GOVERNMENT OF WESTERN AUSTRALIA

WAPC Western Australian Planning Commission

LEADING A CONTEMPORARY PLANNING SYSTEM

agenda

Statutory Planning Committee

Notice is hereby given the next meeting of the Statutory Planning Committee will be:

Wednesday, 23 September, 2026, 9:00 am

		Pages
1.	Meeting opening and commencement	
1.1	Acknowledgement of Country	
1.2	Apologies and leave of absence	
1.3	Disclosure of interests	
1.4	Disclosures of representation	
1.5	Declaration of due consideration	
1.6	Confirmation of Previous minutes - Wednesday, 9 September 2026	10 - 31
2.	Deputations and presentations	
2.1	Precinct Structure Plan - Albany Highway, Town of Victoria Park - Determination (Item 3.2) Presenter: David Doy - Town of Victoria Park	32 - 33
2.2	Section 31 Reconsideration - Reconsideration of Subdivision Condition – Lot 818 Larwood Crescent, High Wycombe (Item 3.3) Presenters: Raj Ramanathan and Jayachitra Ramakrishnan - Veda Estates WA	34 - 35
2.3	City of Wanneroo - District Planning Scheme No. 2, Amendment No. 234 (Standard) - Recommendation to Minister (4.2) Presenter: Alex Jarvis - CLE Town Planning and Design	36 - 41
2.4	City of Wanneroo Draft Local Planning Strategy (Item 3.4) Presenters: Russell Burnett and Judy Burnett - Residents	42 - 46
2.5	City of Wanneroo Draft Local Planning Strategy (Item 3.4) Presenters: Raelee Houden, Chris Leigh, Pas Bracone, Mandy Pearce and Xin Xu - City of Wanneroo	47 - 50
2.6	Part 11B Dev Application – Mixed Use Development at Lot 572 (No. 200) West Coast Highway, Scarborough – Determination and Dev Application – Works within Planning Control Area abutting Lot 572 (No. 200) West Coast Highway, Scarborough (Item 3.5)	51 - 60

Presenters: Nick Bertone and Shaun Wheatland - City of Stirling

2.7 **Part 11B Dev Application – Mixed Use Development at Lot 572 (No. 200) West Coast Highway, Scarborough – Determination and Dev Application – Works within Planning Control Area abutting Lot 572 (No. 200) West Coast Highway, Scarborough (Item 3.5)** 61 - 79

Presenters: Lidija Langford, Greg Rowe and David Maiorana - Rowe Group, William Schofield - Plus Studio, Desmond Ho - Stantec, and Larry Sperling - Meadpoint

2.8 **Local Structure Plan - Clifton Street North, Kelmscott (2026) - Determination (Item 3.1)** 80 - 83

Written Deputation: Miranda Bowman - Harley Dykstra

2.9 **City of Wanneroo Draft Local Planning Strategy (Item 3.4)** 84 - 94

Written Deputation: Paula Lukatelich - Resident

2.10 **City of Wanneroo Draft Local Planning Strategy (Item 3.4)** 95 - 98

Written Deputation: Megan Dowdall - Resident

2.11 **Part 11B Dev Application – Mixed Use Development at Lot 572 (No. 200) West Coast Highway, Scarborough – Determination and Dev Application – Works within Planning Control Area abutting Lot 572 (No. 200) West Coast Highway, Scarborough (Item 3.5)** 99 - 104

Written Deputation: Anne-Louise Vague - Resident

2.12 **Part 11B Dev Application – Mixed Use Development at Lot 572 (No. 200) West Coast Highway, Scarborough – Determination and Dev Application – Works within Planning Control Area abutting Lot 572 (No. 200) West Coast Highway, Scarborough (Item 3.5)** 105 - 110

Written Deputation: Martyna Zaczek - Resident

3. Non-confidential items for discussion, decision or noting

3.1 **Local Structure Plan - Clifton Street North, Kelmscott (2026) - Determination (SPN/2357)** 111 - 671

The Structure Plan was prepared to guide the residential subdivision of the subject lots, which comprise a total area of 5.76ha, incorporating a range of residential densities (R40 toR80) and yielding an estimated 395 lots.

The City recommended refusal of the structure plan on the basis that the structure plan failed to address issues related to:

- Housing density and built form
- Provision of a foreshore reserve
- Provision and equitable distribution of public open space
- Local Water Management
- Bushfire management
- Movement network

3.2 Precinct Structure Plan - Albany Highway, Town of Victoria Park - Determination (SPN/2398) 672 - 1566

The Town of Victoria Park (the Town) has prepared and submitted the draft Albany Highway Precinct Structure Plan (PSP) for Western Australian Planning Commission (WAPC) approval to coordinate the future development of land abutting and in proximity to Albany Highway within the Town of Victoria Park, Attachment 1 – Location Plan). The PSP aims to facilitate expansion of commercial, mixed-use and residential development throughout six sub-precinct areas, which include the Victoria Park secondary activity centre and East Victoria Park district centre and includes provisions to manage the built form transition to the surrounding residential areas (Attachment 2 – Precinct Structure Plan Report).

3.3 Section 31 Reconsideration - Reconsideration of Subdivision Condition – Lot 818 Larwood Crescent, High Wycombe (202723 & DR86/2026) 1567 - 1610

The key consideration in assessing this proposal is whether Condition 21 (i) serves a proper planning purpose, (ii) has a nexus and (iii) is reasonable, having regard to factors such as the demand for POS within the locality, the type of development proposed, and the recent POS Position Statement, with the latter considered fundamental to whether the condition is retained, modified or deleted.

3.4 City of Wanneroo Draft Local Planning Strategy (TPS/2963) 1611 - 2054

The key considerations identified in assessing this proposal are as follows:

- Whether the Modified Strategy document appropriately addresses submissions received;
- Whether any further modifications are recommended; and
- Whether the Strategy remains broadly in accordance with the LPS Regulations, Framework, Strategy Guidelines and relevant State planning policies.

3.5 Part 11B Dev Application – Mixed Use Development at Lot 572 (No. 200) West Coast Highway, Scarborough – Determination and Dev Application – Works within Planning Control Area abutting Lot 572 (No. 200) West Coast Highway, Scarborough – Determination 2055 - 2399

This report seeks determination of two related but separate development applications, as follows:

Part A

A development application for a proposed crossover, landscaping and awning within the Planning Control Area (PCA) has been submitted and is the subject of this report, as it relates to the development application under Part 11B of the Planning and Development Act 2005 (PD Act) (A12).

Part B

An application submitted under the Part 11B Significant Development Pathway seeks approval for a 26-storey mixed use development on Lot 572 (No. 200) West Coast Highway, Scarborough (the site) (refer A1 and A2).

4. Confidential items for discussion, decision or noting

4.1 Town of Victoria Park - Local Planning Scheme No. 2, Amendment No. 2 - For Consideration Prior to Advertising (TPS/3328) 2400 - 2400

4.2 City of Wanneroo - District Planning Scheme No. 2, Amendment No. 234 (Standard) - Recommendation to Minister (TPS/3385) 2401 - 2401

5. Urgent or other business

6. Meeting conclusion and closure

Information for WAPC members

Quorum: 4 of 8 members



Ms Emma COLE
WAPC Chairperson



Mr Ray HAEREN
WAPC Deputy Chairperson



Mr Paul LAKEY
WAPC Board Member



Ms Helen BROOKES
WAPC Board Member



Ms Claire FRANKLIN
SPC Member



Mr Chris HARMAN
SPC Member



Cr Caroline KNIGHT
SPC Member



Mr Sean MORRISON
SPC Member

Vacant
WAPC Board Member

The Western Australian Planning Commission (WAPC) is established under the *Planning and Development Act 2005* to provide independent advice to the Government on integrated land use planning and development, and to facilitate the preparation, implementation and delivery of state planning policies, strategies and plans through its functions and statutory decisions. Schedule 2 of the Act provides for the WAPC to establish committees to support it in delivering its functions and prescribes the establishment of a Statutory Planning Committee (SPC).

The SPC has been established to support the WAPC in undertaking its statutory planning functions including exercising powers to make any decisions the WAPC may delegate to the Committee. Its purpose is to develop and apply statutory planning frameworks which deliver the WAPC's strategic direction, policies and plans.

The key objectives of the SPC are to:

1. Support the WAPC to undertake its statutory planning functions including but not limited those related to:

1.1. The maintenance of and minor amendments to region planning schemes where consistent with applicable strategic planning framework.

1.2. The preparation, review, maintenance and amendment of local planning schemes (including any development contribution provisions these may entail). The preparation, review, maintenance and amendment of local planning schemes (including any development contribution provisions these may entail).

1.3. The determination of local planning strategies, local structure plans (standard and precinct), local development plans and local planning policies where these require the approval of the WAPC.

1.4. The determination of applications for subdivision (including strata subdivision)

1.5. The determination of applications for approval of leases and licenses

1.6. The determination of applications for the use and development of land where this requires the approval of the WAPC excluding proposals:

1.6.1. made under Part 17 of the *Planning and Development Act 2005*.

1.6.2. that are mandatory significant developments for the purposes of section 171L(2) of the *Planning and Development Act 2005;*

1.6.3. subject to a section 171M Premier Authorisation under the *Planning and Development Act 2005*;

1.6.4. critical to major State priority projects such as significant renewable energy facilities, the Future of Fremantle; and

1.6.5. classified as 'State significant' under the Governments Lead Agency Framework.

1.7. Approval of management plans and arrangements and condition compliance in relation to the above.

1.8. Enforcement activities in relation to the above.

2. Provide advice, make recommendations and determine applications in accordance with authority delegated to it.

3. Provide advice to the WAPC on the effective and efficient delivery of statutory planning functions.

4. Provide advice to local government and other government agencies and bodies on statutory planning matters.

Part 11B of the *Planning and Development Act 2005* permanently established the WAPC as the decision-making authority for prescribed significant development proposals. Prescribed significant development proposals are specified in regulation 5 of the Planning and Development (Significant Development) Regulations 2024 as being development valued at $20 million or more for land in the Metropolitan or Peel Region Scheme or the Swan Valley Planning Scheme areas; and $5 million or more for land in other parts of the state. Other projects may be authorised for determination under Part 11B by the Premier, on the advice of the Minister. There are presently no criteria for mandatory significant development proposals.

In accordance with Section 171P of the *Planning and Development Act 2005*, the WAPC must determine Part 11B applications in accordance with the provisions of the 'applicable planning instrument'. The WAPC may determine significant development applications that conflict with provisions of the applicable planning instrument in some circumstances, as set out in Section 171R(1) of the *Planning and Development Act 2005*. These considerations are in addition to any discretion or variation clauses in the applicable planning instrument.

The WAPC as the planning authority for applications submitted under Part 11B and the WAPC has delegated the function to the SPC.

Membership:
The composition of the Statutory Planning Committee is in accordance with Schedule 2(4) of the *Planning and Development Act 2005.*

4. Statutory Planning Committee

(1) The Commission is to establish a committee to be known as the Statutory Planning Committee.

(2) The Statutory Planning Committee is to consist of the following persons —

(a) 2 or more members of the board appointed by the Commission;

(b) 1 or more persons appointed by the Commission with the approval of the Minister —

i. who are not members of the board; and

ii. who have knowledge, expertise and experience in the field of urban and regional planning;

(c) 1 or more persons, not being members of the board, appointed by the Commission with the approval of the Minister to represent the interests of local governments;

(d) any 1 or more other persons, not being members of the board, appointed by the Commission with the approval of the Minister.

WAPC Western Australian Planning Commission

Statutory Planning Committee
Minutes

Wednesday, 9 September, 2026

Members: Commissioner Cole - Chairperson
Commissioner Haeren - Deputy Chairperson
Member Franklin
Member Harman
Member Knight
Commissioner Lakey
Member Morrison

Apologies: Commissioner Brookes

Others present: Lauren Aitken – Director, Office of the WAPC
Jessica Allen – Senior Planner, Significant Development Assessment Unit
Sam Boucher – Manager, Commission Business
Tia Byrd – A/Assistant Director General, Land Use Planning
Ciara Clarke – Planning Manager, State Referral Coordination Unit
Seth Cohen-Radosevich – Planning Manager, Significant Development Assessment Unit
Tristan Emrich – Commission Support Team Leader
Cate Gustavsson – Executive Planning Director, Land Use Planning
Gary James – Senior Planner, Regional Central
Mark Johnston – A/Planning Manager, Regional Central
Jarren Minorgan – Planning Officer, Schemes and Strategies
Thomas Quigley – Commission Support Officer
Phillida Rodic – Director, Commission Services
David Stapleton – Senior Planner, Regional Central
Oscar Thomson – A/Senior Planner, Schemes and Strategies

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1. Meeting opening and commencement

The Chairperson declared the meeting open at 9:09 am.

1.1 Acknowledgement of Country

The Chairperson acknowledged the Whadjuk people of the Noongar Nation as the Traditional Owners and custodians of the land on which the meeting is taking place and welcomed members.

1.2 Apologies and leave of absence

Commissioner Brookes - Leave of absence

1.3 Disclosure of interests

Member Franklin declared an Actual Impartiality Interest on Item 3.3 - Part 11B DA – North East Baldivis Stage 2 Bulk Earthworks at Lots 45, 456, 457, 465, 466 & 1261 St Albans Road, Baldivis - Determination. Member Franklin has advised she is actively engaged as a sub-consultant through Hames Sharley to the City of Rockingham, preparing the City's Local Strategy and draft LPS No. 4. Due to the current level of engagement regarding these projects, Member Franklin considers she should not be present during the discussion and/or decision-making procedure on this item.

1.4 Disclosures of representation

Commissioner Lakey advised that as Chairperson of the Priority Corridor Working Group (PCWG), the PCWG has considered the North East Baldivis area in relation to infrastructure matters. Stockland have previously presented to the PCWG regarding the area, though not relevant to item 3.3 - Part 11B DA – North East Baldivis Stage 2 Bulk Earthworks at Lots 45, 456, 457, 465, 466 & 1261 St Albans Road, Baldivis - Determination. Commissioner Lakey confirmed he has not been provided with any additional information that is not included in the report.

1.5 Declaration of due consideration

All members indicated that they had received and considered the agenda prior to the Statutory Planning Committee meeting.

1.6 Confirmation of previous minutes - Wednesday, 5 August 2026

Moved by Member Harman
Seconded by Member Franklin

That the minutes of the Statutory Planning Committee meeting held on Wednesday, 5 August 2026, be confirmed as a true and correct record of the proceedings.

The motion was put and carried

1.7 Confirmation of previous minutes - Wednesday, 19 August 2026

Moved by Member Harman
Seconded by Member Franklin

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That the minutes of the Statutory Planning Committee meeting held on Wednesday, 19 August 2026, be confirmed as a true and correct record of the proceedings.

The motion was put and carried

2. Deputations and presentations

2.1 Part 11B DA – North East Baldivis Stage 2 Bulk Earthworks at Lots 45, 456, 457, 465, 466 & 1261 St Albans Road, Baldivis - Determination (Item 3.3)

Member Franklin declared an Actual Impartiality Interest on Item 3.3 and left the meeting at 9:12 am.

Presenters: Daniel Martinovich - CLE Town Planning and Design, Shane McSweeney - Pentium Water, and Col Dutton and Damian Shephard - Stockland

Daniel Martinovich, Shane McSweeney, Col Dutton and Damian Shephard made a deputation to the Western Australian Planning Commission regarding Item 3.3 - Part 11B DA – North East Baldivis Stage 2 Bulk Earthworks at Lots 45, 456, 457, 465, 466 & 1261 St Albans Road, Baldivis - Determination.

Member Franklin returned to the meeting at 9:28 am.

2.2 Subdivision (3 lots) - Lot 7876 (No. 355) Terry Road, Boyup Brook – Determination (Item 3.2)

Written Deputation: Roland Harrison and Cora Harrison - Landowners

Members noted the written deputation on Item 3.2 - Subdivision (3 lots) - Lot 7876 (No. 355) Terry Road, Boyup Brook – Determination.

3. Non-confidential items for discussion, decision or noting

3.1 MRS Amendment – Metropolitan Central Omnibus No. 7 – Approval to advertise (RLS/1027)

Members endorsed the recommendation of the Department of Planning, Lands and Heritage for the reasons outlined in the Department's report.

REPORT RECOMMENDATION

Moved by Commissioner Lakey
Seconded by Member Knight

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That the Statutory Planning Committee resolves under section 35 of the Planning and Development Act 2005 and Regulation 6 of the Planning and Development (Region Planning Schemes) Regulations 2023 to:

1. *Initiate an amendment to the Metropolitan Region Scheme as detailed in Attachment 1 – MRS Amendment 14XX (Basic) – Metropolitan Central Districts Omnibus No. 7; and*

2. *Form the opinion that the amendment constitutes a Basic amendment to the Metropolitan Region Scheme as it is a minor amendment that is administrative in nature and highly unlikely to have an adverse impact on an owner or occupier of affected land.*

The motion was put and carried

3.2 Subdivision (3 lots) - Lot 7876 (No. 355) Terry Road, Boyup Brook – Determination (203215)

REASON FOR DECISION

Members agreed to endorse the recommendation of the Department of Planning, Lands and Heritage for the reasons discussed and outlined in the Department's report, noting the following:

- In the current servicing situation and planning framework, this is the appropriate planning outcome. While standalone and renewable energy systems form an important part of the broader energy transition, insufficient information was provided to demonstrate that such a system would adequately service the proposed lots.

- Deferring electricity servicing to future landowners would create uncertainty and potentially transfer significant infrastructure and development costs to future purchasers.

- The potential for land development to be leapfrogging from the servicing requirements places a burden on other coordinated land development in the area.

Moved by Commissioner Haeren
Seconded by Member Harman

REPORT RECOMMENDATION

That the Statutory Planning Committee resolves under Part 10, Division 2, Sections 138 and 143 of the Planning and Development Act 2005 to approve the application to subdivide Lot 7876 Terry Road, Boyup Brook as

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shown on the plan date stamped 16 April 2026, subject to the following conditions:

1. *Arrangements being made with a licensed electricity network operator for the provision of an underground electricity distribution system that can supply electricity to each lot shown on the approved plan of subdivision. (Western Power)*

2. *The transfer of land as a Crown reserve free of cost to Western Power for the provision of electricity supply infrastructure. (Western Power)*

3. *A notification, pursuant to Section 165 of the Planning and Development Act 2005, is to be placed on the certificates of title of the proposed lots, advising of the existence of a hazard or other factor. Notice of this notification is to be included on the diagram or plan of survey (deposited plan). The notification is to state as follows:*

"This land is within a bushfire prone area as designated by an Order made by the Fire and Emergency Services Commissioner and is subject to a Bushfire Management Plan. Additional planning and building requirements may apply to development on this land" (Western Australian Planning Commission)

ADVICE TO APPLICANT

1. *In regard to Condition 1, Western Power provides only one underground point of electricity supply per freehold lot.*

The motion was put and carried

3.3 Part 11B DA – North East Baldivis Stage 2 Bulk Earthworks at Lots 45, 456, 457, 465, 466 & 1261 St Albans Road, Baldivis - Determination (SD-066-26)

Member Franklin declared an Actual Impartiality Interest on Item 3.3 and left the meeting at 9:41 am.

REASON FOR DECISION

Members agreed to endorse the modified recommendation of the Department of Planning, Lands and Heritage for the reasons discussed and outlined in the Department's report, noting the following:

- Recent advice following agenda publication from the Department of Water and Environmental Regulation (DWER) that previous matters in the District Water Management Strategy (DWMS) for

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North East Baldivis have been substantively addressed, and that DWER have endorsed the DWMS.

- The endorsed DWMS, along with conditions of approval relating to the local Drainage Management Strategy, provide for flood management to be appropriately addressed and are supported by State referral agencies, including DWER and Water Corporation.
- The unique and complex circumstances requiring a balanced approach while ensuring stakeholders involved have confidence that water management matters will continue to be adequately addressed.
- Facilitating housing continues to be a priority, and this proposal presents an opportunity to progress future urban development.
- Acknowledgment of the work undertaken by the State Referral Coordination Unit and collaboration with DWER and Water Corporation on resolving water management and drainage issues.

MODIFIED RECOMMENDATION

Moved by Commissioner Haeren
Seconded by Member Morrison

That the Statutory Planning Committee resolves:

A. *to note this application is capable of being determined under the applicable planning instrument, being the City of Rockingham Local Planning Scheme No. 2, and it has been considered and determined accordingly; and*

B. *under s.171P(1) of the Planning and Development Act 2005 to approve development application reference SD-066-26 and accompanying plans (date-stamped 23 July 2026) for bulk earthworks at Lots 45, 456, 457, 465, 466 & 1261 St Albans Road, Baldivis, subject to the following:*

Conditions

Approval Timeframe

1. *This decision constitutes development approval only and is valid for a period of 4 years from the date of approval. If the development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.*

Conformity with Plans

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2. *The development is to be undertaken in accordance with the approved plans (date-stamped 23 July 2026) attached to this approval, subject to modifications required by any condition of this approval, final details of which are to be submitted at working drawings stage (condition clearance stage), to the satisfaction of the Western Australian Planning Commission.*

3. *Prior to commencement of works, the approved development plans and technical supporting documentation are to be modified and updated to include the following:*
   (a) the engineering plans shall remove all outlines of the future subdivision; and
   (b) correct the title of the engineering plans from Stage 1 to Stage 2.

4. *The levels shown on the approved plans are indicative only and are not to be taken as the approved final levels for the development. Final site levels, earthworks and engineering details are to be determined and approved as part of any future subdivision, engineering and/or development application approval process.*

Environmental

5.
   (a) Within 28 days of the date of this approval, a revised Drainage Management Strategy is to be submitted to the Western Australian Planning Commission for approval, on advice from the Department of Water and Environmental Regulation and the Water Corporation. The revised Strategy is to address the following:

      (i) ensure consistency of the Strategy with the earthworks footprint on the approved development plans, and with no fill or other encroachments to occur within the Multi Use Corridor drainage areas as per the approved North East Baldivis District Structure Plan;
      (ii) ensure consistency of the Strategy with an approved District Water Management Strategy or DWER's District Water Management Strategy Addendum advice (dated 9 July 2026), as applicable at the time of commencement of works;
      (iii) confirm that the proposed works do not rely on a bund or any other structure performing a flood-control function;
      (iv) clearly distinguish between the approved Stage 2 bulk earthworks footprint and the broader drainage area;
      (v) record the applicable flood-impact criteria and the modelled flood-level, storage, discharge and downstream impacts;
      (vi) distinguish the modelled impacts associated with the temporary surcharging works from the acceptable final

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district-scale outcome and explain how any potential impacts continuing beyond the surcharging period will be addressed;

(vii) identify any controls required to manage any potential drainage impacts associated with the surcharging works;

(viii) confirm that the approved earthworks will not prejudice the implementation of future district-scale emergency management and access arrangement;

(ix) include an Earthworks Staging Plan to address:

- *the temporary, post-surcharging and ultimate landforms and drainage arrangements;*
- *the period during which the surcharging landform will remain in place, and the plan for its removal or relocation;*
- *how any potential impacts continuing beyond the surcharging period will be addressed; and*

(x) remove the statement that 'the Drainage Management Strategy supporting development application SD-004-24 was endorsed by the Department of Water and Environmental Regulation'.

(b) The approved Drainage Management Strategy is to be implemented to the satisfaction of the Western Australian Planning Commission.

6.

(a) Prior to commencement of works, a Construction and Site Works Management Plan is to be submitted to and approved by the Western Australian Planning Commission, on advice from the Department of Water and Environmental Regulation, the Water Corporation, Main Roads WA and the City of Rockingham. The Plan is to address, but not limited to:

(i) hours of construction and works;
(ii) temporary fencing, hoardings, gantries, and signage;
(iii) site access and egress;
(iv) construction traffic management;
(v) pedestrian and cyclist management and any footpath obstructions;
(vi) parking arrangements;
(vii) deliveries and storage of construction materials and machinery;
(viii) management of stormwater, erosion and sediment;
(ix) management of stockpiles including detailing the location, height, duration etc of imported fill, any stockpiling of topsoil and stripped vegetation;

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(x) *management of any contaminated fill;*
(xi) *management of potential asbestos containing materials if identified during works;*
(xii) *fuel and chemical management;*
(xiii) *management and monitoring of groundwater, surface water, stormwater, and any dewatering, including any water quality management / mitigation measures;*
(xiv) *management of construction noise and/or vibration and other site generated noise and/or vibration;*
(xv) *demolition and construction waste management, recycling, and removal, including disposal of stripped vegetation and materials re-use;*
(xvi) *protection of any street trees and public realm infrastructure;*
(xvii) *protection of remnant vegetation on Lot 456 unless a clearing permit has been obtained;*
(xviii) *mosquito management;*
(xix) *fauna management;*
(xx) *weed management;*
(xxi) *sand and dust management, including any remediation actions;*
(xxii) *measures and monitoring to ensure stormwater discharge does not exceed predevelopment discharge to the Kwinana Freeway or Mundijong Road reserves;*
(xxiii) *management and monitoring of any erosion, including remediation actions;*
(xxiv) *bushfire risk management for site office/s; and*
(xxv) *public communication and complaint handling procedures, including contact details of essential site personnel.*

(b) *The approved Construction and Site Works Management Plan is to be implemented, to the satisfaction of the Western Australian Planning Commission.*

7.

(a) *Prior to commencement of works, a Geotechnical Engineering Report is to be prepared by a suitably qualified professional and approved by the Western Australian Planning Commission, with advice from the City of Rockingham. The Report is to detail:*

(i) *the source of the fill; and*
(ii) *certify the fill material composition and quality.*

(b) *If the source of the material changes from the details as specified in the approved Geotechnical Engineering Report, then an updated report prepared by a suitably qualified professional is to be submitted and approved by the Western Australian*

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Planning Commission, on advice from the City of Rockingham, prior to the use of the fill. The Report is to detail:

(i) the source of the fill; and
(ii) certify the fill material composition and quality.

8. Prior to commencement of works, a Dilapidation Survey is to be submitted to the Western Australian Planning Commission, on advice of the City of Rockingham, detailing the current condition and status of surrounding pavements, public realm infrastructure and roads.

Any damage to existing pavements and roads, associated with the works, shall be reinstated or 'made good' to the same condition prior to works commencing, to the satisfaction of the Western Australian Planning Commission.

9.

(a) Prior to commencement of works, a Sand and Dust Management Plan is to be submitted to and approved by the Western Australian Planning Commission, on advice from the City of Rockingham.

(b) The approved Sand and Dust Management Plan is to be implemented to the satisfaction of Western Australian Planning Commission.

10.

(a) Prior to commencement of works, a Remediation Action Plan is to be submitted to and approved by the Western Australian Planning Commission, on advice from the Water Corporation. The Plan is to include actions by the proponent to rectify any adverse impacts that occur to the level of service provided by the Water Corporation's drainage system that may arise as a result of the approved earthworks, including any inundation of upstream or downstream properties that persists for more than 72 hours.

(b) The approved Remediation Action Plan is to be implemented, if the identified inundation or adverse impacts occur, to the satisfaction of the Western Australian Planning Commission, on advice from the Water Corporation.

Access

11.

(a) Prior to commencement of works on site, a Traffic Management Plan is to be submitted and approved by the Western Australian

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Planning Commission, on advice from Main Roads WA and the City of Rockingham. The Traffic Management Plan is to detail:

(i) how construction activities will be staged and managed to minimise impacts on Kwinana Freeway, Mundijong Road and the surrounding road network;
(ii) truck scheduling;
(iii) proposed haulage routes;
(iv) site access details;
(v) parking arrangements on site;
(vi) provision of suitably constructed vehicle access crossovers to site for construction vehicles;
(vii) measures to maintain public safety; and
(viii) contact details of essential personnel.

(b) The approved Traffic Management Plan is to be implemented, to the satisfaction of the Western Australian Planning Commission.

Advice Notes

(a) This is a development approval only. The landowner/applicant is advised that it is their responsibility to ensure that the proposed development complies with all other applicable legislation, local laws and/or license/permit requirements that may relate to the development. Contact the City of Rockingham for further advice on building, health, engineering and road reserve requirements.

(b) With regard to Condition 1, the term 'substantially commenced' has the meaning as set out in the Planning and Development (Local Planning Schemes) Regulations 2015 as amended from time to time. The substantial commencement date is calculated from the date the applicant receives the determination notice.

(c) With regard to Condition 4, the approved plans are not to be construed as final levels for development of the site, and final levels will be established through any future subdivision and engineering.

(d) With regard to Condition 6(xiv), the plan will need to demonstrate compliance with Environmental Protection (Noise) Regulations 1997 and AS2436-2010-Guide to Noise and Vibration Control on Construction, Demolition and Maintenance sites.

(e) With regard to Condition 6(xvii), the remnant vegetation on Lot 456 St Albans Road is to be protected from the impacts of the works through the installation of temporary fencing, until either a Clearing Permit is obtained, or confirmation is provided from the relevant agency that a Clearing Permit is not required.

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(f) With regard to Condition 6(xx), weed management shall be in accordance with the Biosecurity and Agriculture Management Act 2007.

(g) With regard to Condition 7, the Applicant is reminded of their obligations to determine if fill material used on site is considered "waste" as defined in the Environmental Protection Act 1986 and the Waste and Resource Recovery Act 2007 and therefore whether certain provisions in the legislation apply. Please refer to the Department of Water and Environmental Regulation Factsheet – Assessing whether material is waste for more information. Schedule 1 of the Environmental Protection Regulations 1987 provides that the use of clean fill that requires screening at the premises may cause the premises to be considered a prescribed premises under Category 12 or Category 70, and the use of uncontaminated fill that requires crushing at the premises may cause the premises to be considered a prescribed premises under Category 13.

(h) With regard to Condition 9, the Sand and Dust Management Plan is to ensure any potential dust or mobilised sand fill does not negatively affect the operation of the Peel Main Drain or the Kwinana Freeway. The Plan should be prepared in accordance with the Department of Water and Environmental Regulation's Guidelines and should address:

(i) site classification (in accordance with the Department of Water and Environmental Regulation Guidelines);
(ii) type of wetting agents and proposed interval of use;
(iii) what/if nearby roads will be swept clean of dust/sand and on what interval;
(iv) the size of the area being worked at any one time;
(v) type and location of any wind barrier fencing;
(vi) what environmental monitoring will be undertaken, how many monitors and their location, what factors will be measured and the acceptable levels;
(vii) further to point (vi) above, the mitigation response in the event that the 'acceptable levels' are exceeded;
(viii) proposed stabilising techniques and frequency they will be undertaken; and
(ix) dust covers on haulage vehicles.

(i) The proponent is advised that no change to the size or layout of the Multi Use Corridor drainage areas, as per the approved North East Baldivis District Structure Plan and draft District Water Management Strategy, has been approved as part of this development approval. Any proposal to modify the drainage areas as part of a future local

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structure plan or subdivision applications(s) is to be assessed and determined through those planning processes.

(j) All drinking water provided on site must meet the health-related requirements of the Australian Drinking Water Quality Guidelines 2011. The proponent must design and install all non-drinking water systems so that they do not contaminate or be mistaken for the drinking water supply, including clear and permanent labelling of all non-drinking water outlets and installation of appropriate backflow prevention devices.

(k) Any use of recycled water on site must be in accordance with the Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974, the Guidelines for the non-potable uses of recycled water in Western Australia and the Code of Practice for the Reuse of Greywater in Western Australia 2010.

(l) Main Roads WA advises that the upgrading of Kwinana Freeway and Kwinana Freeway / Mundijong Road / Kulija Road interchange is not in Main Roads current 4-year forward estimated construction program and all projects not listed are subject to change without notice, and Main Roads assumes no liability for the information provided.

(m) Main Roads WA advises that should the development require any modifications to the RAV network it will be subject to a separate approval process under the Road Traffic (Vehicles) Act 2012 and is subject to future support and approval from the City of Rockingham and Main Roads. Application forms and supporting information about the RAV Route Assessment procedure can be found at www.mainroads.wa.gov.au/heavy-vehicles/access-requirements-in-wa/.

(n) If the applicant/landowner is aggrieved by this determination, there is a right of review by the State Administrative Tribunal in accordance with Part 11B of the Planning and Development Act 2005.

The motion was put and carried

AMENDING MOTION

Members moved a motion to delete Condition 5(a) vi and 5(a) ix and renumber the subsequent conditions and associated advice note references.

Members supporting the amending motion outlined the following:

- That the final fill levels can be determined at local structure plan and subdivision stages.

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- That if the process can be simplified there are appropriate safeguards at subsequent stages to address these matters.

Members speaking against the amending motion outlined the following:

- Removing the requirements may reduce clarity around timeframes and compliance processes.

- Maintaining the conditions is unlikely to delay the development process.

- There is justification for the conditions and the State Referral Coordination Unit role in condition clearance will allow timeframes to be met.

Moved by Member Morrison
Seconded by Member Harman

That Condition 5(a) vi and 5(a) ix of the recommendation be deleted in its entirety.

The Chairperson put the amending motion to a vote.

The votes were recorded as follows:

For: Member Harman and Member Morrison

Against: Commissioner Cole, Commissioner Haeren, Commissioner Lakey, Member Knight

The motion was put and lost

SUBSTANTIVE RESOLUTION

That the Statutory Planning Committee resolves:

A. *to note this application is capable of being determined under the applicable planning instrument, being the City of Rockingham Local Planning Scheme No. 2, and it has been considered and determined accordingly; and*

B. *under s.171P(1) of the Planning and Development Act 2005 to approve development application reference SD-066-26 and accompanying plans (date-stamped 23 July 2026) for bulk earthworks at Lots 45, 456, 457, 465, 466 & 1261 St Albans Road, Baldivis, subject to the following:*

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Conditions

Approval Timeframe

1. *This decision constitutes development approval only and is valid for a period of 4 years from the date of approval. If the development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.*

Conformity with Plans

2. *The development is to be undertaken in accordance with the approved plans (date-stamped 23 July 2026) attached to this approval, subject to modifications required by any condition of this approval, final details of which are to be submitted at working drawings stage (condition clearance stage), to the satisfaction of the Western Australian Planning Commission.*

3. *Prior to commencement of works, the approved development plans and technical supporting documentation are to be modified and updated to include the following:*

   (a) the engineering plans shall remove all outlines of the future subdivision; and
   (b) correct the title of the engineering plans from Stage 1 to Stage 2.

4. *The levels shown on the approved plans are indicative only and are not to be taken as the approved final levels for the development. Final site levels, earthworks and engineering details are to be determined and approved as part of any future subdivision, engineering and/or development application approval process.*

Environmental

5.
   (a) Within 28 days of the date of this approval, a revised Drainage Management Strategy is to be submitted to the Western Australian Planning Commission for approval, on advice from the Department of Water and Environmental Regulation and the Water Corporation. The revised Strategy is to address the following:

      (i) ensure consistency of the Strategy with the earthworks footprint on the approved development plans, and with no fill or other encroachments to occur within the Multi Use Corridor drainage areas as per the approved North East Baldivis District Structure Plan;

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(ii) ensure consistency of the Strategy with an approved District Water Management Strategy or DWER's District Water Management Strategy Addendum advice (dated 9 July 2026), as applicable at the time of commencement of works;
(iii) confirm that the proposed works do not rely on a bund or any other structure performing a flood-control function;
(iv) clearly distinguish between the approved Stage 2 bulk earthworks footprint and the broader drainage area;
(v) record the applicable flood-impact criteria and the modelled flood-level, storage, discharge and downstream impacts;
(vi) distinguish the modelled impacts associated with the temporary surcharging works from the acceptable final district-scale outcome and explain how any potential impacts continuing beyond the surcharging period will be addressed;
(vii) identify any controls required to manage any potential drainage impacts associated with the surcharging works;
(viii) confirm that the approved earthworks will not prejudice the implementation of future district-scale emergency management and access arrangement;
(ix) include an Earthworks Staging Plan to address:

- *the temporary, post-surcharging and ultimate landforms and drainage arrangements;*
- *the period during which the surcharging landform will remain in place, and the plan for its removal or relocation;*
- *how any potential impacts continuing beyond the surcharging period will be addressed; and*

(x) remove the statement that 'the Drainage Management Strategy supporting development application SD-004-24 was endorsed by the Department of Water and Environmental Regulation'.

(b) The approved Drainage Management Strategy is to be implemented to the satisfaction of the Western Australian Planning Commission.

6.

(a) Prior to commencement of works, a Construction and Site Works Management Plan is to be submitted to and approved by the Western Australian Planning Commission, on advice from the Department of Water and Environmental Regulation, the Water Corporation, Main Roads WA and the City of Rockingham. The Plan is to address, but not limited to:

(i) hours of construction and works;

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(ii) temporary fencing, hoardings, gantries, and signage;
(iii) site access and egress;
(iv) construction traffic management;
(v) pedestrian and cyclist management and any footpath obstructions;
(vi) parking arrangements;
(vii) deliveries and storage of construction materials and machinery;
(viii) management of stormwater, erosion and sediment;
(ix) management of stockpiles including detailing the location, height, duration etc of imported fill, any stockpiling of topsoil and stripped vegetation;
(x) management of any contaminated fill;
(xi) management of potential asbestos containing materials if identified during works;
(xii) fuel and chemical management;
(xiii) management and monitoring of groundwater, surface water, stormwater, and any dewatering, including any water quality management / mitigation measures;
(xiv) management of construction noise and/or vibration and other site generated noise and/or vibration;
(xv) demolition and construction waste management, recycling, and removal, including disposal of stripped vegetation and materials re-use;
(xvi) protection of any street trees and public realm infrastructure;
(xvii) protection of remnant vegetation on Lot 456 unless a clearing permit has been obtained;
(ii) mosquito management;
(i) fauna management;
(ii) weed management;
(iii) sand and dust management, including any remediation actions;
(iv) measures and monitoring to ensure stormwater discharge does not exceed predevelopment discharge to the Kwinana Freeway or Mundijong Road reserves;
(iii) management and monitoring of any erosion, including remediation actions;
(i) bushfire risk management for site office/s; and
(ii) public communication and complaint handling procedures, including contact details of essential site personnel.

(b) The approved Construction and Site Works Management Plan is to be implemented, to the satisfaction of the Western Australian Planning Commission.

7.

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(a) *Prior to commencement of works, a Geotechnical Engineering Report is to be prepared by a suitably qualified professional and approved by the Western Australian Planning Commission, with advice from the City of Rockingham. The Report is to detail:*
   (i) *the source of the fill; and*
   (ii) *certify the fill material composition and quality.*

(b) *If the source of the material changes from the details as specified in the approved Geotechnical Engineering Report, then an updated report prepared by a suitably qualified professional is to be submitted and approved by the Western Australian Planning Commission, on advice from the City of Rockingham, prior to the use of the fill. The Report is to detail:*

   (i) *the source of the fill; and*
   (ii) *certify the fill material composition and quality.*

8. *Prior to commencement of works, a Dilapidation Survey is to be submitted to the Western Australian Planning Commission, on advice of the City of Rockingham, detailing the current condition and status of surrounding pavements, public realm infrastructure and roads.*

   Any damage to existing pavements and roads, associated with the works, shall be reinstated or 'made good' to the same condition prior to works commencing, to the satisfaction of the Western Australian Planning Commission.

9.
   (a) *Prior to commencement of works, a Sand and Dust Management Plan is to be submitted to and approved by the Western Australian Planning Commission, on advice from the City of Rockingham.*

   (b) *The approved Sand and Dust Management Plan is to be implemented to the satisfaction of Western Australian Planning Commission.*

10.
   (a) *Prior to commencement of works, a Remediation Action Plan is to be submitted to and approved by the Western Australian Planning Commission, on advice from the Water Corporation. The Plan is to include actions by the proponent to rectify any adverse impacts that occur to the level of service provided by the Water Corporation's drainage system that may arise as a result of the approved earthworks, including any inundation of upstream or downstream properties that persists for more than 72 hours.*

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(b) The approved Remediation Action Plan is to be implemented, if the identified inundation or adverse impacts occur, to the satisfaction of the Western Australian Planning Commission, on advice from the Water Corporation.

Access

11.

(a) Prior to commencement of works on site, a Traffic Management Plan is to be submitted and approved by the Western Australian Planning Commission, on advice from Main Roads WA and the City of Rockingham. The Traffic Management Plan is to detail:

(i) how construction activities will be staged and managed to minimise impacts on Kwinana Freeway, Mundijong Road and the surrounding road network;
(ii) truck scheduling;
(iii) proposed haulage routes;
(iv) site access details;
(v) parking arrangements on site;
(vi) provision of suitably constructed vehicle access crossovers to site for construction vehicles;
(vii) measures to maintain public safety; and
(viii) contact details of essential personnel.

(b) The approved Traffic Management Plan is to be implemented, to the satisfaction of the Western Australian Planning Commission.

Advice Notes

(a) This is a development approval only. The landowner/applicant is advised that it is their responsibility to ensure that the proposed development complies with all other applicable legislation, local laws and/or license/permit requirements that may relate to the development. Contact the City of Rockingham for further advice on building, health, engineering and road reserve requirements.

(b) With regard to Condition 1, the term 'substantially commenced' has the meaning as set out in the Planning and Development (Local Planning Schemes) Regulations 2015 as amended from time to time. The substantial commencement date is calculated from the date the applicant receives the determination notice.

(c) With regard to Condition 4, the approved plans are not to be construed as final levels for development of the site, and final levels will be established through any future subdivision and engineering.

(d) With regard to Condition 6(xiv), the plan will need to demonstrate compliance with Environmental Protection (Noise) Regulations 1997

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and AS2436-2010-Guide to Noise and Vibration Control on Construction, Demolition and Maintenance sites.

(e) With regard to Condition 6(xvii), the remnant vegetation on Lot 456 St Albans Road is to be protected from the impacts of the works through the installation of temporary fencing, until either a Clearing Permit is obtained, or confirmation is provided from the relevant agency that a Clearing Permit is not required.

(f) With regard to Condition 6(xx), weed management shall be in accordance with the Biosecurity and Agriculture Management Act 2007.

(g) With regard to Condition 7, the Applicant is reminded of their obligations to determine if fill material used on site is considered "waste" as defined in the Environmental Protection Act 1986 and the Waste and Resource Recovery Act 2007 and therefore whether certain provisions in the legislation apply. Please refer to the Department of Water and Environmental Regulation Factsheet – Assessing whether material is waste for more information.

Schedule 1 of the Environmental Protection Regulations 1987 provides that the use of clean fill that requires screening at the premises may cause the premises to be considered a prescribed premises under Category 12 or Category 70, and the use of uncontaminated fill that requires crushing at the premises may cause the premises to be considered a prescribed premises under Category 13.

(h) With regard to Condition 9, the Sand and Dust Management Plan is to ensure any potential dust or mobilised sand fill does not negatively affect the operation of the Peel Main Drain or the Kwinana Freeway. The Plan should be prepared in accordance with the Department of Water and Environmental Regulation's Guidelines and should address:

(i) site classification (in accordance with the Department of Water and Environmental Regulation Guidelines);
(ii) type of wetting agents and proposed interval of use;
(iii) what/if nearby roads will be swept clean of dust/sand and on what interval;
(iv) the size of the area being worked at any one time;
(iv) type and location of any wind barrier fencing;
(v) what environmental monitoring will be undertaken, how many monitors and their location, what factors will be measured and the acceptable levels;
(vi) further to point (vi) above, the mitigation response in the event that the 'acceptable levels' are exceeded;

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(vii) proposed stabilising techniques and frequency they will be undertaken; and

(viii) dust covers on haulage vehicles.

(i) The proponent is advised that no change to the size or layout of the Multi Use Corridor drainage areas, as per the approved North East Baldivis District Structure Plan and draft District Water Management Strategy, has been approved as part of this development approval. Any proposal to modify the drainage areas as part of a future local structure plan or subdivision applications(s) is to be assessed and determined through those planning processes.

(j) All drinking water provided on site must meet the health-related requirements of the Australian Drinking Water Quality Guidelines 2011. The proponent must design and install all non-drinking water systems so that they do not contaminate or be mistaken for the drinking water supply, including clear and permanent labelling of all non-drinking water outlets and installation of appropriate backflow prevention devices.

(k) Any use of recycled water on site must be in accordance with the Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974, the Guidelines for the non-potable uses of recycled water in Western Australia and the Code of Practice for the Reuse of Greywater in Western Australia 2010.

(l) Main Roads WA advises that the upgrading of Kwinana Freeway and Kwinana Freeway / Mundijong Road / Kulija Road interchange is not in Main Roads current 4-year forward estimated construction program and all projects not listed are subject to change without notice, and Main Roads assumes no liability for the information provided.

(m) Main Roads WA advises that should the development require any modifications to the RAV network it will be subject to a separate approval process under the Road Traffic (Vehicles) Act 2012 and is subject to future support and approval from the City of Rockingham and Main Roads. Application forms and supporting information about the RAV Route Assessment procedure can be found at www.mainroads.wa.gov.au/heavy-vehicles/access-requirements-in-wa/.

(n) If the applicant/landowner is aggrieved by this determination, there is a right of review by the State Administrative Tribunal in accordance with Part 11B of the Planning and Development Act 2005.

The motion was put and carried

Member Franklin returned to the meeting at 10:14 am.

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4. Confidential items for discussion, decision or noting

Nil.

5. Urgent or other business

Members noted Commission Support will arrange a briefing session on the Residential Design Codes Review.

6. Meeting conclusion and closure

The next ordinary meeting is scheduled for 9:00 am on Wednesday, 23 September 2026.

There being no further business before the Committee, the Chairperson thanked members for their attendance and declared the meeting closed at 10:15 am.

_____

CHAIRPERSON

_____

DATE

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WAPC Western Australian Planning Commission

Request for Deputation / Presentation

Committee: Statutory Planning Committee

Meeting Date: Wednesday, September 23, 2026

Deputation Information

Type of Deputation: Verbal Deputation

Agenda Item: Precinct Structure Plan - Albany Highway, Town of Victoria Park – Determination

Agenda Title: 23 Sep 2026 - Statutory Planning Committee - Agenda - Part 1

Is the presentation in support or against the report recommendation? (contained within the agenda) Support

Presenter Information

Name of Presenter David Doy

Organisation: Town of Victoria Park

Email Address:

Mobile Number:

Special Requirements: In the interest of accessibility and inclusion for people with disabilities, please identify if you have any special requirements: No

Presentation Information

Brief Outline of Deputation:

Speaking as Chief Community Planner of the Town of Victoria Part. Wants to make a deputation in support of the AHPSP and modifications agreed between the Town. However, wishes to highlight important aspects of the AHPSP which must remain (such as mandatory public open space, pedestrian links, and rights of way on major sites), and a number of maximum building heights.

Will there be a PowerPoint Presentation? No

Acknowledgements

In submitting this request, you acknowledge that your request form and presentation content will be published to the Planning Online website as part of the agenda.	Yes
I acknowledge that if my request or accompanying documents are not submitted within the required timeframe, they will not be accepted.	Yes

Please attach all accompanying documents to this request. Late submissions will not be accepted. Handouts or PowerPoints will not be accepted on the day of the meeting.

Collection notice

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WAPC Western Australian Planning Commission

Request for Deputation / Presentation

Committee: Statutory Planning Committee

Meeting Date: Wednesday, September 23, 2026

Deputation Information

Type of Deputation: Verbal Deputation

Agenda Item: 3.3

Agenda Title: Section 31 Reconsideration - Reconsideration of Subdivision Condition – Lot 818 Larwood Crescent, High Wycombe

Is the presentation in support or against the report recommendation? (contained within the agenda) Support

Presenter Information

Name of Presenter RAJ RAMANATHAN

Preferred pronouns/title Mr

Organisation: VEDA ESTATES WA PTY LTD

Email Address:

Mobile Number:

Additional Attendees
JAYACHITRA RAMAKRISHNAN

Special Requirements: In the interest of accessibility and inclusion for people with disabilities, please identify if you have any special requirements: No

Presentation Information

Brief Outline of Deputation:
WOULD LIKE TO BE PRESENT IN PERSON TO SUPPORT VEDA'S STANDING ON THE MATTER.

Will there be a PowerPoint Presentation?	No

Acknowledgements

In submitting this request, you acknowledge that your request form and presentation content will be published to the Planning Online website as part of the agenda.	No
I acknowledge that if my request or accompanying documents are not submitted within the required timeframe, they will not be accepted.	Yes

Please attach all accompanying documents to this request. Late submissions will not be accepted. Handouts or PowerPoints will not be accepted on the day of the meeting.

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WAPC Western Australian Planning Commission

Request for Deputation / Presentation

Committee: Statutory Planning Committee

Meeting Date: Wednesday, September 23, 2026

Deputation Information

Type of Deputation: Verbal Deputation

Agenda Item: 4.2

Agenda Title: City of Wanneroo - District Planning Scheme No. 2, Amendment No. 234 (Standard) - Recommendation to Minister (TPS/3385)

Is the presentation in support or against the report recommendation? (contained within the agenda) Support

Presenter Information

Name of Presenter Alex Jarvis

Organisation: CLE Town Planning + Design

Email Address:

Mobile Number:

Special Requirements: In the interest of accessibility and inclusion for people with disabilities, please identify if you have any special requirements: No

Presentation Information

Brief Outline of Deputation:

Support the proposed amendment.
Request a modification for the amendment area to be recoded from 'Residential R40' to 'Residential R60', in line with discussions with DPLH staff to investigate a higher coding for the proposal.

Will there be a PowerPoint Presentation? Yes

Please attach any documents here

3853PPT12 (Mindarie Scheme Amend….pdf

Acknowledgements

In submitting this request, you acknowledge that your request form and presentation content will be published to the Planning Online website as part of the agenda.

Yes

I acknowledge that if my request or accompanying documents are not submitted within the required timeframe, they will not be accepted.

Yes

Please attach all accompanying documents to this request. Late submissions will not be accepted. Handouts or PowerPoints will not be accepted on the day of the meeting.

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ITEM 4.2
City of Wanneroo District Planning Scheme No. 2 Amendment No. 234 - Recommendation to Minister

Presentation to the SPC on 23 September 2026 by:

- Alex Jarvis, CLE Town Planning + Design

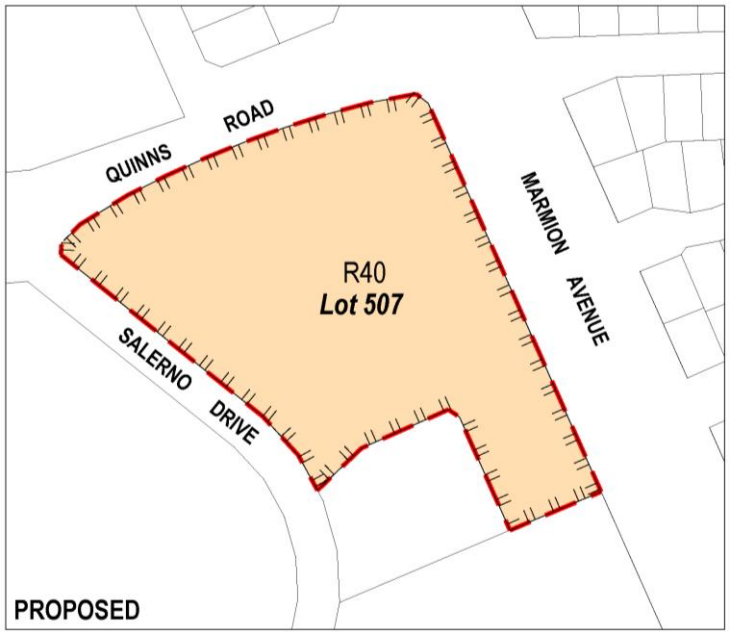
TOMAHAWK PROPERTY

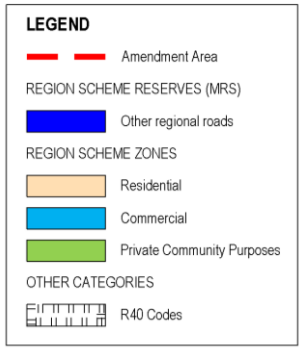
CLE Town Planning + Design

Proposal and Planning Context

- The amendment seeks to rezone 2.75ha of land from 'Private Community Purposes' to 'Residential'.
- The submitted amendment proposed an R40 density code.
- Not identified as a development precinct / infill area in the Sub-regional Planning Framework or City's draft Local Planning Strategy.
- Consistent with the City's LPP 3.1: Local Housing Strategy.
- The site represents an additional infill development opportunity.







TOMAHAWK PROPERTY
CLE Town Planning + Design

Local Government Assessment

- The amendment was lodged in July 2025, following preliminary engagement with the City of Wanneroo by Tomahawk Property.
- The amendment received only seven submissions during the advertising period demonstrating broad support for the proposal.
- The amendment has been supported by the City of Wanneroo's administration and Council throughout the process.

DPLH Assessment and Proposed Modification

- DPLH has requested consideration of an R60 density code to be applied to the amendment.
- The project team has subsequently investigated developing the site at a more compact R60 density.
- Following these investigations, we can confirm support for the amendment area to be rezoned to 'Residential R60', in lieu of 'Residential R40'.

<u>Summary</u>:

Request that the SPC support proposed Amendment No. 234 to the City of Wanneroo's Planning Scheme, subject to a modification for the site to be rezoned Residential R60.

WAPC Western Australian Planning Commission

Request for Deputation / Presentation

Committee: Statutory Planning Committee

Meeting Date: Wednesday, September 23, 2026

Deputation Information

Type of Deputation: Verbal Deputation

Agenda Item: Item 3.4

Agenda Title: Draft Local Planning Strategy

Is the presentation in support or against the report recommendation? (contained within the agenda) Against

Presenter Information

Name of Presenter Russell & Judy Burnett

Organisation: Joint owners

Email Address:

Mobile Number:

Special Requirements: In the interest of accessibility and inclusion for people with disabilities, please identify if you have any special requirements: No

Presentation Information

Brief Outline of Deputation:

Removal of Landscape Enhancement zone & replaced with Rural Residential Zone

Will there be a PowerPoint Presentation? No

Please attach any documents here

PDF Stratgic Planning Submission.pdf

Acknowledgements

In submitting this request, you acknowledge that your request form and presentation content will be published to the Planning Online website as part of the agenda.

Yes

I acknowledge that if my request or accompanying documents are not submitted within the required timeframe, they will not be accepted.

Yes

Please attach all accompanying documents to this request. Late submissions will not be accepted. Handouts or PowerPoints will not be accepted on the day of the meeting.

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Submission – Draft Local Planning Strategy (TPS/2963)

R & J Burnett – 144 Emerald Drive, Carabooda
Request: Rezone Lot 54 from Landscape Enhancement to Rural Residential

1. Background

We request that Lot 54 be removed from the Landscape Enhancement Zone and included within the Rural Residential Zone.

The City's own planning history supports this outcome. Some 25 years ago the SPC approved the rezoning of the adjoining land to Rural Residential with an accompanying Structure Plan. This Structure Plan made provision for Lot 54 to ultimately be Rural Residential. Emerald Drive was planned, to extend to Lot 54, not a cul-de-sac. The unconstructed section and temporary limestone turnaround have remained in place for over 20 years, awaiting subdivision of Lot 54.

The intended east–west link (Doogarch Road) also anticipated vesting of land on Lot 54 at subdivision stage.

The current Landscape Enhancement boundary is therefore inconsistent with historic planning intent and should be corrected.

2. DPLH Officer Comments – Response

The officer's comments Support the City's position that: Landowners are not compelled to undertake the land uses suggested under the zone & may use their land for rural living in the same way that those in the Rural Residential Zone currently do.

This interpretation is incorrect. Zoning must be based on zoned land use, not the preferences of the current owner. Planning is not intended to operate on the assumption that land use remains static.

The officer states:

"An action of the Strategy is to investigate & review the boundaries of the Landscape Enhancement Zone."

This submission is precisely such a request — to review and correct the boundary.
It is therefore inappropriate to dismiss the submission on the basis that the Strategy will "investigate" the boundary at some later time. The Strategy invites this review; our submission provides the evidence.

The officer appears to rely on the North West Sub-regional Planning Framework to justify maintaining the Landscape Enhancement Zone. However it can be argued that this strategy is also low level & interestingly Landscape Enhancement Zone is also not identified in the Strategy. The

Framework does not identify Landscape Enhancement as a strategic zone. The officer's reliance on low-level strategy is selective and inconsistent.

3. Location, Access and Land Use Compatibility

Tourist-oriented uses permitted in the Landscape Enhancement Zone — such as micro-breweries, restaurants, and reception centres — are incompatible with the existing Rural Residential area.

Emerald Drive cannot accommodate & is not designed to take additional vehicles and was designed for low-density rural living, not high-traffic and commercial uses.

I understand that in Ascot there is a hotel/restaurant that has to close at 9pm, due to noise & traffic conflicts with existing residents. Allowing high-impact tourist uses adjacent to Rural Residential land will create predictable conflict, poor amenity outcomes, and potential business failure due to noise and traffic complaints.

Good planning anticipates and avoids incompatible land uses.

4. Landscape Protection

Rural Residential zoning provides greater landscape protection than Landscape Enhancement.

Most tourist uses will require extensive clearing. Rural Residential Zone will have building envelopes strategically located to minimize any landscape impact. Tourist uses require large building footprints, car parking, and vegetation removal. Rural Residential development uses defined building envelopes, retains vegetation, and protects landscape character.

Rezoning Lot 54 to Rural Residential enhances landscape protection.

5. Bushfire Risk and Emergency Access

This is a critical issue.

At any given time there could be in excess of 1,000 patrons trapped in Bernard Road which only has 2 entries. Both entries connect to Wanneroo Road adjacent to a National Park, with the southern entry traversing 1.5 km of bushland.

This presents a significant bushfire entrapment risk.

Lot 54 provides a unique opportunity to improve emergency access. The potential development of Lot 54 for Rural Residential purposes may provide the opportunity to create such a link from Georgjemma Place, at no cost to the City."

This benefit was not considered in the officer's report, which is a serious omission.

Rezoning Lot 54 to Rural Residential supports improved bushfire safety and emergency connectivity.

NORTH WEST STRATEGIC FRAMEWORK

The Framework states that rural residential development can be inefficient. However, this is not the case with Lot 54.

Carabooda contains only 40 Rural Residential properties. The North West Corridor lacks rural lifestyle options, despite being expected to attract professionals working in Yanchep and Alkimos which are identified as Strategic and secondary centres respectively

To attract professionals, you need to provide adequate lifestyle choices which Lot 54 will do. If Lot 54 remains Landscape Enhancement, professionals seeking rural lifestyle properties may purchase land intended for tourist development, sterilising future tourism opportunities.

The Strategy acknowledges over 10,000 ha of rural residential land across Perth and Peel — but none in the North West Corridor.

Lot 54 provides a strategically located rural lifestyle option without compromising regional planning objectives.

CONCLUSION

The current Landscape Enhancement boundary is inconsistent with:

- Historic planning intent
- Existing Road network
- Bushfire safety requirements
- Landscape protection
- Land use compatibility
- Strategic lifestyle needs in the North West Corridor

Rezoning Lot 54 to Rural Residential is the logical, defensible, and strategically aligned outcome.

We formally request that Lot 54 be rezoned from Landscape Enhancement to Rural Residential, consistent with historic planning intent, improved bushfire safety, landscape protection, and the City's long-term planning framework.

"It's time to stop kicking the can down the road."

Submitted for favourable consideration.

WAPC Western Australian Planning Commission

Request for Deputation / Presentation

Committee: Statutory Planning Committee

Meeting Date: Wednesday, September 23, 2026

Deputation Information

Type of Deputation: Verbal Deputation

Agenda Item: 3.4

Agenda Title: City of Wanneroo Draft Local Planning Strategy (TPS/2963)

Is the presentation in support or against the report recommendation? (contained within the agenda) Support

Presenter Information

Name of Presenter Raelee Houden

Organisation: City of Wanneroo

Email Address:

Mobile Number:

Additional Attendees

Attending online from the City of Wanneroo:
Chris Leigh - Director Planning & Sustainability
Pas Bracone - Manager Strategic Land Use Planning & Environment
Mandy Pearce - Coordinator Strategic Land Use Planning
Xin Xu - Senior Planner

Special Requirements: In the interest of accessibility and inclusion for people with disabilities, please identify if you have any special requirements: No

Presentation Information

Brief Outline of Deputation:

The City of Wanneroo supports the Department's recommendation to endorse the Draft Local Planning Strategy without modification. The Strategy provides a long-term framework for growth, housing,

employment, environmental management and infrastructure planning.

Key submission themes included rural land use, tourism, caravan parking, retail planning and bushfire risk. The City supports the Department's recommended responses to these issues, noting that many detailed land use matters are more appropriately considered through future statutory planning processes.

Note: Could the City please be provided with a Zoom link to join the meeting, so that we may be available to respond to any questions the Statutory Planning Committee may have regarding the Strategy.

Will there be a PowerPoint Presentation? No

Please attach any documents here City of Wanneroo Deputation to Statut... .pdf

Acknowledgements

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File Ref: 2897V007
Enquiries: Raelee Houden – 9405 5872

21 September 2026

Ms Emma Cole
Chair of the Western Australian Planning Commission
2/140 William Street
PERTH WA 6000

CITY OF WANNEROO STATEMENT TO STATUTORY PLANNING COMMITTEE

Dear Chair and Commissioners,

The City of Wanneroo appreciates the opportunity to provide this statement to the Statutory Planning Committee regarding the endorsement of the City's Draft Local Planning Strategy.

The City supports the Department's recommendation that the Draft Local Planning Strategy be endorsed without modification.

The recommendation and the Strategy itself is reflective of a comprehensive and collaborative planning process, informed by State planning policy, local planning considerations and community expectations. Throughout its preparation and assessment, the City has worked closely with the Department of Planning, Lands and Heritage to ensure the document provides a clear long-term direction for growth and development while remaining aligned with the broader State planning framework.

The City values the constructive relationship established with the Department throughout this process. The Department’s input has helped ensure the Strategy remains focused on its role as a high-level document that identifies key planning objectives and priorities, while appropriately balancing local aspirations with regional and State interests. The City is also grateful for the Department’s support for the Strategy’s approach to managing land use and development to accommodate future growth, particularly across the key areas of housing, the economy and employment, the environment, and transport and infrastructure. This support provides confidence that the Strategy establishes a sound and coordinated basis for guiding the City’s long-term growth.

The public advertising process provided valuable input on several key matters, including the future of rural land in North Wanneroo, opportunities for tourism and other compatible land uses, the role of rural land along Wanneroo Road in Neerabup, caravan parking in rural areas, retail floorspace planning and bushfire risk. The City and the Department have worked constructively through the issues raised, with the Modified Strategy responding where appropriate while maintaining alignment with State planning policy and the Strategy's high-level purpose. This includes retaining further investigation and advocacy actions, clarifying matters to be addressed through future statutory planning processes, and ensuring that environmental, rural amenity and bushfire considerations continue to inform subsequent proposals.

Importantly, the Strategy is not intended to resolve every future land use issue or introduce detailed statutory controls. Rather, it provides the overarching direction to guide future decision-making, with specific matters to be considered through the appropriate statutory planning processes as they arise. In this regard, the City supports the Department's approach to matters such as caravan parking within rural areas. The City considers it appropriate that these types of proposals continue to be assessed on their individual planning merits rather than being determined at the strategic planning level. This approach maintains the long-term intent of rural areas while retaining flexibility to respond to changing community needs and emerging land use demands.

As the metropolitan region continues to grow and urban development patterns evolve, planning frameworks must be capable of responding to new opportunities and challenges. The Strategy recognises this need by providing a clear strategic direction while allowing sufficient flexibility to consider future proposals in a transparent and balanced manner. At the same time, it supports the ongoing protection of important environmental, agricultural and rural values. The City considers the Strategy to be a sound and coordinated framework for managing future growth, supporting economic development, protecting key assets and responding to community expectations. It also provides an important basis for future reviews of the City's statutory planning framework and local planning policies.

The City remains committed to working collaboratively with the Department during implementation of the Strategy. Where additional guidance or assessment criteria are needed, these matters can be addressed through future scheme amendments, local planning policies or other statutory planning mechanisms to ensure consistent and transparent decision-making. For these reasons, the City supports the Department's recommendation and respectfully requests that the Statutory Planning Committee endorse the Draft Local Planning Strategy without modification.

Thank you for your consideration.

Yours sincerely,



Chris Leigh
DIRECTOR PLANNING & SUSTAINABILITY
City of Wanneroo

WAPC Western Australian Planning Commission

Request for Deputation / Presentation

Committee: Statutory Planning Committee

Meeting Date: Wednesday, September 23, 2026

Deputation Information

Type of Deputation: Verbal Deputation

Agenda Item: 3

Agenda Title: Part 11B Development Application – Mixed Use Development at Lot 572 (No. 200) West Coast Highway, Scarborough – Determination and Development Application – Works within Planning Control Area abutting Lot 572 (No. 200) West Coast Highway, Scarborough – Determination

Is the presentation in support or against the report recommendation? (contained within the agenda) Against

Presenter Information

Name of Presenter Nick Bertone

Organisation: City of Stirling

Email Address:

Mobile Number:

Additional Attendees

Shaun Wheatland, A/ Service Lead Planning, City of Stirling

Special Requirements: In the interest of accessibility and inclusion for people with disabilities, please identify if you have any special requirements: No

Presentation Information

Brief Outline of Deputation:

As attached

Will there be a PowerPoint Presentation?	Yes
Please attach any documents here	City of Stirling Deputation Powerpoint.pdf

Acknowledgements

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City of Stirling

Deputation to Statutory Planning Committee
23 September 2026

Nick Bertone, Coordinator Planning Services
Shaun Wheatland, A/ Service Lead Planning

Site History & City of Stirling's Recommendation

- On 18 December 2023, an application was refused by Development WA, of which the current proposal has a high degree of consistency with.
- On 19 March 2026, the City provided its formal referral comments to the Department of Planning, Lands and Heritage (DPLH) advising that the proposed development was not supported, due to adverse impacts associated with the proposed building height, car parking shortfall, commercial delivery and servicing, waste collection, and engineering matters.
- On 11 August 2026, the DPLH forwarded the City a revised application package for consideration. On 25 August 2026, the City provided its referral response to the revised application package, advising that the City did not support the proposed development noting that while some modifications have been introduced, previous key concerns remained, and that it was considered that these matters cannot be addressed by conditions of approval and should be resolved prior to final determination of the proposal.
- The City does not support the proposal at this point in time and considers the key concerns are not capable of resolution through conditions. Notwithstanding this position, 'without prejudice' conditions and advice notes have been provided to the DPLH should approval be granted.

Building Heights

- The proposed building massing is inconsistent with the strategic vision for the Scarborough Centre.
- The development has not demonstrated a level of design excellence reflective with the requested variations.
- The proposal has not demonstrated to satisfy the design intent of the Scarborough Design Guidelines, particularly in relation to protecting coastal views, privacy, solar access, natural ventilation and minimising perceived building bulk.
- The development adversely impacts the east-west view corridors envisioned by the Scarborough Masterplan.
- The scale and massing of the building is not proportionate to the anticipated future streetscape character and approved built form context.



Figure 1: Comparison of scale and bulk compared to neighbouring property (modified extract from Development Plans)

Building Heights and View Corridors

6.1 Master Plan Drivers

1. Transform Reposition Scarborough as a contemporary beach destination experience through new beach front attractions (consolidated and well protected) and contemporary urban experiences away from the water's edge.

2. Activate Create a series of flexible and robust open spaces which respond to the existing local assets and topography, cater for active and passive uses, and are well serviced by quality amenities and infrastructure.

3. Arrival Create a boulevard environment along Scarborough Beach Road which prioritises pedestrians over cars and facilitates opportunities for improved alfresco dining, better shade and amenity and enhanced public transport and cycling facilities.

4. Enhance Improve West Coast Highway and The Esplanade through landscape, new intersections and traffic calming whilst respecting the traffic movement function of these major roads.

5. Connect Improve east-west connectivity across the site. Enhance view corridors and support streetscape improvements on key coast links. Seek to create new east-west links through large blocks as part of new development proposals.

6. Enable Provide opportunities for a more diverse housing mix, which enables high quality infill, attracts investment and optimises underutilised sites.

7. Revitalise Encourage a vibrant mixed-use zone (residential and commercial) to serve residents and visitors and support the local economy.

8. Renew Enhance high quality redevelopment to support community's housing needs, attract investment and optimise underutilised sites.

9. Protect Protect the natural setting, environmental richness and cleanliness of Scarborough Beach providing controlled access and supporting rehabilitation.



Parking

- The proposal provides 33 visitor parking bays, representing a 50% shortfall against the 66 bays required.
- Scarborough experiences significant demand for public parking from residents, visitors and coastal users.
- All visitor parking bays are located behind a secured garage door and require advance booking, limiting their accessibility and convenience.
- Reliance on a management-based parking solution creates uncertainty regarding the ongoing availability and effectiveness of visitor parking provisions.
- Where visitor parking is inaccessible or inadequately managed, demand is likely to be displaced to the surrounding public parking network.
- Displacement would further increase pressure on existing on-street and public parking resources, exacerbating current parking constraints within the locality.

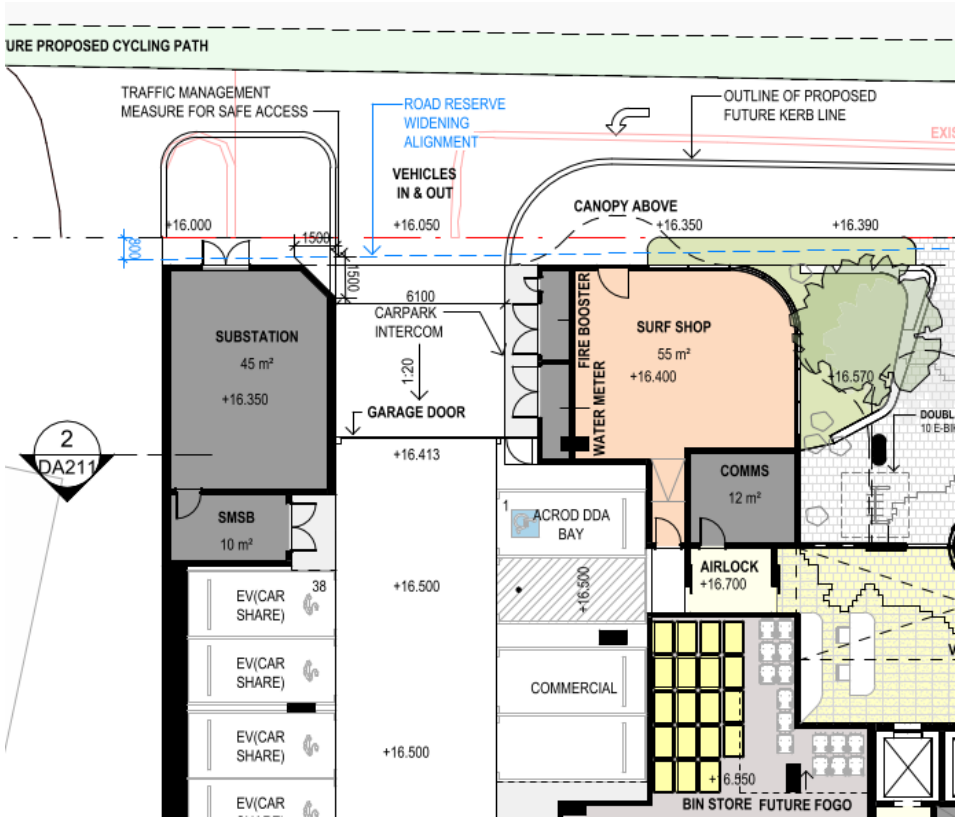


Figure 2: Location of garage door to car parking area (extract from Development Plans)

Access

- Current waste vehicle manoeuvring arrangements present operational and safety concerns.
- The City is required to service the development and must be able to do so safely and efficiently.
- Access arrangements require complex manoeuvres that are not considered acceptable at this point in time.
- Modifications to the design are required to facilitate safe waste collection operations.
- The proposal has not adequately resolved servicing and access requirements.

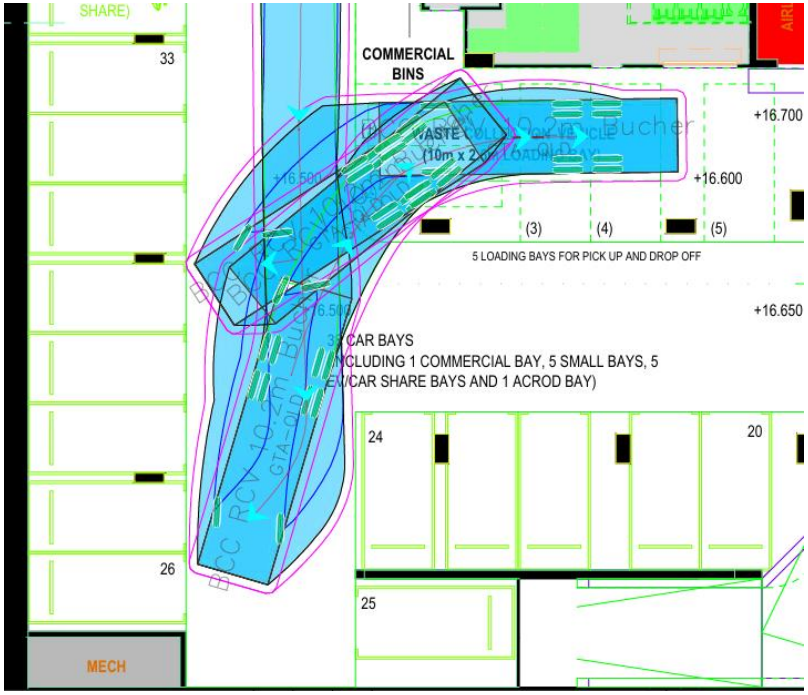


Figure 3: Waste Truck Maneuvering (extract from Transport Impact Assessment)

Conclusion

- The development should not be supported as:
  - The proposed building massing is inconsistent with the strategic vision of the Scarborough Master Plan and the requirements of the Scarborough Design Guidelines
  - The overall profile of the building is not proportionate to to their size and scale of other approved developments, which would further exacerbate the massing of the development and bulk within the future streetscape.
  - The development adversely impacts the east-west view corridors envisioned by the Scarborough Masterplan.
  - The lack of residential visitor parking within the development and questions around its accessibility, would result in the parking demand being displaced to the surrounding public parking network.
  - On-site waste vehicle manoeuvring and access to the site for delivery vehicles present operational and safety concerns.

Thank you

WAPC Western Australian Planning Commission

Request for Deputation / Presentation

Committee: Statutory Planning Committee

Meeting Date: Wednesday, September 23, 2026

Deputation Information

Type of Deputation: Verbal Deputation

Agenda Item: 3.5

Agenda Title: Part 11B Development Application - Mixed Use Development at Lot 572 (No. 200) West Coast Highway, Scarborough - Determination and Development Application - Works within Planning Control Area abutting Lot 572 (No. 200) West Coast Highway, Scarborough - Determination

Is the presentation in support or against the report recommendation? (contained within the agenda) Support

Presenter Information

Name of Presenter Lidija Langford

Preferred pronouns/title she/her

Organisation: Rowe Group

Email Address:

Mobile Number:

Additional Attendees

Mr Larry Sperling - Meadpoint (landowner representative)
Mr Greg Rowe - Rowe Group
Mr David Maiorana - Rowe Group
Mr William Schofield - Plus Studio
Mr Desmond Ho - Stantec

Special Requirements: In the interest of accessibility and inclusion for people with disabilities, please identify if you have any special requirements: No

Presentation Information

Brief Outline of Deputation:

Ms Lidija Langford will speak in support of the officer recommendation, providing brief context and responses to key issues.

Will there be a PowerPoint Presentation?

Yes

Please attach any documents here

8773_20260917_PP_200WCH_LL ARE….pdf

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Part 11B Development Application – Mixed Use Development At Lot 572 (No. 200) West Coast Highway, Scarborough

Support for SPC Meeting Agenda – Item 3.5

PRESENTED BY:

Lidija Langford, Rowe Group

23 SEPTEMBER 2026

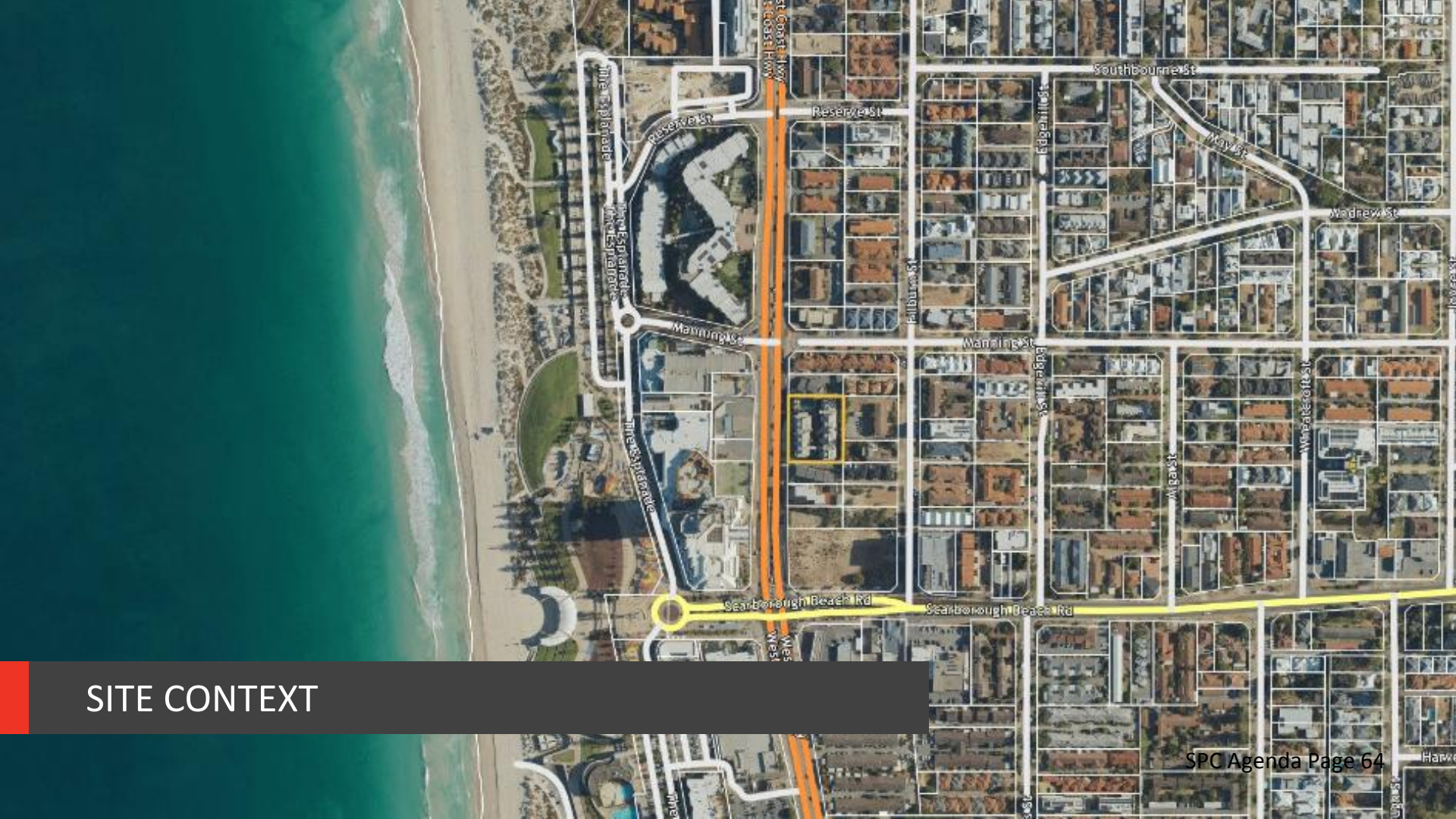
ROWE GROUP 35 YEARS 1991 – 2026

PROPOSAL

Mixed Use Development:

- 246 Build-to-Rent Apartments
- 37 Affordable Dwellings
- Ground floor retail tenancy & management office
- Building height of 26 storeys (above NGL), incl. 3-4 storey podium
- 222 car parking bays (incl. 5 car share bays)





SITE CONTEXT



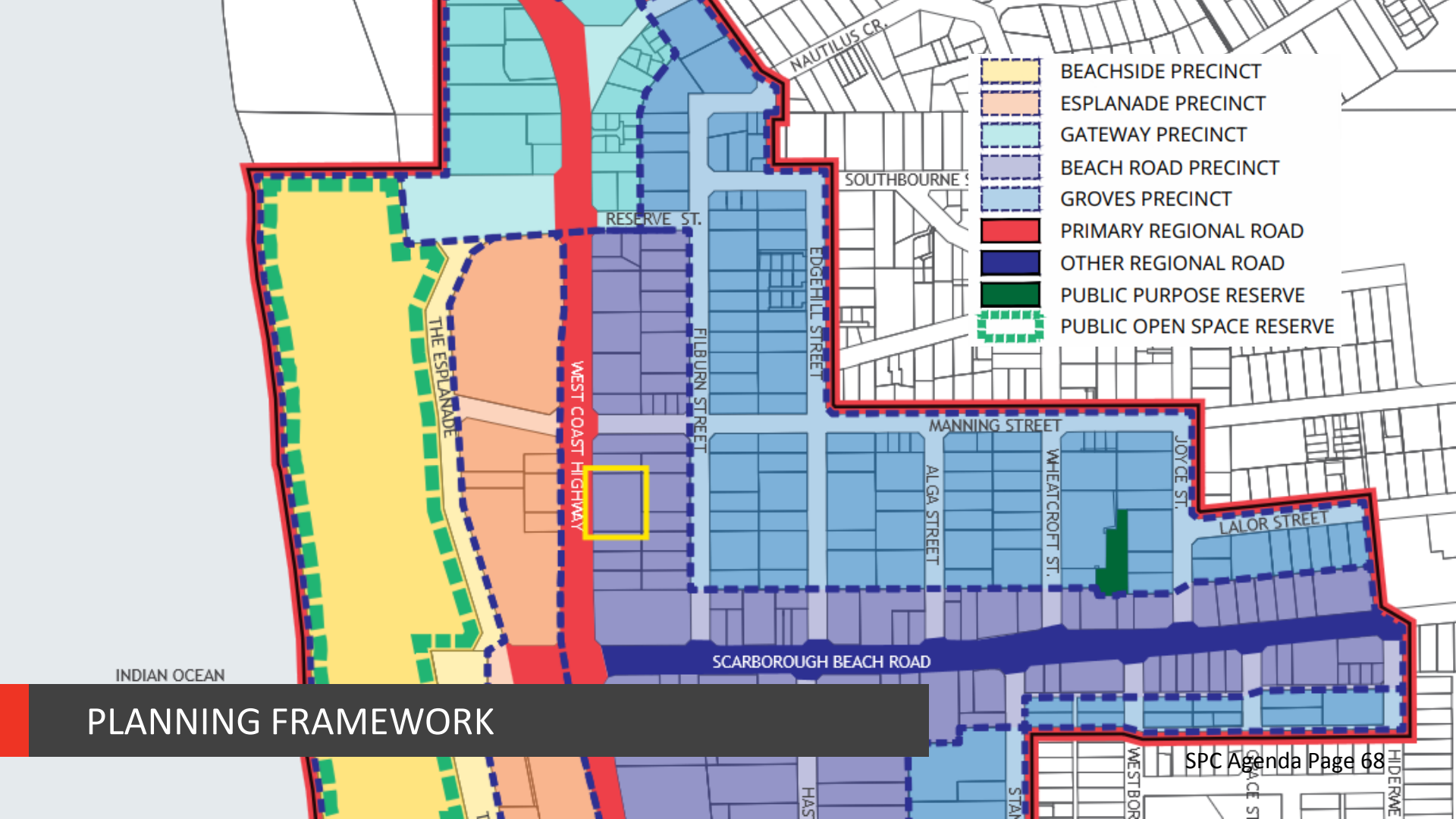
EXISTING CONTEXT



EXISTING CONTEXT



EXISTING CONTEXT



PLANNING FRAMEWORK

LEGEND

Building heights (max):

12 storeys / 43m
*18 storeys / 64m**

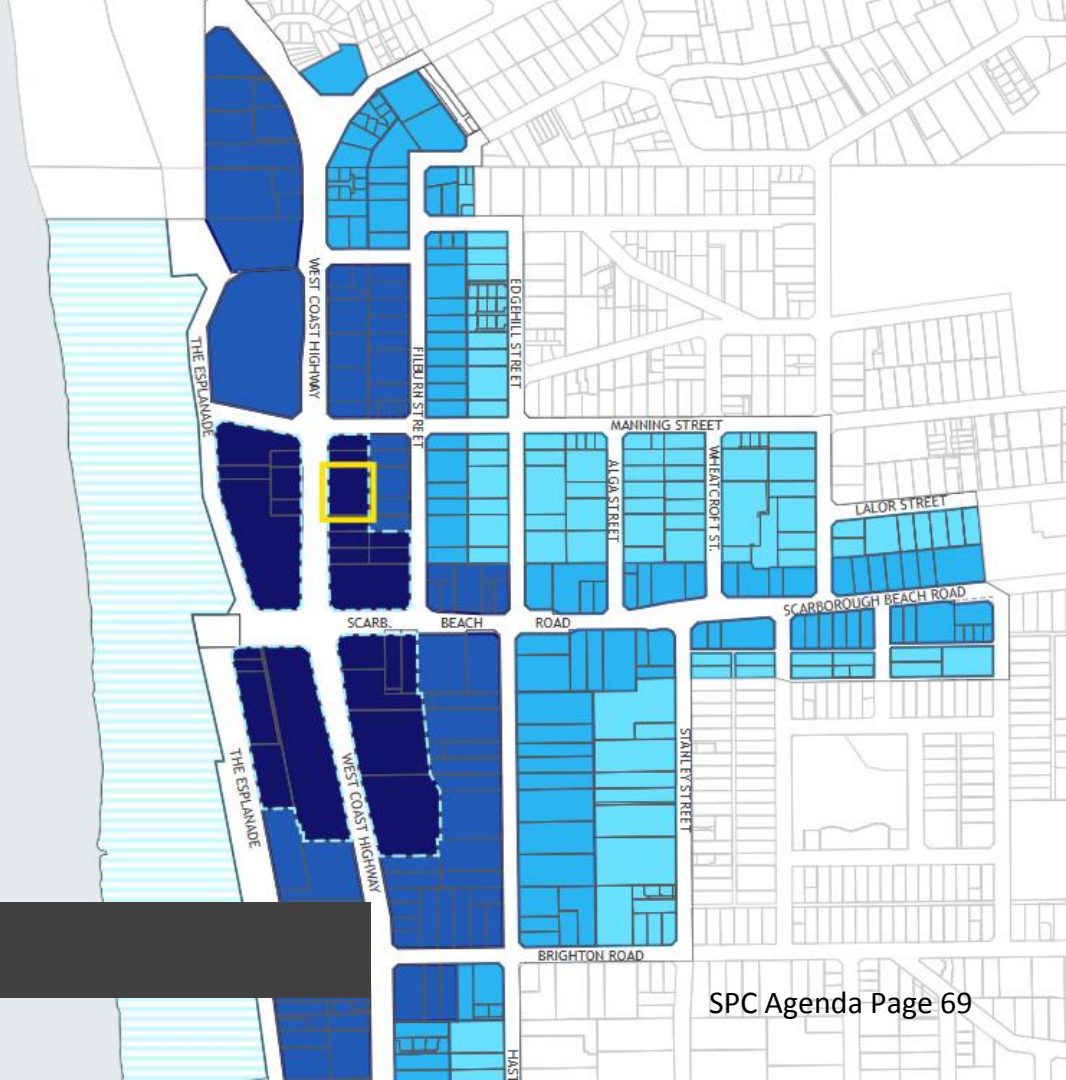
8 storeys / 29m
*12 storeys / 43m**

4 storeys / 15m
*6 storeys / 22m**

3 storeys / 11.5m

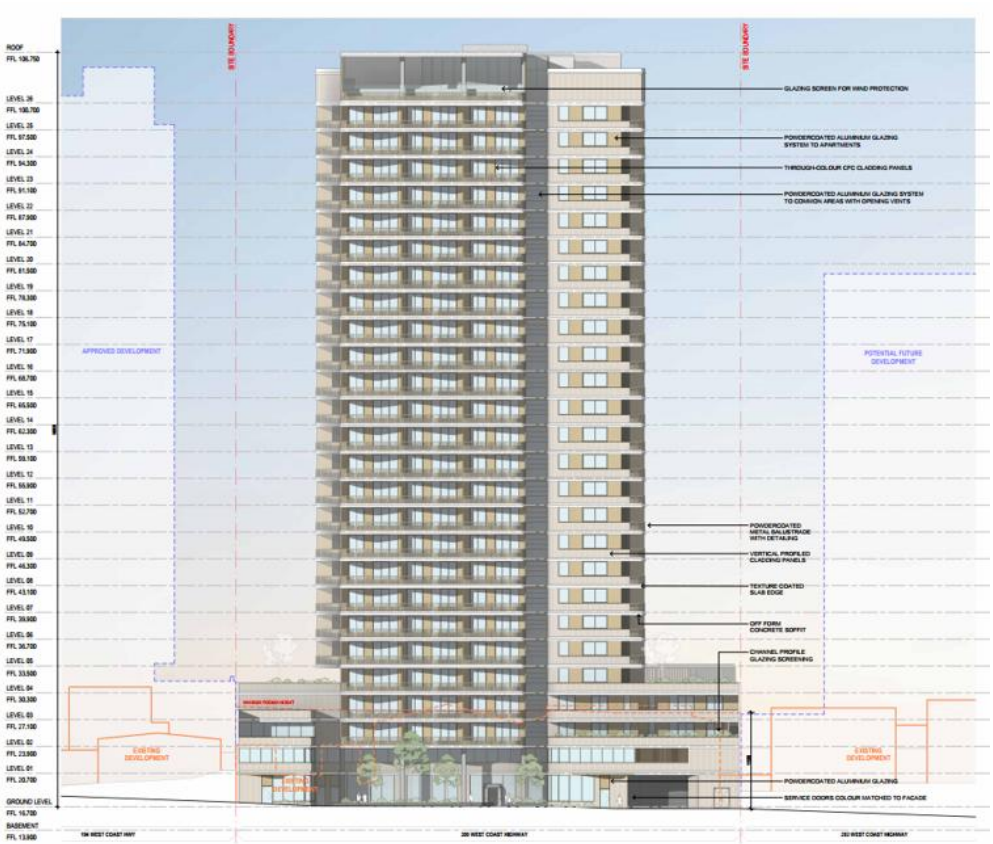
1 storey / 4m – 2 storeys / 8m
refer section 7.1 Beachside Precinct

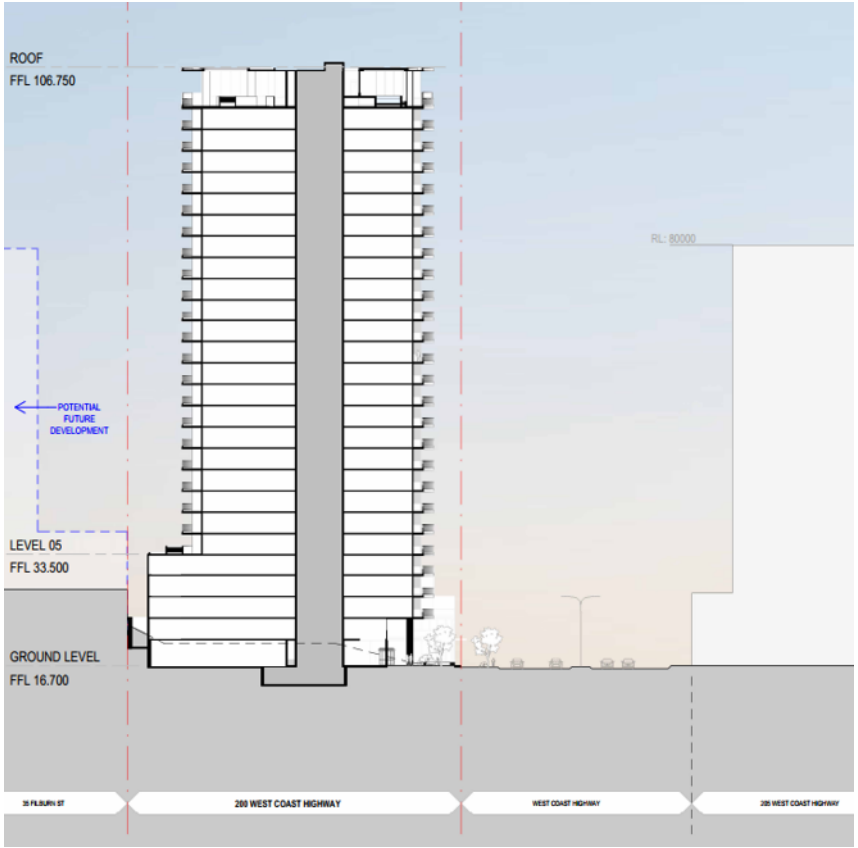
** additional storeys / height which may be permissable subject to compliance with additional development provisions. Refer to section 4.1*



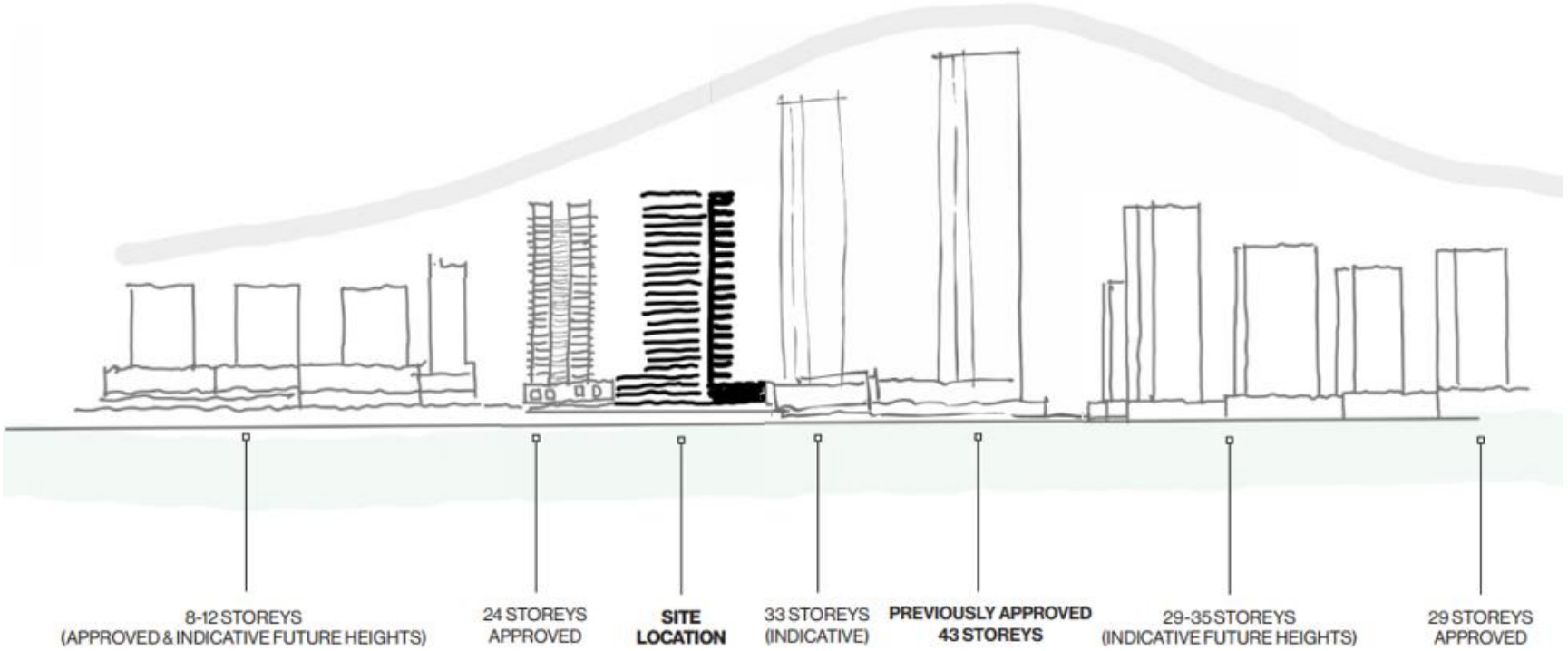
PLANNING FRAMEWORK

BUILDING HEIGHT

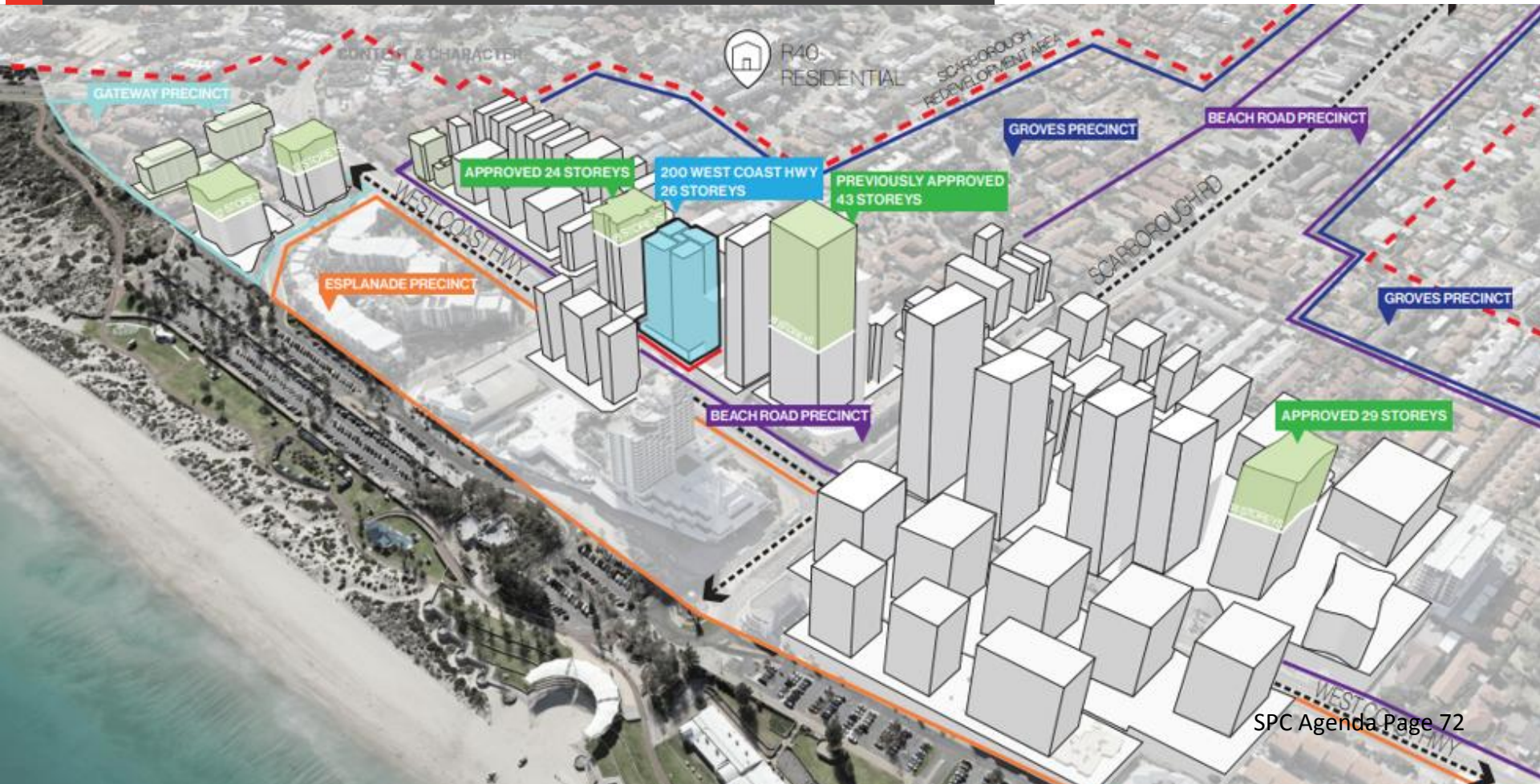


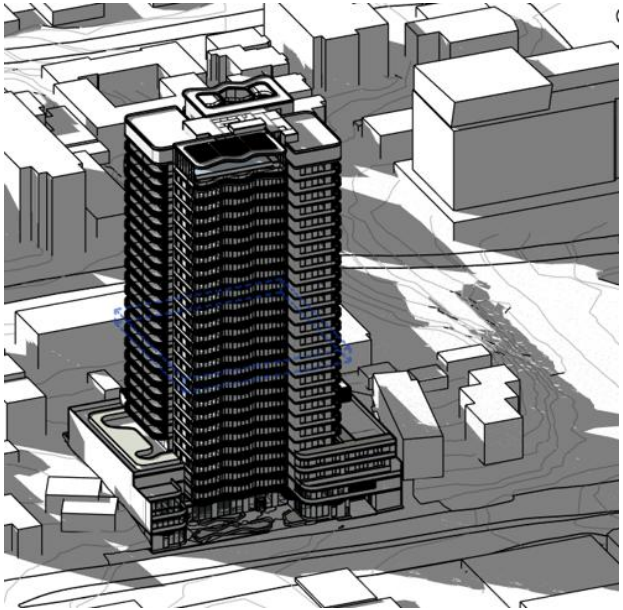


BUILDING HEIGHT

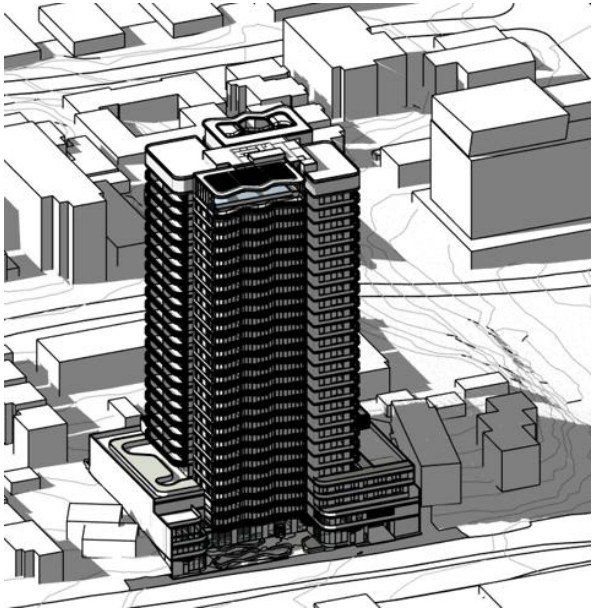


BUILDING HEIGHT

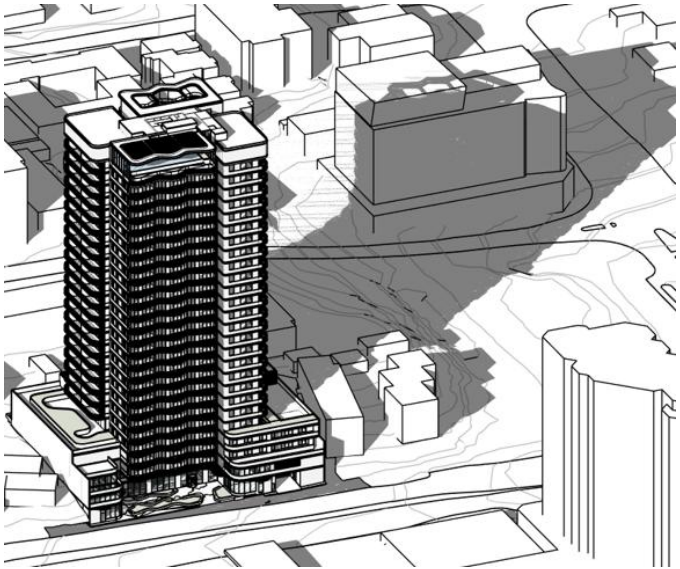




9am



12pm



3pm

OVERSHADOWING



VIEW CORRIDOR



VIEW CORRIDOR



VIEW CORRIDOR

CONCLUSION

- SDRP Support & Design Excellence
- Building Height
  - Compatibility & Vision Alignment
  - Topography & Context
  - View Corridors
  - Overshadowing
- Acceptable car parking & storage provision
- Balanced wind mitigation approach
- West Coast Highway widening unaffected



ROWE GROUP 35 YEARS 1991 – 2026

THANK YOU

Request for Deputation / Presentation

Committee: Statutory Planning Committee

Meeting Date: Wednesday, September 23, 2026

Deputation Information

Type of Deputation: Written Deputation

Agenda Item: 3.1

Agenda Title: Local Structure Plan - Clifton Street North, Kelmscott (2026) Determination (SPN/2357)

Is the presentation in support or against the report recommendation? (contained within the agenda) Support

Presenter Information

Name of Presenter Miranda Bowman

Organisation: Harley Dykstra

Email Address:

Mobile Number:

Special Requirements: In the interest of accessibility and inclusion for people with disabilities, please identify if you have any special requirements: No

Presentation Information

Brief Outline of Deputation:

Providing support for officer recommendation and including additional context regarding pre-lodgement process.

Will there be a PowerPoint Presentation? No

Please attach any documents here

Deputation - Item 3.1 - SPC Meeting - … .pdf

Acknowledgements

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Good morning Chairperson and members of the commission in attendance today.

Thank you for the opportunity to provide this written deputation in respect of the proposed Local Structure Plan for Clifton Street North, Kelmscott.

We would like to thank the DPLH officers for their support of the proposed application subject to modifications and for their assistance throughout the lodgement process.

To assist with the commission with determination we would just like to provide some history and context to the pre-lodgement process which has occurred over the past several years since the project was first raised with the City of Armadale in 2016.

Following receipt of the City's schedule of submissions following advertisement of the structure plan, significant amendments were undertaken to the proposed plans and all supporting technical reports.

This process was underpinned by meetings with the City of Armadale and frequent phone correspondence. Several extensions of time were sought over this period as a number of issues were being resolved.

Ultimately, a detailed response to submissions alongside updated plans and technical reports was submitted to the City in August 2025. Following this lodgement, it was confirmed within numerous calls with the City that the officers were assessing the updated information and still held some concerns in relation to public open space distribution.

It was suggested by the City that the applicant should undertake additional advertisement with the other landowners in the structure plan area to confirm whether they were satisfied with the proposed allocation.

It was advised to the City that this was not considered to be an appropriate exercise to be undertaken by the applicant and full support was given to the City to undertake this additional advertisement themselves.

No confirmation was provided that this would be undertaken and after months of follow-up correspondence seeking the status of the application it was ultimately advised that the application was to be assessed at the November 2025 Ordinary Council Meeting.

It then came as a great surprise when reviewing the agenda to discover that the City had refused to acknowledge the updated materials despite it addressing every submission and requested modifications from the City as well as local residents. For instance, the modified plans included a Foreshore Management Plan and ensured the retention of almost every significant tree on site, which a was key concern of many of the public submissions.

We therefore believe that the City has not given a fair assessment of the application despite having all of the updated information in their possession from August until November when it went to council.

We find the City's following comments as contained in the November 2025 OCM agenda to be a failing of the local governments duties to re-advertise a structure plan if they deem this necessary, as required under the 2015 Planning Regulations:

The applicant lodged Revised Structure Plan documents on 8 August 2025, however they are not considered acceptable on the grounds that the applicant has not engaged with the other landowners in the Structure Plan area in the preparation of the Revised Structure Plan on the additional POS and foreshore provision.

It would be greatly appreciated if the commission could please take the above context into consideration during your determination of the application.

As stated above, the applicant is in full support of all of the modifications that have been proposed by DPLH officers and are eager to see this project proceed towards development of much needed housing supply.

Thank you for your time.

WAPC Western Australian Planning Commission

Request for Deputation / Presentation

Committee: Statutory Planning Committee

Meeting Date: Wednesday, September 23, 2026

Deputation Information

Type of Deputation: Written Deputation

Agenda Item: TPS/2963

Agenda Title: City of Wanneroo Local planning Strategy

Is the presentation in support or against the report recommendation? (contained within the agenda) Against

Presenter Information

Name of Presenter Paula Lukatelich

Organisation: Affected Neighbours

Email Address:

Mobile Number:

Special Requirements: In the interest of accessibility and inclusion for people with disabilities, please identify if you have any special requirements: No

Presentation Information

Brief Outline of Deputation:

We are against the Storage of caravan,boats and trailers on rural land as we have had to put up with for 6 years even though a refusal was gazetted in 2021.
we are asking WAPC to look into this scheme and its affect on rural land such as ours.
We beleive after all we have been through in the past 5 years we need to be heard and listen to. The toll on the enviromental side of this type of storage has never been taken seriously, we hope it is now.

Will there be a PowerPoint Presentation? No

Please attach any documents here

SPC_2696.docx

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Deputation to the Statutory Planning Committee

Submission regarding vehicle and caravan storage provisions in Rural and Rural Resource zones **Submission date: 19 September 2026** **Submission details**	**[Grab your reader's attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]**
Names	Paula and Anthony Lukatelich, Tracey Duffy
Capacity	Affected rural landowners and neighbours for the past six years
Address / Property	240 and 258 Neaves Road, Mariginiup
Position	Strong objection to the inclusion of vehicle and caravan storage provisions in Rural and Rural Resource zones

1. Objective of the Deputation

The City of Wanneroo's statutory planning material states on more than one occasion that the storage of caravans, boats and trailers is not permitted on Rural and Rural Resource land. The submitters dispute the practical application of that position. Over the past six years, repeated requests have been made for enforcement action in relation to an alleged unlawful storage yard on adjoining land. Notwithstanding the Minister for Planning's refusal of the relevant proposal in 2021, the use appears to have continued and expanded with the City's knowledge.

The submitters therefore request that the Statutory Planning Committee excise and reject any strategic provisions or policy mechanisms in the City of Wanneroo's draft framework that would permit the parking or storage of caravans, boats and trailers within Rural and Rural Resource zones. Such uses have the potential to materially affect neighbouring amenity, including privacy, outlook, rural character and environmental values. The submitters have experienced these impacts over an extended period while objecting to an ongoing alleged unlawful use adjoining their properties.

The objection is based on planning considerations relating to environmental impacts, rural amenity, and residential privacy.

The matter also raises concerns about local governance and whether local strategic updates may be running inconsistently with an explicit Ministerial refusal.

2. Planning Grounds for Objection

2.1 Ministerial Precedent: Amendments 198 and 199

On 9 December 2021, the Minister for Planning refused both Amendment 198 and the Shire's Amendment 199. Those amendments looked to alter zoning provisions to permit vehicle storage and car park operations on rural lots. Although there may be demand for caravan, boat and trailer storage, the affected narrow rural lots—and the adjoining property—are unsuitable for this use and do not meet the relevant planning criteria.

The submitters are concerned that the land use that has occurred over the past six years may indicate a broader policy direction for similar uses across East Wanneroo.

The submitters also note concerns that the impacts experienced by adjoining landowners may not have been given adequate weight in comparison with broader community or operator interests.

The impacts are borne most directly by adjoining landowners. The affected properties are also likely to be influenced by future urbanisation. In that context, the submitters look to preserve the existing rural lifestyle, privacy and outlook for the remaining period in which those rural values continue to apply. The submitters have also received correspondence about the proposed acquisition of part of their property for Franklin Road, including land having two tagged black cockatoo nesting trees.

2.2 Status of Amendment 230

In early November 2024, the submitters were advised that the adjoining landowners had sent Amendment 230 for an additional land use, described as a car park. Almost two years later, the status, progress and outcome of that amendment remain unclear to the submitters. The advice received shows that the City of Wanneroo placed non-compliance action on hold, closed the compliance file, and treated the submitted amendment as a basis for not progressing enforcement action following the Minister's refusal. Concerns about tree removal and hardstand material were treated as forming part of the development plan, with the works described by Compliance as tree trimming. This raises questions about how the city would monitor proposed "light touch" car parks on Rural land and prevent comparable outcomes elsewhere, including situations like that observed on Rousset Road.

2.3 Characterisation as "Light Touch" Land Use

The City's draft framework appears to characterise the storage of vehicles and trailers as a "light touch" land use capable of being reversed. The submitters do not accept that

characterisation. Activities such as stripping topsoil, clearing vegetation, removing or damaging trees, and laying hardstand material may have substantial and lasting impacts, particularly in the context of the Gnangara groundwater system and the City's strategic environmental goals.

3. Conclusion and Request to the Committee

Allowing this type of additional land use in Rural areas of Wanneroo and Mariginiup based on operator convenience or lower operating costs would risk undermining the purpose and integrity of designated Light and General Industrial zones. It would also create an undesirable strategic planning precedent for rural land in neighbouring local governments and across the broader East Wanneroo area.

For these reasons, the submitters respectfully request that the Statutory Planning Committee give substantial weight to the Ministerial refusal, the unresolved compliance history, the impacts on adjoining rural landowners, and the broader strategic consequences of permitting vehicle and caravan storage in Rural and Rural Resource zones.

As of 17 September 2026, the submitters were awaiting resolution of a Ministerial section 211 appeal lodged by their legal representative in September 2025 concerning this matter. The existence of that unresolved appeal further supports the need for caution before any strategic provision is adopted that may regularise or encourage similar uses.

The submitters therefore ask that any provisions, policy mechanisms or strategic references that would allow or support vehicle, caravan, boat or trailer storage on Rural or Rural Resource land be removed or rejected. The matter should not be characterised solely as a private neighbour dispute; it raises substantive issues of planning consistency, compliance, land-use suitability, rural amenity, environmental impact and strategic precedent



2022 top photo

Trees removed and hard base footprint doubled in size





All the clients can see directly into Tracey's Home entrance and the vans start 7 mts from her driveway into garage





Before they trimmed (as City put it)

We could not see Tracey's house clearly





This close to Tracey's driveway into her home





of the time as Our blind and shutters are closed 90% this is our view from all windows, patio and doors.





Just a Trim ??





DUST AND FIRES NOT AN ISSUE EITHER ??

WAPC Western Australian Planning Commission

Request for Deputation / Presentation

Committee: Statutory Planning Committee

Meeting Date: Wednesday, September 23, 2026

Deputation Information

Type of Deputation: Written Deputation

Agenda Item: 3.4

Agenda Title: City of Wanneroo Draft Local Planning Strategy

Is the presentation in support or against the report recommendation? (contained within the agenda) Against

Presenter Information

Name of Presenter Megan DOWDALL

Organisation: Local Resident & Landowner

Email Address:

Mobile Number:

Special Requirements: In the interest of accessibility and inclusion for people with disabilities, please identify if you have any special requirements: No

Presentation Information

Brief Outline of Deputation:

I am against the following proposed amendments
City of Wanneroo request to allow caravan storage, boat & trailer parking in rural zoned areas.

Will there be a PowerPoint Presentation? No

Please attach any documents here

WAPC Neerabup Resident Deputation.pdf

Acknowledgements

In submitting this request, you acknowledge that your request form and presentation content will be published to the Planning Online website as part of the agenda.

Yes

I acknowledge that if my request or accompanying documents are not submitted within the required timeframe, they will not be accepted.

Yes

Please attach all accompanying documents to this request. Late submissions will not be accepted. Handouts or PowerPoints will not be accepted on the day of the meeting.

Collection notice

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NEERABUP RESIDENTS DEPUTATION

LOCALITY

26 Lots between Neerabup Road & Menchetti Road NEERABUP
Property Identity address -Wanneroo Rd adjoining boundary Lake Neerabup
North of Menchetti the Lots deviate to a commercial nature including 2 x Fuel Stations

REPRESENTATIVE

General consensus of the landowner / residents within the Wanneroo Road, Neerabup locality parameters outlined above – named herewith in support of this deputation. M&T Dowdall (1834), C&F Sacconi (1862) T.Mason (1768) K.Perkov (1880) C.Borello (1868)



OBJECTION

City of Wanneroo's proposed additional land uses (for area's zoned Rural) **specifically** the intention to consider the "business" of parking and/or storage of caravans, boats and trailers on land areas zoned rural. **Support** that restrictions apply such as limiting to properties larger than four hectares, ensuring clear assessment criteria and appropriate compliance of operators to ensure adherence with laws and regulations.

NEERABUP RESIDENTS DEPUTATION

OUTLINE / OVERVIEW

A current example of non-conforming unauthorised service provider / business operator 1954 Wanneroo Road NEERABUP. Receiving financial consideration for the storage and parking of caravans, boats and trailers on land zoned rural.

The general consensus of the objection made by the residents and landowners herewith is the detrimental impacts on the rural environment, character and heritage values of the area, the adverse visual aesthetics and the negative impact on neighbouring residents.

Additionally, there is adequate commercial / industrial and rural resource land available within a 5 km radius in Meridian Park NEERABUP as an alternative storage solution.

We would like priority given to the conservation of this culturally significant green belt, and consideration given to land usages that enhance the landscape, are rural complementary and would promote a more symbiotic relationship with the environment whilst encompassing social benefits to the broader community.

Main Concerns with caravan / boat / trailer parking are

1) Un-authorised clearing to allow for additional "lay down" storage area for parking.
2) Environmental impact – loss of habitat, weed infestation, damage to native fauna & flora
3) Sullage Management / Waste disposal of holding tanks & sewage – These properties have NO access or connection to sewage utilities
4) Bushfire Hazard Increase due to flammable & combustible material storage
5) Dangerous Goods License - Class 2 storage of excessive LPG bottles
6) Class 3 Hazardous Materials – Storage of Petrol fuel in boats
7) Class 9 Hazardous Materials – Lithium batteries thermal runaway & spontaneous combustion
8) Electrical Isolation Cut off & compliance certificates – Solar Panels & inverters
9) Insufficient Water reserves – properties have no connection to scheme water utilities.
10) Documentation of Emergency Management, Risk Assessment including Fire mitigation and evacuation procedure
11) Register of Vehicles stored – checklist DOT registration & adequate insurance cover.
12) Sufficient buffering from other landowners
13) Parking concentration & density controls – maximum number of boats, caravans & trailers in a per sqm
14) Protect and preserve rural locations as highlighted in Bush forever 2004 WAPC initiative

For the reasons mentioned above, we the Neerabup residents named here in, would like the WAPC to commit to a thorough investigation and evaluation of the role and function of land uses of these 26 properties situated along Wanneroo Road (between Neerabup Road & Menchetti Road) – and **specifically oppose** the proposal put forward by the City of Wanneroo to extend Rural land uses to include Caravan, Boat & Trailer parking on rural zoned lots.
We believe the proximity to Crown Reserves such as the Neerabup National Park provide these lots with a uniquely elevated asset value for land use opportunities other than parking caravans, boats & trailers which is inconsistent with the zoning.

WAPC Western Australian Planning Commission

Request for Deputation / Presentation

Committee: Western Australian Planning Commission

Meeting Date: Wednesday, September 23, 2026

Deputation Information

Type of Deputation: Written Deputation

Agenda Item: Item 3.5

Agenda Title: Part 11B Development Application – Mixed Use Development at Lot 572 (No. 200) West Coast Highway, Scarborough – Determination and Development Application – Works within Planning Control Area abutting Lot 572 (No. 200) West Coast Highway, Scarborough - Determination

Is the presentation in support or against the report recommendation? (contained within the agenda) Against

Presenter Information

Name of Presenter Anne-Louise Vague

Organisation: N/A

Email Address:

Mobile Number:

Special Requirements: In the interest of accessibility and inclusion for people with disabilities, please identify if you have any special requirements: No

Presentation Information

Brief Outline of Deputation:

Development Application SD-030-24, Lot 572 (No. 200) West Coast Highway, Scarborough.

I respectfully submit that:

- The site is appropriate for redevelopment.
- Higher-density residential development is appropriate in principle.
- However, the proposed scale of development is excessive.
- The proposal departs too substantially from the established planning framework.
- The community benefits offered do not justify the degree of variation sought.
- Parking, traffic, visual amenity and precedent concerns remain unresolved.

For these reasons, I request that the Statutory Planning Committee refuse the application in its current form, or alternatively require a substantially reduced building height and built form that better reflects the Scarborough Design Guidelines and the long-term planning vision for Scarborough.

Will there be a PowerPoint Presentation? No

Please attach any documents here Development Application SD-030-24, L….pdf

Acknowledgements

In submitting this request, you acknowledge that your request form and presentation content will be published to the Planning Online website as part of the agenda. Yes

I acknowledge that if my request or accompanying documents are not submitted within the required timeframe, they will not be accepted. Yes

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Statutory Planning Committee

Subject: Written Deputation to the Statutory Planning Committee

Re: Development Application SD-030-24, Lot 572 (No. 200) West Coast Highway, Scarborough

Position: I oppose the recommendation to approve the application.

I respectfully request the opportunity to make a deputation to the Statutory Planning Committee regarding the proposed Mixed-Use Development at 23-sep-2026---statutory-planning-committee---agenda---part-3.pdf, Item SD-030-24, Lot 572 (No. 200) West Coast Highway, Scarborough.

I am a local resident who will be directly and adversely affected by the proposed development. While I support appropriate redevelopment and increased housing supply within Scarborough, I oppose the recommendation to approve this application as currently proposed due to the significant departures from the planning framework and the resulting impacts on local amenity, infrastructure and community expectations.

Proposed Deputation Submission

Introduction

I wish to make it clear that I am not opposed to development of this site.

I support redevelopment, additional housing supply and appropriate urban infill within the Scarborough Activity Centre. I acknowledge that this location is suitable for higher-density residential development and mixed-use outcomes.

However, the issue before the Committee is not whether the site should be redeveloped.

The issue is whether a 26-storey development that substantially exceeds the planning framework should be approved despite significant departures from the Scarborough Design Guidelines, strong community opposition, and unresolved concerns regarding amenity, parking, traffic and built form.

I respectfully submit that it should not.

1. The proposal is fundamentally inconsistent with the Scarborough planning framework

The Scarborough Design Guidelines establish:

- A base building height of 12 storeys (43 metres).
- A maximum bonus height of 18 storeys (64 metres).

The proposal seeks approval for:

- 26 storeys.
- Approximately 90.5 metres in height.

This is not a minor variation. It exceeds the maximum contemplated height by approximately 8 storeys and more than 26 metres. The City of Stirling specifically objected to this aspect of the proposal and concluded that the development does not satisfy the intended scale and built form outcomes established through extensive community consultation and planning for Scarborough.

The City's assessment concludes that the development is inconsistent with:

- Building height controls.
- Podium height controls.
- Site coverage controls.
- Tower floorplate controls.

Approving a development of this scale effectively undermines the planning framework that both the community and developers have relied upon.

2. The proposal establishes an undesirable precedent

The report repeatedly notes that discretion can be exercised. However, discretion should not become a mechanism by which development standards lose practical meaning.

If an 18-storey maximum can become 26 storeys, then there is little certainty remaining within the planning framework.

One of the key functions of a planning scheme is to provide certainty to:

- Existing residents;
- Future purchasers;
- Landowners;
- Developers; and
- The broader community.

Approving a development that substantially exceeds the established maximum height risks further erosion of community confidence in the planning system and encourages future proposals seeking similar departures.

3. The claimed community benefits are not proportionate to the height sought

The primary public benefits identified are:

- 37 affordable apartments;
- A 5-Star Green Star rating;
- A pocket park;
- Public art; and
- Additional housing supply.

While these outcomes are positive, they do not justify an additional 8 storeys beyond the maximum bonus height already contemplated under the planning framework.

In particular:

- Most communal facilities are private and available only to residents.
- The commercial component is extremely limited.

- The publicly accessible pocket park is relatively small.
- The majority of the development's benefits accrue to residents and the developer rather than the broader Scarborough community.

The scale of the planning concession sought is disproportionate to the scale of the public benefit offered.

4. Parking and traffic impacts remain a significant concern

The City of Stirling maintained its objection to the proposal due partly to parking shortfalls and access concerns.

The proposal provides:

- 222 parking bays.

The City concluded that approximately:

- 248 bays are required.

This results in a parking shortfall, particularly in visitor parking.

Scarborough already experiences significant parking pressure, particularly during weekends, holidays, events and summer periods.

The suggestion that visitor parking demand will be offset by public transport, bicycle use or nearby parking facilities is speculative.

The practical reality is that parking demand routinely spills into surrounding residential streets. Additional residential density without adequate visitor parking will exacerbate existing issues experienced by local residents.

5. The proposal will adversely affect visual amenity and local character

The proposal will become one of the most prominent structures in Scarborough.

The Department acknowledges that the building will be a dominant element of the skyline and that it exceeds the planning framework's height expectations.

The development will:

- Increase visual bulk;
- Intensify the urban character of the area;
- Reduce openness;
- Impact views; and
- Alter the established "rise to the centre" principle that underpins the Scarborough planning framework.

Although some view loss may be inevitable in an urban environment, the scale of the variation sought unnecessarily magnifies those impacts.

6. The level of community opposition is significant

Public consultation produced:

- 224 submissions.
- 167 objections or strong objections.
- Approximately 75% opposition overall.

While planning decisions should not be determined by popular vote, such a strong level of opposition demonstrates genuine concern regarding:

- Height;
- Bulk and scale;
- Parking;
- Traffic;
- Amenity impacts; and
- Consistency with the planning framework.

These concerns are not isolated.

They are shared by the City of Stirling and were also reflected in the previous refusal of a similar proposal on this site.

Conclusion

I respectfully submit that:

- The site is appropriate for redevelopment.
- Higher-density residential development is appropriate in principle.
- However, the proposed scale of development is excessive.
- The proposal departs too substantially from the established planning framework.
- The community benefits offered do not justify the degree of variation sought.
- Parking, traffic, visual amenity and precedent concerns remain unresolved.

For these reasons, I request that the Statutory Planning Committee refuse the application in its current form, or alternatively require a substantially reduced building height and built form that better reflects the Scarborough Design Guidelines and the long-term planning vision for Scarborough.

Thank you for your consideration.

Anne-Louise Vague

Request for Deputation / Presentation

Committee: Western Australian Planning Commission

Meeting Date: Wednesday, September 23, 2026

Deputation Information

Type of Deputation: Written Deputation

Agenda Item: Item 3.5

Agenda Title: Part 11B Development Application – Mixed Use Development at Lot 572 (No. 200) West Coast Highway, Scarborough – Determination and Development Application – Works within Planning Control Area abutting Lot 572 (No. 200) West Coast Highway, Scarborough - Determination

Is the presentation in support or against the report recommendation? (contained within the agenda) Against

Presenter Information

Name of Presenter Martyna Zaczek

Organisation: Private resident

Email Address:

Mobile Number:

Special Requirements: In the interest of accessibility and inclusion for people with disabilities, please identify if you have any special requirements: No

Presentation Information

Brief Outline of Deputation:

Re: 200 West Coast Highway, Scarborough

I request that the Committee refuse the development in its current form or require it to be redesigned within the maximum height established by the Scarborough planning framework.

My deputation focuses on the following concerns:

Excessive departure from the planning framework as the proposal is 26 storeys and approximately 90.5 metres high, compared with the 12-storey base height and 18-storey maximum bonus height under the Scarborough Design Guidelines.
No demonstrated need for additional height: Scarborough is already zoned for high-rise and substantial residential density. The reported community benefits do not adequately justify eight additional storeys above the maximum bonus height.
Integrity of the planning system: The guidelines were developed through a strategic planning and community-consultation process. Regularly setting them aside for individual applications undermines their purpose and creates uncertainty for residents and landowners.
Strong community opposition as of the 224 online submissions received, 167, or 75%, opposed or strongly opposed the proposal. The City of Stirling also does not support its height, bulk, scale and parking shortfall.
Limited influence of consultation as despite substantial opposition, the development is recommended for approval without a meaningful reduction in height. This creates the impression that consultation is procedural rather than capable of influencing the outcome.
Restricted consultation reach as direct notification was limited to properties within 200 metres, although the traffic, parking, visual, infrastructure and precedent impacts of a 90.5-metre building potentially extend considerably further.
Barriers to participation: Technical documentation, passive advertising and limited consultation periods make participation difficult. Modified plans and technical documents were also submitted after the public consultation period.
Erosion of public trust: When adopted planning controls and strongly expressed community views are repeatedly overridden, residents lose confidence in planning authorities and begin to regard future consultation as a waste of time.

My requested outcome is to refuse the current proposal or defer it for redesign within the 18-storey maximum, followed by renewed public consultation. If greater height is considered strategically appropriate, it should be examined through a transparent review of the Scarborough planning framework rather than approved through an individual development application.

Will there be a PowerPoint Presentation? No

Please attach any documents here Deputation 23 Sep 2026 Mixed Use … .docx

Acknowledgements

In submitting this request, you acknowledge that your request form and presentation content will be published to the Planning Online website as part of the agenda. Yes

I acknowledge that if my request or accompanying documents are not submitted within the required timeframe, they will not be accepted. Yes

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Collection notice

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Good morning, Chair and Committee members.

I am a Scarborough resident, and I ask the Committee not to approve the proposed 26-storey development at 200 West Coast Highway in its current form.

My concerns relate to two connected issues: the significant departure from the adopted Scarborough planning framework and the apparent lack of meaningful weight given to the community's views.

Departure from the Scarborough planning framework

Scarborough is already designated for substantial density and high-rise development. This is not an argument against redevelopment, additional housing or higher density. It is an argument for respecting the density and height framework that was researched, publicly considered and ultimately adopted for the area.

The Scarborough Design Guidelines provide for:

- a base height of 12 storeys or 43 metres;
- a maximum bonus height of 18 storeys or 64 metres; and
- a three-storey podium of up to 11.5 metres.

The proposal is for 26 storeys and approximately 90.5 metres, with a four-storey podium. It is therefore eight storeys above even the maximum bonus height and more than twice the base height. It also exceeds the expected site coverage and elements of the prescribed building envelope.

The fundamental question is: if a planning framework already allows high-rise development, why is it necessary to exceed it by such a substantial margin?

The report identifies affordable housing, sustainability measures, design quality and public-realm improvements as justification. These may be positive aspects of the proposal, but they do not adequately explain why another eight storeys above the maximum bonus height are necessary. Nor does the existence of other developments that have exceeded the guidelines provide a sound planning justification. Using previous departures to justify further departures creates cumulative development through precedent rather than through transparent strategic planning.

If the intended height and density for this part of Scarborough have changed, that change should occur through a proper review of the planning framework, with comprehensive community participation. It should not occur incrementally through individual development approvals.

Otherwise, the adopted height limits cease to operate as meaningful planning controls. The message to residents is that the community can participate in developing a planning framework, but the resulting controls can later be set aside whenever a developer seeks a substantially larger development.

This creates a serious imbalance. Residents and smaller landowners are expected to comply with planning requirements, while major developers appear able to negotiate outcomes considerably beyond them. That damages confidence in the fairness and integrity of the planning system.

Community consultation and public confidence

The consultation results demonstrate substantial community concern:

- 224 online submissions were received;
- 167 submissions, or 75%, opposed or strongly opposed the proposal;
- only 48 submissions, or 21%, supported or strongly supported it; and
- two additional objection emails were received.

The City of Stirling also does not support the development, particularly because of its height, bulk, scale and parking shortfall.

Despite this, the recommendation is to approve essentially the development that generated those objections. The report states that the submissions have been "considered", but meaningful consultation requires more than recording objections and explaining why they have not changed the recommended outcome.

The Committee should demonstrate what influence the consultation had on the central issue: the proposal's substantial exceedance of the adopted height limits. If the proposal remains at 26 storeys despite the City's opposition and an overwhelming majority of submissions opposing it, residents may reasonably conclude that the consultation was procedural rather than influential.

This perception is reinforced by the way consultation was undertaken. Direct notification was limited to landowners and occupiers within 200 metres of the site. The agenda does not explain why 200 metres was considered an appropriate consultation boundary for a 90.5-metre building with potential visual, traffic, parking, infrastructure and cumulative effects extending well beyond that distance.

A resident living 400 metres away may still be affected by:

- additional traffic and pressure on local intersections;
- overflow parking;
- changes to the skyline and coastal character;
- infrastructure demand;
- wind and overshadowing effects in public areas; and
- the precedent established for future development throughout Scarborough.

Although notices were placed online, in a newspaper, on social media and at the site, passive publication is not equivalent to effective direct engagement. Planning documentation is lengthy and highly technical, consultation periods are limited, and many residents may not understand the significance of an application until well after the submission period closes.

The report also records that modified plans and updated technical documents were submitted after public consultation, while the applicant's original planning report was not updated. This raises a further question about whether residents were given a proper opportunity to comment on the final information now being relied upon by the decision-maker.

Low or uneven participation should therefore not be interpreted as community indifference. Participation is strongly influenced by how consultation is designed, communicated and made accessible.

More importantly, repeated approval of developments that substantially exceed community-supported planning frameworks creates a damaging cycle:

1. Residents invest time in planning and consultation processes.
2. The resulting controls and community objections are given limited weight.
3. Residents conclude that participation does not influence decisions.
4. Trust declines and future participation falls.
5. Lower participation is then treated as an absence of community concern.

This is not simply a communications problem. It is a social-licence and institutional-trust problem.

Requested outcome

I respectfully ask the Committee to:

1. refuse the proposal in its current form because its height, bulk and scale represent an excessive departure from the Scarborough planning framework; or
2. defer the application and require it to be redesigned within the adopted maximum height of 18 storeys, followed by renewed public consultation on the revised proposal.

If the Committee considers that 26 storeys is strategically appropriate for this location, that change should be tested transparently through a review of the Scarborough planning framework—not established through an individual development approval.

Scarborough can accommodate additional housing and investment without abandoning the planning framework created to manage that growth. Approving high-rise development within the adopted limits would still deliver substantial density while providing residents, landowners and investors with confidence that the planning rules have meaning.

Thank you.

Martyna Zaczek

Scarborough Resident

WAPC Western Australian Planning Commission

REPORT TO	Statutory Planning Committee		
Meeting date	23 September 2026	**File number**	SPN/2357
Title	Local Structure Plan - Clifton Street North, Kelmscott (2026) - Determination		
Purpose	For decision		
Head of power	Clause 22, Schedule 2 of the Planning and Development (Local Planning Schemes) Regulations 2015		
Delegation	2024/02 Powers of Committees – 2.3 All powers and functions of the WAPC under Part 5 of the Act		
Confidentiality	Non-confidential		
Responsible officer	Cale Luxton – Planning Manager, Metropolitan South	**Responsible Officer Conflict of Interest**: Nil	
Date DPLH received / conformed	11 November 2025		
Processing days	266		
Statutory determination due date	4 April 2026		
SITE DETAILS			
Region(s)	Metropolitan (South)		
Local government(s)	City of Armadale		
Region Scheme / Zoning	Metropolitan (MRS) Pt Rural, Pt Urban, Bush Forever Site 246		
Local Scheme / Zoning	Local Planning Scheme No. 4 – Urban Development, Parks and Recreation Reserve, Rural		
Property address	Lot 11 and 12 Brookside Avenue and Lot 11, Lot 12 and Lot 1 Clifton Street, Kelmscott		
Site area	5.76 ha		
Existing land use	Rural Living		
Landowner/s	A & CF Macri, Clifton Street Development Pty Ltd, PW Harrison, T & L Pintaudi		
Applicant/s Consultant/s	Harley Dykstra acting for A & CF Macri		
Local Government recommendation/s	REFUSE		
ATTACHMENTS			
A1 – Location Map A2 – Site Plan A3 – Structure Plan Map A4 – Structure Plan A5 – MRS zoning			

A6 – Canning River Precinct Concept Structure Plan
A7 – Clifton St South Precinct Local Structure Plan
A8 – Summary of Issues
A9 - Schedule of Submissions
A10 – Kelmscott Train Walkability Plan
A11 – Schedule of Modifications

EXECUTIVE SUMMARY

The Lot 12 (No. 32) and Lot 11 (No. 1) Brookside Avenue, Lot 11 (No. 15), Lot 12 (No. 17) and Lot 1 (No. 27) Clifton Street, Kelmscott Local Structure Plan (the Structure Plan) City of Armadale has been prepared by Harley Dykstra on behalf of the owner of Lot 11 Brookside Avenue and submitted by the City of Armadale in accordance with Schedule 2 Part 4 of the *Planning and Development (Local Planning Scheme) Regulations 2015* (the Regulations).

The Structure Plan was prepared to guide the residential subdivision of the subject lots, which comprise a total area of 5.76ha, incorporating a range of residential densities (R40 toR80) and yielding an estimated 395 lots.

The City recommended refusal of the structure plan on the basis that the structure plan failed to address issues related to:

- Housing density and built form
- Provision of a foreshore reserve
- Provision and equitable distribution of public open space
- Local Water Management
- Bushfire management
- Movement network

The application is presented to the Committee as the proposed recommendation that the structure plan be modified and resubmitted significantly departs from the City of Armadale's recommendation to refuse the structure plan. Accordingly, under Delegation Del 2025/05 no officer delegation exists to determine the matter.

RECOMMENDATION

That the Statutory Planning Committee resolves, under Clause 22, Schedule 2 of the Planning and Development (Local Planning Schemes) Regulations 2015, to:

1. ***require that the Lot 12 (No. 32) and Lot 11 (No. 1) Brookside Avenue, Lot 11 (No. 15), Lot 12 (No. 17) and Lot 1 (No. 27) Clifton Street, Kelmscott Local Structure Plan be modified in accordance with the attached Schedule of Modifications (Attachment 11);***

2. ***require the modified Structure Plan be re-submitted to the Western Australian Planning Commission for its consideration; and***

3. ***advise the City of Armadale of its decision accordingly.***

PROPOSAL DETAILS

The Structure Plan relates to Lots 11 and 12 Brookside Avenue and Lots 11, 12 and 1 Clifton Street, Kelmscott, which have a combined area of 5.76 ha. The structure plan area is located within the locality of Kelmscott bordered by Clifton Street to the east, Brookside Avenue to the north and the

Canning River to the West and is approximately 500m north-east of the Kelmscott train station. The land sits adjacent to the Canning River and contains Bush Forever Site 246 (BF 246) as well as Conservation Category Wetland (CCW) and Multiple Use Wetland (MUW) areas encompassing the Canning River floodplain (**A1 –** Location Plan).

The structure plan area contains five separate landholdings ranging in size from 6,882m^2 to 20,297m^2 with each lot currently utilised for rural living purposes. (**A2** – Site Plan). The Structure Plan has been prepared on behalf of the owners of Lot 11 Brookside Avenue, which is the minority landholding within the Structure Plan area.

The Structure Plan was prepared to guide subdivision of the site, in accordance with the requirements of the 'Urban Development' zone of the City of Armadale's Town Planning Scheme No. 4 (TPS 4). The Structure Plan proposes Residential density codes of R40, R60 and R80 whilst also allowing for a future retirement village to the north-east corner of the site. The structure plan provides for a foreshore reserve to the Canning River consistent with the area of land zoned Rural under the Metropolitan Region Scheme (MRS) and 11.83% public open space (POS) provision adjacent to the foreshore reserve encompassing BF 246. (**A3** – Structure Plan)

The following documents were prepared in support of the Structure Plan:

- Bushfire Management Plan.
- Local Water Management Strategy.
- Transport Impact Assessment.
- Servicing Report.
- Mosquito Management Plan.
- Flora, Vegetation and Black Cockatoo Assessment.
- Landscaping Plan.

A complete copy of the Structure Plan has been included within Attachment 4 (**A4** - Structure Plan).

The Structure Plan was advertised for public comment from 27 July 2023 to 8 September 2023, during which 285 submissions were received. Following advertising, several extensions to the statutory timeframe for the consideration of submissions were granted. A report considering submissions received, inclusive of a schedule of submissions, issues and modifications was considered by the City of Armadale at its Council Meeting on 24 November 2025. At this meeting, it was resolved to forward the Local Structure Plan to the WAPC with a recommendation that the Structure Plan be refused as the issues and modifications detailed within the Council report, inclusive of the objections, issues and modifications recommended by the DBCA-Rivers and Estuaries Branch, Main Roads WA, Department of Fire and Emergency Services and the Department of Transport had not been addressed.

BACKGROUND

Canning River Precinct Environmental Study

In 2009-2010, the *Canning River Precinct Environmental Study* was undertaken for the City of Armadale and the then Department of Planning, to assess the biophysical characteristics of the Canning River foreshore to determine an appropriate foreshore reserve along the Canning River. The Study encompassed 43.8ha of land located east of the Kelmscott Town Centre identified for potential infill urban residential development, known as the Canning River Precinct.

In relation to the land subject to the LSP, the following recommendations were made in regard to the proposed foreshore boundary:

Lot Details	Summary of Consideration of Factors	Recommendation
Lot 12 Brookside	BF246 encompasses environmental attributes including riparian vegetation and floodway.	Foreshore Reserve to follow BF boundary
Lot 11 Brookside	Not affected by floodway, BF or CCW.	N/A
Lot 11 Clifton St	Riparian vegetation, Floodway, BF & 30m reserve align in most areas. 30 m reserve includes key environmental attributes including riparian vegetation, floodway and habitat trees	Use 30m reserve. Use Town Planning Controls to manage land within BF boundary
Lot 12 Clifton St	50 m buffer will extend close to built forms. Key environmental attributes including riparian vegetation, floodway and habitat trees within 30 m reserve.	Use 30 m reserve. Use Town Planning Controls to manage land within BF boundary
Lot 1 Clifton St	30 m reserve close to building perimeter. 50 m reserve would intrude into built forms. 30 m reserve includes key environmental attributes including riparian vegetation, floodway and habitat trees.	Use 30 m reserve.

Whilst the preference for wider buffers to the river and CCW was acknowledged, the resultant foreshore reserve recommendation was a consolidated approach to the creation of a foreshore reserve based on biophysical factors balanced with the retrofitting of a reserve within an existing urban and rural area and physical constraints of built infrastructure and landuse.

MRS Amendment 1202/41

MRS Amendment 1202/41 was gazetted in 2012 and rezoned the majority of the subject land from Rural to Urban, with the portion of land adjacent to the Canning River retained in the Rural zone defining the boundary between the urban zone and the future Parks and Recreation reservation for the Canning River foreshore (**A5** – MRS zoning).

The boundary of the future parks and recreation reserve was determined having regard to the *Canning River Precinct Environmental Study,* the floodway/floodfringe, BF 246, Conservation Category and Multiple Use Wetlands, and sought to retain the remnant vegetation and existing topographical values of the land within a reservation, whilst providing public access to the foreshore. Within the amendment report it was highlighted that the usual 10% public open space contribution could be located as an adjunct to the foreshore reserve to provide a wider foreshore reservation than that proposed by the proposed future MRS parks and recreation reservation.

Amendment No. 70

Following the gazettal of MRS Amendment 1202/41, the City initiated an amendment to its Town Planning Scheme No. 4 to rezone the MRS Urban portion of the land to the Urban Development zone which also introduced structure plan requirements into Schedule 8 – Development Areas. The amendment included a concept structure plan for the entire precinct which has been included as Attachment 6 (**A6** – Canning River Precinct Concept Structure Plan).

The amendment was granted final approval by the then Minister for Planning and was gazetted on 14 February 2014.

Clifton St South Precinct Local Structure Plan

A structure plan for the southern portion of the Canning River Clifton Street Precinct was approved by WAPC under delegation on 8 May 2017. The structure plan provided for a foreshore reserve adjacent to the Canning River consistent with the Rural zoned portion of the land under the MRS and residential densities ranging between R40 and R80 with an estimated lot yield of 386 lots (**A7** – Clifton St South Precinct Local Structure Plan). A total of 361 submissions were received during the public consultation period for the Clifton St South Structure Plan with the City recommending that the structure plan not be approved until such time as matters relating to bushfire management, environmental impacts, traffic modelling and residential density had been addressed.

Consultation

The Structure Plan was advertised in accordance with the requirements of the *Planning and Development (Local Planning Schemes) Regulations 2015*, between 27 July 2023 and 8 September 2023 during which 285 submissions were received comprising:

- 274 public submissions
  - 12 submissions in support
  - 243 submissions of objection
  - 19 submissions providing comment
- 11 agency submissions
  - 1 submission of objection
  - 7 submissions of no objection
  - 3 submissions recommending modifications

Key matters raised within the submissions received included concerns around the following issues:

- Impact on the natural environment;
- Housing density and built form outcomes in the context of the existing surrounding development;
- Capacity of existing social and community infrastructure to accommodate the proposed development;
- Increased development in a bushfire prone area;
- Loss of character and visual amenity;
- Impact on the surrounding movement network;
- Consideration of heritage; and
- The provision of adequate, useable public open space.

A full schedule of submissions and a summary of issues raised within the submissions received including a response from the City and the Department are attached (**A8 –**Summary of Issues, **A9**-Schedule of Submissions).

Following an assessment of the submissions received and the City's recommendations, a draft Schedule of Modifications was forwarded to both the applicant and the City of Armadale for review. The City has noted the Schedule has been received however have reiterated the recommendation of its Council Meeting of 24 November 2025. The applicant has advised of no objections to the draft schedule.

Framework and Policy Assessment Overview

Legislation, Policies and Framework	Consistency
Metropolitan Region Planning Scheme	Fully consistent
Local Planning Scheme No. 24	Fully consistent
Statement of Planning Policy 3.0 Urban Growth and Settlement	Fully consistent
SPP 2.8 Bushland Policy for the Perth Metropolitan Region	Some inconsistency, variation not recommended
SPP 2.9 - Water	Fully consistent
SPP 3.7 Bushfire	Some inconsistency, variation not recommended
DC Policy 1.6 – Planning to support transit use and transit orientated development	Fully consistent
Liveable Neighbourhoods	Fully consistent

DISCUSSION

Foreshore Boundary

The Structure Plan proposes the creation of a foreshore reserve consistent with the boundary identified for the future parks and recreation reserve under MRS Amendment 1202/41 (consistent with the boundary between the Rural and Urban zoning), with public open space proposed adjacent to the reserve incorporating the boundary of BF 246 and the conservation category wetland. This is consistent with the approach proposed under the *Canning River Precinct Environmental Study* with the Structure Plan recognising the foreshore reserve will be required to be ceded free of cost under future subdivision and development stages. Once ceded, the Structure Plan proposes the creation of a 0.9931ha foreshore reserve with 0.6799ha of public open space representing 24.9% of the overall site area.

Numerous submissions were received raising concerns regarding the proximity of the proposed residential development to the Canning River and the impact of such development on the foreshore vegetation and water quality of the river. The DBCA in their submission on the Structure Plan did not support the proposed foreshore boundary, advising the DBCA considers that the entire BF 246 and CCW area should be included in the foreshore reserve as opposed to within the POS area. DBCA further advised that both BF 246 and the CCW would be best protected through the implementation of an additional minimum 30m wide buffer area to protect the river environment and its associated conservation and landscape values, which is currently not achieved.

In considering the submissions received, the City in its recommendation proposed modifications to the structure plan to provide a 30m wide buffer to BF 246 and the CCW.

Whilst the DBCA's and submitters' comments are noted, the proposed foreshore boundary was set through MRS Amendment 1202/41 in consideration of the Canning River Precinct Environmental Study and the need to balance the retrofitting of a reserve within an existing urban and rural area and physical constraints, with a 30m wide foreshore reserve provided. This is consistent with the provisions of State Planning Policy 2.9 – Water and the associated guidelines which specify a minimum 30m wide foreshore reserve measured outwards from either the outer edge of riparian vegetation or the high water mark level, whichever is the greatest. No modification to the boundary of the proposed foreshore reserve has been recommended.

POS Distribution

Consistent with the recommendations of the Canning River Precinct Environmental Study, an area of public open space has been proposed adjacent to the foreshore reserve which captures the remaining area of BF 246 and the CCW designation located outside of the designated foreshore reserve. A total of 6779m^2 of POS has been provided representing 11.83% of the structure plan area. Much of the POS has been provided within Lot 12 which largely corresponds with the boundary of BF 246, with no POS having been provided within Lot 11 Brookside Avenue.

The City, in noting the inequitable distribution of POS across the structure plan area and submissions received from landholders within the structure plan area requesting a minimum of 10% POS including sufficient stormwater retention be located within the lot boundary of 11 Brookside Avenue, or an alternative cost sharing arrangement being put in place, have recommended a modification requiring a pocket park to be provided within Lot 11 Brookside. Whilst the City's recommendation is noted, a pocket park within Lot 11 would be located within 200m of the Canning River foreshore reserve and the location of public open space adjacent to the foreshore reserve is preferable to supplement the protection of the Canning River whilst capitalising on the amenity of the Canning River for surrounding residents. Modifications have been recommended to the Structure Plan to ensure the provision of a suitable useable pocket park adjacent to the foreshore reserve, equitable distribution of unconstrained POS across the four lots fronting the Canning River, and allowance for a cash-in-lieu contribution towards the development of the foreshore reserve to be provided by Lot 11 Brookside Avenue.

Residential Density

The Structure Plan proposes:

- a residential density of R60 across the majority of the structure plan area,
- a strip of R40 proposed adjacent to Clifton Street to serve as an interface to the existing residential area; and
- pockets of R80 located adjacent to the foreshore reserve/POS to capitalise on the amenity of the Canning River foreshore area and the proximity to the Kelmscott District Centre and train station.

The densities proposed are significantly higher than the R15/25 designation of residential land on the eastern side of Clifton Street, and the R20/R40 density envisaged under the Concept Structure Plan prepared for the Canning River Precinct Study. Whilst a number of submissions were supportive of the proposed density and the housing opportunities it would provide, the majority of submissions were in opposition to the densities proposed in comparison to the adjacent residential areas with concerns raised in regard to building height and bulk, housing type and impact on amenity/neighbourhood character.

The applicant has justified the proposed densities on the basis that the majority of the Structure Plan area falls within the nominal 800m walkable catchment of the Kelmscott train station in accordance with *Development Control Policy 1.6 Planning to Support Transit Use and Transit Orientated Development (DC Policy 1.6),* and within an area of high amenity adjacent to the foreshore reserve of the Canning River. The City of Armadale, in their consideration of the Structure Plan recommended the replacement of the R60 and R80 designations with R40 on the basis the structure plan area is greater than 800m walking distance from the Kelmscott train station when using the ped-shed analysis over the more simplified radius measurement as promoted by DC Policy 1.6. When considering the existing street network and available crossings over the Canning River the structure plan area falls outside of the 800m walkable catchment of the Kelmscott train station (**A10** – Walkability Plan). The City's position was that the recommended modification to apply an R40 density would assist the City to achieve the objectives of the *Perth and Peel and Peel @ 3.5 million* and *Southern Metropolitan*

Peel Sub-Regional Framework for a more consolidated urban form, including medium density housing with a diversity of housing types.

State Planning Policy 3.0 Urban Growth and Settlement (SPP 3.0) sets out the principles and considerations that apply to planning for growth and settlement. Under the policy, key requirements for sustainable communities are listed, including:

- making the most efficient use of land in existing urban areas through the use of vacant and under-utilised land and buildings, and higher densities where these can be achieved without detriment to neighbourhood character and heritage values; the cost-effective use of urban land and buildings, schools and community services, infrastructure systems and established neighbourhoods; and promoting and encouraging urban development that is consistent with the efficient use of energy; and
- supporting higher residential densities in the most accessible locations, such as, in and around town and neighbourhood centres, high frequency public transport nodes and interchanges, major tertiary institutions and hospitals, and adjacent to high amenity areas such as foreshores and parks

In this regard, the structure plan is located adjacent to the Canning River with the proposed foreshore reserve to provide a high level of amenity to future residential areas. In addition, whilst the site is located outside of the walkable catchment of the Kelmscott Train Station, the site is located within 800m from bus stops along Albany Hwy serviced by a high frequency bus service and within close proximity to the Kelmscott District Centre.

Liveable Neighbourhoods provides further guidance on residential density, encouraging a mix of lot sizes distributed throughout neighbourhoods to provide housing choice with medium density housing to be located within high amenity areas such as close to town and neighbourhood centres or overlooking parks.

On this basis, the provision of medium density housing (up to R60) within the Structure Plan area is considered appropriate, however the inclusion of the R80 density code is not considered appropriate given the separation of the site from the Kelmscott District Centre by the Canning River. In this regard a modification has been recommended to provide for an R60 designation adjacent to the Canning River foreshore reserve with a transition zone of R40 to be provided between areas of R60 and the existing R15/25 residential areas and the R60 density.

The R40 and R60 density designations are considered appropriate in accordance with the density targets sent under the Perth and Peel @ 3.5million suite of documents and the site's high amenity in respect to the proximity to the Canning River foreshore, whilst balancing the interface with the existing Residential R15/25 density on the other side of Clifton Street.

Movement Network

The Structure Plan proposes a grid-style movement network consisting of Access Streets connecting to Brookside Avenue and Clifton Street, with a north-south interface road proposed adjacent to the identified foreshore reserve and public open space. A traffic impact assessment was prepared in support of the application; however, it was considered by the Local Government and Main Roads to provide insufficient levels of information in regard to the impact analysis on the surrounding road network and the details of the proposed road network including road hierarchy, reserve widths, cross sections and the provision of pedestrian/cycle routes.

A submission made on behalf of the majority landowner expressed concern regarding the width of street blocks/cells proposed, and the number of full movement intersections required to the external road network, three of which fall within the majority landholders property. The need for a road interface to the foreshore was acknowledged, however concern was raised that the identification of the

remainder of the movement network would pre-determine a built form outcome. Further concerns were raised in the public submissions on the capacity of the surrounding road network to accommodate the proposed development, with specific concern around the safety of Clifton Street.

In response to the majority landowner's concerns, the City's schedule of modifications recommended a maximum of two intersections with Clifton Street and modifications to the structure plan and TIA to reflect this layout. In addition, updates to the TIA were recommended to consider impact on the surrounding road network in more detail in accordance with the requirements of the Commissions Transport Impact Assessment Guidelines and determine the need for any local area traffic management and/or upgrades to the surrounding road network such as provision of footpaths and traffic calming measures. This modification is supported, with the identification and verification of suitability of connections to the surrounding road network a key component of a local structure plan.

Water Management

A local water management strategy (LWMS) was prepared in support of the structure plan incorporating a drainage strategy which proposes:

- A piped road drainage network directing run-off from the area's four drainage catchments into five drainage basins located within the proposed public open space including with BF 246.
- A separate piped drainage system to direct clean roof run-off into POS detention basins, with the option to bypass basins with clean flows directly into the river to be further explored at the subdivision stage through an Urban Water Management Plan (UWMP).

The City has identified a number of issues with the prepared LWMS, primarily related to the lack of detail regarding the proposed drainage strategy with key components deferred to the subdivision stage. As a result, the City do not consider the proposed separate piped system practical given the multiple landholdings within the area and unknown development timeframes resulting in coordination difficulties. Under SPP 2.9 and Water Guidelines, a Local Water Management report is required to address the entirety of a proposal area and provide enough detail to demonstrate the feasibility of the water management systems and strategy. The City has advised the level of detail currently provided within the LWMS is insufficient to demonstrate the feasibility of the proposed drainage system on a staged basis.

In addition to the above, the City and DBCA do not support the location of drainage basins within the CCW and BF 246 as whilst the LWMS states the siting of the basins will avoid existing trees within the site, there are concerns that the construction and ongoing maintenance of the basins may impact surrounding vegetation. *State Planning Policy 2.8 – Bushland Policy for the Perth Metropolitan Region* (SPP 2.8) requires proposals ensure all reasonable steps have been taken to avoid, minimise or offset any likely adverse impact on regionally significant bushland, and the potential for disturbance of vegetation within BF 246 as a result of the location of drainage basins within the site has not been adequately addressed.

In this regard modifications have been recommended to require an updated LWMS in consultation with City, DWER and DBCA to ensure no basin is located within the CCW and BF 246 boundaries and identify an implementable and coordinated strategy across the structure plan area.

Bushfire Planning

The entire structure plan area is located in an area declared bushfire prone by the Commissioner for Fire and Emergency Services (Area 2). This is the primary trigger for the application of *State Planning Policy 3.7 - Bushfire (SPP 3.7)* which does not support more intensive development of bushfire prone land, unless the bushfire risk can be suitably mitigated.

A bushfire management plan was submitted in support of the Structure Plan which indicates the development of the site would reduce the fire hazard to an excluded or low threat status over much of the structure plan area with the exception of the vegetated foreshore reserve and adjacent public open space. To address the remaining high-fire hazard, the BMP recommends a separation distance of 22.5m between classified vegetation and future residential development with two options to achieve this separation proposed as follows:

- Provision of an asset protection zone (APZ) consisting of the 12m perimeter road adjacent to the POS and a 10.5m development setback zone for buildings on residential lots facing the proposed POS.
- Provision of an APZ consisting of a 6m wide managed strip of vegetation within the POS, the 12m road and a 4.5m development setback zone for buildings on residential lots facing the proposed POS.

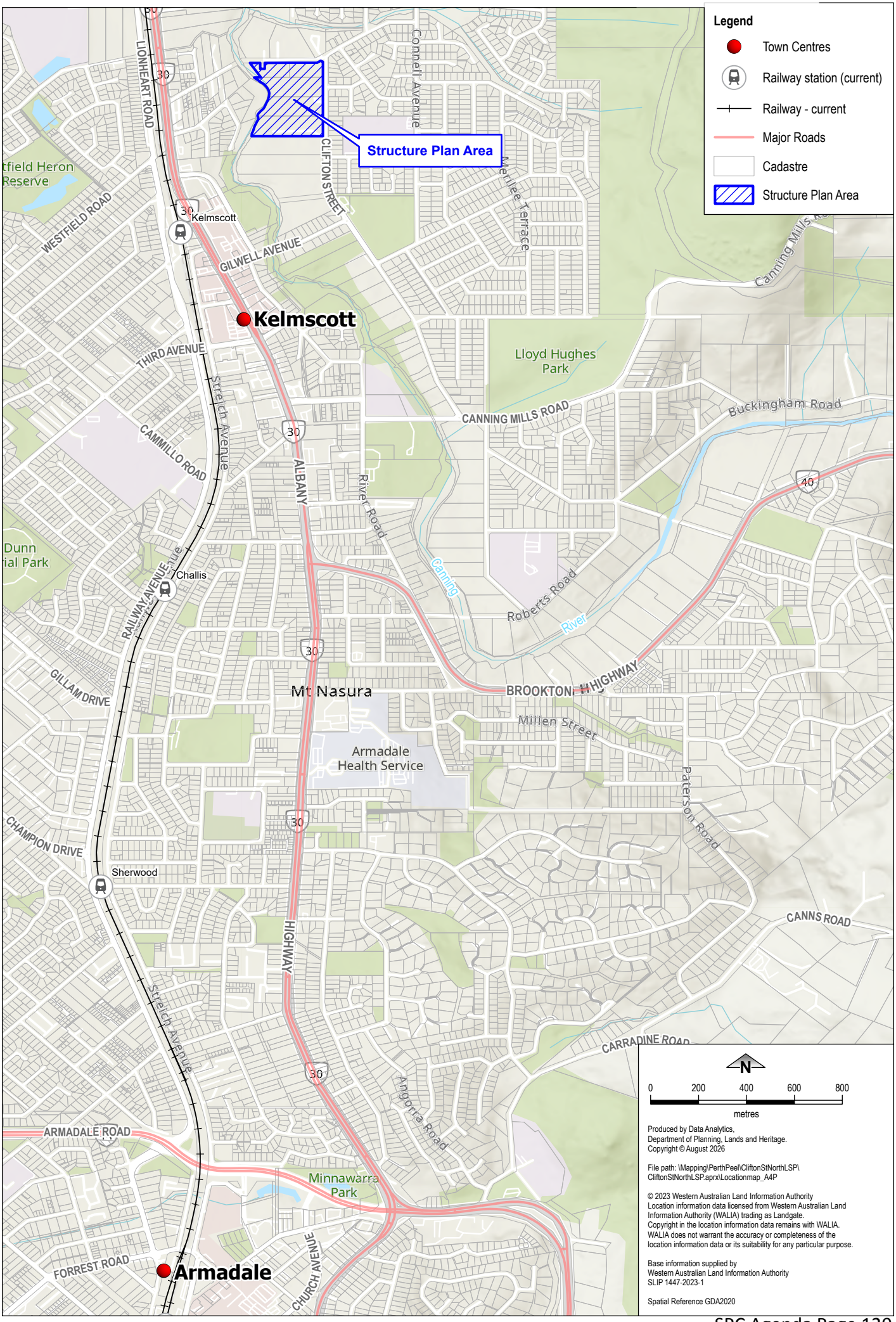
The *Planning for Bushfire Guidelines* (the Guidelines) requires structure plans to provide for lots which can contain a sufficient development site that can achieve a radiant heat impact not exceeding BAL-29. The proposed 10.5m development setback for lots facing the proposed POS is considered excessive for an R60 coded lots which require a minimum front setback of 2m under the Residential Design Codes and potentially restrictive on future landowners.

The alternative proposal of managing a strip of the proposed POS to low threat is also not supported as areas required to be managed to low threat include BF 246 and the area identified as a CCW. The proposal to manage BF 246 to a low threat status is inconsistent with the objectives of SPP 2.8 which seeks to protect and manage significant bushland and ensure all reasonable steps have been taken to avoid, minimise or offset any adverse impacts on such bushland. In this regard, no clearing of vegetation within BF 246 or within the CCW to reduce BAL ratings is supported.

To achieve the recommended separation distance from high-fire hazard, alternative measures such as the provision of an additional area of POS adjacent to BF 246 and the CCW boundary which could be managed to low threat or a wider road reserve bordering the POS may be considered. A modification requiring an updated BMP to be provided has been recommended to demonstrate all residential lots are capable of achieving a BAL rating of BAL-29 or less beyond the front setback line, without the requirement for the removal or management of vegetation within the BF 246 or the CCW.

CONCLUSION

Whilst City of Armadale's recommendation to refuse the structure plan is noted, the modifications proposed in Attachment 11 are considered sufficient to address the key objections and concerns with the proposed development raised during the public submission period. It is therefore recommended that the Structure Plan be modified and resubmitted for further consideration.



Location Plan - Clifton St North Local Structure Plan



Department of **Planning, Lands and Heritage**

GOVERNMENT OF WESTERN AUSTRALIA

Legend

- Cadastre (View 1)

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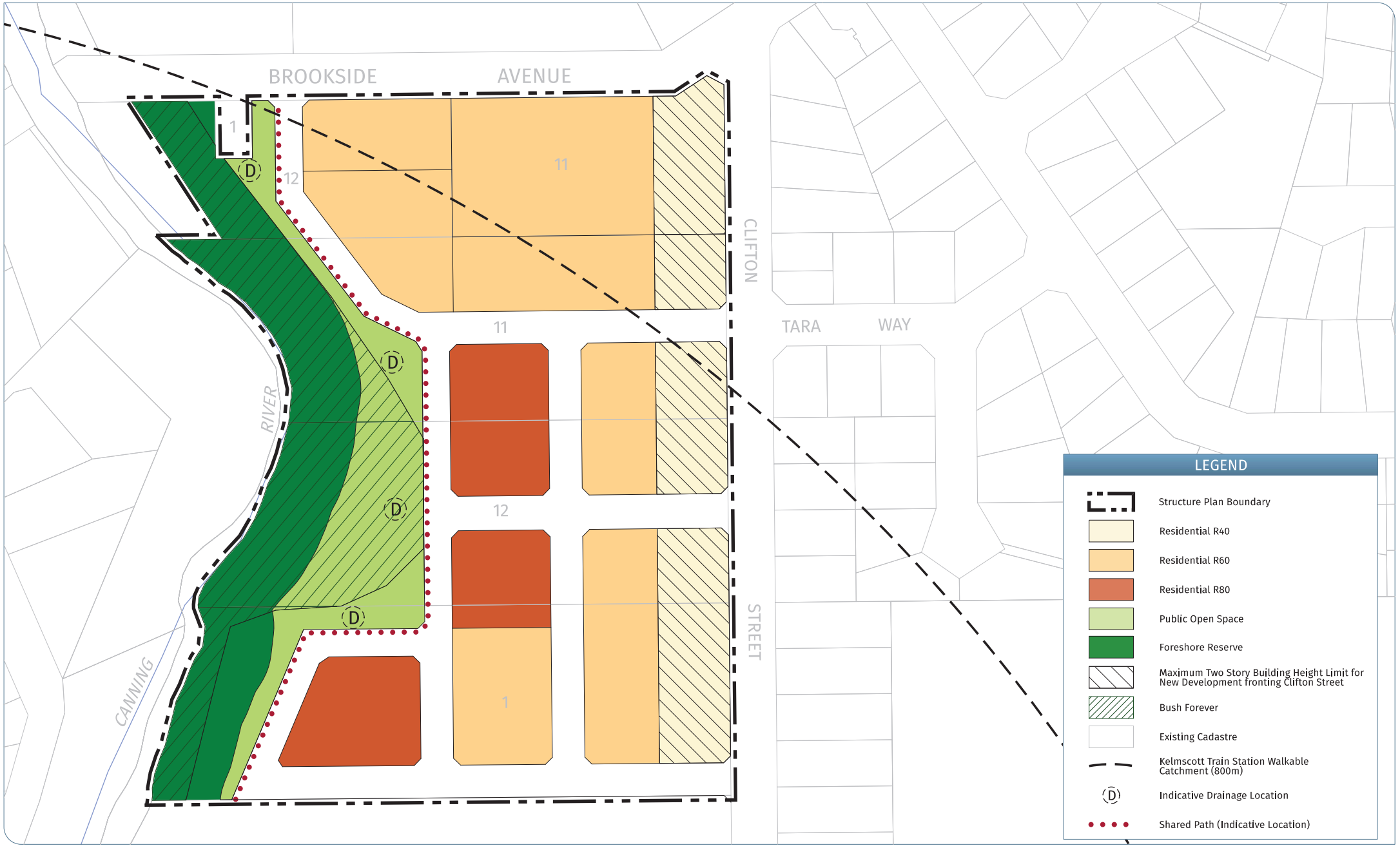
Internal Spatial Viewer
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Date produced: 07-Aug-2026

Attachment 3



LOCAL STRUCTURE PLAN

Clifton Street North Precinct, KELMSCOTT

Plan No.	20233-09
Date	10/05/23
Drawn	KS
Checked	MK
Revision	F
Scale	1:1500@A3

0 20m 40m

NOTE: This plan has been prepared for planning purposes. Areas, Contours and Dimensions shown are subject to survey

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PLANNING & SURVEY SOLUTIONS

LOCAL STRUCTURE PLAN

Lot 12 (No. 32) and Lot 11 (No. 1) Brookside Avenue,
Lot 11 (No. 15), Lot 12 (No. 17) and
Lot 1 (No. 27) Clifton Street,
Kelmscott



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DOCUMENT CONTROL

Control Version	DATE	Status	Distribution	Comment
A	08/08/2022	Draft	Internal	For QA
B	29/08/2022	Draft	Client	Review
C	18/10/2022	Final	City of Armadale	Lodgement
D	23/05/2023	Final	City of Armadale	Modified in accordance with Local Government comments

Prepared for: Tony Macri

Prepared by: KS

Reviewed by: LB

Date: 23th May 2023

Job No: 20233

Ref: D

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ENDORSEMENT PAGE

This structure plan is prepared under the provisions of the City of Armadale Local Planning Scheme No. 4

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

_____
DATE

Signed for and on behalf of the Western Australian Planning Commission:

_____

an officer of the Commission duly authorised by the Commission pursuant to section 16 of the *Planning and Development Act 2005* for that purpose, in the presence of:

_____ Witness

_____ Date

_____ Date of Expiry

TABLE OF AMENDMENTS

AMENDMENT NO.	SUMMARY OF AMENDMENT	AMENDMENT TYPE	DATE APPROVED BY WAPC

TABLE OF DENSITY PLANS

DENSITY PLAN NO.	AREA OF DENSITY PLAN APPLICATION	DATE ENDORSED BY WAPC

EXECUTIVE SUMMARY

This report represents an application to the City of Armadale to consider a proposed Local Structure Plan (LSP) comprising Lot 12 (No. 32) Brookside Avenue and Lot 11 (No. 1), Lot 11 (No. 15), Lot 12 (No. 17) and Lot 1 (No. 27) Clifton Street, Kelmscott ("the Structure Plan Area"). The LSP area has a total area of 5.76ha. The LSP is located within the locality of Kelmscott bordered by Clifton Street to the east, Brookside Avenue to the north and the Canning River to the west, and is situated approximately 300m east of the Albany Highway and Turner Place intersection and 2km south of the Albany Highway-Tonkin Highway intersection. The land is 22km south-east of the Perth CBD.

The Structure Plan has been prepared in respect of the Urban Development zone of the site, as designated under the City of Armadale Local Planning Scheme No. 4. The Structure Plan will facilitate future subdivision and development of residential lots at Residential 40 (R40) and Residential 60 (R60) and Residential 80 (R80) density, whilst also allowing for a future retirement village to the north-east corner of the site.

Approval of the LSP shall enable future subdivision and development to create residential lots, incorporating a range of residential densities (R40-R80).

The Structure Plan Summary Table below details the nature and key outcomes of the Structure Plan.

ITEM	DATA	Structure Plan Ref (section)
Total area covered by the Local Structure Plan	6.7249 ha	1.1, 1.2
Area of Residential land use proposed	3.6465ha	1.1, 5.3
Total estimated lot yield	395 lots	1.1
Total estimated number of dwellings	395 dwellings	1.1
Estimated residential density	R40 0.8195ha 37 dwellings R60 2.1111ha 252 dwellings R80 0.7159ha 106 dwellings	1.1
Estimated Population	987 (based on 2.5persons pre dwelling)	1.1
Number of high schools	0	-
Number of primary schools	0	-
Community purpose site	0	-
Estimate area of Public Open Space given over to: • Regional open space • Neighbourhood parks • Local parks	 0.9931ha 0.0ha 0.6799ha	5.5
Estimated percentage of natural area	1.6730 Ha 24.9%	5.5

TABLE 1 – STRUCTURE PLAN SUMMARY TABLE

CONTENTS

ENDORSEMENT PAGE iii
TABLE OF AMENDMENTS iv
TABLE OF DENSITY PLANS iv
EXECUTIVE SUMMARY i
1 Introduction 4
1.1 Introduction & Purpose 4
1.2 Land Description 5
1.3 Background 8
2 Planning Framework 9
2.1 Zoning and Reservations 9
2.2 Planning Strategies 12
2.3 City of Armadale Local Planning Policies 14
2.4 WAPC Planning Documents 16
2.5 State Planning Policy 3 – Urban Growth and Settlement 22
2.6 State Planning Policy 7.0 – Design of the Built Environment 23
2.7 Liveable Neighbourhoods 24
3 Site Conditions 26
3.1 Landform & Soils 26
3.2 Hydrology 27
3.3 Site Contamination 28
3.4 Bushfire Hazard 28
3.5 Biodiversity and Natural Assets 28
4 Opportunities and Constraints analysis 31
4.1 Canning River 31
4.2 Bush Forever 32
4.3 Kelmscott District Centre & Train Station Catchment 33
4.4 Clifton Street Interface 33
4.5 Southern and Northern Interfaces 34
4.6 Existing Drainage Infrastructure 34
4.7 Sewer Pump Station 35
4.8 New Roads 36
5 Local Structure Plan 37
5.1 Vision 37
5.2 Local Structure Plan Summary 37
5.3 Residential 37
5.4 Movement Networks 39
5.5 Open Space 41
5.6 Built Form 44
5.7 Water Management 45
5.8 Heritage 45
5.9 Bushfire Management 45
5.10 Activity Centres and Employment 46
5.11 Servicing and Staging 46
5.12 Developer Contribution Arrangements 47
6 Conclusion 48

APPENDICES

APPENDIX A	Certificates of Title
APPENDIX B	Bushfire Management Plan
APPENDIX C	Local Water Management Strategy
APPENDIX D	Transport Impact Assessment
APPENDIX E	Servicing Report
APPENDIX F	Mosquito Management Plan
APPENDIX G	Flora, Vegetation and Black Cockatoo Assessment
APPENDIX H	Statement relating to the location of Drainage Basins
APPENDIX I	Landscaping Plan
APPENDIX J	Erosion and Sediment Worksheet

Part One – Implementation

1.0 Local Structure Plan Area

The Local Structure Plan shall apply to Lot 12 (No. 32) Brookside Avenue and Lot 11 (No. 1), Lot 11 (No. 15), Lot 12 (No. 17) and Lot 1 (No. 27) Clifton Street, Kelmscott being the land contained within the inner edge of the line denoting the structure plan boundary shown on the Local Structure Plan Map (**Plan 1**).

2.0 Operation

In accordance with Schedule 2, Part 4 of the Planning and Development (Local Planning Schemes) Regulations 2015 ('Regulations'), this Structure Plan comes into operation when it is approved by the Western Australian Planning Commission ('WAPC'), pursuant to Schedule 2, Part 4, Clause 22 of the Regulations. The LSP will be valid for a period of 10 years.

3.0 Staging

Staging of the Local Structure Plan is not dependent upon any infrastructure triggers and will be subject to market demand and individual landowner timeframes.

4.0 Subdivision and Development Requirements

This Local Structure Plan (LSP) provides a framework for future subdivision and development of the land. Actual subdivision may vary from the Structure Plan, and requires approval from the Western Australian Planning Commission.

4.1 Subdivision within the Structure Plan area is to be in accordance with the residential density code prescribed by the Structure Plan**,** subject to review at the time of subdivision.

4.2 Land use permissibility within the Structure Plan area shall be in accordance with the corresponding zone or reserve under the Scheme.

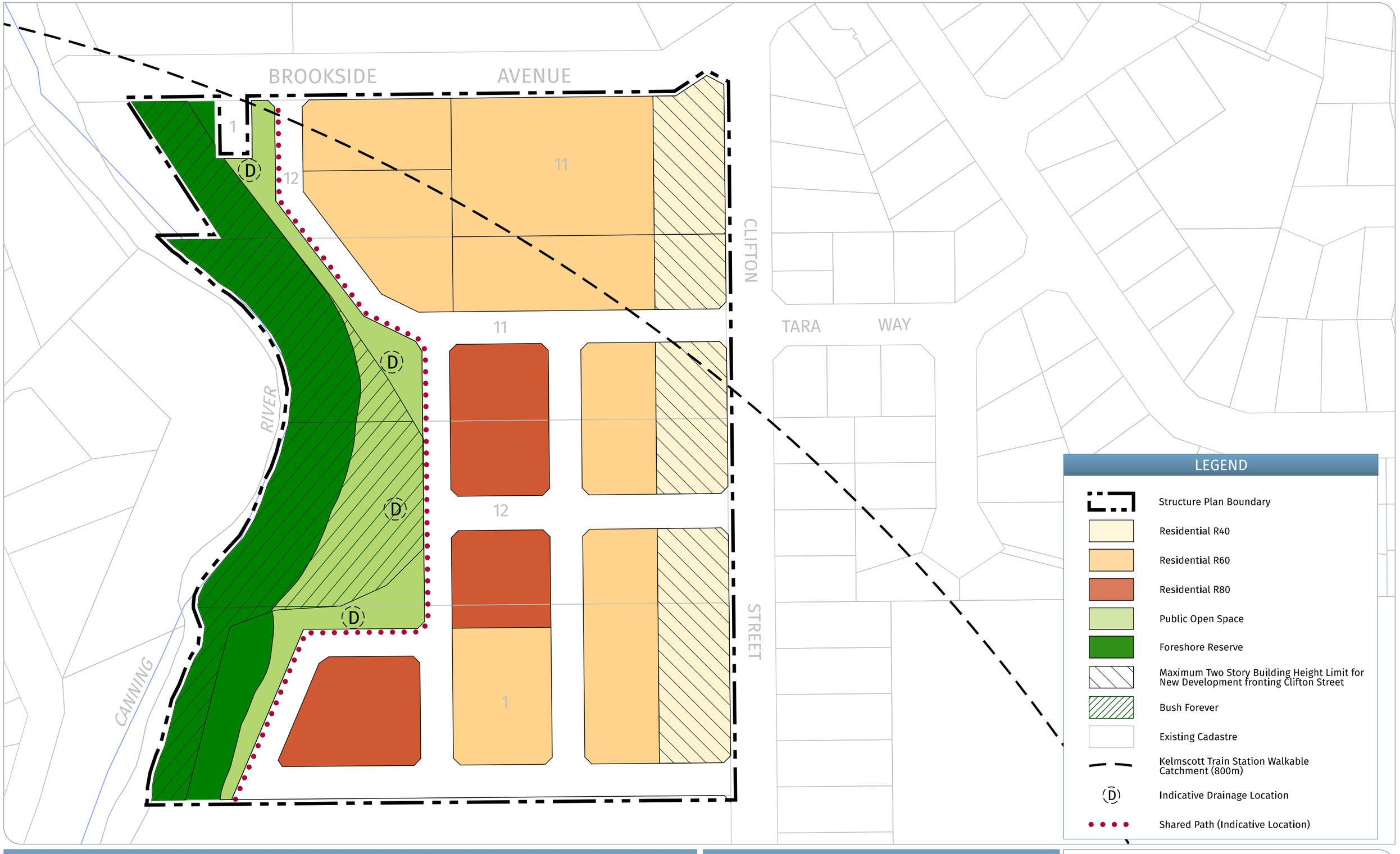
4.3 At the time of subdivision, the following strategies and plans will be required via conditions of subdivision approval:

a) Landscaping and Streetscape Plan;
b) Urban Water Management Plan; and
c) Bushfire Management Plan

4.4 A Local Development Plan (LDP) will be required to be prepared as a condition of subdivision approval for any lots directly abutting a portion of Public Open Space (POS). The purpose of the LDP will be to prescribe the provision of semi-permeable fencing adjacent to the POS to ensure sufficient surveillance over that space.

4.5 Pedestrian pathways are to be constructed by the subdivider in the locations shown on the Structure Plan and to the specifications of the City of Armadale. Pathways within the Public Open Space are to be located and constructed so as to minimize disruption to existing vegetation.

4.6 Areas designated as Foreshore Reserve on the LSP Map are to be given up free of cost at subdivision/development stage. Typically, the ceding of the foreshore area and public open space is to be shown on the Deposited Plan associated with the subdivision or development of each lot within the Structure Plan area.



LOCAL STRUCTURE PLAN

Clifton Street North Precinct, KELMSCOTT

Plan No.	20233-09
Date	10/05/23
Drawn	KS
Checked	MK
Revision	F
Scale	1:1500@A3

0 20m 40m

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Part Two – Explanatory Report

1 INTRODUCTION

1.1 Introduction & Purpose

This Local Structure Plan (LSP) has been prepared by Harley Dykstra on behalf of Tony Macri in respect of Lot 12 (32) Brookside Avenue and Lot 11 (1), Lot 11 (15), Lot 12 (17) and Lot 1 (27) Clifton Street, Kelmscott (the "Structure Plan area"). The structure plan area is bound by Brookside Avenue to the north, Canning River to the west and existing residential development to the south and east. The subject land is shown in **Figure 1** below.

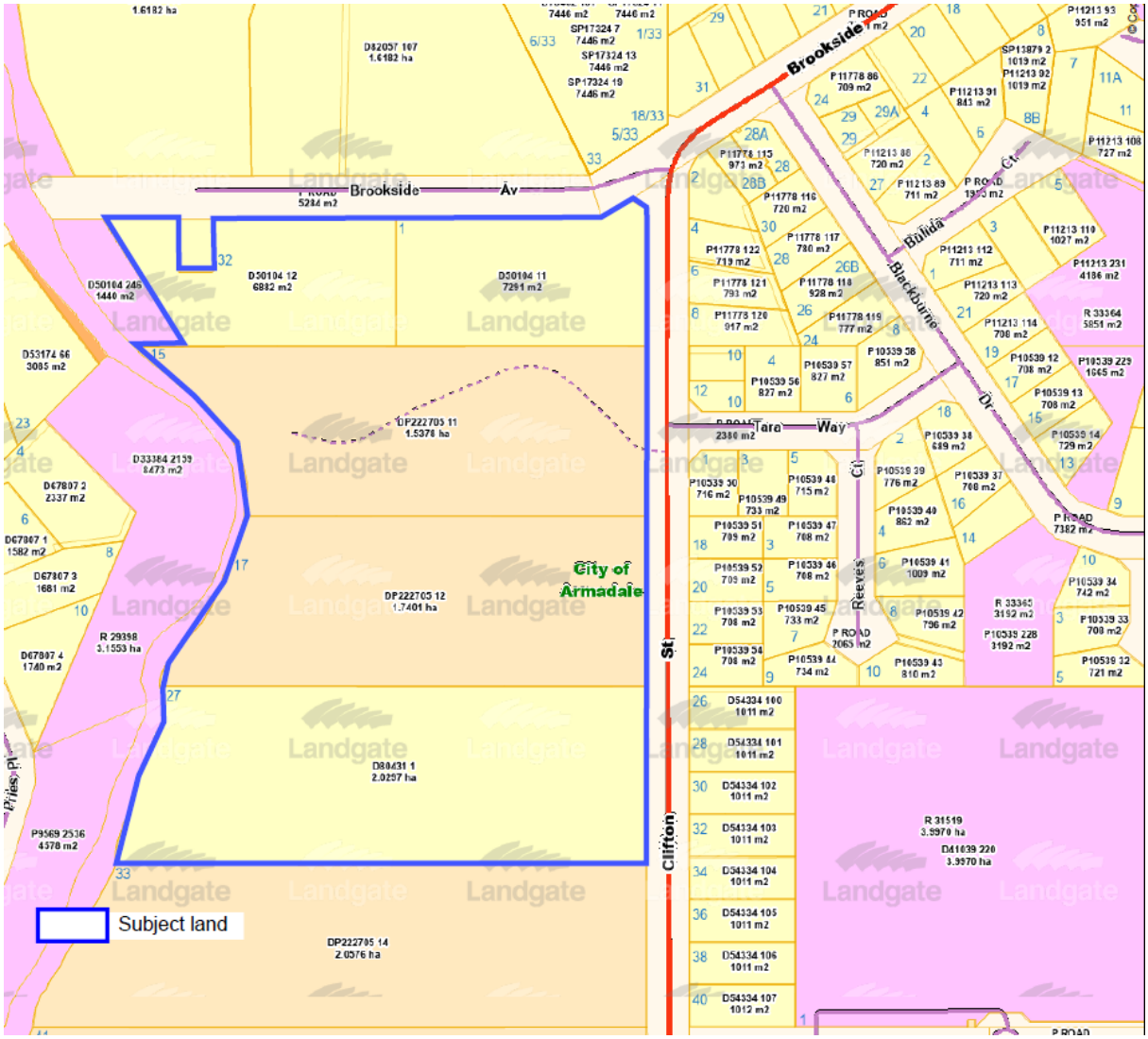


FIGURE 1 – SUBJECT LAND

The ultimate objective of this proposal is to facilitate the subdivision and development of the land for residential land uses in a manner that interacts appropriately with the developing urban environment in this locality.

The intended land uses within the Structure Plan include:

- Approximately 37 single residential lots at density code of R40;
- Approximately 252 single residential lots at density code of R60;
- Approximately 106 single residential lots at density code of R80;
- Public Open Space (POS) and Regional Open Space (ROS) located adjacent to Canning River; and
- The accommodation of the existing Bush Forever zoning within the open space.

This proposal is accompanied by a Structure Plan Map (**Plan 1**) prepared in accordance with the *Planning and Development (Local Planning Scheme) Regulations, 2015*. It is included in Part One of this Report.

The Explanatory Section of this Structure Plan Report includes a detailed description of the proposal, provides an evaluation of the relevant town planning, environmental, bushfire management, traffic, local water management and servicing considerations applicable to the land, and details the rationale supporting the proposed Structure Plan.

The Structure Plan has been formulated by Harley Dykstra in collaboration with a team of specialist consultants, who have provided technical input in relation to matters as follows:

Bayley Environmental Services	Local Water Management Strategy
Stantec (formerly Cardno)	Transport Impact Assessment & Servicing Report
Ecosystems Solutions	Fire Management Plan
EDS Environmental	Mosquito Management Plan
Western Environmental	Flora, Vegetation and Black Cockatoo Assessment

Copies of the relevant consultant reports are appended to this submission and key findings incorporated within the body of the report. The Consultants' reports demonstrate how development can occur in respect of the various matters that their respective reports address, including information in respect of the amelioration of any constraints.

1.2 Land Description

Location & Context

The subject land is located within the suburb of Kelmscott, bordered by the Canning River to the west and Clifton Street to the east. The subject land is situated approximately 300m east of the Albany Highway and the Kelmscott District Centre, 2km south of the Albany Highway-Tonkin Highway intersection, 2.3km north of the Albany Highway-Brookton Highway intersection and 22km south-east of the Perth CBD.

The majority of the subject land is located within the nominal 800m walkable catchment surrounding the Kelmscott train station, as illustrated on **Figure 2**. The subject site is well serviced by road and rail infrastructure and there are a number of schools (primary and secondary), existing open space and recreation facilities located within the surrounding region, as evident on **Figure 2**.

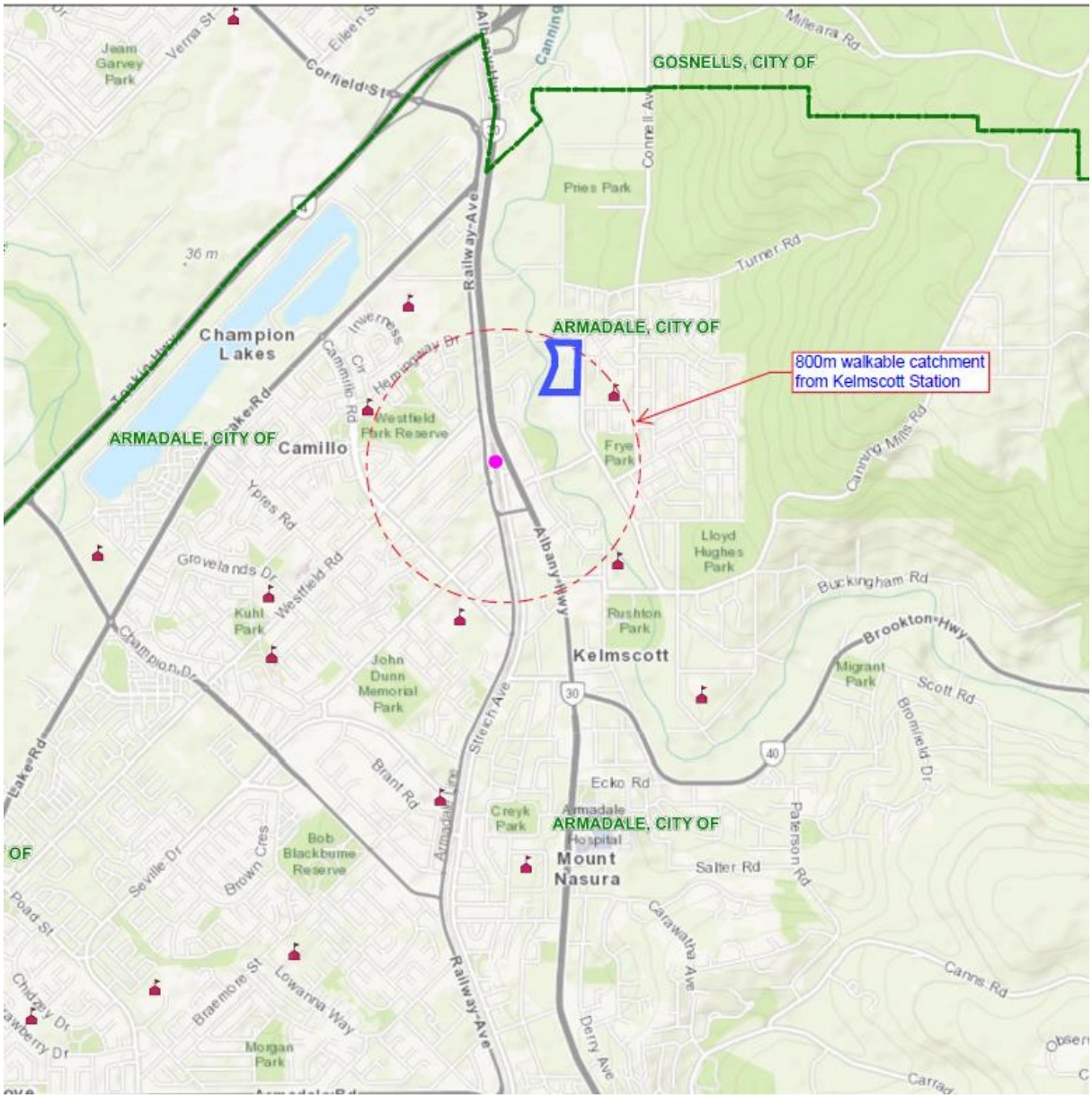


FIGURE 2 – LOCATION PLAN

Area and Land Use

The subject land is located within the City of Armadale and has a total area of approximately 6.725ha. The majority of lots have primary road frontage to Clifton Street to the east and the northern end of the LSP area have legal road frontage to Brookside Avenue (refer to **Figure 3**). The Canning River bounds the western edge of the subject land.

All lots contain residential dwellings, with some lots also containing sheds and other outbuildings. The majority of the lots are primarily cleared of native vegetation, with propose residential density generally higher in closer proximity to the Canning River.

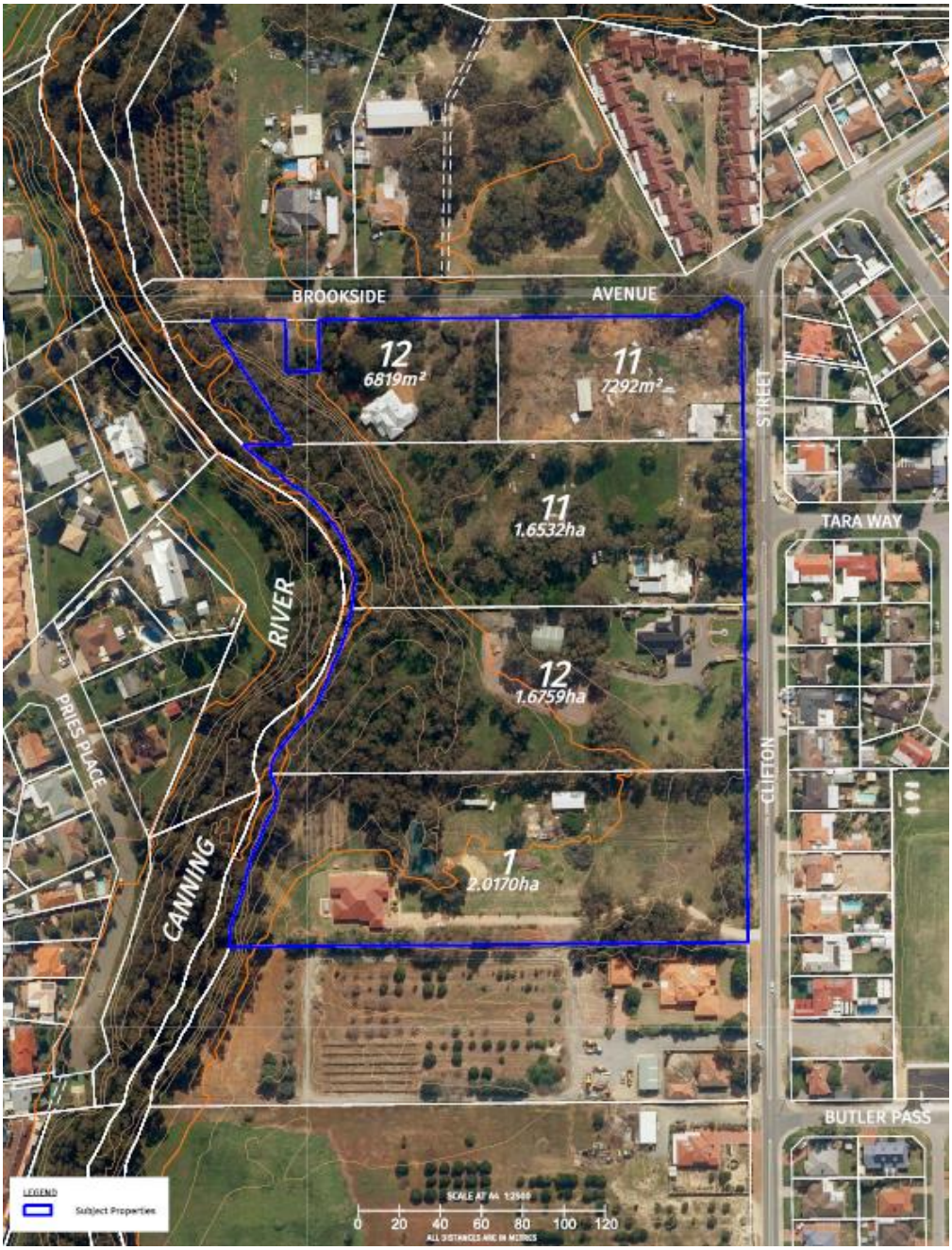


FIGURE 3 – AERIAL PHOTOGRAPH

Legal Description & Ownership

The details of the properties the subject of this LSP is outlined in **Table 2** below.

The subject land comprises of a total of five (5) lots. The aerial photograph at **Figure 3** identifies the individual landholdings. **Table 2** provides additional details in respect of the constituent lots. Copies of the Certificates of Title are attached at **Appendix A** of this report.

Lot	Vol.	Folio	Plan	Area	Street Address	Landowner
12	1446	753	D50104	0.6882 ha	32 Brookside Ave	Clifton Street Development Pty Ltd
11	1446	752	D50104	0.7291 ha	1 Clifton St	Antonio & Concetta Macri
11	213	81A	D222705	1.5378 ha	15 Clifton St	Clifton Street Development Pty Ltd
12	1254	947	D222705	1.7401 ha	17 Clifton St	Paul Harrison
1	1916	506	D80431	2.0297 ha	27 Clifton St	Teo & Lynne Pintaudi
TOTAL AREA				6.7249 ha		

TABLE 2 – LEGAL DESCRIPTION AND OWNERSHIP

1.3 Background

The subject land has typically been used for rural residential purposes, although is proposed for future development subject to detailed planning.

The site is within proximity to the Kelmscott commercial centre, other shopping centres, schools, a railway station and parks.

The majority of Kelmscott's property types are single houses on individual lots owned by the resident.

2 PLANNING FRAMEWORK

2.1 Zoning and Reservations

Metropolitan Region Scheme

The Metropolitan Region Scheme (MRS) is the statutory land use planning scheme for the Perth Metropolitan Area. The primary purpose of the MRS is to reserve and zone land and control development on reserved and zoned land at the regional level. The MRS reflects the agreed strategic direction for land in the metropolitan region and facilitates changes to planning controls at the local level and subsequent local area planning.

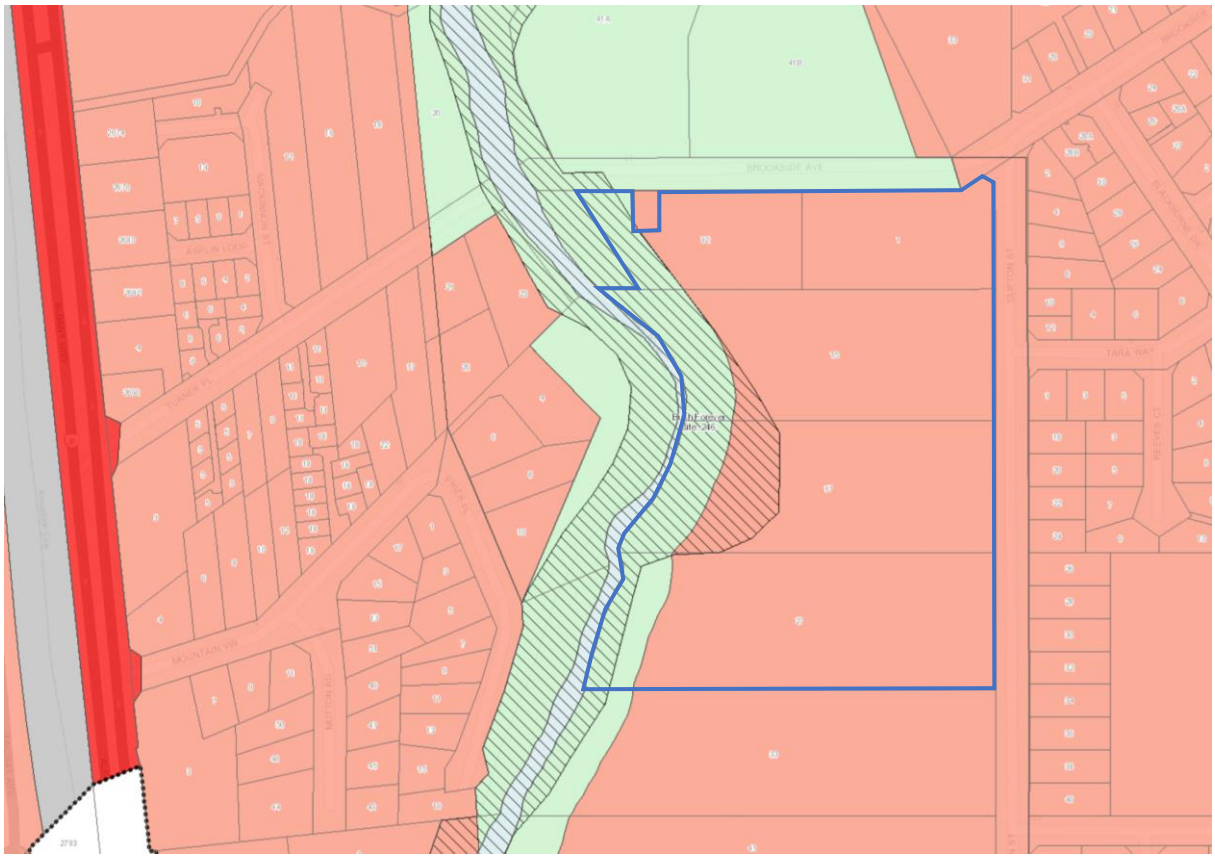


FIGURE 4 – MRS ZONING

The subject land is zoned "Urban" with the Canning River foreshore area zoned "Rural" in the MRS (refer to **Figure 4**). The land to the south and east of the subject land is also zoned Urban. The land to the immediate west of the site is being the Canning River is designated as "Waterways". The land to the north of the subject site is also zoned Rural. A "Bush Forever" overlay also covers part of the subject land, generally following the alignment of the Canning River. The Bush Forever overlay covers a considerable portion of the Urban zoning on Lot 12 (No. 17) Clifton Street.

The land was formally zoned Rural and was the subject of an amendment (1202/41) that put the Urban zoning in place. The amendment became effective in the MRS on 25 May 2012 and also included land abutting the Canning River to the south.

The subject land is zoned Urban Development and "Rural Living 2" zone in the City of Armadale's Town Planning Scheme No. 4 (TPS 4) (**Figure 5**). The Urban Development zone also falls within a "Development Area" being area 44. The extent of the Rural Living area matches the Rural zone of the MRS. Two Special Control Areas (SCAs) affect the western portion of the subject land. These are "Flood Prone Areas – Flood Fringes" and "Bush Forever Sites – Outside of Parks and Recreation Reservation".

The planning context, under TPS No. 4, is such that the Brookside Avenue road reserve (No Zone) abuts the land to north, with the land further north zoned "Rural Living 2". The existing Clifton Street reserve (No Zone) abuts the land to the east. The majority of the area to the east of Clifton St is zoned "Residential R15/25".

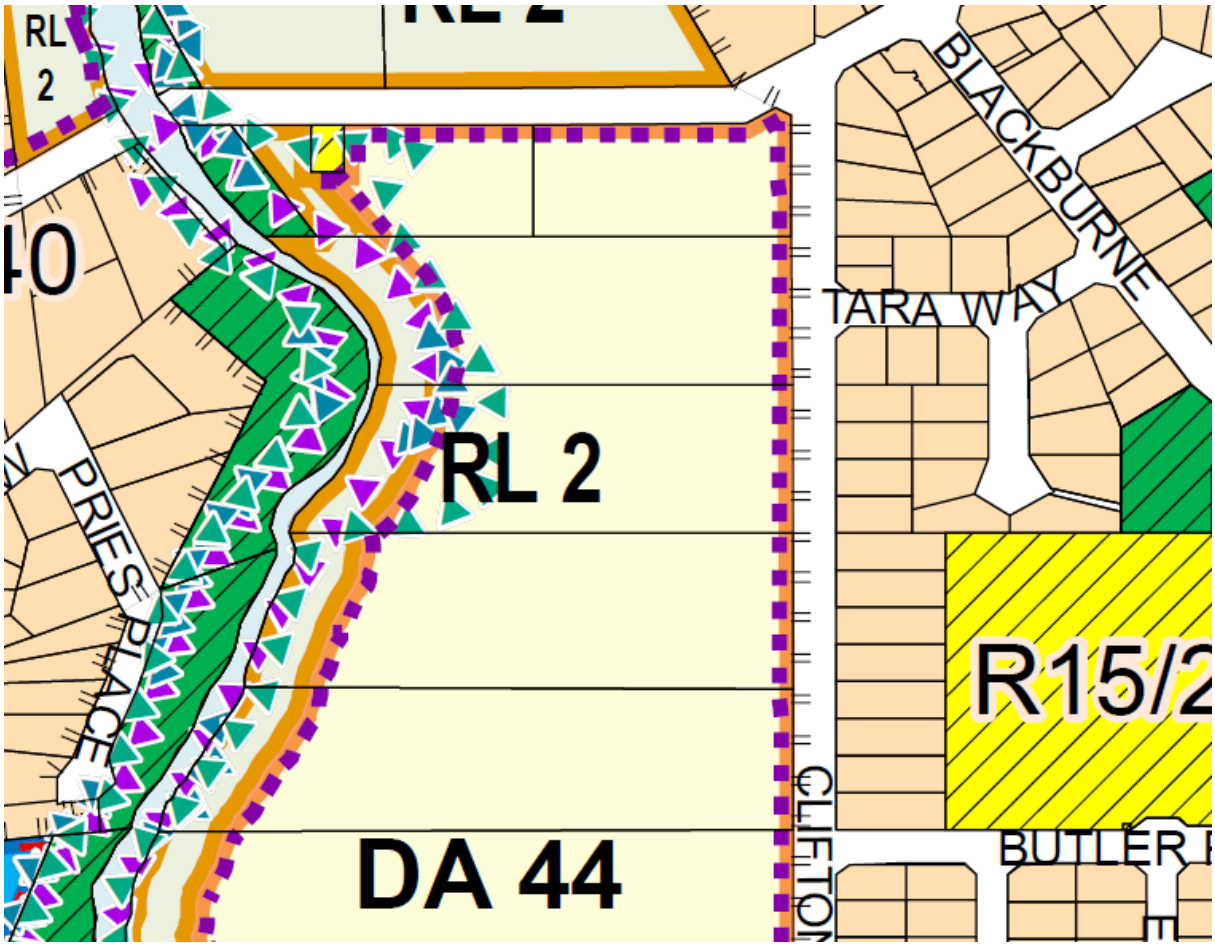


FIGURE 5 – TOWN PLANNING SCHEME NO. 4

The Urban Development zone provides an appropriate and flexible mechanism to progress subdivision and development because it requires the endorsement of a Structure Plan that is prepared in accordance with the *Planning and Development (Local Planning Schemes) Regulations, 2015.* This Structure Plan has regard to the following purpose and objectives of the zone:

The objectives of the Urban Development zone are set out as follows in TPS No. 4:

(a) *To provide for the orderly planning of large areas of land for residential and associated*

purposes through a comprehensive Structure Plan which is able to respond to changing circumstances throughout the developmental stages of the area.

(b) To promote the sustainable development of new urban communities in accordance with the social, environmental and economic goals of the local government of Armadale.

Schedule 8 – Development (Structure Planning) Areas of TPS 4 DA 44 outlines a series of additional subdivision and development provisions. These are as follows:

TPS 4 Schedule 8 No. 44 Provision	**Applicant Response**
1. Subdivision shall occur in accordance with a Structure Plan for the Canning River Clifton Street Precinct Urban area which is to be prepared pursuant to the provisions outlined in Part 6A.	*This document represents the preparation of a Structure Plan to guide the subdivision and development of the land, in accordance with this provision.*
2. The Structure Plan shall incorporate assessments and recommend design and management responses to the satisfaction of the local government for the following environmental planning factors: *a) local urban water management,* *b) flora and fauna, heritage sites, conservation category wetlands, bush fire protection and acid sulphate soils.*	This Structure Plan has been designed in accordance with Bushfire Management Plan (see **Appendix B**), a Local Water Management Strategy (see **Appendix C**), and a Flora, Vegetation and Black Cockatoo Assessment (see **Appendix G**).
3. The Structure Plan shall make provision for: *a) a variety of lot sizes and high quality residential dwellings and respond to the preferred concept outcomes of the Canning River Precinct Study (Consolidated Scenario 4),* *b) protection of valued vegetation located within or adjacent to the Martin Street road reserve including options regarding the potential heritage rose bush in the vicinity of the original Martin house,* *c) providing an archaeological watching brief in the River Road Heritage Precinct Class B zone, which is the indicative site of the former historic police barracks,* *d) suitable provision of 10% standard Public Open Space contributions, predominantly by augmenting and extending the width of the Canning River foreshore reserve area, creating pocket parks, or in accordance with policies of the Western Australian Planning Commission equivalent cash in lieu contributions which can be used to improve public recreation*	This proposed Structure Plan makes provision for: • A variety of lot sizes. This is demonstrated in the multiple proposed lot sizes for the area. • The proposed Structure Plan area is not adjacent to Martin Street. • The River Road Heritage Precinct B is not located near the Structure Plan area. • 25% of the subject site is to be ceded as Open Space being a combination of ROS and POS adjacent to the Canning River. • The Local Water Management Strategy at **Appendix C** provides management detail for Foreshore Management. Importantly, the development of the foreshore reserve was informed by consultation involving WAPC, EPA, DWER, DBCA and the City of Armadale by Bayley Environmental Services.

opportunities and facilities in the foreshore POS reserve areas, *e) providing Canning River foreshore reserves and management,* *f) investigation of solar access opportunities for housing at medium and above densities,* *g) a Local Water Management Strategy to be prepared in consultation with the DoW and the local government, and,* *h) servicing and infrastructure requirements including any requirements for road and bridge upgrades to provide access to the additional residential development and to manage local traffic.*	• Solar access has been considered in the design of the local structure plan. Particularly, future development density increases as the AHD of the site slopes down. This has been done in order to ensure all lots enjoy as much sunshine as possible throughout the day. • The Local Water Management Strategy at **Appendix C** has been prepared in collaboration with the WAPC, EPA, DWER, DBCA and the City of Armadale. • The proposed Local Structure Plan includes provision for the required roads and services to ensure vehicular thoroughfare through the precinct and are adequately serviced. A Servicing Report is included in **Appendix E**.

Based on the justification provided above, the proposed local structure plan is considered consistent with the provisions of the City of Armadale's Town Planning Scheme No. 4.

2.2 Planning Strategies

City of Armadale Local Planning Strategy

The City of Armadale Local Planning Strategy (LPS) was endorsed by Council on 27 September 2016 and endorsed by the Western Australian Planning Commission (WAPC) on 23 December 2016. The strategy reflects the planning intent of the City of Armadale for 2015-2025 period.

Overall objectives and key elements in the LPS include the following:

- *Provide for a variety of development to meet the needs of the community with regard to housing, employment and services, and to facilitate the provision of a wide range of social and cultural facilities and services;*
- *Improve access and integrate land uses with the available and extended public transport systems throughout the district;*
- *Consolidation, infill and refurbishment of housing in established residential areas which are well located in proximity to community facilities, public transport and services.*

Key strategies for the Canning River Kelmscott precinct include:

- *The Canning River Precinct was identified as an Urban Expansion Area in the 2005 LPS Strategic Plan by virtue of its location adjacent to the Kelmscott Town Centre and suitability for urban purposes.*
- *The opportunity for infill urban developments close to the Kelmscott Town Centre had been identified as a planning objective in the Kelmscott Enquiry By Design Workshop*

(2003) and the detailed opportunities and constraints in the precinct were further refined in the Community Consultation and Planning Study of the Canning River Precinct (2005). After a further (2009) environmental assessment study was jointly completed by the WAPC and City to define a future foreshore reserve, Metropolitan Region Scheme (MRS) Urban zone Amendment 1202/41 became effective in the MRS on 25 May 2012.

- *The Urban Development zone aims to support the Town Centre and Kelmscott station by a larger residential population catchment and to facilitate new foreshore parklands to enhance the management of the Canning River environment.*

The Housing Strategy component of the LPS identifies that the City of Armadale will remain as a place where a range of high quality of living environments can be enjoyed with:

- *a range of housing and opportunities for home businesses in community neighbourhoods that are developed on good design principles;*
- *meeting the housing targets as identified in the Directions 2031 Annual Report Card (2012) and influencing the housing mix (particularly for one and two bedroom dwellings) as per Directions 2031 Report Card (2012);*
- *Greenfields development at increasing density with the aim of achieving the Directions 2031 objective/target of 15 dwellings per hectare;*
- *future urban growth focused in and around retail and employment centres, transit orientated developments and high frequency public transport corridors;*
- *higher R-codes applied to areas that have close proximity to community facilities and services; and*
- *new facilities, infrastructure and service provision assisted by appropriate forms of contributions from new developments.*

This LPS provides for the development of a range of higher density residential facilities in close proximity to the Kelmscott District Centre and nearby services in accordance with the principles and objectives of the LPS.

The Bushfire Protection Strategy component of the LPS identifies the following relevant action:

- *Ensure that bushfire risks and impacts in new areas of closer subdivision and development are reduced and minimised by implementing a Bushfire hazard analysis and preparation of Bushfire Management Plans in risk areas from the earliest stages in planning assessment processes at the rezoning, structure plan, subdivision and development stages;*

A Bushfire Management Plan (BMP) has been prepared in support of the LSP and is included as **Appendix B**. The BMP assessed bushfire risks and outlines the necessary mitigation requirements.

The LSP has been prepared having regard to the objectives and key strategies while considering the overall intention of the Local Planning Strategy.

2.3 City of Armadale Local Planning Policies

Landscape Feature and Tree Preservation (PLN 2.4)

Part 3.1 of the City of Armadale's Local Planning Policy 2.4 Landscape Feature and Tree Preservation prescribes that the policy applies when Local Structure Plans are prepared. The following represents the required Local Landscape Feature and Tree Retention Strategy prescribed at Part 3.3 of PLN 2.4.

PLN 2.4 Requirement	**Applicant response**
A description and map prepared by a suitable qualified professional (to the satisfaction of the City) showing the location, species, size and structural health of Significant trees on site.	The environmental report at **Appendix G** of this report demonstrates the location, species and size of significant trees on the site.
A map showing which significant trees are proposed to be retained and which Significant Trees are to be removed.	The Plan at **Figure 6** demonstrates areas where trees are to be retained, and areas where trees are to be removed. In short, the portion of POS will retain all existing vegetation, while the trees in areas identified for Residential zones will be subject to tree removal.
A description of methods to avoid impacts on trees that are to be retained.	Trees which are retained will be protected via being allocated as POS. These trees will then be maintained by the City.
A description of ongoing management and maintenance.	Once the POS is ceded to the City, ongoing management and maintenance of the trees will be subject to the City's management.
A map and description of all landscape Features on site.	The Landscaping Plan at **Appendix I** provides a detailed description of the landscape features at the site.
A map of the Landscape Features that are proposed to be retained, modified, or removed, and;	The Landscaping Plan at **Appendix I** provides detail of the landscape features which are to be retained. The environmental report at **Appendix G** demonstrates the vegetation at its current state. In short, trees within the area identified to become POS will be retained, while trees outside of this area are to be removed.
Statement of how the District Structure Plan has considered and responded to Element 1 (Community Design) of Liveable Neighbourhoods.	The design of the proposed future development is consistent with the requirements of Element 1 (Community Design) of Liveable Neighbourhoods. This is addressed in detail at Part 2.7 of this report.

Therefore, the proposed Structure Plan achieves the requirements of PLN2.4.

Erosion Prevention and Sediment Control (PLN 2.5)

Part 3.1 of the City of Armadale's Local Planning Policy 2.5 Erosion Prevention and Sediment Control prescribes that the policy applies when Local Structure Plans are prepared. The following presents the information required in the development of a Local Structure Plan, as prescribed in the City of Armadale's Local Planning Policy 2.5.

PLN 2.5 Requirement	**Applicant Response**
The erosion risk should be assessed using the Work Sheet reproduced as Attachment 1 to this policy.	A completed Erosion and Sediment Risk Worksheet has been completed, a copy of which is in **Appendix J.**
Roads should be located on or parallel to ridges and have gentle slopes generally following contours or be located perpendicular to the contours if necessary. Rads should not be placed obliquely to contours. Consideration may need to be given to visual amenity in the location of roads;	Roads have been designed to respond to the contours at the subject site. The subject site slopes gradually from around 22m AHD in the east to 14m AHD on the western side of the site. No roads have been located along ridges.
Lot boundaries or roads should not cross watercourses if it can be avoided.	No future roads will need to cross any watercourses as a result of the proposed Local Structure Plan.
Lot orientation should maximise boundary length along contours and minimise boundary lengths down slopes. If practical, in order to minimise the need to construct cross-drains on firebreaks, property boundary lengths should not exceed 80m for slopes of less than 10% or 35m for slopes greater than 10%.	The future lot design will be responsive to the gradual slope at the subject site.
The location of existing or proposed erosion prevention control measures such as diversion drains, level spreaders or level sills, level banks, and contour banks or contours sills should be indicated on the plan.	The proposed local structure plan will preserve the existing bush on the western side of the site. This vegetation will reduce the instance of erosion from the site. Further, drainage basins located within the POS will further slow the flow of water and reduce erosion.
Strategic Firebreaks/Fire Access Ways should have gentle slopes (ie less than 10%) to reduce the likelihood of erosion and need for cross drains, and;	No strategic firebreaks or fire access ways will be required as a result of this development.
Stands of remnant vegetation should be retained where practical and should not be fragmented by lot boundaries. Revegetation to prevent or control erosion should be utilised where appropriate and practical.	Large portions of vegetation are being retained on the most sloped sections of land to reduce erosion. This vegetation will be contained within POS.

Therefore, the proposed Structure Plan achieves the requirements of PLN2.5.

Water Sensitive Design (PLN 2.6)

The policy applies to structure plans, subdivisions and development proposals throughout the City of Armadale and seeks integrate quality urban development with the natural environment. Furthermore, the policy seeks to enhance the qualities and benefits of the natural environment by:

- *Protecting the beneficial uses of the Canning River and watercourses.*
- *Ensuring water sensitive design best management practices are implemented for all new proposals so as to minimise nutrient and other pollutant export to the City's Rivers;*
- *Protecting and where possible restoring and enhancing environmental and social (i.e. recreational and scenic) values of waterways and protected wetlands;*
- *Retaining or enhancing open drains by converting them to multiple use corridors that provide habitat for wildlife and passive recreation opportunities wherever possible;*
- *Ensuring that upland vegetation is considered for protection in addition to wetland vegetation;*
- *Fringing vegetation along watercourses and around protected wetlands and associated significant upland vegetation for retention and rehabilitation where practical.*

All development along watercourses, main drains and overland flow paths for the 100 year storm recurrence interval shall have floor levels a minimum of 300mm above the 100 year flood level, however the City prefers floor levels to be 500mm above the 100 year level, particularly in areas with heavy soils.

Major watercourse and main drainage reserves should be of sufficient width to allow for 1:6 batters, appropriate access for maintenance, and the floodway associated with the 100 year event. This would normally result in a minimum reserve width of 30m.

Fringing vegetation associated with wetlands should not be removed from within buffer zones. Where significant upland vegetation is associated it should be considered for retention.

Landscaping (PLN 2.9)

Part 4.1 of the City of Armadale's Local Planning Policy 2.9 requires '*Any local Structure Plan shall be accompanied with the information required by* Part 4 – Structure Plans of the planning and Development (local Planning Schemes) Regulations 2015 (Clause 16).'.

This report achieves the requirements of Part 4 (Clause 16) of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

2.4 WAPC Planning Documents

Perth and Peel@3.5million and South Metropolitan Peel Sub-Regional Planning Framework

Perth and Peel@3.5million (*PP3.5m*) and *South Metropolitan Peel Sub-Regional Planning Framework* (*SRPF*) was prepared by the Department of Planning, Land and Heritage and endorsed by the Western Australian Planning Commission (WAPC) in 2018. PP3.5m provides strategic direction regarding the development of Perth across the course of the next 35 years. The subject site is identified as Urban in the draft SRPF, reflecting the existing zoning of the MRS and TPS 4. The key principles of the SRPF are as follows:

- *Develop a consolidated urban form that limits the identification of new greenfield areas to where they provide a logical extension to the urban form, and that places a greater emphasis on urban infill and increased residential density.*
- *Avoid areas that are at a high risk of bushfire to manage the potential impact on people, property and infrastructure.*
- *Limited support for new rural residential development, with the emphasis on areas currently zoned for the purpose.*
- *Facilitate increasing the number of people living close to where they work with the identification of suitable sites for employment within the sub-region, with a focus on attracting strategic economic and employment land use to the sub-region.*
- *Protect employment land from other competing land uses that could limit its ability to be used for employment purposes.*
- *Integrate land use and public transport to contribute to maintaining air quality.*
- *Maximise the use of and add value to existing infrastructure, including transport, community/ social and service infrastructure, where there is a concentration of urban and employment opportunities.*
- *Promote shared infrastructure corridors and sites for transport, community/social and service infrastructure (where appropriate).*
- *Provide effective and sustainable management of water resources including public drinking water source areas, drainage, nutrient management and water allocation to minimise environmental impacts, particularly in a drying climate.*
- *Avoid, protect and mitigate impacts on environmental attributes (with an emphasis on avoiding and protecting) when allocating proposed land uses, or address impacts through an improved conservation estate where those impacts cannot be avoided or mitigated, especially the Peel-Harvey Catchment area.*
- *Identify ultimate land uses for industrial and public purposes sites, while promoting access to finite basic raw materials, through the staging and sequencing of development.*
- *Retain land for agriculture and food production.*

The LSP is considered to be strongly aligned with the fundamental principles of the SRPF, with higher density residential development located in close proximity to existing amenity, public transport infrastructure and employment opportunities. Development will also provide the opportunity for environmental improvement and the mitigation of potential bushfire risk.

Development Control Policy 1.6 – Planning to Support Transit Use and Transit Oriented Development (DC 1.6)

DC 1.6 seeks to provide guidance regarding planning, urban design and development matters in the vicinity of mass transit infrastructure. The objectives of DC 1.6 are as follows:

- *To promote and facilitate the use of public transport as a more sustainable alternative to the private car for personal travel, to enhance community accessibility to services and facilities, including employment opportunities, community services and recreational facilities, and to improve equity in accessibility for those who do not own or have access to a car.*

- *To encourage spatial patterns of development that make it easier to plan and efficiently operate public transport services, and for the existing and potential users of public transport to access those services.*
- *To encourage balanced public transport rider-ship along transit corridors by creating places that are destinations as well as points of departure.*
- *To ensure the optimal use of land within transit oriented precincts by encouraging the development of uses and activities that will benefit from their proximity and accessibility to public transport, and which will in turn generate a demand for the use of transit infrastructure and services.*
- *To ensure that opportunities for transit supportive development are realised, both on public and privately owned land, and that transit infrastructure is effectively integrated with other development, to maximise safety, security and convenience for transit users.*
- *To promote and facilitate walking and cycling within transit oriented precincts by establishing and maintaining high levels of amenity, safety and permeability in the urban form, and to promote and facilitate opportunities for integrating transport modes by creating opportunities for convenient, safe and secure mode interchange.*

Key elements of DC 1.6 include the following:

- Preference for the street pattern within Transit Oriented Development (TOD) precincts to enhance walkability and to facilitate pedestrian and cyclist access to transit facilities.
- Higher density residential development should be located near transit infrastructure. The WAPC expects the application of densities substantially higher than 25 dwellings per hectare where sites have the advantage of close proximity to a rail station.
- A mixture of lot sizes should be provided within TOD precinct, as it provides greater flexibility of development options, and enhances the robustness of the urban structure, making it easier for the precinct to evolve over time through a progressive intensification of activities and change to uses that will more effectively support transit use.
- Streetscapes in TOD areas should include features to encourage walking (i.e. continuous footpaths). Continuity of footpaths should be ensured along both sides of streets within TOD precincts.

The LSP has due regard to the key TOD objectives and principles of DC 1.6 relevant to the proposal. The site has easy pedestrian access to the Kelmscott Train Station via the pedestrian bridge over the Canning River linking Brookside Avenue and Turner Place. An alternative route to the south has a bridge crossing Gilwell Avenue to the train station to the east.

Development Control Policy 2.3 Public Open Space in Residential Areas

Development Control Policy 2.3 (DCP 2.3) objectives are to ensure that:

- all residential development in WA is complemented by adequate Public Open Space,
- the provision of land for community facilities are ceded in conjunction with Public Open Space, and;
- margins of wetlands, watercourses and foreshores adjacent to residential development are protected.

Address of the relevant policy measure, described at Part 3 of DCP 2.3, is demonstrated in the table below.

Development Control Policy 2.3 provision	***Applicant response***
3.1.1 The commissions normal requirement in residential areas is that, where practicable, 10 percent of the gross subdivisible area be given up free of cost by the subdivider…	Of the 6.7249ha of the overall subject site and with the deduction of ROS of 0.9931ha, it is proposed that 0.6202ha is ceded as Public Open Space. This equates to around 11.83% of the overall subdivisible area, and achieves the required minimum 10 percent of Public Open Space.

Therefore, the proposed local structure plan achieves the requirements of Development Control Policy 2.3.

State Planning Policy 2.10 Swan-Canning River System

The objectives of the State Planning Policy 2.10 Swan-Canning River System are to:

- provide a regional framework for the preparation of precinct plans based on the precincts identified in the Swan River System Landscape Description,
- provide a context for consistent with integrated planning and decision making in relation to the river, and,
- ensure that activities, land use and development maintain and enhance the health, amenity and landscape values of the river, including its recreational and scenic values.

The following table addresses the provisions of Part 7.4 of State Planning Policy 2.10.

SPP 2.10 Part 7.4 provision	**Applicant response**
7.4.1 Development should maintain and enhance the quality and setting of the river.	The proposed local structure plan has been designed to respond positively to the river.
7.4.2 Proposals for development should be considered in the context of the river setting and the characteristics of the development site, particularly in regard to building height, bulk, scale, form, orientation and location.	Noted.
7.4.3 The selection and use of external finishes and materials should generally be based on materials and hues naturally occurring or predominantly used in the locality.	Noted.
7.4.4 Design should take account of the social, cultural, physical and historical setting of the river, as described in the Swam River System Landscape Description and adopted Swan-Canning precinct plans.	Noted.
7.4.5 Active recreation areas and associated development should occur in selected and suitable nodes where it achieves better access to and enjoyment of the river by the whole community.	The proposed Public Open Space is to be located between the river and the future residential lots to ensure access and enjoyment of the river is publicly available.
7.4.6 Proposals for development adjacent to, or over the water, may be supported in locations identifies as transport, commercial or recreation nodes in an adopted Swan-Canning precinct plan, subject to sub-clause 7.4.7 being taken into account.	Not relevant.
7.4.7 Proposals for development will be considered in the context of the extent to which: *- the development is pertinent to the river,* *- public access is improved,* *- the public's use and enjoyment of the river experience is enhanced,* *The visual landscape character of the river is maintained or improved,* *- views to and from the river are maintained or improved,* *- the long term health, amenity and landscape values of the river are sustained, and,* *- the natural ecosystem of the river is protected.*	Not relevant.

7.4.8 Land adjacent to the river should be available for public access, recreation and conservation of the river.	The proposed Public Open Space is to be located between the river and the future residential lots to ensure access and enjoyment of the river is publicly available.
7.4.9 Foreshore reserves should be secured in public ownership…	The foreshore area is to be ceded as Public Open Space.
7.4.10 Limited term private or public authority exclusionary control and rights to use portions of the river or the river foreshore may be acceptable in limited or special circumstances, provided the reason for the exclusionary control is for a wider public interest and the power to bring the land back to public control, if deemed required, is not compromised, and where acceptable alternative public access and circulation arrangements are implemented as part of a proposal.	Noted.
7.4.11 Where public acquisition of private land planned for future foreshore reserve purposes is not likely to occur in the short-term, development should not be permitted within the area of reservation if it is likely to impact on the natural qualities of the land, or if it would prejudice its timely transfer to the Crown in the future.	The foreshore area is to be ceded as Public Open Space.
7.4.12 River foreshore reserves should be planned with sufficient distance between the waters of the river and urban development to allow for: *- protection from inundation caused by a 1 in 100 year flood event,* *- conservation of the estuarine environment, including riparian vegetation,* *Public access and recreational use of the foreshore and the river,* - *installation or placement of essential public infrastructure,* - *commercial, transport and recreation nodes and associated facilities in accordance with adopted Swan-Canning river precinct plans, or other relevant plans,* - *views of the river from public places, and views of the foreshore from the river,* - *landscape protection and enhancement where needed, and,*	The proposed Local Structure Plan has been informed by the Local Water Management Strategy at **Appendix C** which provides design detail in relation to potential flooding at the site. Also within **Appendix H** is a Technical Memorandum providing justification for location of the proposed drainage basins.

- *adequate separation distance from nuisance insects of disease-causing organisms.*	
7.4.13 Adequate setbacks to development should be specified in local planning schemes, and other plans and proposals, to allow for natural estuarine processes, conservation of environmental values, significant landscapes, public access and to maintain views to and from the river.	Noted.
7.4.14 In the case of subdivision, private development should be separated from foreshore reserves by public road.	The proposed Public Open Space will be separated from residential areas by a public road.
7.4.15 Linkages and natural vegetation corridors incorporated into plans and development proposals are encouraged where they: *- provide important wildlife habitat and connections between habitat,* *- provide for public recreational movement and provide for natural water flows and stormwater, and,* *- connect known destinations and identified nodes to enhance the community's recognition or sense of place of the river.*	Noted.

Therefore, the proposed development is considered consistent with the provisions of SPP 2.10.

State Planning Policy 3.7 – Planning in Bushfire Prone Areas

State Planning Policy 3.7 (SPP 3.7) seeks to guide the implementation of effective risk based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure. SPP 3.7 applies to strategic planning proposals, including Structure Plans, over land designated as bushfire prone by the *Map of Bushfire Prone Areas* prepared by the Department of Fire and Emergency Services.

Given the subject land is designated as Bush Fire Prone, SPP 3.7 is applicable to the Structure Plan area. The requirements of SPP 3.7 are addressed by a Bushfire Management Plan prepared in support of the Structure Plan.

2.5 State Planning Policy 3 – Urban Growth and Settlement

State Planning Policy 3 (*SPP 3*) sets out the principles and considerations which apply to planning for urban growth and settlement in Western Australia. The Policy seeks to ensure well planned and coherent management of urban growth having regard to a range of social, economic and environmental objectives.

The key objectives of the Policy are:

- *"To promote a sustainable and well planned pattern of settlement across the State, with sufficient and suitable land to provide for a wide variety of housing, employment, recreation facilities and open space.*

- *To build on existing communities with established local and regional economies, concentrate investment in the improvement of services and infrastructure and enhance the quality of life in those communities.*

- *To manage the growth and development of urban areas in response to the social and economic needs of the community and in recognition of relevant climatic, environmental, heritage and community values and constraints.*

- *To promote the development of a sustainable and liveable neighbourhood form which reduces energy, water and travel demand whilst ensuring safe and convenient access to employment and services by all modes, provides choice and affordability of housing and creates an identifiable sense of place for each community.*

- *To coordinate new development with the efficient, economic and timely provision of infrastructure and services."*

The LSP meets the objectives of SPP3 by proposing a serviced, affordable, residential development within a walkable catchment of a train station and good transport links. The site is in close proximity to Clifton Hills Primary School, Fyfe Park recreation facilities, Kelmscott Public library, retail services to respond to community needs and expectations.

2.6 State Planning Policy 7.0 – Design of the Built Environment

State Planning Policy 7.0 (SPP 7.0) seeks to "address design quality and built form outcomes in Western Australia", and it does so by providing the framework for design and built environment. The policy includes a number of design principles, of which some are relevant to the Structure Plan process, in this instance.

The Structure Plan has been prepared in accordance with the design principles in the following manner:

- The design enhances and responds to the natural features of the site, including its topography and the portions of high-quality vegetation. This has been achieved by ensuring lots can generally be orientated "side-on" to the slope, thereby minimising retaining, and through the protection of a significant portion of vegetation, as detailed above.

- The structure plan includes the sufficient provision of unrestricted public open space that are adequately sized and located within proximity to all lots.

- The design accounts for good water management principles, protection of environmental features, and provides for opportunities to consider tree retention and protection, thereby achieving sustainable development outcomes.

- The road network is legible with clear connections to important features including the future school site and the surrounding road network.

2.7 Liveable Neighbourhoods

The WAPC's Liveable Neighbourhoods is an operational policy that guides the design and assessment of structure plans (regional, district and local) and subdivision for new urban neighbourhoods in the metropolitan area and country centres, on greenfield and large urban infill sites. Liveable Neighbourhoods includes the following Principle Aims that are particularly relevant to the Study Area:

- To foster a sense of community and strong local identity and sense of place in neighbourhoods and towns.
- To ensure the avoidance of key environmental areas and the incorporation of significant cultural and environmental features of a site into the design of an area.
- To provide for a more integrated approach to the design of open space and urban water management.
- To ensure cost-effective and resource-efficient development to promote affordable housing.
- To maximise land efficiency wherever possible.
- To provide a variety of lot sizes and housing types to cater for the diverse housing needs of the community at a density that can ultimately support the provision of local services.

Liveable Neighbourhoods outlines that Local Structure Plans should depict:

- *Walkable neighbourhood catchments of approximately 400m–450m radius around proposed commercial centres;*
- *Density targets expressed as dwellings per hectare;*
- *Existing and proposed commercial centres;*
- Natural features to be retained;
- *Proposed street block layout;*
- *Proposed street network, including street types and path networks;*
- *Proposed transportation corridors, public transport network and cycle and pedestrian networks;*
- *Proposed land uses, including distribution of higher, medium and lower density residential;*
- *Proposed schools and community facilities;*
- *Public parkland; and*
- *Proposed urban water management measures.*

This structure plan report identifies compliance with all of the above design requirements and principles, as is demonstrated throughout various sections of this report.

In summary, some of the key outcomes in relation to the above include a street block design that is legible and that provides good access and connection to the existing residential developments, the protection of the most environmentally sensitive vegetation, the promotion of a variety of lot sizes and appropriate provision of public open space.

3 SITE CONDITIONS

Due regard has been given to environmental considerations, particularly regarding the Canning River, in the preparation of the LSP. The extensive previous environmental work associated with the MRS and TPS rezonings has also been considered. Some information regarding the existing physical site conditions is incorporated within the Local Water Management Strategy (LWMS) included at **Appendix C,** Flora Vegetation and Black Cockatoo Assessment at **Appendix G**, Bushfire Management Plan at **Appendix B** and Mosquito Management Plan **at Appendix F**.

3.1 Landform & Soils

Topography

The project area is situated on an alluvial plain immediately east of the Canning River. The land slopes generally west towards the Canning River, with slightly higher ground in the north-east and slightly lower in the south-west. The slope increases markedly on the western edge of the project area, where the land falls away into the Canning River floodway.

Soil Types

The development area is located immediately to the east of the Darling Fault, mostly on colluvium formed by erosion of material from the Darling Scarp. The Geological Survey of Western Australia (Jordan, 1986) mapped about two thirds of the site, mostly in the north-east, as colluvial gravelly sandy clay. The margins of the Canning River were mapped as alluvial clayey sandy silt which also extends from the central west across to the south-east. A very small area of Yoganup Formation structureless yellow sand occurs on the north-eastern edge of the site. Drilling of four boreholes across the site revealed silty and clayey soil profiles that agreed well with the GSWA mapping.

Soil permeability testing indicates that surface soils have low to very low permeability, as is typical of silty clay soils. It appears that infiltration into the natural soils will be minimal and that infiltration basins will need to be engineered with imported permeable soils underlain by subsoil drains. Geotechnical reporting has not been undertaken at the LSP stage to assess permeability, however detailed geotechnical reporting will be required at the subdivision stage.

Acid Sulphate Soils

The Department of Water and Environmental Protection (DWER) maps the floodway of the Canning River (including the part of the south-western of the subject area) as having a high risk to moderate risk of acid sulphate soils (ASS) occurring within 3m of the natural soil surface. Further investigation has been undertaken as part of the LWMS (see **Appendix C**), which showed no evidence of ASS within the subject land area. Soil sampling may be required prior to any significant excavation or dewatering in the areas mapped as high ASS risk.

3.2 Hydrology

Surface Drainage

The low-permeability soils result in most drainage being by surface runoff. The higher parts of the LSP area, furthest from the Canning River, are generally well drained. Some areas closer to the river, including the central southern area of Lot 12 Clifton St, are subject to seepage and saturation. The low ground in the south-west of the site is poorly drained and may be subject to seasonal saturation.

One constructed drainage line flows along the southern boundary of Lot 12 Clifton St and then across the western part of the lot, carrying street drainage from Clifton St into the river via a combination of underground pipe and open channel flow. Runoff from private lots within the LSP area currently flows overland to the river. The major surface drainage feature of the project area is the Canning River and its floodplain, which forms the western boundary of the development area.

Groundwater

Groundwater exists in the clay soils beneath the LSP area and flows west towards the Canning River. The clay soils of the site suggest that the rate of groundwater movement is very low, although voids such as that encountered at one infiltration test site could produce much more rapid flows in localised areas. Depths to groundwater (measured in March 2015) ranged from 3.79m to 7.27m.

Wetlands

The DWER Geomorphic Wetlands Database maps most of Lot 1 and part of Lot 12 Clifton St as a Multiple Use Category Palusplain. The DWER also maps the watercourse of the Canning River as Conservation Category River and Palusplain. Because it is a waterway, foreshore setbacks to the river are determined by the WAPC and DWER with reference to Development Control Policy 3.1 and River Restoration 16 (rather than by the DBCA).

Water Quality

Water samples have been collected on three occasions in March and September 2015 and August 2017 from the onsite bores as well as the Canning River upstream and downstream of the project area. The results in Table 2.5 show that the water quality is generally good across the site, with slightly elevated levels of conductivity and salinity. The concentrations of total and/or reactive phosphorus are above the ANZECC freshwater ecosystem guideline in the bores but below the guideline in the river. The levels of metals and acid sulphate soil indicators are generally low.

Bush Forever

Bush Forever Area 246 (BFA 246) is identified along the length of the Canning River, from Beckenham to Kelmscott. The majority of BFA 246 is located outside of the LSP area within the identified floodway, however portions of BFA 246 is identified within the LSP on Lots 11, 12 and 1. These areas will be protected in future local open space areas within the LSP.

3.3 Site Contamination

The Department of Environmental Regulation's (DER) Contaminated Sites Database shows no known contaminated sites on or near the LSP area. Historical Landgate aerial photography of the LSP area also shows no evidence of contamination or contaminating land uses since at least 1953 (being the date of the earliest photography). The land does not appear to have been used for market gardening, intensive animal stocking or industry at any time. A small orchard has been present on Lot 1 since before 1995 but its small size (less than 1,500m^2) means that significant contamination is unlikely.

The site inspection by Bayley Environmental Services in March 2015 found no visual or olfactory evidence of past or present contamination. Current land uses consist of occupied and unoccupied dwellings and sheds. It is concluded that no further investigation of contamination is necessary.

3.4 Bushfire Hazard

A Bushfire Management Plan (BMP) has been prepared by Ecosystem Solutions in support of the LSP and is included within **Appendix B**. The BMP incorporates an assessment of the bushfire risk for the subject site, undertaken in accordance with the requirements of *Planning for Bush Fire Protection*, which takes into account vegetation cover, topography (with particular reference to ground slopes and accessibility), weather (temperature, relative humidity and wind speed/direction) and relationship to surrounding development.

3.5 Biodiversity and Natural Assets

Vegetation

A Flora, Vegetation and Black Cockatoo Assessment was undertaken by Western Environmental with fieldwork conducted in February 2023. A copy of the assessment can be found in **Appendix G**.

The assessment identified a total of 23 species within the subject site, with 19 of these being non-native. The results of the survey and observations were likely due to the history of the site, which has previously been cleared for rural residential type development. Further, no Commonwealth EPBC Act listed, or State BC Act listed Threatened or DBCA listed Priority Flora were recorded in the Survey Area or were assessed as having a high-medium likelihood of occurrence.

The vegetation of the Survey Area was considered Completely Degraded as a result of historic clearing for urban development and replaced by planted eucalyptus, maintained lawn and paddock grasses, assorted fruit trees and exotic garden plants. Figure 6 indicates the trees to be retained within the ROS and POS.

Fauna

The Fauna assessment undertaken by Western Environmental determined that there were no intact vegetation and hence it can be concluded that there was no suitable habitat for ground dwelling fauna species. The assessment in relation to Black Cockatoo conclude that although there were a significant number of trees of a suitable size to develop hollows, the majority did not show signs of any hollow development and were not of a sufficient age to be forming suitable nesting hollows. Details of the assessment can be found at **Appendix G**.



Source : Western Environmental

Figure 6 - Location of Significant Trees

Canning River

The Canning River is located to the west of the subject land and is a major contributor to the desirability of the locality by providing a high level of amenity and a significant environmental feature. The DBCA maps the watercourse of the Canning River as a Conservation Category River and Palusplain.

The Canning River foreshore is a major contributing factor influencing the design of the LSP with a Foreshore Reserve proposed on the western side of the subject land. The Foreshore Reserve is to be ceded to the crown at the time of development/subdivision of the land parcels adjacent to the foreshore.

While the environmental conditions of the river foreshore are outside of the subject land, the Canning River provides for a permanent water source and potential habitat and movement corridor for fauna. Further information is available in the Flora, Vegetation and Black Cockatoo Assessment at **Appendix G**.

Drainage flows from the proposed development will be managed to allow a quantity of small, clean flows to the Canning River. Further information on the drainage catchment flows can be found in the LWMS at **Appendix C**. Also within **Appendix H** is a Technical Memorandum providing justification for location of the proposed drainage basins.

While the Canning River provides for recreational uses and is of significant environmental value, the wetland is a potential for mosquito breeding area. Prevailing winds in summer (the most likely time for mosquito breeding) are from the south and east in the morning and from the west in the afternoon. There is a risk that the prevailing summer afternoon wind can assist in the dispersal of mosquitos from the Canning River location to the subject land. Mitigation measures are detailed in the Mosquito Management Plan provided in **Appendix F**.

4 OPPORTUNITIES AND CONSTRAINTS ANALYSIS

An Opportunities and Constraints Analysis has been undertaken for the subject land explanation of the relevant considerations is provided below.

4.1 Canning River

The abutting Canning River is a significant natural asset which has the potential to provide a high degree of amenity to the future residents of the LSP area and the wider community. The opportunity exists to provide new passive recreation facilities for pedestrian and cyclists, as well as new picnic and playground areas. Rushton and Fancote Parks are good nearby examples of high amenity parkland areas developed in close proximity to the Canning River (refer **Plates 1**) that incorporate tree retention and community facilities. Weeding and upgrading of the river environs is required to render this area useable and attractive.



PLATE 1 – EXAMPLE FORESHORE PICNIC, RUSHTON PARK

Whilst providing the potential for significant natural amenity, the Canning River also serves as a physical barrier between the LSP area and the key attractions to the west (i.e. Kelmscott Town Centre and Train Station). Consideration needs to be given to the pedestrian, cyclist and vehicle connectivity of the subject site to these attractors. The existing Brookside Avenue/Turner Place and Gilwell Avenue bridges provides access to the Kelmscott Town Centre.

A shared pedestrian and cyclist path should be provided along the length of the foreshore parallel to the Canning River. This path could be located within a future foreshore reserve, within local open space, within new road reserves or a combination of some or all of these areas. The exact alignment should be determined at the detailed design stage and avoid existing established trees where possible.

4.2 Bush Forever

The total area of the Bush Forever designation that impacts upon the area zoned for Urban Development in TPS 4 is 3536m^2. The vast majority of this area (2989m^2) is on Lot 12 (No. 17), with 526m^2 identified on Lot 11 (No. 15) and 21m^2 identified on Lot 1 (No. 27). This area will need to be retained within open space within the framework of the LSP.

Examination of the Bush Forever area on Lot 12 identified the presence of an existing seasonal linear swale, running from south-east to north-west and discharging into the Canning River (refer **Plates 2**).



PLATE 2 – EXISTING DRAINAGE SWALE LOCATED ON LOT 12 (NO. 17), LOOKING NORTH

4.3 Kelmscott District Centre & Train Station Catchment

The majority of the subject land is located within the nominal 800m walkable catchment of the Kelmscott Train Station. In line with Transit Orientated Development principles, higher residential densities should be developed within the catchment of mass transit infrastructure. Doing so supports the viability of the infrastructure with increased patronage. In turn, this generates more pedestrian and cyclist trips to and from the train station, which improves the economic viability of local businesses, with "more wallets passing shopfronts". It also provides for improve passive surveillance of the public realm and "eyes on the street".

The location of the subject land within the Kelmscott District Centre and Train Station catchment, coupled with the amenity of the Canning River, provides a strong basis for the identification of higher residential densities. In accordance with the principles of orderly and proper planning, density should decrease as distance from amenity (both functional and natural) increases. The Local Structure Plan identifies the potential for higher densities closer to the Train Station and overlooking the Canning River, with progressively lower densities with R40 (with a two-storey limit overlay) to future lots fronting Clifton Street.

4.4 Clifton Street Interface

Consideration should be given to ensuring a suitable built form and development interface is achieved along Clifton Street opposite the existing residential areas (refer **Plates 3**). The land naturally falls from Clifton Street down to the Canning River and medium density residential housing could be developed with a two-storey building height limit imposed fronting Clifton Street. The LSP allows for higher density development to occur further down slope adjacent to the high amenity of the Canning River. Such a scenario would facilitate a transition in densities and built form scale moving west towards the Town Centre.



PLATE 3 – EXISTING CLIFTON ST STREETSCAPE

4.5 Southern and Northern Interfaces

The land to the south of the LSP is situated within Development Area 44 and will be the subject of a future Structure Plan prior to subdivision and development. Consideration needs to be given to the nature of the interface at this boundary, with either the provision of a new public road or rear lot boundaries in this location. The future extension of north-south roads also needs to be considered in the design formulation process.

The land to the north (of Brookside Avenue) is currently zoned as Rural Living 2 and there are no known plans for the rezoning of this land to enable more intense residential development in the future. It could be foreseen, however, from the examination of the wider zoning pattern in the Kelmscott locality that this area may one day in the future be rezoned for residential development. The LSP proposes a super lot with the potential to be developed as a lifestyle village while maintaining an R40 portion of the lot abutting Brookside Avenue. This would suitably address Brookside Avenue and have an attractive built form appearance when viewed from the land to the north.

4.6 Existing Drainage Infrastructure

An existing drainage pipe is located on Lot 12 (No. 17) Clifton St, running parallel to the common boundary with Lot 1 to the south (refer **Plates 4**). It is understood that the existing pipe accommodates local government drainage from the east. The drainage pipe is not identified via an easement on the Lot 12 Certificate of Title. The design for and development of the subject land needs to take into account the presence of this infrastructure and the need for an east-west drainage connection in this area.



PLATE 4 – EXISTING DRAINAGE INFRASTRUCTURE ON LOT 12

4.7 Sewer Pump Station

An existing sewer pump station is situated on Lot 1 Brookside Avenue, which is outside of the LSP area and surrounded by Lot 12 (No. 32) to the east, south and west (refer **Plate 5**). Lot 1 is owned by the Water Corporation, and it is understood that the pump station will continue to operate into the future. The existing facility represents the logical and most efficient location for wastewater generated from the development of the subject land to be directed and incorporated into the wider Water Corporation sewer system.



PLATE 5 – EXISTING WESTFIELD PS, BROOKSIDE AVENUE WASTEWATER PUMP STATION

Page 4 of the Servicing report, attached at **Appendix E** of this document, includes input from Water Corporation which concludes the existing wastewater system is capable of hosting the proposed development.

Sewer planning provided by the Water Corporation shows the existing pump rate of the Westfield Pump Station as 29.4 L/s with a long term rate of 33.3 L/s. Using these rates, a buffer distance requirement of 10m from the pump station have been calculated based on the table within Appendix 1 - Separation Distances between Industrial and Sensitive Land Uses, from the Environmental Protection Authority's (EPA) *Guidance for the Assessment of Environmental Factors*, June 2005. The buffer distance is accommodated within the LSP, with the Pump Station site separated from the residential development by a local road and a portion of POS.

4.8 New Roads

The City has, through the rezoning processes, previously expressed a preference for a public road interface to be provided at the edge of a future foreshore area and open space area associated with the Canning River. New road reserves can also be provided to act as a partial buffer for fire management purposes.

The existing bridge at the western end of Brookside Avenue/eastern end of Turner Place currently only provides for pedestrians to cross the Canning River at this location, with both roads ending as cul-de-sacs (refer **Plate 6**). The need for a new vehicle crossing in this location is questionable, with the major attractors (Kelmscott and Armadale District Centres) being located to the south and readily accessible via Clifton St and the existing Gilwell Avenue vehicle bridge.



PLATE 6 – EXISTING BROOKSIDE AVENUE/TURNER PLACE PEDESTRIAN BRIDGE

5 LOCAL STRUCTURE PLAN

5.1 Vision

The development of the Clifton St North Precinct will see the creation of attractive, higher density residential facilities that will provide a mixture of housing opportunities for the Kelmscott community. The mixture of housing options available will serve the diverse needs of the Kelmscott community, including singles, couples, families, empty nesters and retirees. Development will take advantage of the considerable natural and functional amenity associated with the Canning River, Kelmscott District Centre and Kelmscott Train Station and will facilitate environmental improvement.

5.2 Local Structure Plan Summary

The LSP encourages the development of higher density residential facilities that seek to capitalise on the existing natural and functional amenity that is located within close proximity to the site.

The LSP seeks to stipulate the key boundaries between land uses (e.g. between residential development and open space), address the key interface considerations (e.g. road interface to future foreshore, building height restrictions fronting Clifton St) and identify the key matters that need to be addressed at the detailed subdivision and development stages (e.g. BAL compliance etc). As such, the LSP affords a certain degree of flexibility for innovative and creative detailed design responses, provided that there is compliance with the key elements and principles of the LSP and the key objectives are realised.

5.3 Residential

5.3.1 Land Use and Residential Density

The LSP specifies a range of residential densities, from R40 to R80. This level of density is proposed to capitalise on the amenity of the Canning River foreshore area and the functional amenity of the Kelmscott District Centre and Train Station. The vast majority of the subject land is located within the nominal 800m walkable catchment of the Kelmscott Train Station and higher densities are accordingly warranted in accordance with TOD principles outlined in DC 1.6. Furthermore, the densities proposed are consistent with the principles outlined in the City's draft Local Planning Strategy for areas in and around existing centres.

The LSP proposes a spatial distribution of densities whereby higher densities are provided in closer proximity to the Kelmscott District Centre and Train Station and relatively lower densities are provided as distance to these facilities increases. Doing so provides for a gradual density transition, which is likely to be reflected in a similar built form bulk and scale transition.

The proposed densities provide for a range of single, grouped and multiple dwellings to be developed within the LSP area. The LSP does not, however, mandate that a particular form of development (i.e. single, grouped and multiple dwellings) must occur in any particular location.

A density of R40 is generally proposed along Clifton Street, to provide a suitable interface to the existing developed areas in the vicinity of the LSP. This lower density, coupled with the two storey building height restriction, will combine to minimise the built form and visual impact of development in this location on existing residents and on the Clifton St streetscape. This will provide for a suitable built form transition to the surrounding residential areas without significantly compromising the ability to realise a higher density within the catchment of the Kelmscott Train Station.

Areas of R80 density are identified immediately adjacent to the Canning River and within the 800m catchment of the Kelmscott Train Station. This area represents the most logical location within the LSP area for this higher density, given the proximity to amenity, infrastructure, facilities, POS and services. The identification of R80 as the upper density limit is also consistent with the City's Draft LPS for areas around the City's main centres.

A density of R60 is proposed for the majority of the LSP area, generally between the R40 and R80 areas. This density is appropriate in this location, given ready access to the shops and services of the Kelmscott District Centre and Train Station. The amenity of the Canning River will also be readily accessible. R60 is considered an appropriate level of density in this area, given the quality and extent of the nearby functional and natural amenity and is consistent with the TOD principles of DC 1.6 and the City's LPS.

5.3.2 Lot Layout

The Structure Plan has regard for the established residential development occurring to the east of the Structure Plan area, within the adjoining estate, the sites proximity to the Kelmscott town centre, and the immediate context that includes the Canning River.

The proposed residential density is consistent with the strategic direction of the Sub-Regional Planning Framework which promotes higher densities in undeveloped areas zoned for urban use, particularly in areas close to transit corridors and high amenity. The Sub-Regional Planning Frameworks encourage new urban development to use an average residential density target of 15 dwellings per gross hectare of urban zoned land and 26 dwellings per residential site hectare to guide the allocation of residential densities.

On the basis of the above, the Structure Plan is proposed for residential development at a density coding of R40, R60 and R80. Given there is an expected yield of 396 lots, in real terms, the Structure Plan area achieves a residential density, in an area of high amenity, and exceeding the target set out in Perth and Peel@3.5 million strategic document.

5.3.3 Residential Lot Size

The Structure Plan responds to the existing alignment of roads and where possible and the Canning River, achieves an overall road network resulting in the creation of standard street blocks that are robust and adaptable to accommodate a variety of lot sizes. Density codes of R40, R60 and R80 are proposed. Standard R40 coded lots would average 220m² in area, while R60 and R80 coded lots have average areas per dwelling ranging between 150m² and 120m² in area.

5.3.4 Residential Lot Layout

The road network has been designed to facilitate the creation of regular shaped lots, capable of accommodating standard residential dwellings as well as high density apartment developments, with direct access to a public street. Orientation of lots fronting the various areas of Public Open Space encourages passive surveillance, including lots abutting the Canning River which runs along to western boundary of the LSP area. Other design considerations include ensuring street blocks and lot orientations have maximised separation from bushfire hazards.

5.4 Movement Networks

Cardno has prepared a Transport Impact Assessment, a copy of which is included at **Appendix D**.

5.4.1 Regional Road Network

The subject site is well connected to the metropolitan and wider regional road network, given its close proximity to the Albany Highway and frontage to Clifton Road. The regional road network provides efficient access to the wider Perth Metropolitan Region including commercial and employment centres. Albany Highway is considered to be a Primary Regional Road, whilst Clifton Road functions as a regional distributor (providing a connection from existing residential developments and Albany Highway/Kelmscott.

5.4.2 Local Road Network

Aside from its frontage to Clifton Road, the subject land has direct frontage to Brookside Avenue, which provides connections to the adjacent estate. A series of new local road reserves are proposed on the LSP, which will provide access to the new development sites and will provide public access between the Canning River foreshore area and Clifton Street. The new roads will also provide a clear demarcation between the public and private realms, particularly along the foreshore and open space areas along the eastern boundary of the LSP.

5.4.3 Road Widths

The ultimate reserve widths for new local roads and possible laneways within the LSP area will be determined at the detailed subdivision design stage, in accordance with Liveable Neighbourhoods to the satisfaction of the WAPC in consultation with the City of Armadale.

5.4.4 Intersections

Details associated with the design of any required intersection treatments, including any new and upgraded local road connections to the primary road network will be identified and concept designs will be prepared during the detailed subdivision stages of the development, in consultation with the City of Armadale.

All intersections within the LSP area will be basic priority-controlled T-intersections, due to the relatively low traffic volumes. Local intersection connections with Clifton Street are proposed to typically operate under T-intersection Give Way control, with the exception of Tara Way which will become a four way intersection. Clifton Street will remain the priority road with stop signs on both local roads including the existing Tara Way. Consideration is to be given to the potential retention of trees at the intersection of Brookside Avenue and Clifton St, subject to sightline requirements, at the detailed subdivision stage.

5.4.5 Public Transport

The nearest public transport connection comprises the Kelmscott Train Station which is located approximately 800m west of the subject site, on Albany Highway. Buses services also run along Albany Highway.

5.4.6 Pedestrian and Cycle Network

Pedestrian and cycling facilities are available along the eastern side of Clifton Street and the southern side of Brookside Avenue. Brookside Avenue terminates at a cul-du-sac with a footbridge over the Canning River. Footpaths are also available in the adjacent estate and provides connection to Clifton Hill Primary School and sporting oval. The LSP will extend the walking and cycling network through a shared path which is proposed to run along the Canning River connecting the Brookside Avenue.

5.4.7 Proposed Movement Network

A Transport Impact Assessment prepared by Stantec in support of the Structure Plan, provides detail on the proposed road network and the impact of potential traffic volumes on the local road network. A pedestrian path system shall be designed to seamlessly integrate with the existing path systems in the adjoining existing estate.

5.4.8 Proposed Movement Capacity

In calculating trip generation and distribution within the Structure Plan area, the Transport Impact Assessment examines the trip generation rates for the proposed residential development. Based on these rates, the proposed Structure Plan will generate approximately 920 vpd which can be accommodated by the proposed internal road network. It is noted that as part of the land is earmarked for future retirement village which traditionally do not generate a significant number of trips.

The traffic report concludes that the existing and proposed upgraded road network abutting and within the subject site has/will have the capacity to accommodate future anticipated traffic movements.

5.5 Open Space

Public open space areas are proposed to be provided as part of the development of the LSP area. These open space areas will also serve a local drainage function and combined with a new Canning River foreshore reserve, will provide new passive recreation opportunities, amenity and environmental benefits.

The public open space areas are proposed along the western boundary of the LSP, abutting the future Canning River foreshore area. This area will also accommodate the treatment and attenuation of local drainage associated in accordance with Water Sensitive Urban Design.

The main area of proposed local open space is provided on Lot 12 and largely corresponds with the extent of the Bush Forever designation that affects the urban-zoned portion of the LSP area. It is proposed that the areas of open space to each of the lot within the LSP will accommodate local drainage associated with the development of each lot with the acceptation of Lot 11 (No. 1) Clifton Street which will require the construction of the drainage and basin located on Lot (No. 32) Brookside Avenue.

Table 3 and **Figure 7** detail the POS provision and location.

Table 1 - POS Requirement		
Public open space schedule		
Calculation of Required POS Provision		
Total site area (ha)		**6.7249**
Deductions		
Regional Open Space	0.9931	
Surplus Restricted Public Open Space Not Credited	0.0000	
Total Deductions		
Total Deductions		**0.9931**
Gross Subdivisible Area (total site area minus deductions)		**5.7318**
Required Public Open Space (10%)		**0.5732**
Breakdown of POS Provided		
Restricted Public Open Space		
Dedicated Drainage Basins (1yr ARI)	0.0576	
Total Restricted POS	0.0576	
Maximum 20% credit	0.1146	
Total Restricted POS Credited to a maximum of 20%		**0.0576**
Surplus Restricted POS Not Credited i.e. over the maximum 20%	0.0000	
Unrestricted Public Open Space		
Sport	0.0000	
Recreation	0.0000	
Nature (POS minus 1yr ARI drainage basins)	0.6203	
Total Unrestricted POS	0.6203	
Total Unrestricted POS		**0.6203**
Total		**0.6779**
POS Provision as Percentage of Gross Subdivisible Area		**11.83%**

Table 3 - Public Open Space Schedule



DRAINAGE BASINS - AREA INUNDATED		
BASIN	1 ARI	100 ARI
1	70m²	221m²
2	200m²	516m²
3	121m²	420m²
4	185m²	734m²
TOTAL	576m²	1891m²

POS CALCULATION PER LOT	
Lot 12 Brookside Ave	666m²
Lot 11 Clifton St	1473m²
Lot 12 Clifton St	3371m²
Lot 1 Clifton St	1289m²
TOTAL	6799m²

LEGEND

- Structure Plan Boundary
- Public Open Space
- Regional Open Space
- Bush Forever
- (1) Indicative Drainage Location
- Shared Path (Indicative Location)

Figure 7 - Public Open Space Plan

5.6 Built Form

It is envisaged that a high quality built form will be delivered in the development of the LSP area and it will be the expectation of the City that high quality outcomes are realised in order to fully achieve the development potential afforded by the nominated densities. Some key principles for the consideration of detailed built form design are as follows:

- The new built form should be contemporary in design, whilst also acknowledging and paying tribute to the architectural heritage of the Kelmscott locality.
- A mixture of dwelling types and sizes should be provided to facilitate dwelling ownership and occupation to provide accommodation at all stages of life and a mixture of members of the community.
- New development shall orientate to the surrounding public realm (i.e. public roads and open space areas) to facilitate community interaction and passive surveillance.
- New built form shall provide for the creation of a varied and interesting streetscape, through articulation and the use of a mixture of materials and colours. Elevations may be articulated using some or all of the following measures: glazing, awnings, porticos, verandas, balconies, major openings to habitable rooms.
- Blank facades to the public realm should be avoided wherever possible.

5.6.1 Local Development Plans

Local Development Plans (LDPs) may be required to be prepared and approved by the City of Armadale as a condition of subdivision approval and prior to the creation of new lots/development sites. LDPs shall specifically address open space, orientation and access matters for each new lot, as well as other relevant consideration outlined in Clause 6A.5.3 of TPS 4.

LDPs should be prepared with acknowledgment and due consideration provided to the following development principles:

- Vehicle access to laneway lots is to be provided from the rear laneway, with the dwelling orientating to and addressing the primary street;
- All dwellings shall have at least one major opening from a habitable room, outdoor living area and/or balcony facing all abutting public road reserves and/or public open space areas.
- All dwellings on lots/development sites directing abutting public open space areas shall be designed to orientate towards and provide surveillance of public open space areas.
- Visually permeable fencing shall be provided at the boundary between lots/development sites and public open space areas.
- Some visitor parking may be able to be provided offsite within public road reserves, to the satisfaction of the City of Armadale.
- Vehicle access to lots/development sites shall preferably not be provided from Clifton St or from roads facing the Canning River.
- Specific built form measures required to mitigate potential bushfire hazards.

5.6.2 Minimum Two Storey Height Limit

The LSP incorporates a requirement for future built form on R80 coded sites to have a minimum height of two storeys. This requirement will ensure that a minimum development standard is

realised in the LSP area. This measure specifically seeks to avoid an outcome that results in single storey, single dwelling development at R80 densities, which would be contrary to the built form vision for the LSP area.

A second level above the ground floor level must be provided to comply with the minimum building height requirement of the LSP. This may be in the form of a full additional storey(s) and/or via the addition of a loft. Where provided, lofts should contribute to the presence of the built form to the surrounding public realm. This can be achieved via the provision of windows, balconies and/or other architectural and design elements.

5.6.3 Maximum Two Storey Height Limit

The LSP incorporates a two storey height limit that applies to all forms (i.e. single, grouped and/or multiple) of new development fronting Clifton St. The calculation of this height limitation shall be undertaken in accordance with the requirements of the R-Codes.

This clause seeks to provide for a suitable built form interface between the LSP area and the existing properties located on the eastern side of Clifton St. Given the existing nature of the terrain in this area (i.e. rising eastwards), a two storey height limit will ensure that the mass and scale of new built form in this area will not dominate the streetscape and will not adversely affect the visual amenity of the existing property owners.

5.7 Water Management

The WAPC's Better Urban Water Management (BUWM) document identifies the requirement to prepare a Local Water Management Strategy (LWMS) to support Structure Plan proposals. An LWMS has been prepared and submitted to support the proposed Structure Plan in accordance with the requirements of the BUWM. The LWMS outlines the key elements required to achieve best practice stormwater management for the site and identifies how the Structure Plan supports water sensitive urban design. The LWMS presents the management strategy for groundwater, surface water, and water use.

Implementation of the LWMS will be facilitated by an Urban Water Management Plan required as a condition of Subdivision approval. The LWMS can be found at **Appendix C**. Also within **Appendix H** is a Technical Memorandum providing justification for location of the proposed drainage basins.

5.8 Heritage

Although outside of the LSP area, an Registered Aboriginal Heritage Site (3538) is located on the Canning River and foreshore to the west of the site. The Canning River is also identified by the Heritage Council as a Historic heritage Place (P17887).

5.9 Bushfire Management

A series of Bushfire Attack Levels (BAL) are identified, reflecting the outcomes of the bushfire hazard risk assessment undertaken and incorporated in the BMP included within **Appendix B**. There are

different construction requirements to mitigate against fire risk for the different BAL ratings, which are outlined in *AS 3959-2009 Construction of buildings in bushfire prone areas*.

Development can occur in accordance with the BAL Ratings identified in the BMP. Alternatively, developers of the land within the LSP area can choose to have a site-specific assessment undertaken by a suitably qualified fire consultant at the time of development to assess the fire hazard at that time, noting the likely future modification of the vegetation within the foreshore reserve and the resultant modification to the identified BAL ratings.

Such an assessment would consider the mitigation measures required for the whole of the site, taking into consideration its context. For example, a site may have multiple BAL ratings identified in the BMP and the implementation of mitigation measures in accordance with highest BAL rating on the building frontage orientated towards the bushfire risk may reduce the mitigation measures required elsewhere on that particular site. Similarly, later stage development that is shielded from a bushfire risk by an earlier development stage may serve to reduce the BAL rating and consequently the bushfire mitigation measures required. The potential for modifications to the BAL ratings identified in the FMP, is to be assessed by a suitably qualified fire consultant and shall be to the satisfaction of the City of Armadale.

5.10 Activity Centres and Employment

A future retirement village is proposed within the LSP area. This is an ideal location for such a development given the close proximity to existing residential development and the Kelmscott District Centre to the west and the Armadale City Centre further south. This provides excellent opportunities for people to live and work locally as well as provided a level of service and amenity to residents in a retirement village.

5.11 Servicing and Staging

An engineering Service Report has been prepared by Stantec and is included within **Appendix E**. The key elements of the Servicing Report are included below. The report confirms that there are no impediments to the development of the LSP area in terms of the available utility infrastructure. Upgrades to existing water infrastructure and extension of the power network will be required; however, these works are relatively simple and are technically and economically feasible.

5.11.1 Water

There is an existing 205mm cast iron pipe running along Brookside Avenue and a 100mm cast iron pipe running along Clifton St. The Water Corporation has advised that no water reticulation concept planning for the structure plan area has been undertaken by the Department to date, but this can happen leading up to or as part of the subdivision approvals process. For water servicing purposes, it can be assumed at this stage the developer of the site will need to extend reticulation mains of suitable site (usually 100PVC or 150PVC) off the surrounding network.

5.11.2 Sewer

There is currently a 230mm diameter VC sewer along Brookside Avenue and a 150mm diameter VC sewer along the northern-most portion of Clifton Street. This existing infrastructure gravitates to

the Brookside Avenue pump station located on Lot 1 which abuts the north-western corner of the LSP area. The LSP area can be connected to this existing pump station. Specific sewer installation requirements will be confirmed at the subdivision stage, based on the extent of infrastructure in place at that time and the staging of development.

5.11.3 Power

Western Power have confirmed that there is a 22kV network (G522 85 Wheatley St feeder) running along Clifton St with sufficient capacity to service the development of the LSP area. A connection to the high voltage feeder will be required just to the east of the Clifton Street/Brookside Avenue intersection with a loop back to the feeder backbone required to be installed along Clifton Street and Butler Pass. Unless the available spare capacity on the G522 feeder is allocated or used up by other customers prior to development within the LSP area applying for connection, it is likely that no reinforcement works on the existing network are required for this connection.

5.11.4 Gas

A medium pressure 80mm diameter gas main in currently installed along Brookside Avenue and a medium pressure 100mm gas main is installed along Clifton Street. Atco Gas have confirmed that the existing gas network is currently able to supply all lots proposed within the LSP area.

5.11.5 Telecommunications

The National Broadband Network (NBN) has not been rolled out in the area and there is no time frame for installation of NBN services in the vicinity of the LSP area. It is noted that NBN Co will install new cable in developer provided pit and pipe where the development exceeds 100 lots. If the NBN Co is unable to install the NBN infrastructure, then Telstra will provide the service.

5.11.6 Staging

Given the fragmented nature of the existing landholdings within the LSP area, it is not possible to specify the likely staging of subdivision and development. It is envisaged that subdivision and development will occur progressively, with landowners/developers required to provide the necessary services to facilitate the development of their parcels.

The design and implementation of services (i.e. alignments, levels) and earthwork levels for the initial stages of development is to be done in such a way so as to enable the efficient and effective co-ordination of subsequent stages with the initially installed servicing and drainage infrastructure.

5.12 Developer Contribution Arrangements

Developer Contribution Arrangements (DCA) are not proposed to be established for the LSP area. It will be the requirement of each subdivider to construct new local roads identified to service the development of their landholdings and to provide open space as identified on the LSP Map. The LSP layout provides for the largely equitable distribution of open space and land for new public roads across existing landownership boundaries. The establishment and operation of formal DCA is not considered appropriate for a relatively small-scale development such as this, given the additional cost impost for landowners to prepare a Developer Contribution Plan (DCP) and the ongoing DCP maintenance obligation placed on the City of Armadale to administer the arrangements.

6 CONCLUSION

The proposed Structure Plan has been prepared in accordance with the requirements of the *Planning and Development (Local Planning Schemes) Regulations 2015*. Further, the Structure Plan complies with the applicable State and Local Planning Policy Framework as set out in section 1.3 of this Report.

This LSP has been prepared to outline a land use and movement network framework for the development of No. 32 Brookside Avenue and No. 1, 15, 17 and 27 Clifton Street, to accommodate medium and high-density residential housing and open space. The LSP encourages the development of higher density residential facilities that seek to capitalise on the existing natural and functional amenity that is located within close proximity to the site.

The LSP seeks to stipulate the key boundaries between land uses, address the key interface considerations and identify the key matters that need to be addressed at the detailed subdivision and development stages. This LSP therefore affords a certain degree of flexibility for innovative and creative detailed design responses, provided that there is compliance with the key elements and principles of the LSP and that the key objectives are realised.

Following adoption of the Structure Plan, development and subdivision applications can be considered and approved where they comply with the Structure Plan.

APPENDIX A

Certificates of Title (Landgate)

WESTERN AUSTRALIA

REGISTER NUMBER	
1/D42254	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
N/A	N/A

RECORD OF CERTIFICATE OF TITLE

VOLUME 596 FOLIO 188A

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 1 ON DIAGRAM 42254

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

WATER CORPORATION OF 629 NEWCASTLE STREET, LEEDERVILLE
(A G224515) REGISTERED 9 JULY 1996

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	596-188A (1/D42254).
PREVIOUS TITLE:	242-45A.
PROPERTY STREET ADDRESS:	NO STREET ADDRESS INFORMATION AVAILABLE.
LOCAL GOVERNMENT AREA:	CITY OF ARMADALE.
RESPONSIBLE AGENCY:	WATER CORPORATION.

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WESTERN AUSTRALIA

REGISTER NUMBER	
11/DP222705	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
2	25/7/2017

VOLUME 213 FOLIO 81A

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 11 ON DEPOSITED PLAN 222705

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

CLIFTON STREET DEVELOPMENT PTY LTD OF 17 CLIFTON STREET KELMSCOTT WA 6111
(T O218422) REGISTERED 20/8/2019

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. THE LAND THE SUBJECT OF THIS CERTIFICATE OF TITLE EXCLUDES ALL PORTIONS OF THE LOT DESCRIBED ABOVE EXCEPT THAT PORTION SHOWN IN THE SKETCH OF THE SUPERSEDED PAPER VERSION OF THIS TITLE.
2. *O218423 MORTGAGE TO WESTPAC BANKING CORPORATION REGISTERED 20/8/2019.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	213-81A (11/DP222705)
PREVIOUS TITLE:	414-194
PROPERTY STREET ADDRESS:	15 CLIFTON ST, KELMSCOTT.
LOCAL GOVERNMENT AUTHORITY:	CITY OF ARMADALE

NOTE 1: DUPLICATE CERTIFICATE OF TITLE NOT ISSUED AS REQUESTED BY DEALING

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WESTERN AUSTRALIA

REGISTER NUMBER	
12/DP222705	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
2	30/1/2006

VOLUME 1254 FOLIO 947

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 12 ON DEPOSITED PLAN 222705

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

PAUL WILLIAM HARRISON OF 17 CLIFTON STREET, KELMSCOTT

(T H595738) REGISTERED 13/11/2000

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. THE LAND THE SUBJECT OF THIS CERTIFICATE OF TITLE EXCLUDES ALL PORTIONS OF THE LOT DESCRIBED ABOVE EXCEPT THAT PORTION SHOWN IN THE SKETCH OF THE SUPERSEDED PAPER VERSION OF THIS TITLE.
2. H595739 MORTGAGE TO WESTPAC BANKING CORPORATION REGISTERED 13/11/2000.
3. J580647 MORTGAGE TO WESTPAC BANKING CORPORATION REGISTERED 11/1/2006.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: 1254-947 (12/DP222705)
PREVIOUS TITLE: 39-11
PROPERTY STREET ADDRESS: 17 CLIFTON ST, KELMSCOTT.
LOCAL GOVERNMENT AUTHORITY: CITY OF ARMADALE

NOTE 1: A000001A LAND PARCEL IDENTIFIER OF KELMSCOTT SUBURBAN LOT 12 (OR THE PART THEREOF) ON SUPERSEDED PAPER CERTIFICATE OF TITLE CHANGED TO LOT 12 ON DEPOSITED PLAN 222705 ON 22-MAY-02 TO ENABLE ISSUE OF A DIGITAL CERTIFICATE OF TITLE.
NOTE 2: THE ABOVE NOTE MAY NOT BE SHOWN ON THE SUPERSEDED PAPER CERTIFICATE OF TITLE OR ON THE CURRENT EDITION OF DUPLICATE CERTIFICATE OF TITLE.

END OF PAGE 1 - CONTINUED OVER

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REGISTER NUMBER: 12/DP222705 VOLUME/FOLIO: 1254-947 PAGE 2

NOTE 3: K922959 CORRECTION MADE ON ORIGINAL CERTIFICATE OF TITLE - BUT NOT SHOWN ON CURRENT EDITION OF THE DUPLICATE

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WESTERN AUSTRALIA

REGISTER NUMBER	
11/D50104	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
2	28/5/2014

VOLUME 1446 FOLIO 752

RECORD OF CERTIFICATE OF TITLE

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BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 11 ON DIAGRAM 50104

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

ANTONIO MACRI
CONCETTA FRANCES MACRI
BOTH OF 41A BROOKSIDE AVENUE, KELMSCOTT
AS JOINT TENANTS

(T J523922) REGISTERED 25/11/2005

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. M648664 MORTGAGE TO MEMBERS EQUITY BANK PTY LTD REGISTERED 26/5/2014.
*N507594 TRANSFER OF MORTGAGE M648664, MORTGAGEE NOW PERPETUAL TRUSTEE COMPANY LIMITED REGISTERED 13/12/2016.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	1446-752 (11/D50104)
PREVIOUS TITLE:	596-189A
PROPERTY STREET ADDRESS:	1 CLIFTON ST, KELMSCOTT.
LOCAL GOVERNMENT AUTHORITY:	CITY OF ARMADALE

NOTE 1: N507594 DUP C/T NOT PRODUCED FOR DOCUMENT N507594

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WESTERN AUSTRALIA

REGISTER NUMBER	
12/D50104	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
2	9/3/2018

VOLUME 1446 FOLIO 753

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 12 ON DIAGRAM 50104

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

CLIFTON STREET DEVELOPMENT PTY LTD OF 17 CLIFTON STREET KELMSCOTT WA 6111
(T O218419) REGISTERED 20/8/2019

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. *O218420 MORTGAGE TO WESTPAC BANKING CORPORATION REGISTERED 20/8/2019.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: 1446-753 (12/D50104)
PREVIOUS TITLE: 596-189A
PROPERTY STREET ADDRESS: 32 BROOKSIDE AV, KELMSCOTT.
LOCAL GOVERNMENT AUTHORITY: CITY OF ARMADALE

NOTE 1: DUPLICATE CERTIFICATE OF TITLE NOT ISSUED AS REQUESTED BY DEALING O029788

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WESTERN AUSTRALIA

REGISTER NUMBER	
1/D80431	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
N/A	N/A

VOLUME 1916 FOLIO 506

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 1 ON DIAGRAM 80431

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

TEO PINTAUDI
LYNNE PINTAUDI
BOTH OF 79 CONNELL AVENUE, KELMSCOTT
AS JOINT TENANTS

(T E855435) REGISTERED 10/4/1992

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. G562667 MORTGAGE TO WESTPAC BANKING CORPORATION REGISTERED 22/8/1997.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
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Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	1916-506 (1/D80431)
PREVIOUS TITLE:	1130-475
PROPERTY STREET ADDRESS:	27 CLIFTON ST, KELMSCOTT.
LOCAL GOVERNMENT AUTHORITY:	CITY OF ARMADALE

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APPENDIX B

Bushfire Management Plan
(Envision Bushfire Protection)

Bushfire Management Plan

No. 32 Brookside Avenue and Nos. 1, 15, 17 and 27 Clifton Street Kelmscott

October 2022

envision
bushfire protection

5LIMITATIONS STATEMENT

This Bushfire Management Plan ('BMP') has been prepared for a Structure Plan to guide a proposal for subdivision at No. 32 Brookside Avenue and Nos. 1, 15, 17 and 27 Clifton Street Kelmscott (**the Site**).

Envision Bushfire Protection

ABN: 90958370365

PO Box 7209 SHENTON PARK WA 6008

P: 0428 066 147

Email: admin@envisionbp.com.au

Version Control

No. 32 Brookside Avenue and Nos. 1, 15, 17 and 27 Clifton Street Kelmscott.			
Version	**Date**	**Author**	
V1	26 November 2021	Anthony Rowe	Submission
V2	10 July 2022	Anthony Rowe	Revised plan layout and update to V1.4
V3	17 October 2022	Anthony Rowe	Revised Plan layout.

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Disclaimer

In undertaking this work, the authors have made every effort to accurately apply the available information at the time of writing following the instructions of the regulatory authorities and applying best practice as described by the Fire Protection Association Australia. Any conclusions drawn or recommendations made in the report are made in good faith, and the consultants take no responsibility for how this information and the report are subsequently used.

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Envision Bushfire Protection accepts no liability for the inaction of the owner to provide or maintain the bushfire protection measures identified in this report. Vegetation is dynamic, building materials may distort, and the accumulation and the location of flammable materials near the building may affect the potential for damage or loss of a building to occur.

Failure to maintain the property and/or building to these standards may compromise an insurance policy if currently covering any of your assets or those of any third party that may be consequentially affected due such failure. If not insured, and if you are seeking insurance, this report may not influence the decision of any insurer not to offer cover.

Importantly the measures contained in this report cannot guarantee human safety or an absence of harm or that the building will not be damaged or would survive a bushfire event on every occasion. This is due to the unpredictable nature of fire behaviour (knowledge in this field continues to develop) and the unpredictable nature of extreme weather conditions.

Scope of this report

Envision Bushfire Protection has been engaged to provide expert bushfire safety and planning advice.

The scope of the advice has been to assess the proposal for compliance with the policy measures described in State Planning Policy 3.7 and identify appropriate mitigation measures to be considered by the determining authority. This is described in a Bushfire Management Plan and prepared with regard to the Department of Planning Lands and Heritage templates.

Client relationship

I was engaged to provide expert bushfire safety and planning advice. My relationship with the client is a standard commercial contract, and no private, personal, or other matter has influenced the content of the BMP or my findings.

STATEMENT OF CONFORMITY – PLANNING AND DEVELOPMENT ACT 2005



Anthony Rowe Level 3 - BPAD36690

Principal

envision
bushfire protection

FPA AUSTRALIA BRONZE MEMBER Fire Protection Association Australia

BPAD Bushfire Planning & Design Accredited Practitioner Level 3

The signatory declares that this Bushfire Management Plan meets the requirements of State Planning Policy 3.7 and the Guidelines for Planning in Bushfire Prone Areas V1.4.

SUMMARY

The proposal is a Structure Plan to guide subdivision of land into additional lots within the area comprising No. 32 Brookside Avenue and Nos. 1, 15, 17 and 27 Clifton Street Kelmscott **(the site).**

The site is located within the City of Armadale, within an Urban Development Zone and within an area identified as Bushfire Prone Area (OBRM December 2021).

This Bushfire Management Plan ('BMP') has been prepared for a Structure Plan; to demonstrate the capability of the intended land use, to achieve compliance with the Policy Intent for SPP 3.7, which is:

> "***to implement effective risk based landuse planning and development to preserve life and reduce the impact of bushfire on property and infrastructure*** "

The 'risk based' approach utilises AS 3959:2018 to determine the bushfire risk at the site, and compliance with the Bushfire Protection Criteria (Appendix 4) described in the *Guidelines for Planning in Bushfire Prone Areas* V1.4, as the controls and treatments that achieve an acceptable residual risk.

This BMP has been prepared in accordance with the DPLH *BMP template to support a BAL Contour assessment for structure plans where the lot layout is known and subdivision applications* and the *Model Subdivision Conditions Schedule May 2020.*

The headings below follow the structure and investigations of the DPLH template.

1. Proposal details (addressed in Section 1)

The proposed structure plan will facilitate the subdivision of the land comprising the whole of No. 32 Brookside Avenue and Nos. 1, 15, 17 and 27 Clifton Street Kelmscott.

The site area is bound by Brookside Avenue and large lot rural living to the north, Clifton Street and medium residential density development to the east, large lot rural living at the south boundary (grassland zoned Urban Development Zone), and the Canning River (Bush Forever corridor (forest) at the western extent of the site.

The land is flat with a gentle slope 1.0^0 down and towards the Canning River.

The Structure Plan will facilitate residential development ranging from R40 to R80 and provides for an expansion of the Canning River (foreshore) public open space.

The site is located between Albany Highway and Connell Avenue to provide multiple destinations and route options.

The site is within the urban area with access to Water Corporation reticulated supply and potential hydrant services.

2. Environmental considerations (addressed in Section 2)

The proposal is to set aside the Bush Forever corridor, to develop the area consisting of predominantly pasture grass that has been historically cleared and utilised for rural living.

Revegetation of the area extending the Canning River (foreshore) public open space is anticipated to be forest, consistent with the Canning River Bush Forever corridor.

3. Bushfire assessment results (addressed in Section 3)

A Bushfire Attack Level assessment following Method 1 AS 3959:2018, and the DPLH *Visual guide for bushfire risk assessment in Western Australia*, and using an FFDI of 80, has been undertaken.

The indicative BAL, demonstrating a developable area on each lot (post development) is shown on Figure 5a. It illustrates the BAL-29 level commences at 10.5 m from the street and the BAL levels diminish progressively towards the east of the site.

Figures 5b illustrate the Public Open Space management options at 6 m from the road and the consequential effect on the required habitable building setback. This option would be subject to the agreement of the WAPC which is responsible for the administration of Bush Forever sites.

4. Identification of bushfire hazard issues (addressed in Section 4)

The site, with the exception of the west boundary is predominantly adjoined by rural living, grassland and residential development.

The Canning River Corridor at the west boundary is a narrow corridor of forest ranging in width from 70 m up to 120 m.

The Canning River Corridor as forest, has potential to impact the site with flame impingement, where the BAL is greater than BAL-29, radiant heat, ember attack and smoke.

Landscape scale forest fires can eject embers greater than 5 km from the fire front and the site is located 1 km from the foot of the Darling Scarp, but it is outside of a distance requiring a construction response.

In a bushfire event, other than within the area immediate to the Canning River Corridor, the site can be accessed from a BAL Low area to support evacuation or the attendance of emergency services to undertake fire suppression. Reticulated water is available and emergency services are located nearby (6 km). The attendance of emergency services however should not be relied upon in a landscape scale fire because of competing priorities for emergency services. Buildings should be constructed to their commensurate BAL level to provide a passive resistance to bushfire attack, to reduce the dependence upon emergency services.

There is a 'likelihood' the site may experience a bushfire attack event. The consequence upon human harm is considered 'minor' (not including respiratory considerations) because multiple options for evacuation to a BAL Low area are available. The consequence for buildings/assets can be reduced through treatments including an appropriate setback and a construction commensurate to the BAL level at the building location. These risk treatments are addressed by the bushfire protection criteria.

5. Assessment against the bushfire protection criteria (addressed in Section 5)

The proposed subdivision arrangement has been compared with the Acceptable Solutions (provision) associated with the four Bushfire Protection Criteria elements: Location, Siting and Design, Access, and Water.

Element 1 Location - this provision requires that a strategic proposal can demonstrate upon completion, the area will be classified as a low or moderate Bushfire Hazard Level.

The site is within an area (150 m) that is predominantly urban development (low BHL) pastural grasses (moderate BHL). The Canning River corridor forest (extreme BHL) is a localised element and not reflective of a broader condition.

The site is compliant with Element 1

Element 2 Siting and Design – this provision requires that a planning application should demonstrate the habitable buildings will not be exposed to a BAL greater than BAL-29.

The public open space (POS) at the west section of the site will be revegetated as forest as an extension of the Canning River Bush Forever corridor.

A perimeter road way, 12 m reserve adjacent the POS (forest), separates the residential area from the POS. Typically a wider road can absorb the majority of the distance required for the separation between a forest and a habitable building to achieve BAL-29. In this instance the POS also has a gentle downslope (1.0^0) requiring a larger separation distance. A method 2 calculation has been undertaken to demonstrate BAL-29 will be achieved at 22.5 m from the forest (1.0^0 downslope). This has been illustrated in Figure 5a which shows the adjacent residential lots will require a 10.5 m street setback. Options illustrating the effect of management in the reserve area, first 6 m, is illustrated in Figures 5b and illustrates a street setback of 4.5 m to achieve BAL 29.

The alternative is for the buildings to have a setback of 11 m from the indicated perimeter road at the western extent of the site.

In the absence of an agreement to manage adjoining land the developable area is shown in the Spatial representation of Bushfire Management Strategies Figure Ex1, with a 10.5 m setback to the street.

Element 3 Vehicle Access – this provision requires the site has access to a through road to provide alternate routes of escape and access for fire fighters.

The site is located within the urban area of the City of Perth. The site is accessed by Clifton Street which connects with Albany Highway via Page Road and Gilwell Avenue and Tonkin Highway via Brookside Avenue and Connell Avenue. These roads are sealed public roads compliant with the technical requirements in Table 6 Column 1 Element 3.

The roads within the estate will be transferred as public roads compliant with the technical requirements in Table 6 Column 1 Element 3.

Element 4 Water – this provision requires the availability of water for firefighting purposes.

The site has access to the Water Corporation reticulated water supply. Hydrants will be provided along the public roads to be provided in accordance (routine) with the Water Corporation Reticulation Standard no. 63.

Additional Bushfire Management Strategies (addressed in section 5.2)

No measures additional to the matters addressed in the Bushfire Protection Criteria have been identified.

Spatial representation of the bushfire management strategies (Figure EX 1)

The key features demonstrating compliance with the bushfire protection measures are identified on the *Spatial representation of the bushfire management strategies*.

These actions are reflected in the following *Responsibilities for implementation and management of the bushfire measures.*

6. Responsibilities for implementation and management of the bushfire measures

The structure plan guides the subsequent subdivision. The instructions (Subdivision Requirements) are provided for guidance of the subdivision at section 6 in this report. These are to be provided on the Structure Plan under the heading of Subdivision Requirements.

Figure EX1: Spatial representation of bushfire management strategies



Bushfire Protection Measures

The siting of habitable buildings, and any building within 6 m of the habitable building, is to be located within the area not exceeding BAL-29.

All habitable buildings, and any building within 6 m of the habitable building, will be required to be constructed in accordance with the Construction Requirement described in AS 3959:2018 that is applicable to the Bushfire Attack Level at the building's location.

All roads are to be constructed as public roads, no less than the technical requirements described in table 6, Column 1 Element 3 *Guidelines for Planning in Bushfire Prone areas V1.4*..

Hydrants are to be provided within the public roads in accordance with the Water Corporations Water Reticulation Standard No 63.

Notifications

A notification is to be placed on the titles of all lots with a BAL 12.5 or higher, notifying landowners that the property is subject to a Bushfire Management Plan (to be applied by WAPC model condition F2).

A notification is to be placed on the titles advising that restrictions may apply to buildings within areas that have been assessed as BAL-40 or BAL-Flame Zone (to be applied by WAPC model condition F3).

Legend

- Site Boundary
- Developable Area
- 10.5 m street setback

Table of Contents

1. PROPOSAL DETAILS 1

1.1 Introduction 1

1.2 Site and Proposal Description 1

1.3 Regulatory Compliance Requirements 6

2. ENVIRONMENTAL CONSIDERATIONS 8

2.1 Native Vegetation – Modification and Clearing 8

3. BUSHFIRE ASSESSMENT 10

3.1 Bushfire Attack Level Assessment (Inputs) 10

3.2 Potential Bushfire Impact - Outputs 24

4. IDENTIFICATION OF BUSHFIRE HAZARD ISSUES 28

5. BUSHFIRE PROTECTION MEASURES 33

5.1 State Planning Policy 3.7 - Planning In Bushfire Prone Areas (SPP 3.7) 33

5.2 Guidelines for Planning in Bushfire Prone Areas Version 1.4 (the Guidelines) 33

5.3 Additional Bushfire Management Strategies 39

5.4 Spatial representation of the bushfire management strategies 39

6. DIRECTIONS FOR IMPLEMENTATION AND MANAGEMENT OF THE BUSHFIRE MEASURES AT SUBDIVISION 40

APPENDIX 1 – References

1. PROPOSAL DETAILS

1.1 Introduction

The proposal is a Structure Plan to guide subdivision of land into additional lots at the area comprising No. 32 Brookside Avenue and Nos. 1, 15, 17 and 27 Clifton Street Kelmscott **(the site).**

The site is located within an area identified as bushfire prone area (OBRM 2019).

A structure plan is being prepared as part of facilitating and guiding the subdivision. The structure plan addresses a range of planning issues for the purpose of demonstrating the suitability of the site for further division. Because the site is within a mapped (declared) bushfire prone area the structure plan is required to include a Bushfire Management Plan that assesses the potential for the subdivision, and the subsequent development, to comply with the Policy Intent and bushfire protection measures identified in State Planning Policy 3 .7 *Planning in Bushfire Prone Areas* (SPP 3.7) and its Guidelines V1.4.

The intent of SPP 3 .7 is to implement effective, **risk-based** land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure.

The risk is assessed by AS 3959:2018 (using either Method 1 or Method 2) and the countering risk treatments are demonstrated by satisfying each element in the Bushfire Protection Criteria, either by Acceptable Solutions or by Performance Principle.

Demonstrating compliance with the Acceptable Solutions, at completion, is an acceptable residual risk. Alternatively a Performance Principle (alternative solution) can be accepted through the *precautionary principle,* and it requires satisfaction that the residual risk at completion can avoid 'a significant adverse impact'.

1.2 Site and Proposal Description

The Structure Plan will facilitate residential development ranging from R40 to R80 and provides for an expansion of the Canning River public open space. A two storey height limit will be imposed along the boundary with Clifton Street, where it meets the established residential area east of Clifton Steet .

The site area is bound by Brookside Avenue and large lot rural living to the north, Clifton Street and medium residential density development to the east, large lot rural living at the south boundary (grassland zoned Urban Development Zone), and the Canning River (Bush Forever corridor (forest) at the western extent of the site.

The land is flat with a gentle slope 1.0^0 downwards and towards the Canning River.

The site is located in between Albany Highway (west) and Connell Avenue (east) to provide multiple destinations north and south.

The site is within the urban area with access to a Water Corporation reticulated supply and potential hydrant services.

Address	No. 32 Brookside Avenue and Nos. 1, 15, 17 and 27 Clifton Street Kelmscott			
Local Government Area	City of Armadale			
Local Planning Scheme Zone	City of Armadale Town Planning Scheme No 4 Urban Development Zone Development Structure Plan Area No.44			
Bushfire Season	1 December – 12 May (precise dates may vary annually)			
Building class	Class 1 – Class 3			
Land description site	Formerly agriculture and market gardens (since before 1953). Remnant vegetation retained along the Canning River Corridor.			
Adjoining Land uses	North	East	South	West
Within 150 m	Market garden Rural living/ grassland and woodland	Residential/low threat	Rural living/ grassland	Forest 50 Canning river Corridor, residential low threat.

Within 2.5 km	Rural Living and Residential	Residential < 1 km Forest Darling Scarp > 1km	Residential	Residential
Road Access	The site is on a through road that connects Albany Highway to Connell Avenue. The access to the site from Albany Highway is via Gilwell Avenue and onto Clifton Street. Access to the site from Connell Avenue is via Brookside Avenue and onto Clifton Street.			
Water supply	The site has access to the Water Corporation reticulated water supply. Hydrants are installed in Clifton Steet and Brookside Avenue.			
Tele communications	The site is within the Telstra 4G network			
Emergency services	The nearest fire brigades are Armadale Fire and Rescue, 438 Green Ave, Armadale(6 km) Roleystone Fire Station, 48 Jarrah Rd, Roleystone (8 km)			
Minor Development	N/A			
Unavoidable development	N/A			
Vulnerable Development	N/A			
High risk land use	N/A			

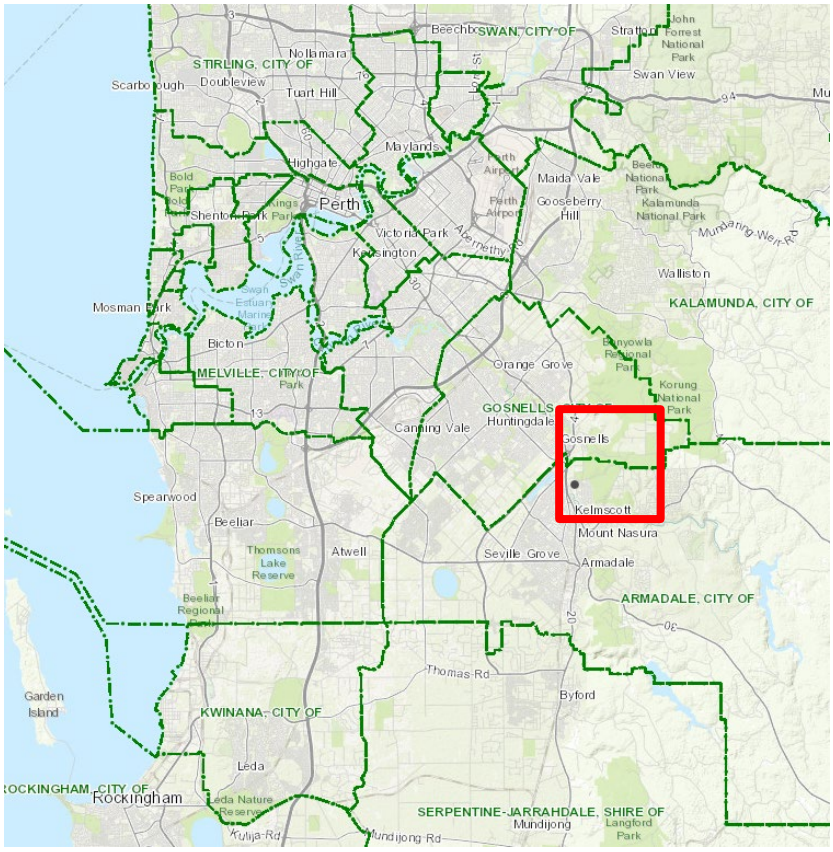


Plate 1:Site in Locality

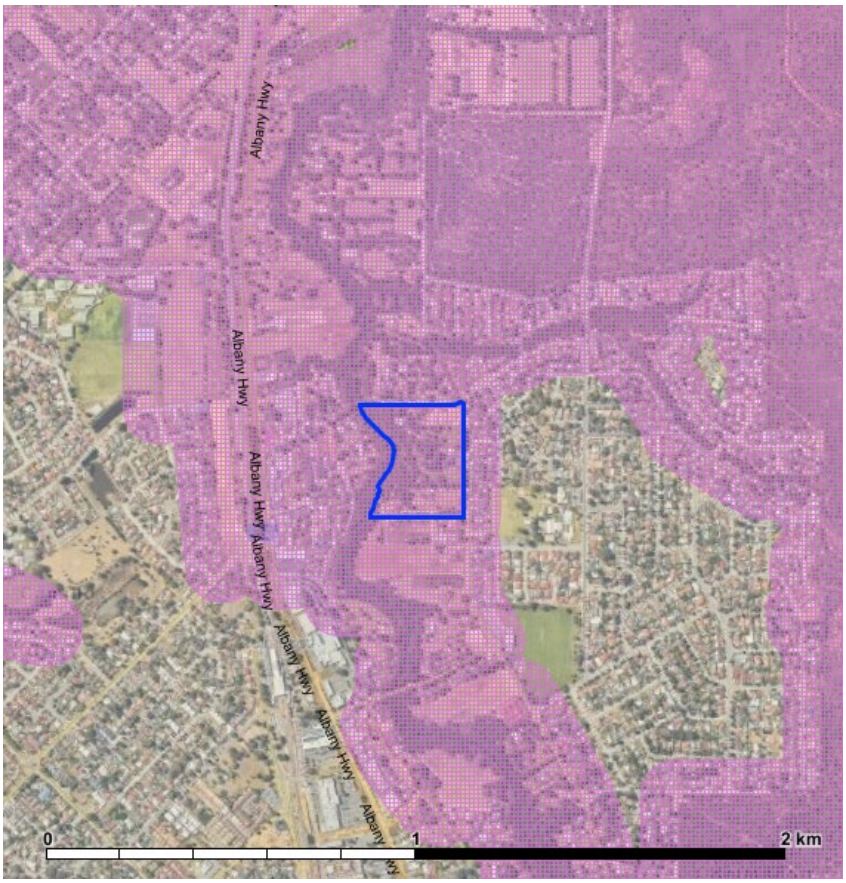


Plate 2: OBRM Bushfire Prone Area (Pink area)

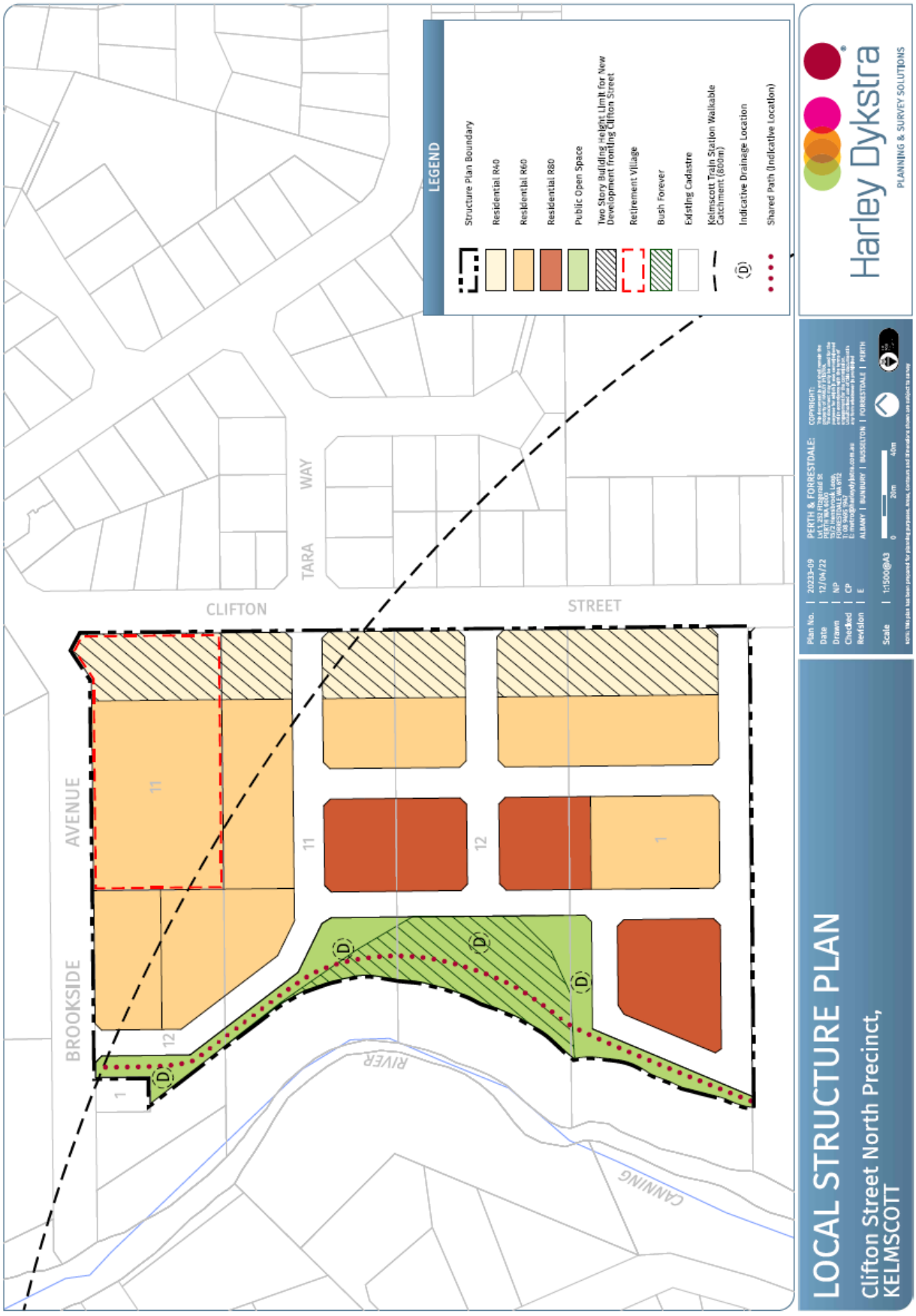


Plate 3: Structure Plan

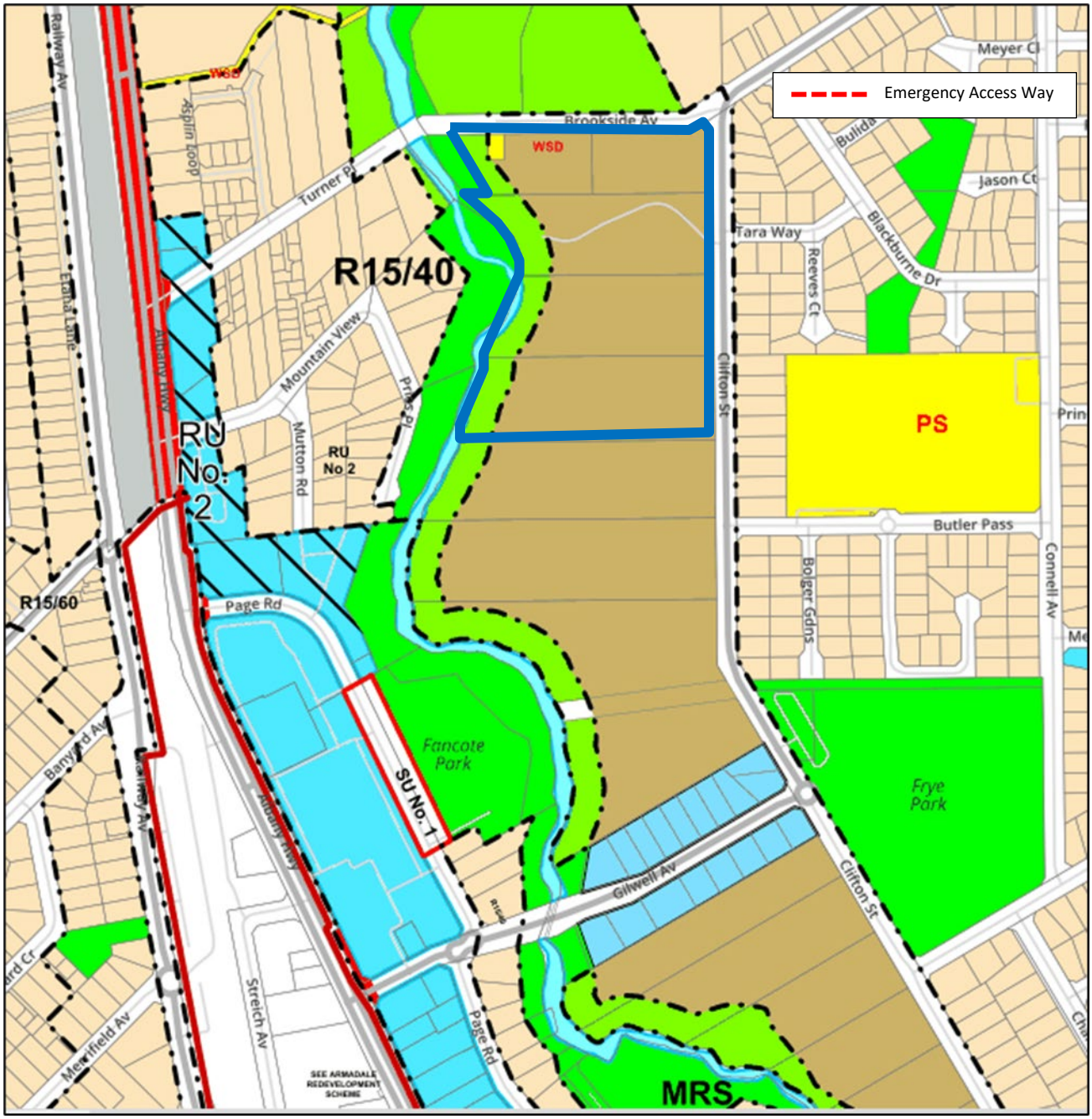


Plate 4: Site in blue frame within the Urban Development Zone City of Armadale TPS 4

1.3 Regulatory Compliance Requirements

Planning and Development Act 2005 - SPP 3.7

On 7 December 2015, the State Government introduced by Gazette, a state map of Bushfire Prone Areas by order under the *Fire and Emergency Services Act 1998* and introduced development controls in Bushfire Prone Areas through the *Planning and Development Act 2005*. These controls were authorised by State Planning Policy 3.7 (Planning in Bushfire Prone Areas) regulations introduced under Part 10A Schedule 2 of the *Planning and Development (Local Planning Scheme) Regulations 2015* and guided by the *Guidelines for Planning in Bushfire Prone Areas*.

The proposal is a Structure Plan (Strategic Planning Proposal), where the lot lay out is known. Because the proposed lots are known the capability of the lot to comply with the Policy Intent can be assessed and the relevant WAPC template joins the considerations for subdivision.

Planning and Development (Local Planning Schemes) Amendment Regulations 2015 (Schedule 2)

Structure plans are approved by the West Australian Planning Commission on assessment by the local government based on appropriate planning principles.

State Planning Policy 3.7 Planning in Bushfire prone areas.

The State Planning Policy, Regulations, and Guidelines now form the foundation for fire risk management planning in WA at a community and land development level. The Policy Intent of SPP 3.7 is ***to preserve life and reduce the impact of bushfire on property and infrastructure***.

Section 4 of SPP 3.7 provides the policy is to be read in conjunction with the Local Planning Schemes) Amendment Regulations 2015, supplementary provisions of a scheme (if present), the supporting Guidelines and the Australian Standard AS 3959.

Applicable clause from SPP 3.7, addressing structure plans where the lot layout is known the includes:

SPP 6.3: Any strategic planning proposal is to be accompanied by a Bushfire Hazard Level (BHL) assessment (Guidance provided by a WAPC Position Statement) and Bushfire Attack Level Contour Map illustrating a developable area < BAL 29 can be achieved and demonstrating the bushfire hazard issues can be addressed in compliance with the Policy Intent. *In this instance a moderate BHL can be achieved in accordance with the Position Statement.*

SPP 6.4: The information required to accompany subdivision applications is to include a BAL Contour Map, the identification of any hazard resulting from the BAL Contour Map and an assessment against the bushfire protection criteria that demonstrates the capability of the subsequent development to comply with the Policy Intent. *In this instance the Structure Plan can demonstrate a developable area (BAL Contour Map) can be achieved on each lot, a through way access arrangement can be achieved, and the lots will have access to a reticulated water supply.*

SPP 6.7: A development that will result in the introduction or intensification of development or land use in an area that has or will, on completion, have an extreme BHL and/or BAL-40 or BAL-FZ will not be supported. *In this instance the proposed Structure Plan can demonstrate a developable area, BAL-29 is available subject to a development setback from the west and south boundary, or by an adjoining land management agreement; refer to Figure 5.*

SPP 6.11: Precautionary Principle if a landowner/proponent cannot satisfy the performance principles of the relevant policy measures (intent) through either the acceptable solutions outlined in the Guidelines, or through the alternative solutions (Performance Principle) the application may not be approved. *The proposal can achieve compliance with the Acceptable Solutions; see section 5 of this report.*

Position Statement: Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2: Siting and design

This Position Statement is to be read in conjunction with SPP 3.7.

It provides that consideration should be given to the level of bushfire exposure that adjoins or is within the subject site and where lot(s) contain BAL-40 or BAL-FZ, that sufficient area by an Asset Protection Zone (APZ) within the site, can achieve BAL-29 at a habitable building.

Building Act 2011

Not applicable to the consideration of a Structure Plan, but the resulting development class 1-3 and 10a will be subject to the construction standards in AS 3959:2018, as required by the ***Building Act 2011*****,** referencing the National Construction Code 2019.

***Bushfires Act* 1954**

Section 33 of the *Bush Fires Act 1954* recognises the responsibility of all landowners to prevent the spread of bushfire. The City of Armadale issues a Firebreak Notice annually. The City can issue a notice upon the landowner to act as and when specified in the notice, to a standard higher than the minimum specified in the annual notice. Lots larger than 4000 m^2 are required to provide a Firebreak and lots less than 4000 m2 are required to maintain grasses at less than 50 mm.

Environment Protection Act 1986 and Environmental Protection (clearing native vegetation) Regulation 2004

It is an offense to clear native vegetation without the authority of a permit or an exemption. The act of clearing native vegetation, requires a permit from either the Department of Water and Environmental Regulation (DWER) or the Department of Mines, Industry Regulation and Safety (DMIRS), unless an exemption applies.

Exemptions include:

Environment Protection Act 1986

- Clearing required by local government Section 33 *Bush Fires Act 1954.*
- **Clearing in accordance with the terms of a subdivision approval.**
- Clearing in accordance with a permit under the *Bush Fires Act 1954* (prescribed burning) and clearing by a bushfire control officer.

Environmental Protection (clearing native vegetation) Regulation 2004 (exemptions do not apply in Environmentally Sensitive Areas, and clearing > than 5ha)

https://www.der.wa.gov.au/your-environment/environmentally-sensitive-areas

- Clearing to the extent necessary to construct an approved building.
- Clearing that is for fire hazard reduction burning.
- Clearing to maintain an area cleared in the last ten years.

(WA) Biodiversity Conservation Act 2016 and Bio-diversity Conservation Regulations 2018

The *Biodiversity Conservation Act, 2016*, replaces the *Wildlife Conservation Act, 1950*, and the *Sandalwood Act, 1929*, it became operational with the *Bio-diversity Conservation Regulations 2018*, on 1 January 2019.

The Act provides for listing species, threatened ecological communities (TECs), key threatening processes, and critical habitats. It introduces criteria for listing species 'endangered', 'critically endangered' or 'vulnerable,' to align with the Environment Conservation and Biodiversity Conservation Act 1999 (Cth).

The *Biodiversity Conservation Act 2016* recognises that activities approved under the *Environment Protection Act 1986* do not require further approval include clearing of native vegetation that is either exempt or done under the authority of a clearing permit or done in accordance with an implementation decision under Part IV of the *Environment Protection Act 1986*.

Commonwealth Environment Protection Biodiversity Conservation Act 1999

The Commonwealth Environment Protection Biodiversity Conservation Act 1999 provides for the protection of matters of national environmental significance. National environment law does not generally regulate fire prevention measures taken by state and territory governments, but no specific exemptions are provided.

Note: that whilst the DPLH template as a consideration reference in s.4 of SPP 3.7 applies only to National and State environmental legislation, at Planning Scheme or by City By Law other ecological policies may apply either restricting the removal of vegetation or promoting revegetation. The later can overtime change the Bushfire Hazard Level, converting pasture to forest.

2. ENVIRONMENTAL CONSIDERATIONS

2.1 Native Vegetation – Modification and Clearing

A fundamental consideration in the assessment of development under SPP 3.7 is to avoid instances where bushfire risk management measures would conflict with or be limited by other biodiversity management measures.

In accordance with the Department of Planning Lands and Heritage template (BMP template to support a BAL Contour Assessment) a review of the listed databases has been undertaken as part of this assessment to identify whether restrictions or other specific considerations may apply that would affect the implementation of any bushfire protection initiatives that may otherwise be identified.

Table 1: Ecological database assessment.

Is the land affected by:	**Yes/No/NA**	**If yes - describe**	
Conservation Wetland or buffer (DBCA-019 DBCA-017)	No	Not identified on SLIP	
RAMSAR Wetland (DBCA-010)	No	Not identified on SLIP	
Threatened and Priority Flora (DBCA-036)	No	Not identified on SLIP	
Threatened and Priority Fauna (DBCA-037)	No	Nearby but not affecting the site	
Threatened Ecological Communities (DBCA-038)	No	Not identified on SLIP	
Bush Forever (COP-071)	Yes	Aligns the Canning River and occupies the western portion of the site.	
Environmentally Sensitive Area (DWER-046)	No	Not identified on SLIP	
Regionally Significant Natural Areas (DWER-070)	No	Not identified on SLIP	
Conservation Covenant (DPIRD-023)	N/A		
Does the proposal require the removal of restricted vegetation?		~~**Yes**~~	**No**

The requirement for the Development Structure Plan Area No.44, is a contribution of 10% to augment the area of the Canning River Foreshore Reserve.

> *"(iv) suitable provision of 10% standard Public Open Space contributions, predominantly by augmenting and extending the width of the Canning River foreshore reserve area, creating pocket parks, or in accordance with policies of the Western Australian Planning Commission equivalent cash in lieu contributions which can be used to improve public recreation opportunities and facilities in the foreshore POS reserve areas;*
>
> *(v) providing Canning River foreshore reserves and management"*
>
> Extract from Development Structure Plan Area No.44

The Canning River Foreshore Reserve will be provided by the proposed subdivision in realising the Structure Plan for area 44.

The retention of adjoining vegetation, see Figure 5a at the west boundary and the south boundary will require a restriction upon habitable buildings, due to the BAL cast by the forest.

The remainder of the site is predominantly grassland and not restricted. There are no revegetation proposals associated with the residential areas R 40 - R80.

Revegetation

The proposal will provide 10% of its area to expand the public open space, Canning River Foreshore Reserve. This area will be revegetated to forest, consistent with the vegetation within the Canning River corridor Bush Forever area.

The expectation conferred by the Development Structure Plan Area No.44 (iv) and (v) is not clear. It may provide the opportunity to negotiate the management of the interface between the foreshore and the developable area.

However, until an agreement is reached it is assumed the BAL burden will be managed by restricting development within the area BAL-40 -FZ that extends 10.5 m into the residential area (based upon a separation of 22 m from the forest).

3. BUSHFIRE ASSESSMENT

3.1 Bushfire Attack Level Assessment (Inputs)

The following assessment has applied the methodologies described in AS 3959-2018, the Guidelines, and has used the Fire Protection Association Australia accredited practitioner methodology for the preparation of Bushfire Attack Level (BAL) assessments.

All vegetation within 150 m (context) of the site has been classified following Clause 2.2.3 (AS 3959:2018) to determine the predominant vegetation affecting the behaviour at the locality. The Bushfire Attack Level is determined by the **predominant** vegetation within 100 m of the site boundary (for subdivision), or around the development site (building envelope) or the external face from a habitable building.

The classifications of vegetation used in AS 3959:2018 are based on foliage cover, measured as a percentage of a hectare and by the fuel (vegetation) height.

> ***Foliage cover**: The portion of the ground that would be shaded by foliage when the sun is shining directly overhead , expressed as a percentage for each stratum or identifiable layer of vegetation*

AS 3959:2018

Layer/ Stratum	Description	Hazard
Bark	Tight/fine – course/ribbon	Spotting and ember attack potential
Canopy	Trees taller than 6 m	Influences the flame height
Elevated fuel	Trees and Shrubs up to 6 m	Influences the flame height
Near surface	Grasses and shrubs taller than 100 mm and up to 2 m	Influences the rate of spread
Surface	On ground material, leaves, twigs, bark	Influences the rate of spread

From CFA (Vic) Overall fuel assessment guide 2010

AS 3959:2018 prescribes six categories of Bushfire Attack Level (BAL): BAL-LOW, BAL-12.5, BAL-19, BAL-29, BAL-40, and BAL-FZ. In addition, BAL-FZ describes only performance solutions where the separation from classified vegetation (on completion) is less than 10 m. The BAL level is used for determining the siting of development (to be less than BAL-40) and in turn the construction standard that is equivalent to the BAL at the proposed building location.

This assessment has followed the guidance of AS 3959:2018. This includes:

- A recognition of excluded vegetation types described at cl.2.2.3.2 (e) and (f), but the underlying vegetation should still be classed e.g. an orchard may be excluded but not the grassland within it.
- Only vegetation that is analogous to the description in AS 3959:2018 is to be used, the substitution of botanical names does not necessarily represent the fuel load and potential fire intensity considered in the analogies.
- A separate plot is applied if there is a variation in the slope greater than $5.0^{0.}$ irregularities in slopes.
- For various vegetation classes a representation that is less than 10%, does not constitute the predominant class. Foliage cover referred to in AS 3959:2018 for various classes is based on the foliage cover (density) as a percentage of distribution over a ha. (shadow cast other than from directly above is not representative of foliage cover). It does not permit an averaging i.e. to accept a concentration of a 30 % foliage cover, compressed to one area.
- The measurement point and the most influential vegetation class (presenting the highest BAL at the building) is used for the determination of the BAL at the building (Figure 2.2 AS 3959:2018).

- Consideration of the predominant vegetation is to consider the reasonable likelihood of revegetation occurring it may include landscape plans, or the lack of intervention to control the condition. Where land is purposefully used the continuation and present classification of the vegetation/land use is to be used.
- A single row is taken as row less than 10 m wide and used as a windbreak or screening it may have an interconnected vertical structure.

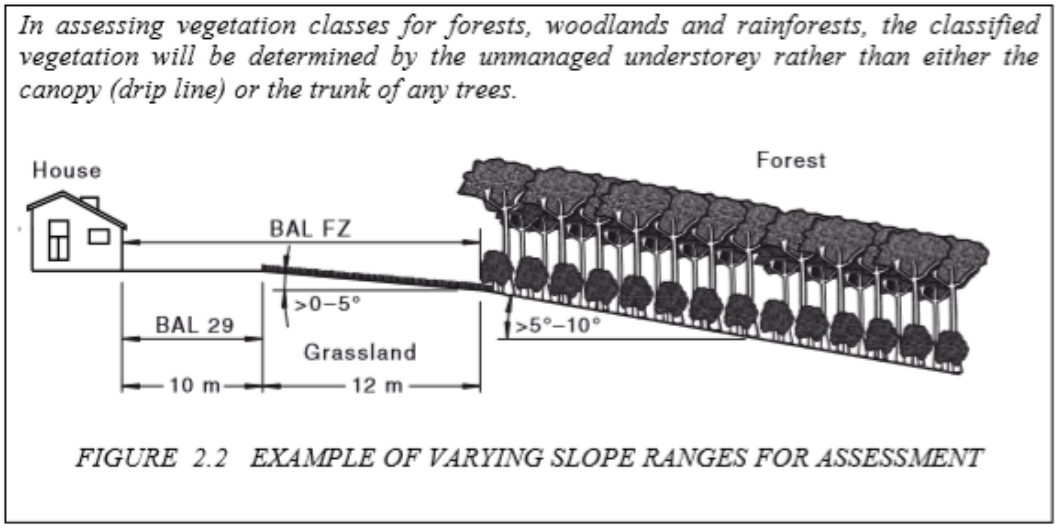


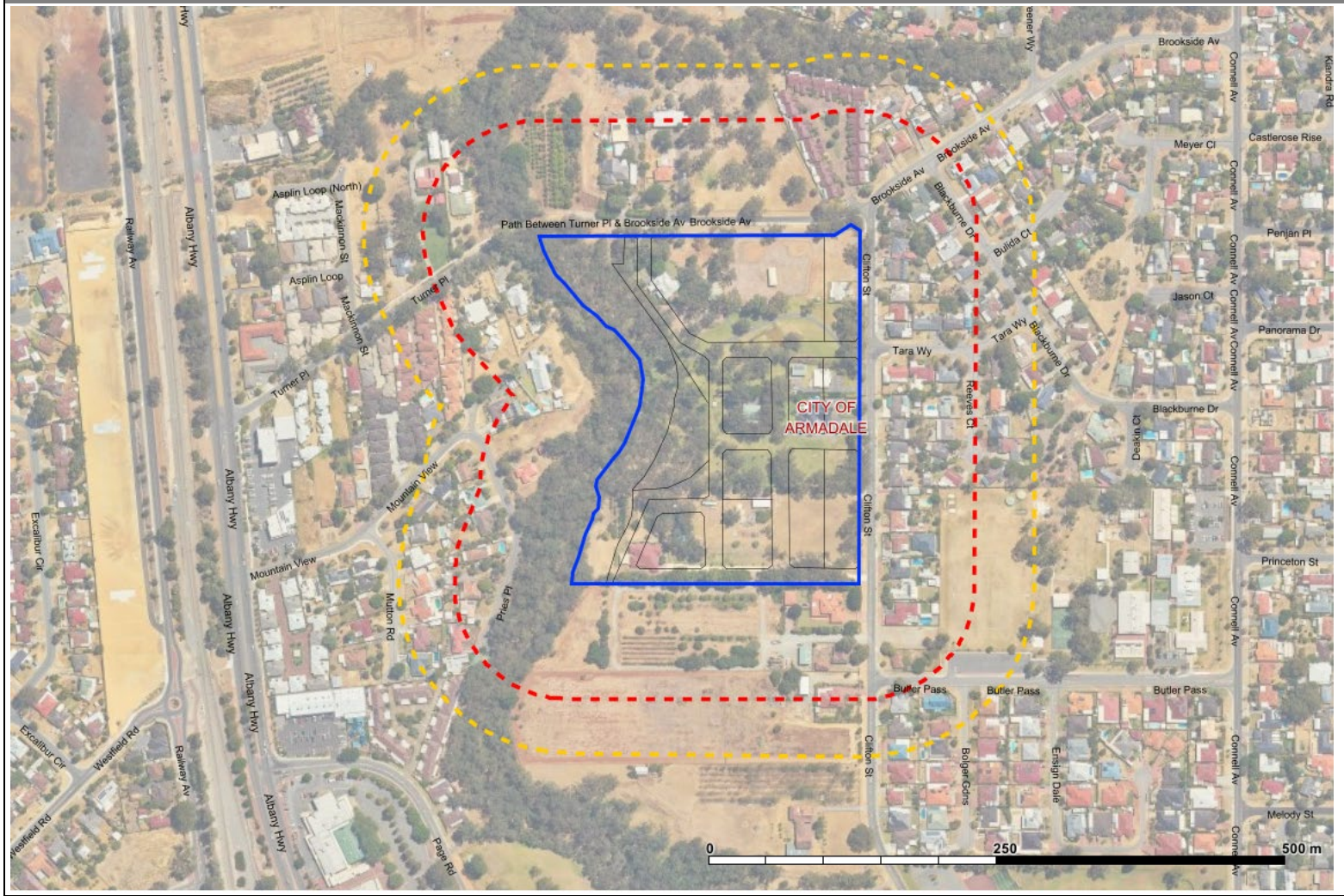
Plate 5: Effective Slope and measurement taken from AS 3959:2018

Effective slope under each vegetation plot was assessed in accordance with the methodology detailed in AS 3959:2018 Construction of buildings in bushfire prone areas (AS 3959) (Standards Australia, 2018 Bushfire Fuels). Slope data was measured on site and cross referenced with Landgate elevation data.

Photo evidence Site Assessment & Site Plans

The assessment of this site / development was undertaken on 10 October 2021 by a BPAD Accredited Practitioner for the purpose of determining the Bushfire Attack Level in accordance with AS 3959:2018 Simplified Procedure (Method 1).

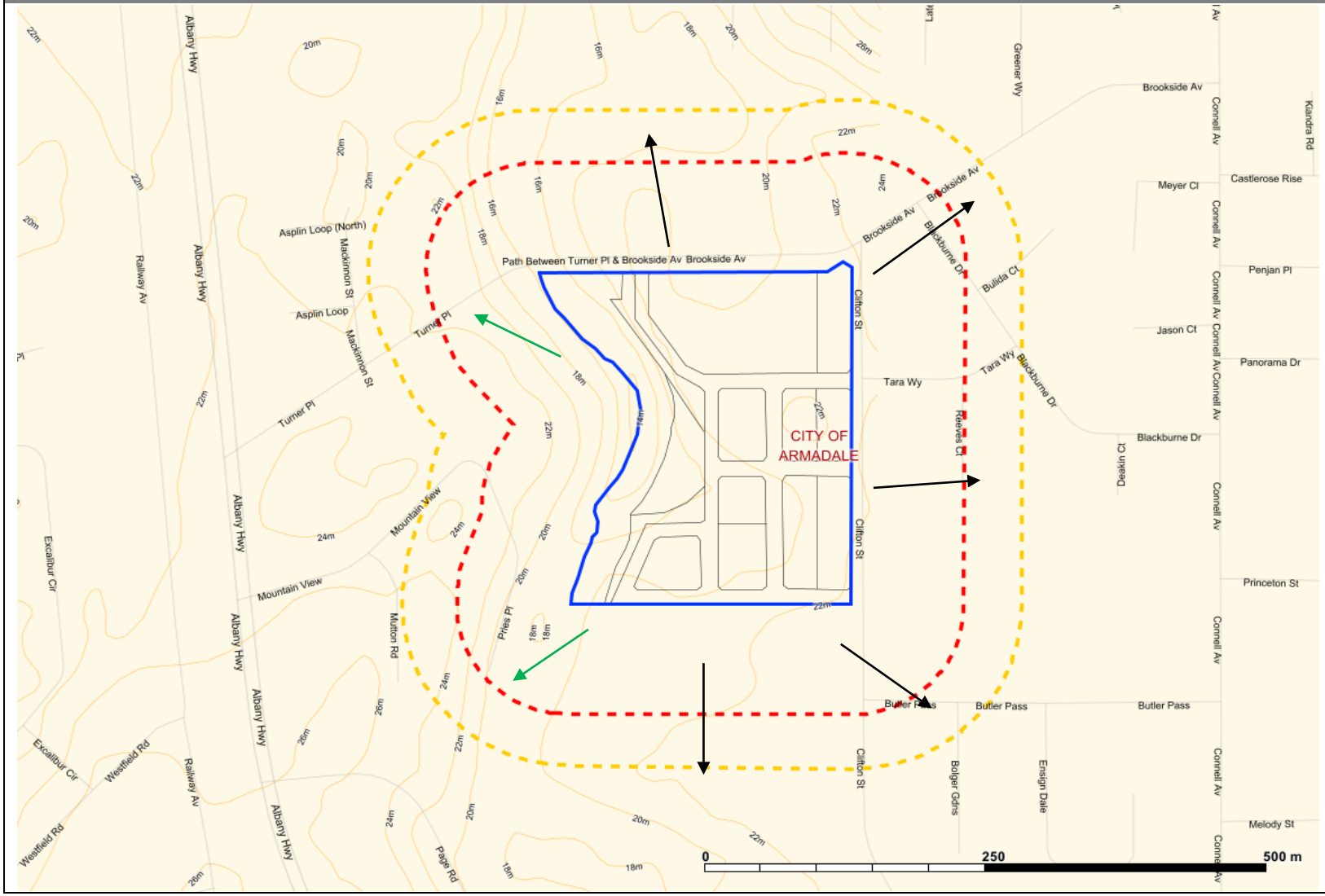
Figure 1: Location



Assessment Date: 10/10/2021
Prepared: Anthony Rowe
Accreditation Level: BPAD L3
Accreditation Number: 36690
Accreditation Expiry: Dec 2021
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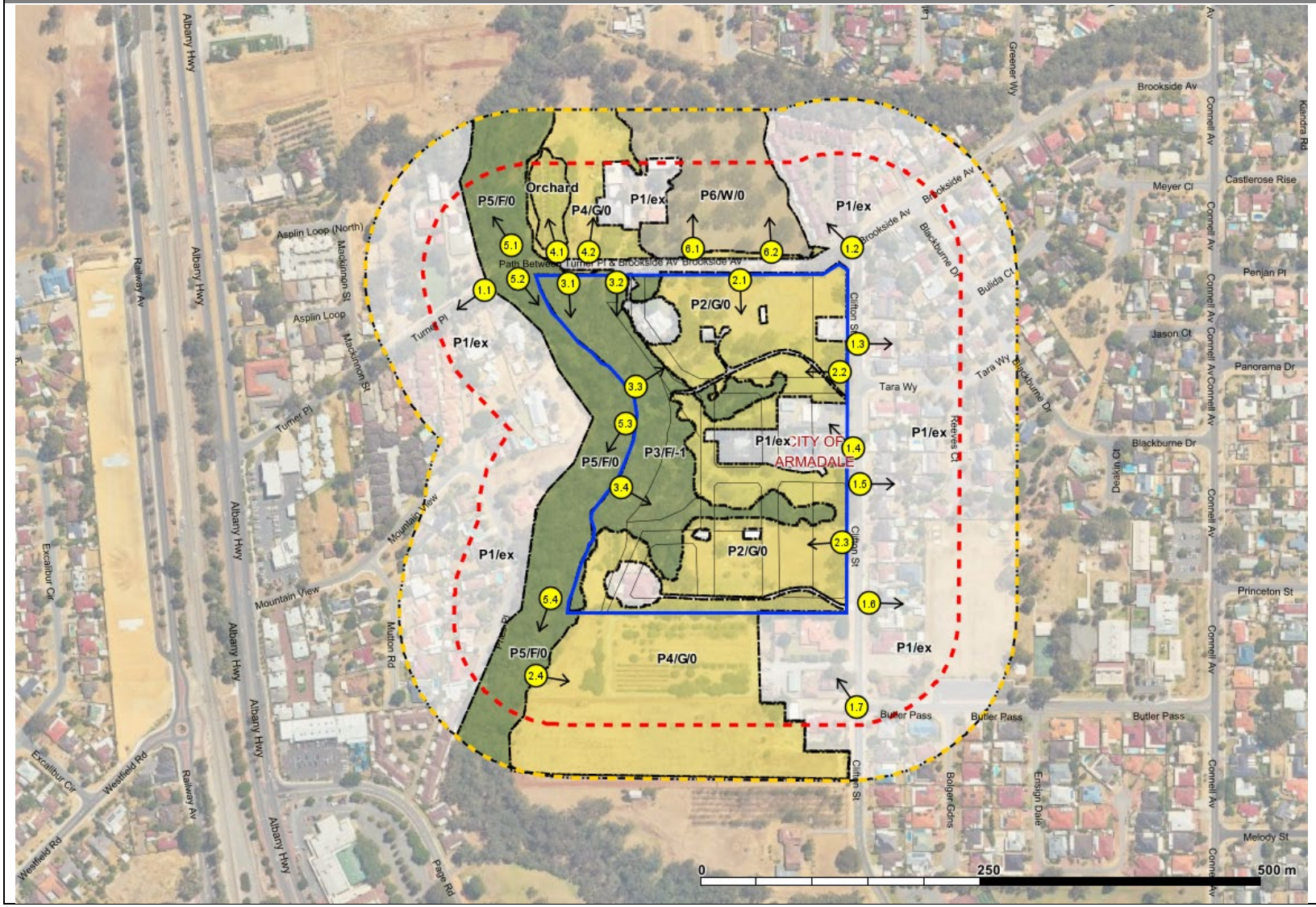
Figure 2: Topography



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Figure 3: Vegetation Classification

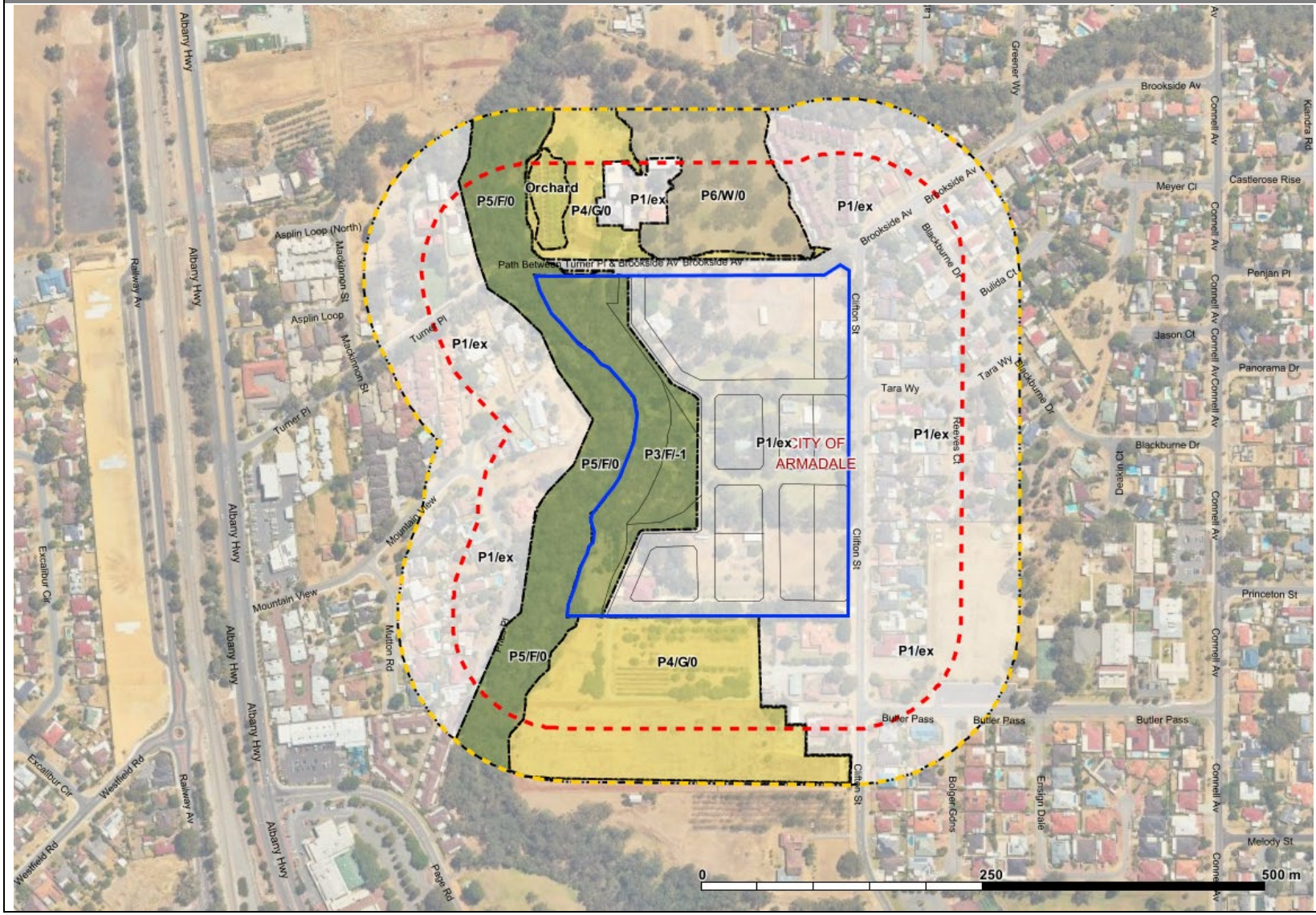


- Building Envelope
- Site boundary
- 150 m assessment area
- 100 m assessment area
- Class A Forest
- Class B Woodland
- Class C Shrubland
- Class D Scrub
- Class G Grassland
- Excluded
- Photograph location
- Plot Label

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Figure 3: Vegetation Classification – Post Development



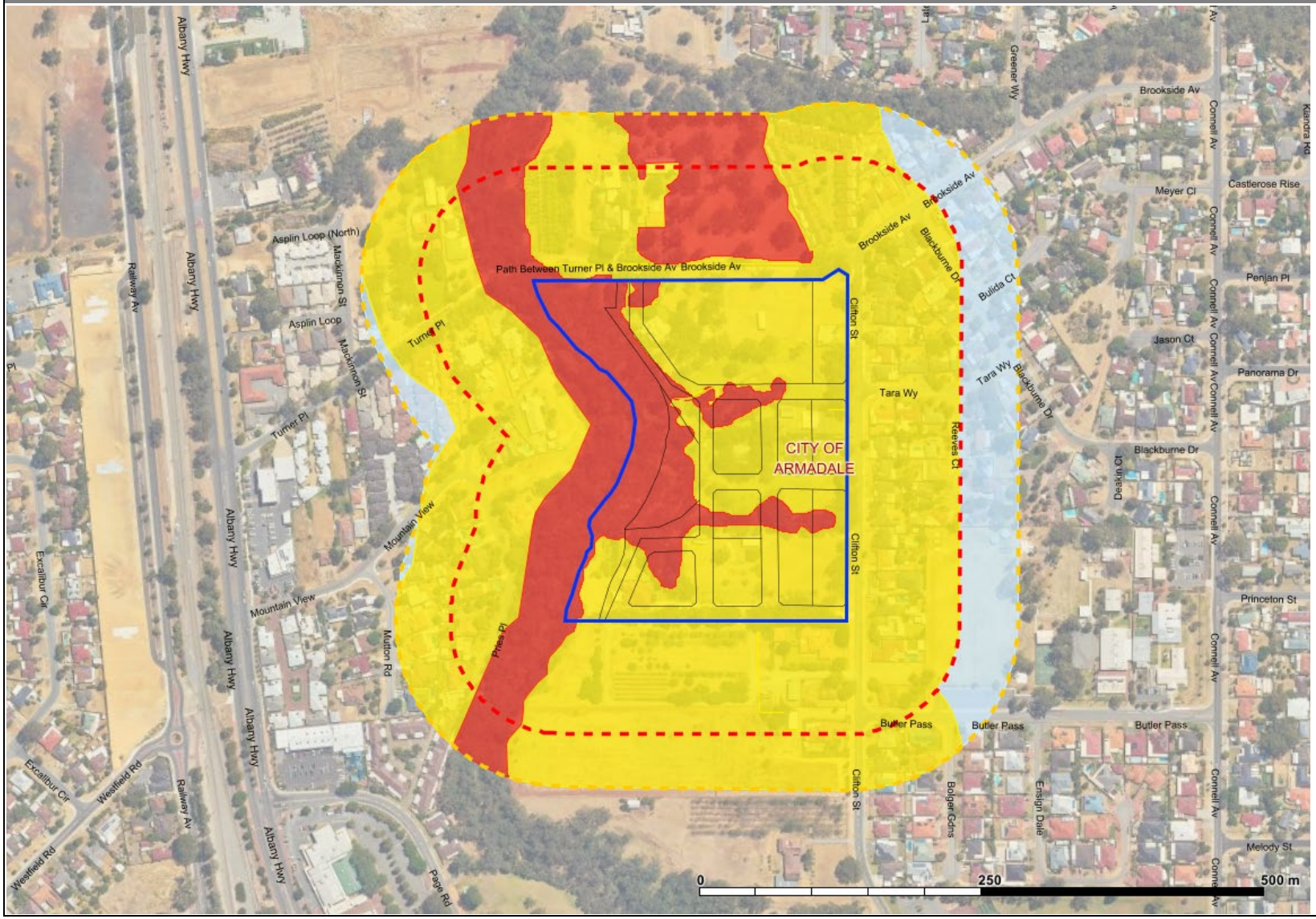
- Building Envelope
- Site boundary
- 150 m assessment area
- 100 m assessment area
- Class A Forest
- Class B Woodland
- Class C Shrubland
- Class D Scrub
- Class G Grassland
- Excluded

Plot/Class/Slope — Plot Label

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Figure 4: Bushfire Hazared Level



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<table>
<tr><th colspan="6">PLOT: 1</th></tr>
<tr><td colspan="2">Vegetation Classification</td><td colspan="4">PHOTO ID: 1.1</td></tr>
<tr><td colspan="2">Excludable - 2.2.3.2(f) Low Threat Vegetation</td><td colspan="4" rowspan="3">
</td></tr>
<tr><td colspan="2">Slope</td></tr>
<tr><td colspan="2">Flat/upslope</td></tr>
<tr><td colspan="2">Description (AS3959)</td><td colspan="4">PHOTO ID: 1.2</td></tr>
<tr><td colspan="2">Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.</td><td colspan="4" rowspan="3">
</td></tr>
<tr><td colspan="2">Observation/Justification for classification</td></tr>
<tr><td colspan="2"><table>
<tr><td>Fuel Hazard</td><td>Surface</td><td>Near surface</td><td>Elevated</td><td>Bark</td></tr>
<tr><td>Low</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td></tr>
<tr><td>Moderate</td><td></td><td></td><td></td><td></td></tr>
<tr><td>High</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Very High</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Extreme</td><td></td><td></td><td></td><td></td></tr>
</table></td><td colspan="4">PHOTO ID: 1.3</td></tr>
<tr><td colspan="2" rowspan="2">Post development

Excluded</td><td colspan="4">
</td></tr>
<tr><td colspan="4">PHOTO ID: 1.4</td></tr>
<tr><td colspan="2">Comment:</td><td colspan="4">
</td></tr>
</table>

PLOT: 1

Vegetation Classification

Excludable - 2.2.3.2(e) Non Vegetated Areas

Slope

Flat/upslope

Description (AS3959)

Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.

PHOTO ID: 1.5

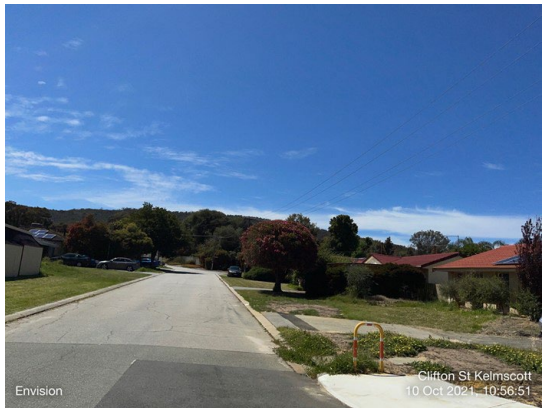


PHOTO ID: 1.6



Observation/Justification for classification

Fuel Hazard	Surface	Near surface	Elevated	Bark
Low	✓	✓	✓	✓
Moderate				
High				
Very High				
Extreme				

Post development

Excluded, land to be developed for residential purposes consistent with cl. 2.2.3.2(e).

PHOTO ID: 1.7



Comment:

PLOT: 2

Vegetation Classification

Class G Grassland – Open herbfield G-27

Slope

Flat

Description (AS3959)

All forms (except tussock moorlands) including situations with shrubs and trees if the overstorey foliage cover is less than 10%. Includes pasture and cropland.

PHOTO ID: 2.1



PHOTO ID: 2.2



Observation/Justification for classification

Fuel Hazard	Surface	Near surface	Elevated	Bark
Low	✓	✓	✓	✓
Moderate				
High				
Very High				
Extreme				

Post development

Excluded, land to be developed for residential purposes consistent with cl. 2.2.3.2(e).

PHOTO ID: 2.3



PHOTO ID: 2.4



Comment: Rural living area , classed as grassland. Photo 2.4 is grass land beyond initial line of trees, adjoins the southern boundary and is Urban Development Zone

PLOT: 3

Vegetation Classification

Class A Forest - Open forest A-03

Slope

Downslope 1.0^0. Calculated Method 2

Description (AS3959)

Trees over 30 m high; 30%-70% foliage cover (may include understorey ranging from rainforest species and tree ferns to low trees and tall shrubs). Found in areas of high reliable rainfall. Typically dominated by eucalypts with a sub-dominant tree layer.

PHOTO ID: 3.1



PHOTO ID: 3.2



Observation/Justification for classification

Fuel Hazard	Surface	Near surface	Elevated	Bark
Low	✓			
Moderate		✓		✓
High			✓	
Very High				
Extreme				

Post development

To be retained, and extended as Public Open Space to the east.

PHOTO ID: 3.3



PHOTO ID: 3.4



Comment: Tree over 6 m, moderate density of 40%

PLOT: 4

Vegetation Classification

Class G Grassland – Open herbfield G-27

Slope

Flat

Description (AS3959)

All forms (except tussock moorlands) including situations with shrubs and trees if the overstorey foliage cover is less than 10%. Includes pasture and cropland.

PHOTO ID: 4.1



PHOTO ID: 4.2



Observation/Justification for classification

Fuel Hazard	Surface	Near surface	Elevated	Bark
Low	✓	✓	✓	✓
Moderate				
High				
Very High				
Extreme				

Post development

To be retained, not Urban Development Zone

Comment: Orchard is excluded from classification. The underlying grass is greater than 100 mm and classified as grassland

PLOT: 5

Vegetation Classification

Class A Forest - Low open forest A-04

Slope

Downslope 5-10

Description (AS3959)

Trees over 30 m high; 30%-70% foliage cover (may include understorey ranging from rainforest species and tree ferns to low trees and tall shrubs). Found in areas of high reliable rainfall. Typically dominated by eucalypts with a sub-dominant tree layer.

PHOTO ID: 5.1



PHOTO ID: 5.2



Observation/Justification for classification

Fuel Hazard	Surface	Near surface	Elevated	Bark
Low	✓			
Moderate		✓		✓
High			✓	
Very High				
Extreme				

PHOTO ID: 5.3



PHOTO ID: 5.4



Post development

Canning River foreshore/corridor. To be retained as Bush Forever.

Comment: Trees over 6 m tall and shrubs.

PLOT: 6

Vegetation Classification

Class B Woodland - Open woodland B-06

Slope

Downslope 5-10

Description (AS3959)

Trees 10 m - 30 m high; 10% - 30% foliage cover dominated by eucalypts and/or callistris with a prominent grassy understorey. May contain isolated shrubs.

PHOTO ID: 6.1



PHOTO ID: 6.2



Observation/Justification for classification

Fuel Hazard	Surface	Near surface	Elevated	Bark
Low		✓		
Moderate	✓			✓
High			✓	
Very High				
Extreme				

Post development

To be retained, not Urban Development Zone

Comment: Separated trees 15% foliage cover, over grassland.

3.2 Potential Bushfire Impact - Outputs

In accordance with SPP 3.7, a BAL Contour Map has been prepared to illustrate the potential radiant heat impacts and associated BAL ratings for the assessment area after the development is completed (Figure 5d). Figure 5d is based upon an overall completion (Stage 5) and illustrates that no lot will exceed BAL-29.

Plot	Vegetation classification	Effective slope (degrees)	Separation Distance (AS 3959:2018 Table 2.5)	BAL
5	Forest	Flat/upslope	< 16 m	BAL-FZ
			16- < 21 m	BAL-40
			21 - < 31 m	BAL-29
			31 - < 42 m	BAL-19
			42 - < 100 m	BAL-12.5
			> 100 m	BAL-LOW
3	Forest	0-5	< 20 m	BAL-FZ
			20 - < 27 m	BAL-40
			27 - < 37 m	BAL-29
			37 - < 50 m	BAL-19
			50 - < 100 m	BAL-12.5
			> 100 m	BAL-LOW
6	Woodland	Flat/upslope	< 10 m	BAL-FZ
			10 - < 14 m	BAL-40
			14 - < 20 m	BAL-29
			20 - < 29 m	BAL-19
			29 - < 100 m	BAL-12.5
			> 100 m	BAL-LOW
2 and 4	Grassland	Flat/upslope	< 6 m	BAL-FZ
			6- < 8 m	BAL-40
			8 - < 12 m	BAL-29
			12 - < 17 m	BAL-19
			17 - < 50 m	BAL-12.5
			> 50 m	BAL-LOW
			> 50 m	BAL-LOW

Method 2 Calculation

For simplicity the method 1 approach in AS 3959:2018 utilises the highest slope in a range made up of 5 degree increments. This can overestimate the radiant heat and the required separation. A slope of 1.0^0 is in the range (downslope >0-5 degrees). The Method 1 calculation is therefore based on a slope of 5.0^0.

A Method 2 calculation can be made on the specific slope, in this instance a downslope of 1.0^0.

A method 2 calculation with the slope has been used below.

Method and slope	Radiant heat separation 29 kWm^2
Forest upslopes and flat land (method 1).	21 m
Forest downslope >0-5 degrees (method 1).	27 m
Forest downslope >0-1.0^0 (method 2).	22.5 m

FPA AUSTRALIA | FLAMESOL

Calculated November 28, 2021, 11:37 am (MDc v.4.9)

Minimum Distance Calculator - AS3959-2018 (Method 2)			
Inputs		Outputs	
Fire Danger Index	80	Rate of spread	2.57 km/h
Vegetation classification	Forest	Flame length	20.91 m
Understorey fuel load	25 t/ha	Flame angle	52 °, 62 °, 69 °, 73 °, 75 ° & 82 °
Total fuel load	35 t/ha	Elevation of receiver	7.94 m, 8.84 m, 9.199999999999999 m, 9.24 m, 9.210000000000001 m & 8.359999999999999 m
Vegetation height	n/a	Fire intensity	46,500 kW/m
Effective slope	1 °	Transmissivity	0.861, 0.838, 0.8090000000000001, 0.783, 0.771 & 0.714
Site slope	1 °	Viewfactor	0.6069, 0.4531, 0.3083, 0.2091, 0.1704 & 0.0459
Flame width	100 m	Minimum distance to < 40 kW/m²	16.9 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	22.5 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	31.8 m
Flame temperature	1,090 K	Minimum distance to < 12.5 kW/m²	43.5 m
		Minimum distance to < 10 kW/m²	50.6 m

Rate of Spread - Mcarthur, 1973 & Noble et al., 1980

Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980

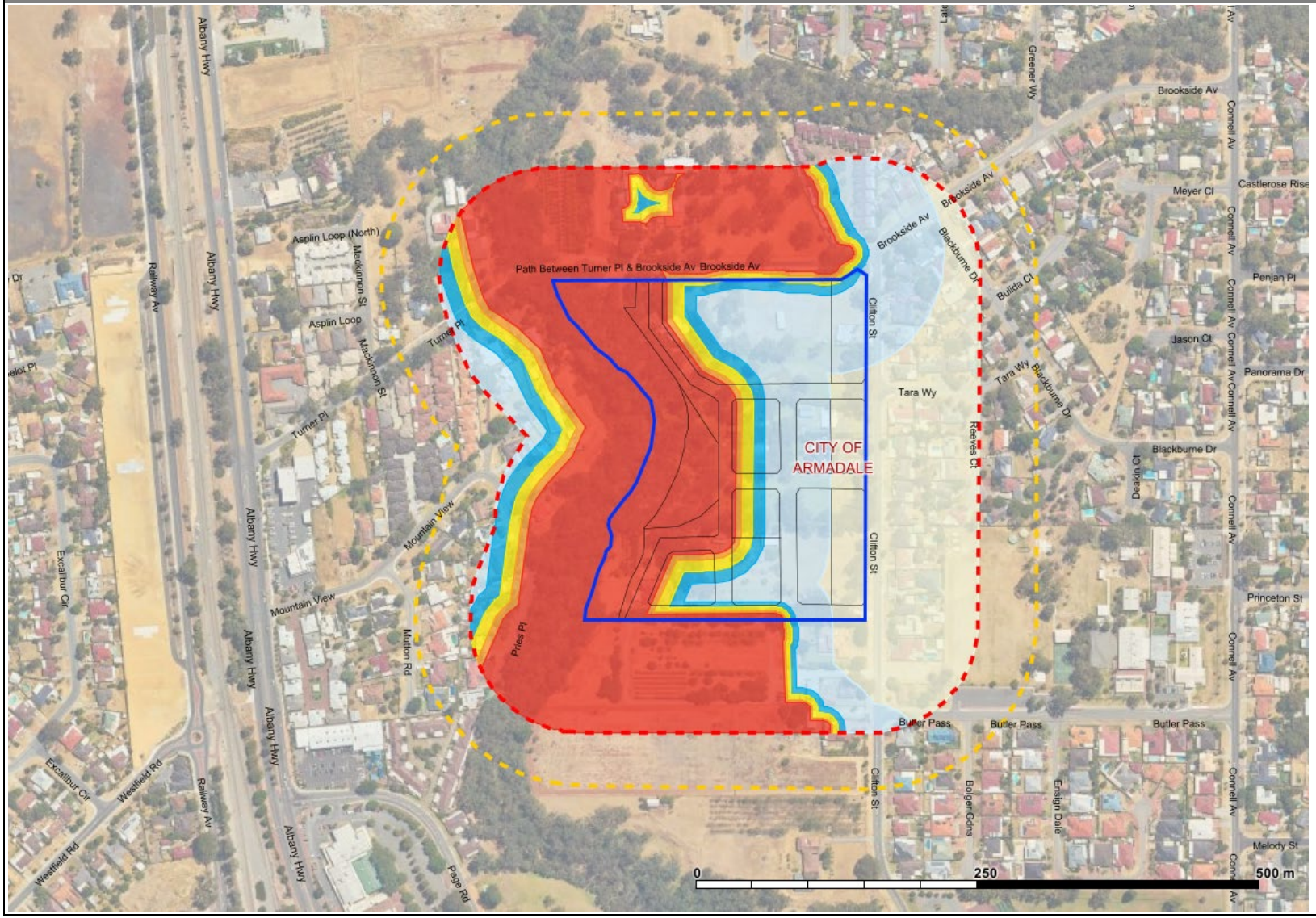
Elevation of receiver - Douglas & Tan, 2005

Flame angle - Douglas & Tan, 2005

Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

Plate 6: Calculation inputs using the FSA Flamesol calculator.

Figure 5a: BAL Contour Current Vegetation



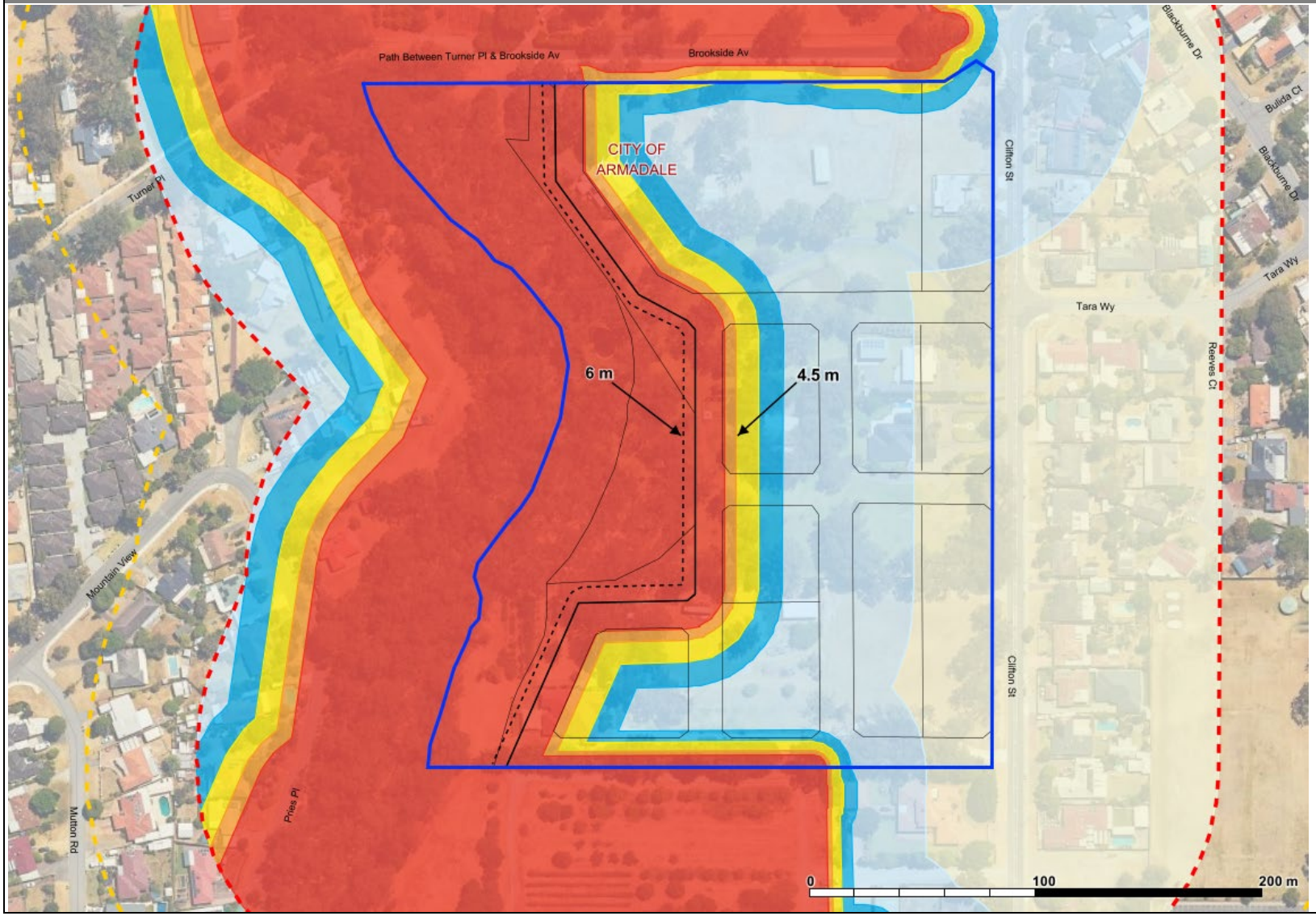
Site boundary
150 m assessment area
100 m assessment area
BAL-FZ
BAL-40
BAL-29
BAL-19
BAL-12.5
BAL-Low

Assessment Date: 10/10/2021
Prepared: Anthony Rowe
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Site boundary
150 m assessment area
100 m assessment area

Figure 5b: BAL Contour APZ



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4. IDENTIFICATION OF BUSHFIRE HAZARD ISSUES

The following has had regard to the principles AS ISO 3100:2018 and the National Emergency Risk Assessment Guideline (NERAG 2020)

Risk identification

Sustainable fire combustion depends upon the availability of fuel, oxygen, and heat. Removal of any one of the three aspects will extinguish or not sustain a fire. Fuel management, the management of vegetation, is the most practical means of control.

Bushfire behaviour, as it increases in intensity and speed of travel, can exceed human control measures and when this occurs the risk to humans and property increases. Bushfire behaviour is a result of climate, topography, and the availability of bushfire fuel (vegetation).

- Climate (drought and season) & weather (temperature, humidity, wind, atmospheric instability).

  Wind

  Bushfires are influenced by the wind direction and the speed. The wind direction generally determines the direction of the fire and wind speed, along with ground slope, generally determines the speed a fire will travel over ground. As wind strength increases it increases the availability of oxygen allowing the fire intensity to increase.

  Atmospheric conditions determine the potential for the uplift of embers and particles that can be distributed by the prevailing wind direction well ahead of the fire, up to 9 km, to create spot fires that can advance the location of the fire front.

  Fire Danger Index FDI

  FDI is an indicator of potential fire intensity and behaviour based upon weather conditions; temperature, humidity, and wind speed, together with climate measures, drought factor representing the dryness of the ground fuels.

  The FDI is an indicator of the potential for house loss and fatalities.

  The FDI is used as a basis for determining the required design performance of a building.

  - Topography (slope of the ground, aspect) – fire travels faster uphill, and in some conditions may determine the direction of the fire. The landform can also channel and increase the windspeed at a locality and create turbulence. It is measured as 0.0^0 or in downslope increments of 5.0^0.
  - Vegetation (horizontal and vertical structure, flammability, mass, and availability). Measured as a vegetation classification, or an exclusion, in AS 3959 (Method 1). The arrangement of fuel has a greater effect upon the **intensity** of a fire than just its mass; its exposure to oxygen is referred to as its availability in a bushfire. The available fuel represents a potential fire intensity measured in tonnes per ha. For this reason the predominant vegetation as an expectation of fire intensity is used, rather than a determination based upon a minor proportion of exceptional vegetation; that may either under or overestimate the bushfire intensity. The potential for revegetation is also to be considered in context to the likely future use of the land, where there is potential to introduce an extreme bushfire hazard level.

It is assumed that a bushfire will achieve a steady-state and be fully developed to maximum intensity over a 100 m (minimum) fire run. Grass fires travel faster (GFDI) than a forest canopy fire, but a forest canopy fire can eject a higher level of embers and also eject them over a greater distance. Crown fires occur when the ground fire is intense, and conversely, when ground fuels are managed, the resultant fire intensity may not be sufficient to involve the crown or sustain a fire.

Fuel reduction initiatives such as slashing and controlled burns are intended to reduce the fuel availability to a level where the intensity of the fire remains controllable.

The most relevant weather station is at Gosnells north of the site. The site is within an area described as having a Mediterranean climate of dry summers and mild, wet winters. The majority of rainfall is between May and September. The prohibited burning period is from mid-December to mid-March.

The Bushfire Danger Season has traditionally been between November and April each year, but recent climatic conditions have caused fire danger conditions to be present either side of this period.

Severe bushfire conditions FDI 50+, occur mostly between January and March. Severe plus conditions may occur in the morning from the east and with a stronger southerly aspect in the afternoon. The fire history in the Perth Hills including the Roleystone Kelmscott Fire On Monday 7 February 2011 which destroyed seventy-one homes and damaged 39 homes reaching Kelmscott.

Bushfires generally travel in the direction of the prevailing wind. The direction of the prevailing wind conditions can affect the options for evacuation and anticipated fire intensity depending upon the slope and fuel.

The wind roses below (Plates 5 and 6) for February (averaged) recorded at 9 am and 3 pm illustrate morning wind directions are predominantly from the southeast with and winds are generally stronger and of higher frequency from the south.

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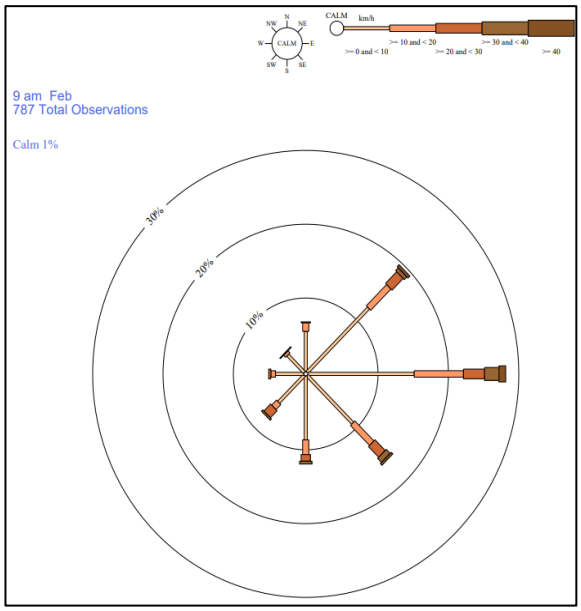


Plate 7a: wind directions as at 9 am

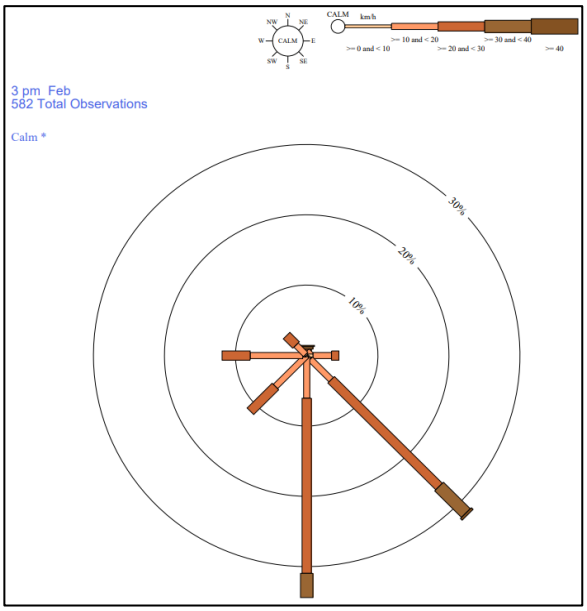


Plate 7b: wind directions as 3 pm

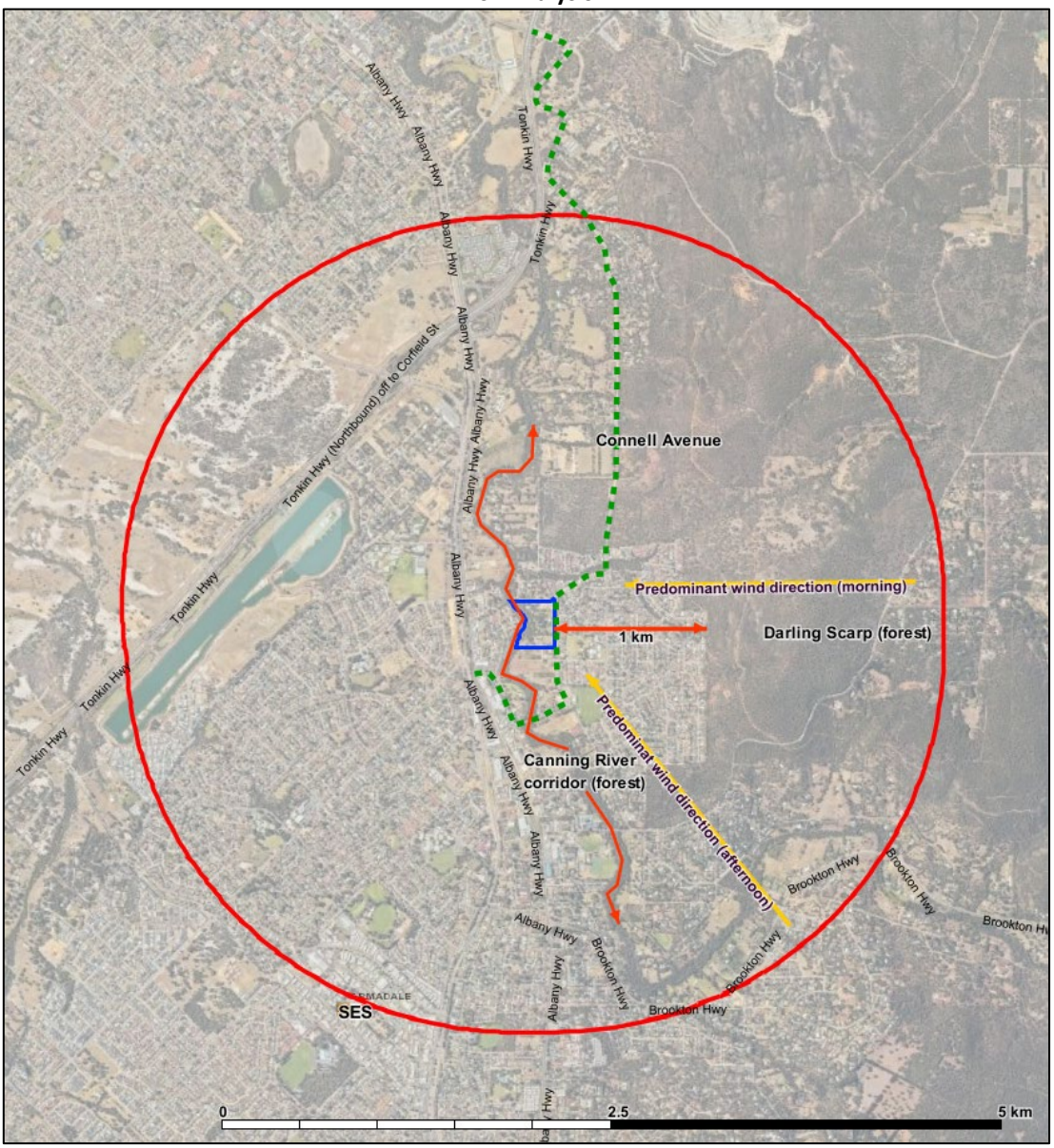


Plate 8: Illustrates the surrounding area within 2.5 km is predominantly residential or pasture grass, the exception is the Canning River corridor (forest) running north south, and the Darling Scarp (forest) located 1 km to the east.

The Canning River Corridor provides a contiguous link of forest fuels, north south, but it is generally narrower than the width used for calculating the radiant heat, which is 100 m, however it will be greater than 100 m adjacent the site.

The Canning River Corridor is classed as forest and has the potential to impose a direct flame contact, unless a separation greater than the flame length is provided (as shown by the APZ distance in Figure 5a). This will leave the fire to impact the building areas by radiant heat (BAL 29), ember attack and smoke.

The site is located at the foot of the Darling Scarp which is 1 km to the east and forest extending east. Landscape scale forest fires can eject embers greater than 5 km from the fire front. The site may be impacted by an ember attack from the east but due to the distance from the fire front it would not be impacted by radiant heat.

In a bushfire event other than the area immediate to the Canning River Corridor, should it ignite, the site can be accessed for the suppression of any initial ignitions because reticulated water is available and emergency services are located close by (within 2.5 km). This however should not be relied upon in a landscape scale fire because of competing priorities for emergency services and water supply.

The future residential development should (and is expected) to comply with the construction standard described in AS 3959:2018. Whilst these techniques are not a guarantee of building survival and rely on complementary maintenance and land management, it provides an increased passive resistance to bushfire attack.

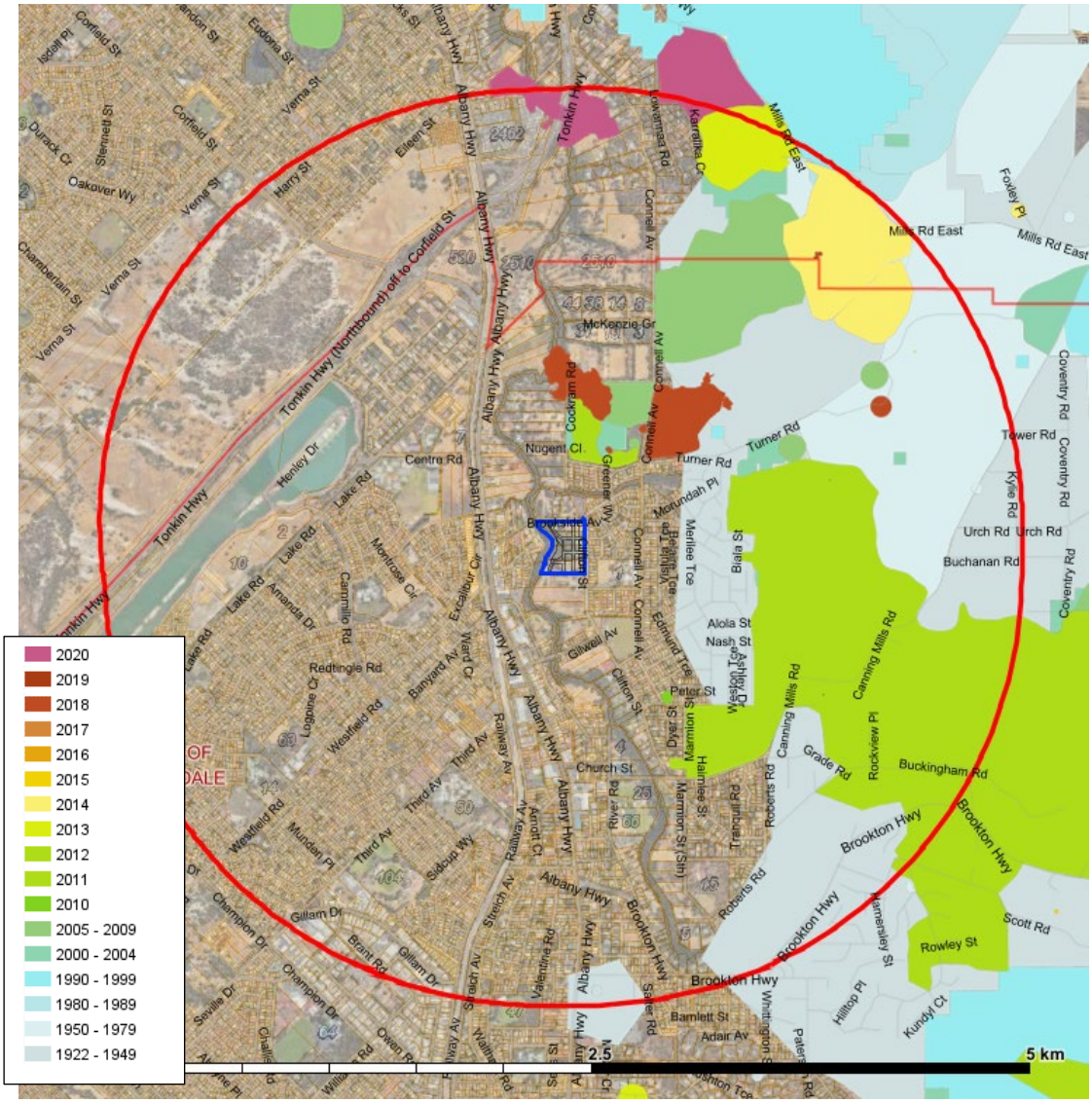


Plate 9: *Illustrates the fire history affecting the site. It is an indicative reference only due to historically different reporting practice*

Risk evaluation (risk level, risk treatments and residual risk)

There is a 'likelihood' due to human interaction, that the site may be impacted by a local fire ignited within the Canning River Corridor (forest). The site may also be impacted by an ember attack from forest in the Darling Scarp, embers can travel up to 5 Km but disperse with distance.

The proposed arrangement is the provision of a Public Open Space (POS) along the Canning River, which will be separated from the residential area by a 12 m wide road reserve.

The primary threat is from the revegetation of the proposed PoS, to forest, at the west of the site and up to the perimeter road.

The consequence of human harm is considered minor (not including respiratory sensitivities to smoke). There are multiple options for occupants to evacuate to a BAL low area.

The consequence for buildings/assets for those facing the PoS is potentially catastrophic because the nearest lots will be exposed to direct flame contact and extreme heat. The close proximity of buildings may lead to building to building fires (urban penetration).

Existing controls that ameliorate the bushfire risk are:

- Urban location and a single aspect to the classified vegetation, enabling movement in an opposite direction and into safety.
- Telecommunication network providing early reporting and community alert
- An established road network providing multiple destinations to evacuate to or receive support from
- Close proximity to emergency services, availability and short response time, to prevent and suppress fire- urban penetration
- Access to a reticulated water supply/suppression resource for attending emergency services.

Risk Treatments

Human safety

Evacuation to remove people from the potential impact of bushfire is assisted by early warning and egress opportunity into a urban road network and multiple destination.

Building resistance

The building resistance is achieved where the performance of the exterior (building construction materials) exceed the Bushfire attack mechanisms.

The facing building will experience the highest heat level and ember attack level.

Increasing the separation distance reduces the heat exposure and the density of ember attack.

The bushfire protection criteria has established BAL-29 as the best compromise of separation and the retention of vegetation, and a practical construction standard (matching performance level). BAL-29 is the distance outside of the flame length.

Following the requirements of the Bushfire Protection Criteria provides the risk treatments, to counter the risk identified at the site.

Residual risk

The acceptable level of risk (residual) is achieved by a separation of 22.5 m (based on forest with a 1.0^0 downslope and a commensurate construction standard, graduating down levels as the BAL level reduces with distance.

Potential setback arrangements are:

1. Based upon a road reserve 12 m wide, zero management adjacent the road reserve, the facing habitable building will require a 10.5 m setback from the street.
2. Based upon a road reserve 12 m wide, 4 management adjacent the road reserve*, the facing habitable building will require a 6.5 m setback from the street.
3. Based upon a road reserve 12 m wide, 6 m management adjacent the road reserve*, the facing habitable building will require a 4.5 m setback from the street.

**The WAPC is responsible for the management of Bush Forever land.*

5. BUSHFIRE PROTECTION MEASURES

5.1 State Planning Policy 3.7 - Planning In Bushfire Prone Areas (SPP 3.7)

SPP 3.7 applies to all subdivision applications in designated bushfire prone areas.

SPP 3.7 Objectives

Policy Measure 5 contains the objectives of SPP 3.7. The following demonstrates how the proposed development meets each of the objectives.

Objective 1: Avoid any increase in the threat of bushfire to people, property, and infrastructure. The preservation of life and management of bushfire impact is paramount.

The development of the site will displace classified vegetation (grassland which will reduce the threat to the nearby residential area. The revegetation of the POS, consistently to forest, will impose a BAL into the site.

Objective 2: Reduce vulnerability to bushfire through the identification and consideration of bushfire risks in decision-making at all stages of the planning and development process.

A developable area can be achieved within the site subject to restricting habitable buildings within 11 m from the proposed road at the western perimeter and 8 m from the Southern boundary. The setback areas are to be maintained as low threat AS 3959:2018 2.2.3.2 (e) and (f).

Objective 3: Ensure that higher order strategic planning documents, strategic planning proposals, subdivision and development applications take into account bushfire protection requirements and include specified bushfire protection measures.

Objective 3 is satisfied through the compliance of the proposed development with the Bushfire protection Criteria addressed in Section 5.2 below.

Objective 4: Achieve an appropriate balance between bushfire risk management measures and, biodiversity conservation values, environmental protection and biodiversity management and landscape amenity, with consideration of the potential impacts of climate change.

The proposal will augment the Canning River Foreshore Reserve (Bush Forever).

5.2 Guidelines for Planning in Bushfire Prone Areas Version 1.4 (the Guidelines)

The Guidelines apply to development applications located within designated bushfire prone areas. The Guidelines provide supporting information for implementation of SPP 3.7. Specifically, they provide the Bushfire Protection Criteria to be addressed for all applications.

5.2.1 Bushfire Protection Criteria

The bushfire risk mitigation strategies detailed in (Table 2 below) are designed to comply with the Bushfire Protection Criteria detailed in Guidelines for Planning in Bushfire Prone Areas Version 1.4 (the Guidelines) Appendix 4 (WAPC, 2017).

Where discrepancy occurs between State and local bushfire planning provisions the higher standard of mitigation has been selected.

Table 2: Bushfire Protection Criteria assessment.

For each of the elements listed within Appendix 4 of the Guidelines for Planning in bushfire-prone areas, the 'intent' must be achieved either by the proposal meeting the acceptable solutions; or where these acceptable solutions cannot be fully met, then by a performance-based solution that can achieve the 'intent.'

The purpose of the Structure Plan is to resolve bushfire hazard issues and treatments for the following subdivision. In order to avoid repetition at subdivision issues resolved at the structure plan need not be revisited at subdivision if the subdivision is consistent with the acknowledgements, acceptance and directions made by the structure plan.

✓	Acceptable solution provided	C	An Acceptable Solution to be conditioned
N/A	Not Applicable	P	Performance Principle solution see 5.2

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
Element 1: location To ensure that strategic planning proposals, subdivision, and development applications are located in areas with the least possible risk of bushfire to facilitate the protection of people, property, and infrastructure	**A1.1 Development location** The strategic planning proposal, subdivision, and development application is located in an area that is or will, on completion, be subject to either a moderate or low bushfire hazard level, or BAL–29 or below.	✓		*Position Statement: Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2: Siting and design* The site is within a designated rural living area that is considered a moderate bushfire hazard level (BHL). The site is within an area (150 m) that is predominantly urban development (low BHL) and pastural grasses (moderate BHL). The Canning River corridor forest extreme (BHL) is a localised element and not reflective of a broader condition. The site is compliant with Element 1.

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
Element 2: Siting and Design To ensure that the siting and design of development minimises the level of bushfire impact	**A2.1 Asset Protection Zone** Every habitable building is surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the following requirements: • Width: Measured from any external wall or supporting post or column of the proposed building, and of sufficient size to ensure the potential radiant heat impact of a bushfire does not exceed 29kW/m² (BAL-29) in all circumstances. • Location: the APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity (see explanatory notes). • Management: the APZ is managed in accordance with the requirements of 'Standards for Asset Protection Zones.' (see Schedule 1).	✓		It is anticipated that the POS will be revegetated as forest comparable to the Canning River Bush Forever corridor. The perimeter road way adjacent the POS (forest) is a 12 m reserve. In this instance the PoS also has a gentle downslope requiring a greater distance. A method 2 calculation has been undertaken to demonstrate a distance of 22.5 m will be required from the forest in the POS (western boundary). This has been illustrated in Figure 5a. Without management arrangements in place the BMP, the routine WAPC subdivision condition will restrict habitable buildings from being constructed within 10.5 m from the street setback Figures 5b illustrate the required management extent (6 m) to achieve BAL 29 at 4.5 m from the street. In the absence of an agreement to manage adjoining land the developable area is shown to be restricted in the Spatial representation of Bushfire Management Strategies Figure Ex1. A 'notification' is to be provided on the title of each lot alerting to the requirement of bushfire protection measures; APZ and bushfire construction standard apply.
Element 3: Vehicular Access To ensure that the vehicular access serving a subdivision/development is available and safe during a bushfire event.	**A3.1 Public roads** The minimum requirements under this acceptable solution are applicable to all proposed and existing public roads. Public roads are to meet the minimum technical requirements in Table 6, Column 1.	✓		The access to the site is from Albany Highway via Gilwell Avenue and on to Clifton Street. These are established sealed public roads compliant with IPWEA Subdivision Guidelines. Access to the site is also available from Connell Avenue via Brookside Avenue and onto Clifton Street. These are established sealed public roads compliant with IPWEA Subdivision Guidelines
	A3.2a Multiple access routes Public road access is to be provided in two different directions to at least two different suitable destinations with an all-weather surface (two-way access).			The site adjoins a through road that connects Albany Highway to Connell Avenue, to provide access to the metropolitan road network and multiple destinations.

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
	A3.2b Emergency access way Where it is demonstrated that A3.2a cannot be achieved due to site constraints, or where an alternative design option does not exist, an emergency access way can be considered as an acceptable solution.	N/A		
	A3.3 Through-roads All public roads should be through-roads. No-through roads should be avoided.	✓		The proposed road layout will provide all roads as through roads.
	A3.4a Perimeter roads A perimeter road is a public road and should be provided for greenfield or infill development where 10 or more lots are being proposed.	✓		The layout for the following subdivision, provides a public road to separate the public open space (Forest Bush Forever) from the residential area. The residential development will also be separated from the undeveloped land (grassland) south of the site by a public road. The site otherwise adjoins existing public roads at its north and east boundary.
	A3.4b Fire service access route Where proposed lots adjoin classified vegetation under AS3959 (excluding Class G Grassland)', and a perimeter road is not required in accordance with A3.4a, a fire service access route can be considered as an acceptable solution to provide firefighter access, where access is not available, to the classified vegetation.	N/A		
	A3.5 Battle-axe access legs Where it is demonstrated that a battle-axe access leg cannot be avoided due to site constraints, it can be considered as an acceptable solution.	N/A		

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
	A3.6 Private driveways There are no private driveway technical requirements where the private driveway is: within a lot serviced by reticulated water; no greater than 70 metres in length between the most distant external part of the development site and the public road measured as a hose lay; and accessed by a public road where the road speed limit is not greater than 70 km/h.37	✓		
Element 4: Water To ensure that water is available to enable people, property and infrastructure to be defended from bushfire.	**A4.1 Identification of future water supply** Evidence that a reticulated or sufficient non-reticulated water supply for bushfire fighting can be provided at the subdivision and/or development application stage, in accordance with the specifications of the relevant water supply authority or the requirements of Schedule 2. Where the provision of a strategic water tank(s) is required a suitable area within a road reserve or a dedicated lot the location should be identified, should be identified on the structure plan, to the satisfaction of the local government.	✓		A reticulated water supply is available. Hydrants are provided in Clifton Street and Brookside Avenue. Hydrants will be provided within the public roads in accordance with the Water Corporation Reticulation Standard No.63.
	A4.2 Non-reticulated areas • Volume: minimum 50,000 litres per tank; Ratio of tanks to lots: minimum one tank per 25 lots (or part thereof); • Tank location: no more than two kilometres to the furthermost house site within the residential development to allow a 2.4 fire appliance to achieve a 20 minute turnaround time at legal road speeds; • Hardstand and turn-around areas suitable for a type 3.4 fire appliance (i.e. kerb to kerb 17.5 metres) are provided within three metres of each water tank; and • Water tanks and associated facilities are vested in the relevant local government	N/A		

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
	A4.3 Individual lots within non-reticulated areas (Only for use if creating 1 additional lot and cannot be applied cumulatively) Single lots above 500 square metres need a dedicated static water supply on the lot that has the effective capacity of 10,000 litres.	N/A		

5.3 Additional Bushfire Management Strategies

The following additional management strategies are treatments in addition to the matters addressed in the Bushfire Protection Criteria. Note: WAPC model conditions are to be imposed by the WAPC at subdivision.

Table 3: WAPC Model Subdivision Conditions Schedule December 2020.

No.	Condition requirement - Summary	Applicability (to be identified by the WAPC om the approval)
F1	Implementation of the required bushfire management plan measures (certified by Bushfire Consultant)	Required
F2	Notification 165 PDA - land within a bushfire prone area > than BAL- Low (WAPC).	Required
F3	Restrictive covenant – 129BA Transfer of Land Act 1893 – restricting habitable buildings within areas identified as BAL-40 or BAL-Flame Zone. (Local Government)	Required
F4	Bushfire access not for public access – easement under s.195 LAA. (Local Government)	Not required
F5	Public bushfire access – easement under s.195 and 196 LAA or right of way under s.152 PDA. (Local Government)	Not required
F6	'Right-of-carriageway' bushfire access – easement under s.195 LAA. (Local Government)	Not required
F7	Reserve for strategic water supply for firefighting purposes	Not required, a reticulated supply is available

5.4 Spatial representation of the bushfire management strategies

Further to the assessment against the bushfire protection criteria, the key features demonstrating compliance should be represented spatially in the *Spatial representation of the bushfire management strategies*. It represents the required bushfire risk management measures that must be implemented and maintained.

The Spatial representation of the bushfire management strategies is provided in Figure EX1.

It illustrates the required APZ and developable areas to be followed at subdivision.

6. DIRECTIONS FOR IMPLEMENTATION AND MANAGEMENT OF THE BUSHFIRE MEASURES AT SUBDIVISION

The structure plan guides the subsequent subdivision. The following instructions (Subdivision Requirements) are provided for guidance of the subdivision.

The following acknowledgements, acceptance and directions (conditions) are to be provided on the Structure Plan under the heading of Subdivision Requirements.

Bushfire Protection Measures.

1. Location

The site is accepted as a moderate Bushfire Hazard Level where the bushfire impacts can be ameliorated to an acceptable level in compliance with Element 1 Element 3 *Guidelines for Planning in Bushfire Prone areas V1.4.*

2. Siting and Design

The siting of habitable buildings, and any building within 6 m of the habitable building, is to be located within the area not exceeding BAL-29.

All habitable buildings, and any building within 6 m of the habitable building, will be required to be constructed in accordance with the Construction Requirement described in AS 3959:2018 that is applicable to the Bushfire Attack Level at the building's location.

3. Vehicular Access

All roads are to be constructed as public roads, no less than the technical requirements described in table 6, Column 1 Element 3 *Guidelines for Planning in Bushfire Prone areas V1.4*.

4. Water

Hydrants are to be provided within the public roads in accordance with the Water Corporations Water Reticulation Standard No 63.

Notations

The following notations are to be placed on subsequent land titles where the lot is BAL-12.5 or a higher BAL Level

1. A notification is to be placed on the titles of all lots with a BAL-12.5 or higher, notifying landowners that the property is subject to a Bushfire Management Plan (to be applied by WAPC model condition F2).
2. A notification is to be placed on the titles advising that restrictions may apply to buildings within areas that have been assessed as BAL-40 or BAL-Flame Zone (to be applied by WAPC model condition F3).

APPENDIX 1 – References

GENERAL REFERENCES

Australian Building Codes Board 2019, *Handbook: Bushfire Verification Method*, Commonwealth of Australia and States and Territories 2019, published by the Australian Building Codes Board.

Australian Building Codes Board 2014, *Information Handbook: Design and Construction of Community Bushfire Refuges*, 2014

SA Department of Environment and Natural Resources, Government of South Australia, 2012 *Overall Fuel Hazard Guide for South Australia*

Standards Australia, *Australian Standard AS 3745:2010 Planning for emergencies in facilities*

Standards Australia, *AS 3959:2018 Construction of buildings in bushfire-prone areas*, Sydney

Standards Australian and Standards New Zealand, *Australian Standard / New Zealand Standard ISO 31000:2018 Risk management – principles and guidelines*

Western Australian Planning Commission (WAPC) 2019 *A Guide to developing a Bushfire Emergency Evacuation Plan* October 2019.

Western Australian Planning Commission (WAPC) *Position Statement: Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2: Siting and design* November 2019

WA Department of Planning Land and Heritage 2016*, Visual Guide for bushfire risk assessment in Western Australia*

Western Australian Planning Commission (WAPC) 2015, *State Planning Policy 3.7 Planning in Bushfire Prone Areas*, Western Australian Planning Commission, Perth, Perth

Western Australian Planning Commission and Department of Fire and Emergency Services (WAPC and DFES) 2017, *Guidelines for Planning in Bushfire Prone Areas Version 1.4*, Western Australia

Online references

Office of Bushfire Risk management (OBRM), Map of Bush Fire Prone Areas,
< https://maps.slip.wa.gov.au/landgate/bushfireprone/>

Office of Bushfire Risk Management (OBRM), Bushfire Risk Management (BRM) Plan Guidelines

APPENDIX C

Local Water Management Strategy
(Bayley Environmental Services)

CLIFTON STREET NORTH PRECINCT

LOTS 1, 11 & 12 CLIFTON ST AND LOTS 11 & 12 BROOKSIDE AVE, KELMSCOTT

LOCAL WATER MANAGEMENT STRATEGY

Prepared for

Mr Tony Macri and Mr Paul Harrison
c/- Harley Dykstra
PO Box 316
KELMSCOTT WA 6991

Report No. J14037
3 October 2022

BAYLEY ENVIRONMENTAL SERVICES
30 Thomas Street
SOUTH FREMANTLE WA 6162

EXECUTIVE SUMMARY

Harley Dykstra has prepared a Local Structure Plan for Lots 1, 11 and 12 Clifton St and Lots 11 and 12 Brookside Avenue, Kelmscott, on behalf of Mr Tony Macri (the owner of Lot 12 Brookside Ave) and Mr Paul Harrison (the owner of Lot 12 Clifton St). The LSP proposes to subdivide the subject land, totalling about 7ha, into a range of R40, R60 and R80 residential lots. The LSP also proposes approximately 0.7ha of Public Open Space, comprising about 12% of the total developable area. A further 1.16ha (approximately), comprising the river foreshore and most of the floodway, will be ceded as Regional Open Space.

The subject land is located immediately east of the Canning River, and the river is a major factor influencing the design of the LSP. Other influences on the LSP are:

- existing land uses on the site (private houses and vacant land on 0.7 - 2ha lots);
- mostly flat topography with largely impermeable silty clay soils, and, in places, a steep fall down to the river channel;
- the 100-year floodway of the Canning River;
- remnant native vegetation (mostly mature Flooded Gums) along the river foreshore; and
- areas of seasonal saturation along the slope near the river.

The Canning River will be protected by a foreshore reserve that has been determined by a lengthy investigation and consultation process involving the WAPC, EPA, DoW, DPAW and City of Armadale. The foreshore reserve will be formalised in a combination of Regional and Public Open Space.

Water Use Efficiency

Waterwise landscaping will be applied to the POS and other public areas to reduce irrigation requirements. Street trees and other landscape plantings will be unirrigated after the initial establishment phase.

Irrigated turf within POS will be limited to central amenity areas. Irrigation will be by means of large droplet emitters or trickle irrigation where applicable, and will be .

Groundwater for ongoing POS irrigation will be sourced from one or more bores to be installed within POS in the LSP area. The location, depth and abstraction rates of these bores have yet to be determined.

Private ex-house water use is expected to be small as a result of the high development density and consequent absence of large lawns and gardens. In-house water use will be minimised by the application of 5-star Plus Building Standards, in accordance with the *Building Code of Australia 2012*.

Drainage Management

The proposed development will cause an increase in the overall imperviousness of the subject land. Given the clay soils of the site and consequent high runoff rates, this increase will be smaller than for a similar development on a sandy catchment. However, the clay soils also reduce the opportunities for at-source infiltration of runoff.

The drainage system for the LSP area is designed to maintain as nearly as possible the existing hydrology of the subject land and the river. The essential features of the drainage system are:

- Runoff from building roofs will be piped to detention basins, bypassing the road drainage network and thus avoiding contamination. The option exists to bypass these flows past the detention basins, thus reducing the required size of the basins while at the same time increasing the quantity of small, clean flows to the Canning River. This option will be explored further at the UWMP stage.

- Runoff from paved ground within private lots (e.g. driveways) will be partly captured by lawns and gardens, with the excess flowing into the road drainage system.

- Road runoff from storms up to 1 year ARI, 1 hour duration (about 17.6mm) will be captured by the piped drainage network and wholly infiltrated in bioretention basins (rain gardens), which will be engineered and vegetated to achieve high removal of contaminants while avoiding prolonged ponding of stormwater.

- Runoff from larger storms up to 100-year ARI will be conveyed by a combination of piped and pavement flow to detention basins, from where they will be infiltrated or progressively released to the Canning River. The size of the basins and the overflows will be designed to maintain the peak flows from the site at pre-development levels.

Groundwater Management

The proposed development is expected to have no effect on groundwater levels or quality over most of the site, as a result of the impermeable clay soils and depth to groundwater. Dewatering is unlikely to be required for the installation of underground services.

Groundwater quality will be protected by a combination of the adsorptive clay soils, treatment of runoff and minimal use of fertilisers in landscaping and POS areas.

Implementation and Further Management Plans

Urban Water Management Plans will be prepared for each stage of subdivision within the LSP area. The UWMPs will set out detailed drainage designs, landscape plans and monitoring programs for each stage of subdivision.

Foreshore Management Plans will be prepared to guide rehabilitation and management in the foreshore area adjacent to each stage of subdivision.

TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1
1.1 Background 1
1.2 Planning Context 1
1.3 Scope of the LWMS 3
1.4 Relevant Guidelines and Policies 3
1.4.1 State Planning Policy 2.9 3
1.4.2 Better Urban Water Management 4
1.4.3 Local Planning Policy PLN2.6: Water Sensitive Urban Design 5
1.5 Previous Studies 6

2.0 PRE-DEVELOPMENT ENVIRONMENT 7
2.1 Rainfall 7
2.2 Physiography 9
2.2.1 Topography 9
2.2.2 Geology, Landforms and Soils 9
2.2.3 Soil Permeability 9
2.2.4 Acid Sulphate Soils 10
2.2.5 Phosphorus Retention Index 10
2.3 Hydrology 11
2.3.1 Surface Drainage 11
2.3.2 Groundwater 11
2.3.3 Wetlands 12
2.4 Water Quality 12
2.5 Vegetation 16
2.6 Land Uses and Potential Contamination 16

3.0 WATER USE SUSTAINABILITY 17
3.1 Water Efficiency Measures 17
3.1.1 Public Open Space 17
3.1.2 Domestic Use 18
3.2 Wastewater Management 18

4.0 STORMWATER MANAGEMENT 19
4.1 Principles and Objectives 19
4.2 Design Criteria 19
4.3 Drainage Management System 22
4.4 Basin Locations 25
4.5 Basin Sizing and Design 26
4.6 Water Quality Management 27
4.7 Maintenance 27

5.0 GROUNDWATER MANAGEMENT 28
5.1 Groundwater Levels 28
5.2 Groundwater Quality 28

6.0 LANDSCAPE STRATEGY 30

7.0 SUBDIVISION WORKS 32
7.1 Construction Management Plan 32
7.2 Tree Protection 33

8.0 MONITORING AND RESPONSE 34
8.1 Monitoring Programme 34
8.2 Criteria 34
8.3 Contingency Response 35
8.4 Recording and Reporting 36

9.0 IMPLEMENTATION AND FURTHER MANAGEMENT PLANS 37

10.0 REFERENCES 38

LIST OF TABLES

Table	Title	Page
2.1	Rainfall Intensity for Kelmscott	8
2.2	Soil Permeability Test Results	9
2.3	Soil PRI Results	11
2.4	Groundwater Levels	12
2.5	Water Quality	13
4.1	Design Criteria	20
4.2	Drainage Alternatives	23
4.3	Permitted Catchment Outflows	24
4.2	Preliminary Basin Sizing	26

LIST OF FIGURES

Figure	Title
1	Draft Local Structure Plan
2	Perth Airport Mean Rainfall (p. 7 of document)
3	Environmental Features
4	Historical Aerial Photography
5	Drainage Concept
6	Catchment 3 Basin Layout
7	Conceptual Infiltration Basin Profile

LIST OF APPENDICES

Appendix	Title
A	Bore Logs
B	Permeability Test Results
C	Drainage Report

1.0 INTRODUCTION

1.1 Background

Harley Dykstra has prepared a Local Structure Plan for Lots 1, 11 and 12 Clifton St and Lots 11 and 12 Brookside Avenue, Kelmscott, on behalf of Mr Tony Macri (the owner of Lot 12 Brookside Ave) and Mr Paul Harrison (the owner of Lot 12 Clifton St). The LSP proposes to subdivide the subject land, totalling about 7ha, into a range of R40, R60 and R80 residential lots. The LSP also proposes approximately 0.7ha of Public Open Space, comprising about 12% of the total developable area. A further 1.16ha (approximately), comprising the river foreshore and most of the floodway, will be ceded as Regional Open Space. Figure 1 shows the Local Structure Plan.

The subject land is zoned Urban in the Metropolitan Region Scheme (MRS). The land to the south and east is also zoned Urban. The land immediately to the north and west is zoned Rural and separates the subject land from the Canning River Waterways reservation. A Bush Forever overlay also covers part of the subject land, generally following the alignment of the Canning River.

The subject land was rezoned from Rural to Urban under the MRS in May 2012 (amendment 1202/41).

As a brownfield site, no formal District Water Management Strategy (DWMS) has been prepared for the subject land, although an outline DWMS was provided as part of the *Canning River Precinct Environmental Study* (Enviroworks, 2009) prepared for the Department of Planning and the City of Armadale.

1.2 Planning Context

The City of Armadale and the WAPC, in consultation with the Swan River Trust (SRT), Department of Water & Environmental Regulation (DWER) and Environmental Protection Authority (EPA), have been engaged in a long-term program of consultation and planning for land use and zoning changes and the reservation of the Canning River foreshore. Planning and consultation for the Precinct has progressed through various stages over the past 17 years between 1999 and 2016:

<u>1999 to 2004 Preliminary Strategic Municipal and District Planning</u>

- The *Residential Neighbourhood Strategy - Discussion Paper* first flagged the proposed change in land use from Rural to Urban. It was prepared as one of the consultation discussion papers which preceded the Review of TPS No.2 and No 3 and advertising of a draft TPS 4. The Discussion Paper was advertised for public submissions in 1999.

- The *Kelmscott Enquiry-By-Design Workshop* (2002 - 3) was undertaken jointly by the City of Armadale and the Department of Planning with community representative participation through focus groups and in the workshop forum. It produced initial land use and foreshore landscaping concepts for land use change to Urban use combined with a proposed new foreshore reserve frontage to the Canning River. The Workshop Report was advertised for public submissions in 2003.

- The City of Armadale *Local Planning Strategy* earmarked the Canning River Precinct for future urbanisation under TPS No.4. The LPS was advertised for public submissions with draft TPS No. 4 in 2004 (gazetted 5 November 2005).

2005 Planning at the Precinct level

- The *Canning River Precinct Study* series of consultant-facilitated stakeholder workshops was conducted jointly by the City of Armadale and the Department of Planning in 2005. Community representatives, precinct landowners and State environmental and land management agencies participated in the workshops:

  - Stakeholders Workshop (W/S No. 1) - 26th May 2005;
  - Stakeholders Workshop (W/S No. 2) – 20th July 2005;
  - Public Workshop (W/S No. 3) – 17th August 2005.

  Invitations to the workshop were extended to stakeholder landowners, nearby residents and the general public by notices in the local paper and on the City's website. Frequently asked questions and information were provided on the City's website.

Statutory Planning Amendments to MRS and TPS No.4 (2009 to 2014)

- The *Environmental Review – Canning River Precinct* (2009) was undertaken by the City of Armadale and the WAPC at the request of the EPA and other State environmental agencies. The findings of the study informed the Urban zoning in the WAPC's Metropolitan Region Scheme (MRS) Amendment 1202/41. The study included the definition of a Canning River foreshore reserve based on the methodology set out in EPA Guidance 33 (Section 5: Waterways) and policy guidelines for determining foreshore reserves, including WRC *River Restoration 16: Determining Foreshore Reserves*.

  The resulting MRS Amendment was advertised for public submissions from 25th January to 29th April 2011. Public hearings were conducted by the Planning Commission (WAPC) in August 2011. The MRS Amendment, which was gazetted in May 2012, delineated the extent of the Urban zone, which formed the Structure Plan area, while retaining the identified foreshore reserve in the Rural zone.

- *TPS No. 4 Amendment No. 70* was prepared following gazettal of MRS 1202/41 in order to make the TPS consistent with the MRS. The TPS Amendment was advertised for public submissions in May 2013 and Gazetted in February 2014.

1.3 Scope of the LWMS

This LWMS has been prepared in support of the Local Structure Plan to:

- Document the existing environment on the site in relation to soils, drainage, erosion, watercourses, groundwater and water dependent ecosystems.
- Briefly describe the proposed development in relation to water management.
- Address relevant regulatory requirements and design criteria for water harvesting, groundwater management and drainage.
- Describe the strategies to be implemented for water conservation, groundwater management and stormwater drainage.
- Outline the proposed monitoring program.
- Outline what is to be addressed in future water management plans for developments within the LSP area.

1.4 Relevant Guidelines and Policies

1.4.1 State Planning Policy 2.9

State Planning Policy 2.9: *Water Resources* (WAPC, 2006) lists the following key principles for total water cycle management:

- Consideration of all water sources (including wastewater) in water planning, maximising the value of water resources.
- Integration of water and land use planning.
- Sustainable and equitable use of all water sources, having consideration of the needs of all water users including the community, industry and the environment.
- Integration of water use and natural water processes.
- A whole-of-catchment integration of natural resource use and management.

SPP 2.9 also lists the following general objectives for water-sensitive urban design:

- To manage a water regime.
- To maintain and, where possible, enhance water quality.
- To encourage water conservation.
- To enhance water-related environmental values.
- To enhance water-related recreational and cultural values.

Element 5 of *Liveable Neighbourhoods* Edition 3 (WAPC, 2004) identifies specific objectives and requirements for Urban Water Management. These are based on Best Planning Practices which are defined as the best practical approach for achieving water resource management objectives within an urban framework.

1.4.2 Better Urban Water Management

Better Urban Water Management (WAPC, 2008) sets out the following objectives for water sensitive urban design:

Water Conservation

- Consumption of 100kL/p/yr including less than 40-60 kL/p/yr scheme water.

Water Quantity

- Ecological Protection – Maintain pre-development flow rates and volumes for the 1 year ARI event. Maintain or restore desirable environmental flows and/or hydrological cycles.
- Flood Management – Maintain pre-development flow rates and volumes for the 100 year ARI event.

Water Quality

- Maintain pre-development nutrient outputs (if known) or meet relevant water quality guidelines (e.g. ANZECC & ARMCANZ, 2000).
- Treat all runoff in the drainage network prior to discharge consistent with the Stormwater Management Manual.
- As compared to a development that does not actively manage stormwater quality, achieve:

- at least 80% reduction of Total Suspended Solids;
- at least 60% reduction of Total Phosphorus;
- at least 45% reduction of Total Nitrogen; and
- at least 70% reduction of gross pollutants.

Mosquitoes and Midges

- Design detention structures so that, between the months of November and May, stormwater is fully infiltrated within 96 hours.

- Design permanent water bodies (where accepted by DWER) to maximise predation of mosquito larvae by native fauna.

1.4.3 Local Planning Policy PLN2.6: Water Sensitive Urban Design

The City of Armadale's Local Planning Policy PLN2.6 seeks to integrate development with enhancing the qualities of the natural environment by:

- preventing contamination of stormwater through education and design;
- using appropriate technology;
- using the natural ability of watercourses and water bodies to improve water quality; and
- revegetating existing stormwater drains with local species to enhance their values and visual appeal.

The Policy sets out the following principles for design and assessment of best management practice in water-sensitive design:

(a) Water resource management is addressed at the sub-catchment level.

(b) Multiple use corridors located within Public Open Space are used when appropriate.

(c) Storage, stormwater use and stormwater treatment occur as high as possible in the catchment, a treatment train approach is used and components of stormwater management are located so they follow natural contours.

(d) Stormwater system design incorporates as much as possible features of waterways that improve water quality.

(e) Fringing vegetation along watercourses and around protected wetlands and associated significant upland vegetation is considered for retention and rehabilitation where practical.

(f) Property is protected from flooding or damage by surface water or groundwater.

(g) Post-urban development conditions in watercourses approximate pre urban conditions (i.e. water level and flow regimes are maintained) (unless it can be demonstrated that the downstream channel and floodplain has the capacity to accept higher flows to the satisfaction of the Department of Water).

(h) The area of open drain habitat is maintained or increased over time.

The Clifton Street North LSP and this LWMS have been prepared in line with the principles of PLN2.6.

1.5 Previous Studies

Canning River Precinct Environmental Review (2009)
The Canning River Precinct Environmental Review (Enviroworks, 2009) was undertaken by the Department of Planning and the City of Armadale over a 2km stretch of Canning River foreshore and adjacent upland that had been identified for possible infill urban redevelopment, including the Clifton St North Precinct. The objective of the study was to investigate the environmental features of the foreshore, identify areas suitable for Parks and Recreation reservation and define a foreshore reserve for incorporation into the Metropolitan Region Scheme.

The study included review of existing biophysical information (including Bush Forever, floodway mapping, Swan River Trust Development Control Area), on-site investigations and consultation with agencies including the Department of Environment & Conservation and the Department of Water, and site investigations. A biophysical assessment was undertaken in accordance with EPA Guidance 33 (Section 5: Waterways) and WRC RR16: *Determining Foreshore Reserves*.

The foreshore reserve identified by the study has been incorporated into the MRS as an interim Rural zoning before a Parks & Recreation Reservation is implemented in accordance with WAPC practices (WAPC, 2012). The foreshore reserve is covered by a Development Control Area under the *Swan and Canning Rivers Management Act 2005*. It forms the western boundary of the structure plan area for the Clifton St North Precinct.

2.0 PRE-DEVELOPMENT ENVIRONMENT

2.1 Rainfall

Kelmscott, like the rest of the Perth region, has a strongly seasonal rainfall, with most of the annual rain falling between May and September in association with winter cold fronts. Occasional heavy falls may occur from summer thunderstorms. The long-term average annual rainfall for Perth Airport is 774.7mm, of which over 78% falls between the months of May and September.

Figure 2 shows a rainfall occurrence chart for Perth Airport. Table 2.1 shows rainfall intensity, frequency and duration for Kelmscott.

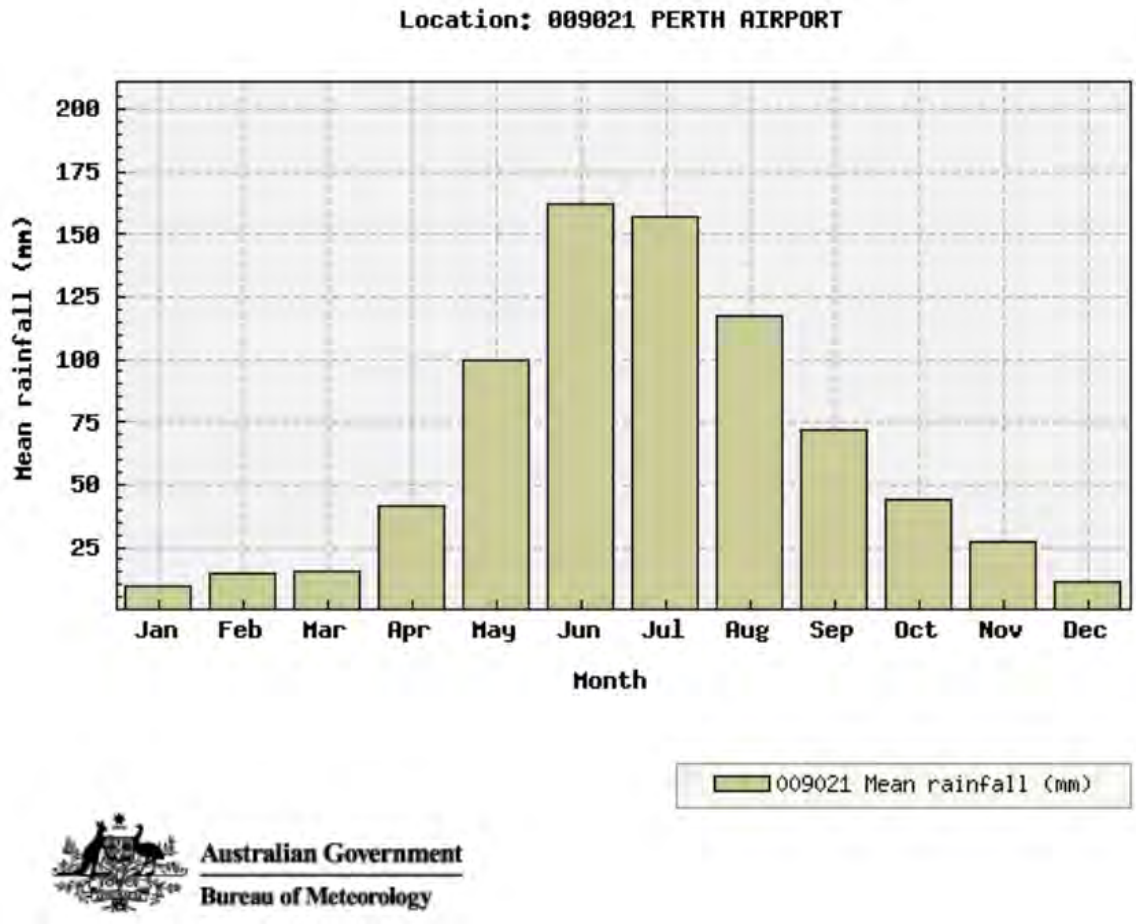


Figure 2 Perth Airport Mean Rainfall

IFD Design Rainfall Depth (mm)

Issued: 16 December 2021

Rainfall depth for Durations, Exceedance per Year (EY), and Annual Exceedance Probabilities (AEP).
FAQ for New ARR probability terminology

	Annual Exceedance Probability (AEP)						
Duration	**63.2%**	**50%#**	**20%***	**10%**	**5%**	**2%**	**1%**
1 min	1.76	1.95	2.55	2.99	3.44	4.06	4.55
2 min	3.10	3.40	4.37	5.07	5.80	6.81	7.63
3 min	4.15	4.55	5.89	6.86	7.85	9.24	10.4
4 min	5.00	5.51	7.16	8.36	9.59	11.3	12.7
5 min	5.73	6.32	8.26	9.65	11.1	13.1	14.7
10 min	8.29	9.18	12.1	14.2	16.3	19.3	21.6
15 min	9.99	11.1	14.6	17.1	19.7	23.2	26.0
20 min	11.3	12.5	16.5	19.3	22.2	26.1	29.3
25 min	12.4	13.7	18.0	21.1	24.2	28.5	32.0
30 min	13.3	14.7	19.3	22.6	25.9	30.5	34.2
45 min	15.6	17.1	22.4	26.1	30.0	35.4	39.8
1 hour	17.4	19.1	24.8	28.9	33.2	39.3	44.3
1.5 hour	20.2	22.1	28.6	33.4	38.4	45.7	51.7
2 hour	22.5	24.5	31.6	37.0	42.7	51.0	58.0
3 hour	26.1	28.5	36.6	42.9	49.7	59.8	68.4
4.5 hour	30.3	33.0	42.5	50.0	58.1	70.3	81.0
6 hour	33.7	36.7	47.3	55.7	64.9	78.9	91.1
9 hour	39.0	42.5	54.9	64.7	75.5	92.1	107
12 hour	43.1	47.0	60.8	71.7	83.8	102	118
18 hour	49.5	54.0	70.0	82.4	95.9	116	134
24 hour	54.3	59.4	76.9	90.3	105	126	144
30 hour	58.3	63.8	82.5	96.5	111	133	152
36 hour	61.8	67.6	87.3	102	117	139	157
48 hour	67.5	74.0	95.2	110	125	148	165
72 hour	76.8	84.3	107	123	138	160	177
96 hour	84.8	93.0	118	134	150	172	188
120 hour	92.2	101	128	145	161	184	201
144 hour	99.5	109	137	156	173	198	216
168 hour	107	117	147	167	186	213	234

Note:
The 50% AEP IFD **does not** correspond to the 2 year Average Recurrence Interval (ARI) IFD. Rather it corresponds to the 1.44 ARI.
* The 20% AEP IFD **does not** correspond to the 5 year Average Recurrence Interval (ARI) IFD. Rather it corresponds to the 4.48 ARI.

Table 2.1 Rainfall Intensity for Kelmscott

2.2 Physiography

2.2.1 Topography

The project area is situated on an alluvial plain immediately east of the Canning River. The land slopes generally west towards the Canning River, with slightly higher ground in the north-east and slightly lower in the south-west. The slope increases markedly on the western edge of the project area, where the land falls away into the Canning River floodway. Figure 3 shows topographic contours over the site.

2.2.2 Geology, Landforms and Soils

The development area is located immediately to the east of the Darling Fault, mostly on colluvium formed by erosion of material from the Darling Scarp. The Geological Survey of Western Australia (Jordan, 1986) mapped about two thirds of the site, mostly in the north-east, as colluvial gravelly sandy clay (Qc/Csg). The margins of the Canning River were mapped as alluvial clayey sandy silt (Qha/Msc_1), which also extends from the central west across to the south-east. A very small area of Yoganup Formation structureless yellow sand (Qpr/S12) occurs on the north-eastern edge of the site. Figure 3 shows the GSWA mapping.

Drilling of four boreholes across the site (Figure 3) revealed silty and clayey soil profiles that agreed well with the GSWA mapping. Borehole logs from the drilling are attached in Appendix A.

2.2.3 Soil Permeability

Constant-head permeability tests were carried out at 0.5m depth at seven sites (Figure 3) in March 2015. The tests were conducted in accordance with Australian Standard AS1547:2000. The results of the permeability tests are detailed in Appendix B and summarised in Table 2.2.

Table 2.2 Soil Permeability Test Results

Test Location (see Figure 3)	*Saturated Hydraulic Conductivity Ks (m/day)*
CI1a	265
CI1b	0.3
CI2	0.8
CI3	3
CI4	1.2
CI5	0.1
CI6	1.5

Table 2.2 shows that the surface soils mostly have low to very low permeability, as is typical of silty clay soils. The very high permeability in CI1a is a result of voids (possibly old root channels) in the clay at about 0.5m depth, which were visible in the test hole.

Of the rest, the highest permeabilities (CI3, CI4 and CI6) were in the west of the site, in the area of the proposed bioretention basins.

Overall, it appears that infiltration into the natural soils will be poor and that bioretention basins will need to be engineered with imported permeable soils underlain by subsoil drains. For design purposes, the permeability of the natural soils is assumed to be zero.

2.2.4 Acid Sulphate Soils

The Department of Biodiversity, Conservation and Attractions (DBCA) maps the floodway of the Canning River and part of the south-west of the project area as having a High risk of actual or potential acid sulphate soils (ASS). The remainder of the project area is mapped as low to Nil ASS risk. Figure 3 shows the DBCA ASS mapping.

Analysis of groundwater samples collected from three bores shown on Figure 3 (one, CB3, was dry to 8.6m) showed no significant evidence of ASS, with low acidity, high alkalinity, low sulphate, neutral pH and low heavy metal concentrations. Nevertheless, soil sampling for ASS will be required prior to any significant excavation or dewatering in the areas mapped as high ASS risk. Depending upon the results of the soil testing, groundwater abstracted during dewatering may need to be monitored and/or treated before discharge.

2.2.5 Phosphorus Retention Index

Soil samples were taken from a depth of 0.5m in infiltration test holes and at 1m in some boreholes (Figure 3) and analysed for phosphorus retention index (PRI).

PRI is a measure of the ability of a soil to adsorb and retain phosphorus from solution. A high PRI indicates that a soil is unlikely to leach phosphorus to the water table. Typical ranges for PRI values in soils are as follows:

PRI Range	*Rating*	*Typical soils*
0 – 0.5	Very Low	Bassendean Sand
2 – 4	Low – Moderate	Karrakatta Sands
5 – 12	Moderate – High	Cottesloe Sands
12 – 20	High	Crushed Limestone, Limesand
20 – 1000+	Very High	Clay

The DWER advocates a minimum PRI of 15 for soils beneath bioretention basins.

Table 2.3 shows the PRI values obtained from the on-site samples. The values are all very high. In practical terms, these high PRI values will be of little significance due to the very low permeability of the soils, which will prevent their being used as the base for bioretention basins. Materials imported for lining the basins will at least meet the DWER's preferred minimum PRI of 15.

Table 2.3 Soil PRI Results

Sample Location (see Figure 3)	*Phosphorus Retention Index (PRI)*
CB1	719.5
CB2	439.5
CB3	328.4
CB4	41.1
CI3	1149.4
CI4	219.2
CI5	164.3
CI6	53.8

2.3 Hydrology

2.3.1 Surface Drainage

The low-permeability soils of the project area mean that most drainage is by surface runoff. The higher parts of the project area, furthest from the Canning River, are generally well drained. Some areas closer to the river, including the central south of Lot 12 Clifton St, are subject to seepage and saturation.

One constructed drainage line flows along the southern boundary of Lot 12 Clifton St and then across the western part of the lot, carrying street drainage from Clifton St into the river via a combination of underground pipe and open channel flow. Runoff from private lots within the project area currently flows overland to the river.

Appendix C gives details of pre-development catchments and flows.

The major surface drainage feature of the project area is the Canning River and its floodplain, which forms the western boundary of the development area. Figure 3 shows the alignment of the river and the boundaries of its 100-year floodway and flood fringe. No development of lots is proposed within the floodway or flood fringe.

The Canning River and its immediate foreshore are covered by a Development Control Area (DCA) under the *Swan and Canning Rivers Management Act 2006*. The DCA forms the western boundary but does not cover any part of the structure plan area.

2.3.2 Groundwater

Groundwater Occurrence and Flows

Groundwater exists in the clay soils beneath the project area and flows west towards the river at a gradient of about 1:100. Given the low soil permeability, the rate of groundwater movement through the clay soils would be very low; probably about 10mm/day, although voids such as that encountered in infiltration test site 1a could produce much more rapid flows in localised areas.

Depths to groundwater have been measured in March 2015, September 2015 and August 2017. The minimum measured depths (September 2015) ranged from 3.48m to 7.41m. Table 2.4 shows the measured groundwater depths and levels.

Table 2.4 Groundwater Levels

Bore (see Figure 3)	*Bore Measurements 2015 – 2017*					
	Water Depth (mbgl)			*Water Level (mAHD)*		
	10/3/2015	*29/9/2015*	*30/8/2017*	*10/3/2015*	*29/9/2015*	*30/8/2017*
CB1	7.27	7.02	7.32	14.43	14.68	14.38
CB2	7.24	6.95	7.24	13.66	13.95	13.66
CB3	>8.58 (dry)	7.41	7.47	<13.52	14.69	14.63
CB4	4.09	3.48	3.97	14.41	15.02	14.53

Water Resources
The project area is not within any proclaimed groundwater area and groundwater abstraction is not currently subject to licensing by the DWER.

Most existing landowners within the project area have river frontage and have historically drawn water for irrigation direct from the river. This access will cease when the lots are subdivided and the foreshore is ceded as Regional Open Space.

The City of Armadale has irrigation bores in POS in Clifton Street about 500m south of the development area, which abstract water from deeper sand layers within the superficial aquifer. It is likely that similar resources will be available in the Clifton St North precinct, although exploratory drilling will be required to confirm this.

2.3.3 Wetlands

The DBCA Geomorphic Wetlands Database maps most of Lot 1 and part of Lot 12 Clifton St as a Multiple Use Category Palusplain.

The DBCA also maps the watercourse of the Canning River as Conservation Category River and Palusplain. Because it is a waterway, foreshore setbacks to the river are determined by the WAPC and DWER with reference to Development Control Policy DC3.1 and River Restoration 16 rather than by the DBCA. Figure 3 shows the DBCA wetland mapping.

2.4 Water Quality

Water samples have been collected on three occasions in March and September 2015 and August 2017 from the onsite bores as well as the Canning River upstream and downstream of the project area. Figure 3 shows the sampling locations; Table 2.5 shows the water analysis results.

Table 2.5 Water Quality 2015-2017
(see Figure 3 for sample locations)

Parameter (all units mg/L unless stated otherwise)	*Guide-line*	***March 2015***					
		CB1	*CB2*	*CB3 no sample (dry)*	*CB4*	*CUS*	*CDS*
Nutrients							
Total Nitrogen	1.2[2]	0.6	0.7		0.3	0.2	0.3
NO_X	0.15[2]	<0.01	<0.01		<0.01	<0.01	0.02
Total Kjeldahl Nitrogen	ng	0.6	0.7		0.3	0.2	0.3
Total Phosphorus	0.065[2]	**0.56**	**1.2**		**0.37**	0.03	0.01
Reactive Phosphorus	0.04[2]	<0.01	**0.08**		**0.08**	0.02	<0.01
Physico-chemical							
pH (no units)	6.5-8.0[2]	**8.3**	7.8		7.7	**8.2**	**8.1**
Conductivity (mS/cm)	.12-.30[2]	**2.6**	**3.2**		**1.7**	**0.56**	**0.57**
Salinity[1]	72-180	**1560**	**1920**		**1020**	**336**	**342**
Acidity (as $CaCO_3$)	40[3]	<5	7		19	<5	<5
Alkalinity (as $CaCO_3$)	ng	400	220		520	61	61
Acidity:Alkalinity Ratio	1[3]	<0.01	0.03		0.04	<0.08	<0.08
Total Suspended Solids	ng	390	1200		53	<5	<5
Hardness	60-350[4]	65	133		117	64	68
Ions							
Sulphate	ng	180	180		110	17	15
Chloride	350[4]	**490**	**780**		250	110	110
SO_4:Cl Ratio	0.53	0.37	0.23		0.44	0.15	0.14
Metals							
Aluminium	1[3]	0.3	**1.6**		<0.1	<0.1	<0.1
Arsenic (III & V)	0.136[2]	<0.002	<0.002		<0.002	<0.002	<0.002
Cadmium	0.0004[2]	<0.002	<0.002		<0.002	<0.002	<0.002
Calcium	ng	10	22		17	15	16
Chromium (VI)	0.006[2]	<0.002	<0.002		<0.002	<0.002	<0.002
Copper	0.0018[2]	<0.01	<0.01		<0.01	<0.01	<0.01
Iron	10[4]	0.18	0.29		0.17	0.05	0.07
Lead	0.0056[2]	<0.01	<0.01		<0.01	<0.01	<0.01
Magnesium	ng	9.8	19		18	6.5	6.8
Mercury	0.0019[2]	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002
Nickel	0.0013[2]	<0.01	<0.01		<0.01	<0.01	<0.01
Potassium	ng	16	15		6	3	3
Sodium	230[4]	**560**	**580**		**350**	76	78
Zinc	0.015[2]	<0.01	<0.01		<0.01	<0.01	<0.01

1. Calculated as 600 x recorded electrical conductivity (mS/cm).
2. ANZECC (2000) Aquatic Ecosystem trigger values (Nutrient, pH and Conductivity are for lowland rivers; Dissolved Metals trigger values are for freshwater ecosystems (90% species protection)).
3. DEC (20__) oxidation indicator triggers for ASS–affected groundwater.
4. ANZECC (2000) Irrigation trigger values (long-term irrigation up to 100 years).

Table 2.5 (cont.) Water Quality 2015-2017
(see Figure 3 for sample locations)

Parameter (all units mg/L unless stated otherwise)	*Guide-line*	***September 2015***					
		CB1	*CB2*	*CB3*	*CB4*	*CUS*	*CDS*
Nutrients							
Total Nitrogen	1.2[2]	0.9	0.8	0.5	0.6	0.5	0.5
NO_X	0.15[2]	0.02	0.04	0.13	0.01	**0.21**	**0.2**
Total Kjeldahl Nitrogen	ng	0.9	0.8	0.3	0.6	0.3	0.2
Total Phosphorus	0.065[2]	**1.7**	**0.49**	**0.12**	**0.93**	0.03	0.06
Reactive Phosphorus	0.04[2]	**0.06**	**0.04**	**0.05**	0.03	<0.01	<0.01
Physico-chemical							
pH (no units)	6.5-8.0[2]	7.5	7	7	6.7	7.2	7.3
Conductivity (mS/cm)	.12-.30[2]	**2.4**	**5.2**	**11**	**1.9**	**0.67**	**0.68**
Salinity[1]	72-180	**1440**	**3120**	**6600**	**1140**	**402**	**408**
Acidity (as $CaCO_3$)	40[3]	23	35	**65**	**170**	5	<5
Alkalinity (as $CaCO_3$)	ng	330	250	120	480	60	57
Acidity:Alkalinity Ratio	1[3]	0.07	0.14	0.54	0.35	0.08	<0.09
Total Suspended Solids	ng	760	80	10	410	<5	<5
Hardness	60-350[4]	62	250	**1100**	150	89	89
Ions							
Sulphate	ng	180	250	550	150	35	35
Chloride	350[4]	**410**	**1600**	**3900**	280	140	150
SO_4:Cl Ratio	0.53	0.44	0.16	0.14	**0.54**	0.25	0.23
Metals							
Aluminium	1[3]	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (III & V)	0.136[2]	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cadmium	0.0004[2]	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Calcium	ng	9.7	42	180	23	16	16
Chromium (VI)	0.006[2]	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Copper	0.0018[2]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Iron	10[4]	0.02	0.2	<0.01	0.09	0.41	0.39
Lead	0.0056[2]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium	ng	9.1	36	160	23	12	12
Mercury	0.0019[2]	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel	0.0013[2]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium	ng	16	28	67	6.6	2.9	3.1
Sodium	230[4]	**630**	**1000**	**2300**	**580**	110	97
Zinc	0.015[2]	<0.01	<0.01	<0.01	**0.02**	<0.01	<0.01

1. Calculated as 600 x recorded electrical conductivity (mS/cm).
2. ANZECC (2000) Aquatic Ecosystem trigger values (Nutrient, pH and Conductivity are for lowland rivers; Dissolved Metals trigger values are for freshwater ecosystems (90% species protection)).
3. DEC (20__) oxidation indicator triggers for ASS–affected groundwater.
4. ANZECC (2000) Irrigation trigger values (long-term irrigation up to 100 years).

Table 2.5 (cont.) Water Quality 2015-2017
(see Figure 3 for sample locations)

Parameter (all units mg/L unless stated otherwise)	*Guide-line*	***August 2017***					
		CB1	*CB2*	*CB3 no sample (dry)*	*CB4*	*CUS*	*CDS*
Nutrients							
Total Nitrogen	1.2[2]	**15**	0.5	**1.7**	0.4	0.5	0.5
NO_X	0.15[2]	<0.01	0.01	<0.01	<0.01	**0.5**	**0.51**
Total Kjeldahl Nitrogen	ng	15	0.5	1.7	0.4	<0.2	<0.2
Total Phosphorus	0.065[2]	**2.7**	**0.43**	**0.17**	**0.37**	0.05	0.06
Reactive Phosphorus	0.04[2]	**0.38**	0.02	**0.07**	0.02	<0.01	<0.01
Physico-chemical							
pH (no units)	6.5-8.0[2]	7.6	7	7.3	6.7	7.3	7.3
Conductivity (mS/cm)	.12-.30[2]	**3.1**	**6.1**	**8.2**	**2.5**	**0.64**	**0.64**
Salinity[1]	72-180	**1860**	**3660**	**4920**	**1500**	**384**	**384**
Acidity (as $CaCO_3$)	40[3]	35	32	25	**87**	<5	<5
Alkalinity (as $CaCO_3$)	ng	800	270	350	440	43	43
Acidity:Alkalinity Ratio	1[3]	0.04	0.12	0.07	0.20	<0.12	<0.12
Total Suspended Solids	ng	-	-	-	-	<5	<5
Hardness	60-350[4]	86	256	**515**	141	76	76
Ions							
Sulphate	ng	160	200	300	99	31	31
Chloride	350[4]	**360**	**1500**	**2100**	300	130	130
SO_4:Cl Ratio	0.53	0.44	0.13	0.14	0.33	0.24	0.24
Metals							
Aluminium	1[3]	0.22	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic (III & V)	0.136[2]	<0.002	<0.003	<0.004	<0.005	<0.006	<0.007
Cadmium	0.0004[2]	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Calcium	ng	18	45	89	22	14	14
Chromium (VI)	0.006[2]	<0.002	<0.002	<0.002	0.002	<0.002	<0.002
Copper	0.0018[2]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Iron	10[4]	2.5	0.01	<0.01	0.08	0.28	0.26
Lead	0.0056[2]	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium	ng	10	35	71	21	9.9	10
Mercury	0.0019[2]	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel	0.0013[2]	**0.06**	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium	ng	62	38	58	7.5	3.1	3.2
Sodium	230[4]	**640**	120	160	52	80	10
Zinc	0.015[2]	**0.5**	<0.01	**0.02**	<0.01	<0.01	<0.01

1. Calculated as 600 x recorded electrical conductivity (mS/cm).
2. ANZECC (2000) Aquatic Ecosystem trigger values (Nutrient, pH and Conductivity are for lowland rivers; Dissolved Metals trigger values are for freshwater ecosystems (90% species protection)).
3. DEC (20__) oxidation indicator triggers for ASS–affected groundwater.
4. ANZECC (2000) Irrigation trigger values (long-term irrigation up to 100 years).

The results in Table 2.5 show that the water quality is generally good across the site, with slightly elevated levels of conductivity and salinity. The concentrations of total and/or reactive phosphorus are above the ANZECC freshwater ecosystem guideline in the bores but below the guideline in the river. The levels of metals and acid sulphate soil indicators are generally low.

2.5 Vegetation

The development area is largely cleared of native vegetation. On the western side, on the edge of the floodway, are a number of mature Flooded Gums (*Eucalyptus rudis*). More Flooded Gums occur in the floodway and the river channel. These areas and their native vegetation will be protected within the foreshore reserve and local POS following the redevelopment of the site.

Over the rest of the development area the cover consists mainly of introduced trees (including exotics and non-local natives) and grasses.

The large Flooded Gums in the floodway may contain hollows suitable for nesting of birds, although none were observed during the site surveys.

No Threatened Ecological Communities or Declared Rare or Priority listed flora were found during the site surveys.

The waterway and parts of the floodplain of the Canning River are within Bush Forever Site 246: “Southern Rivers, Beckenham to Martin/Kelmscott”. The Bush Forever site is entirely contained within the foreshore reserve and local POS. Figure 3 shows the boundary of the Bush Forever site in the project area.

2.6 Land Uses and Potential Contamination

Historical Landgate aerial photography of the project area (Figure 4) shows no evidence of contamination or contaminating land uses since at least 1953, the date of the earliest photography. The land does not appear to have been used for market gardening, intensive animal stocking or industry at any time. A small orchard has been present on Lot 1 since before 1995 but its small size (less than 1,500m^2) means that significant contamination is unlikely.

The site inspection by Bayley Environmental Services in March 2015 found no visual or olfactory evidence of past or present contamination. Current land uses consist of occupied and unoccupied dwellings and sheds.

The DER Contaminated Sites Database shows no known contaminated sites on or near the project area. It is concluded that no further investigation of contamination is necessary.

3.0 WATER USE SUSTAINABILITY

3.1 Water Efficiency Measures

3.1.1 Public Open Space

Waterwise Landscaping
Waterwise landscaping will be applied to the POS and other public areas to reduce irrigation requirements. Section 6.0 sets out the landscaping principles to be adopted.

Measures to be adopted include the following:

- Street trees will be watered by tanker for the first two summers after establishment. Thereafter they will be unirrigated.

- Landscape plantings (including POS, road verges and swales) will be irrigated for the first two summers after establishment by tanker (where accessible) or tricklers. Short-term trickle irrigation may be supplied from scheme water or a bore. After two summers the irrigation will cease, although trickler lines will remain in place and available for use if replacement plantings are required for any reason.

- All landscaping within the POS will employ waterwise native plants that do not require ongoing irrigation. Irrigated turf within POS will be limited to central amenity areas.

- Passive open space will be planted with drought-resistant local native species suited to the prevailing site conditions.

- Irrigation will be by means of large droplet emitters or trickle irrigation where applicable.

- Irrigation will be scheduled to encourage deep root growth during plant establishment, with application intervals progressively extended and eventually discontinued.

- Garden beds and landscaped areas will be mulched to minimise water loss.

- Soil wetting agents will be used as appropriate to maximise water penetration and reduce overall irrigation demand. Wetting agents will not be used in situations where they could be washed into the Canning River.

- Plantings will be kept dense and compact, as these areas are more efficient to irrigate than dispersed plantings.

- Groundwater for ongoing POS irrigation will be sourced from one or more bores to be installed within POS in the LSP area. The location, depth and abstraction rates of these bores have yet to be determined.

3.1.2 Domestic Use

5 Star Plus Building Standards
In accordance with the amended *Building Regulations 1989*, new homes within the development will incorporate the following features:

- Minimum 4 stars WELS rated tap fittings, except bath outlets and garden taps.
- Minimum 3 stars WELS rated shower heads.
- Minimum 4 stars WELS rated dual-flush toilets.
- Covers on all private swimming pools.
- All internal hot water pipes installed and insulated in accordance with AS 3500:2003.
- Maximum run of pipe from hot water system to outlet will not exceed 20 metres length or 2 litres internal volume.

Rainwater Harvesting
The developers will provide information and/or incentives for lot purchasers to install rainwater tanks.

Waterwise Landscaping
The developers will provide information packs, consisting of brochures and other information published by the Water Corporation and other agencies, to lot purchasers advising them of waterwise garden strategies including soil management, mulching, plant species selection, irrigation and fertilisation. Ultimately, the developer can influence but not control individual lot owners' decisions on these matters.

Where front landscaping packages are provided, street trees will be planted during the landscaping works. In the absence of front landscaping packages, street trees will be planted after a majority of buildings have been constructed so as to minimise the risk of damage to the trees by construction vehicles.

3.2 Wastewater Management

All lots in the precinct will be deep-sewered. Greywater recycling may be implemented by individual lot owners. Any person wishing to install a greywater reuse system must lodge an Application to Construct or Install an Apparatus for the Treatment of Sewage with the City of Armadale.

4.0 STORMWATER MANAGEMENT

4.1 Principles and Objectives

The stormwater management strategy aims to comply with the principles and objectives for stormwater management identified in the *Stormwater Management Manual for WA* (DoW, 2004) and *Better Urban Water Management* (WAPC, 2008).

Nutrient concentrations and loads in water leaving the site will be managed to comply with the targets of the draft *Swan Canning Water Quality Improvement Plan* (SRT, 2009), as follows:

- Winter median TP concentration: 0.1 mg/L
- Winter median TN concentration: 1.0 mg/L
- Annual TP yield: 0.013 kg/ha
- Annual TN yield: 0.2 kg/ha.

4.2 Design Criteria

Table 4.1 summarises the design criteria applying to the subject land, drawn from the DoW's *Developing a Local Water Management Strategy* (2008) and the *Canning River Precinct Environmental Review* (Enviroworks, 2009), and indicates how these criteria will be met in the development.

Table 4.1 Design Criteria

Objective	*Source*	*Criterion*	*Strategy*
Potable water use	DoW (2008)	Minimise ex-house use. Target <100 KL/pp/yr water use 40-60 KL/pp/yr scheme water use.	Perth Residential Water Use Study (Water Corp, 2009) estimated average 56 KL/pp/yr in-house, 46 KL/pp/yr ex-house. Small lots, multiple/group dwellings will minimise ex-house (e.g. irrigation) use.
Water quantity	DoW (2008)	Post-development discharge same as pre-development	1 yr, 5 yr and 100 yr peak discharge will be the same after development (see Sections 4.3-4.5, Appendix D).
Maintain post-development surface and ground water quality at or above pre-development	DoW (2008)	Manage contaminated sites.	No soil contamination is believed to be present.
		Treat drainage as per Stormwater Management Manual for WA.	See drainage description Sections 4.3 - 4.5.
		Swales should equal 2% of impervious catchment area	See Appendix D.
		Treat subsoil drainage.	No subsoil drainage is currently proposed. If required, SSD will be drained to detention basins.
Insect minimisation	DoW (2008)	Drainage basins hold water for <96 hours between November and May	1-yr ARI rain gardens will drain within 2 hrs. 100-yr ARI detention basins will drain within 6 hrs. See Section 4.4, Appendix D.
Drainage design	Enviroworks (2009)	Minimise additional flood risk in the Canning River	Peak runoff from the development site in up to 100 year ARI storms will be unchanged (see Section 4.3).
		Maintain or improve water quality of drainage to the Canning River	Runoff up to 1 year ARI will be infiltrated, capturing over 98% of total flows (Section 4.3).
		Minimise pollutant generation, disconnect drainage, treat runoff	As above. All ground surface runoff captured and treated by infiltration or detention. Clean roof runoff will be detained (option to bypass directly to river).
		Soil amendment of lawns and gardens	Soil amendment is not necessary as the clay soils already have a very high phosphorus retention index (PRI).
Best Management Practices	Enviroworks (2009)	Rainwater harvesting	Information and/or incentives will be provided to purchasers regarding purchasing
		Infiltration	See Section 4.4.
		Pervious paving	Not feasible due to clay soils.
		Gross pollutant traps (GPTs)	Not required due to small catchment size.
		Swales	Potential to be examined at detailed design (UWMP) stage.
		Bioretention	Incorporated in bioretention and detention basins.

		Revegetation	Proposed in POS and foreshore reserve.
		Living streams	Proposed for detention basin overflows.
		Constructed wetlands	Not proposed.
		Detention and retention	See Sections 4.3 – 4.5, Appendix D.
Monitoring	Enviroworks (2009)	Pre-development	Groundwater depth and quality March and September 2015, August 2017..
		Post-development	Each developer to monitor for 2 years after completion of subdivision.

4.3 Drainage Management System

The drainage system will maintain surface flow rates and volumes within and from the developed site at or below their pre-development levels, unless further investigation shows that increasing flows to the Canning River is desirable.. The drainage design presented here is conceptual and will be refined during the detailed subdivision design and reported in the UWMP for that stage. Details of the drainage system including drainage layouts, basin sizing and event plans are given in Appendix C.

The drainage design of the subject land is constrained by a number of factors including:

- the presence of low-permeability silty clay soils, which make dispersed local infiltration difficult or impractical;
- the design of the development, which aims (in line with State and local government policy for city centre areas) for increased development density, including smaller lots and narrower road reserves; and
- the presence of the Canning River and its floodplain on the edge of the development.

The preliminary drainage design described in this LWMS is intended as a proof of concept to demonstrate that the site can be effectively drained. The system described here is essentially a traditional “pit and pipe” system, with runoff conveyed by pipes to bioretention and detention basins located in the foreshore POS. The drainage calculations and diagrams (e.g. Section 4.4, Figures 5-7, Appendix C) are based on this preliminary design.

The calculations show that the preliminary design is capable of effectively draining the site and managing flow rates and volumes to match the pre-development hydrology. Furthermore, by infiltrating all runoff from up to the 1-year ARI 1-hour storm in bioretention basins, the system can intercept and remove virtually all sediment and other pollutants including metals, hydrocarbons and nutrients (particularly phosphorus) from the runoff before it reaches the river.

A number of alternative designs exist that have the potential to reduce the reliance on piped drainage. These include:

- replacement of some or all piped drainage and/or bioretention basins with vegetated swales in medians or road verges;
- increased in-lot storage of roof runoff; and
- increasing flow rates to the Canning River.

These alternatives were considered during the preliminary drainage design phase but were found to be constrained by the site characteristics. They will require further examination during the detailed design of each stage of subdivision before they can be considered for adoption in place of, or as well as, the preliminary design.

The potential advantages and disadvantages of each of these alternatives are summarised in Table 4.2.

Table 4.2 Drainage Alternatives

Option	*Advantages*	*Disadvantages*
Local Infiltration in median swales	At-source infiltration. Reduced pipe drainage. Reduced flows in small storms.	No medians available in internal roads. No infiltration in natural soils, requiring engineered swales with extensive subsoil drainage.
Local infiltration in verge swales	At-source infiltration. Reduced pipe drainage. Reduced flows in small storms.	Verges with lot frontages require frequent culverted crossovers. Landowners may fill or obstruct swales. Increased maintenance burden for Council.
Conveyance in non-frontage verge swales	Reduced pipe drainage. Reduced flow rates in small storms.	Constrained by road reserve widths and underground services. Increased maintenance burden for Council. Further investigation required.
In-lot detention of roof runoff	Reduced flow rates (not volumes) to street drainage.	No infiltration available on most lots – detention only. Increased cost and complexity of lot development. Only practical where pipe drainage connection is available.
Increased flow rates to Canning River	Increased flows in Canning River from small storms. Possible reduction in size of detention basins.	No increase in flow volume to Canning River, only rate. Increased risk of erosion/scouring in overflows and river. Further investigation required to assess impact on river bed and flood levels.
Direct roof connection to overflow to river	Increased flows of clean water to river from small storms. Possible reduction in size of detention basins.	Separate dedicated pipe network required. Increased cost and complexity of development. Potential direct path for pollutants to river if misused (e.g. chemical disposal into downpipes).

The redevelopment of the project area for housing at R40 or higher density will decrease the overall permeability of the site and give rise to higher local runoff rates and volumes. The silty clay soils that underlie the development area will limit the potential for local infiltration. For this reason, soakwells are unlikely to be feasible for capturing roof runoff on most private lots. Some parts of the site may be filled (or excavated and backfilled) with sand, depending upon the site classification desired by individual developers. In these areas, soakwells may be practical for capturing roof runoff. For design and sizing purposes (see below), it has been assumed that no soakwells will be used. However, as noted in Table 4.2, the option exists to employ in-lot detention as a means of reducing flow rates to the pipe drainage system.

Drainage Catchments

The site will be divided into four drainage catchments as shown on Figure 5. Catchment 2 will receive overflow from a 21.5ha catchment east of Clifton Street during storms in excess of 5-year ARI. Table 4.3 shows permissible catchment outflow rates to the Canning River, based on pre-development flows. The detention basins have been sized to limit flows to the rates shown in Table 4.3

Table 4.3 Permitted Catchment Outflows

Catchment	*Contributing Lots*	*Permitted Outflow (L/s)*	
		5 yr	*100 yr*
1	12 Brookside	18	42
2	11 Brookside, 11 Clifton, External	57	1,547
3	12 Clifton	34	95
4	1 Clifton	44	122
External	External	62	176
Total		215	1982

Private Lot Runoff

Runoff from building roofs will be conveyed via a dedicated pipe system with inlet points on each lot, discharging to detention basins located on the western side of each catchment (Figure 5) and overflowing into the Canning River. Roof runoff is expected to constitute up to 90% of the total runoff from lots. Runoff from paths, driveways and other paved areas within lots will be partly captured by garden beds and lawns, with larger flows overflowing into the road drainage system.

Road Runoff

Runoff from the roads and excess runoff from lots will be captured by the piped low-flow drainage system and infiltrated in bioretention/detention basins located in POS reserves on the western side of the development area (Figure 5). The bioretention basins will be sized to contain and infiltrate the runoff from the first 15mm of each rainfall event (roughly equivalent to a 1-year ARI 1-hour event), in line with DWER recommendations.

Figure 5 shows the preliminary drainage design based on piped conveyance of small flows to infiltration/detention basins in the POS. Alternative designs will be examined during the detailed design of each stage of subdivision.

Runoff in excess of the 1-year 1-hour storm will travel via the piped minor flow system (up to 5-year ARI) or by a combination of piped and pavement flow (5-year to 100-year ARI) into detention basins surrounding the 1-year bioretention basins (Figure 5). From these basins, the water will be released at a controlled rate (not exceeding the pre-existing peak flow rate) into the Canning River.

The capture and infiltration of 1-year ARI road runoff will tend to reduce the overall rate and volume of discharge from the site in small storms. This will be balanced by the bypassing of roof runoff, so that the overall discharge rate and volume from the site in small storms will be similar after development. This will be confirmed by detailed calculations at the subdivision design stage, with modifications made to the system if necessary to maintain the off-site flows at pre-development levels.

4.4 Basin Locations

The development plan has been configured to provide all but one of the existing lots with their own catchment and bioretention basin, so as to allow each lot to be subdivided and developed independently of the other lots. The exception is Lot 11 Brookside Avenue, which ultimately will drain into the basin on Lot 11 Clifton Street but in the short term may be served if necessary by a temporary basin within its own boundary.

The bioretention and detention basins will be located in Public Open Space on the western side of the development area. With the exception of Catchment 3, each basin will comprise a central 1-year ARI bioretention basin surrounded by a 5 – 100 year ARI detention basin.

The basins for Catchment 3 will be separated into three: a 1-year ARI bioretention basin located in cleared POS adjacent to a road reserve and two 100-year ARI detention basins located in the vegetated POS, part of Bush Forever Site 246.

The detention basins in Catchment 3 have been located so as to maximise the efficiency of land use in the development area while protecting all existing trees within the Bush Forever area. The location and layout of the basins has been discussed on site with officers of the DBCA and WAPC. Proposed measures to ensure protection of the existing trees in the Bush Forever area are set out in Section 7.2. Figure 6 shows the layout of the basins in Catchment 3.

4.5 Basin Sizing and Design

The bioretention basins will be sized to fully retain and infiltrate the runoff from storm events up to 1-year ARI, 1-hour duration, as recommended by the Department of Water (2004). This will ensure that approximately 99.5% of the total runoff from the site is captured and treated to remove entrained contaminants.

Runoff from larger storms up to 100-year ARI will be detained in the basins and either infiltrated or progressively released via overflow structures that limit the outflow to the pre-development rate. Inflow to Basin 2 from external catchments in greater than 5-year ARI storms (Section 4.3) will not be detained.

Appendix C presents details of the preliminary sizing of bioretention and detention basins. Table 4.4 summarises the basin sizing in Catchments 1 to 4. The runoff calculations and basin dimensions given here are preliminary and will be refined in the detailed drainage design prepared before subdivision.

Table 4.4 Preliminary Basin Sizing

Basin (Figure 5)	*Catchment Area (ha)*	*Volume Stored (m^3)*			*Area Inundated (m^2)*		
		1 yr	*5 yr*	*100 yr*	*1 yr*	*5 yr*	*100 yr*
1	0.52	21	37	58	70	156	221
2	2.08	60	231	320	200	516	516
3	1.41	36	73.7	1	121	366	420
4	1.75	56	145	304	185	499	734

The bioretention basins will be engineered to ensure that they drain effectively while achieving high uptake of sediments, particulate contaminants and dissolved nutrients. The basins will be over-excavated approximately 0.6m into the natural soil then backfilled with an imported, permeable soil with a high phosphorus retention index (PRI). Suitable materials may include crushed laterite, limesand, crushed limestone or loam. The adsorptive material will be blended with topsoil if necessary to create a suitable growing medium for plants. The adsorptive layer will be underlain by a drainage layer such as crushed aggregate or gravel. Subsoil drains will be located within the drainage layer to capture infiltrating water and convey it to the discharge point. Figure 7 shows a conceptual profile of the bioretention basins.

The basins will be designed to be normally dry, with all captured water infiltrating or discharging within 96 hours in order to minimise the potential for insect breeding. The basins will be densely planted with native species including sedges and small shrubs to promote uptake of nitrogen from the water.

4.6 Water Quality Management

The drainage system site will be designed to maximise on-site retention of nitrogen, phosphorus and other stormwater contaminants. This will be achieved by infiltrating all runoff from the ground surface from the first 15mm of rainfall in each storm (approximately a 1-year ARI 1-hour storm, comprising approximately 99% of total flows) in densely vegetated basins with a soil PRI of at least 15.

4.7 Maintenance

The drainage system has been designed to require minimal maintenance. The following may be required to ensure that the stormwater drainage system continues to function as designed:

- Regular cleaning of bubble-up pits, inlet pits and small culverts. More frequent (perhaps annual) cleaning may be required during the construction phase.

- Tending and maintenance of basins to remove trash, control weeds and encourage the growth of native species.

5.0 GROUNDWATER MANAGEMENT

5.1 Groundwater Levels

The proposed redevelopment will have no significant effect on groundwater levels beneath the project area. Given the existing depth to groundwater, subsoil drainage will not be required for building. Some short-term dewatering may be required for installation of underground services. If dewatering is required and is expected to exceed a rate of 10 litres/second, a total of 25,000 kilolitres or a duration of 30 days, the developer will apply to the DWER for an abstraction licence. Water produced by any dewatering operation will be held in a pond and used for dust suppression or infiltrated back into the ground as near as practical to the dewatering operation.

Landowners within the project area may install domestic bores for garden irrigation, although the density of the proposed development means that this is likely to be uncommon. Any domestic bores are likely to target deeper sand layers beneath the silty clay surface soils and are unlikely to have any effect on shallow groundwater levels.

No active management of groundwater levels by the City of Armadale is expected to be necessary, beyond monitoring of levels and yields in the POS irrigation bore(s).

5.2 Groundwater Quality

The bore sampling undertaken to date indicates that the groundwater beneath the site is generally of moderate to high quality, containing low to moderate concentrations of nitrogen, phosphorus and other contaminants.

The relationship between nutrient inputs and exports is complex, especially in the case of phosphorus, which travels through the soil profile as a “front” in a complex series of adsorption and desorption reactions. Nitrogen, also, is subject to denitrification and mineralisation in the soil and groundwater. As a result, nutrient exports from the site at present will be a reflection of nutrient inputs over the last several decades, modified by soil hydrology and nutrient retention capacity.

Development of the site is not expected to significantly change the quality of groundwater beneath the site. The main threats to water quality under urban development are lawn and garden fertilisers and road runoff. The contaminant of main concern is phosphorus. The density of the proposed development means that lawn and garden areas, and hence fertiliser applications, will be limited. In addition, the very high PRI of the site soils means that any phosphorus in infiltrating water is unlikely to reach the water table.

The aim of nutrient management will be to limit nutrient inputs to the site so that nutrient exports are maintained at or below current levels. The primary source of groundwater-borne nutrients will be soluble garden fertilisers. With low-phosphorus garden fertilisers

being strongly promoted under the State government's Fertiliser Action Plan, most fertilisers now available in retail stores contain little or no phosphorus.

Measures available to minimise nutrient inputs and exports in the development will include:

- regular street sweeping to remove accumulated contaminants;
- selection of native species with low water and fertiliser requirements for public open space and landscaped areas;
- community education on waterwise gardening, fertiliser use and management of pet wastes; and
- modification of soils beneath bioretention basins to achieve a phosphorus retention index (PRI) of at least 15 along with efficient infiltration.

6.0 LANDSCAPE STRATEGY

Landscaping of public areas will focus on two areas:

- the Canning River foreshore reserve and adjacent POS; and
- street verges throughout the project area.

The river foreshore and adjacent POS will be rehabilitated and planted with native trees, shrubs and sedges that do not require ongoing irrigation beyond the initial establishment phase. The City of Armadale will maintain the landscaping following the ceding of the land to the Crown and after the initial developer maintenance periods.

The landscaping of the site will focus on the use of low water demand species. Irrigation of street trees will be limited to the first two summers after establishment. Irrigated turf will be limited to the central amenity areas of POS.

New plantings in the foreshore, adjacent POS and verge trees may, if necessary, be irrigated by tanker or temporary drip lines during the first two summers after establishment, although the clay soils of the site may make this irrigation unnecessary. If required, the water source for this irrigation may be the Water Corporation scheme or one of the existing City of Armadale bores in the project area. After two years this irrigation will cease but drip lines may be left in place in case needed for infill planting.

Fertiliser use in public areas will be minimal. Street trees will be fertilised with slow-release granular fertilisers on establishment and will thereafter not be fertilised. Irrigated turf will be fertilised with nitrogen and phosphorus on establishment and thereafter at a low rate with nitrogen alone. Phosphorus will only be applied if the turf shows signs of deficiency and only after soil or tissue testing.

Other water-saving landscaping to be adopted include the following:

- Irrigation will be by means of large droplet emitters or trickle irrigation where applicable.

- Irrigation will be scheduled to encourage deep root growth during plant establishment, with application intervals progressively extended and eventually discontinued.

- Garden beds and landscaped areas will be mulched to minimise water loss.

- Soil wetting agents may be used as appropriate to maximise water penetration and reduce overall irrigation demand. Wetting agents will not be used in situations where they could be washed into the Canning River.

- Plantings will be kept dense and compact, as these areas are more efficient to irrigate than dispersed plantings.

Further details of water and nutrient management will be provided in Landscape Concept Plans that will be prepared prior to subdivision. Details of rehabilitation and landscaping in the foreshore area will be provided in the Foreshore Management Plan that will be required prior to any subdivision. The City of Armadale will assume responsibility for the management of the foreshore area following the ceding of this land to the Crown and completion of the initial developer maintenance periods, and will liaise with relevant government agency and community stakeholders in respect to ongoing management.

7.0 SUBDIVISION WORKS

7.1 Construction Management Plan

Developers of land within the project area will implement a Construction Management Plan dealing with dust management, erosion and sediment control, containment of environmental hazardous materials (chiefly fuel and oils) and spill response. The key elements of the Construction Management Plan will include the following:

Dust Minimisation

- No topsoil stripping will be undertaken when the wind speed is greater than 25km/h.
- No earthworks will be undertaken when the wind speed is greater than 40km/h.
- Dust will be suppressed on open ground and stockpiles by regular watering, hydromulching, wind fencing and/or covering.
- An adequate supply of water for dust suppression will be kept on site at all times.
- Ground to be disturbed will be wet prior to soil disturbance.
- Soil stockpiles will be limited to a height of two metres to minimise dust generation and to facilitate watering.
- Other dust minimisation measures will include minimising areas of disturbance, limiting volume and speed of construction traffic, and instructing site workers in dust minimisation.

Erosion and Sedimentation

- Drains and bunds will be constructed as necessary to capture and direct all runoff from disturbed areas into settling ponds prior to discharge.
- Drains, bunds and ponds will be appropriately designed and sized.
- Vehicles and machinery will be kept to designated roads, tracks and work areas.

Water Conservation

- Water consumption during construction will be minimised by:
  - limiting dust suppression watering to prevent ponding and runoff
  - use of non-water dust control methods such as wind fencing and hydromulching.

Hazardous Materials

- All environmentally hazardous materials will be stored in their original labelled containers (or labelled jerrycans in the case of petroleum fuels) in a ventilated sea container equipped with appropriate signage, fire extinguishers and a spill response kit.
- Petroleum products will be held in a bunded enclosure.
- Material Safety Data Sheets (MSDS) and a chemical register for all hazardous materials on the site will be maintained by the site supervisor in the site office.

Complaints Register

- The site supervisor will maintain a record of any public complaints and the actions taken in response.

7.2 Tree Protection

Two detention basins in Catchment 3 are proposed to be located within a Bush Forever area close to the foreshore of the Canning River. The vegetation in this vicinity consists of mature Flooded Gum trees 5m to 15m tall, spaced 5m to 20m apart over an understorey of grass and weeds. The basins have been located to avoid damage to the root systems of the trees.

Sudmeyer (2002) measured roots of *Eucalyptus globulus* extending outwards up to twice the height of the trees (2.0xH), although most roots were within 1.5 times the tree height (1.5xH). Sudmeyer also found that surface roots pruned at a distance of 0.3xH grew back within two to four years, either by lateral extension of shallow roots or upward growth from deeper roots. This suggests that retained trees will redevelop a full surface root system over time provided that major damage is avoided within the inner root zone (0.3xH).

The largest Flooded Gum trees in the vicinity of the proposed basins reach about 15m in height, while the smallest trees are about 5m in height. The basins have been sited so that the outer edge of the batter (excavated or filled) is at least 5m from the base of the large trees and at least 2m from the bases of the smallest trees. The construction of the basins will be essentially a temporary disturbance, as the trees' roots will be able to grow back into the excavated surface of the basins.

The method of root pruning outside the root protection zone is important. Roots cut cleanly will tend to survive and regrow, while ripping with excavators or bulldozers will tend to leave mangled ends susceptible to infection, as well as causing root damage closer to the tree. Roots to be cut will be excavated and cut by hand-operated tools such as shovels, handsaws or chainsaws under the supervision of a qualified arborist.

The root protection zone will be clearly marked and fenced before the start of earthworks. Within the root protection zone, no vehicular or machinery traffic, parking, stockpiling of materials, fires, chemical storage or application, filling or excavation will be permitted. If any work is necessary within the root protection zone it will be minimal and performed using hand tools only.

To control weeds, the area within the root protection zone may be mulched with dry wood chips or bark chips. The mulch will be spread using hand tools only and will not contact the base of the tree.

8.0 MONITORING AND RESPONSE

8.1 Monitoring Programme

As the redevelopment of the project area is likely to undertaken by a number of landowners and/or developers over a number of years, a formal monitoring programme is inappropriate in this case. Instead, it is proposed that the parties to the redevelopment plan will monitor the groundwater and river for two years to establish a water quality baseline for the site. Thereafter, developers undertaking subdivision and development within the project area will conduct monitoring for two years after the completion of their developments.

The monitoring points will include or reflect those used for pre-development monitoring, as shown on Figure 3. Any bores that are lost or damaged during development works will be reinstalled or replaced.

Water monitoring will be carried out nominally twice each year in winter and spring, in accordance with the DoW (2012) *Monitoring Guidelines for Better Urban Water Management*. The monitoring parameters will include:

- Depth to water.
- Field parameters – temperature, pH, conductivity, salinity.
- Physical parameters – pH, TDS, TSS, hardness, acidity, alkalinity.
- Major ions – chloride, sulphate.
- Nutrients – Total P, FRP, Total N, TKN, NO_X.
- Metals – Al, As, Cd, Cr, Cu, Fe, Hg, Ni, Pb, Zn.

8.2 Criteria

The monitoring results will be compared with criteria based on the three rounds of pre-development monitoring and on ANZECC water quality standards. The criteria have been designed to ensure that the water quality within and downstream of the site will be as good after development as before. The criteria will be reviewed after each round of monitoring to confirm their applicability and to assess the need for any revision.

Bores

- Target
  - Median of bore values should not exceed the median of all pre-development bore values by more than 20%.
  - The median pH in the bores should be within 20% of the median of all pre-development bore values.
- Limit
  - No bore value should exceed twice the maximum of all pre-development bore values.

Canning River Downstream

- Target
  - Should not exceed the maximum of pre-development values for Canning River Downstream or Upstream, whichever is the higher, by more than 20%.
  - Should not exceed the value for Canning River Upstream on the same sampling occasion by more than 20%.
  - The pH in the Canning River Downstream should be within 20% of the median of all pre-development bore values and within 20% of the pH in the Canning River Upstream on the same sampling occasion.
- Limit
  - Should not exceed twice the maximum of pre-development values for Canning River Downstream or Upstream, whichever is the higher.

8.3 Contingency Response

The results of each round of water monitoring will be compared with the criteria. If any limit is breached, the developer will respond as follows:

1. Initially, resample to confirm that the breach was not due to sample contamination or natural variation.

2. Inform the City of Armadale.

3. Determine whether the breach is an isolated, project or regional occurrence.

4. Determine whether the breach is attributable to the development or to external factors.

5. Take appropriate contingency action(s) in consultation with the City of Armadale and the Department of Water. These may include:

   - Identify and remove any point sources of contamination.
   - Review operational and maintenance (e.g. fertiliser) practices.
   - Modify the stormwater system including enlarging or modifying infiltration swales.
   - Reinforce community education/awareness programs.

6. Record the breach and the action taken.

7. If necessary, inform residents of any required actions and their purpose.

8.4 Recording and Reporting

The developer will keep a record of the results of all monitoring, including any breaches of limits and actions taken. Any breaches and contingency actions will be reported immediately to the City of Armadale.

At the end of the post-development maintenance period, the developer will prepare a report to the City of Armadale containing all of the recorded data and records of any breaches of limits and contingency actions taken.

9.0 IMPLEMENTATION AND FURTHER MANAGEMENT PLANS

Structure planning and subdivision of lots within the Clifton Street North Precinct will be carried out in accordance with the general water management principles set out in this LWMS.

An Urban Water Management Plan (UWMP) will be prepared for each stage of subdivision within the precinct. The UWMP will present the detailed design of the stormwater drainage system for each development.

Each developer will maintain the drainage system, landscaped areas and water monitoring program until two years after their subdivision is completed. At the end of that time the responsibility for monitoring and management will pass to the City of Armadale, subject to the City's acceptance of the works.

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Figures



LOCAL STRUCTURE PLAN

Clifton Street North Precinct, KELMSCOTT

Harley Dykstra
PLANNING & SURVEY SOLUTIONS

Plan No.	20233-09
Date	12/04/22
Drawn	NP
Checked	CP
Revision	E
Scale	1:1500@A3

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NOTE: This plan has been prepared for planning purposes. Areas, Contours and Dimensions shown are subject to survey

Figure 1

LOCAL STRUCTURE PLAN



Figure 3

ENVIRONMENTAL FEATURES

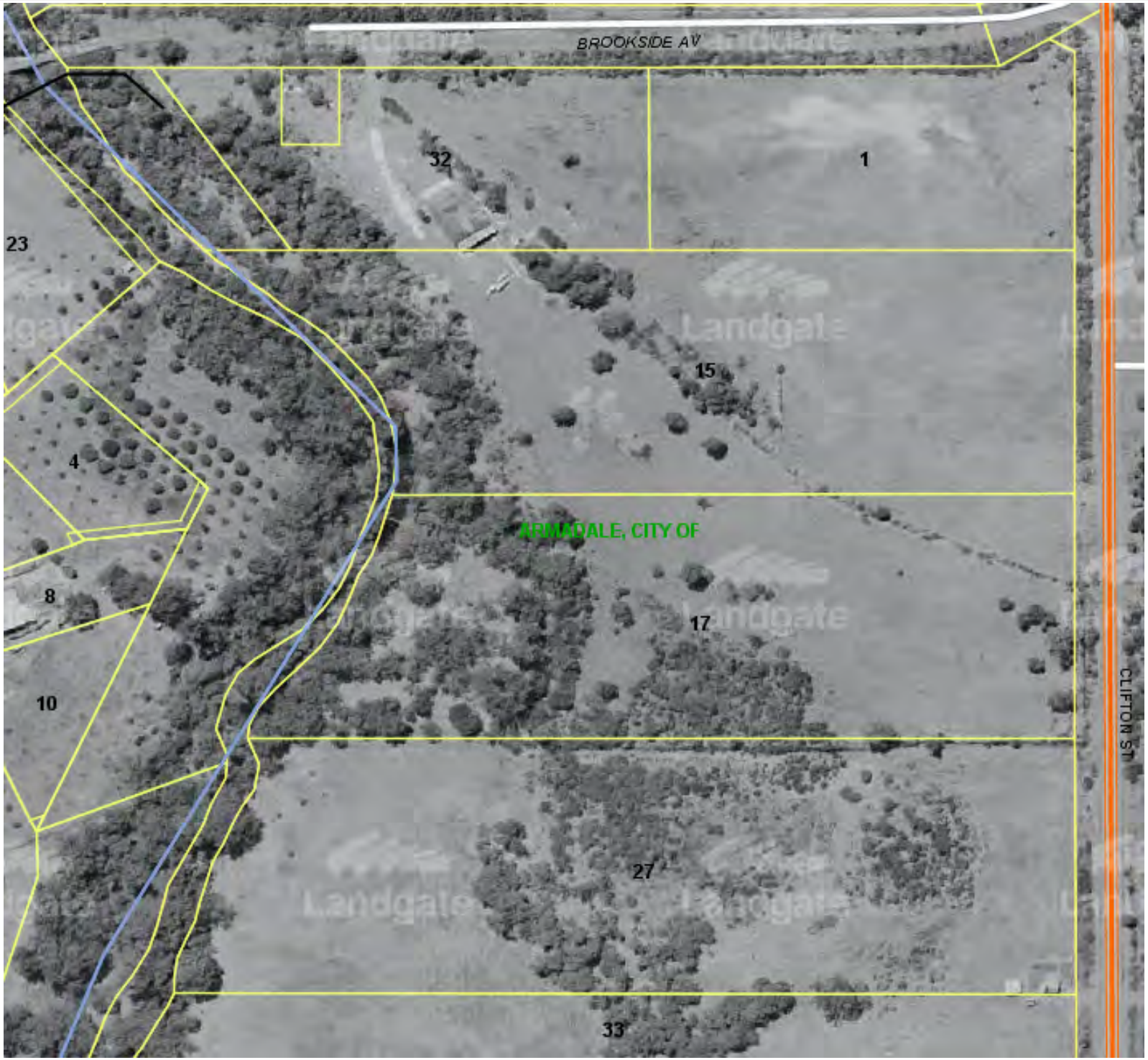


1953

Figure 4a

HISTORICAL AERIAL PHOTOGRAPHY

bayley environmental services



1965

Figure 4b

HISTORICAL AERIAL PHOTOGRAPHY

bayley environmental services



1974

Figure 4c

HISTORICAL AERIAL PHOTOGRAPHY

bayley environmental services



1981

Figure 4d

HISTORICAL AERIAL PHOTOGRAPHY

bayley environmental

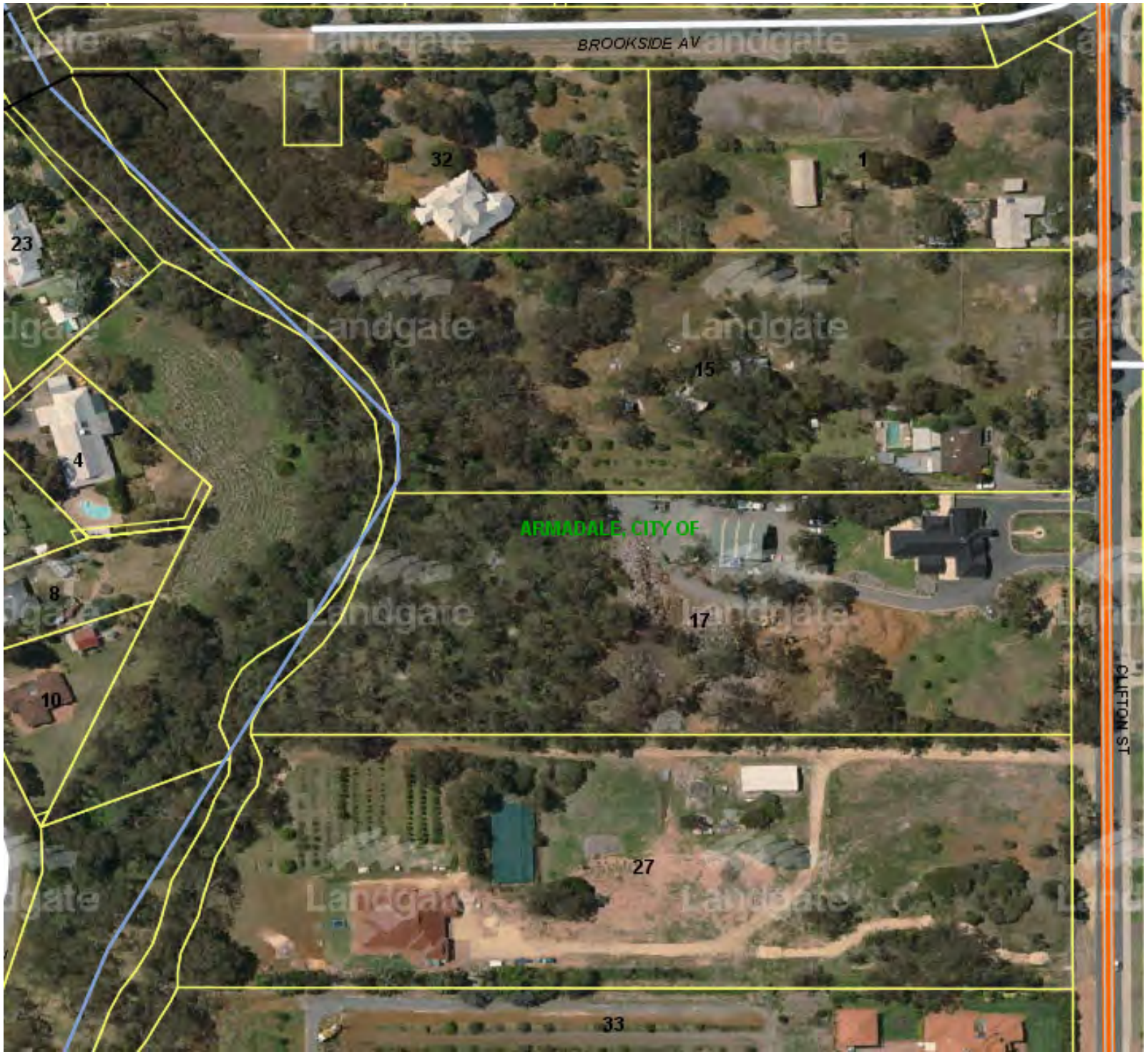


1995

Figure 4e

HISTORICAL AERIAL PHOTOGRAPHY

bayley environmental



2005

Figure 4f

HISTORICAL AERIAL PHOTOGRAPHY

bayley environmental services

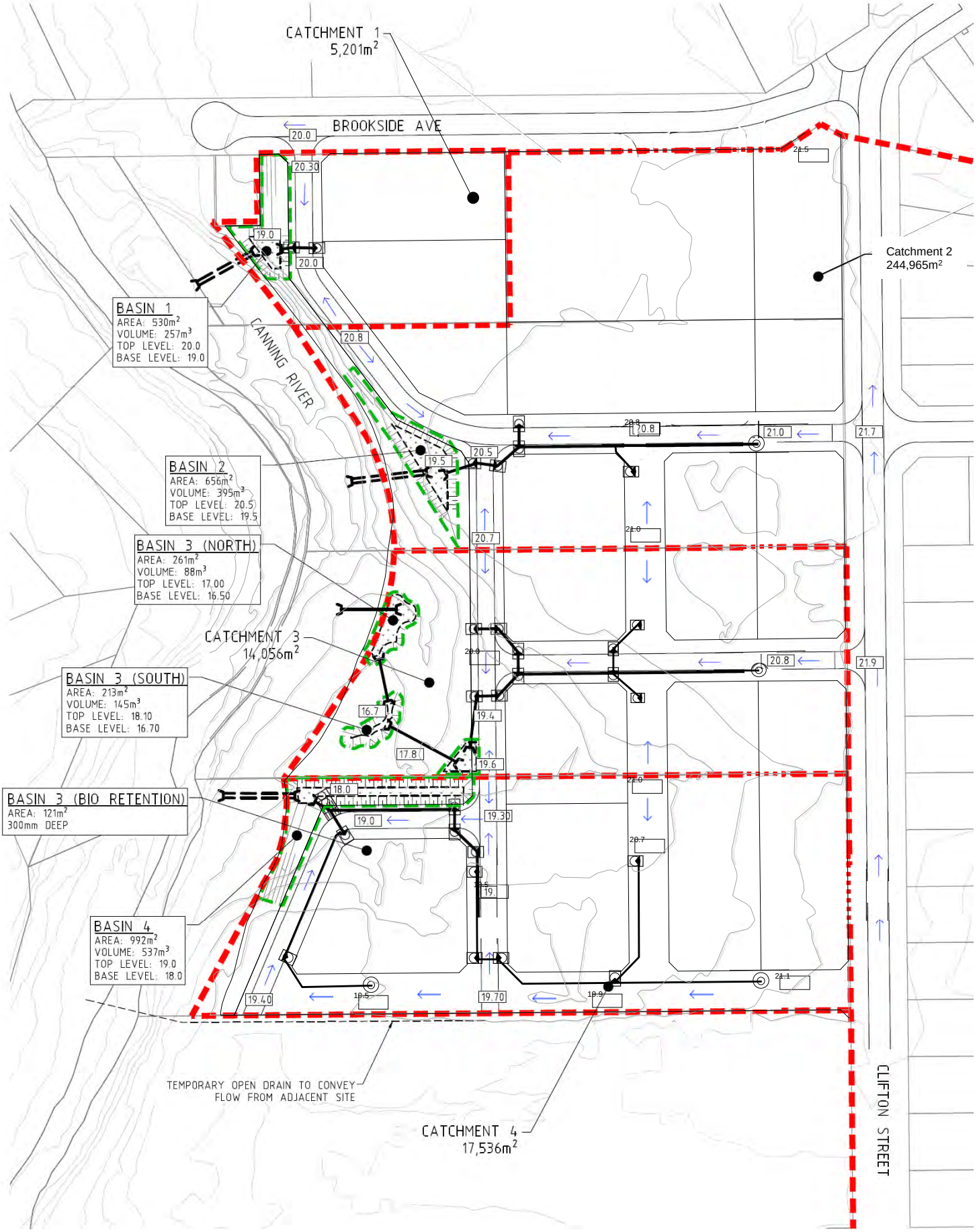


Figure 5

DRAINAGE CONCEPT

Original prepared by Shawmac July 2015
Updated by BES to reflect modified structure plan June 2022

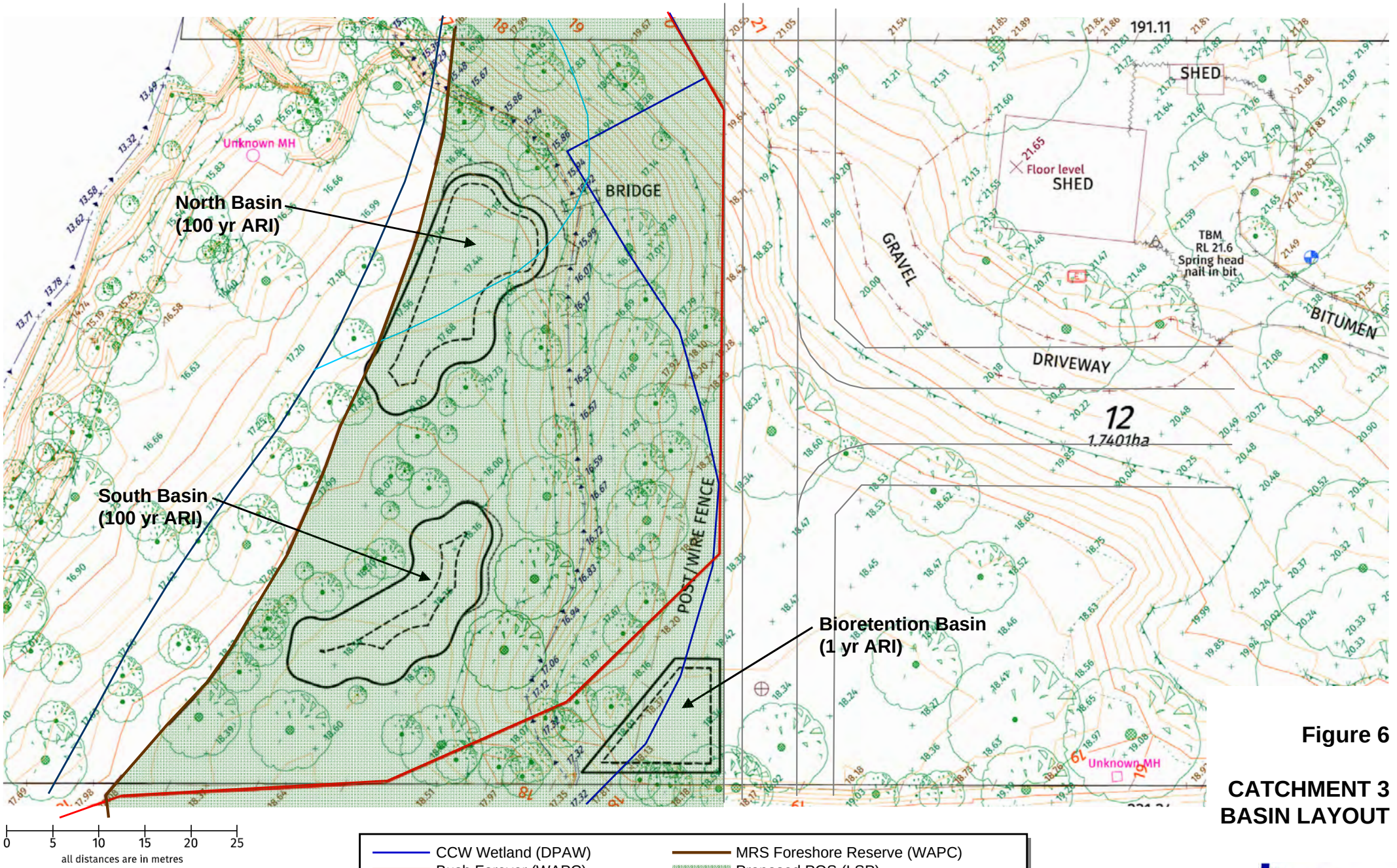


Figure 6

CATCHMENT 3 BASIN LAYOUT

Source: Harley Dykstra (2015)

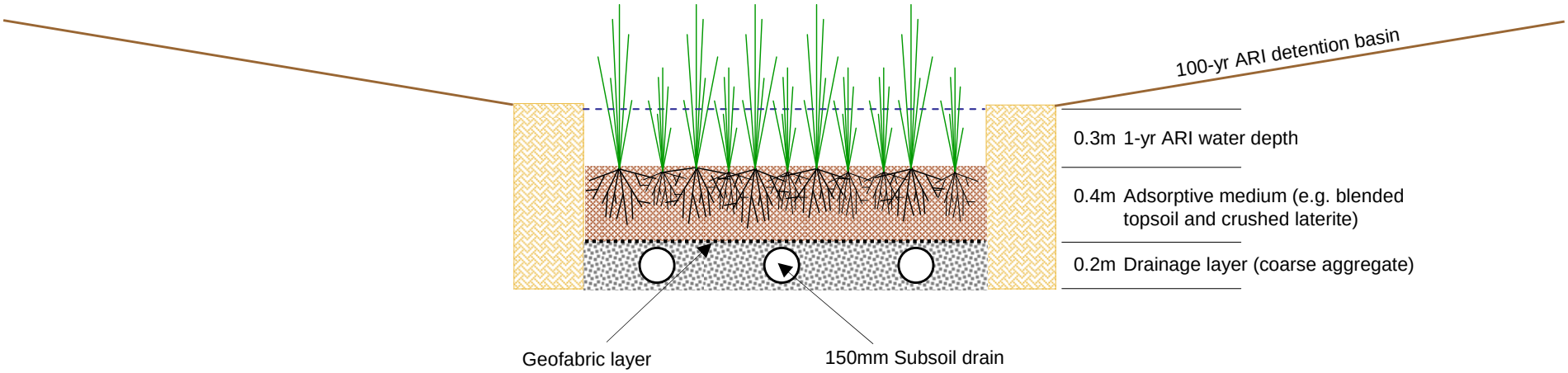


Figure 7

CONCEPTUAL INFILTRATION BASIN PROFILE

Appendix A

Bore Logs

SOIL PROFILE LOG

PROJECT NUMBER:	J14037
SITE ID:	CB1
EASTING:	407402
NORTHING:	6447291
METHOD:	Auger Rig
TOTAL DEPTH (mbgl):	8.5
REFUSAL (Y/N):	N
DATE:	27/02/2015
DEPTH TO WATER (mbgl)	8.5

SOIL PROFILE		SAMPLE DATA	
DEPTH (m)	SOIL DESCRIPTION	SAMPLE ID	INTERVAL (m)
0	Orange-brown gravelly silt		
1	Orange-grey mottled clayey silt		
2	Yellow-brown silty clay, very dry		
3	Yellow-brown silty clay, very dry		
4	Brown sandy silt		
5	Brown clayey silt		
6	Dark brown gravelly silty clay, slightly moist		
7	Brown clayey silt, moist		
8	Brown silty clay, moist		
8.5	Grey weathered granite, wet		



SOIL PROFILE LOG

PROJECT NUMBER:	J14037
SITE ID:	CB2
EASTING:	407308
NORTHING:	6447256
METHOD:	Auger Rig
TOTAL DEPTH (mbgl):	8.5
REFUSAL (Y/N):	N
DATE:	27/02/2015
DEPTH TO WATER (mbgl)	8.5

SOIL PROFILE		SAMPLE DATA	
DEPTH (m)	SOIL DESCRIPTION	SAMPLE ID	INTERVAL (m)
0	Orange-brown clayey silt		
1	Orange-brown clayey silt		
2	Orange clayey silt		
3	Yellow-brown silty sand, moist		
4	Dark brown clayey silt, moist		
5	Brown silty clay, moist		
6	Brown clayey silt, moist		
7	Brown clayey silt, moist		
8	Dark brown clayey silt, moist		
8.5	Grey-green gritty clay/weathered granite, wet		



SOIL PROFILE LOG

PROJECT NUMBER:	J14037
SITE ID:	CB3
EASTING:	407403
NORTHING:	6447056
METHOD:	Auger Rig
TOTAL DEPTH (mbgl):	8.5
REFUSAL (Y/N):	Y
DATE:	27/02/2015
DEPTH TO WATER (mbgl)	

SOIL PROFILE		SAMPLE DATA	
DEPTH (m)	SOIL DESCRIPTION	SAMPLE ID	INTERVAL (m)
0	Orange-brown silt		
1	Brown silt		
2	Pale yellow-brown silty clay		
3	Brown silty clay		
4	Brown silty clay, gritty		
5	Brown silty clay, gritty		
6	Brown silty clay		
7	Dark brown silty clay, moist		
8	Brown silty clay, moist		
8.5	Refusal on granite(?)		



SOIL PROFILE LOG

PROJECT NUMBER:	J14037
SITE ID:	CB4
EASTING:	407293
NORTHING:	6447097
METHOD:	Auger Rig
TOTAL DEPTH (mbgl):	6.0
REFUSAL (Y/N):	N
DATE:	27/02/2015
DEPTH TO WATER (mbgl)	4.0

SOIL PROFILE		SAMPLE DATA	
DEPTH (m)	SOIL DESCRIPTION	SAMPLE ID	INTERVAL (m)
0	Brown silt		
1	Dark brown silty clay		
2	Brown silty clay		
3	Green sandy clay, moist		
4	Green sandy clay, wet		
5	Green sandy clay, liquid		
6	Green sandy clay, liquid		



Appendix B

Permeability Test Results

SOIL PERMEABILITY TEST

Site No.	CI1a
Date	10/03/15
Easting	407386
Northing	6447285

Time (h:m:s)	Weight (kg)	Change in Weight (kg)	Ks (m/d)
12:27:00	30.8		
12:27:30	15	15.8	**265.86**
		15	

H =	25
r =	**4.5**

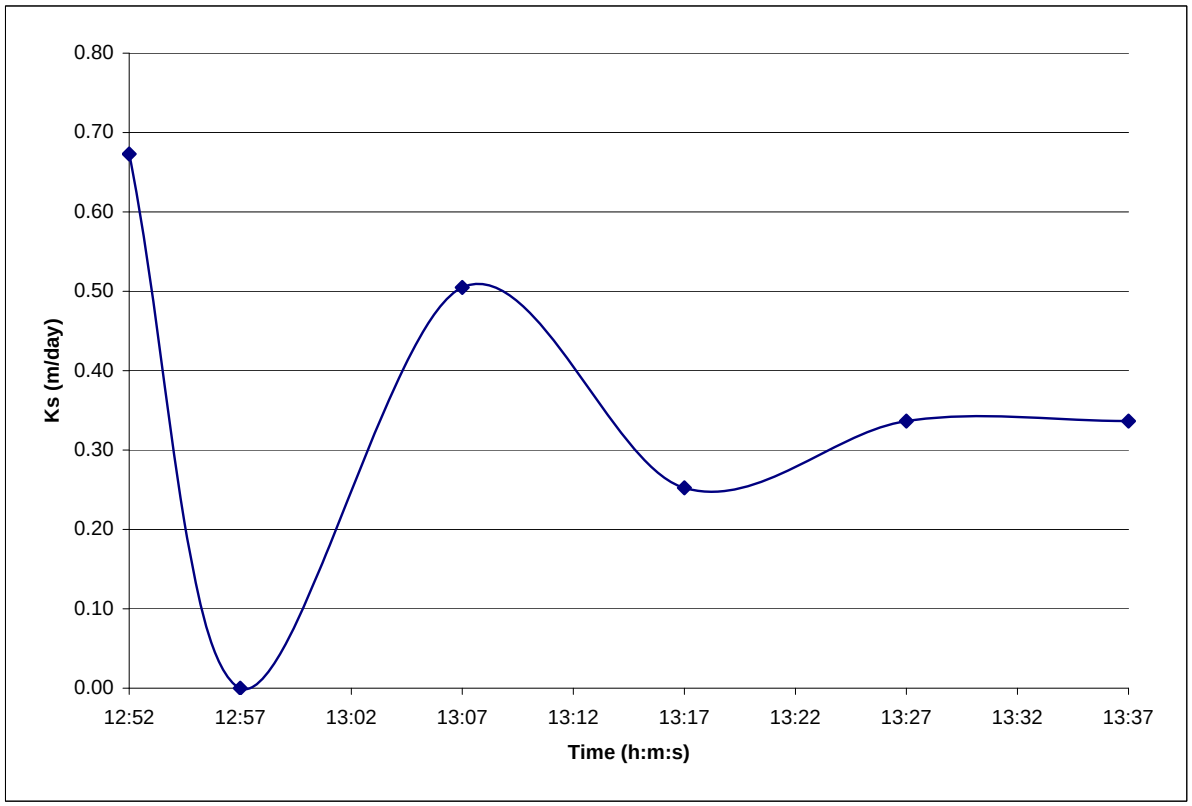


SOIL PERMEABILITY TEST

Site No.	CI1b
Date	10/03/15
Easting	407390
Northing	6447289

Time (h:m:s)	Weight (kg)	Change in Weight (kg)	Ks (m/d)
12:47:00	40.5		
12:52:00	40.1	0.4	**0.67**
12:57:00	40.1		
13:07:00	39.5	0.6	**0.50**
13:17:00	39.2	0.3	**0.25**
13:27:00	38.8	0.4	**0.34**
13:37:00	38.4	0.4	**0.34**
		38.4	

H =	25
r =	**4.5**

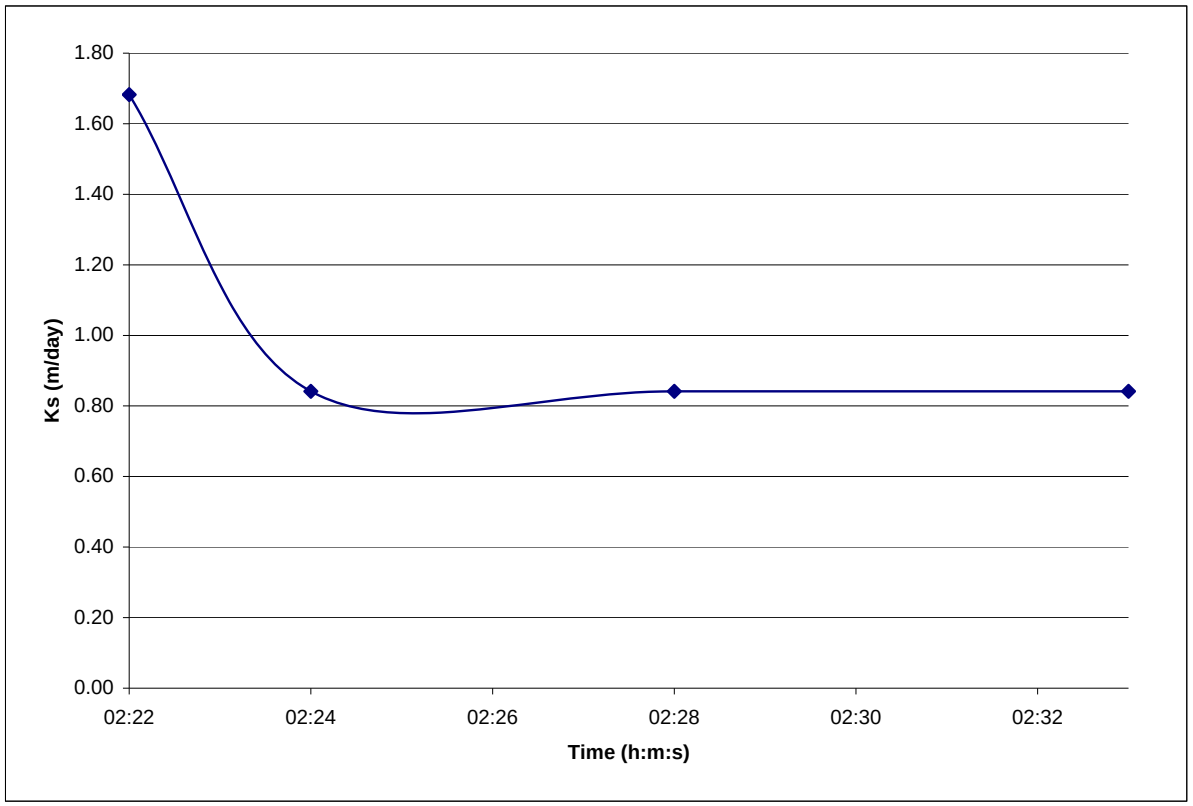


SOIL PERMEABILITY TEST

Site No.	CI2
Date	10/03/15
Easting	407348
Northing	6447286

Time (h:m:s)	Weight (kg)	Change in Weight (kg)	Ks (m/d)
02:20:00	36.6		
02:22:00	36.2	0.4	**1.68**
02:24:00	36	0.2	**0.84**
02:28:00	35.6	0.4	**0.84**
02:33:00	35.1	0.5	**0.84**
		35.1	

H =	25
r =	**4.5**

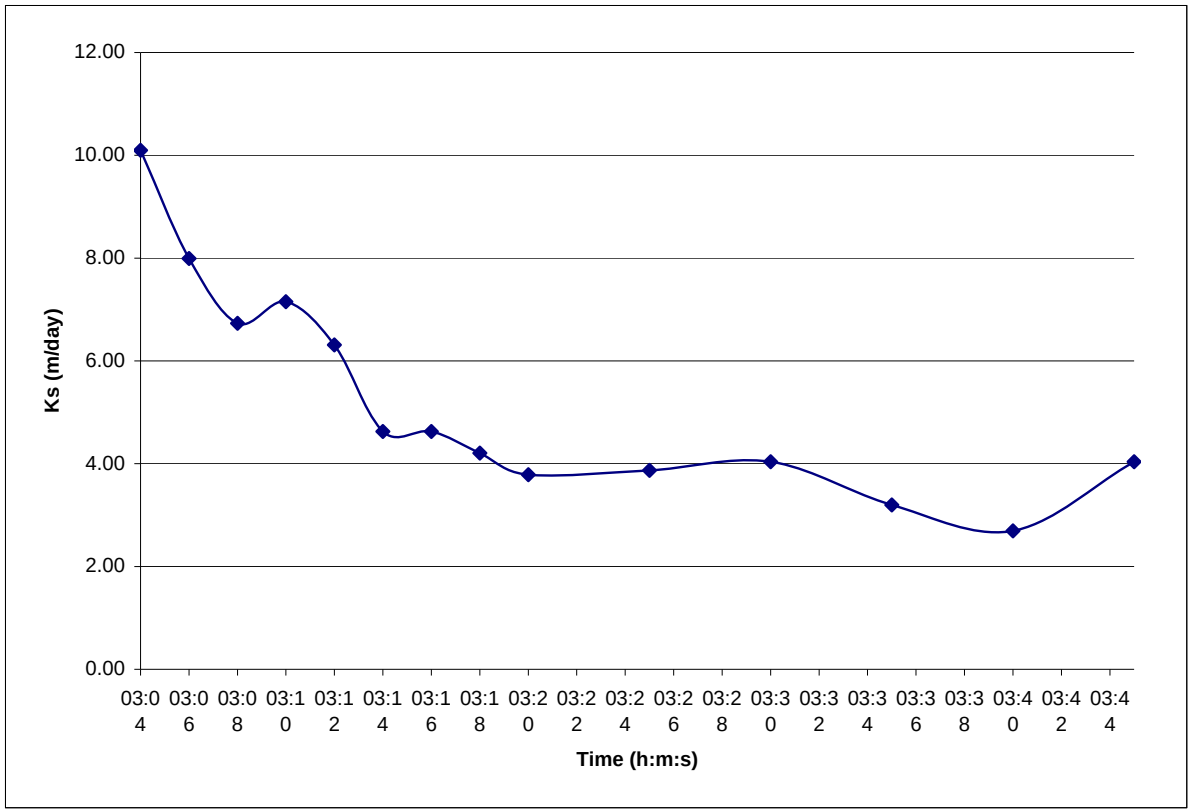


SOIL PERMEABILITY TEST

Site No.	CI3
Date	10/03/15
Easting	407217
Northing	6447265

Time (h:m:s)	Weight (kg)	Change in Weight (kg)	Ks (m/d)
03:02:00	41.9		
03:04:00	39.5	2.4	**10.10**
03:06:00	37.6	1.9	**7.99**
03:08:00	36	1.6	**6.73**
03:10:00	34.3	1.7	**7.15**
03:12:00	32.8	1.5	**6.31**
03:14:00	31.7	1.1	**4.63**
03:16:00	30.6	1.1	**4.63**
03:18:00	29.6	1	**4.21**
03:20:00	28.7	0.9	**3.79**
03:25:00	26.4	2.3	**3.87**
03:30:00	24	2.4	**4.04**
03:35:00	22.1	1.9	**3.20**
03:40:00	20.5	1.6	**2.69**
03:45:00	18.1	2.4	**4.04**
		18.1	

H =	25
r =	**4.5**

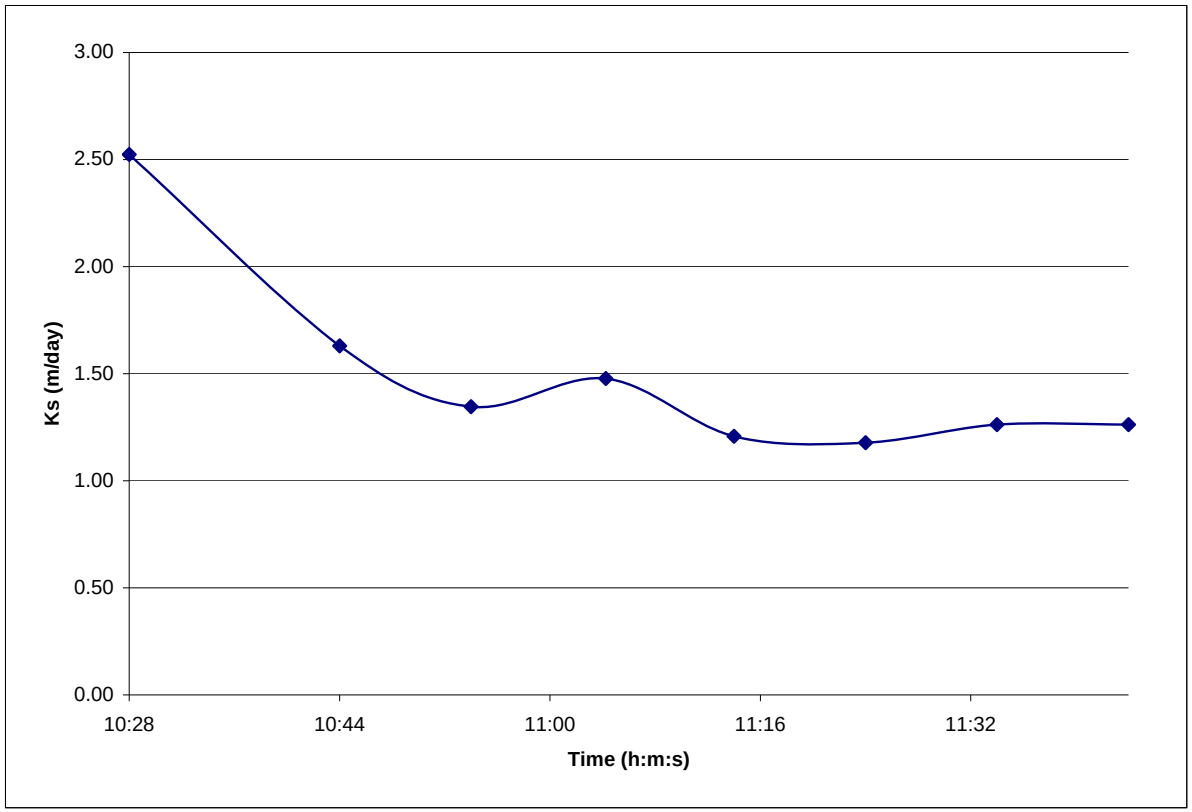


SOIL PERMEABILITY TEST

Site No.	CI4
Date	11/03/15
Easting	407283
Northing	6447136

Time (h:m:s)	Weight (kg)	Change in Weight (kg)	Ks (m/d)
10:26:00	38.6		
10:28:00	38	0.6	**2.52**
10:44:00	34.9	3.1	**1.63**
10:54:00	33.3	1.6	**1.35**
11:04:15	31.5	1.8	**1.48**
11:14:00	30.1	1.4	**1.21**
11:24:00	28.7	1.4	**1.18**
11:34:00	27.2	1.5	**1.26**
11:44:00	25.7	1.5	**1.26**
		25.7	

H =	25
r =	**4.5**

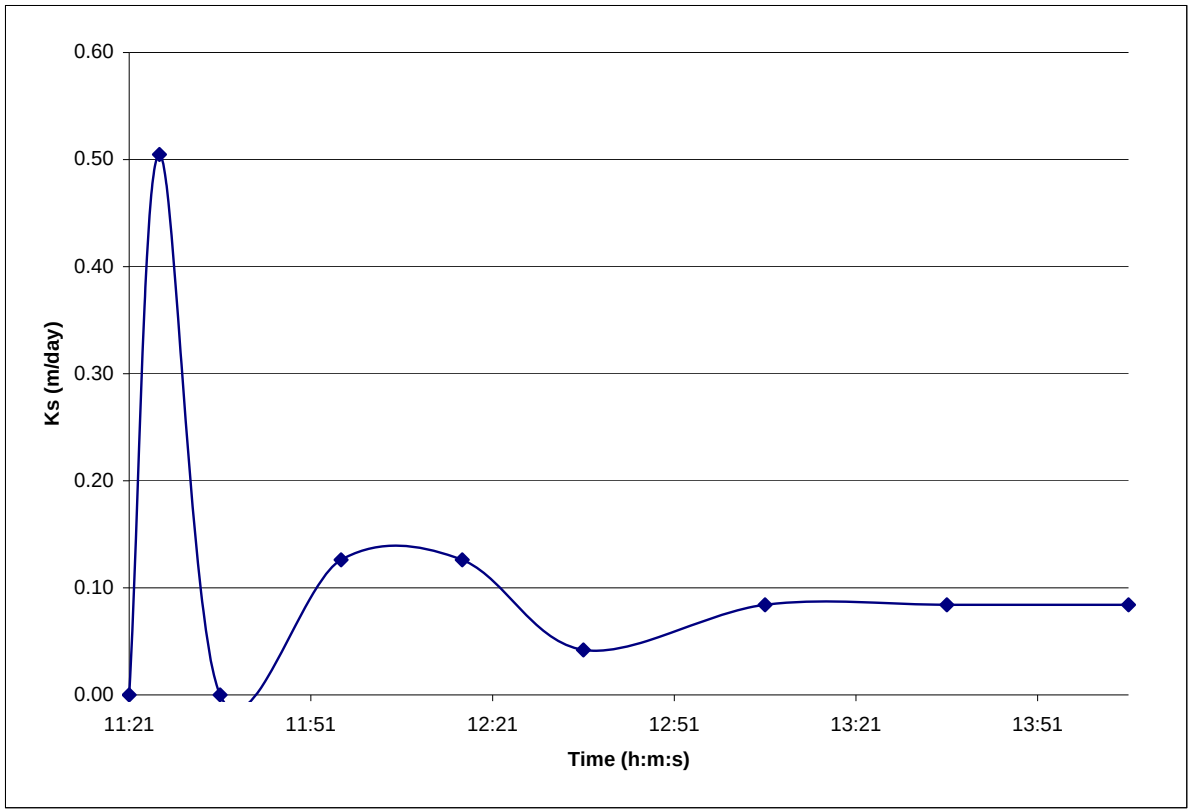


SOIL PERMEABILITY TEST

Site No.	CI5
Date	11/03/15
Easting	407334
Northing	6447091

Time (h:m:s)	Weight (kg)	Change in Weight (kg)	Ks (m/d)
11:16:00	41.3		
11:21:00	41.3		
11:26:00	41	0.3	**0.50**
11:36:00	41		
11:56:00	40.7	0.3	**0.13**
12:16:00	40.4	0.3	**0.13**
12:36:00	40.3	0.1	**0.04**
13:06:00	40	0.3	**0.08**
13:36:00	39.7	0.3	**0.08**
14:06:00	39.4	0.3	**0.08**
		39.4	

H =	25
r =	**4.5**

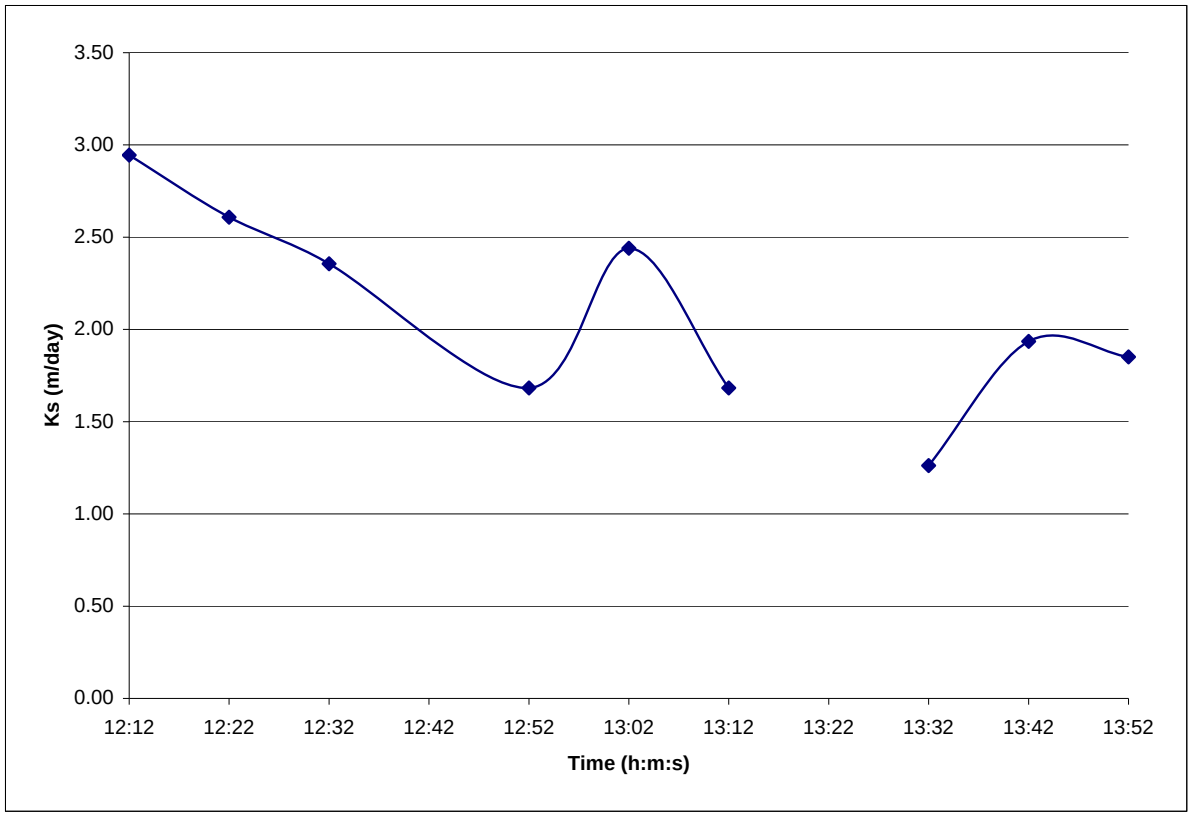


SOIL PERMEABILITY TEST

Site No.	CI6
Date	11/03/15
Easting	407231
Northing	6447064

Time (h:m:s)	Weight (kg)	Change in Weight (kg)	Ks (m/d)
12:10:00	38.3		
12:12:00	37.6	0.7	**2.94**
12:22:00	34.5	3.1	**2.61**
12:32:00	31.7	2.8	**2.36**
12:52:00	27.7	4	**1.68**
13:02:00	24.8	2.9	**2.44**
13:12:00	22.8	2	**1.68**
13:22:00	24.4		
13:32:00	22.9	1.5	**1.26**
13:42:00	20.6	2.3	**1.94**
13:52:00	18.4	2.2	**1.85**
		18.4	

H =	25
r =	**4.5**



Appendix C

Drainage Report

SHAWMAC

CONSULTING CIVIL & TRAFFIC ENGINEERS, RISK MANAGERS.



Project:	Clifton Street North Precinct LWMS
Client:	Harley Dykstra
Job Number:	1502004
Author:	Ryan Needham
Date:	24-06-15

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Document Status

Version No.	Author	Reviewed by	Date	Document status	Signature	Date
A	RN	PG	24.06.15	Draft for Client Review		24.06.15

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Contents

1. Pre-Developed Environment 1

Pre-develop Catchments 1

Pre-developed flow rates for each lot 2

Summary of future basin allowable outflow rates 2

2. Design Criteria 3

3. 1 Year Event 4

4. 5 Year Event 4

5. 100 year event 5

1. PRE-DEVELOPED ENVIRONMENT

Pre-develop Catchments

			5 yr			100 yr		
Catchment Code	Description	Flow Path	Area	tc (mins)	Q5 (L/s)	Area	tc (mins)	Q100 (L/s)
A	North Portion of Site	discharge to river approximately at Lot 11 Brookside and 12 Clifton Boundary. 100 year includes flow from residential area to east of Clifton*	22,095	6	62	224,160	27	1,695*
B	Western Portion of Site	discharge via sheet flow over river bank	3,749	6	11	3,749	6	26
C	Central and Southern Portion of site plus area south of site	drains to gully central to site then to river	60,602	6	142	60,602	6	402

Pre-developed flow rates for each lot

			5 yr		100 yr	
		post-dev basin	Area	Flow (l/s)	Area	Flow (l/s)
A	Lot 11	2	6,387	24	6,387	57
	Lot 12 (Brookside)	1	8,553	18	8,553	42
	Lot 11 (Brookside)	2	7,155	20	7,155	48
	External	2			214,839	1,407*
B	Lot 11	2	1,179	3	1,179	8
	Lot 12	3	909	3	909	6
	Lot 1	4	1,828	5	1,828	12
C	Lot 11	2	4,000	9	4,000	27
	Lot 12	3	13,422	31	13,422	89
	Lot 1	4	16,622	39	16,622	110
	External	N/A	26,558	62	26,558	176
Total				214		1,982

*The construction of the new road at the intersection with Tara way will result in the 100 year flow path from the large residential catchment to the east being directed towards basin 2, however a pipe drainage system existing which directs lower flows elsewhere. The total estimated peak runoff from the Catchment A External area is approximately 3,107/s and it is assumed that the 5year total estimated runoff of 1,700L/s is carried via the piped system elsewhere, with the remaining 1,407L/s required to pass through the site.

Summary of future basin allowable outflow rates

Basin	Contributing pre-development catchments	5yr	100yr
1	Lot 12 (Brookside)	18	42
2	External, Lot 11 (Brookside), Lot 11 (Clifton)	57	1,547
3	Lot 12 (Clifton)	34	95
4	Lot 1	44	122
External	External	62	176
Total		215	1,982

2. DESIGN CRITERIA

Table 2 - IFD Table (mm/hr) (Source BoM)

	Average Recurrence Interval (ARI)						
Duration	1 Year	2 years	5 years	10 years	20 years	50 years	100 years
5 Mins	64.7	84.6	109	126	149	184	214
6 Mins	60.4	79	101	117	139	171	199
10 Mins	48.3	62.9	79.8	91.7	108	133	153
20 Mins	33.7	43.5	54.2	61.5	72	87	99.6
30 Mins	26.8	34.4	42.4	47.8	55.7	66.8	76.1
1 Hr	17.7	22.6	27.5	30.7	35.5	42.2	47.8
2 Hrs	11.5	14.7	17.7	19.7	22.6	26.8	30.2
3 Hrs	8.98	11.4	13.7	15.2	17.5	20.6	23.2
6 Hrs	5.87	7.45	8.9	9.86	11.3	13.3	14.9
12 Hrs	3.84	4.87	5.82	6.44	7.37	8.68	9.75
24 Hrs	2.48	3.16	3.8	4.22	4.84	5.72	6.44
48 Hrs	1.56	2	2.43	2.71	3.13	3.73	4.22
72 Hrs	1.16	1.49	1.82	2.04	2.37	2.84	3.23

Table 3

	C_1	C_5	C_{10}	C_{100}
Residential lots	0.50	0.60	0.65	0.75
Access streets and road reserves	0.80	0.80	0.85	0.90
Group housing sites, mixed use commercial/ residential, local centre & laneways	0.50	0.65	0.80	0.80
POS basins	0.75	0.85	1.00	1.00
POS remaining areas	0.08	0.10	0.10	0.12

3. 1 YEAR EVENT

Bioretention Area Sizing

Catchment	Road Area (m^2)	Ai (m^2)	Q (L/s)	Inflow Volume (m^3)	Bioretention Area	Storage Volume	Infiltration Volume	Total Volume Provided	2% Area check
CA01	2,065	1,652	8.1	29.3	70	21	14	35	41
CA02	5,356	4,285	21.1	75.9	200	60	42	102	107
CA03	3,235	2,588	12.7	45.8	121	36	25	61	65
CA04	4,939	3,951	19.4	70.0	185	56	39	95	99

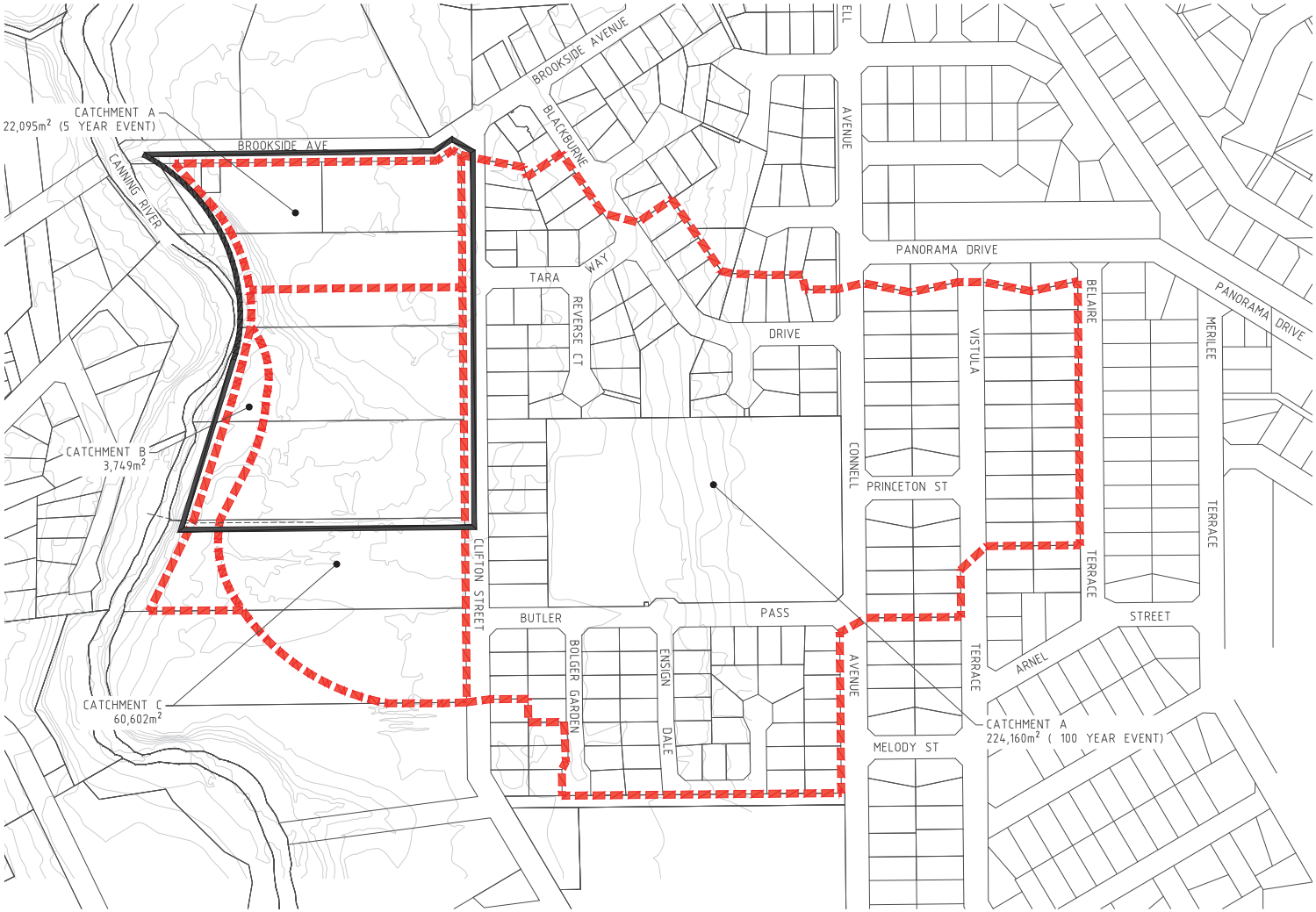
1. Bioretention areas are based on 300mm stored depth.
2. Sizing based on 1yr, 1hr event
3. Infiltration rate of 5m day assumed.

4. 5 YEAR EVENT

Catchment	Total Catchment Area (m2)	Peak Runoff (L/s)	Basin Area	Base Level	Top Level	Max Volume (m3)	Max Water Level	Max Stored Volume (m3)	Inundated Area (m2)	Peak Outflow
1	5,201	47	530	19.0	20.00	257	19.36	37	156	17
2	20,805	303	656	19.5	20.50	395	20.22	231	516	68
3 (combined)	14,056	118	474	-	-	233	-	37.6	245	43
3 (north)	-	-	261	16.5	17.0	88	16.62	20.9	175	-
3 (south)	-	-	213	16.7	18.1	145	17.05	16.7	70	-
4	17,536	172	992	18.0	19.00	537	18.45	145	499	43

5. 100 YEAR EVENT

Catchment	Total Catchment Area (m2)	Peak Runoff (L/s)	Basin Area	Base Level	Top Level	Max Volume (m3)	Max Water Level	Max Stored Volume (m3)	Inundated Area (m2)	Peak Outflow
1	5,201	104	530	19.0	20.00	257	19.47	58	221	48
2	128,155	3,561	656	19.5	20.50	395	20.39	320	516	1,792
3 (combined)	14,056	118	474	-	-	233	-	127	349	101
3 (north)	-	-	261	16.5	17.0	88	16.71	36.5	195	-
3 (south)	-	-	213	16.7	18.1	145	17.78	90.1	154	-
4	17,536	388	992	18.0	19.00	537	18.71	304	734	115



LEGEND

- CATCHMENT BOUNDARIES
- TOPOGRAPHY CONTOURS
- CADASTRAL BOUNDARY
- SITE BOUNDARY

0 20 40 60 80 100m
1 : 4000 (A3) 1 : 2000 (A1)

REV	DATE	DESCRIPTION	APPROVED
B	09.07.15	ISSUED FOR CLIENT REVIEW FOR MINOR AMENDMENTS	PG
A	03.07.15	ISSUED FOR CLIENT REVIEW	PG

ISSUE AND REVISION HISTORY

CLIENT: Harley Dykstra PLANNING & SURVEY SOLUTIONS

LOCAL GOVERNMENT AUTHORITY: CITY OF Armadale

SCALE @A1
HORIZ: 1:2000

DATUM
HORIZONTAL: MGA94
VERTICAL: AHD

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DRAWN:	TR
CHECKED:	PG
APPROVED:	T SHAW

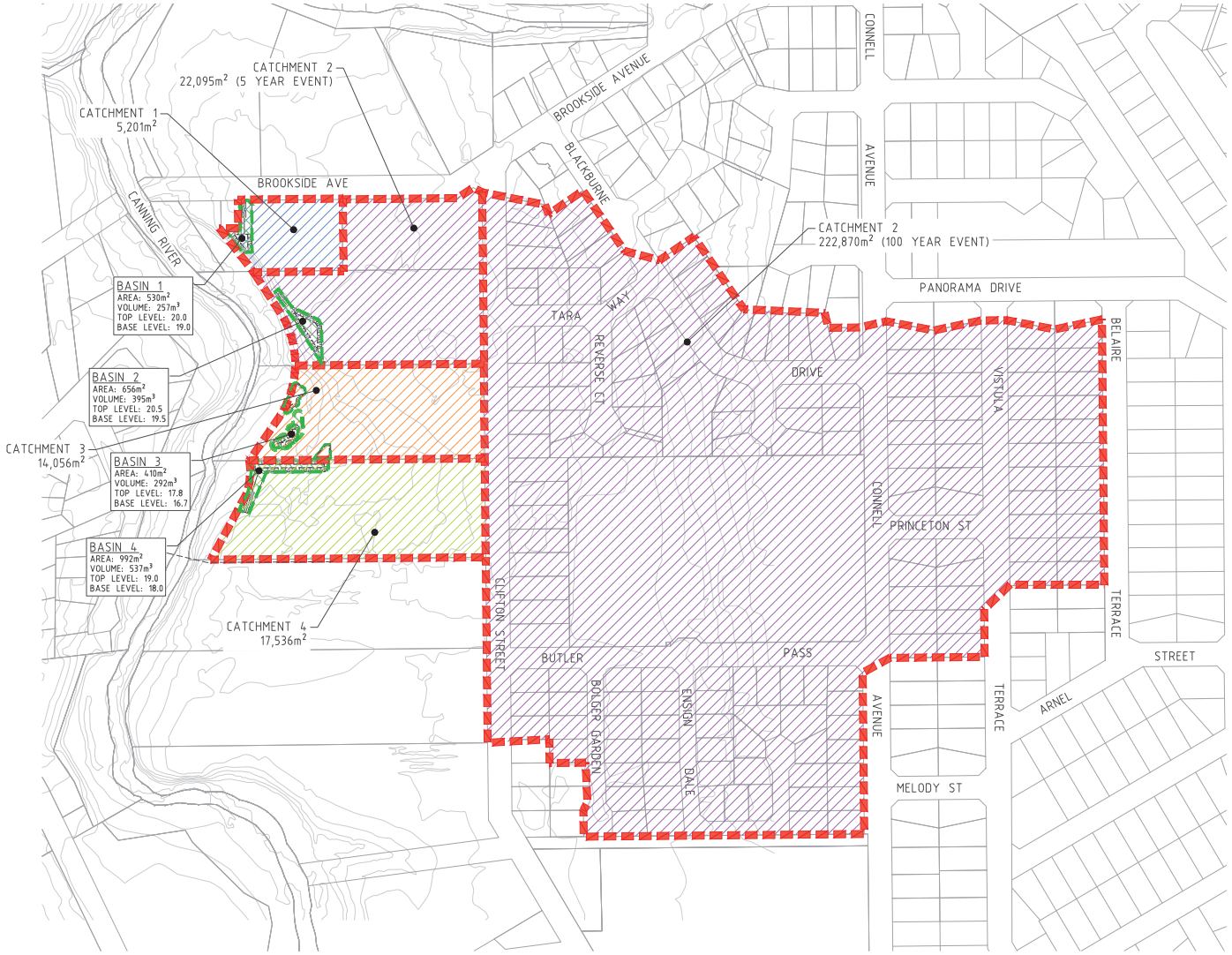
KELMSCOTT
CLIFFTON STREET NORTH LSP DRAINAGE
PRE - DEVELOPMENT CATCHMENT PLAN

DRAWING NUMBER: 1502004-201
REV: B

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FILE REF: Z:\Jobs Active 2015\CE - Land Development\1502004 - Clifton St North, LSP - Harley Dykstra\Drawings\1502004-200 - General Arrangment

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LEGEND

- CATCHMENT BOUNDARIES
- TOPOGRAPHY CONTOURS
- CADASTRAL BOUNDARY
- PROPOSED BASIN BOTTOM
- PROPOSED BASIN LOCATION
- PROPOSED CATCHMENT 1
- PROPOSED CATCHMENT 2
- PROPOSED CATCHMENT 3
- PROPOSED CATCHMENT 4

0 20 40 60 80 100m
1 : 4000 (A3) 1 : 2000 (A1)

REV	DATE	DESCRIPTION	APPROVED
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POST - DEVELOPMENT CATCHMENT PLAN

DRAWING NUMBER: 150Z004-202
REV: B

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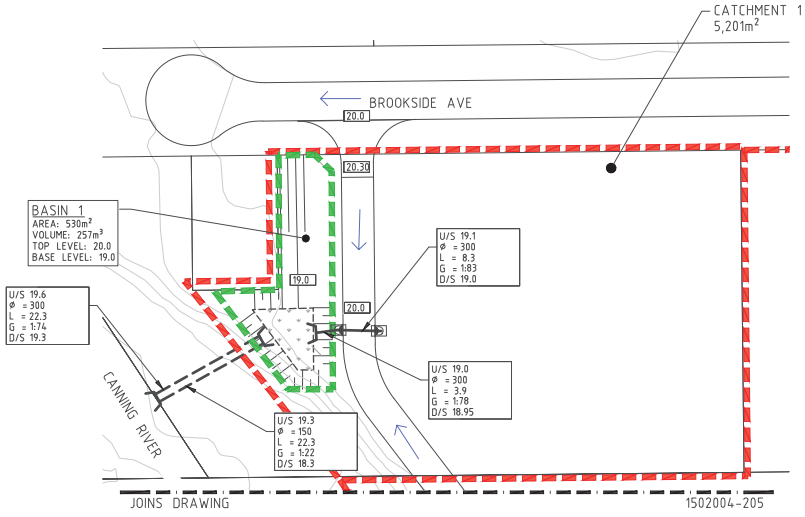
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CLIFFTON STREET NORTH LSP DRAINAGE
POST - DEVELOPMENT OVERALL DRAINAGE PLAN

DRAWING NUMBER: 1502004-203
REVISION: A



LEGEND

- EXISTING CADASTRAL BOUNDARY
- TOPOGRAPHY CONTOURS
- CATCHMENT BOUNDARIES
- PROPOSED BASIN TOP
- PROPOSED BASIN BOTTOM
- PROPOSED DRAINAGE PIPE (300ø RCP U.N.O.)
- PROPOSED BASIN OUTLET PIPE WITH HEADWALL
- 24.0 PROPOSED DESIGN LEVELS
- OVERLAND FLOW PATH
- PROPOSED GULLY PIT LOCATION
- PROPOSED SIDE ENTRY PIT
- PROPOSED BIO-RETENTION AREA

0 10 20 25m
1 : 1000 (A3) 1 : 500 (A1)

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HORIZONTAL: MGA94
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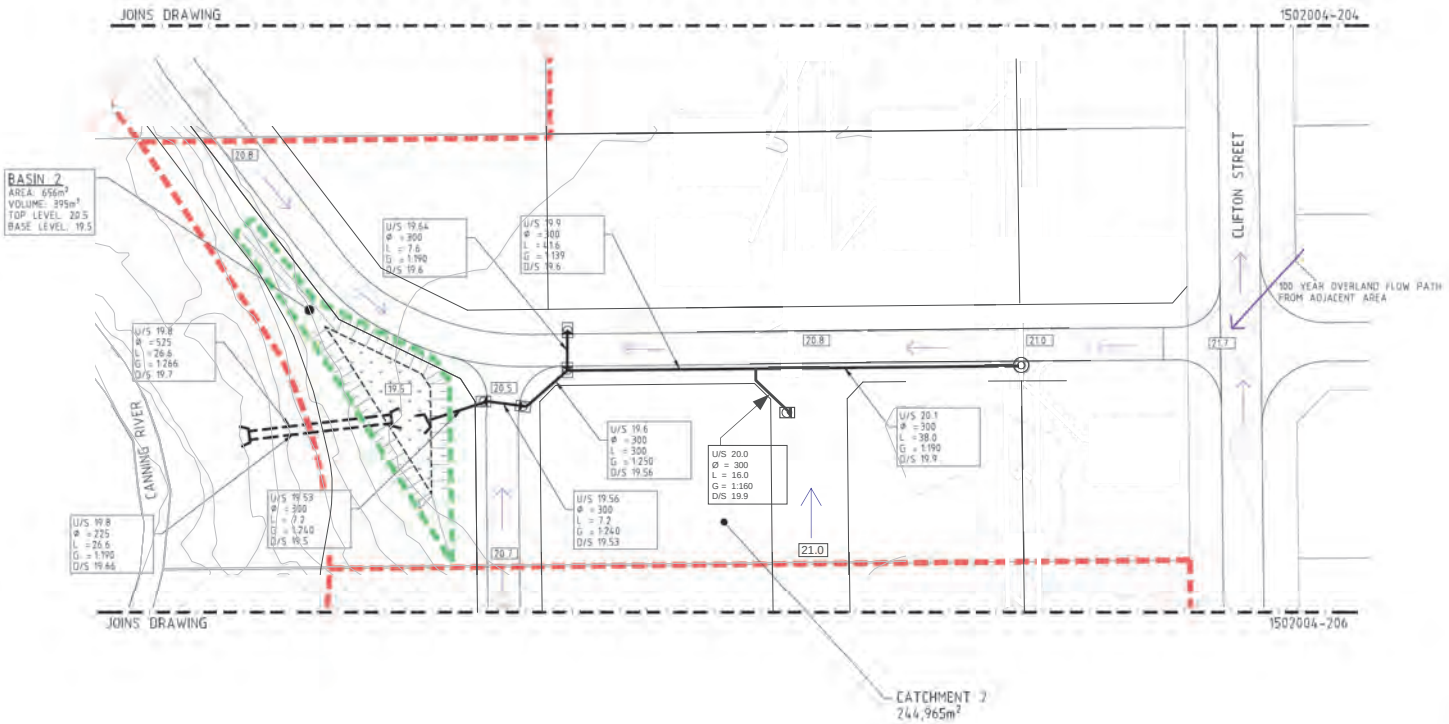
KELMSCOTT
CLIFFTON STREET NORTH LSP DRAINAGE
POST - DEVELOPMENT DRAINAGE
CONCEPT PLAN SHEET 1 OF 4

DRAWING NUMBER: 1502004-204
REV: A

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LEGEND

- EXISTING CADASTRAL BOUNDARY
- TOPOGRAPHY CONTOURS
- CATCHMENT BOUNDARIES
- PROPOSED BASIN TOP
- PROPOSED BASIN BOTTOM
- PROPOSED DRAINAGE PIPE (300Ø REP U.N.O.)
- PROPOSED BASIN OUTLET PIPE WITH HEADWALL
- PROPOSED DESIGN LEVELS
- OVERLAND FLOW PATH
- PROPOSED GULLY PIT LOCATION
- PROPOSED SIDE ENTRY PIT
- PROPOSED MANHOLE LOCATION
- PROPOSED BIO-RETENTION AREA

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0 10 20 25m
1 : 1000 (A3) 1 : 500 (A1)

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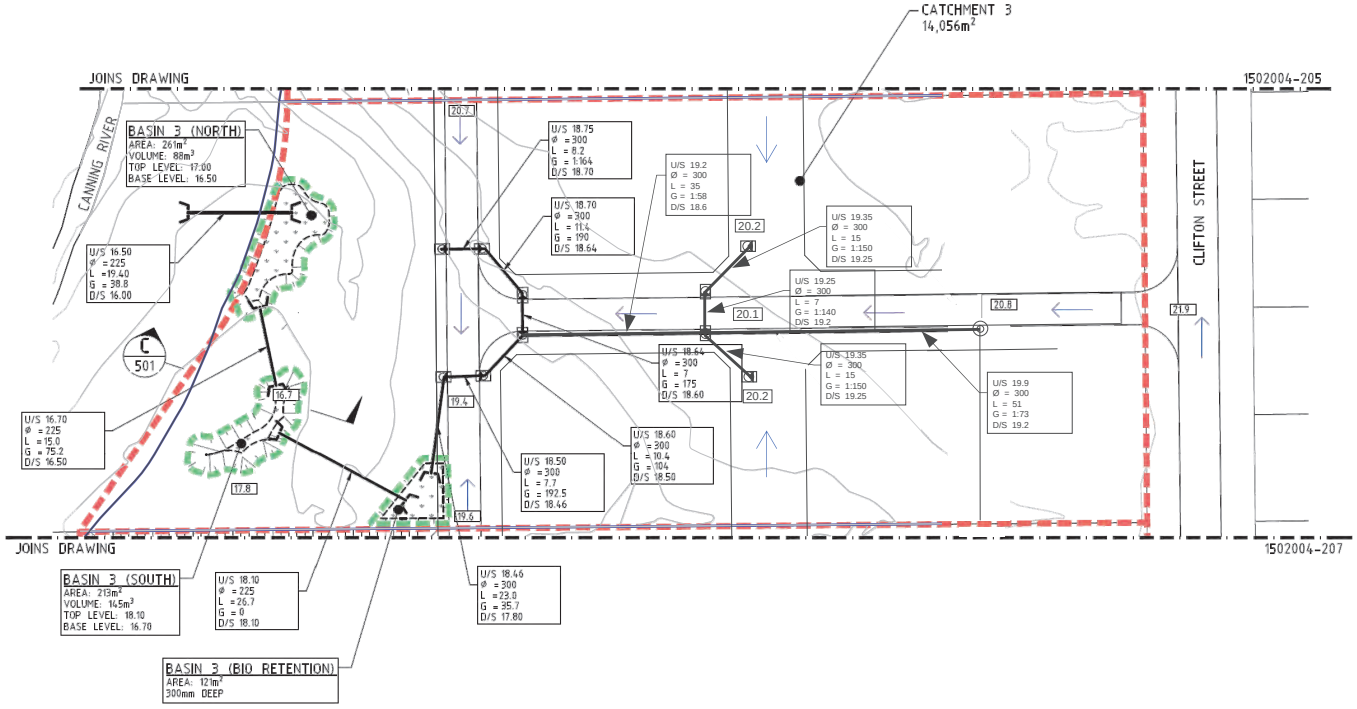
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CLIFFTON STREET NORTH LSP DRAINAGE
POST - DEVELOPMENT DRAINAGE
CONCEPT PLAN SHEET 2 OF 4

DRAWING NO: 1502004-205 REV: A



LEGEND

- EXISTING CADASTRAL BOUNDARY
- TOPOGRAPHY CONTOURS
- CATCHMENT BOUNDARIES
- PROPOSED BASIN TOP
- PROPOSED BASIN BOTTOM
- PROPOSED DRAINAGE PIPE (300ø RCP U.N.O.)
- PROPOSED BASIN OUTLET PIPE WITH HEADWALL
- 24.0 PROPOSED DESIGN LEVELS
- OVERLAND FLOW PATH
- PROPOSED GULLY PIT LOCATION
- PROPOSED SIDE ENTRY PIT
- PROPOSED MANHOLE LOCATION
- PROPOSED BIO-RETENTION AREA

0 10 20 25m
1 : 1000 (A3) 1 : 500 (A1)

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CLIENT: Harley Dykstra

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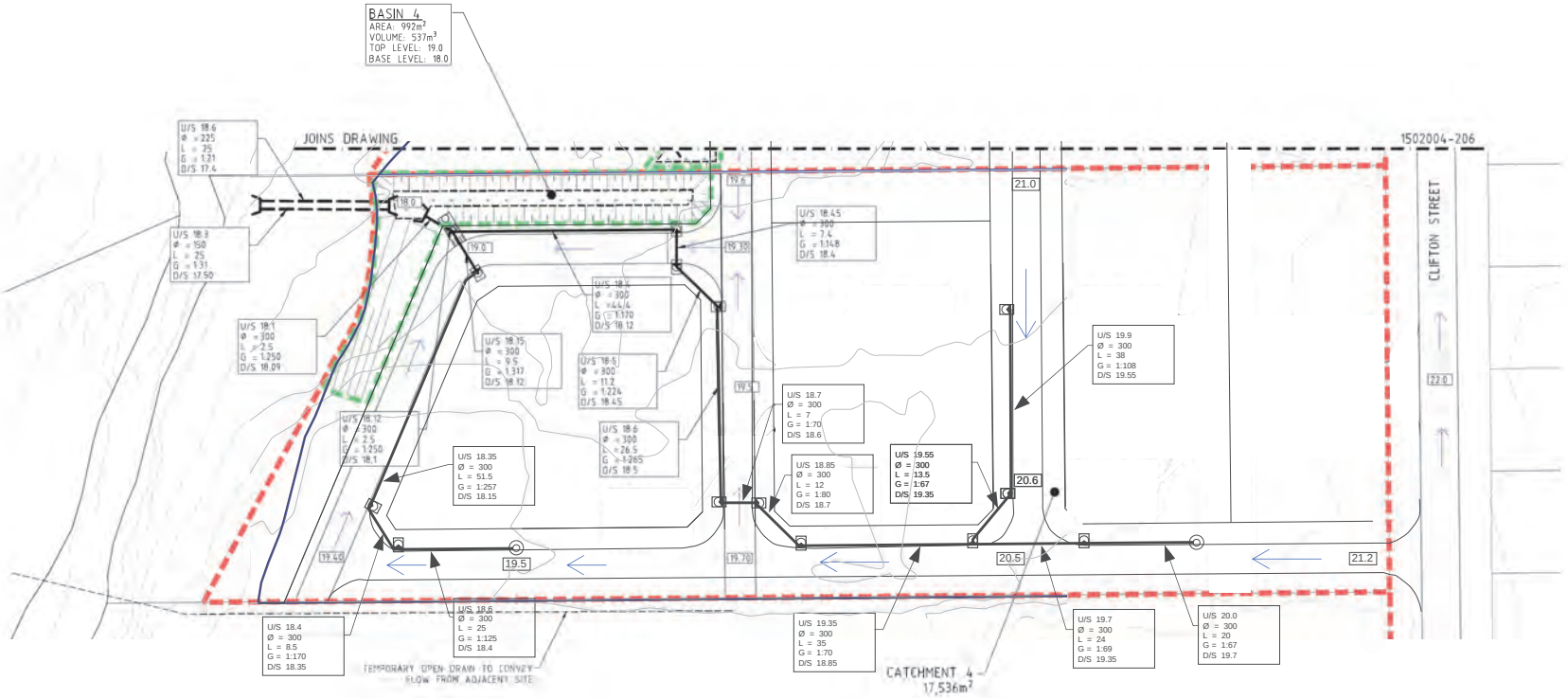
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HORIZONTAL: MGA94
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POST - DEVELOPMENT DRAINAGE
CONCEPT PLAN SHEET 3 OF 4

DRAWING NUMBER: 1502004-206
REV: B



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0 10 20 25m
1 : 1000 (A3) 1 : 500 (A1)

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CLIENT: Harley Dykstra

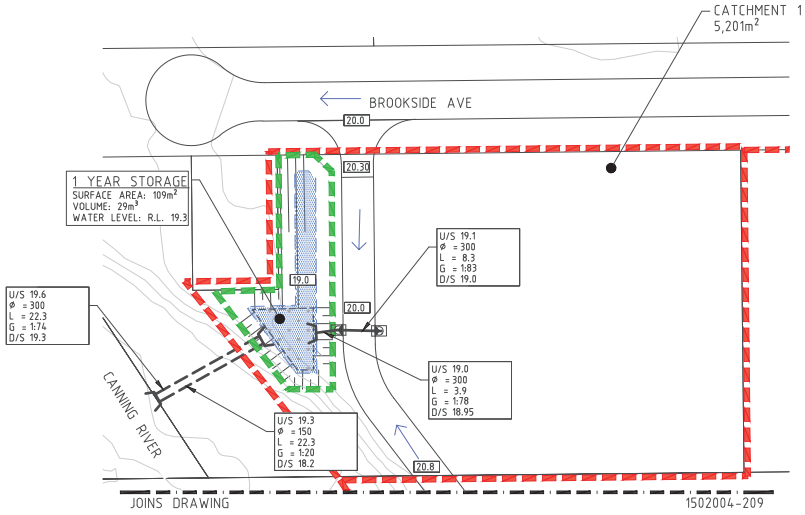
LOCAL GOVERNMENT AUTHORITY: CITY OF Armadale

SCALE @A1: HORIZ. 1:500
DATUM: HORIZONTAL: MGA94 VERTICAL: AHD

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KELMSCOTT
CLIFTON STREET NORTH LSP DRAINAGE
POST - DEVELOPMENT DRAINAGE CONCEPT PLAN SHEET 4 OF 4
DRAWING NUMBER: 1502004-207 REVISION: A



LEGEND

- EXISTING CADASTRAL BOUNDARY
- TOPOGRAPHY CONTOURS
- CATCHMENT BOUNDARIES
- PROPOSED BASIN TOP
- PROPOSED BASIN BOTTOM
- PROPOSED DRAINAGE PIPE (300Ø RCP U.N.O.)
- PROPOSED BASIN OUTLET PIPE WITH HEADWALL
- INUNDATED AREAS
- 24.0 PROPOSED DESIGN LEVELS
- OVERLAND FLOW PATH
- PROPOSED SIDE ENTRY PIT
- PROPOSED BIO-RETENTION AREA

0 10 20 25m
1 : 1000 (A3) 1 : 500 (A1)

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SCALE @A1
HORIZ: 1:500

DATUM
HORIZONTAL: MGA94
VERTICAL: AHD

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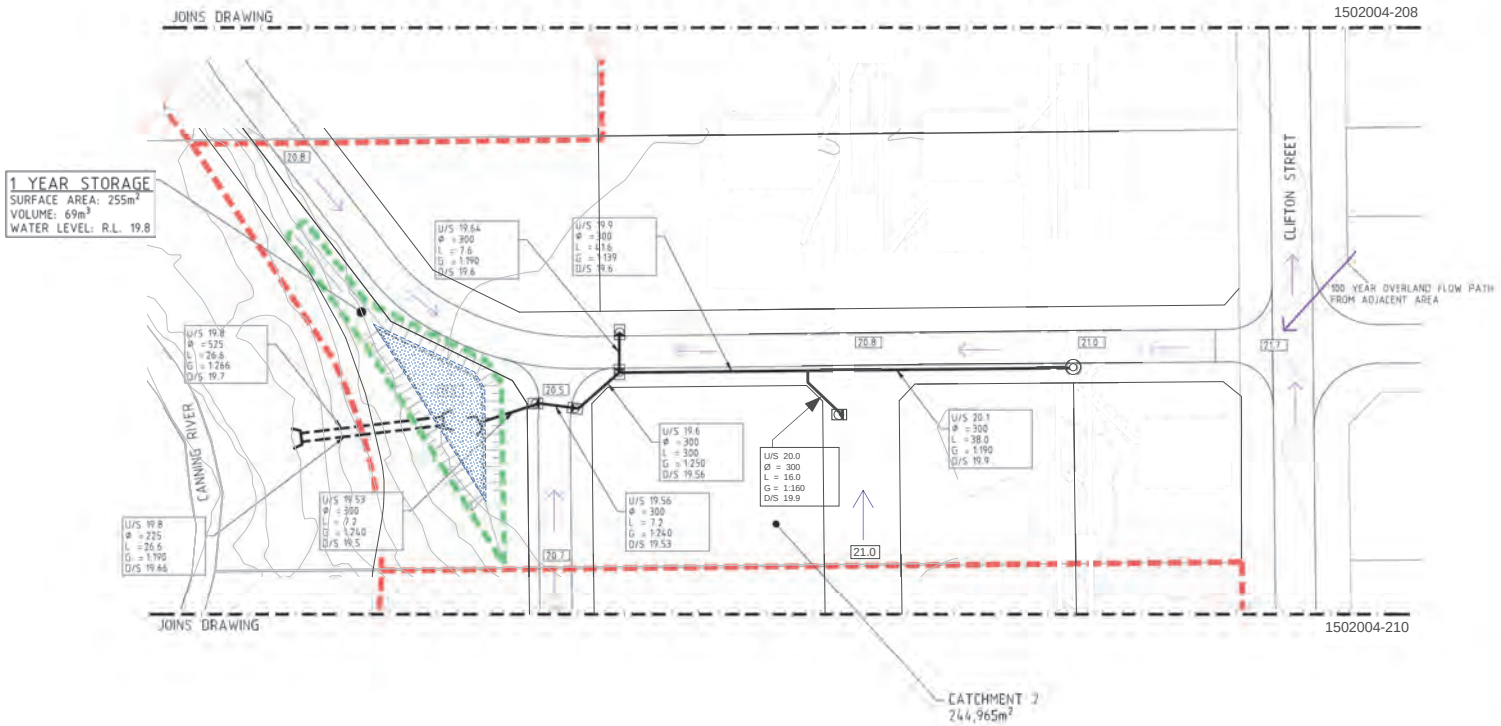
KELMSCOTT
CLIFFTON STREET NORTH LSP DRAINAGE
POST - DEVELOPMENT DRAINAGE
1 YEAR EVENT PLAN SHEET 1 OF 4

DRAWING NUMBER: 1502004-208
REV: A

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LEGEND

- EXISTING CADASTRAL BOUNDARY
- TOPOGRAPHY CONTOURS
- CATCHMENT BOUNDARIES
- PROPOSED BASIN TOP
- PROPOSED BASIN BOTTOM
- PROPOSED DRAINAGE PIPE (300Ø RCP U.N.O.)
- PROPOSED BASIN OUTLET PIPE WITH HEADWALL
- INUNDATED AREAS
- 24.0 PROPOSED DESIGN LEVELS
- OVERLAND FLOW PATH
- PROPOSED GULLY PIT LOCATION
- PROPOSED SIDE ENTRY PIT
- PROPOSED MANHOLE LOCATION
- PROPOSED BIO-RETENTION AREA

0 10 20 25m
1 : 1000 (A3) 1 : 500 (A1)

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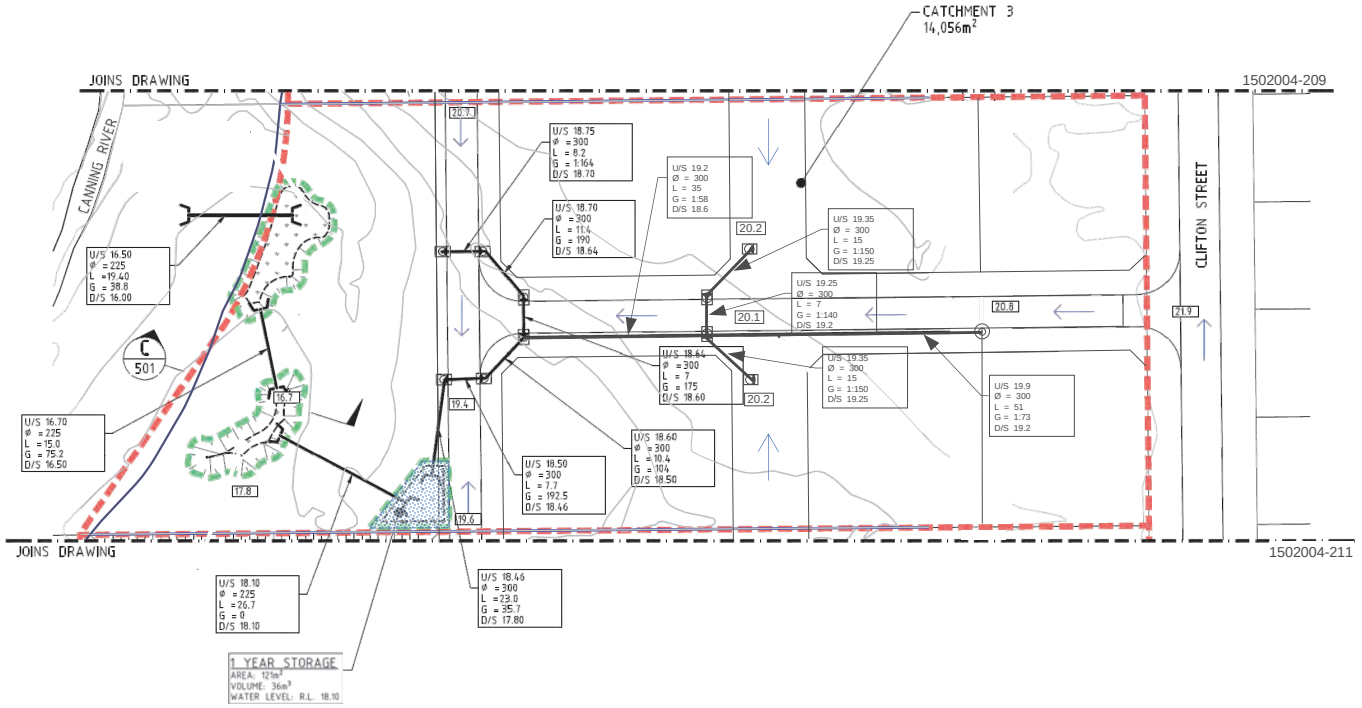
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DATUM
HORIZONTAL: MGA94
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CLIFFTON STREET NORTH LSP DRAINAGE
POST - DEVELOPMENT DRAINAGE
1 YEAR EVENT PLAN SHEET 2 OF 4

DRAWING NUMBER: 1502004-209
REVISION: A



LEGEND

- EXISTING CADASTRAL BOUNDARY
- TOPOGRAPHY CONTOURS
- CATCHMENT BOUNDARIES
- PROPOSED BASIN TOP
- PROPOSED BASIN BOTTOM
- PROPOSED DRAINAGE PIPE 1200Ø RCP U.N.O.
- PROPOSED BASIN OUTLET PIPE WITH HEADWALL
- INUNDATED AREAS
- 24.5 PROPOSED DESIGN LEVELS
- OVERLAND FLOW PATH
- PROPOSED GULLY PIT LOCATION
- PROPOSED SIDE ENTRY PIT
- PROPOSED MANHOLE LOCATION
- PROPOSED BIO-RETENTION AREA

0 10 20 25m
1 : 1000 (A3) 1 : 500 (A1)

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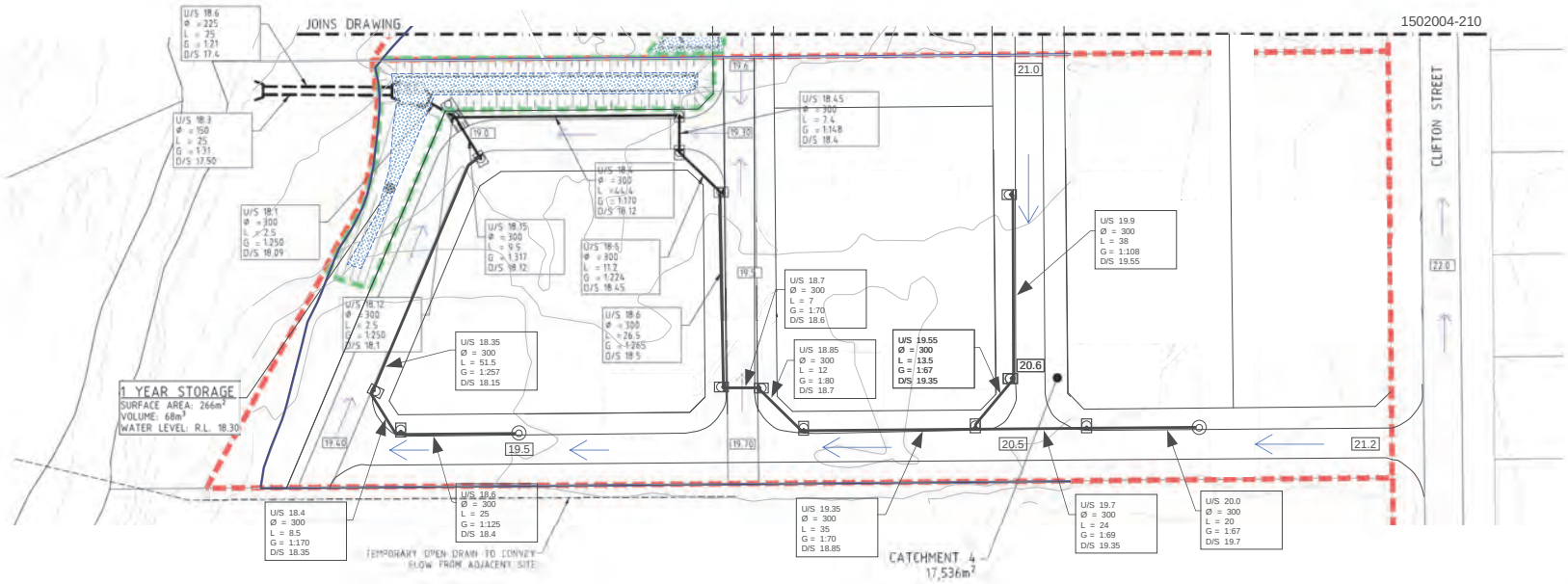
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KELMSCOTT
CLIFTON STREET NORTH LSP DRAINAGE
POST - DEVELOPMENT DRAINAGE
1 YEAR EVENT PLAN SHEET 3 OF 4
DRAWING NO: 1502004-210 B



LEGEND

- EXISTING CADASTRAL BOUNDARY
- TOPOGRAPHY CONTOURS
- CATCHMENT BOUNDARIES
- PROPOSED BASIN TOP
- PROPOSED BASIN BOTTOM
- PROPOSED DRAINAGE PIPE (300ø RCP U.N.O.)
- PROPOSED BASIN OUTLET PIPE WITH HEADWALL
- MAINDATED AREAS
- PROPOSED DESIGN LEVELS
- OVERLAND FLOW PATH
- PROPOSED GULLY PIT LOCATION
- PROPOSED SIDE ENTRY PIT
- PROPOSED MANHOLE LOCATION
- PROPOSED COMBINATION PIT LOCATION
- PROPOSED BIO-RETENTION AREA
- TEMPORARY OPEN DRAIN

0 10 20 25m
1 : 1000 (A3) 1 : 500 (A1)

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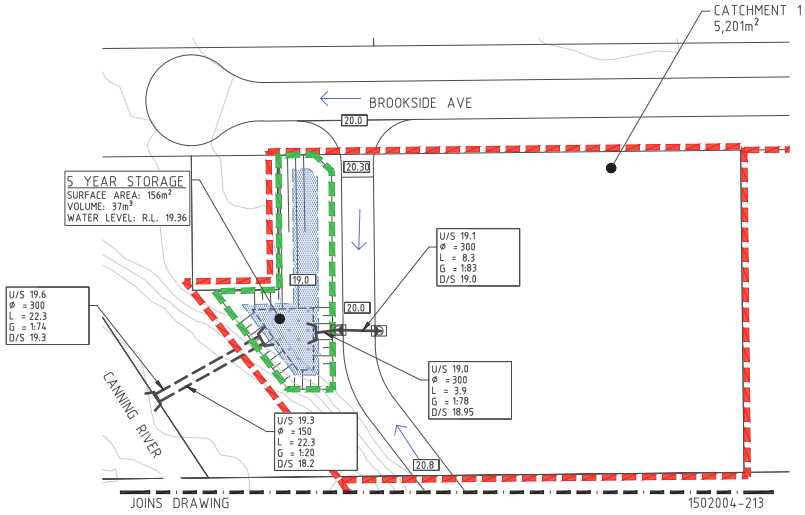
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DATUM:
HORIZONTAL: MGA94
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CLIFFTON STREET NORTH LSP DRAINAGE
POST - DEVELOPMENT DRAINAGE
1 YEAR EVENT PLAN SHEET 4 OF 4

DRAWING NUMBER: 1502004-211
REV: A



LEGEND

- EXISTING CADASTRAL BOUNDARY
- TOPOGRAPHY CONTOURS
- CATCHMENT BOUNDARIES
- PROPOSED BASIN TOP
- PROPOSED BASIN BOTTOM
- PROPOSED DRAINAGE PIPE (300Ø RCP U.N.O.)
- PROPOSED BASIN OUTLET PIPE WITH HEADWALL
- INUNDATED AREAS
- 24.0 PROPOSED DESIGN LEVELS
- OVERLAND FLOW PATH
- PROPOSED GULLY PIT LOCATION
- PROPOSED SIDE ENTRY PIT
- PROPOSED BIO-RETENTION AREA

0 10 20 25m
1 : 1000 (A3) 1 : 500 (A1)

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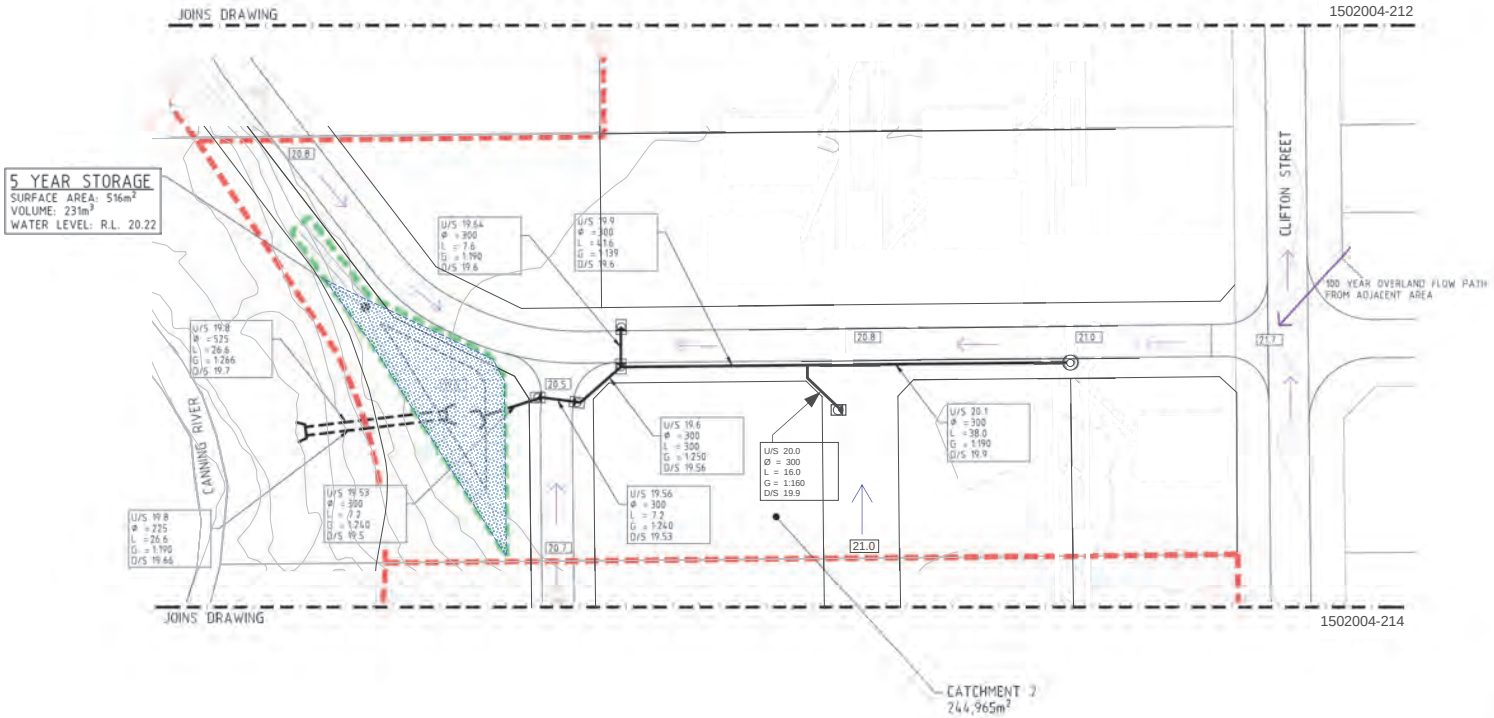
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CLIFFTON STREET NORTH LSP DRAINAGE
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5 YEAR EVENT PLAN SHEET 1 OF 4

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REV: A

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LEGEND

- EXISTING CADASTRAL BOUNDARY
- TOPOGRAPHY CONTOURS
- CATCHMENT BOUNDARIES
- PROPOSED BASIN TOP
- PROPOSED BASIN BOTTOM
- PROPOSED DRAINAGE PIPE (300ø RCP U.N.O.)
- PROPOSED BASIN OUTLET PIPE WITH HEADWALL
- INUNDATED AREAS
- 24.0 PROPOSED DESIGN LEVELS
- OVERLAND FLOW PATH
- PROPOSED GULLY PIT LOCATION
- PROPOSED SIDE ENTRY PIT
- PROPOSED MANHOLE LOCATION
- PROPOSED BIO-RETENTION AREA

0 10 20 25m
1 : 1000 (A3) 1 : 500 (A1)

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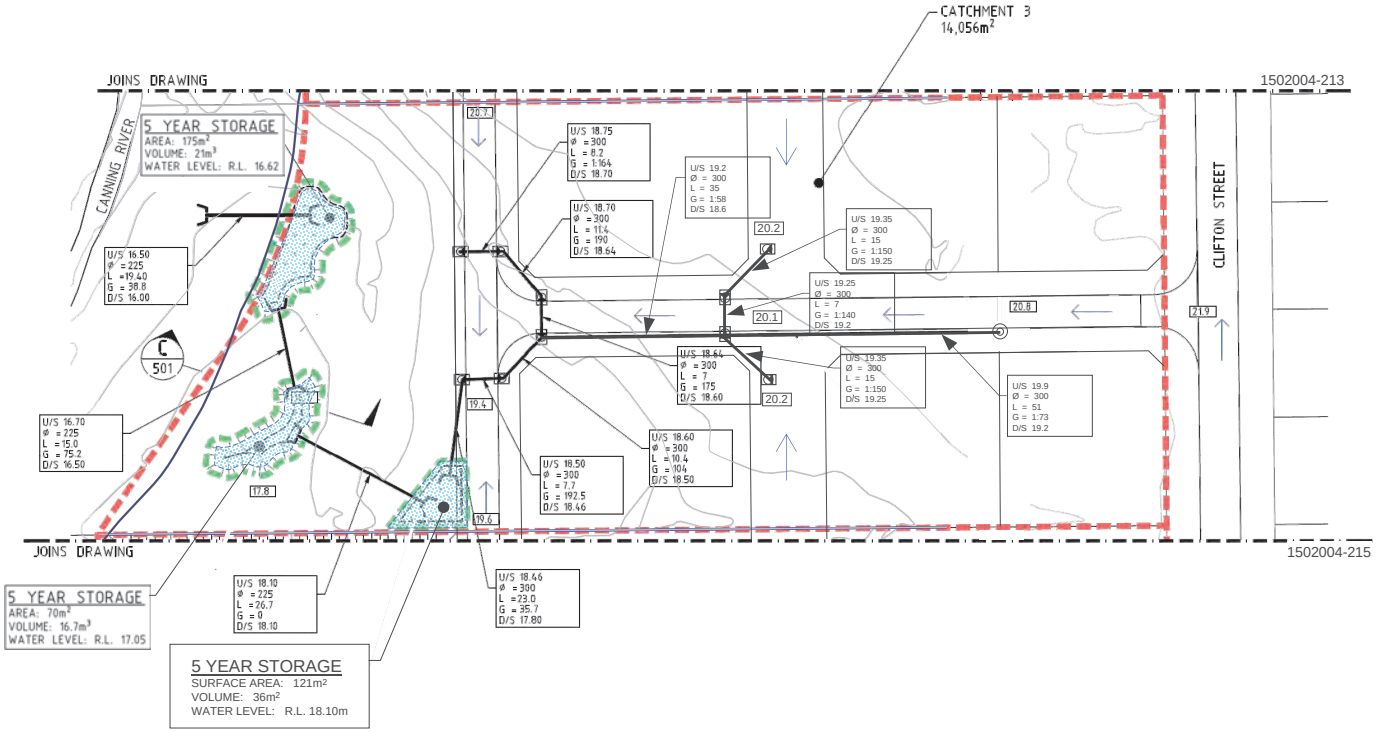
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CLIFFTON STREET NORTH LSP DRAINAGE
POST - DEVELOPMENT DRAINAGE
5 YEAR EVENT PLAN SHEET 2 OF 4

DRAWING NO. 1502004-213 REV A



LEGEND

- EXISTING CADASTRAL BOUNDARY
- TOPOGRAPHY CONTOURS
- CATCHMENT BOUNDARIES
- PROPOSED BASIN TOP
- PROPOSED BASIN BOTTOM
- PROPOSED DRAINAGE PIPE (300ø RCP U.N.O.)
- PROPOSED BASIN OUTLET PIPE WITH HEADWALL
- INUNDATED AREAS
- 24.3 PROPOSED DESIGN LEVELS
- OVERLAND FLOW PATH
- PROPOSED GULLY PIT LOCATION
- PROPOSED SIDE ENTRY PIT
- PROPOSED MANHOLE LOCATION
- PROPOSED BIO-RETENTION AREA

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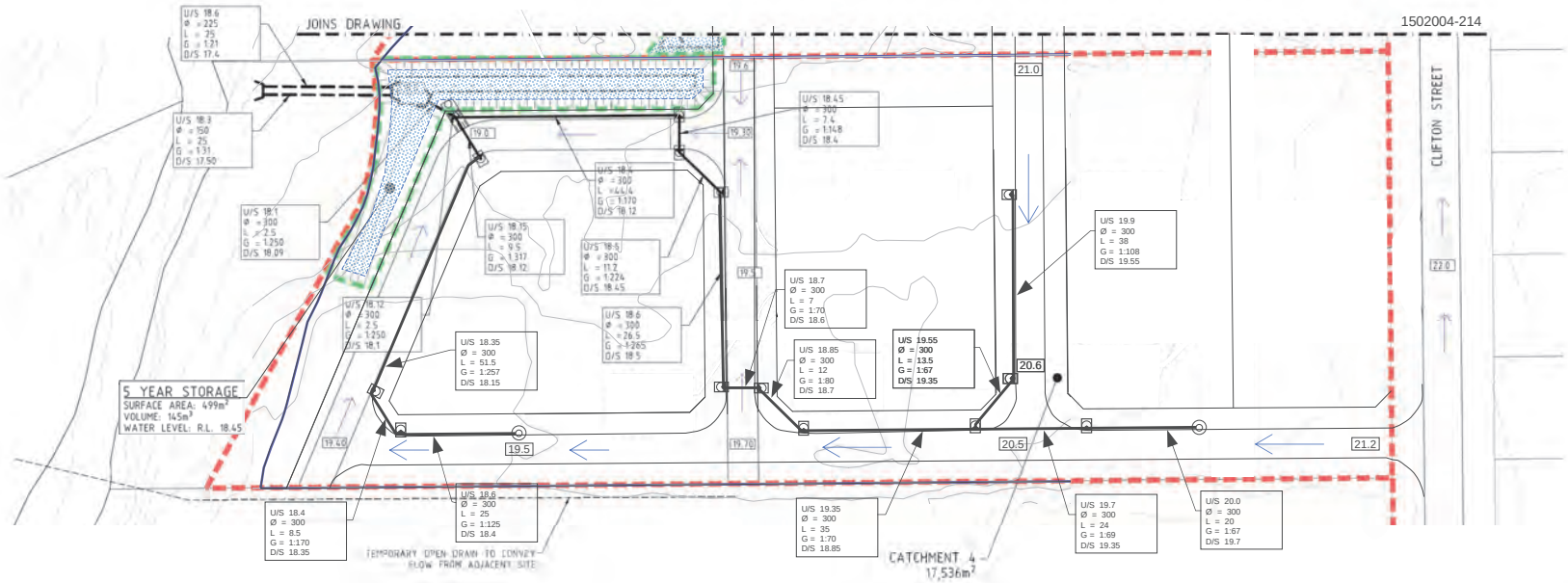
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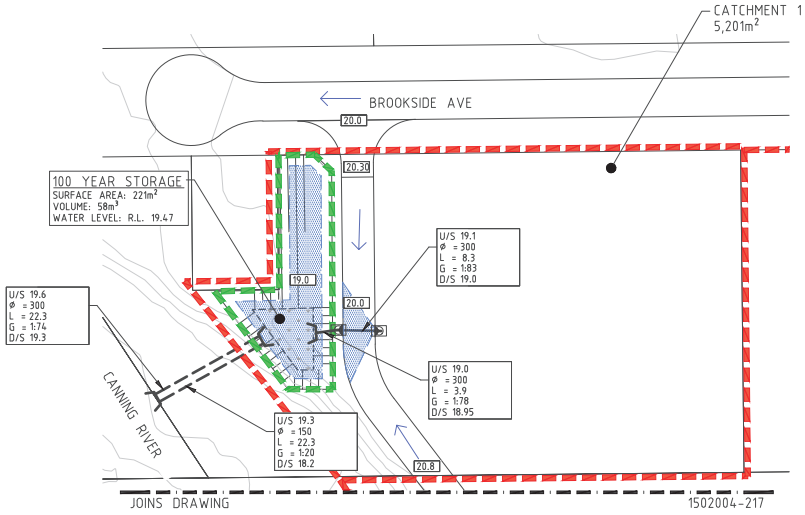
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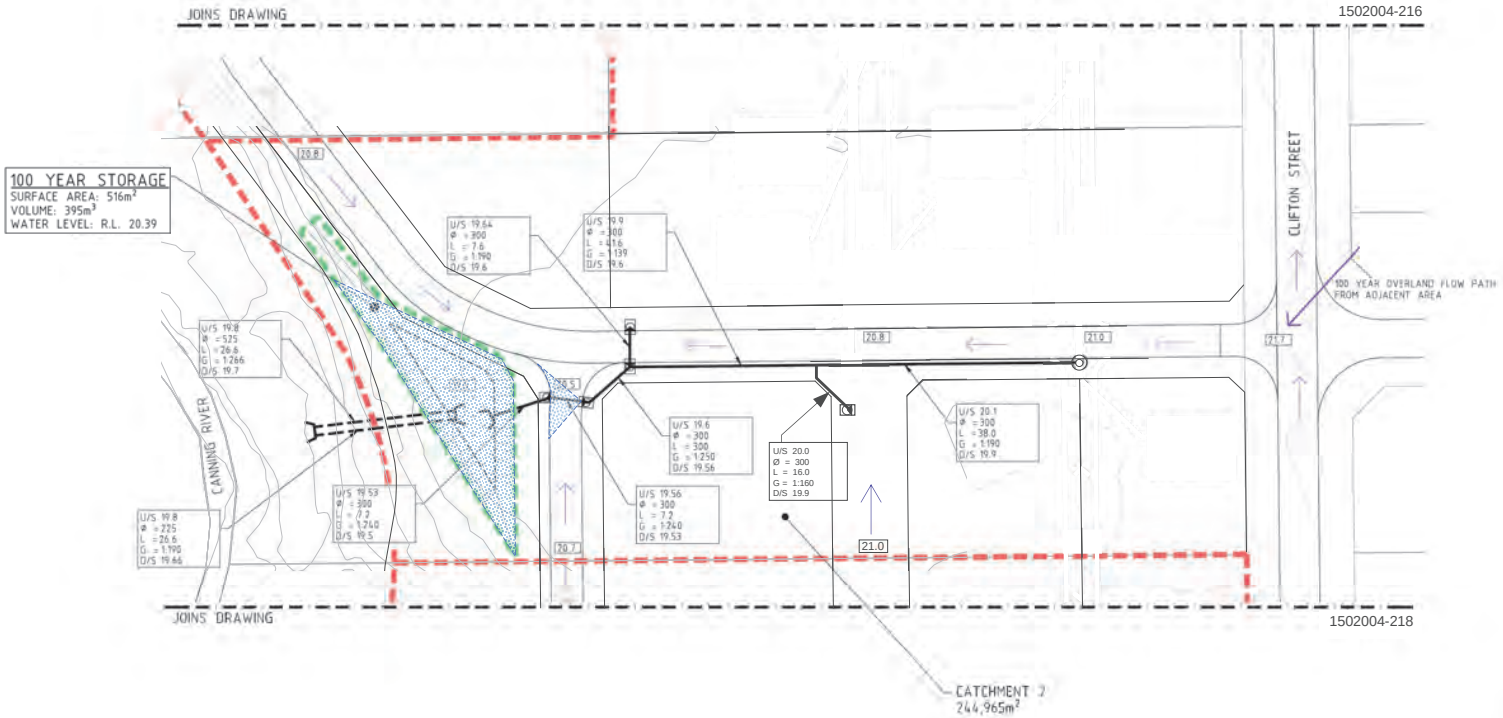
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SPC Agenda Page 333

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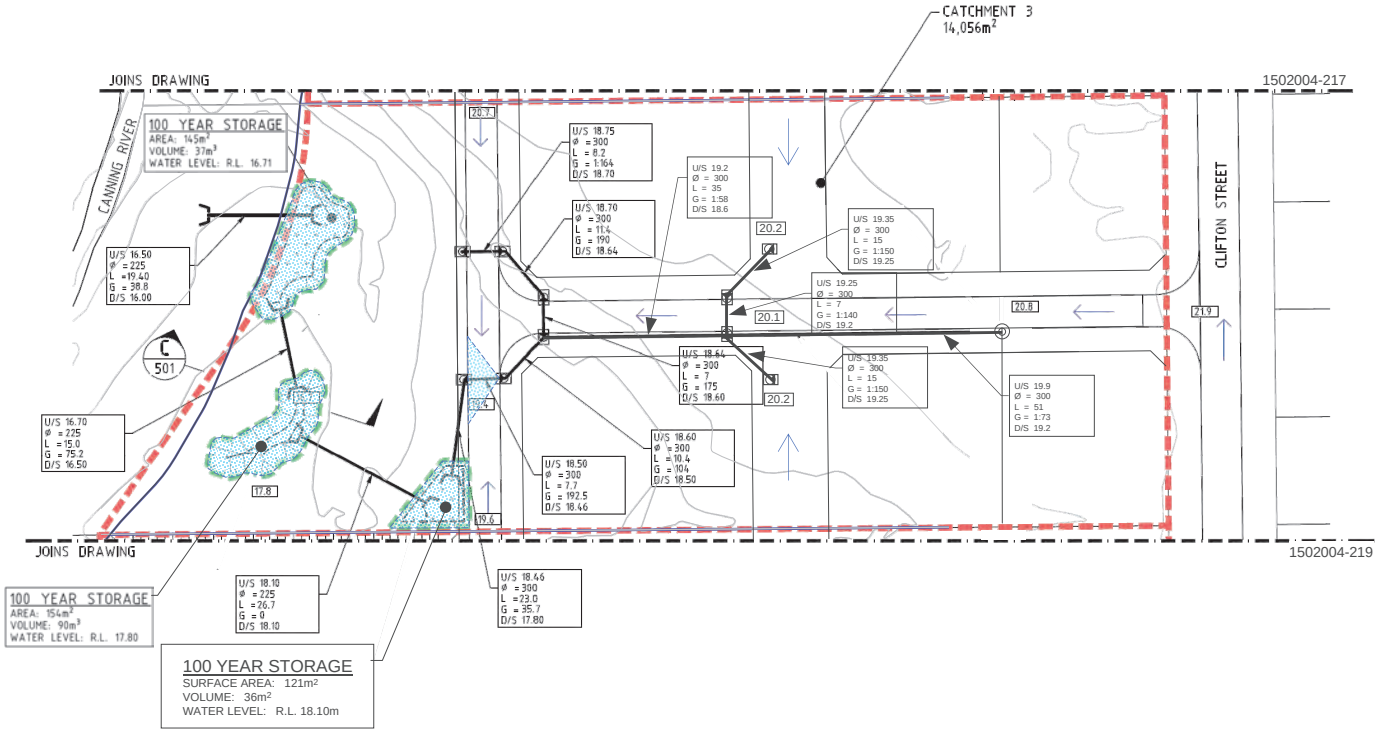
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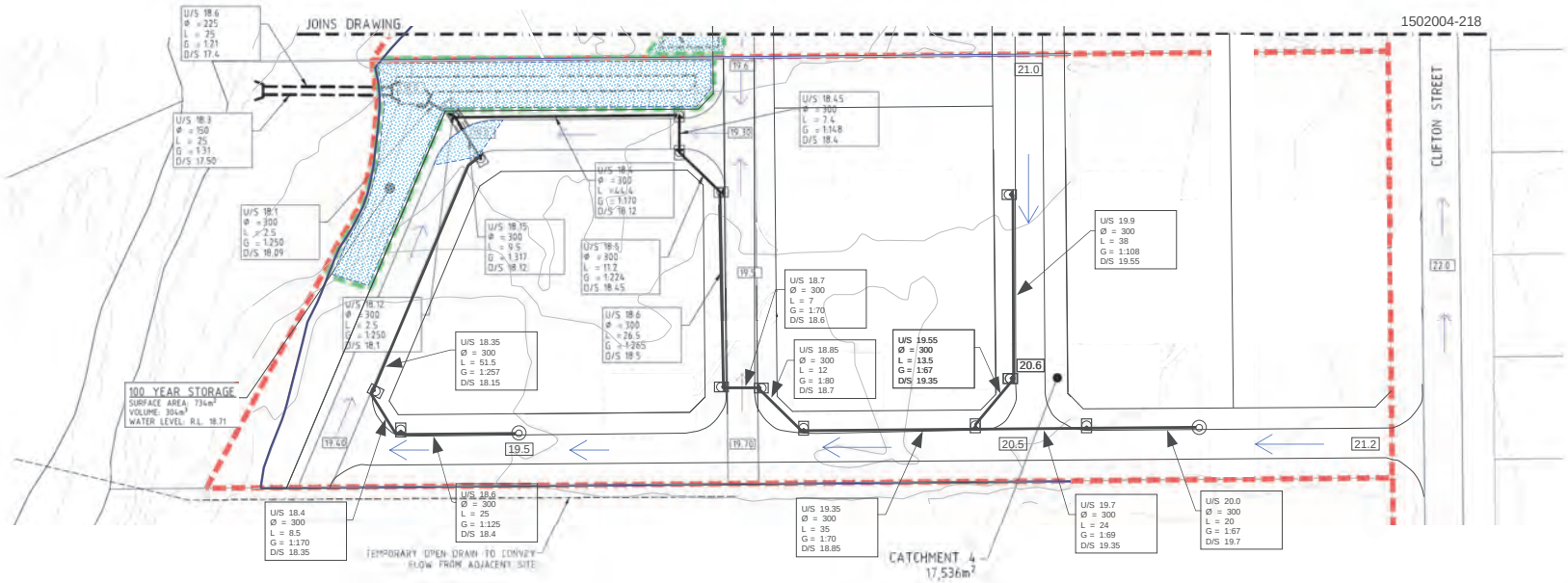
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APPENDIX D

Traffic Impact Assessment
(Cardno)

Transport Impact Assessment

Clifton Street North Local Structure Plan

CW1199700/304900223



Prepared for

Antonio Macri

24 June 2022

Cardno

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Prepared for	Antonio Macri
Project Name	Clifton Street North Local Structure Plan
File Reference	CW1199700-TR-RP-001-A-TIA- Clifton St North Structure Plan
Job Reference	CW1199700
Date	24 June 2022
Version Number	A

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Effective Date 24/06/2022

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Business Leader – Traffic and Transport Planning

Date Approved 24/06/2022

Document History

Version	Effective Date	Description of Revision	Prepared by	Reviewed by
A	24 June 2022	For Issue	DR	DH/RJC

Table of Contents

1	Introduction		1
	1.1	Background	1
	1.2	Site Context	1
2	Existing Situation		2
	2.1	Surrounding Land Uses	2
	2.2	Existing External Road Network	2
	2.3	Existing Traffic Volumes	4
	2.4	Existing Public Transport Facilities	4
	2.5	Existing Pedestrian/Cycle Network Facilities	5
	2.6	Existing Crash Data	6
3	Proposed Development		7
	3.1	Proposed Development	7
	3.2	Access Arrangements	8
4	Changes to Surrounding Transport Network		9
	4.1	Road Network	9
	4.2	Pedestrian/Cycle Network	9
	4.3	Public Transport Networks	9
5	Analysis of Transport Network		10
	5.1	Assessment Overview	10
	5.2	Key Assumptions	12
	5.3	Development Trip Generation	16
	5.4	Development Trip Distribution	16
	5.5	Traffic Volumes	18
	5.6	Intersection Performance	21
	5.7	SIDRA Analysis Results	22
	5.8	SIDRA Analysis Summary	33
6	Conclusions and Summary		34

Appendices

Appendix A WAPC Checklist

Appendix B Site Plans

Tables

Table 2-1 Road Network Classification 3
Table 2-2 Daily Traffic Volumes 4
Table 2-3 Bus Routes and Service Frequency 4
Table 2-4 Total Crashes 6
Table 2-5 Intersection Crashes 6
Table 5-1 Assessment Summary 11
Table 5-2 Right Turn Traffic Diversion from Page Road to Gilwell Avenue 14
Table 5-3 Trip Generation Rate 16
Table 5-4 Directional Distribution 16
Table 5-5 Total Trip Generation 16
Table 5-6 Level of Service (LOS) Performance Criteria 21
Table 5-7 SIDRA Results – Albany Highway and Turner Place (Scenario 1) 22
Table 5-8 SIDRA Results – Albany Highway and Turner Place (Scenario 2) 23
Table 5-9 SIDRA Results – Albany Highway and Turner Place (Scenario 3) 23
Table 5-10 SIDRA Results – Albany Highway and Page Road (Scenario 1) 24
Table 5-11 SIDRA Results – Albany Highway and Page Road (Scenario 2) 25
Table 5-12 SIDRA Results – Albany Highway and Page Road (Scenario 3) 25
Table 5-13 SIDRA Results – Albany Highway and Gilwell Avenue (Scenario 1) 26
Table 5-14 SIDRA Results – Albany Highway and Gilwell Avenue (Scenario 2) 26
Table 5-15 SIDRA Results – Albany Highway and Gilwell Avenue (Scenario 3) 27
Table 5-16 SIDRA Results – Gilwell Avenue and Clifton Street (Scenario 1) 28
Table 5-17 SIDRA Results – Gilwell Avenue and Clifton Street (Scenario 2) 29
Table 5-18 SIDRA Results – Gilwell Avenue and Clifton Street (Scenario 3) 29
Table 5-19 SIDRA Results – Brookside Avenue and Access 1 (Scenario 2) 30
Table 5-20 SIDRA Results – Brookside Avenue and Access 1 (Scenario 3) 30
Table 5-21 SIDRA Results – Clifton Street and Access 2 (Scenario 2) 31
Table 5-22 SIDRA Results – Clifton Street and Access 2 (Scenario 3) 32

Figures

Figure 1-1 LSP Location 1
Figure 2-1 Existing Zoning 2
Figure 2-2 Road Hierarchy 3
Figure 2-3 Bus Routes in the Vicinity of the LSP 4
Figure 2-4 Pedestrian and Cycling Facilities 5
Figure 2-5 Crash Locations 6
Figure 3-1 Proposed Development 7
Figure 3-2 Access Arrangements 8

Figure 5-1 Assessed intersections 10
Figure 5-2 Denny Avenue Level Crossing Removal Concept Design 12
Figure 5-3 Albany Highway / Page Road intersection 13
Figure 5-4 Albany Highway / Gilwell Avenue intersection 13
Figure 5-5 Traffic Diversion from Page Road to Gilwell Avenue 14
Figure 5-6 Traffic Volumes on Albany Highway South of Tonkin Highway 15
Figure 5-7 Trip Distribution – Outbound 17
Figure 5-8 Trip Distribution – Inbound 17
Figure 5-9 Scenario 1 – 2021 Base Scenario Traffic Volumes 18
Figure 5-10 Scenario 2 – 2024 FutureTraffic with Development Volumes 19
Figure 5-11 Scenario 3 – 2031 FutureTraffic with Development Volumes 20
Figure 5-12 SIDRA Layout – Albany Highway and Turner Place 22
Figure 5-13 SIDRA Layout – Albany Highway and Page Road 24
Figure 5-14 SIDRA Layout – Albany Highway and Gilwell Avenue 26
Figure 5-15 SIDRA Layout – Gilwell Avenue and Clifton Street 28
Figure 5-16 SIDRA Layout – Brookside Avenue and Access 1 30
Figure 5-17 SIDRA Layout – Clifton Street/ Access 2 31

1 Introduction

1.1 Background

Cardno now Stantec was commissioned by Antonio Macri (the Client) to prepare a Transport Impact Assessment for the proposed Clifton Street North Local Structure Plan (''the Site'). The LSP is located in the suburb of Kelmscott in the City of Armadale.

This report has been prepared in accordance with the Western Australian Planning Commission (WAPC) *Transport Impact Assessment Guidelines Volume 2 – Planning Schemes, Structure Plans & Activity Centre Plans* (2016).

1.2 Site Context

The Site is located at No. 32 Brookside Avenue and No. 1, 15, 17 and 27 Clifton Street, Kelmscott as shown in Error! Reference source not found..

Figure 1-1

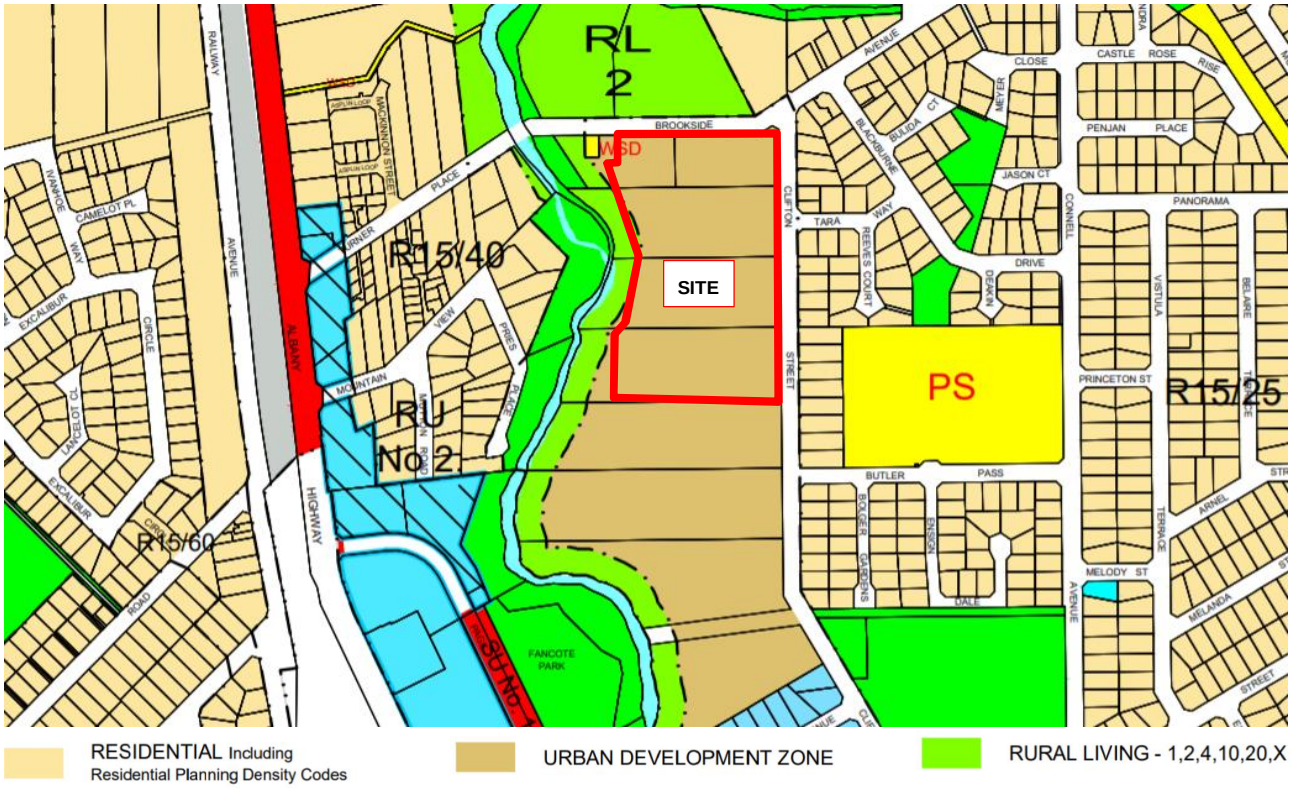


2 Existing Situation

2.1 Surrounding Land Uses

Pursuant to the provision of the *City of Armadale Town Planning Scheme No. 4* (TPS4), the Site is zoned '*Urban Development Zone'* as shown in **Figure 2-1**. The land within the LSP area is mostly vacant land with several existing single dwellings fronting Clifton Street. The Site is surrounded by Residential land uses to the east and Rural Living to the north.

Figure 2-1 Existing Zoning



Source: City of Armadale Town Planning Scheme No. 4

2.2 Existing External Road Network

Road classifications are defined in the Main Roads Functional Hierarchy as follows:

Primary Distributors (light blue): Form the regional and inter-regional grid of Main Roads WA traffic routes and carry large volumes of fast-moving traffic. Some are strategic freight routes and all are National or State roads. They are managed by Main Roads.

District Distributor A (green): These carry traffic between industrial, commercial, and residential areas and connect to Primary Distributors. These are likely to be truck routes and provide only limited access to adjoining property. They are managed by Local Government.

District Distributor B (dark blue): Perform a similar function to District Distributor A but with reduced capacity due to flow restrictions from access to and roadside parking alongside adjoining property. These are often older roads with traffic demand in excess of that originally intended. District Distributor A and B roads run between land-use cells and not through them, forming a grid that would ideally be around 1.5 kilometres apart. They are managed by Local Government.

Local Distributors (orange): Carry traffic within a cell and link District Distributors at the boundary to access roads. The route of the Local Distributor discourages through traffic so that the cell formed by the grid of District Distributors only carries traffic belonging to or serving the area. These roads should accommodate buses but discourage trucks. They are managed by Local government.

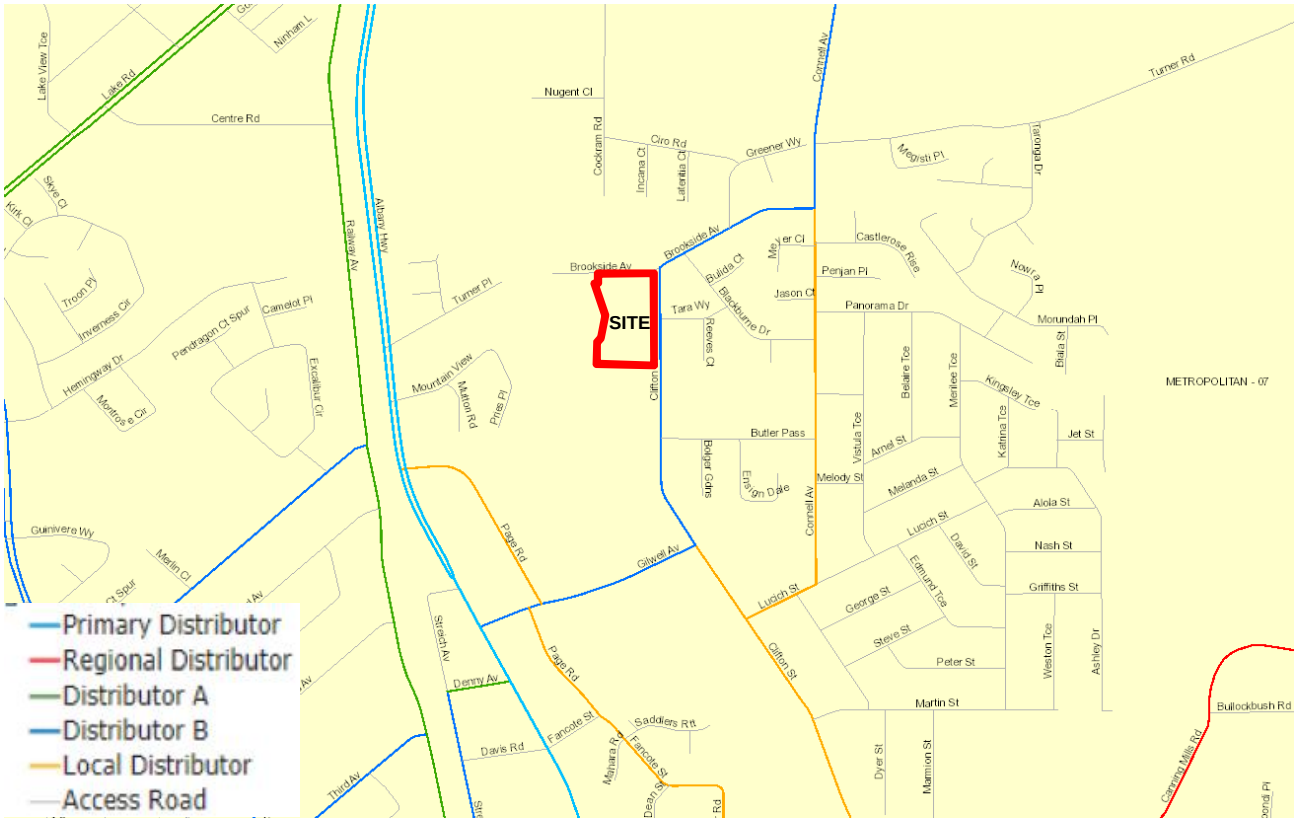
Access Roads (grey): Provide access to abutting properties with amenity, safety and aesthetic aspects having priority over the vehicle movement function. These roads are bicycle and pedestrian friendly. They are managed by Local Government.

The LSP is bounded by Brookside Avenue to the north and Clifton Street to the east. The surrounding road network is further described in **Table 2-1** and shows the hierarchy as per the Main Roads WA Road Information Mapping System, whilst **Figure 2-2** shows the road hierarchy.

Table 2-1 Road Network Classification

	Road Hierarchy		Road Network			
	Road Hierarchy	**Jurisdiction**	**No. of Lanes**	**No. of Footpaths**	**Width (m)**	**Posted Speed (km/h)**
Brookside Avenue	Access Road	Local Government	2	1	5m	50
Clifton Street	Distributor B	Local Government	2	1	7.5m	50
Tara Way	Access Road	Local Government	2	-	7.2m	50

Figure 2-2 Road Hierarchy



Source: MRWA Road Information Mapping System

2.3 Existing Traffic Volumes

The most recent traffic volumes for the roads in the vicinity of the LSP were obtained from the City of Armadale and are summarised in **Figure 2-2**.

Table 2-2 Daily Traffic Volumes

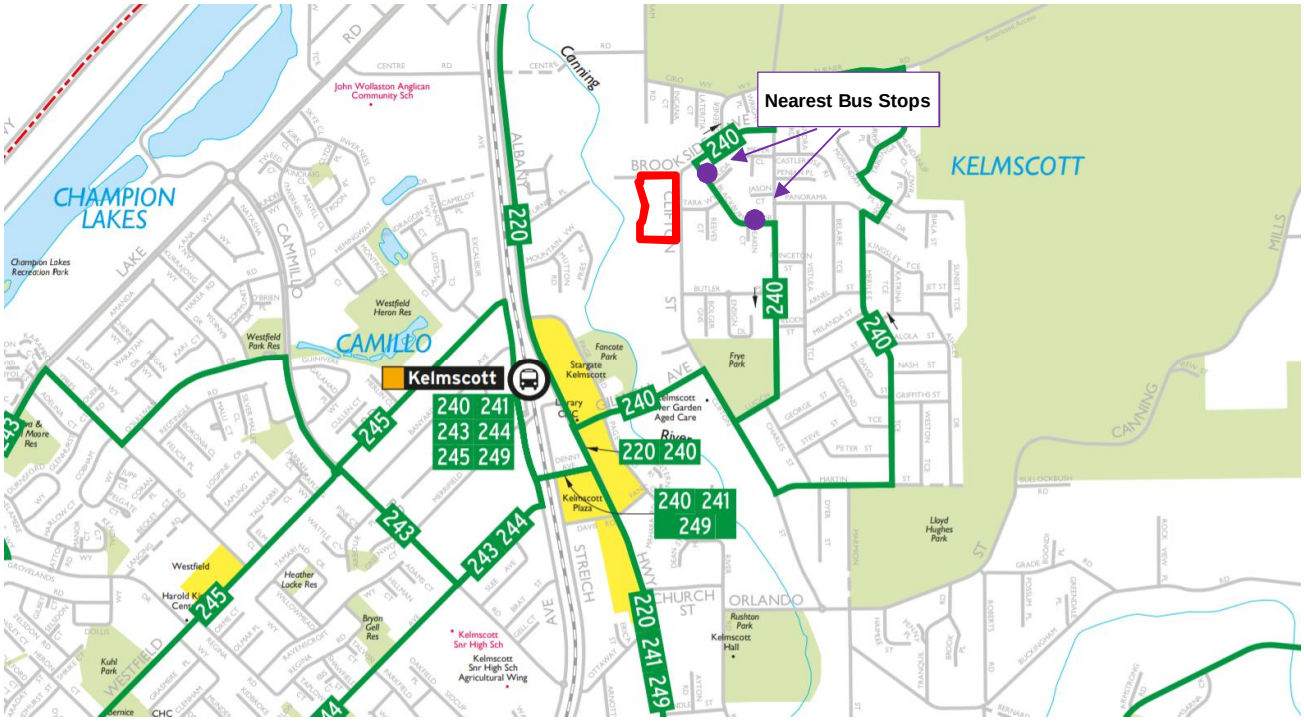
Road Name	Year	Average Weekday Traffic (%HV)	Source
Brookside Avenue (Between Clifton Street and Connell Avenue opposite house No. 31)	2017	1226 (5.4%)	City of Armadale
Clifton Street (Between Brookside Avenue and Gilwell Ave opposite Tara Street)	2017	1608 (4.2%)	City of Armadale

2.4 Existing Public Transport Facilities

The nearest bus stops to the Site are located approximately 130m east of the Site, as shown in **Figure 2-3**. Bus route 240 operates from these stops along Blackburne Drive and travels to Kelmscott Station.

The Kelmscott Railway Station is located within 550m walking distance of the LSP with frequent services between Armadale Railway Station and Perth Central Railway Station. Public transport facilities in the vicinity of the LSP are shown in **Figure 2-3** and their service frequencies are summarised in **Table 2-3**.

Figure 2-3 Bus Routes in the Vicinity of the LSP



Source: Transperth Network Maps (2022)

Table 2-3 Bus Routes and Service Frequency

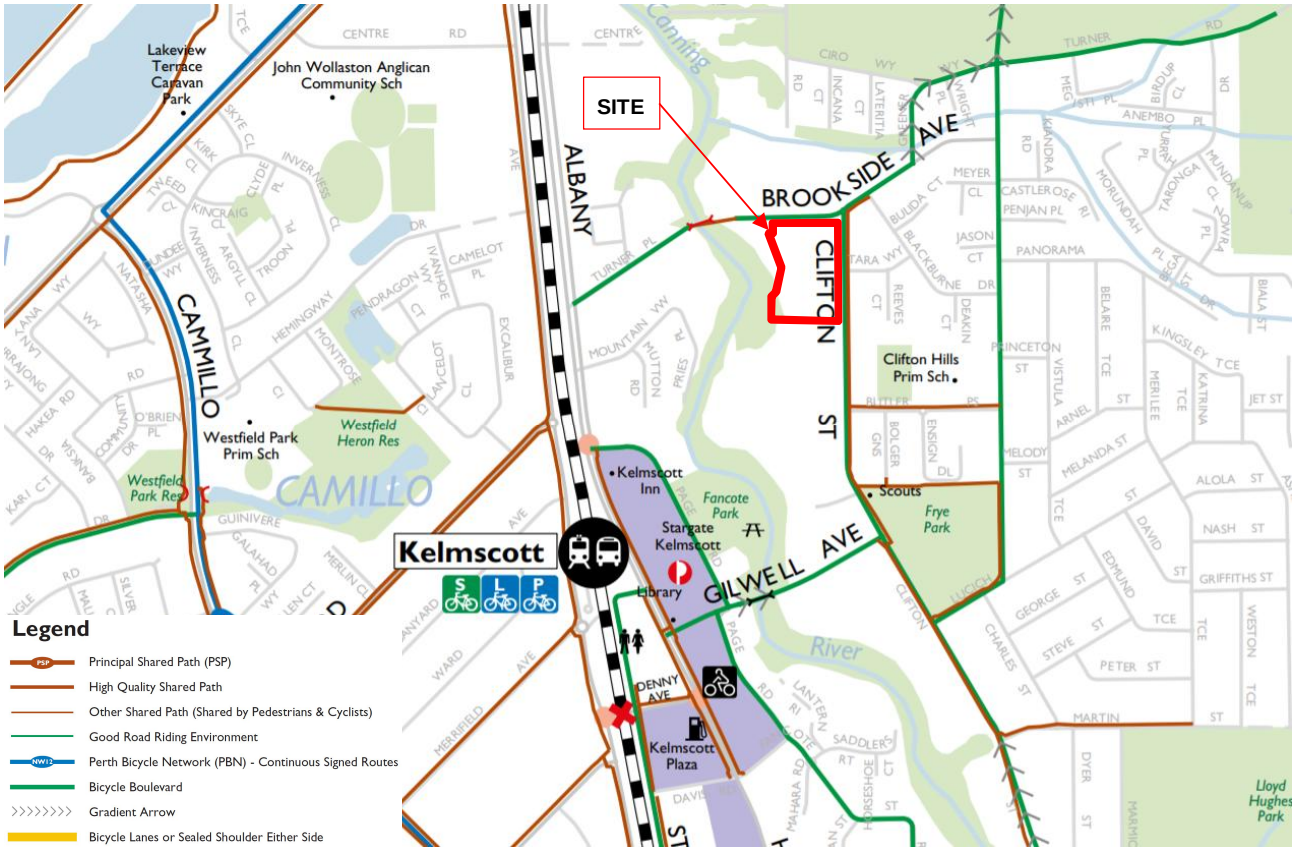
Route No.	Route Description	Service Frequency		
		Weekdays	**Saturday**	**Sunday and Public Holiday**
240	Kelmscott Station - Clifton Hills - Kelmscott Station (Circular Service)	Between every 30 minutes – 2 hours, operating 6:30am – 6:30pm	No service	No service

2.5 Existing Pedestrian/Cycle Network Facilities

Shared paths exist along Clifton Street, Butler Pass, Connell Avenue and Luchich Street as shown in **Figure 2-4**. "Good Road Riding Environments" extend along Brookside Avenue, Turner Road, Clifton Street, Connell Avenue, Turner Place and Gilwell Avenue.

Overall, the Site is surrounded by good pedestrian and cycle network facilities.

Figure 2-4 Pedestrian and Cycling Facilities



Source: Department of Transport Bicycle Network Maps

2.6 Existing Crash Data

A crash assessment for the surrounding road network of the Site has been conducted using the *Main Roads WA Reporting Centre information* summarised in **Table 2-4** and **Table 2-5**. The assessment covers all the recorded accidents for the 5-year period between 1 January 2017 to 31 December 2021.

Table 2-4 Total Crashes

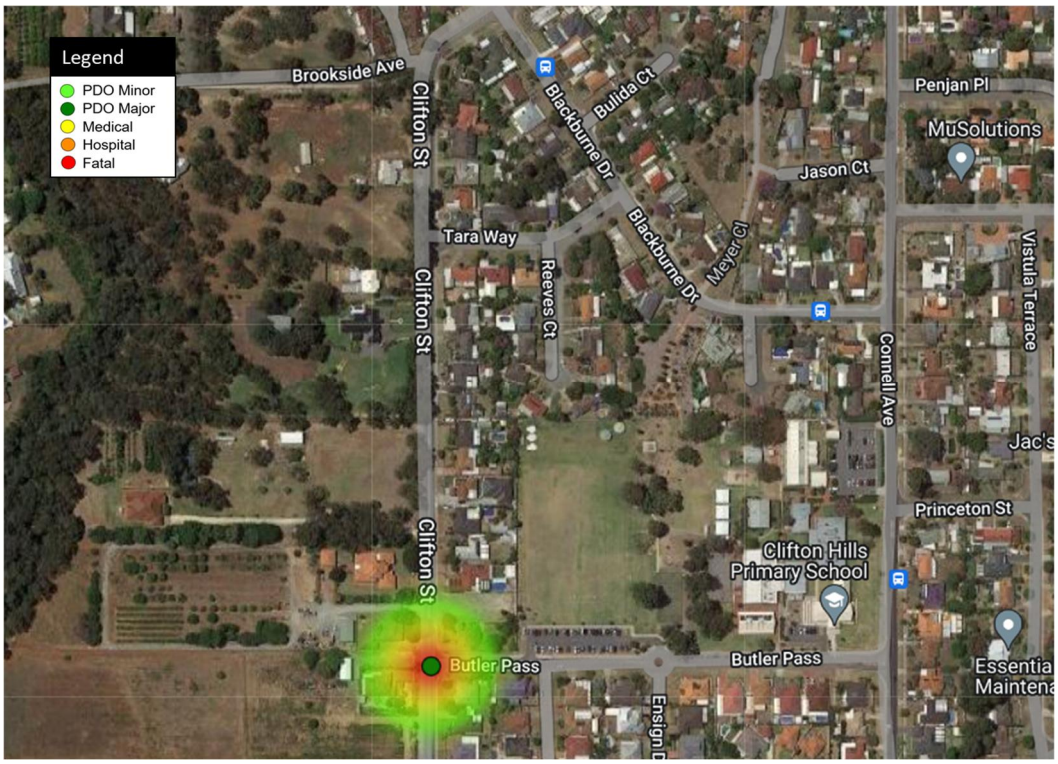
TOTAL CRASHES						
Type of Crash (RUM Code)	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	**Total Crashes**
Right Angle	-	-	-	1	-	**1**
Total	**-**	**-**	**-**	**1**	**-**	**1**

Table 2-5 Intersection Crashes

INTERSECTION CRASHES						
Intersection Name	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	**Total Crashes**
Clifton St - Butler Pass	-	-	-	1	-	**1**
Total	**-**	**-**	**-**	**1**	**-**	**1**

Figure 2-5 shows the crash locations and their intensity along Clifton Street.

Figure 2-5 Crash Locations



A summary of the crash data is as follows:

- A total of 1 crash was recorded which resulted in major property damage; and
- The single crash occurred at the intersection of Clifton Street and Butler Pass.

It is very unlikely that the proposed LSP development would have any material impact on road safety in the area due t6o its small scale.

3 Proposed Development

3.1 Proposed Development

The proposal consists of the following site specific components:

- 397 residential lots;
- Public open space; and
- 6 new internal roads.

Figure 3-1 shows the conceptual layout plan for the LSP area.

Figure 3-1 Proposed Development



Source: Harley Dykstra (2022)

3.2 Access Arrangements

Vehicle access to each of the residential lots is proposed via the existing road network along Cliffton Street and Brookside Avenue. New internal roads are proposed as part of the LSP to allow for access to the proposed dwellings as shown in **Figure 3-2Figure 3-2**.

Figure 3-2 Access Arrangements



Source: Harley Dykstra (2022)

4 Changes to Surrounding Transport Network

4.1 Road Network

Cardno now Stantec contacted the City of Armadale and were advised that no changes are proposed to the existing road network.

4.2 Pedestrian/Cycle Network

According to the City of Armadale's 5 year plan, pedestrian footpaths are proposed on Brookside Avenue (Clifton Street to Blackburne Drive) – 85m and on Clifton Street (Luchich Street to Gilwell Avenue) – 175m.

4.3 Public Transport Networks

Cardno now Stantec contacted the Public Transport Authority and were advised that there are no changes proposed to the public transport network within the short term.

5 Analysis of Transport Network

5.1 Assessment Overview

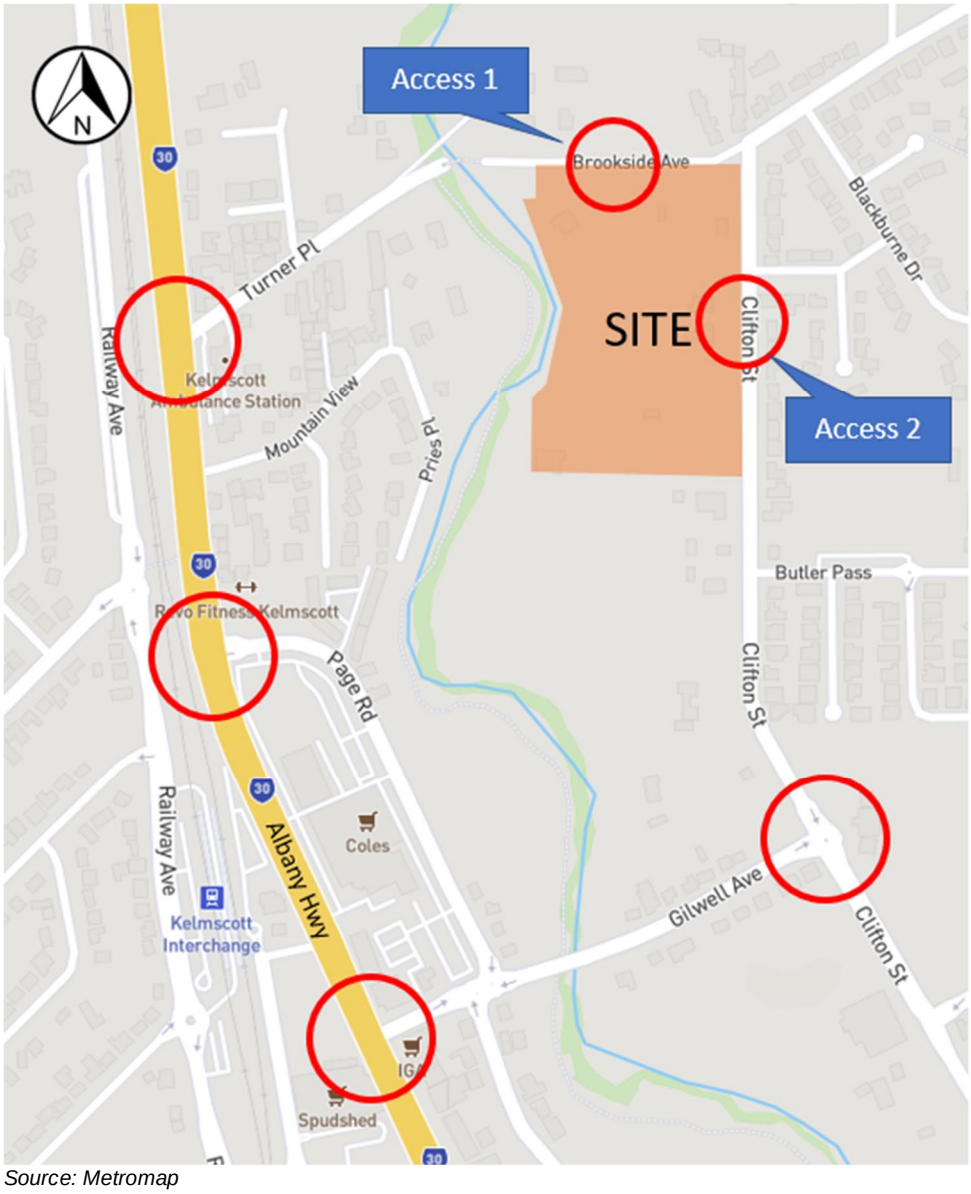
5.1.1 Assessed Intersections

SIDRA analysis has been undertaken for the following intersections in the vicinity of the Site:

- Albany Highway / Gilwell Avenue
- Albany Highway / Turner Place
- Albany Highway / Page Road
- Gilwell Avenue / Clifton Street
- Brookside Avenue / Access 1
- Clifton Street / Access 2

The locations of the assessed intersections are shown in **Figure 5-1**.

Figure 5-1 Assessed intersections



Source: Metromap

5.1.2 Assessment Years and Time Period

The following scenarios have been analysed for this assessment:

- **Scenario 1** – 2021: base scenario
- **Scenario 2** – 2024 future year with development: opening year of the proposed development, without connection between Turner Place and Brookside Avenue
- **Scenario 3** – 2031 future year with development: without connection between Turner Place and Brookside Avenue

Peak hours used in the analysis are based on the surrounding road network peak which is detailed below:

- AM Peak: 7:45 – 8:45
- PM Peak: 15:30 – 16:30

The peak hours were identified from traffic survey data which was collected by an external service provider on 25 November 2021 at the identified key intersections.

5.1.3 Assessment Summary

A summary of the intersections to be analysed under each scenario is shown in **Table 5-1**. It should be noted that the access intersections have not been assessed for the base scenario because as these accesses do not exist for the base year.

Table 5-1 Assessment Summary

Intersection	Scenario 1 – Base Scenario (2021)	Scenario 2 – 2024 traffic with development (Without Turner Place-Brookside Avenue link)	Scenario 3 – 2031 traffic with development (Without Turner Place-Brookside Avenue link)
Albany Highway / Gilwell Avenue	Assessed	Assessed	Assessed
Albany Highway / Turner Place	Assessed	Assessed	Assessed
Albany Highway / Page Road	Assessed	Assessed	Assessed
Gilwell Avenue / Clifton Street	Assessed	Assessed	Assessed
Brookside Avenue / Access 1	Not assessed. No volumes under base scenario.	Assessed	Assessed
Clifton Street / Access 2	Not assessed. No volumes under base scenario.	Assessed	Assessed

5.2 Key Assumptions

The assumptions/adjustments to the data and SIDRA model are discussed on the following sections:

5.2.1 Rerouting Caused by Denny Avenue Level Crossing Removal

The intersection of Denny Avenue and Albany Highway located to the southwest of the Site is being converted from a signal-controlled intersection to a priority-controlled intersection as shown in Error! Reference source not found..

Figure 5-2 Denny Avenue Level Crossing Removal Concept Design



Source: Metronet

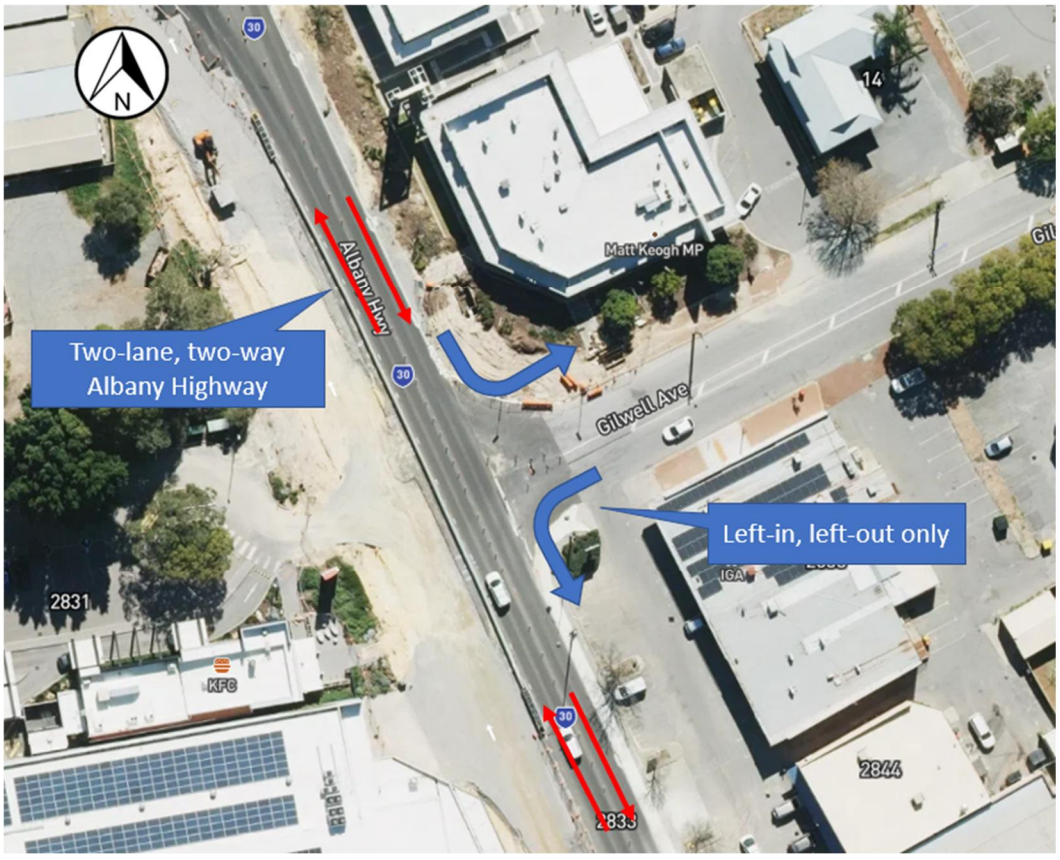
As part of the construction works for the Denny Avenue Level Crossing Removal, lane closures on the section of Albany Highway fronting Gilwell Avenue and Page Road were noted. Right-turn movements at the intersection of Albany Highway and Gilwell Avenue were also temporarily restricted. The intersection configurations for the affected intersections during the period of the traffic survey (25 November 2021) are shown in **Figure 5-3** and **Figure 5-4**.

Figure 5-3 Albany Highway / Page Road intersection



Source: Metromap

Figure 5-4 Albany Highway / Gilwell Avenue intersection



Source: Metromap

As already mentioned, the right-turn movements at the intersection of Albany Highway and Gilwell Avenue were restricted during the time of the traffic survey due to construction works being undertaken. It was assumed that the vehicles who would normally make these turning movements would have diverted to the Albany Highway/Page Road intersection.

To estimate the right turning movement volumes for the Albany Highway/Gilwell Avenue and Albany Highway/Page Road intersections under the current geometric configurations, a sensitivity analysis was undertaken for different percentages listed in **Table 5-2**.

Table 5-2 Right Turn Traffic Diversion from Page Road to Gilwell Avenue

% Split	2021 Traffic Volume Page Road/ Albany Hwy Average Delay and LOS	2021 Traffic Volume Gilwell Avenue/ Albany Hwy Average Delay and LOS
80% of right turns exiting and 20% entering Page Rd diverted to Gilwell Ave	AM Peak: 17.8/LOS B PM Peak: 20.9/LOS C	AM Peak: 3.6/ LOS A PM Peak: 3.0/LOS A
70% of right turns exiting and 30% entering Page Rd diverted to Gilwell Ave	AM Peak: 17.8/LOS B PM Peak: 20.4/LOS C	AM Peak: 3.3/LOS A PM Peak: 2.8/LOS A
60% of right turns exiting and 40% entering Page Rd diverted to Gilwell Ave	AM Peak: 17.6/LOS B PM Peak: 20.0/LOS B	AM Peak: 3.1/LOS A PM Peak: 2.7/LOS A

Based on the above sensitivity analysis and for a robust assessment, it was assumed that 80% of the right-turn volumes exiting Page Road and 20% of the right-turn volumes entering Page Road would be associated with the Albany Highway/Gilwell Avenue intersection under normal traffic operations as illustrated in **Figure 5-5**.

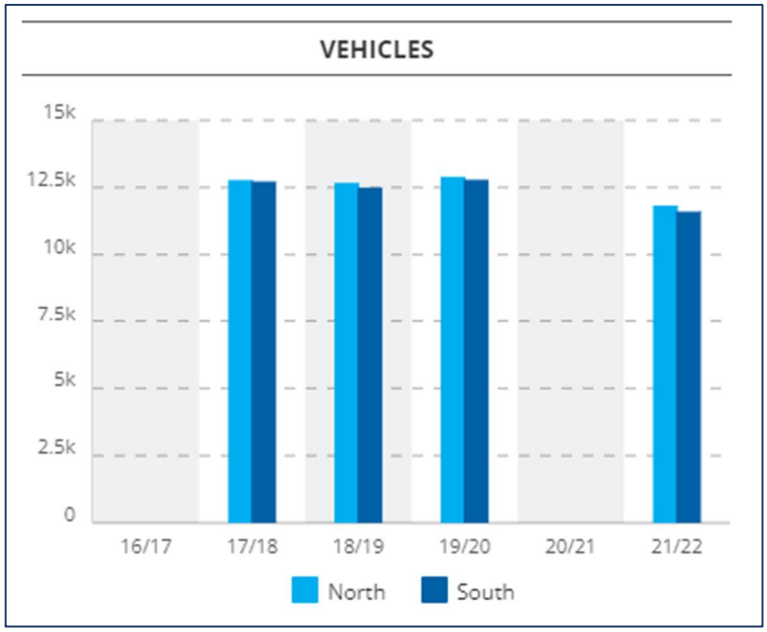
Figure 5-5 Traffic Diversion from Page Road to Gilwell Avenue



5.2.2 Volume Upscale Factor

Based on average daily traffic on Albany Highway South of Tonkin Highway as shown in **Figure 5-6**, there is a noticeable drop in the traffic flows in the 2021/2022 data which could potentially be related to the COVID-19 pandemic and the roadworks associated with the Denny Avenue Level Crossing Removal project. Hence, the surveyed traffic data may not be fully representative of the actual volumes that would have been observed at the key intersections under normal conditions. For a robust assessment, a factor of 109% has been applied to the 2021 surveyed data to obtain volumes which are equivalent to pre-covid years (prior to 2020).

Figure 5-6 Traffic Volumes on Albany Highway South of Tonkin Highway



Source: Main Roads Traffic Map

5.2.3 Other Assumptions

- Annual growth rate of 1.0% applied to the 2021 traffic volumes to obtain 2024 and 2031 traffic flows. This is based on the historical traffic growth calculated from the available traffic counts within the surrounding road network.
- Percentage of heavy vehicles based on 2021 traffic counts and assumed to be the same for future scenarios
- As per SCATS data, the peak activity period occurs from 7:45 AM to 8:45 AM and 4:45 PM to 5:45 PM on weekdays.
- The network was modelled in accordance with MRWA Operational Modelling Guidelines, as a network model in SIDRA 9.
- Dimensions of all intersection elements (e.g., lane width, median width, etc.) were measured from the latest Metromap aerial photos.
- Approach and exit speeds were based on posted speed limits from MRWA Road Information Mapping System.
- Intersection controls are anticipated to remain the same for future scenarios. Controls at the proposed new accesses are assumed to be give-way.

5.3 Development Trip Generation

Trip generation rates from the *Institute of Transportation Engineers* (*ITE) Trip Gen Manual 10th edition* and *NSW Roads & Maritime Services (RMS)* as detailed in **Table 5-3** were used to calculate the estimated trip generation for the Site. **Table 5-4** shows the directional distribution and **Table 5-5** summarises the total expected trips to be generated by the proposed site.

Table 5-3 Trip Generation Rate

Land Use	ITE Code/Source	Yield	AM Peak	PM Peak
Single Detached Dwelling	ITE 213	232 dwellings	0.76 per dwelling	1.00 per dwelling
Multifamily Housing (mid-rise)	RMS Technical Direction TDT 2031/04a	165 dwellings	0.53 per unit	0.32 per unit

Table 5-4 Directional Distribution

Land Use	AM Peak		PM Peak	
	In	**Out**	**In**	**Out**
Single Detached Dwelling	26%	74%	64%	36%
Multifamily Housing (mid-rise)	26%	74%	61%	39%

Table 5-5 Total Trip Generation

Land Use	AM Peak Hour		PM Peak Hour	
	In	**Out**	**In**	**Out**
Single Detached Dwelling	46	130	148	84
Multifamily Housing (mid-rise)	23	64	32	20
Sub-Total	69	194	180	104
TOTAL	263		284	

The proposed development is expected to generate approximately 263 vehicles during the AM peak hour and 284 vehicles during the PM peak hour respectively. It should be noted that the proposed site is located in close proximity to excellent public transport services and cycling facilities. Hence, it is expected that the vehicular trips would potentially be overestimated.

5.4 Development Trip Distribution

The assumed trip distributions of the traffic generated within the proposed development are illustrated in **Figure 5-7** and **Figure 5-8.** The development distribution considers the following:

- Based on the surrounding road network, it was assumed that 95% of the development trip will be westbound towards Albany Highway and the remaining 5% will be eastwards along Brookside Avenue.
- Turning distributions at existing intersections are calculated based on existing traffic distributions.
- A high proportion of traffic is expected at Access 2 since this is the shortest path to the main path towards Albany Highway. Therefore, based on the accessibility to the Site, 90% of the residential trip is expected to use Access 2 and the remaining 10% is anticipated to use Access 1.

Figure 5-7 Trip Distribution – Outbound

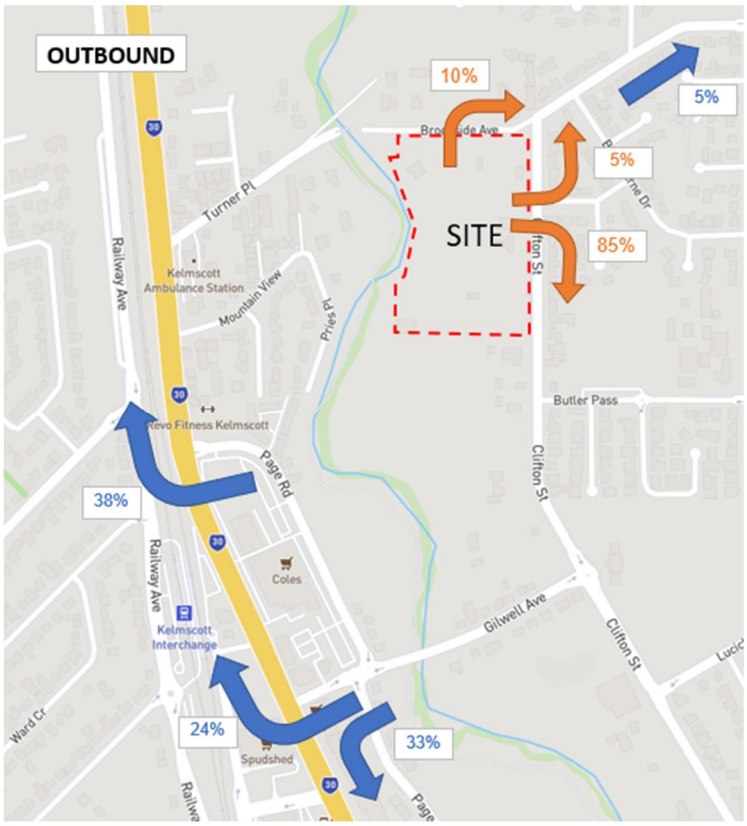
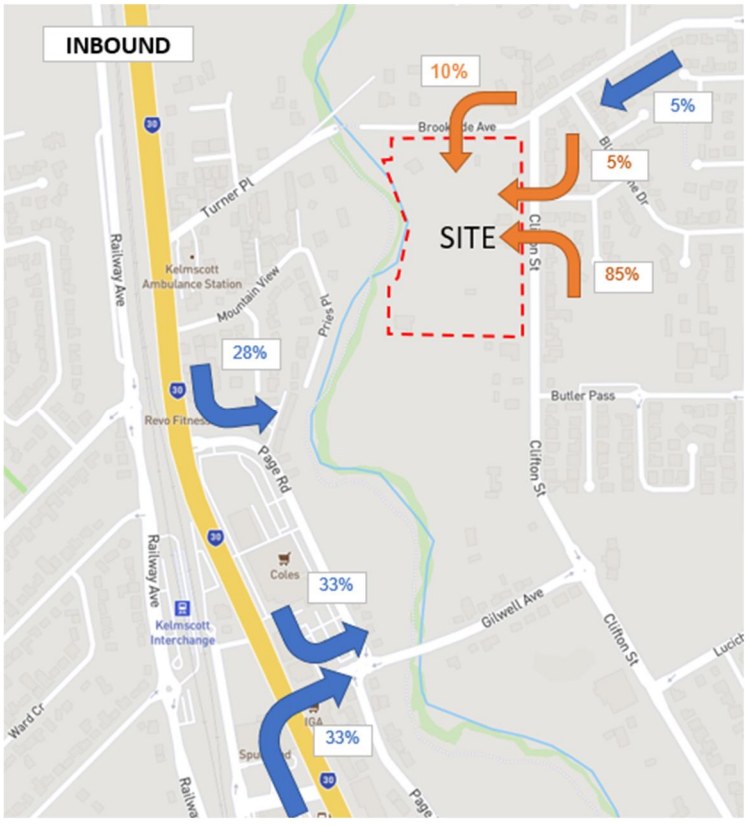


Figure 5-8 Trip Distribution – Inbound



5.5 Traffic Volumes

Using the existing traffic data and the estimated trip generation and distribution, the volumes for the three identified scenarios were calculated and are indicated in **Figure 5-9, Figure 5-10** and **Figure 5-11**.

Figure 5-9 Scenario 1 – 2021 Base Scenario Traffic Volumes

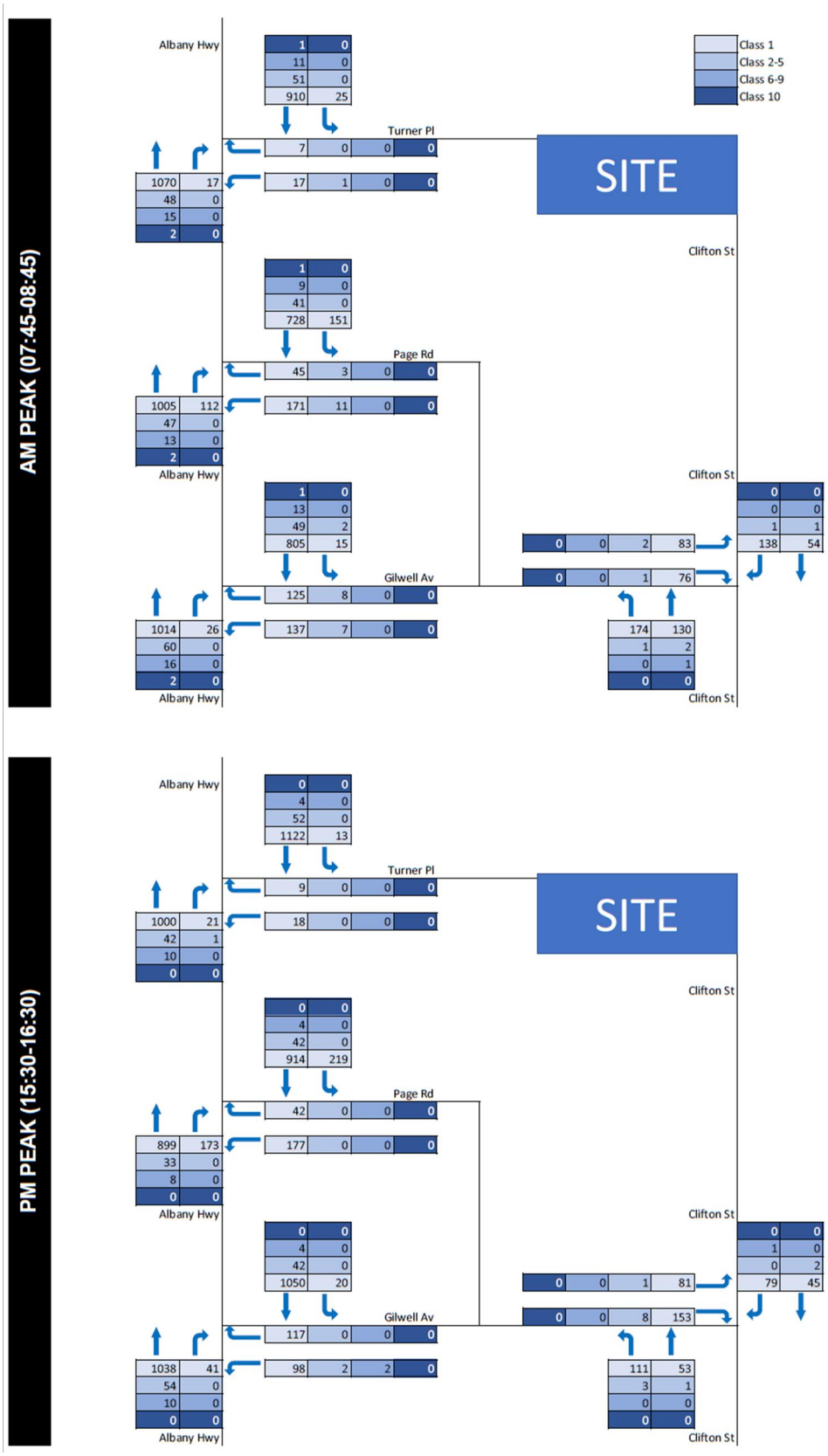


Figure 5-10 Scenario 2 – 2024 FutureTraffic with Development Volumes

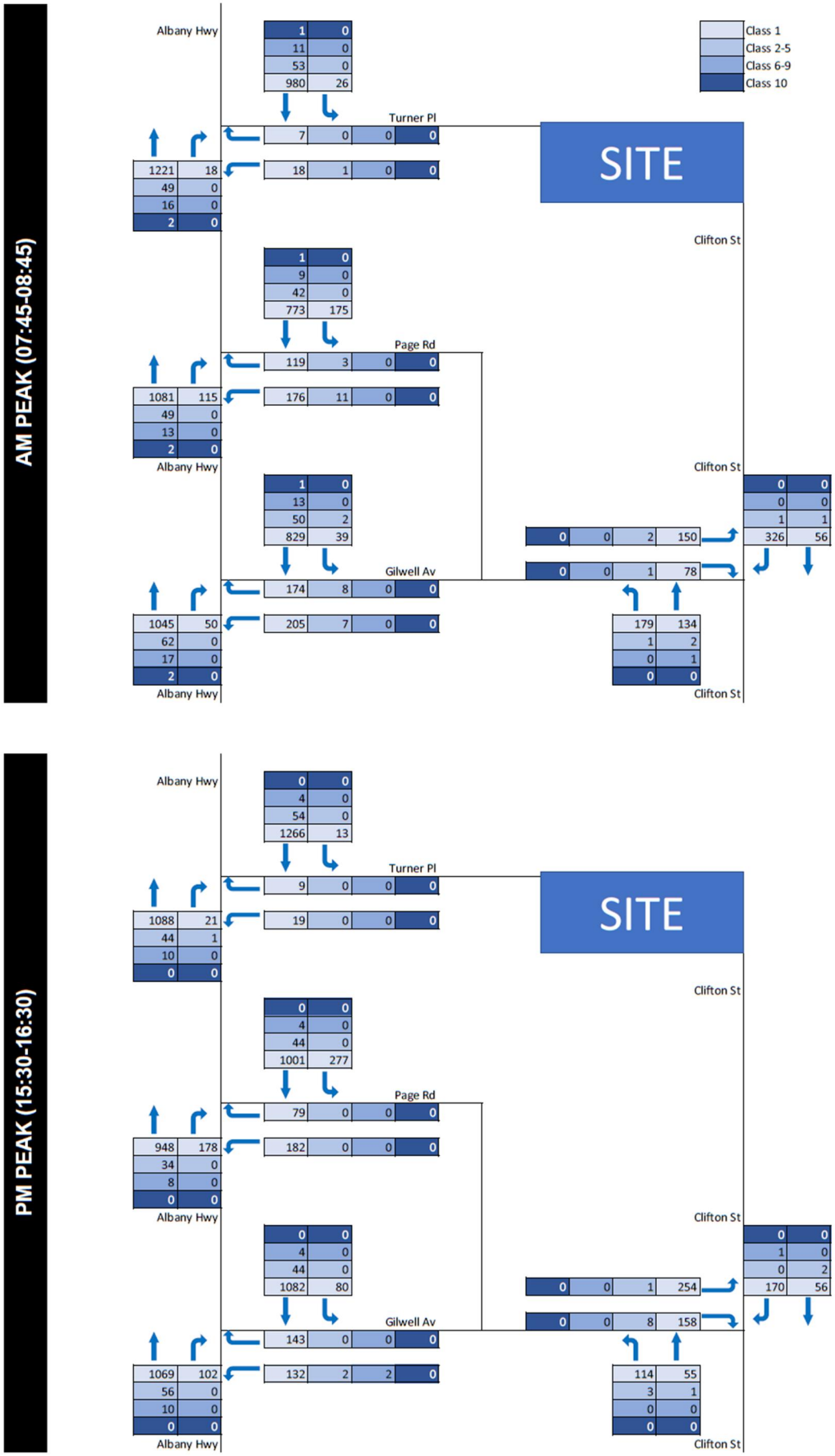
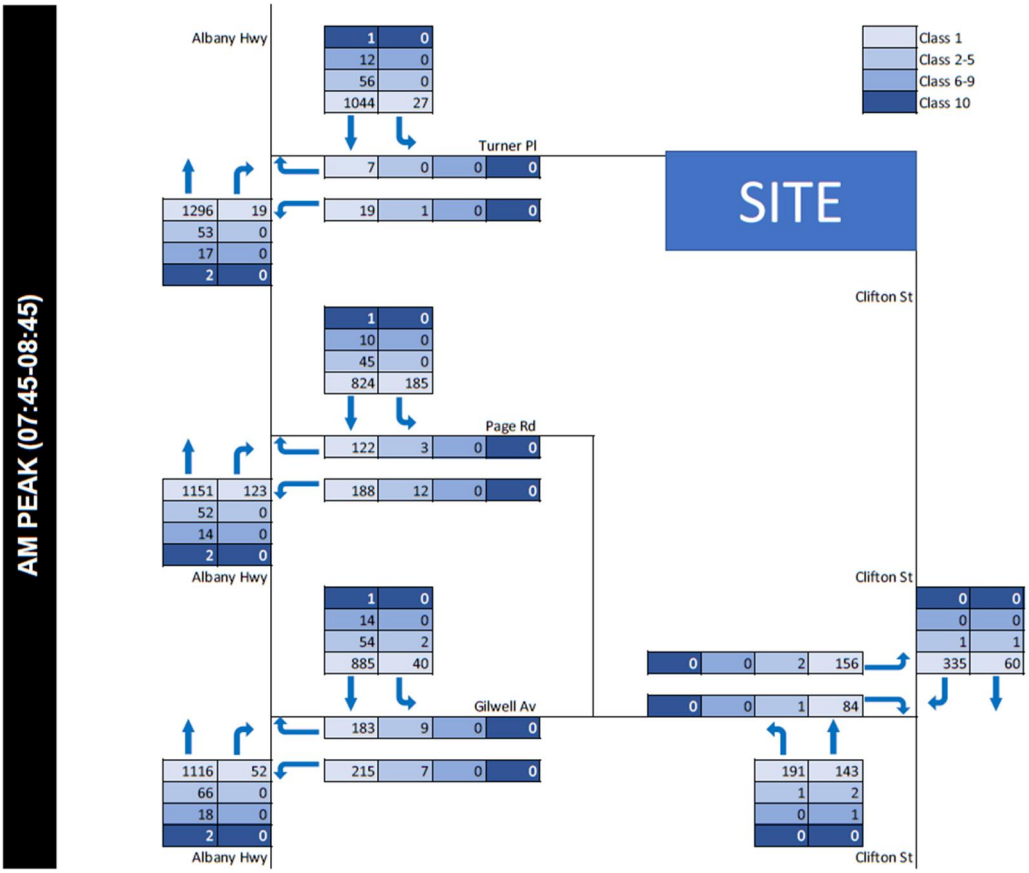
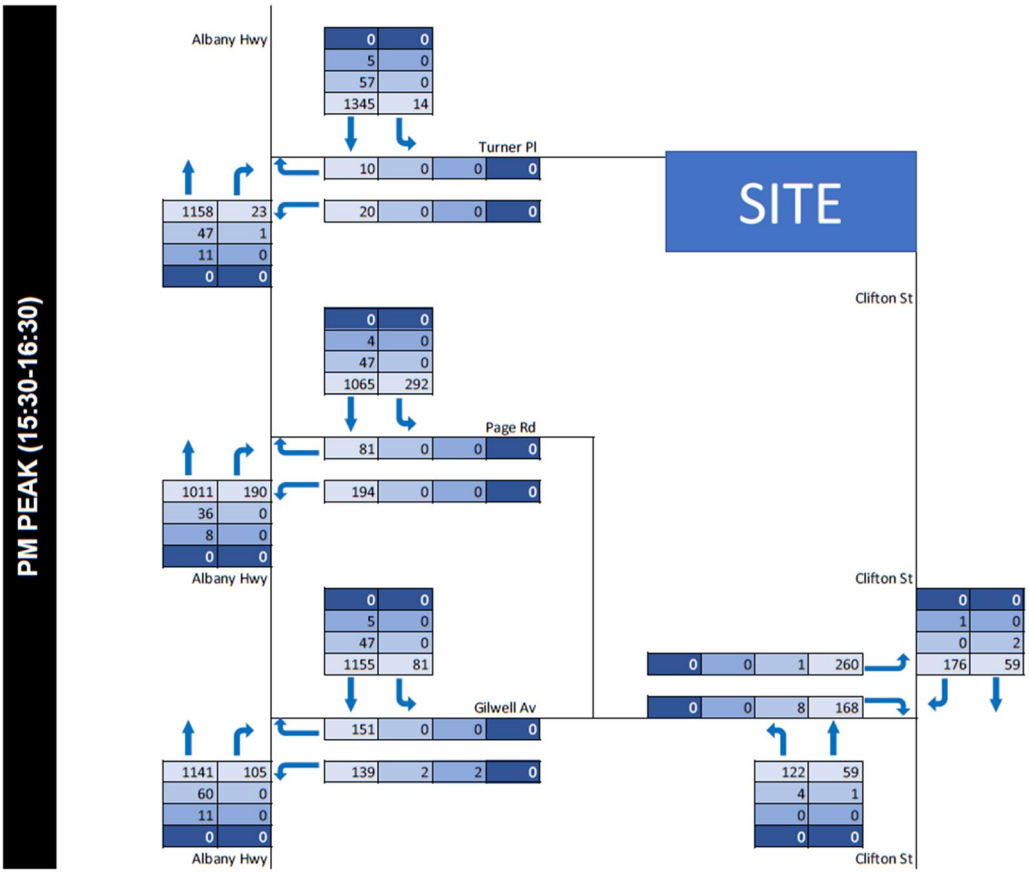


Figure 5-11 Scenario 3 – 2031 FutureTraffic with Development Volumes





5.6 Intersection Performance

SIDRA analysis was undertaken at surrounding intersections to estimate the impact of the development generated traffic on the surrounding transport network. SIDRA results for each approach are presented below in the form of Degree of Saturation (DOS), Average Delay, Level of Service (LOS) and 95th Percentile Queue. These characteristics are defined as follows:

- **Degree of Saturation (DOS)**: is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The theoretical intersection capacity is exceeded for an un-signalized intersection where DOS > 0.80;
- **95% Queue**: is the statistical estimate of the queue length up to or below which 95% of all observed queues would be expected;
- **Average Delay**: is the average of all travel time delays for vehicles through the intersection. An unsignalised intersection can be considered to be operated at capacity where the average delay exceeds 40 seconds for any movement; and
- **Level of Service (LOS)**: is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. The different levels of service can generally be described as shown in **Table 5-6**.

Table 5-6 Level of Service (LOS) Performance Criteria

LOS	Description	Signalised Intersection	Unsignalised Intersection
A	Free-flow operations (best condition)	≤10 sec	≤10 sec
B	Reasonable free-flow operations	10-20 sec	10-15 sec
C	At or near free-flow operations	20-35 sec	15-25 sec
D	Decreasing free-flow levels	35-55 sec	5-35 sec
E	Operations at capacity	55-80 sec	35-50 sec
F	A breakdown in vehicular flow (worst condition)	≥80 sec	≥50 sec

5.7 SIDRA Analysis Results

Analysis has been undertaken using the SIDRA traffic analysis software. The model parameters have been set up in accordance with the Main Roads WA Operational Modelling Guidelines ('the guidelines'). The results of the analysis are discussed in the succeeding sections.

5.7.1 Albany Highway and Turner Place

The layout of the Albany Highway and Turner Place intersection is shown in **Figure 5-12**. The intersection is a stop sign-controlled intersection that has been modelled as a staged crossing (Type B) in accordance with the guidelines. The results of the analysis of this intersection is summarised in **Table 5-7** to Error! Reference source not found.**.**

Figure 5-12 SIDRA Layout – Albany Highway and Turner Place

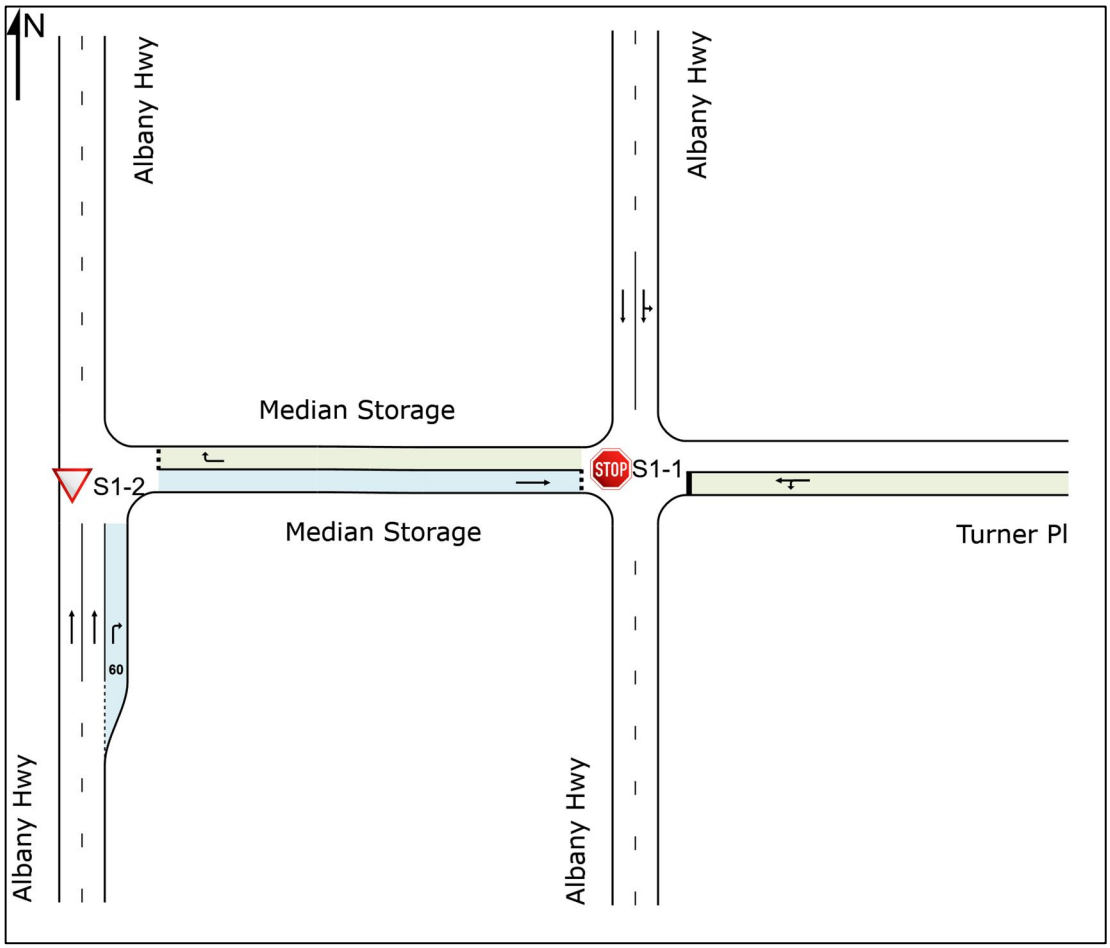


Table 5-7 SIDRA Results – Albany Highway and Turner Place (Scenario 1)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
East: Turner Pl	L	0.043	10.6	B	1	0.058	11	B	1.3
	R	0.043	16.8	C	1.2	0.058	19.4	C	1.9
North: Albany Hwy	L	0.29	6.4	A	0	0.338	6.4	A	0
	T	0.29	1.1	A	0	0.338	1.1	A	0
South: Albany Hwy	T	0.329	0.1	A	0	0.301	0.1	A	0
	R	0.037	12.3	B	0.9	0.068	15.7	C	1.6
All vehicles		0.172	1.6	A	1	0.194	1.6	A	1.6

Table 5-8 SIDRA Results – Albany Highway and Turner Place (Scenario 2)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
East: Turner Pl	L	0.047	10.9	B	1.2	0.072	11.8	B	1.6
	R	0.047	18.5	C	1.4	0.072	22.6	C	1.9
North: Albany Hwy	L	0.31	6.4	A	0	0.378	6.5	A	0
	T	0.31	1.1	A	0	0.378	1.1	A	0
South: Albany Hwy	T	0.371	0.1	A	0	0.326	0.1	A	0
	R	0.044	13.3	B	1	0.088	19	C	2.1
All vehicles		0.188	1.6	A	1.2	0.219	1.6	A	2.1

Table 5-9 SIDRA Results – Albany Highway and Turner Place (Scenario 3)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
East: Turner Pl	L	0.052	11.2	B	1.3	0.088	12.4	B	1.9
	R	0.052	20.1	C	1.6	0.088	25.2	D	2.2
North: Albany Hwy	L	0.33	6.4	A	0	0.402	6.5	A	0
	T	0.33	1.1	A	0	0.402	1.1	A	0
South: Albany Hwy	T	0.394	0.1	A	0	0.347	0.1	A	0
	R	0.052	14.4	B	1.2	0.112	21.4	C	2.6
All vehicles		0.202	1.6	A	1.3	0.240	1.7	A	2.6

The analysis shows that this intersection currently operates at satisfactory capacity, with an overall level of service of 'A,' which denotes free-flow operations. This intersection is expected to still operate at acceptable level of service for the opening year of the proposed development as well as for the 2031 design year.

5.7.2 Albany Highway and Page Road

The layout of the Albany Highway and Gilwell Avenue intersection is shown in **Figure 5-13.** The intersection is a signal-controlled intersection. The results of the analysis of this intersection is summarised in **Table 5-10** to **Table 5-12.**

Figure 5-13 SIDRA Layout – Albany Highway and Page Road

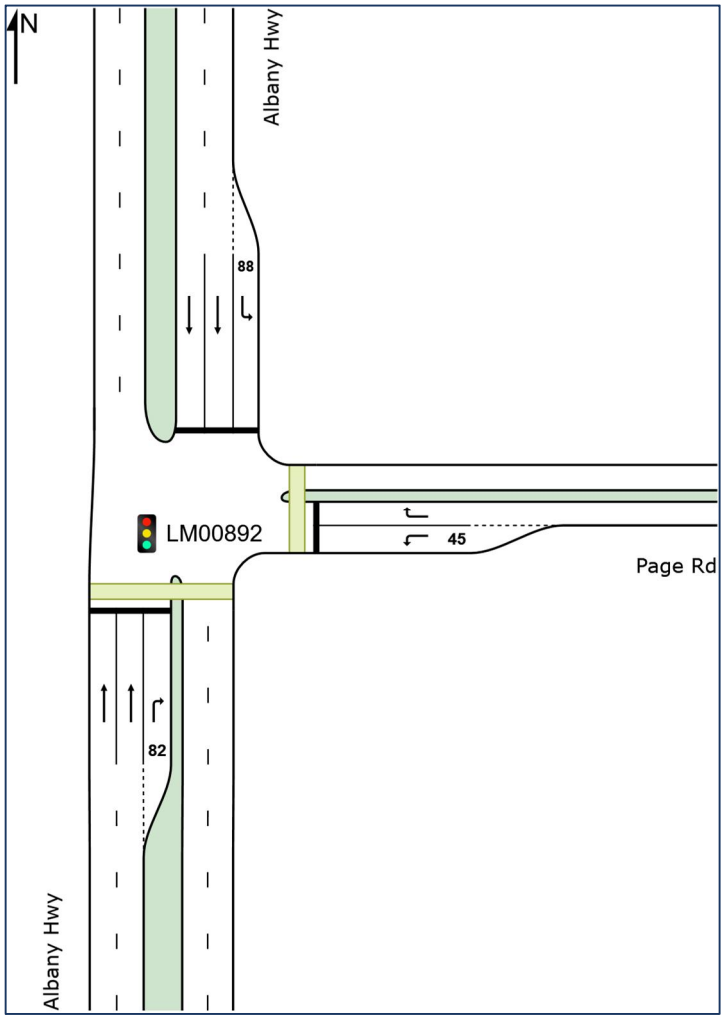


Table 5-10 SIDRA Results – Albany Highway and Page Road (Scenario 1)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
South: Albany Hwy	T	0.493	10.5	B	111.4	0.344	5.8	A	86.4
	R	* 0.540	50.2	D	39.6	* 0.521	65.6	E	89.4
East: Page Rd	L	* 0.395	25.4	C	45.9	* 0.393	43.4	D	73.5
	R	0.116	34.2	C	14.2	0.157	64.6	E	20.9
North: Albany Hwy	L	0.14	10.2	B	14.9	0.199	13.3	B	37.9
	T	* 0.515	21.2	C	110.5	* 0.515	23.3	C	187.1
All Vehicles		0.54	17.8	B	111.4	0.521	20.9	C	187.1

Table 5-11 SIDRA Results – Albany Highway and Page Road (Scenario 2)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
South: Albany Hwy	T	0.527	10.8	B	123	0.356	5.2	A	87.2
	R	* 0.554	50.3	D	40.8	* 0.556	66.8	E	93.2
East: Page Rd	L	* 0.405	25.5	C	47.3	* 0.438	50	D	77.4
	R	0.282	35.7	D	36.5	0.324	68.4	E	41.1
North: Albany Hwy	L	0.162	10.2	B	17.6	0.255	13.6	B	48.6
	T	* 0.544	21.6	C	118.5	* 0.553	22.1	C	208.2
All Vehicles		0.554	18.2	B	123	0.556	21.2	C	208.2

Table 5-12 SIDRA Results – Albany Highway and Page Road (Scenario 3)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
South: Albany Hwy	T	0.561	11.2	B	135.2	0.375	5	A	92.3
	R	* 0.593	50.6	D	44	* 0.593	67.3	E	100.3
East: Page Rd	L	* 0.434	25.7	C	51.1	* 0.481	53.8	D	83.4
	R	0.289	35.8	D	37.5	0.348	69.6	E	42.6
North: Albany Hwy	L	0.172	10.3	B	18.7	0.269	13.7	B	51.8
	T	* 0.581	22	C	129.3	* 0.589	22.1	C	229.3
All Vehicles		0.593	18.6	B	135.2	0.593	21.4	C	229.3

The analysis shows that this intersection is operating at a satisfactory capacity with an overall level of service of 'C' or better. This intersection is expected to still operate at acceptable level of service for the opening year of the proposed development as well as for the 2031 design year.

5.7.3 Albany Highway and Gilwell Avenue

The layout of the Albany Highway and Gilwell Avenue intersection is shown in **Figure 5-14**. The intersection is a stop sign-controlled intersection that has been modelled as a staged crossing (Type B) in accordance with the guidelines. The results of the analysis of this intersection is summarised in **Table 5-13** to **Table 5-15.**

Figure 5-14 SIDRA Layout – Albany Highway and Gilwell Avenue

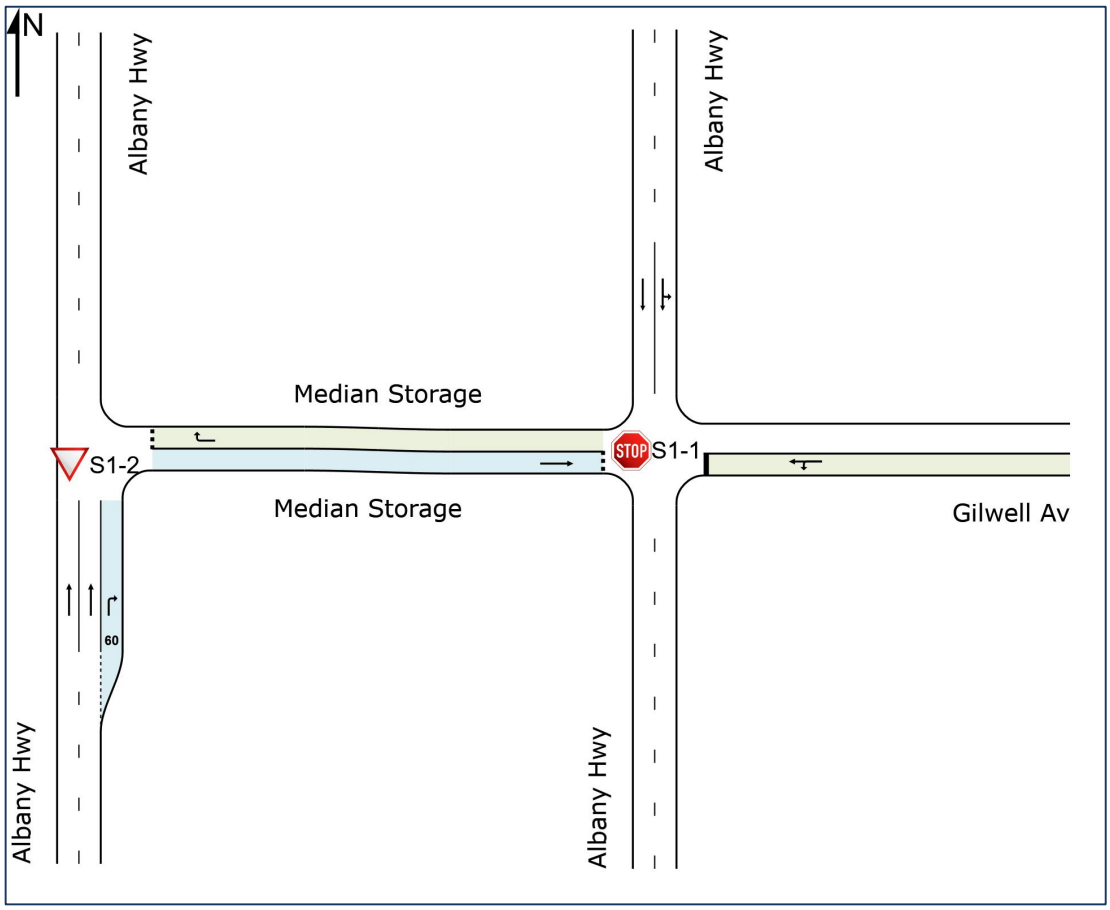


Table 5-13 SIDRA Results – Albany Highway and Gilwell Avenue (Scenario 1)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
East: Gilwell Av	L	0.499	12.4	B	7.6	0.506	13.9	B	6.7
	R	0.499	20.5	C	9.4	0.506	22.5	C	8.1
North: Albany Hwy	L	0.261	5.8	A	0	0.315	5.6	A	0
	T	0.261	0.1	A	0	0.315	0.1	A	0
South: Albany Hwy	T	0.321	0.1	A	0	0.317	0.1	A	0
	R	0.073	10.7	B	0.7	0.105	13.4	B	1
All vehicles		0.319	3.6	A	7.6	0.344	3	A	6.7

Table 5-14 SIDRA Results – Albany Highway and Gilwell Avenue (Scenario 2)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
East: Gilwell Av	L	0.723	15.2	C	15.5	0.677	16.2	C	11
	R	0.723	25	C	18.2	0.677	27.6	D	12.9
North: Albany Hwy	L	0.275	5.7	A	0	0.342	5.6	A	0
	T	0.275	0.1	A	0	0.342	0.1	A	0
South: Albany Hwy	T	0.331	0.1	A	0	0.327	0.1	A	0

	R	0.101	11.3	B	1	0.305	16.8	C	3.3
All vehicles		0.405	5.4	A	15.5	0.445	4.5	A	11

Table 5-15 SIDRA Results – Albany Highway and Gilwell Avenue (Scenario 3)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
East: Gilwell Av	L	0.84	19.9	C	22.7	0.795	21.1	C	15.4
	R	0.84	31.6	D	25.9	0.795	34.8	D	17.6
North: Albany Hwy	L	0.293	5.7	A	0	0.364	5.6	A	0
	T	0.293	0.1	A	0	0.364	0.1	A	0
South: Albany Hwy	T	0.354	0.1	A	0	0.349	0.1	A	0
	R	0.115	12.1	B	1.1	0.359	19.3	C	3.9
All vehicles		0.456	6.9	A	22.7	0.504	5.7	A	15.4

The analysis shows that this intersection is operating at a satisfactory capacity with an overall level of service of 'A'. This intersection is expected to still operate at acceptable level of service for the opening year of the proposed development as well as for the 2031 design year.

5.7.4 Gilwell Avenue and Clifton Street

The layout of the Albany Highway and Gilwell Avenue intersection is shown in **Figure 5-15**. The intersection is a roundabout controlled intersection. The results of the analysis of this intersection is summarized in **Table 5-16** to **Table 5-18**Error! Reference source not found..

Figure 5-15 SIDRA Layout – Gilwell Avenue and Clifton Street

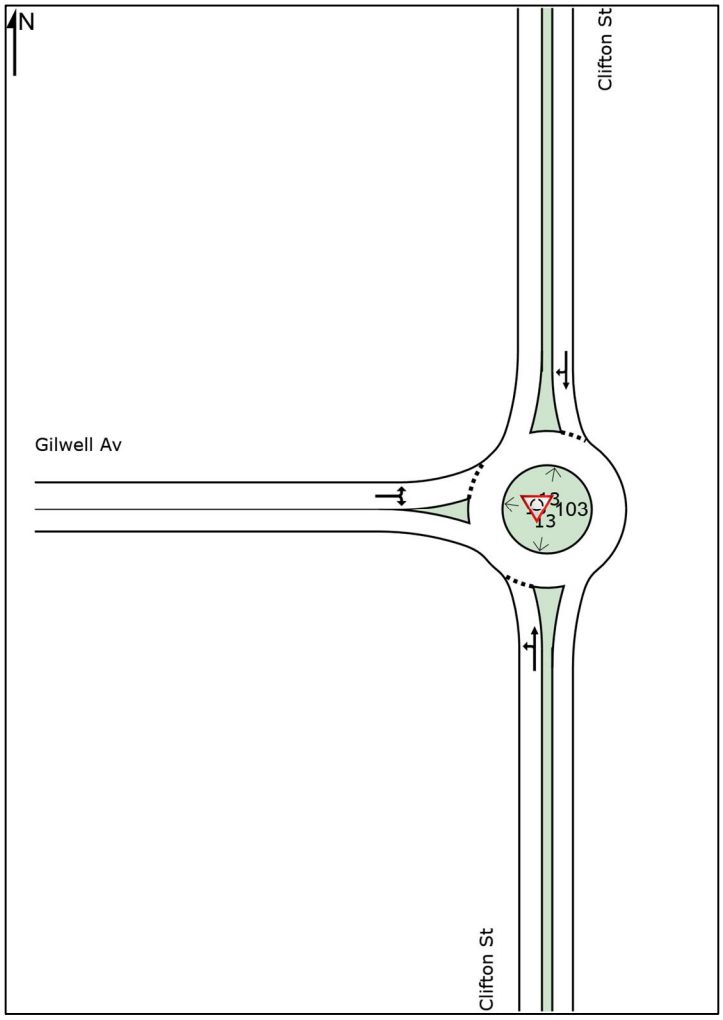


Table 5-16 SIDRA Results – Gilwell Avenue and Clifton Street (Scenario 1)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
South: Clifton St	L	0.282	4.4	A	14.4	0.145	3.9	A	6.9
	T	0.282	4.5	A	14.4	0.145	3.9	A	6.9
North: Clifton St	T	0.165	3.9	A	8.2	0.127	4.7	A	5.8
	R	0.165	7.6	A	8.2	0.127	8.3	A	5.8
West: Gilwell Av	L	0.15	4.2	A	6.2	0.193	3.6	A	8.5
	R	0.15	7.8	A	6.2	0.193	7.3	A	8.5
All Vehicles		0.282	5.4	A	14.4	0.193	5.6	A	8.5

Table 5-17 SIDRA Results – Gilwell Avenue and Clifton Street (Scenario 2)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
South: Clifton St	L	0.368	6.2	A	19.2	0.173	4.6	A	8.2
	T	0.368	6.4	A	19.2	0.173	4.6	A	8.2
North: Clifton St	T	0.313	4	A	18.1	0.226	4.8	A	11.3
	R	0.313	7.6	A	18.1	0.226	8.4	A	11.3
West: Gilwell Av	L	0.213	4.2	A	9.8	0.324	3.7	A	16.8
	R	0.213	7.8	A	9.8	0.324	7.4	A	16.8
All Vehicles		0.368	6.4	A	19.2	0.324	5.7	A	16.8

Table 5-18 SIDRA Results – Gilwell Avenue and Clifton Street (Scenario 3)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
South: Clifton St	L	0.396	6.4	A	21.2	0.188	4.7	A	9.1
	T	0.396	6.5	A	21.2	0.188	4.7	A	9.1
North: Clifton St	T	0.327	4.1	A	19.2	0.238	4.9	A	12
	R	0.327	7.7	A	19.2	0.238	8.5	A	12
West: Gilwell Av	L	0.226	4.3	A	10.5	0.338	3.7	A	17.8
	R	0.226	7.9	A	10.5	0.338	7.4	A	17.8
All Vehicles		0.396	6.5	A	21.2	0.338	5.8	A	17.8

The analysis shows that this intersection currently operates at satisfactory capacity, with an overall level of service of 'A,' which denotes free-flow operations. This intersection is expected to still operate at acceptable level of service for the opening year of the proposed development as well as for the 2031 design year.

5.7.5 Brookside Avenue and Access 1

The layout of the Brookside Avenue/ Access 1 intersection is shown in **Figure 5-16**. The intersection is a give-way controlled intersection with the access yielding to Brookside Avenue. The results of the analysis of this intersection is summarised in **Table 5-19** and **Table 5-20**

Figure 5-16 SIDRA Layout – Brookside Avenue and Access 1

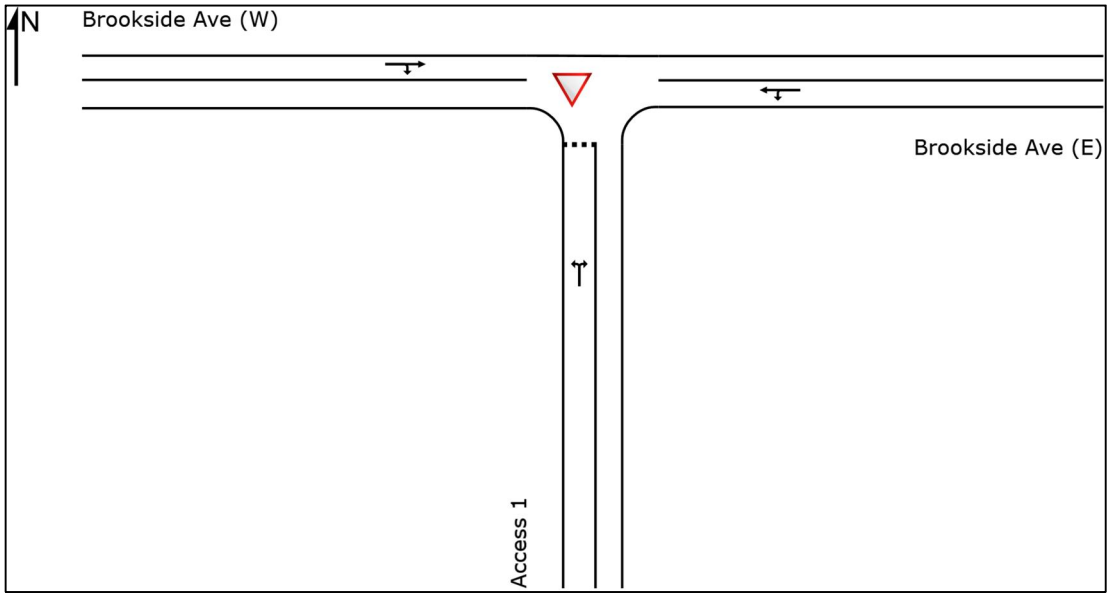


Table 5-19 SIDRA Results – Brookside Avenue and Access 1 (Scenario 2)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
South: Access 1	L	0.016	4.6	A	0.4	0.009	4.6	A	0.2
	R	0.016	4.6	A	0.4	0.009	4.6	A	0.2
East: Brookside Ave (E)	L	0.005	4.6	A	0	0.011	4.6	A	0
	T	0.005	0	A	0	0.011	0	A	0
West: Brookside Ave (W)	T	0.001	0	A	0	0.001	0	A	0
	R	0.001	4.6	A	0	0.001	4.6	A	0
All Vehicles		0.016	4.3	A	0.4	0.011	4.3	A	0.2

Table 5-20 SIDRA Results – Brookside Avenue and Access 1 (Scenario 3)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
South: Access 1	L	0.016	4.6	A	0.4	0.009	4.6	A	0.2
	R	0.016	4.6	A	0.4	0.009	4.6	A	0.2
East: Brookside Ave (E)	L	0.005	4.6	A	0	0.011	4.6	A	0
	T	0.005	0	A	0	0.011	0	A	0
West: Brookside Ave (W)	T	0.001	0	A	0	0.001	0	A	0
	R	0.001	4.6	A	0	0.001	4.6	A	0
All Vehicles		0.016	4.3	A	0.4	0.011	4.3	A	0.2

The analysis shows that this intersection is expected to operate at satisfactory capacity, with an overall level of service of 'A' for the opening year of the proposed development as well as for the 2031 design year.

5.7.6 Clifton Street/ Access 2

The layout of the Clifton Street/ Access 2 intersection is shown in **Figure 5-17**. The intersection is a give-way controlled intersection with the access yielding to Brookside Avenue. The results of the analysis of this intersection is summarised in **Table 5-21** and **Table 5-22**.

Figure 5-17 SIDRA Layout – Clifton Street/ Access 2

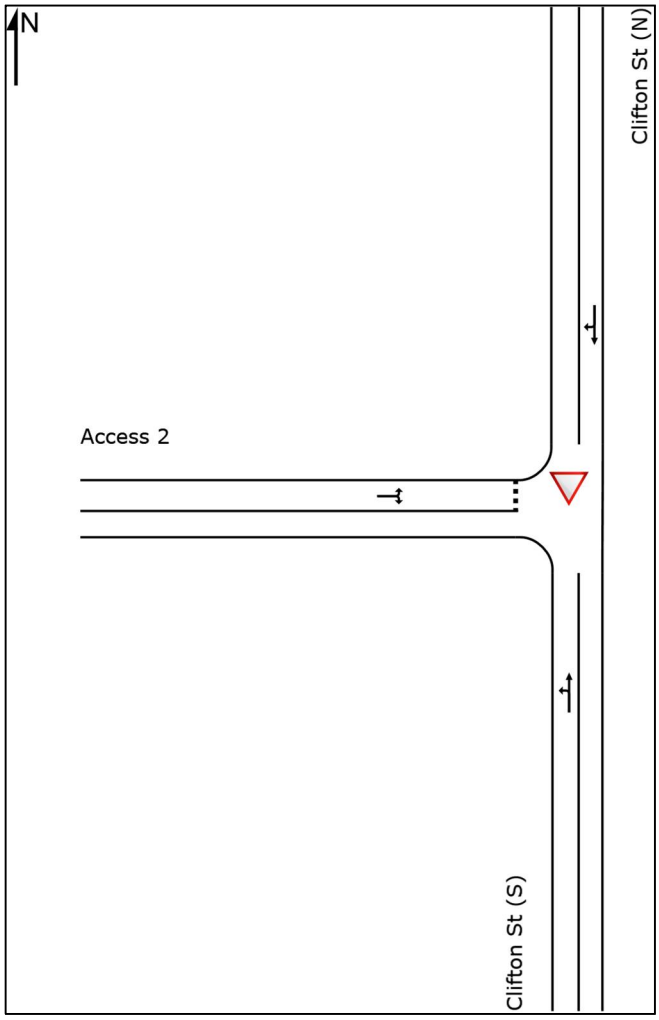


Table 5-21 SIDRA Results – Clifton Street and Access 2 (Scenario 2)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
South: Clifton St (S)	L	0.159	4.6	A	0	0.173	4.6	A	0
	T	0.159	0	A	0	0.173	0	A	0
North: Clifton St (N)	T	0.124	0	A	0.3	0.088	0.1	A	0.7
	R	0.124	5.7	A	0.3	0.088	5.8	A	0.7
West: Access 2	L	0.224	5.5	A	5.9	0.109	5.1	A	2.7
	R	0.224	7.1	A	5.9	0.109	6.3	A	2.7
All Vehicles		0.224	2.2	A	5.9	0.173	2.5	A	2.7

Table 5-22 SIDRA Results – Clifton Street and Access 2 (Scenario 3)

Intersection Approach		AM peak				PM Peak			
		DOS	Delay (s)	LOS	95% Queue (m)	DOS	Delay (s)	LOS	95% Queue (m)
South: Clifton St (S)	L	0.167	4.6	A	0	0.178	4.6	A	0
	T	0.167	0	A	0	0.178	0	A	0
North: Clifton St (N)	T	0.132	0	A	0.3	0.093	0.1	A	0.7
	R	0.132	5.8	A	0.3	0.093	5.8	A	0.7
West: Access 2	L	0.232	5.5	A	6.1	0.111	5.1	A	2.8
	R	0.232	7.3	A	6.1	0.111	6.4	A	2.8
All Vehicles		0.232	2.2	A	6.1	0.178	2.4	A	2.8

The analysis shows that this intersection is expected to operate at satisfactory capacity, with an overall level of service of 'A' for the opening year of the proposed development as well as for the 2031 design year.

5.8 SIDRA Analysis Summary

The results of the SIDRA analysis of the key intersections analysed are summarised below:

Scenario 1 – 2021 without development

- The existing intersections of Albany Highway/ Turner Place, Albany Highway/ Gilwell Avenue, Gilwell Avenue/ Clifton Street currently operate at LOS A which is considered to be free-flow operations.
- The existing intersection of Albany Highway/ Page Road currently operates at LOS B during the AM Peak and LOS C during the PM Peak. For both peak hour periods these intersectuons are considered to be operating at a good capacity with reasonable or near free-flow operations.

All the key intersections currently operate at acceptable traffic operations with an overall level of service of 'C' or better during the AM and PM peak hour periods respectively.

Scenario 2 – 2024 with development

- For the 2024 opening year, the intersections of Albany Highway/ Turner Place, Albany Highway/ Gilwell Avenue, Gilwell Avenue/ Clifton Street is expected to operate at LOS A for both AM peak and PM peak hour periods which is considered to be free flow operations.
- The intersection of Albany Highway/ Page Road is anticipated to operate at a good capacity with 'LOS B during the AM Peak hour and LOS C during the PM Peak hour period and are considered to be operating at a good capacity with reasonable or near free-flow operations.
- The analysis shows that the proposed accesses on Clifton Street and Brookside Avenue are expected to operate at satisfactory level of service and capacity.

All of the key intersections are expected to operate at acceptable traffic operations with an overall level of service of 'C' or better during the AM and PM peak hour periods respectively.

Scenario 3 – 2031 with development

- For the 2031 design year, the intersections of Albany Highway/ Turner Place, Albany Highway/ Gilwell Avenue, Gilwell Avenue/ Clifton Street is expected to operate at LOS A for both AM peak and PM peak hour periods which is considered to be free-flow operations.
- The intersection of Albany Highway/ Page Road is anticipated to operate at a good capacity with 'LOS B during the AM Peak hour and LOS C during the PM Peak hour period. And are considered to be operating at a good capacity with reasonable or near free-flow operations.
- The analysis shows that the proposed accesses on Clifton Street and Brookside Avenue are expected to operate at satisfactory level of service and capacity.

All of the key intersections are expected to operate at acceptable traffic operations with an overall level of service of 'C' or better during the AM and PM peak hour periods respectively.

Overall, the key intersections are expected to operate at acceptable levels for all scenarios analysed and the proposed development is anticipated to have a moderate impact on the surrounding road network.

6 Conclusions and Summary

This report has been prepared in accordance with the *Western Australian Planning Commission (WAPC) Transport Impact Assessment Guidelines Volume 2 – Planning Schemes, Structure Plans and Activity Centre Zones (2016).*

The following conclusions have been made in regard to the proposed development:

- The proposed LSP proposes 397 residential dwellings, new internal roads and public open space;
- The Site is surrounded by good connectivity to public transportation and walking/cycling networks;
- The SIDRA analysis indicates that all the identified key intersections are currently operating at acceptable traffic operations with an overall level of service of 'C' or better during the AM and PM peak hour periods; and
- The SIDRA analysis shows that all the key intersections are expected to perform at satisfactory traffic operations and levels of service for the 2031 design year

Overall, the proposed LSP is not anticipated to have a material impact on the traffic operations and safety of the surrounding road network.

Clifton Street North Local Structure Plan

APPENDIX A

WAPC CHECKLIST

Item	Provided	Comments/Proposals
Summary		
Introduction/Background	Section 1	
Structure plan proposal	Section 1	
▪ regional context	Section 1	
▪ proposed land uses	Section 2	
▪ table of land uses and quantities	Section 2	
▪ major attractors/generators	Section 5	
▪ specific issues	Section 3	
Existing situation		
▪ existing land uses within structure plan	Section 3	
▪ existing land uses within 800 metres of structure plan area	Section 3	
▪ existing road network within structure plan area	Section 3	
▪ existing pedestrian/cycle networks within structure plan area	Section 3	
▪ existing public transport services within structure plan area	Section 3	
▪ existing road network within 2 (or 5) km of structure plan area	Section 3	
▪ traffic flows on roads within structure plan area (PM and/or AM peak hours)	Section 6	
▪ traffic flows on roads within 2 (or 5) km of structure plan area (AM and/or PM peak hours)	Section 3	
▪ existing pedestrian/cycle networks within 800m of structure plan area	Section 3	
▪ existing public transport services within 800m of structure plan area	Section 3	
Proposed internal transport networks		
▪ changes/additions to existing road network or proposed new road network	Section 4	
▪ road reservation widths	Section 2, 4	
▪ road cross-sections & speed limits	Section 2, 4	
▪ intersection controls	Section 4	
▪ pedestrian/cycle networks and crossing facilities	Section 4, 5	
▪ public transport routes	Section 4	
Changes to external transport networks		
▪ road network	Section 4	
▪ intersection controls	Section 4	
▪ pedestrian/cycle networks and crossing facilities	Section 4	
▪ public transport services	Section 4	
Integration with surrounding area		
▪ trip attractors/generators within 800 metres	Section 5	
▪ proposed changes to land uses within 800 metres	Section 5	
▪ travel desire lines from structure plan to these attractors/generators	Section 5	
▪ adequacy of external transport networks	Section 5	

▪ deficiencies in external transport networks	Section 5	
▪ remedial measures to address deficiencies	N/A	
Analysis of internal transport networks		
▪ assessment year(s) and time period(s)	Section 6	
▪ structure plan generated traffic	Section 6	
▪ extraneous (through) traffic	Section 6	
▪ design traffic flows (ie. total traffic)	Section 6	
▪ road cross-sections	Section 6	
▪ intersection controls	Section 6	
▪ access strategy	Section 4	
▪ pedestrian / cycle networks	Section 4	
▪ safe routes to schools	Section 5	
▪ pedestrian permeability & efficiency	Section 4	
▪ access to public transport	Section 4	
Analysis of external transport networks		
▪ extent of analysis	Section 6	
▪ base flows for assessment year(s)	Section 6	
▪ total traffic flows	Section 6	
▪ road cross-sections	Section 6	
▪ intersection layouts & controls	Section 6	
▪ pedestrian/cycle networks	Section 6	
Conclusions	Section 7	

Clifton Street North Local Structure Plan

APPENDIX B

SITE PLAN



LOCAL STRUCTURE PLAN

Clifton Street North Precinct, KELMSCOTT

Plan No. | 20233-09
Date | 12/04/22
Drawn | NP
Checked | CP
Revision | E

Scale | 1:1500@A3

0 20m 40m

NOTE: This plan has been prepared for planning purposes. Areas, Contours and Dimensions shown are subject to survey

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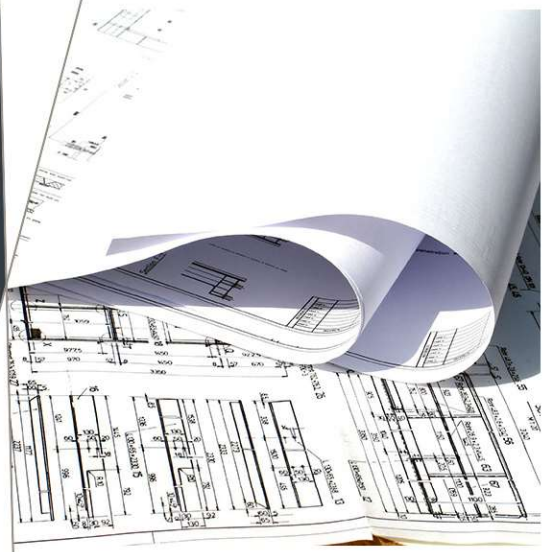
APPENDIX E

Servicing Report
(Cardno)

Service Report

North Clifton Street LSP, Kelmscott

CW1199200



Prepared for
Harley Dykstra

22 June 2022

Cardno

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Document Information

Prepared for	Harley Dykstra
Project Name	North Clifton Street LSP, Kelmscott
File Reference	CW1199200-CI-RP-REV-C.docx
Job Reference	CW1199200
Date	22 June 2022
Version Number	D
Effective Date	1/02/2022
Date Approved	1/02/2022

Author(s):



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Approved By:



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Document History

Version	Effective Date	Description of Revision	Prepared by	Reviewed by
A	21/10/2021	Internal Review	JL	SC/CS
B	22/10/2021	Draft for Client Review	JL	CS
C	01/02/2022	Final Version	SA	CS
D	22/06/2022	Updated	SA	CS

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Our report is based on information made available by the client. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Cardno is both complete and accurate. Whilst, to the best of our knowledge, the information contained in this report is accurate at the date of issue, changes may occur to the site conditions, the site context or the applicable planning framework. This report should not be used after any such changes without consulting the provider of the report or a suitably qualified person.

Table of Contents

1	Background		1
	1.1	Study Area	1
2	Potable Water		2
	2.1	Existing Infrastructure	2
	2.2	Planned Infrastructure	3
	2.3	Required infrastructure	3
3	Waste Water		4
	3.1	Existing Infrastructure	4
	3.2	Planned Infrastructure	4
	3.3	Required infrastructure	4
4	Storm water		5
	4.1	Existing Infrastructure	5
	4.2	Planned upgrades	5
	4.3	Required infrastructure	6
5	Communication		7
	5.1	Existing Infrastructure	7
	5.2	Planned Infrastructure	7
	5.3	Required Infrastructure	7
6	Gas		8
	6.1	Existing Infrastructure	8
	6.2	Planned Infrastructure	8
	6.3	Required infrastructure	8
7	Power		9
	7.1	Existing Infrastructure	9
	7.2	Planned Infrastructure	10
	7.3	Required infrastructure	10
8	Conclusions		11

Appendices

Appendix A Development Plan

Appendix B Potable Water

Appendix C Waste Water

Appendix D Storm Water

Appendix E Communication

Appendix F Gas

Appendix G Power

Tables

Table 1-1	Approximate Concept Plan Site Area Breakdown	2
Table 2-1	Projected Probable Simultaneous Demand (Water) for Residential	3
Table 3-1	Local Scheme Zone Sewer Demand	4
Table 6-1	Future Residential Gas Demand	8
Table 7-1	Projected substation network capacity	10
Table 7-2	Estimated Power Demand	10

Figures

Figure 1-1	Satellite Image	1
Figure 1-2	rezoning plan of study area	2
Figure 4-1	Existing Stormwater Infrastructure	5
Figure 7-1	Forecasted 2031 Network Capacity	9

1 Background

Cardno has been engaged by Harley Dykstra to support the rezoning of North Clifton Street LSP, Kelmscott. This services report will cover the following scope:

- Review of planned growth of service infrastructure in study area;
- Provide analysis of existing services infrastructure, including;
  - Potable water
  - Waste Water
  - Storm Water
  - Communications
  - Gas
  - Power
- Infrastructure upgrade requirements.
- Liaison and engagement of service providers

The findings and advice presented in this report is based on Cardno's observations, experience from similar projects and responses from various service providers and stakeholders.

The investigations and preparation of this report have largely been based on preliminary advice from the various service authorities.

1.1 Study Area

The study area is located in Kelmscott, and is situated on Clifton Street, Brookside Ave and Canning River as seen Figure 1-1. The study area has existing dwellings; however, it is proposed to rezone the development as per plans provided by Harley Dykstra (Appendix A). Approximate areas attributed to rezoning of residential areas are summarised in Table 1-1.

Figure 1-1 Satellite Image

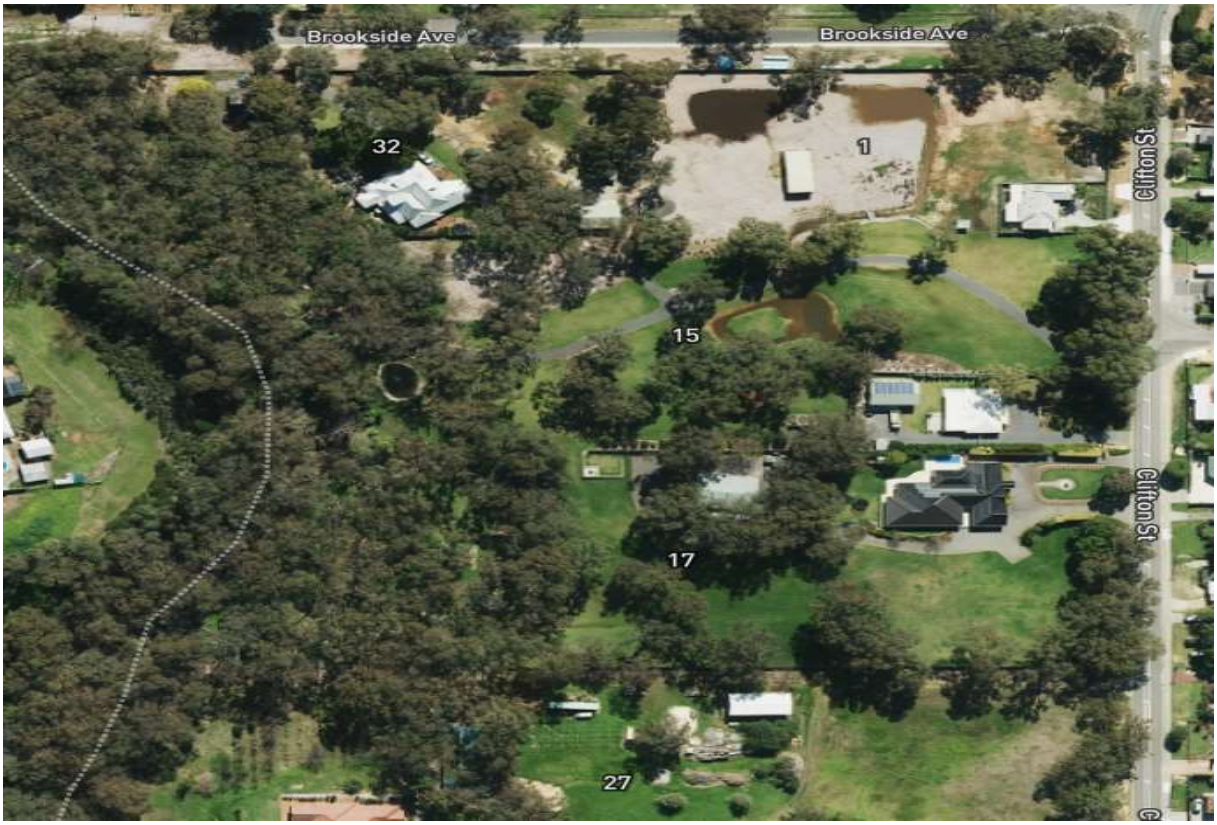


Figure 1-2 rezoning plan of study area



Table 1-1 Approximate Concept Plan Site Area Breakdown

Local Scheme Zones	Residential (R40)	Residential (R60)	Residential (R80)	**Total Area**
Area	0.82ha	2.11ha	0.72ha	3.65ha

2 Potable Water

Water Corporation Western Australia is the state authority regulating the distribution infrastructure for water reticulation in the area.

Information related to potable water infrastructure was obtained from Dial Before You Dig and ESInet enquiries, and from servicing queries raised with Water Corporation.

2.1 Existing Infrastructure

Existing water infrastructure is traverses through the northern verge of Brookside Av (205CI) and western verge of Clifton Street (100CI). Water Corporation DBYD mapping included in appendix A shows locations of existing

water infrastructure within and adjacent to subject area. The existing water infrastructure can also be observed in Appendix B.

2.2 Planned Infrastructure

Water Corporation provides a spatial dataset representing the spatial extent of the Water Corporation's 5- year capital investment program. All future water capital investment projects that are growth driven are represented. This is to enable effective response for future infrastructure plans/ enquiries, greater inter-government planning coordination and to facilitate the development industry's planning.

Water Corporation infrastructure mapping has identified metropolitan water reticulation renewal planned for 2027. This planned water main can be seen in Appendix B.

2.3 Required infrastructure

Projected Probable Simultaneous Demand for Residential potable water demand has been estimated by using the maximum number of dwellings for each residential zoning code. Proposed development flow has been determined in reference to Table 3.2.3 AS 3500.1.

Table 2-1 Projected Probable Simultaneous Demand (Water) for Residential

Residential Zone	Area (ha)	Maximum Number of Dwellings	Proposed Development Flow (L/s)
R40	0.82	37	3.88
R60	2.11	252	14.79*
R80	0.72	107	7.92
Total	**3.65**	**396**	**26.59**

*Proposed development flow estimated at pro rata rate from Table 3.2.3 AS3500.1

It is difficult to ascertain exactly what the capacity is for the current infrastructure network, as full water network modelling needs to be undertaken by the Water Corporation to confirm what the remaining capacity is (if any).

Exact waster infrastructure upgrades will be determined when Water Corporation carries out full water network modelling. Water Corporation have advised that water reticulation planning and modelling will be done after structure plan and rezoning is confirmed.

In an email dated 13/01/2022, Water Corporation said *"We have not undertaken any water reticulation concept planning for the structure plan area, but this can happen leading up to or as part of the subdivision approvals process. For water servicing purposes, you can assume at this stage that the developer of the site will need to extend reticulation mains of suitable site (usually 100PVC or 150PVC) off the surrounding network. There is an existing 205mm cast iron main running along Brookside Ave, and a 100mm PVC main running along Clifton St."*

3 Waste Water

The Water Corporation Western Australia is the main service provider regulating the distribution, storage and disposal infrastructure for waste water in the study area.

Information related to waste water infrastructure was obtained from Dial Before You Dig and ESInet enquiries, and from servicing queries raised with Water Corporation.

3.1 Existing Infrastructure

Waste water infrastructure within the study area is serviced by gravity waste water system to surrounding residents with a pressurised waste water drainage infrastructure on western side of Brookside Avenue as seen in Appendix C.

3.2 Planned Infrastructure

Water Corporation provides a spatial dataset representing the spatial extent of the Water Corporation's 5- year capital investment program. All future waste water capital investment projects that are growth driven are represented. This is to enable effective response for future infrastructure plans/ enquiries, greater inter-government planning coordination and to facilitate the development industry's planning. Water Corporation infrastructure mapping has not identified any future upgrades within the study area.

3.3 Required infrastructure

Table 3-1 identifies the additional sewer demand estimated within the study area

Table 3-1 Local Scheme Zone Sewer Demand

Local Scheme Zones	Area (ha)	Additional Dwellings (No)*	Additional Sewer Demand (L/s)**
Residential (R40)	0.82	37	0.30
Residential (R60)	2.11	252	1.3
Residential (R80)	0.72	107	0.5
Total	**3.65**	**396**	**2.1**

* Refer Table 4.4 of DS 50 for Design & Construction Requirements for Gravity Sewers DN150 to DN600

**Capacity based on Water Corporation DS50 Table 4.1.

Water Corporation have provided an excerpt of their Westfield Sewer District conceptual sewer planning for the area, showing the infrastructure should be sufficient for calculated sewer demand. The conceptual sewer plan has been attached in Appendix C

4 Storm water

The City of Armadale is the local authority that owns, controls and manages the stormwater drainage in the study area.

4.1 Existing Infrastructure

The existing storm water system within the study area and surrounds can be found in Appendix D. The study area consists of pipe and pit network along both Clifton Street and Brookside Ave, as shown in Figure 4-1 below.

Figure 4-1 Existing Stormwater Infrastructure



4.2 Planned upgrades

The City of Armadale has advised that no future upgrades have been proposed as of email correspondence dated 18/10/2021.

4.3 Required infrastructure

The rezoning of the study area will result in greater proportions of impermeable area, requiring drainage infrastructure to manage and convey the post-development flows. No Local Water Management Strategies or Urban Water Management Plans have been prepared to date, due to the relatively conceptual nature of investigations related to the site. As such, any drainage infrastructure required for the site is currently unknown.

5 Communication

Telstra and NBN have been identified to be the service providers for communication infrastructure within the study area.

5.1 Existing Infrastructure

NBN assets have been identified within the study area which consist of a pit and pipe network along Brookside Ave and Clifton Street as seen in DBYD plans shown in Appendix E.

Required infrastructure Telstra assets have been identified within the study area which consist of a pit and pipe network along Brookside Ave and Clifton Street

5.2 Planned Infrastructure

Telstra representatives have previously stated that NBN will take over from Telstra in performing future planning and upgrades for network infrastructure, where NBN is already in place.

5.3 Required Infrastructure

Required infrastructure for NBN is determined at the planning and design stage of developments by NBN Co. All works within new developments must be designed and built by the developer, with infrastructure headworks requirements identified in early planning and design stages.

We are still awaiting a response from Western Power on any planned upgrades and confirmation of network capacity.

6 Gas

ATCO Gas is the service provider that operates and owns the gas network within the study area and have provided information on the existing and required future upgrades.

6.1 Existing Infrastructure

The existing reticulated gas mains within the Study area and surrounds can be found in Appendix F. The network consists of 100 ST 4.2 HP 1900 kPa line along the northern verge of Brookside Ave and 100 PVC 1.5 MP 70 kPa.

6.2 Planned Infrastructure

ATCO Gas has advised that no future gas infrastructure upgrades are planned as of email correspondence received 18/10/2021.

6.3 Required infrastructure

The estimated future residential gas demand for the for rezoning within the study area is provided in Table 6-1. The gas demand has been determined by the maximum number of dwellings. These figures are based on peak and diversified gas load (per hour) not overall usage, as per ATCO Gas advice. The current standard dwelling consumption for RSMC is assumed 0.35 scmh (standard cubic metres per hour).

Table 6-1 Future Residential Gas Demand

Maximum Number of Dwellings	Residential Gas Demand (scmh)
396	138.6

ATCO have confirmed that they can meet the extra demand of 138.6 scmh from this proposed development.

7 Power

Western Power is the service provider that operates and own the electricity supply network assets within the study area and have provided information regarding existing assets and future upgrades.

7.1 Existing Infrastructure

The existing power infrastructure can be found in Appendix G. The network consists of low voltage powerline along the eastern verge of Clifton street. High and low voltage overhead powerline can be found on southern and northern verge of Brookside Ave.

Power distribution and production is managed by Western Power. Data obtained from the Western Power *Network Mapping Tool* indicates that the area is serviced by Gosnells and has a remaining capacity of 15 <= x < 20 MVA as of 2021.

Gosnells substation network forecast for the study area is shown in Table 7-1 and along with network maps in Appendix G. A forecasted network capacity map for 2031 is shown in Figure 7-1.

Figure 7-1 Forecasted 2031 Network Capacity



Table 7-1 Projected substation network capacity

Year	Remaining Capacity
2021	15 <= x < 20 MVA
2026	15 <= x < 20 MVA
2031	15 <= x < 20 MVA
2036	10 <= x < 15 MVA

7.2 Planned Infrastructure

Western Power were unable to provide any comment on planned infrastructure in the area.

7.3 Required infrastructure

The future power demand required for the proposed development has been estimated using Western Power's Design Maximum Demand calculator. The estimated demand has been based off the maximum number of dwellings to be serviced from the rezoning plan.

The additional number of dwellings may require up to an additional 1090.4 kVA to the network. The existing infrastructure should be able accommodate the additional demand as there is an additional 10 <= x < 15 MVA capacity up to year 2036.

Table 7-2 Estimated Power Demand

Number of Additional Dwellings	Max. Demand/Dwelling (kVA)	Approx. Estimated Demand (kVA)
396	4.7	1861.2

8 Conclusions

Key Findings

Potable Water

Water Corporations spatial dataset representing 5-year investment program has revealed planned upgrades in 2027 on Clifton Street. The additional number of dwellings from the rezoning development may require up to an additional 26.59 L/s of potable water flow. Water Corporation is to conduct full water networking modelling to confirm remaining capacity and required water infrastructure upgrades.

Waste Water

Water Corporations spatial dataset representing 5-year investment program has revealed no planned upgrades within the study area. The additional number of dwellings from the rezoning development may require up to an additional 2.1 L/s of waste water flow. Water Corporation to provide existing sewer network and pumping station capacity to determine potential waste water infrastructure upgrades.

Storm Water

The City of Armadale has advised that no future storm water system upgrades as of 18/10/2021. The rezoning development of the study area will result in greater proportions of impermeable area, requiring the drainage structure to manage post development flows. Further details of the rezoning plans will be required to determine the drainage infrastructure for the rezoning development.

Communication

Telstra and NBN are to provide planned future upgrades within the study area. Required infrastructure for NBN is determined at the planning and design stage of developments by NBN Co. All works within new developments must be designed and built by the developer.

Gas

ATCO Gas has advised that no future gas infrastructure upgrades are planned as of 18/1021. The additional number of dwellings from the rezoning development may require up to an additional 138.6 scmh of gas. ATCO are to provide current gas network capacity to determine gas infrastructure upgrades for the rezoning development.

Power

Western Power is to confirm planned power network infrastructure upgrades. Western Power Network Mapping Tool indicates the remaining capacity to be 10 <= x < 15 MVA up to the year 2036. The additional number of dwellings from the rezoning development may require up to an additional 1861.2 kVA, which is within the capacity of the current power network.

APPENDIX

A

DEVELOPMENT PLAN



LOCAL STRUCTURE PLAN

Clifton Street North Precinct, KELMSCOTT

Plan No.	20233-09	
Date	12/04/22	
Drawn	NP	
Checked	CP	
Revision	E	
Scale	1:1500@A3	0 20m 40m

PERTH & FORRESTDALE:
Lvl 1, 252 Fitzgerald St
PERTH WA 6000
15/2 Hensbrook Loop,
FORRESTDALE WA 6112
T: 08 9495 1947
E: metro@harleydykstra.com.au
ALBANY | BUNBURY | BUSSELTON | FORRESTDALE | PERTH

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NOTE: This plan has been prepared for planning purposes. Areas, Contours and Dimensions shown are subject to survey

Harley Dykstra®
PLANNING & SURVEY SOLUTIONS

APPENDIX

B

POTABLE WATER

Legend

WaterCorp CIP Planned Assets Water (Lines) WCORP (WCORP-013)

- Distribution Main
- Reticulation
- Trunk Main
- Site Boundary
- Potable Water

N

1:2,000 Scale at A3

km

4 0 4 8

Existing and Planned Water Network

Cardno

APPENDIX

C

WASTE WATER

Legend

- Site Boundary
- Sewer Pressure Main (WCORP-069)
- Sewer Gravity Pipe (WCORP-068)
- Sewer Connection (WCORP-084)

Existing Sewer Network

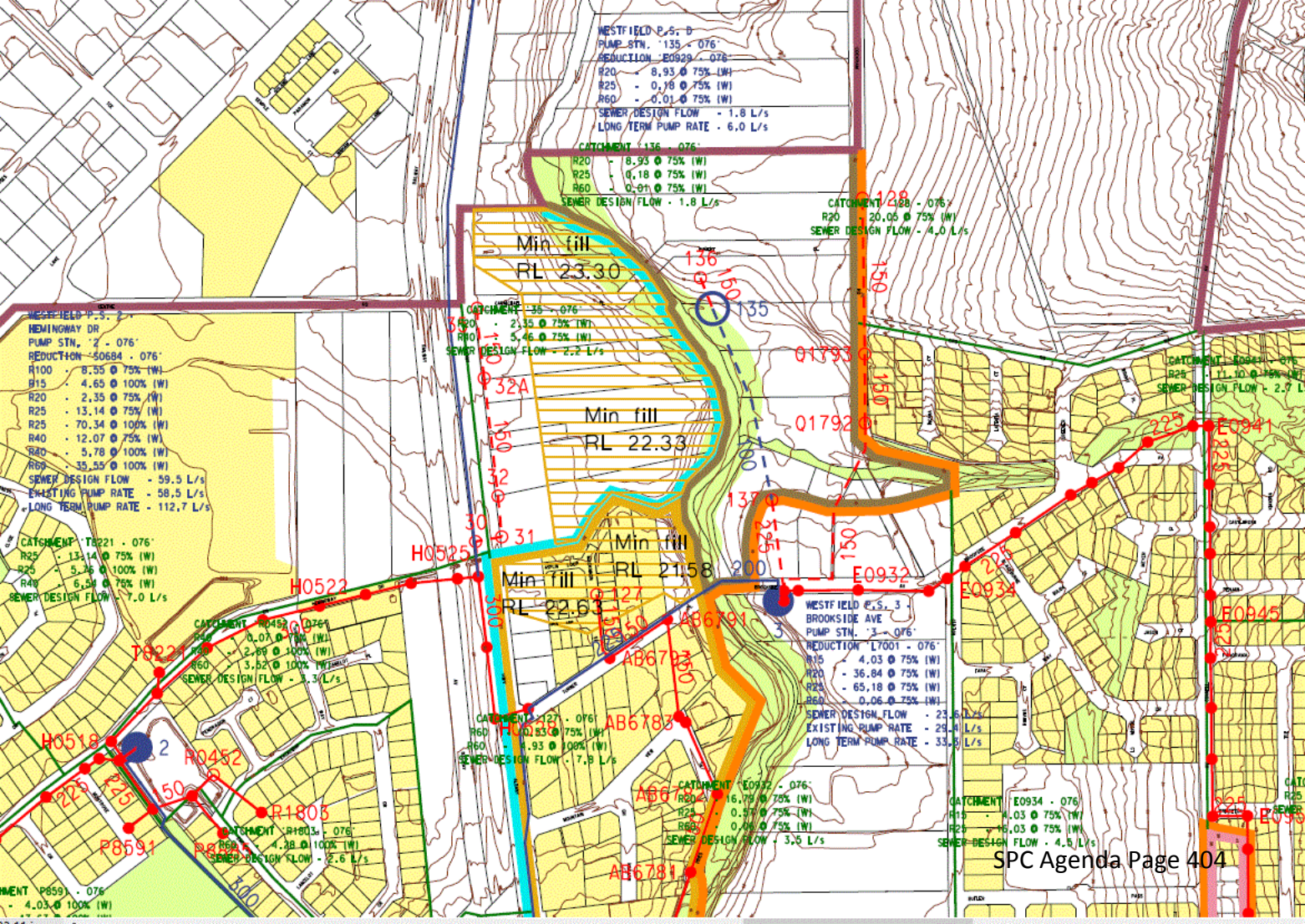
N

1:2,000 Scale at A3

km

4 0 4 8

Cardno


WESTFIELD P.S. 2
HEMINGWAY DR
PUMP STN. '2 - 076'
REDUCTION '50684 - 076'
R100 - 8.55 @ 75% (W)
R15 - 4.65 @ 100% (W)
R20 - 2.35 @ 75% (W)
R25 - 13.14 @ 75% (W)
R25 - 70.34 @ 100% (W)
R40 - 12.07 @ 75% (W)
R40 - 5.78 @ 100% (W)
R60 - 35.55 @ 100% (W)
SEWER DESIGN FLOW - 59.5 L/s
EXISTING PUMP RATE - 58.5 L/s
LONG TERM PUMP RATE - 112.7 L/s
CATCHMENT T8221 - 076'
R25 - 13.14 @ 75% (W)
R25 - 5.46 @ 100% (W)
R40 - 6.54 @ 75% (W)
SEWER DESIGN FLOW - 7.0 L/s
WESTFIELD P.S. 1
PUMP STN. '1 - 076'
REDUCTION '50684 - 076'
R20 - 8.93 @ 75% (W)
R25 - 0.18 @ 75% (W)
R60 - 0.01 @ 75% (W)
SEWER DESIGN FLOW - 1.8 L/s
LONG TERM PUMP RATE - 6.0 L/s
CATCHMENT '136 - 076'
R20 - 8.93 @ 75% (W)
R25 - 0.18 @ 75% (W)
R60 - 0.01 @ 75% (W)
SEWER DESIGN FLOW - 1.8 L/s
CATCHMENT '128 - 076'
R20 - 20.06 @ 75% (W)
SEWER DESIGN FLOW - 4.0 L/s
CATCHMENT '35 - 076'
R20 - 2.35 @ 75% (W)
R40 - 5.46 @ 75% (W)
SEWER DESIGN FLOW - 2.2 L/s
CATCHMENT E0941 - 076'
R25 - 11.10 @ 75% (W)
SEWER DESIGN FLOW - 2.7 L/s
WESTFIELD P.S. 3
BROOKSIDE AVE
PUMP STN. '3 - 076'
REDUCTION 'L7001 - 076'
R15 - 4.03 @ 75% (W)
R20 - 36.84 @ 75% (W)
R25 - 65.18 @ 75% (W)
R60 - 0.06 @ 75% (W)
SEWER DESIGN FLOW - 23.6 L/s
EXISTING PUMP RATE - 29.4 L/s
LONG TERM PUMP RATE - 33.8 L/s
CATCHMENT R0452 - 076'
R40 - 0.01 @ 75% (W)
R60 - 2.89 @ 100% (W)
R60 - 3.52 @ 100% (W)
SEWER DESIGN FLOW - 3.3 L/s
CATCHMENT '127 - 076'
R60 - 0.83 @ 75% (W)
R60 - 1.93 @ 100% (W)
SEWER DESIGN FLOW - 1.8 L/s
CATCHMENT E0932 - 076'
R20 - 16.76 @ 75% (W)
R25 - 0.57 @ 75% (W)
R60 - 0.01 @ 75% (W)
SEWER DESIGN FLOW - 3.5 L/s
CATCHMENT E0934 - 076'
R15 - 4.03 @ 75% (W)
R25 - 16.03 @ 75% (W)
SEWER DESIGN FLOW - 4.5 L/s
CATCHMENT R1803 - 076'
R60 - 4.38 @ 100% (W)
SEWER DESIGN FLOW - 2.6 L/s
Min fill
RL 23.30
Min fill
RL 22.33
Min fill
RL 21.58
Min fill
RL 22.63
H0525
H0522
H0518
R0452
R1803
P8591
T8221
E0932
E0934
E0941
AB6791
AB6783
AB6781
01793
01792
SPC Agenda Page 404

APPENDIX

D

STORM WATER



Existing Drainage Network

N

1:2,000 Scale at A3

km

4 0 4 8

Cardno

APPENDIX

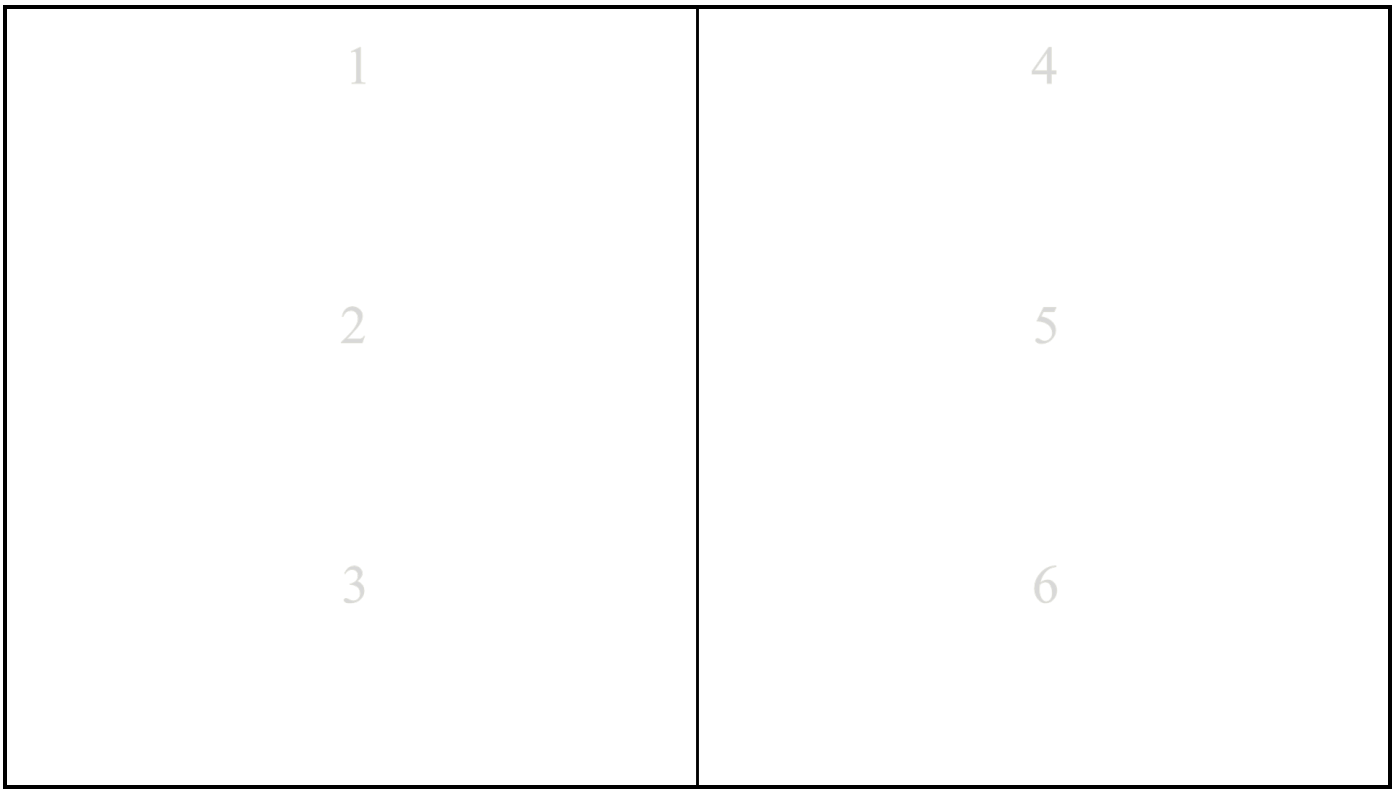
E

COMMUNICATION

To:	Josh Lee
Phone:	Not Supplied
Fax:	Not Supplied
Email:	dongrae.lee@cardno.com.au

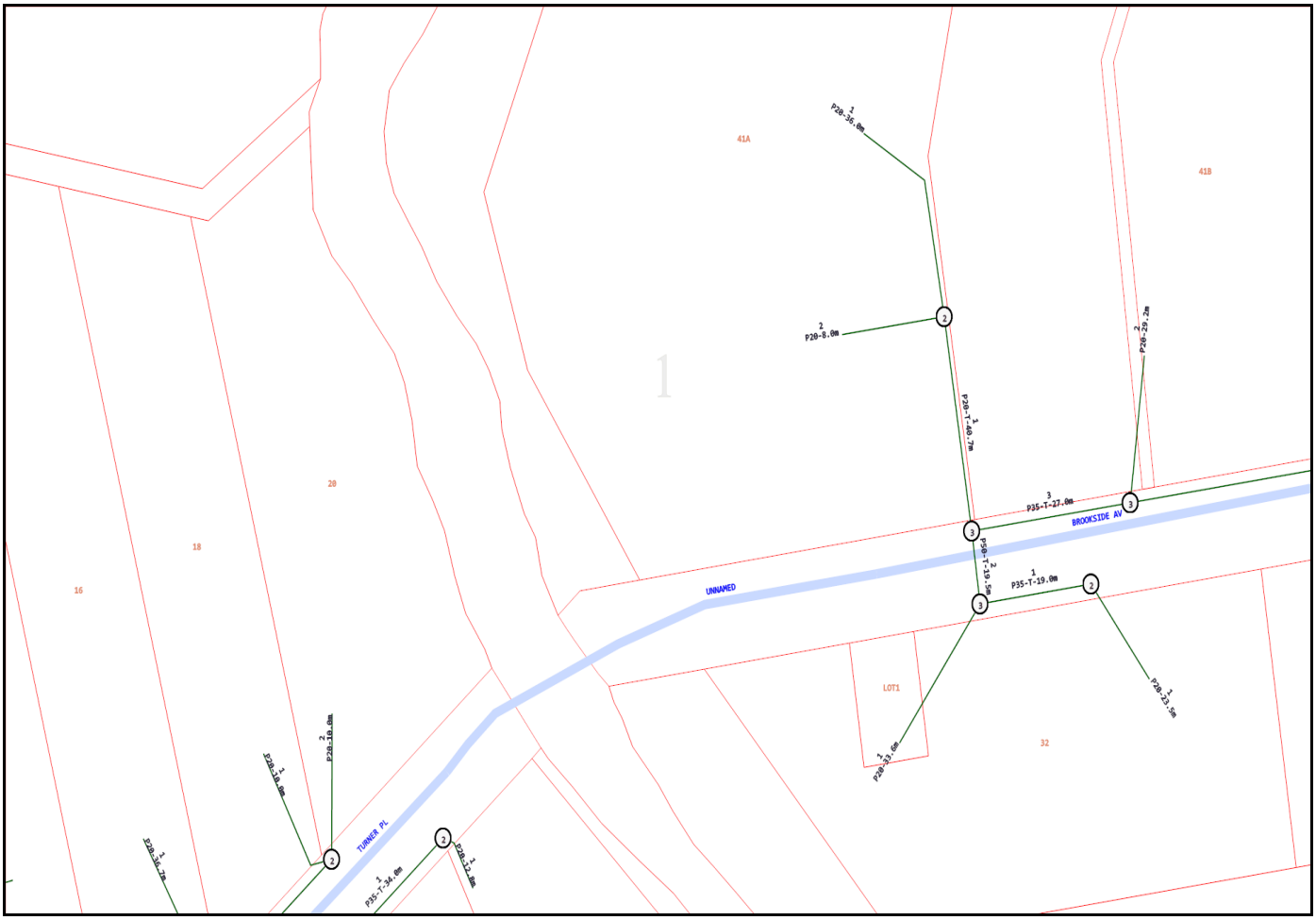
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Sequence #	203922675
Issue Date:	11/10/2021
Location:	17 Clifton Street , Kelmscott , WA , 6111

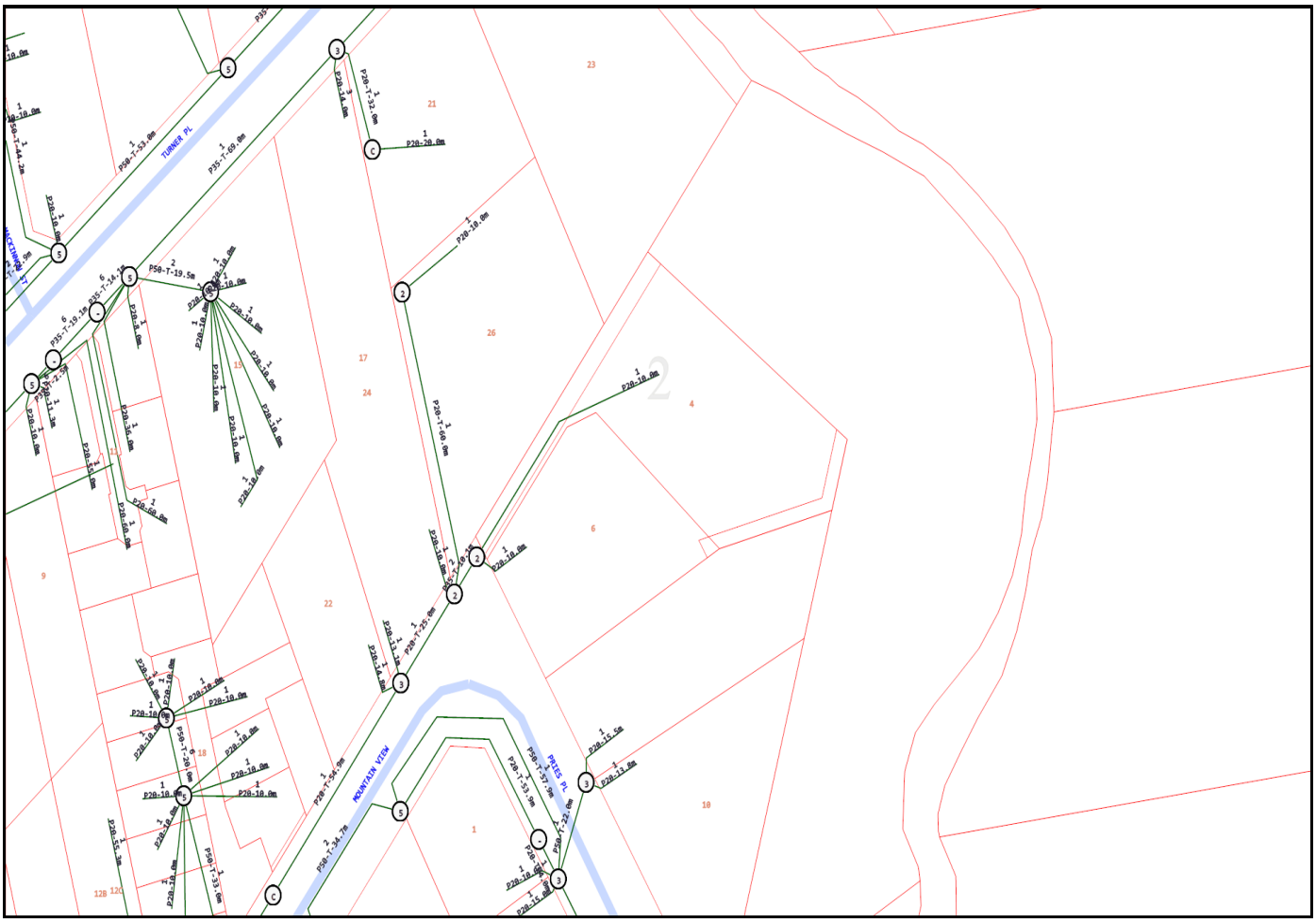
Indicative Plans

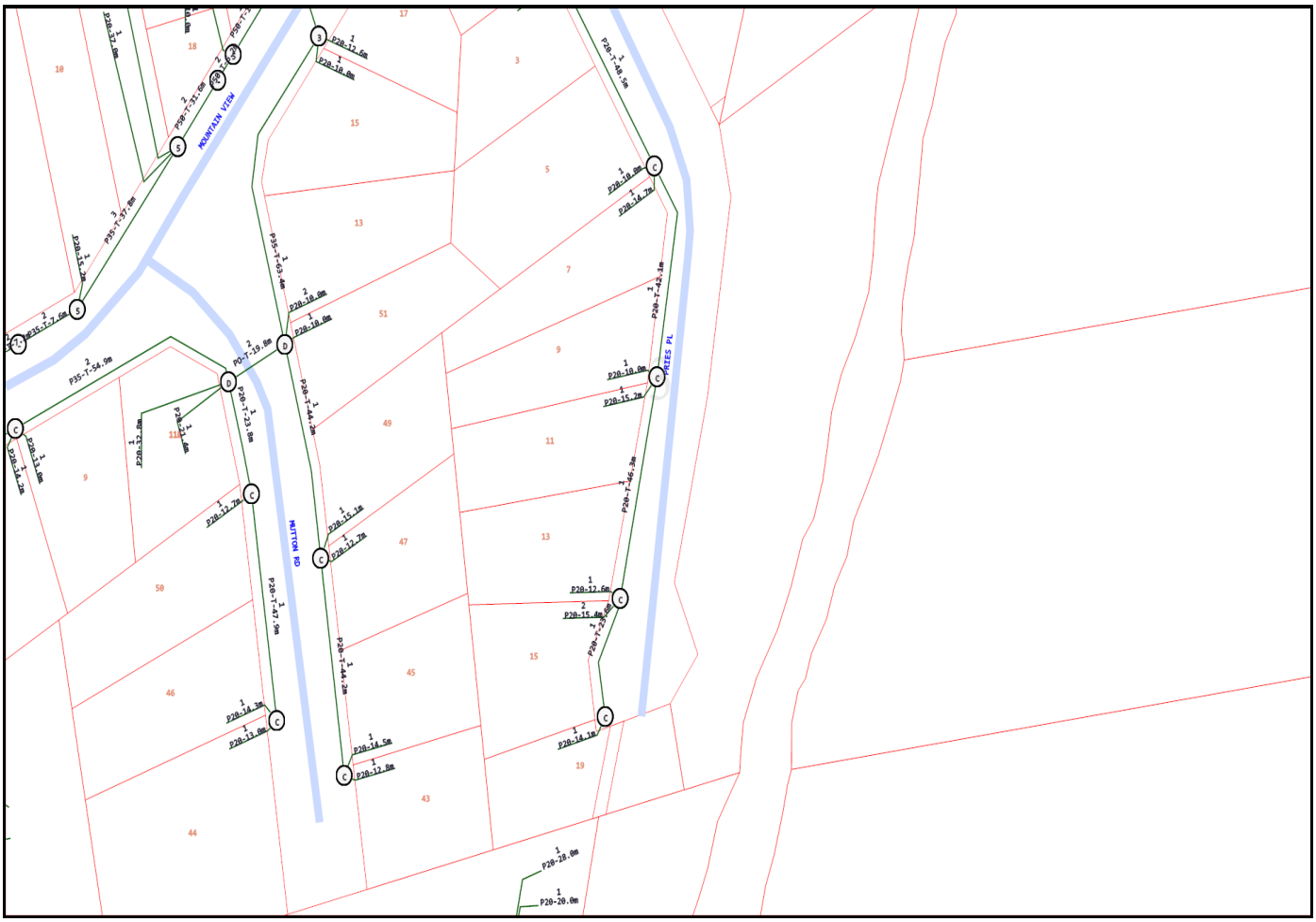


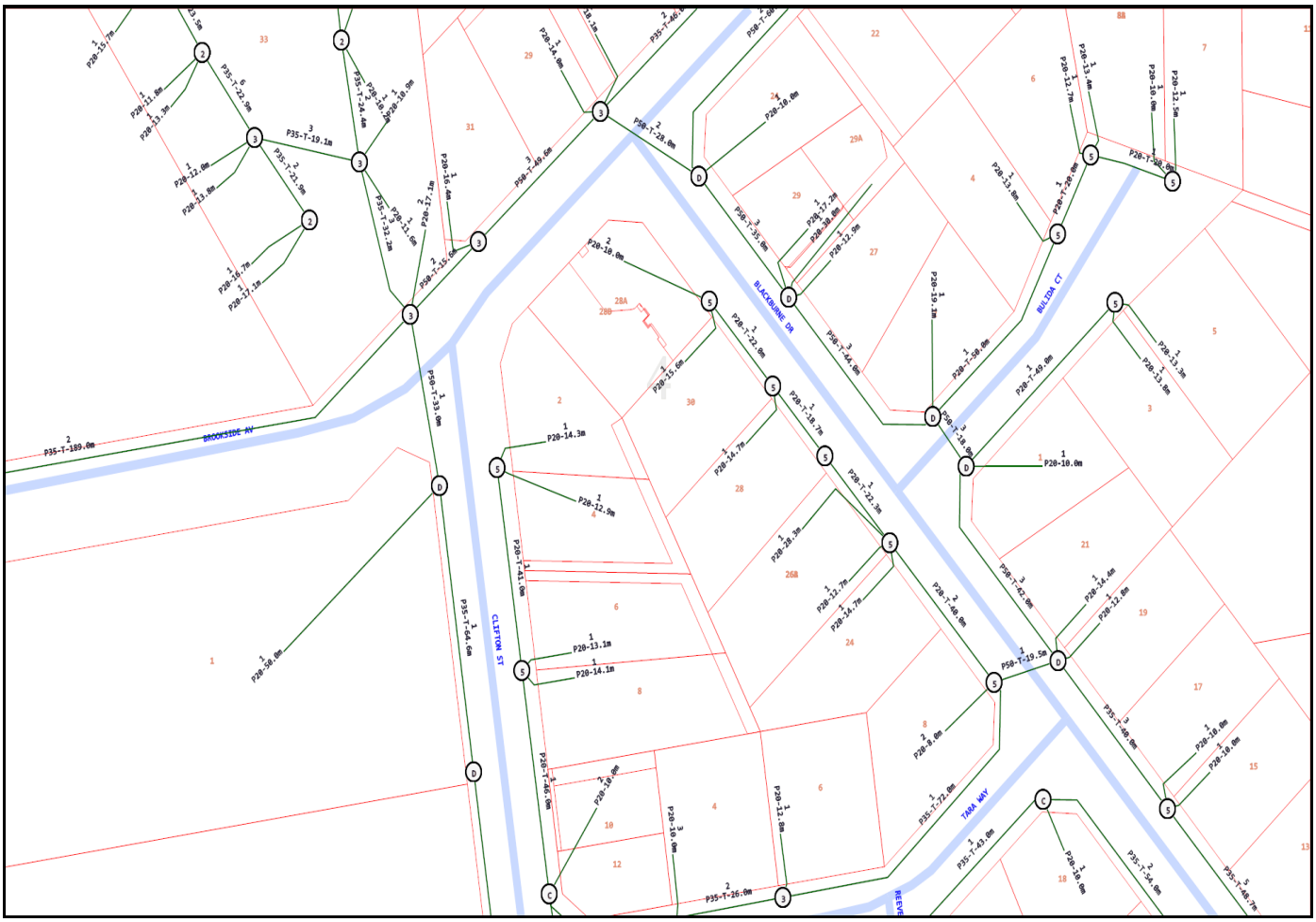
LEGEND

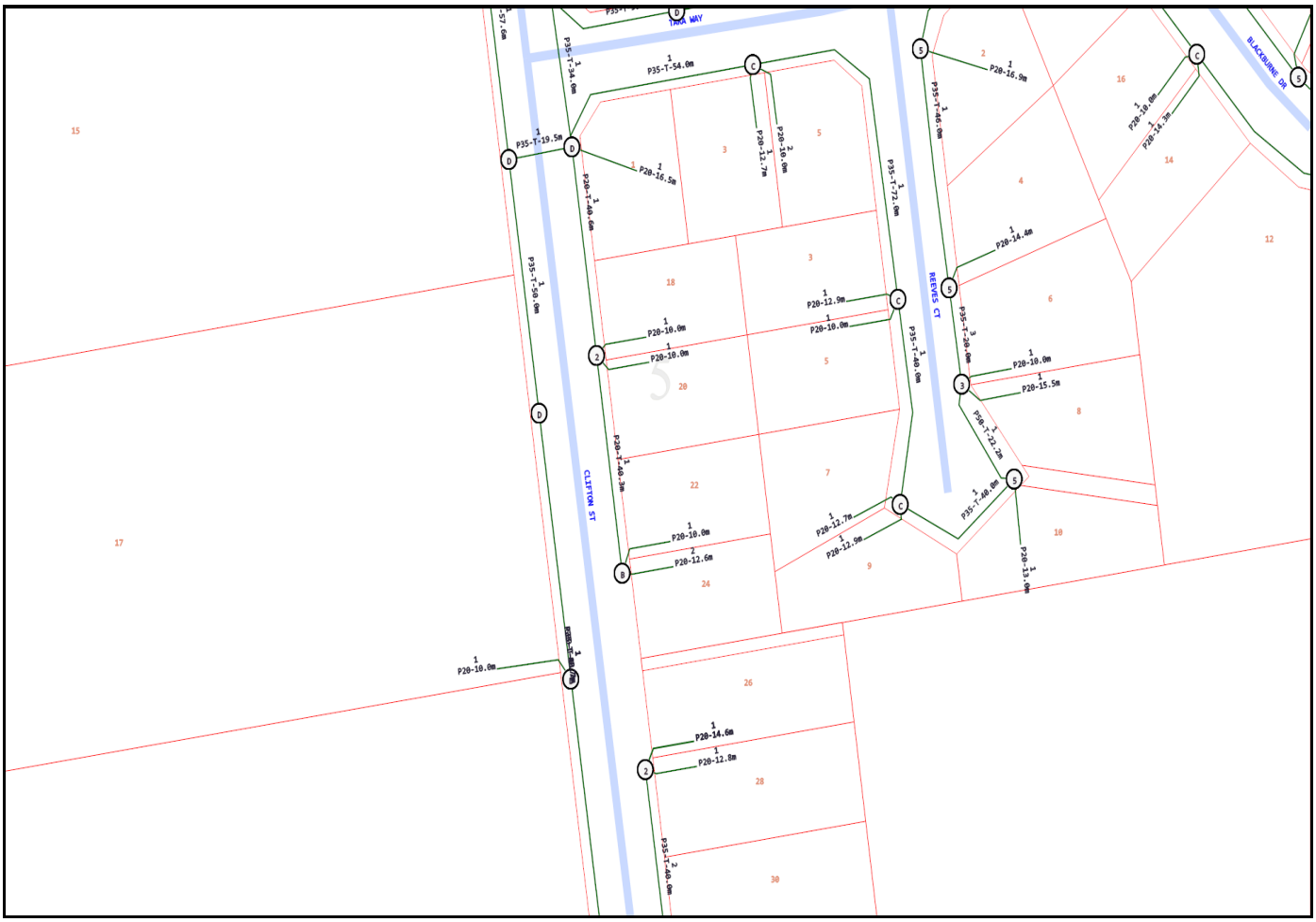
34	Parcel and the location
5	Pit with size "5"
2E	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
2 PO – T- 25.0m P40 – 20.0m 5 9	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
2 10.0m 5 9	2 Direct buried cables between pits of sizes ,"5" and "9" are 10.0m apart.
5 9	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
5 9	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
5 9	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
BROADWAY ST	Road and the street name "Broadway ST"
Scale	0 20 40 60 Meters 1:2000 1 cm equals 20 m

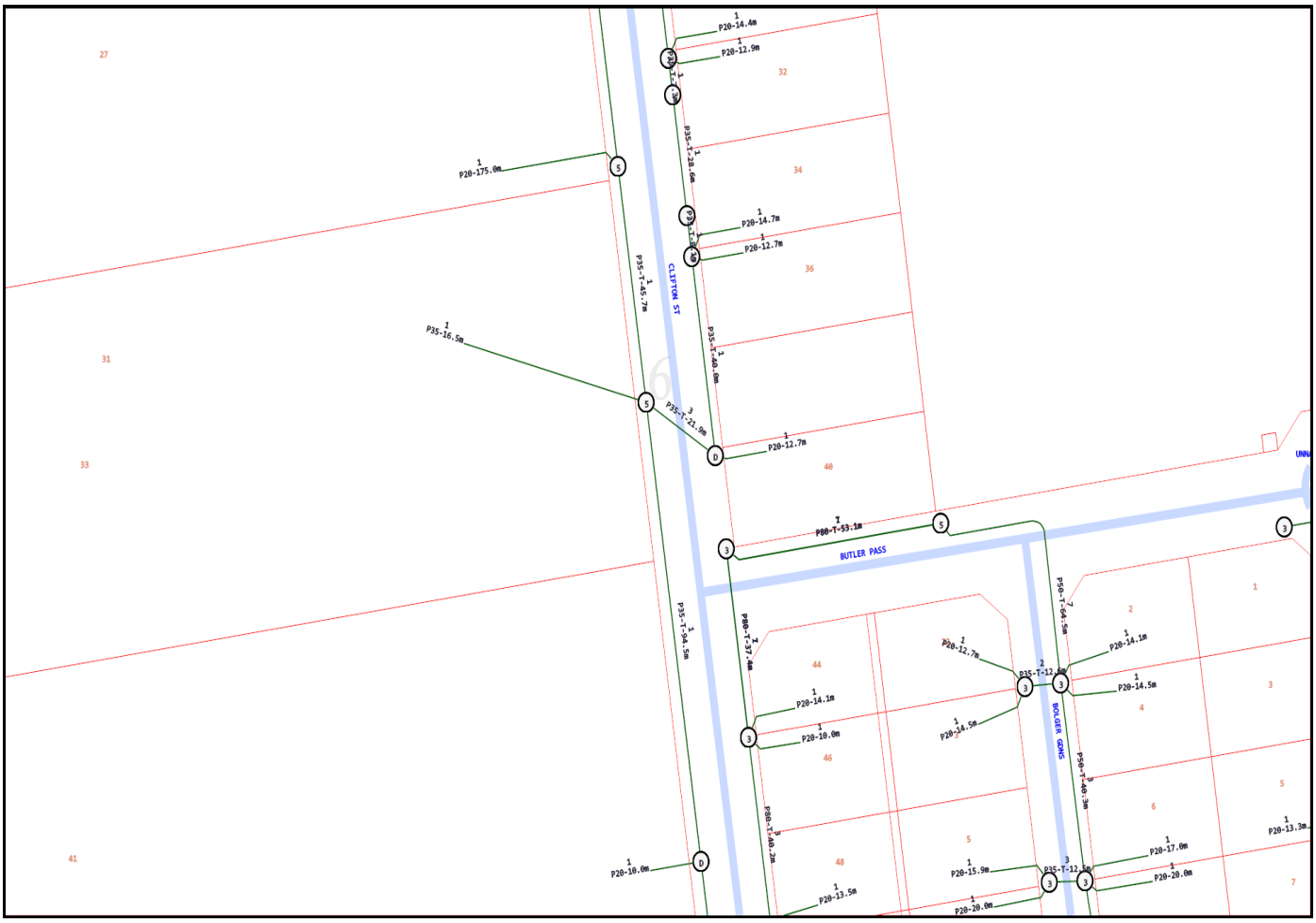

41A
41B
1
20
18
16
32
LOT1
UNNAMED
BROOKSIDE AV
TURNER PL
P20-36.0m
P20-8.0m
P20-T-49.7m
P20-29.2m
P35-T-27.0m
P35-T-19.0m
P20-T-19.0m
P20-23.5m
P20-23.6m
P20-10.0m
P20-10.0m
P20-36.2m
P35-T-34.0m
P20-12.8m


TURNER PL
MOUNTAIN VIEW
PEIES PL


MOUNTAIN VIEW
MUTTON RD
KATIES PL


BROOKSIDE AV
CLIFTON ST
BLACKBURNE DR
BULIDA CT
TARA WAY

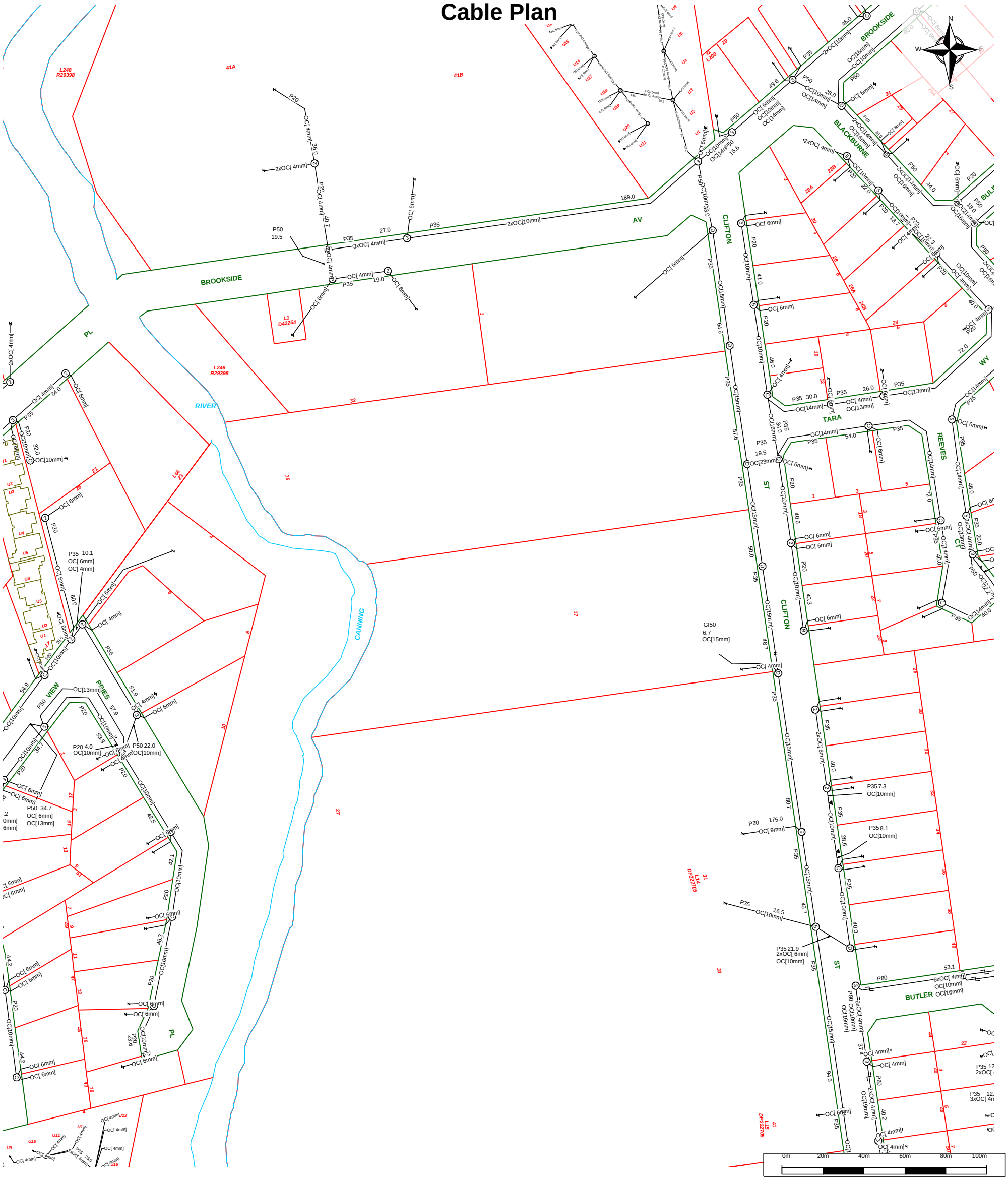

CLIFTON ST
REEVES CT
BLACKBURNE DR
TRAIL WAY



Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

Cable Plan



Telstra

For all Telstra DBYD plan enquiries -
email - Telstra.Plans@team.telstra.com
For urgent onsite contact only - ph 1800 653 935 (bus hrs)

TELSTRA CORPORATION LIMITED A.C.N. 051 775 556

Generated On 11/10/2021 14:25:09

Sequence Number: 203922678

Please read Duty of Care prior to any excavating

WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

It is your responsibility to locate Telstra's underground plant by careful hand pot-holing prior to any excavation in the vicinity and to exercise due care during that excavation.

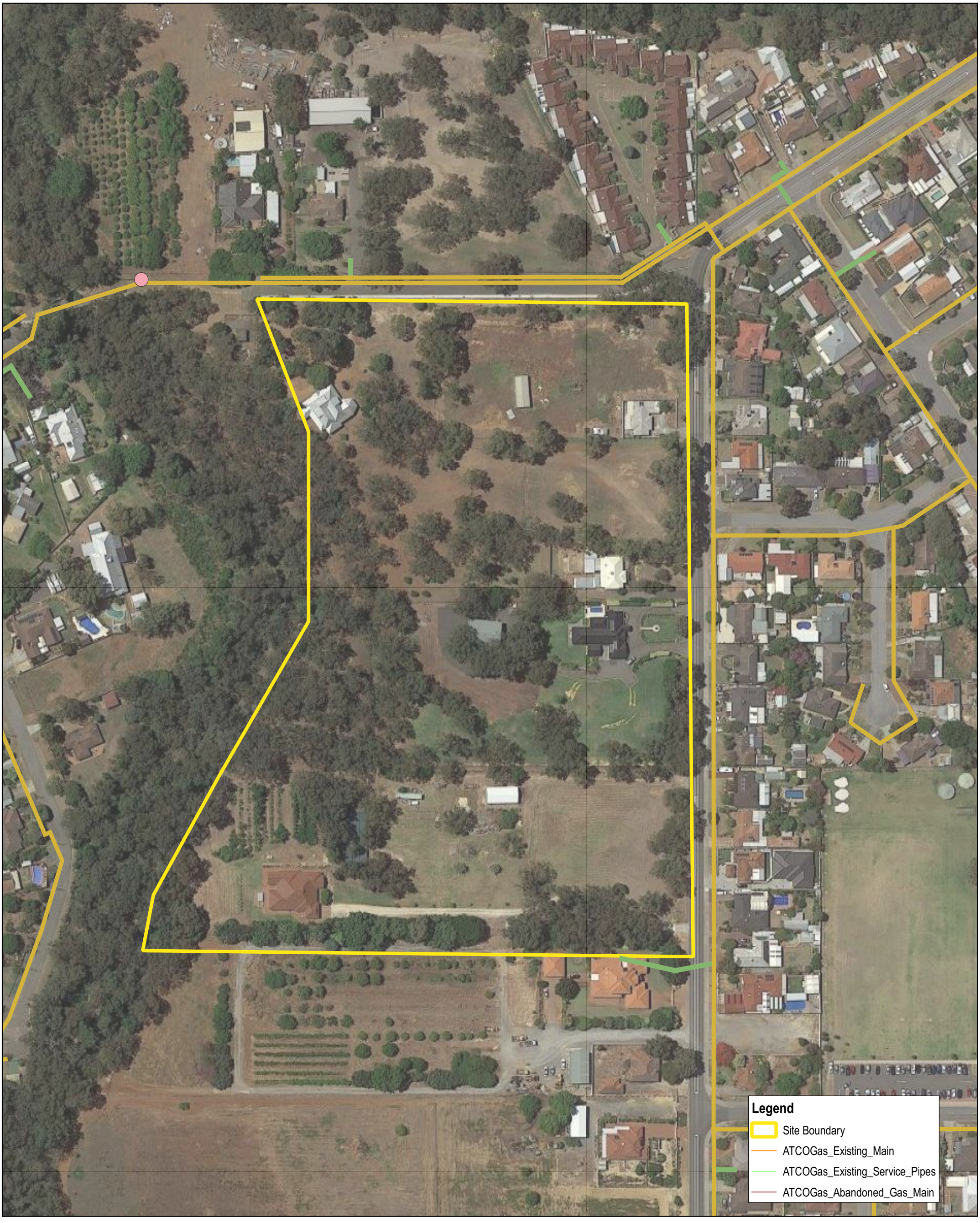
Please read and understand the information supplied in the duty of care statement attached with the Telstra plans. TELSTRA WILL SEEK COMPENSATION FOR LOSS CAUSED BY DAMAGE TO ITS PLANT.

Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.

APPENDIX

F

GAS



N

1:2,000 Scale at A3

km

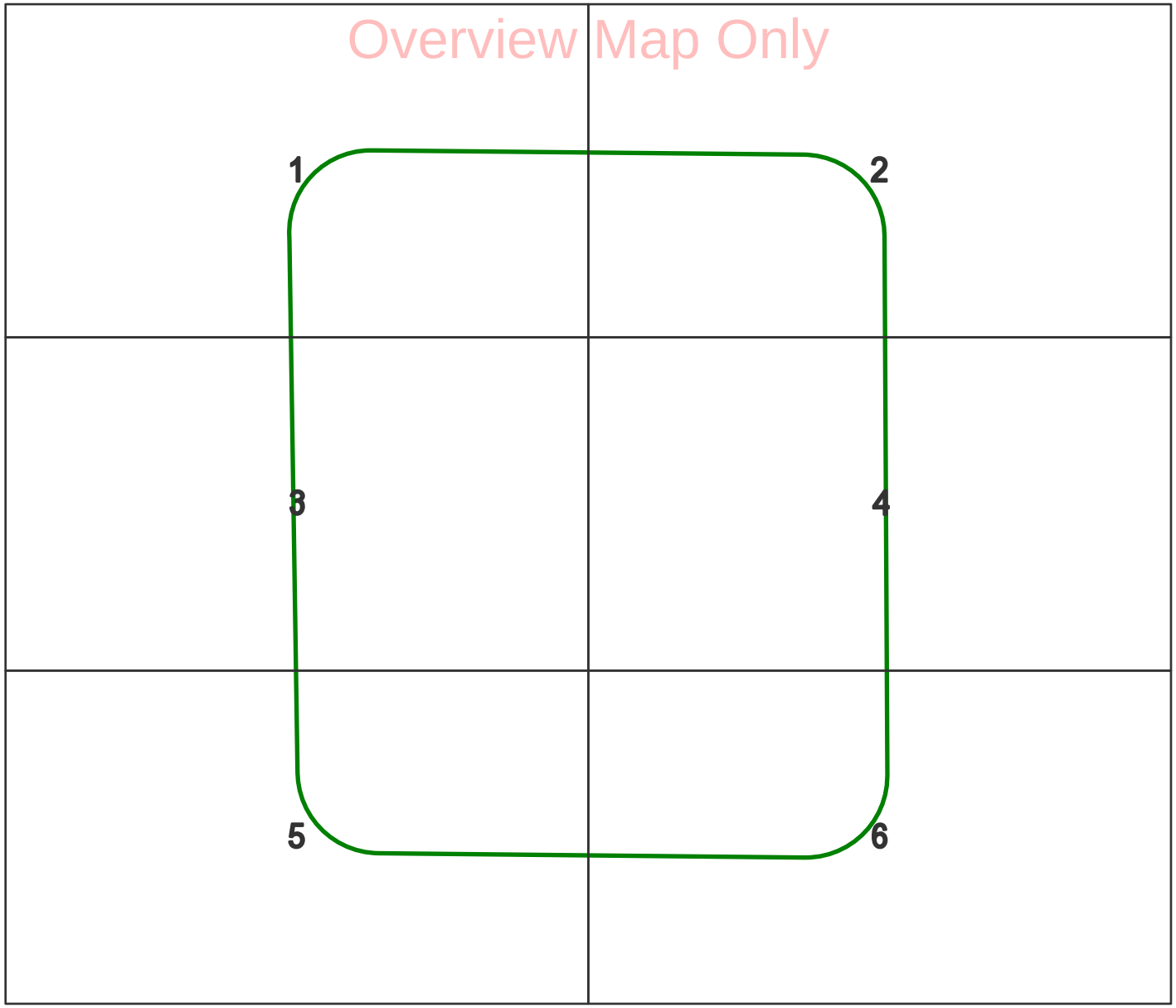
4 0 4 8

Existing Gas Network

Cardno

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No works within 15 metres of this asset are permitted without prior approval from ATCO Gas Australia PH 1300 926 755



Sequence No: 203922677
Job No: 30671325
Map Tile:
Date:11/10/2021
Scale: 1:4612
Location: 17 Clifton Street, Kelmscott 6111

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ABN 90 089 531 975

N
W E
S

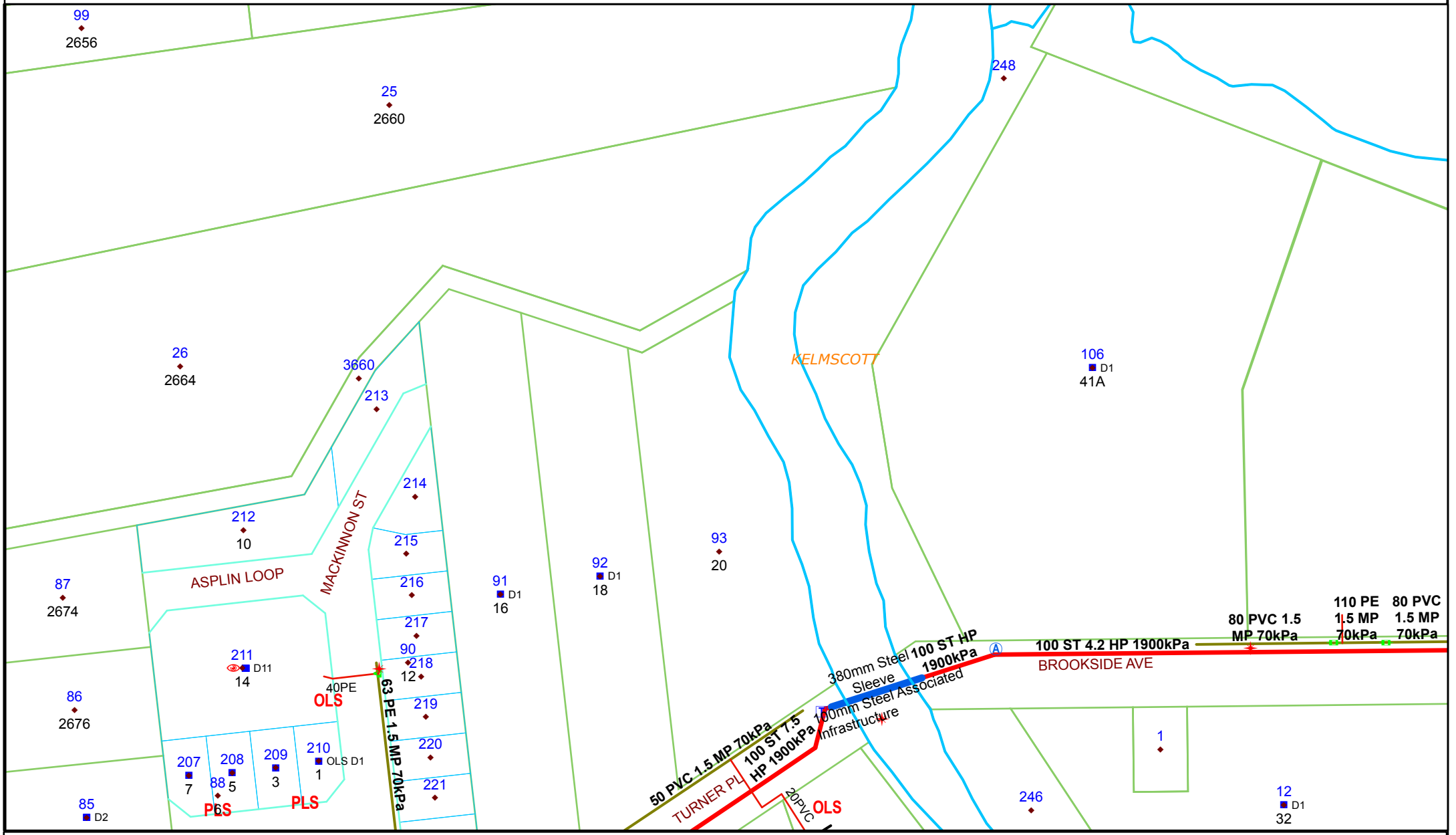
ATCO

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Job No: 30671325 Date:11/10/2021 Location: 17 Clifton Street, Kelmscott 6111

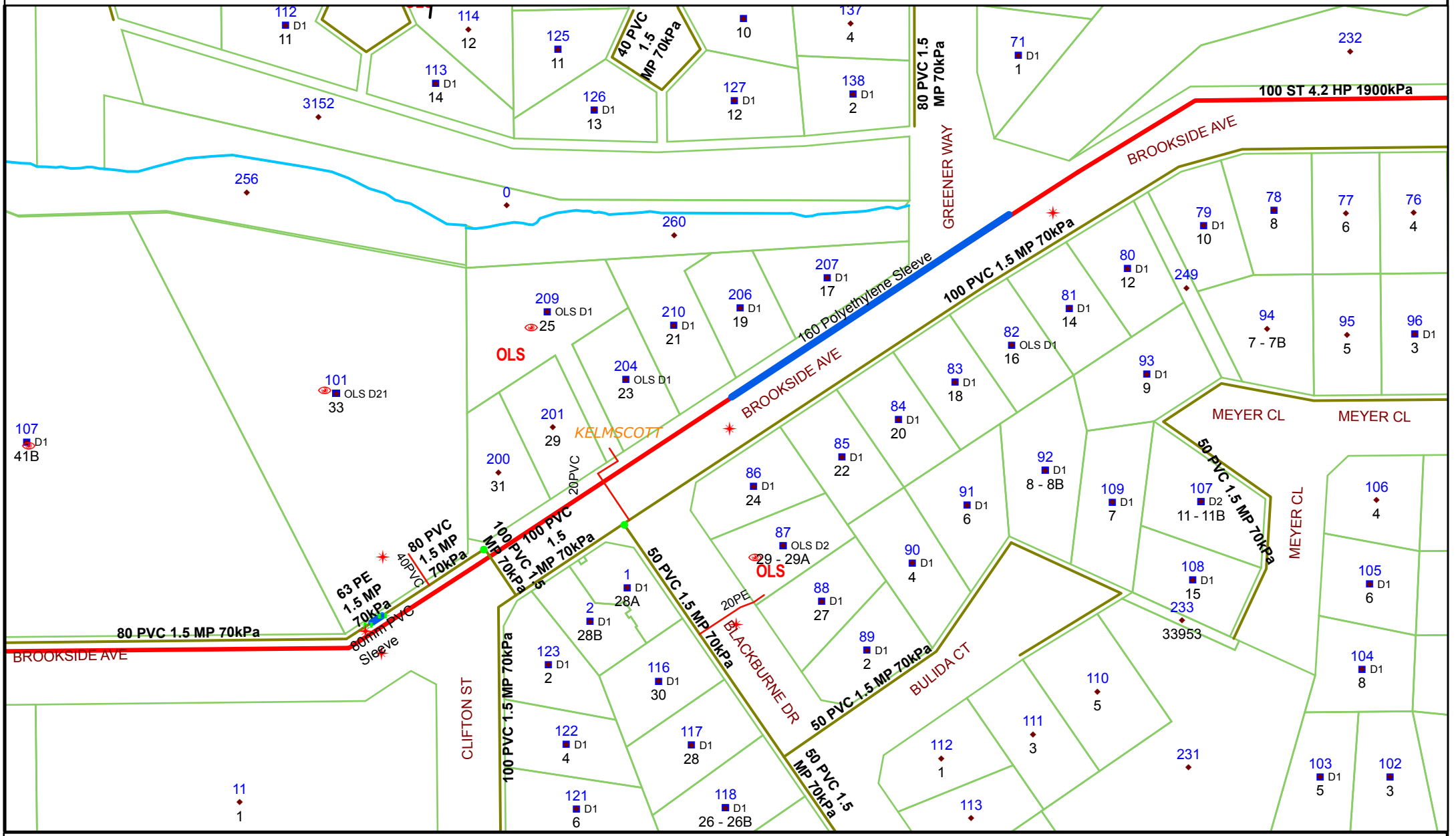
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Job No: 30671325 Date:11/10/2021 Location: 17 Clifton Street, Kelmscott 6111

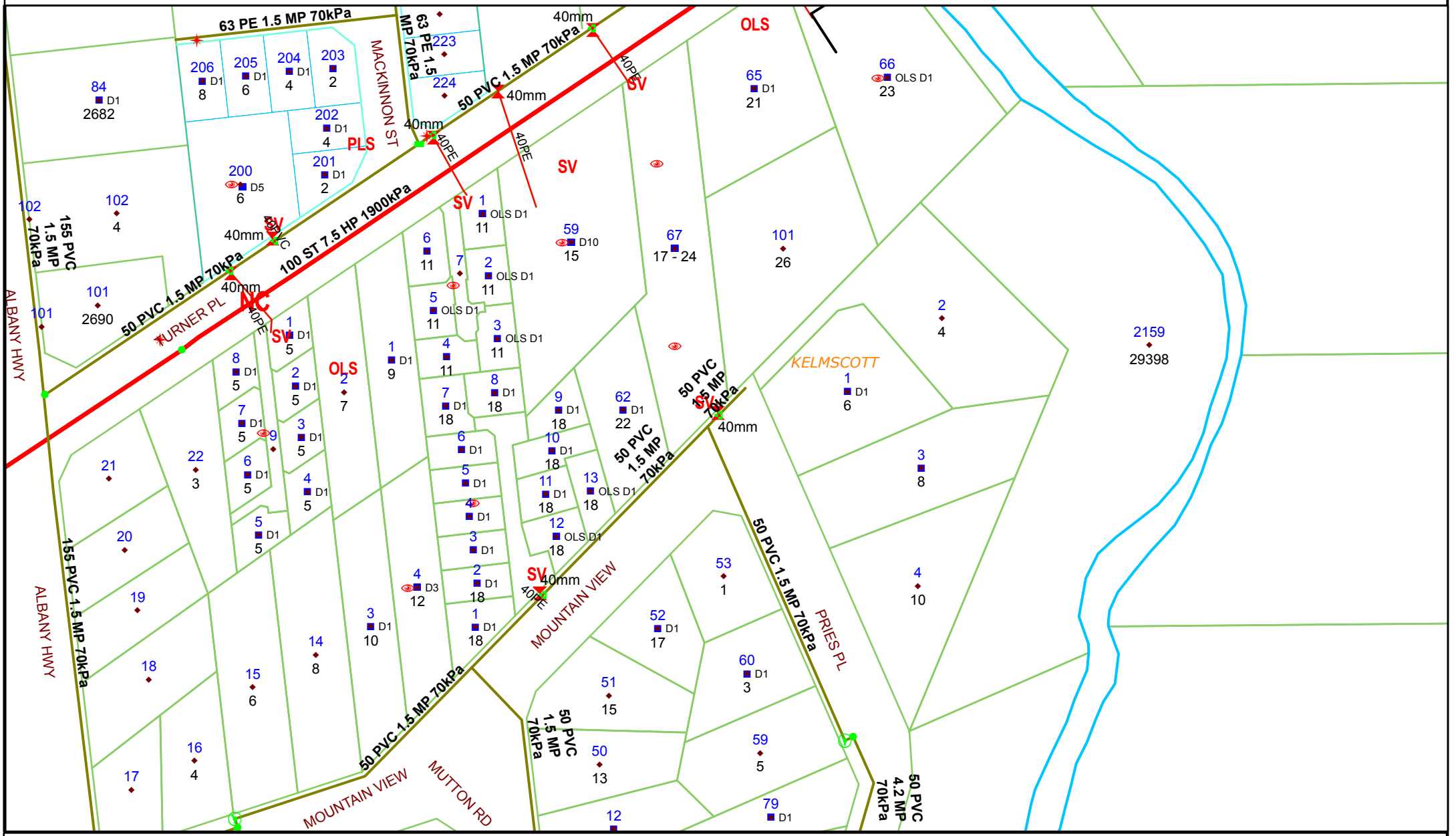
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Sequence No: 203922677 Map Tile: 3 Scale: 1:1500

Job No: 30671325 Date:11/10/2021 Location: 17 Clifton Street, Kelmscott 6111

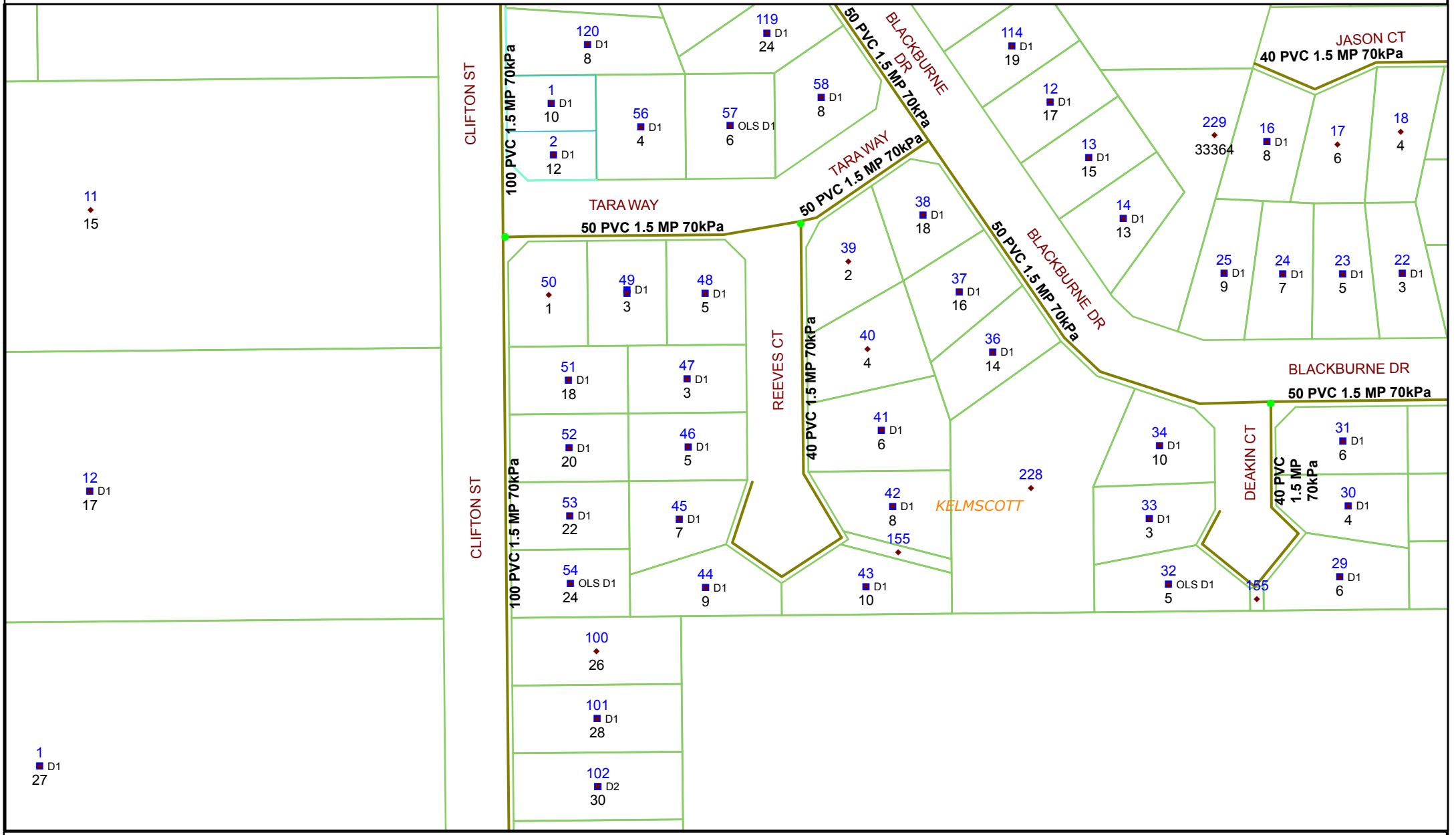
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Sequence No: 203922677 | Map Tile: 4 | Scale: 1:1500

Job No: 30671325 | Date:11/10/2021 | Location: 17 Clifton Street, Kelmscott 6111

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ABN 90 089 531 975

N W E S

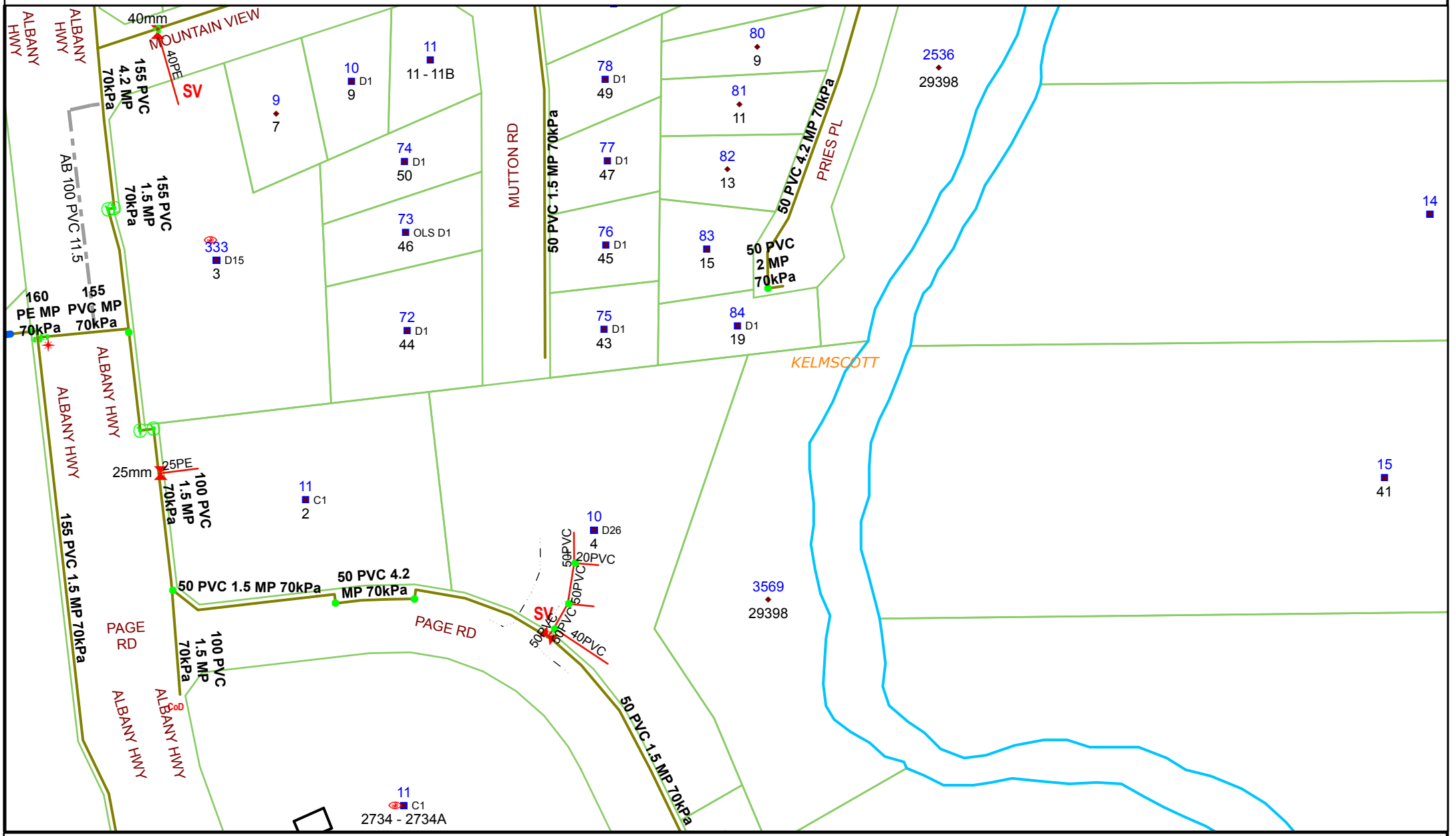
ATCO

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Job No: 30671325 | Date:11/10/2021 | Location: 17 Clifton Street, Kelmscott 6111

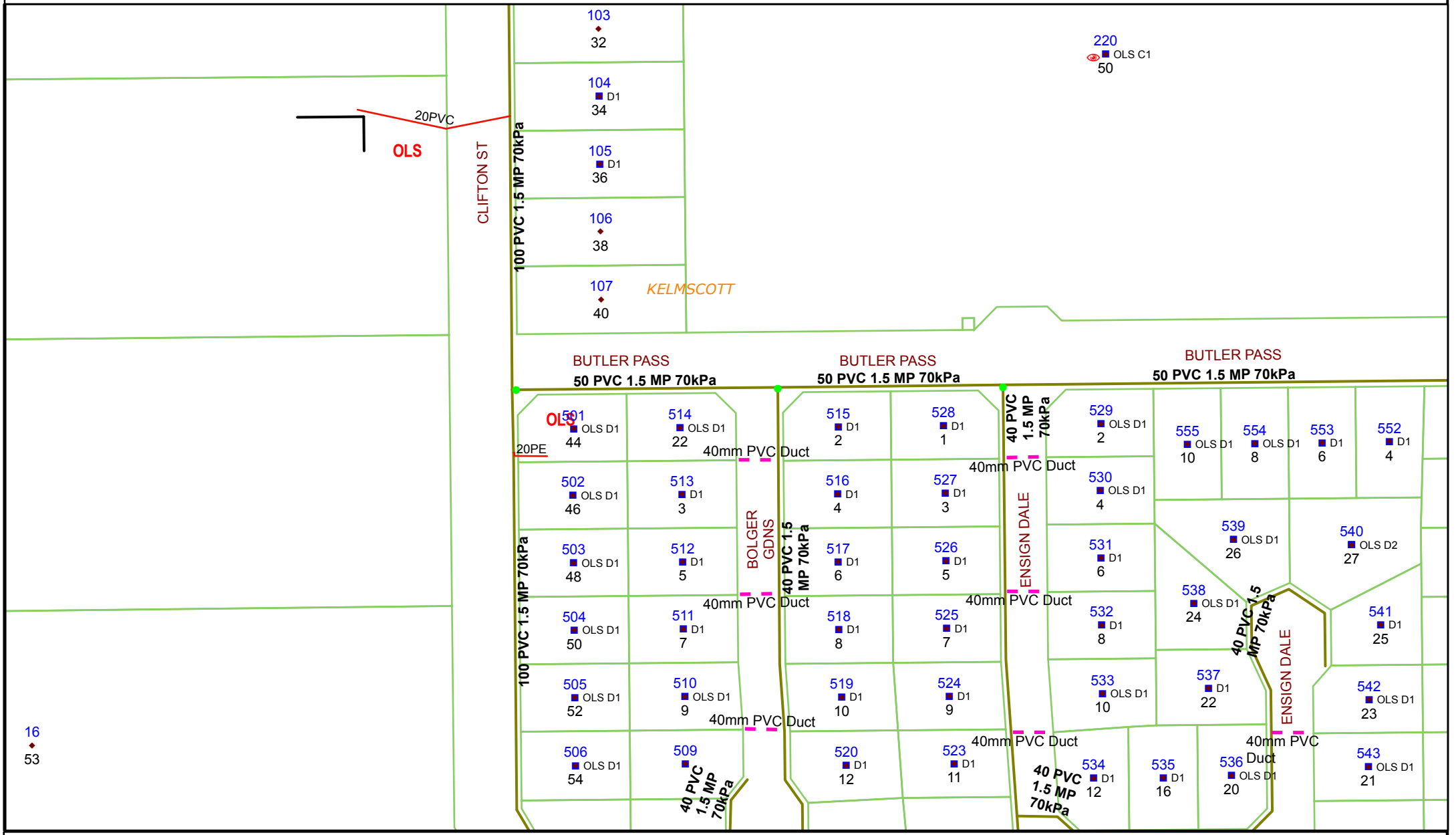
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Sequence No: 203922677 Map Tile: 6 Scale: 1:1500

Job No: 30671325 Date:11/10/2021 Location: 17 Clifton Street, Kelmscott 6111

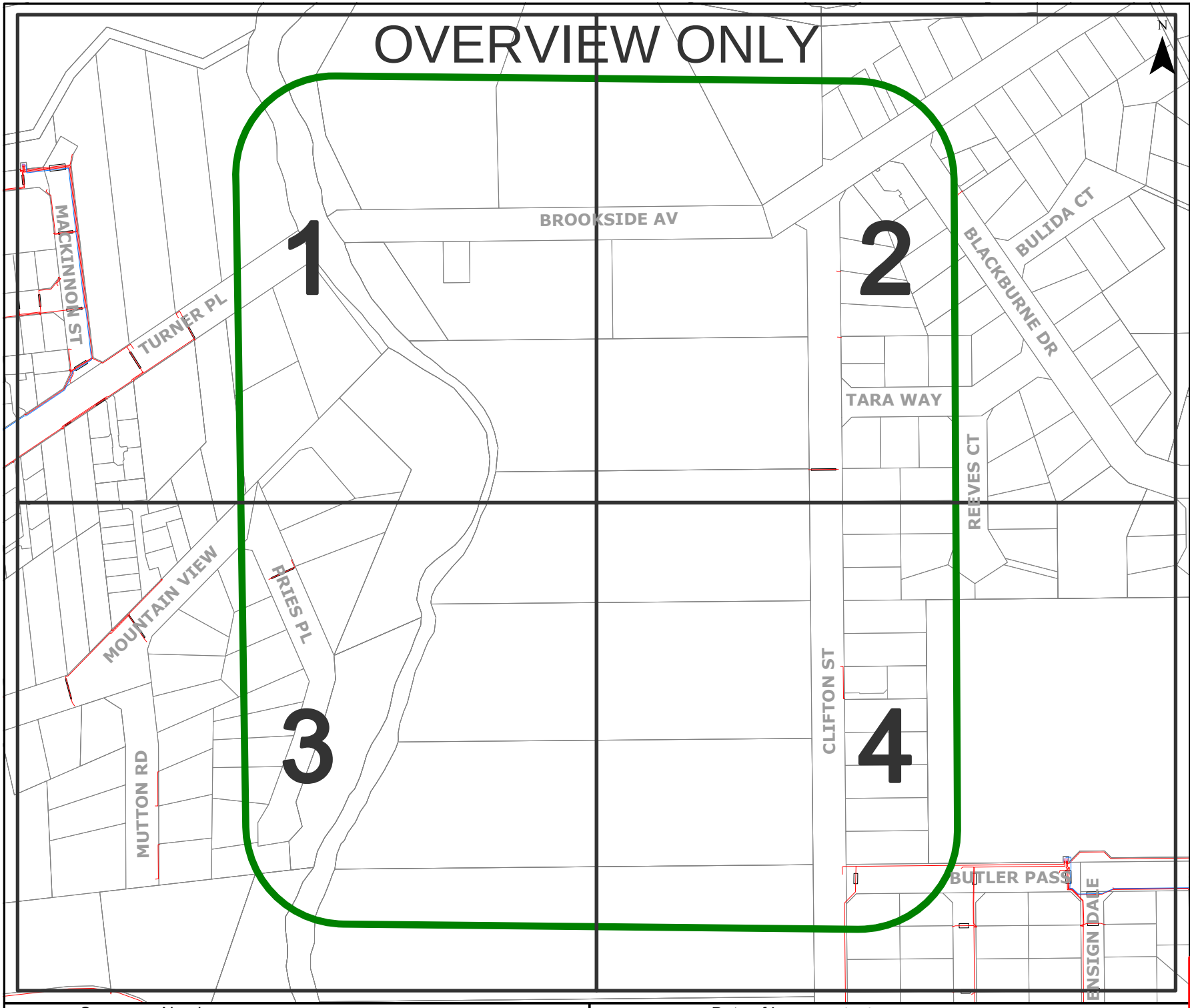
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Please read all **warnings**, conditions and information on the attached "Underground Asset Details" information sheet. This plan is issued subject to that information and those conditions and **warnings** (including, but not limited to, the "NO HOT WORKS" warning). Plans are current for only **30 days** from date of request, indicative only and not warranted to be accurate. It is your responsibility to carefully locate underground assets and follow safe work practises and procedures (eg pot-holing). ATCO Gas Australia will seek compensation for damage caused to assets.

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APPENDIX G

POWER



westernpower

UNDERGROUND LEGEND

Structures

- Pillar
- Metal Pole
- Transformer Site
- UG Crossing *
- Ring Main Unit
- LV Distribution Frame

Distribution Cables

- High Voltage Cable (1kV - 33kV)
- Low Voltage Cable (< 1kV)
- Street Light Circuit (< 1kV)
- Street Light Pilot (< 1kV)
- Earth Wire

Cable Pole Terminations

- HV Termination
- LV Termination

Proposed Construction Assets

- Design Area *
- High Voltage Underground Cable
- Low Voltage Underground Cable
- Metal Pole
- Pillar
- Transformer site
- HV Termination
- LV Termination

State Underground Power Project

- CURRENT Work Area *
- COMPLETED Area *

Feature

- Area of Interest

*** Please refer to coversheet**

Privately owned cables NOT SHOWN (including house services)

This map is INDICATIVE ONLY. Hand exposure via pothole method is MANDATORY.

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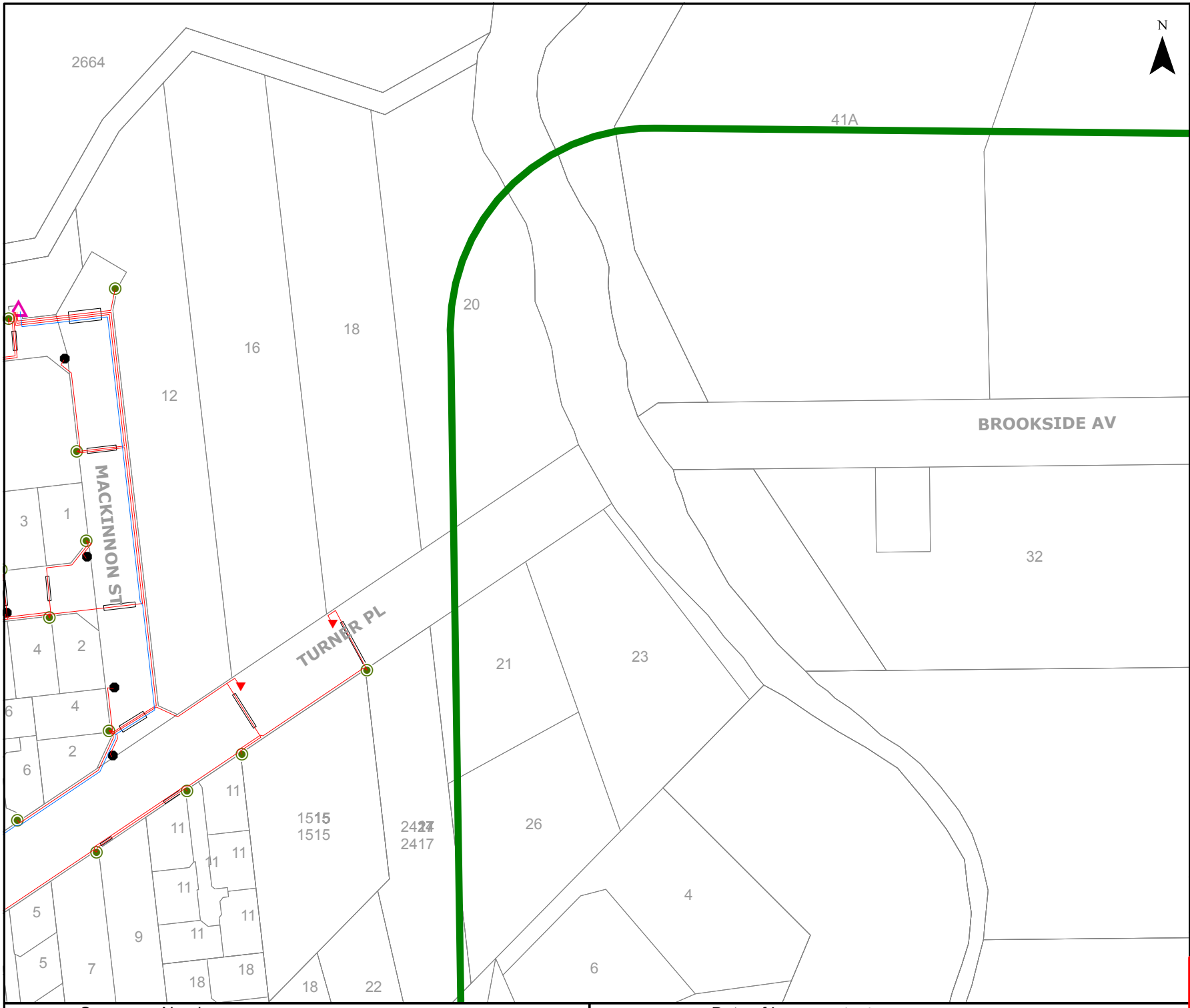
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WARNING! Look out for

Sequence Number: 203922679

Date of Issue: 11/10/2021



westernpower

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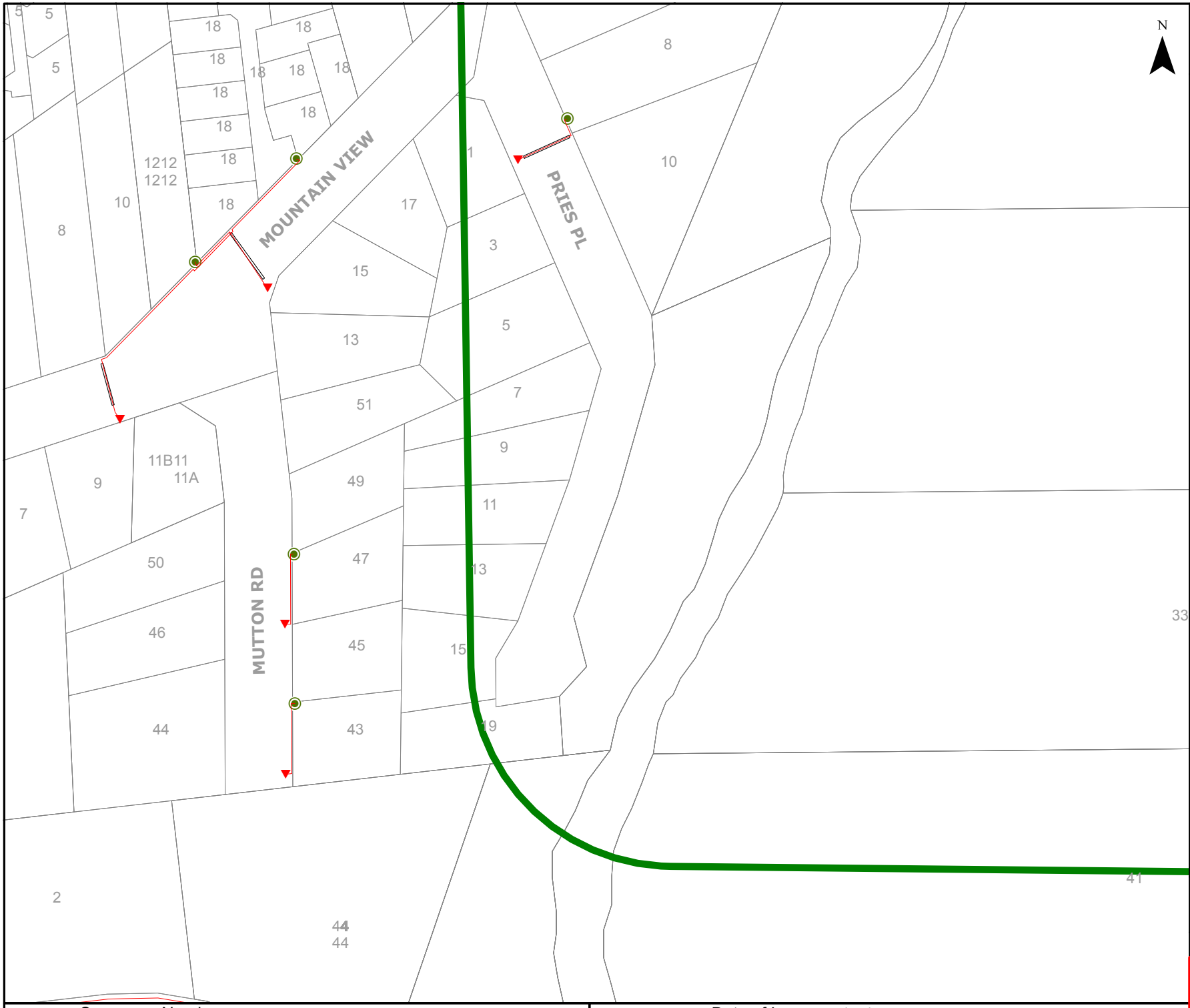
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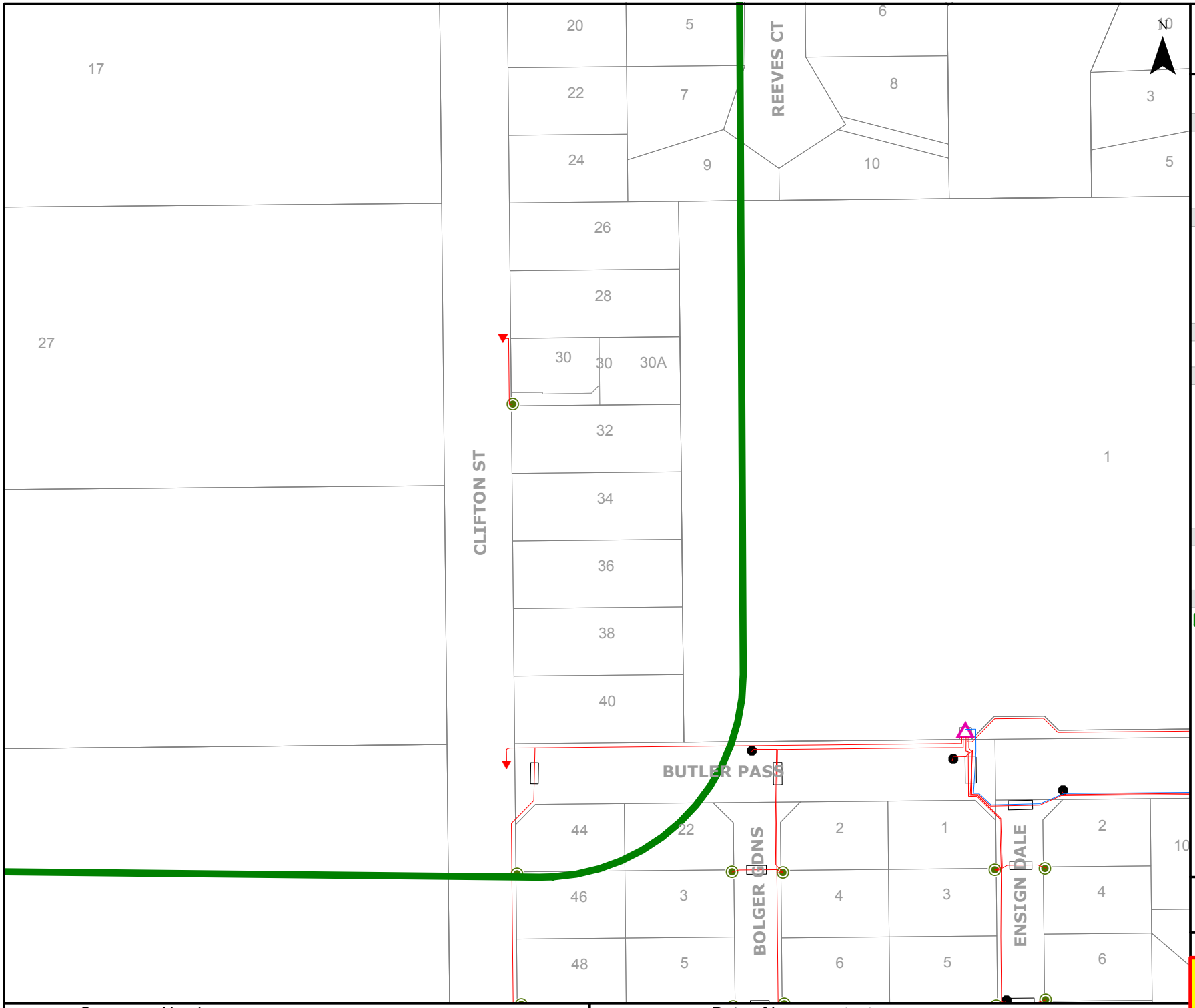
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WARNING! Look out for Overhead Powerlines

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westernpower

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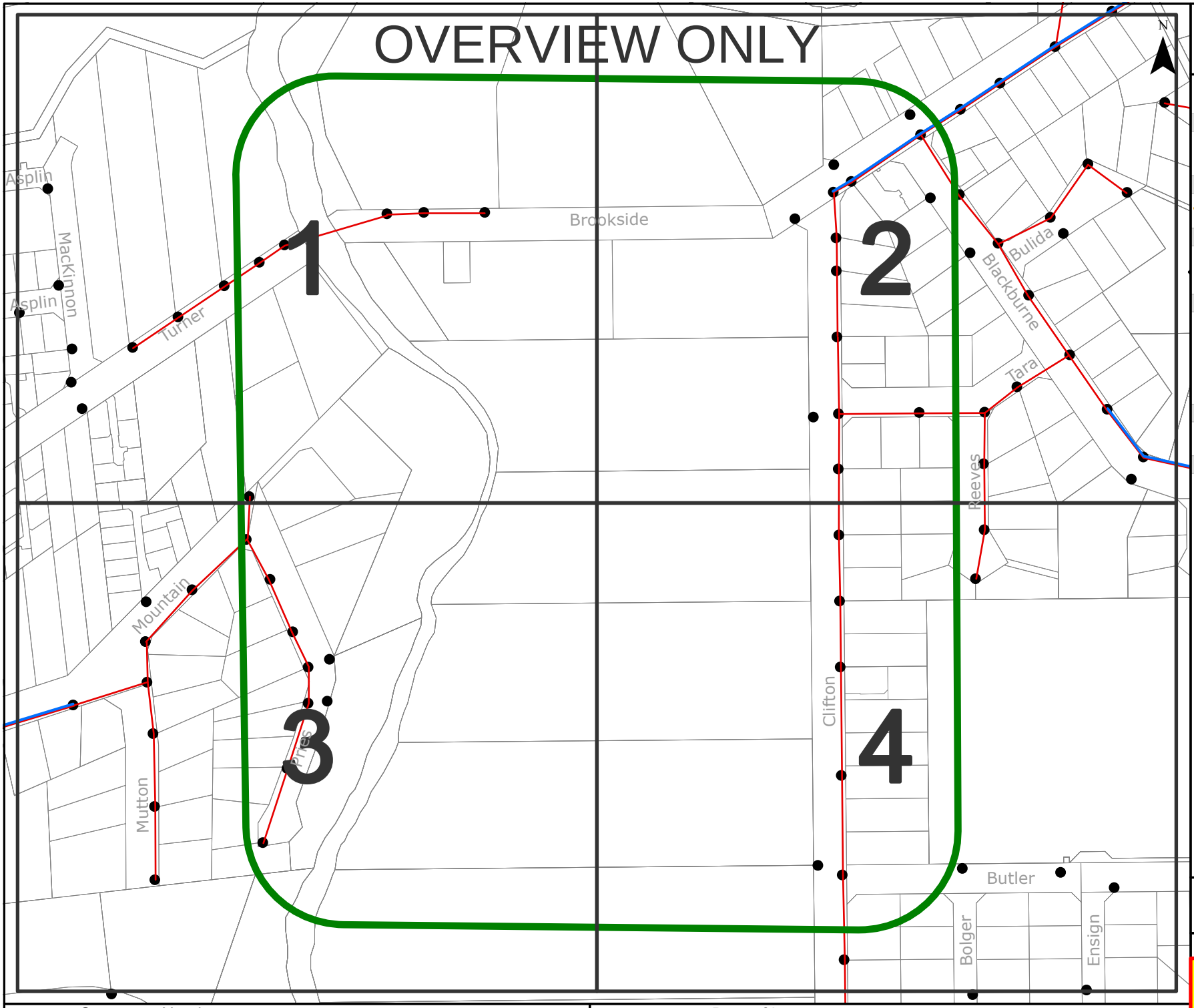
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WARNING! Look out for Overhead Wires!

Sequence Number: 203922679

Date of Issue: 11/10/2021



westernpower

OVERHEAD LEGEND

Structures

- Power Pole
- Transmission Poles

Transmission Overhead Powerline

- Transmission (33kV - 330kV)

Distribution Overhead Powerline

- High Voltage (1kV - 33kV)
- Low Voltage (< 1kV)

Proposed Construction Assets

- Design Area *
- High Voltage Overhead Powerline
- Low Voltage Overhead Powerline
- Power Pole

Communications Assets

- Overhead Pilot Cable

Feature

- Area of Interest

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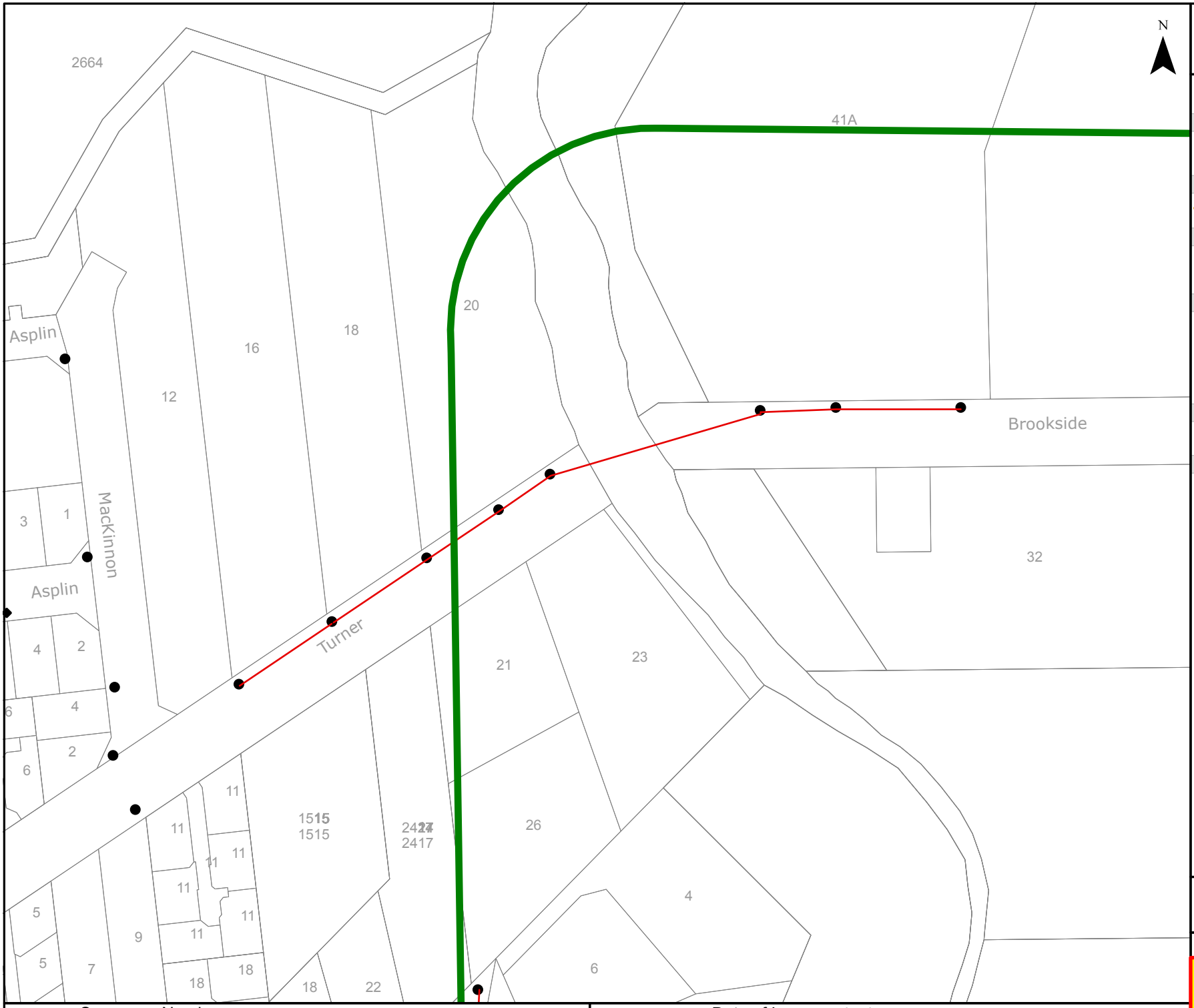
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westernpower

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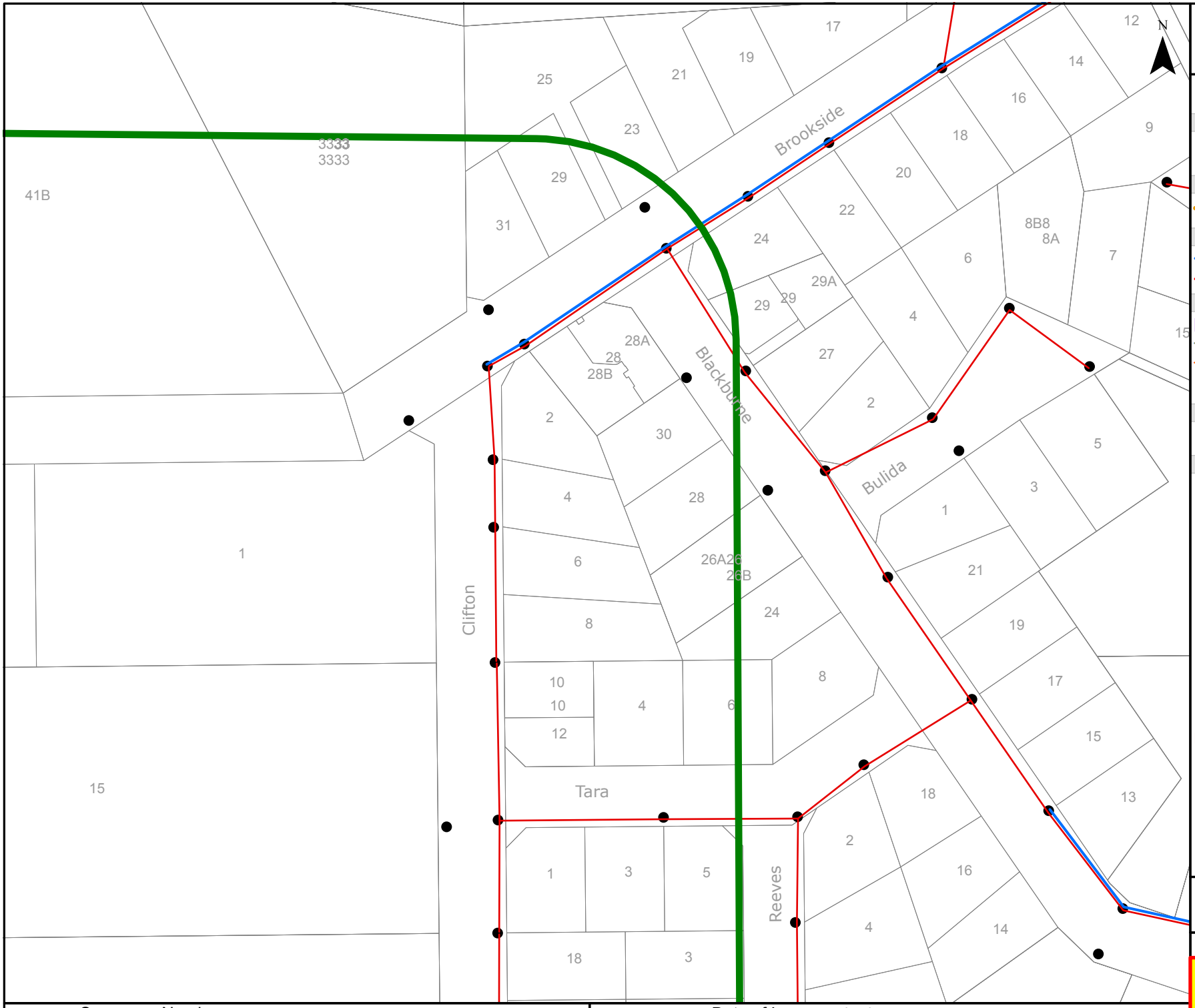
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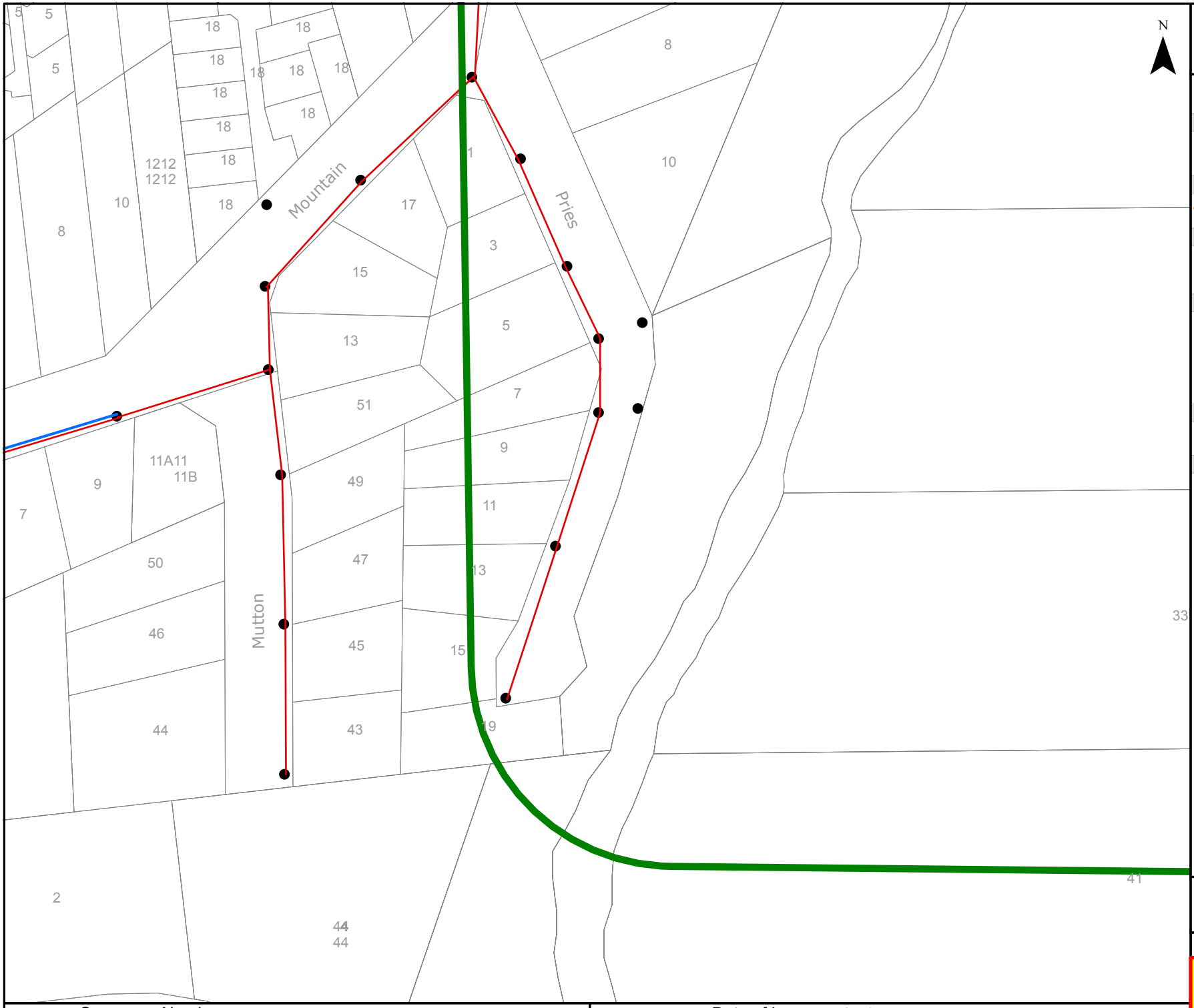
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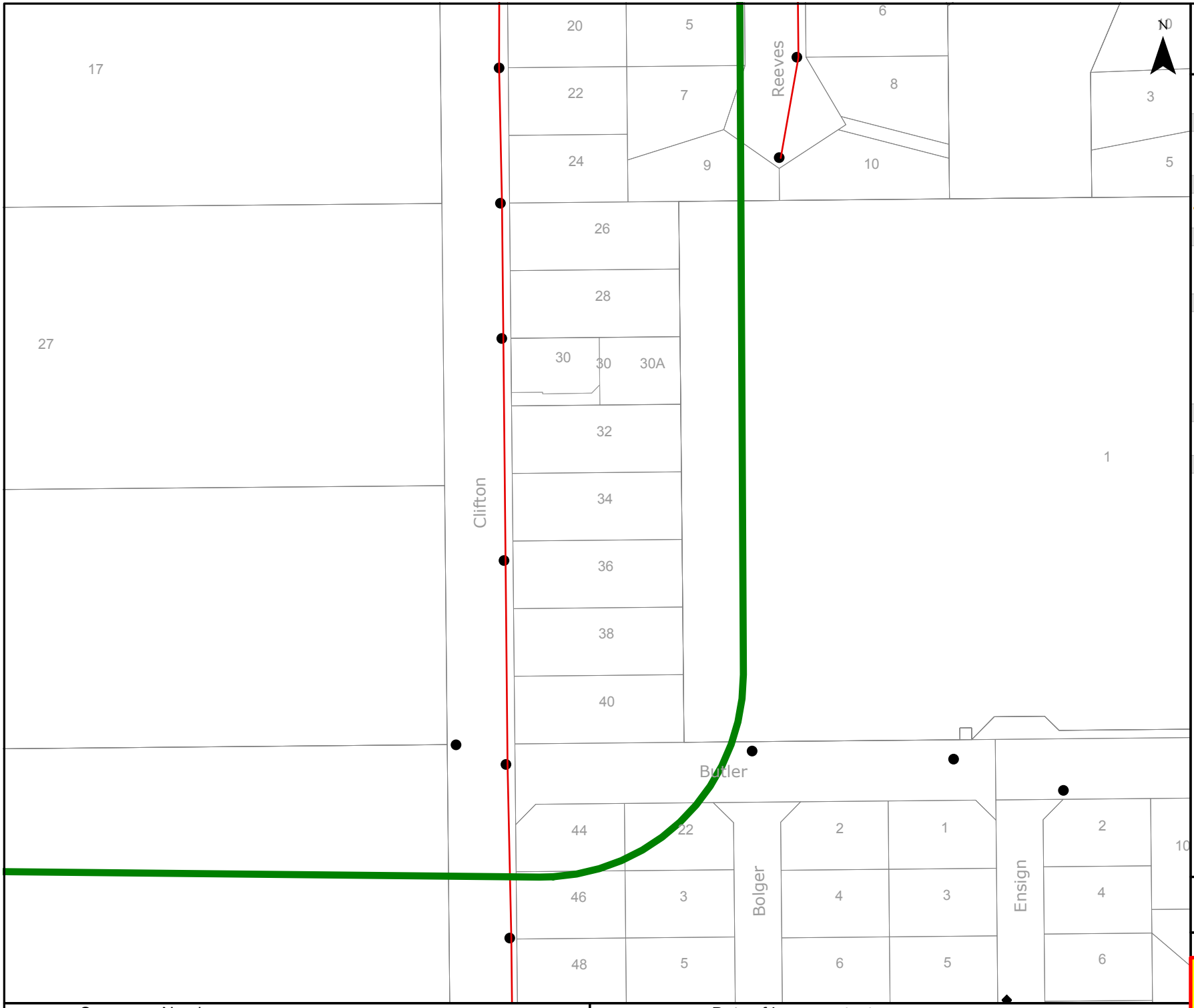
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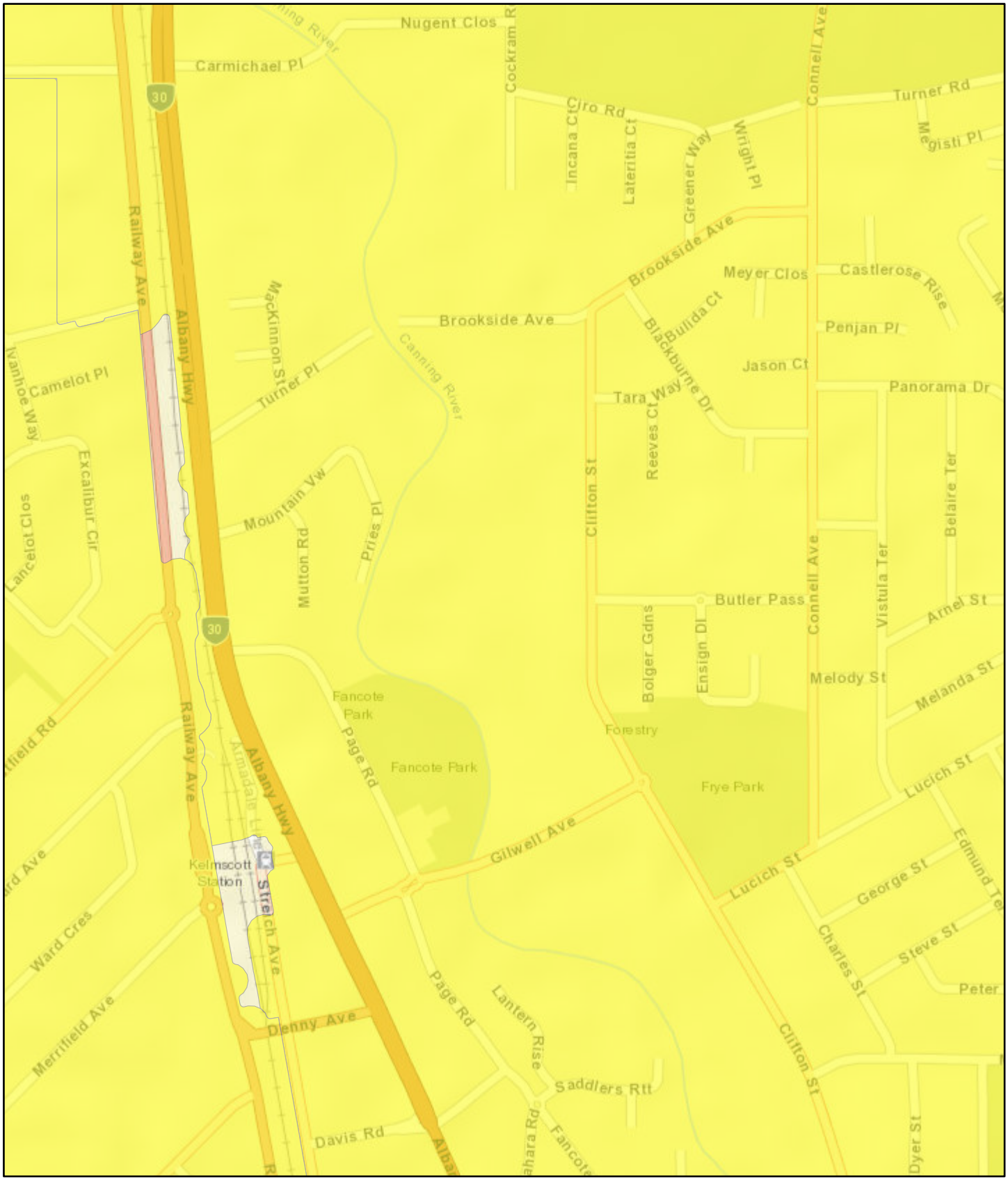
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A4	Scale : 1:1500

WARNING! Look out for overhead powerlines

Sequence Number: 203922679 | Date of Issue: 11/10/2021

Network Capacity Mapping Tool



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0 0.1 0.2 0.4 km

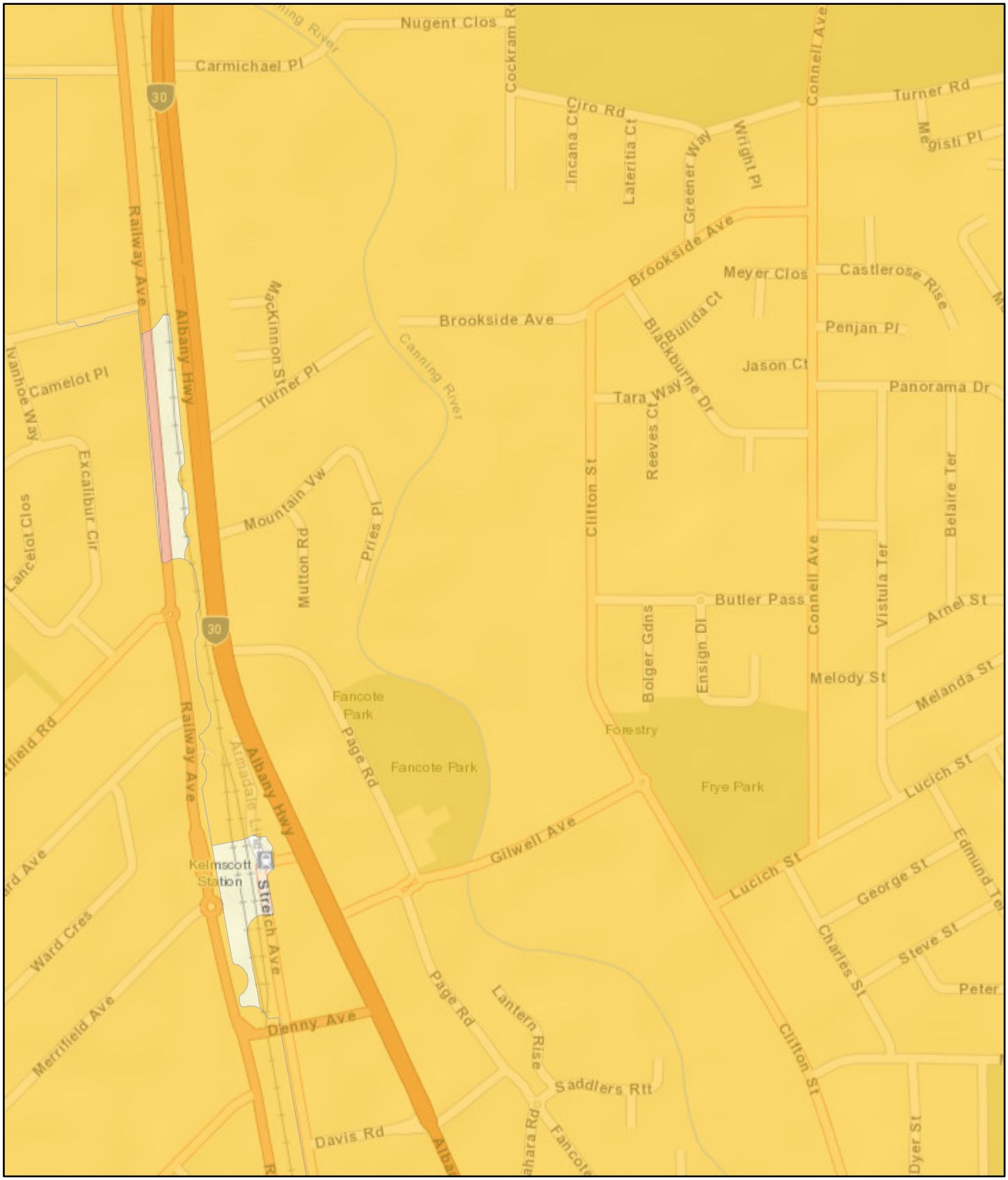
Forecast Remaining Capacity 2017 2031: WP-009

15 <= x < 20 MVA

Esri, HERE, Garmin, NGA, USGS

Plans printed from the Network Capacity Mapping Tool (NCMT) are indicative
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Network Capacity Mapping Tool



10/19/2021, 4:45:30 PM

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Forecast Remaining Capacity 2036 : WP-028

10 <= x < 15 MVA

Esri, HERE, Garmin, NGA, USGS

Plans printed from the Network Capacity Mapping Tool (NCMT) are indicative
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APPENDIX F

Mosquito Management Plan
(EDS Environmental)

Mosquito Management Plan

Clifton Street North Precinct (Lots 1, 11 and 12 Clifton Street and Lots 11 & 12 Brookside Avenue), Kelmscott

2 May 2023

(Rev 0)

Prepared for Harley Dykstra
By EDS Environmental

Table of Contents

1. Introduction 4
   - 1.1 Background 4
   - 1.2 Scope and Objective 4
2. Site Overview 7
   - 2.1 Topography 7
   - 2.2 Soils 7
   - 2.3 Hydrology 7
     - 2.3.1 Groundwater 7
     - 2.3.2 Surface water and wetlands 7
   - 2.4 Flora and vegetation 7
3. Mosquito Biology and Ecology 8
   - 3.1 Mosquitos 8
     - 3.1.1 Distribution and habitat 8
     - 3.1.2 Lifecycle 8
     - 3.1.3 Ecology 8
     - 3.1.4 Species of Concern 9
     - 3.1.5 Potential risk 9
     - 3.1.6 Existing management 10
4. Management strategy 11
   - 4.1 Overview 11
   - 4.2 Physical control measures 12
     - 4.2.1 Separation zones 12
     - 4.2.2 Weed control 12
   - 4.3 Subdivision and stormwater design control 12
     - 4.3.1 Overview 12
     - 4.3.2 Public Open Space design 13
   - 4.4 Chemical control measures 13
   - 4.5 Cultural control measures 13
     - 4.5.1 Public education 13
   - 4.6 Management actions 15
5. Monitoring 17
6. Contingency actions 18
7. Reporting 19
8. References 20

List of Tables

Table 4.1: Mosquito management actions 15
Table 5.1: Monitoring program 17
Table 6.1: Contingency actions 18

List of Figures

Figure 1: Project Area.....5
Figure 2: Local Structure Plan.....6

1. Introduction

1.1 Background

This Mosquito Management Plan (MMP) has been prepared for Harley Dykstra, representing Mr Tony Marci (the Proponent), to support the development of the Clifton Street North Precinct. This development is comprised for Lot 1, Lot 11 and Lot 12 Clifton Street & Lot 1 and Lot 12 Brookside Avenue, Kelmscott (the Project Area; **Figure 1)** within the City of Armadale (CoA). The Project Area covers a total area of approximately 5.76 ha.

A Local Structure Plan (LSP) has been prepared for the development of the Clifton Street North Precinct (Harley Dykstra, 2022). The LSP proposes to subdivide the subject land, totalling about 7ha, into a range of R40, R60 and R80 residential lots. The LSP also proposes approximately 0.7ha of Public Open Space, comprising about 12% of the total developable area. A further 1.16ha (approximately), comprising the river foreshore and most of the floodway, will be ceded as Regional Open Space, as presented in **Figure 2**.

Following review of the LSP, the CoA has issued a request for further information which includes the requirement for the provision of a MMP to support future subdivision applications made under the LSP once approved.

1.2 Scope and Objective

This MMP has been developed to support the final Structure Plan report for the development of the Clifton Street North Precinct.

The MMP has been prepared with regard to the following information from the Department of Health (DoH):

- *A guide to developing management for Local Government – Part A Template and guidance notes.*
- *A guide to developing management for Local Government – Part B Case study examples.*

The objectives of the MMP are to:

- Describe mosquito and midge life cycles and habitats as applicable to the Project Area;
- Outline potential high-risk areas that may contribute to favourable habitat conditions for mosquito and midges on site;
- Identify physical and other management strategies to manage mosquito and midge populations by reducing the risk of breeding; and
- Provide a strategy to manage mosquito and midge nuisance to the satisfaction of the CoA and DoH.



Legend

Project Area

Clifton Street North Precinct
Lot 1, Lot 11 and Lot 12 Clifton Street &
Lot 1 and Lot 12 Brookside Avenue, Kelmscott

Figure 1: Project Area

0 35 70 140 m

Scale: 1:2,500

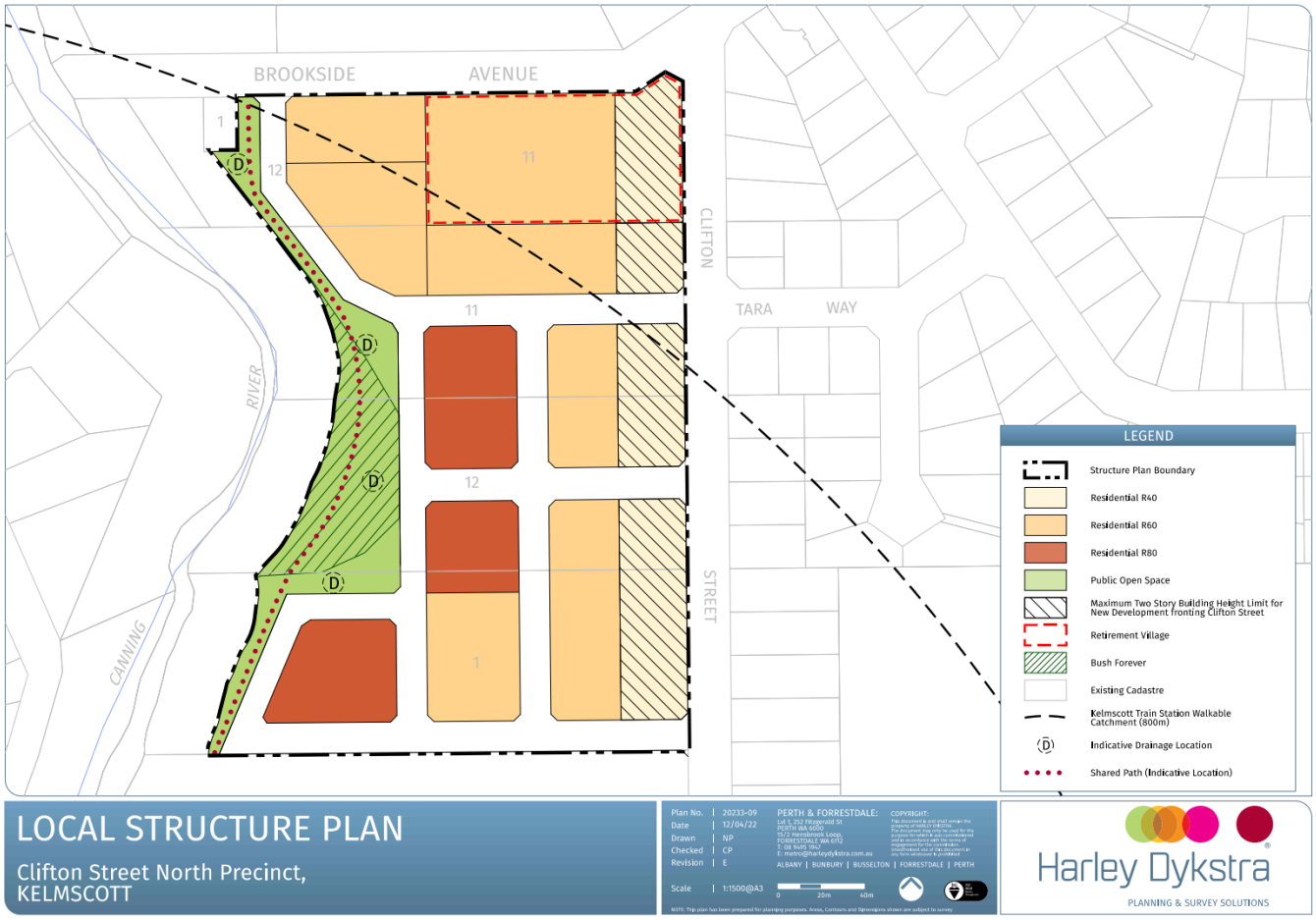


Figure 2: Local Structure Plan

2. Site Overview

2.1 Topography

The Project Area is situated immediately east of the Canning River on an alluvial plain. The land slopes generally west towards the Canning River, with slightly higher ground in the north-east (25 m AHD) and slightly lower in the south-west (20 m AHD). The slope increases markedly on the western edge of the project area, where the land falls away into the Canning River floodway.

2.2 Soils

The Project Area is located immediately to the east of the Darling Fault, mostly on colluvium formed by erosion of material from the Darling Scarp. The Geological Survey of Western Australia (Jordan, 1986) mapped about two thirds of the site, mostly in the north-east, as colluvial gravelly sandy clay (Qc/Csg). The margins of the Canning River were mapped as alluvial clayey sandy silt (Qha/Msc1), which also extends from the central west across to the south-east. A very small area of Yoganup Formation structureless yellow sand (Qpr/S12) occurs on the north-eastern edge of the site.

Drilling to inform the Local Water Strategy (Bayley Environmental Services, 2022) identified silty and clayey soil profiles, confirming the GSWA mapping.

2.3 Hydrology

2.3.1 Groundwater

Groundwater occurs within the clay soils beneath the Project Area which flows west towards the Canning River. The LWMS, assumes that given the low permeability of the soils, groundwater movement is approximately 10 mm/day.

Groundwater depth under the Project Area ranges from 3.48 m to 7.41 m (Bayley Environmental Services, 2022)

2.3.2 Surface water and wetlands

There are no surface water features present within the Project Area. Geomorphic wetland mapping of the Swan Coastal Plain region indicates that there are no wetlands mapped within the Project Area.

The nearest Directory of Important Wetlands is located approximately 1.2 km to the west of the Project Area and is known as “Spectacles Swamp”.

The Project Area is not located within the boundary of a Priority Drinking Water Source Area (PDWSA). The nearest PDWSA is Jandakot Underground Water Pollution Control Area located over 400 m from the Project Area.

2.4 Flora and vegetation

Western Environmental Pty Ltd (WEPL) undertook a reconnaissance flora, vegetation and fauna survey on 22 February 2023 (WEPL, 2023). The results from this survey are summarised below:

- Total of 23 flora taxa were recorded within the Project area, of these nineteen were non-native species
- No State or Commonwealth listed flora species were identified
- Two vegetation types were identified, these are:
    - **VT01** – *Eucalyptus rudis* mid open forest over non-native gardens and grasses
    - **Cleared Areas** - Areas cleared for garden and paddock, upper stratum includes planted *Corymbia citriodora*, *Eucalyptus camaldulensis* x, *Eucalyptus maculate* and *Eucalyptus rudis* mid isolated trees over planted maintained lawn grasses, garden plants and assorted fruit trees. No native mid or ground story species present.
- No State or Commonwealth listed ecological communities were recorded

3. Mosquito Biology and Ecology

3.1 Mosquitos

3.1.1 Distribution and habitat

Mosquitoes utilise waterbodies for breeding habitats and have colonised a vast array of aquatic environments for breeding, including such diverse habitats as tree holes, floodplains, sewage ponds, salt marshes, water-filled debris, leaf axils, gutters, irrigation ditches, and stormwater drains. However, individual mosquito species may be restricted to geographic regions or even specific habitats within a region, and most have preferred larval habitats, selected by the adult female when she lays her eggs (Department of Health WA [DoH] 2009).

While mosquitos are diverse, they tend to prefer habitats with slow moving water and an abundance of aquatic vegetation. Slow flowing water allows eggs to settle on the surface. The vegetation provides a source of food as well as protection and stability in which to breed. Waterbodies with high organic pollution levels, such as sewage treatment works are often a profile source of mosquitoes (DoH 2009).

Mosquito survival is affected by temperature, rainfall, wind, tidal inundation, and humidity, with optimal breeding conditions consisting of:

- Warm temperatures
- High rainfall
- Low wind speeds
- Absent of tidal inundation
- High humidity

3.1.2 Lifecycle

Carbon dioxide exhaled by humans and animals attracts mosquitoes. Mosquitoes mainly feed at dawn and dusk and can generally become greater nuisances around these times of the day although many species, especially the *Aedes* vector species, will bite at any time of the day, especially in shaded areas (DoH 2009).

The life cycle of mosquitoes consists of four distinct stages: eggs, larvae, pupae, and adults. Adults lay fifty to several hundred eggs on or around water bodies, depending on this species, and all require water for their complete development (Le Messurier 1987). *Aedes* lay eggs on moist substrates, *Anopheles* and *Culex* deposit eggs on the water surface and *Mansonia* lay a submerged egg mass attached to aquatic plants.

Larvae are aquatic, feeding on microscopic organisms, decaying vegetation, or bottom detritus. Larvae are commonly found just beneath the water surface film because they breathe air using the siphon attached to the tail end of the body that penetrates the surface. The average larval development time is five to seven days and is dependent on factors such as temperature, food availability, larval crowding, persistence of water and predation by both fish and macro invertebrates (DoH 2009).

Pupae are also aquatic but can complete their development on a moist surface if necessary. Pupae remain mobile in the water column but do not feed. On emerging from the pupal case, adults remain on the water surface until they are strong enough to fly. Both male and female mosquitoes feed on nectar; however, most females also require a blood meal to produce eggs. Adults reach sexual maturity in one to two days and generally remain near their emergence site to mate (DoH 2009).

3.1.3 Ecology

Mosquitoes play an important role in wetland ecosystems as they recycle nutrients, provide food for birds, bats, amphibians, fish and macro invertebrates and pollinate some plants. Currently, the Project Area is bounded to the west by the Canning River, which is likely to provide breeding grounds for various mosquito species.

Different species of mosquito breed in different habitats and therefore, an understanding of the species present can assist with targeted larval investigations and the subsequent targeted control

actions at the breeding site. Given the geographic and climatic conditions of the region, there are a number of different mosquito species present including estuarine and freshwater species.

As the site is in the pre-development phase, no specific mosquito surveys were conducted for the site. However, based on the past studies and the known habitat of the likely mosquito species, the likely habitats for mosquito breeding would be:

- Natural environment – Canning River foreshore and associated areas of low flowing/stagnant water
- Artificial environment – Bioretention and detention basins, located within the Public Open Space on the western side of the Project Area.

3.1.4 Species of Concern

Over 90 species of mosquitoes have been recorded in Western Australia. Of these, 30 species are considered to be major pests and/or possible carriers of viruses (including, Ross River virus (RRV), Barmah Forest virus (BFV), Murray Valley encephalitis (MVE) virus and West Nile virus Kunjin strain (WNVKUN)) that can cause diseases in humans (DoH, 2009).

The most common mosquitoes in WA are (DoH, 2023):

- *Aedes camptorhynchus*
- *Aedes notoscriptus*
- *Aedes vigilax*
- *Anopheles annulipes s.l.*
- *Culex annulirostris*
- *Culex quinquefasciatus*

While no mosquito survey has been undertaken as part of the proposed LSP and subsequent subdivisions, it can be assumed that the Canning River at this location will provide suitable habitat for some of the species listed above.

Based on a review of publicly available information it is assumed that all the above listed species have a potential to occur within the City of Armadale, however *Aedes vigilax* is considered unlikely as it primarily occurs within coastal salt marshes and brackish swamps.

3.1.5 Potential risk

Mosquitoes pose a risk to human health by piercing the skin to feed on the blood or warm-blood species, thereby providing a pathway for transmitting blood-borne viruses (pathogenic arboviruses). Mosquitoes become particular pests during the warmer summer months when the temperatures increase, causing their breeding cycle to speed up and numbers to increase. Where mosquitoes are not carriers of such viruses, they cause irritation by generating itchy lumps on the skin that develop following a bite, reducing local amenity for residents of mosquito-prone areas.

Mosquitoes are capable of transmitting three types of pathogens: protozoa (malaria), nematodes (filaria) and viruses (arboviruses). The most important and common type of pathogens transmitted by mosquitoes in Australia are the arboviruses. The Ross River (RR) virus, Barmah Forest (BF) virus and Australian Encephalitis (AE) are the most common diseases that are transmitted to humans via mosquitoes in Western Australia, and these diseases can only be caught by being bitten by a mosquito. Both RR and BF viruses occur throughout Western Australia when conditions are warm enough for the virus to be active and when it is wet enough for mosquitoes to be active (DoH 2009). Whilst RR and BF are not life-threatening, these viruses can be chronically debilitating. Australian Encephalitis can potentially be fatal; however, generally does not occur in the vicinity of the Project Area as it is restricted to the north of Western Australia.

Based on data from the Department of Health (DoH, 2022), January and March 2022, the CoA had 11 confirmed cases of RRV, comprised of:

- 6 cases in January
- 4 cases in February, and
- 1 case in March.

This was considered significantly above the long-term mean for January and February within the CoA. It should be noted that it is not possible to determine if RRV in the reported cases originated from within the CoA area or another location.

Within the Project Area there is a low risk of mosquito and breeding habitat due to the absence of surface water features. The risk of mosquito breeding within the Project Area is expected to be low under appropriate management conditions including the implementation of the MMP in addition to appropriate drainage design and the management and monitoring measures outlined in the LWMS. These measures will prevent standing water by ensuring appropriately sized and constructed drainage areas which promote infiltration within 96 hours.

Notwithstanding this, management measures to be implemented as part of this MMP include monitoring to identify breeding areas, increases in population and to enable targeted application of chemical treatment to reduce mosquito breeding, as required.

There remains potential for adult mosquitoes to move through the Project Area from adjacent and nearby areas that contain potential mosquito breeding habitat including wetland areas (Canning River). These areas are outside the control of the Proponent; however, the Proponent will ensure that education material is provided to future occupants as outlined in Section 4.5.

Mosquito breeding within adjacent subdivisions will be managed through the implementation of mosquito monitoring and management programs relevant to those developments.

3.1.6 Existing management

DoH has a state-wide charter to ensure the protection of public health, including the threat from mosquito borne disease. A group known as the 'Mosquito Control Advisory Committee' (MCAC) oversee the provision of DoH funding to Local Government Authorities with recognised mosquito-borne disease problems.

The CoA hosts public information regarding mosquitos and their management on their website[1] and appear to routinely publish health bulletins to the public, ahead of mosquito breeding season, on actions to take to minimise exposure to mosquitos and subsequent risk of mosquito-borne infections.

[1] https://www.armadale.wa.gov.au/mosquitoes-and-other-pests

4. Management strategy

4.1 Overview

The management strategy with this MMP have been developed to respond to the risks identified in **Sections 3.1.5.** The strategy includes:

1. Physical control and design – physical modification or removal of source to prevent breeding such as source reduction by filling, draining or removing breeding sites.
2. Chemical control – such as the application of insecticides (adulticides or larvicides) (if required).
3. Cultural control – encouragement of public to implement personal preventative measures through education, such as planning outdoor activities to avoid mosquito activity times and building screened outdoor living areas.

The subdivision design has focused on eliminating the risk of breeding from the development in alignment with the safety industry hierarchy of risk control (Plate 1).

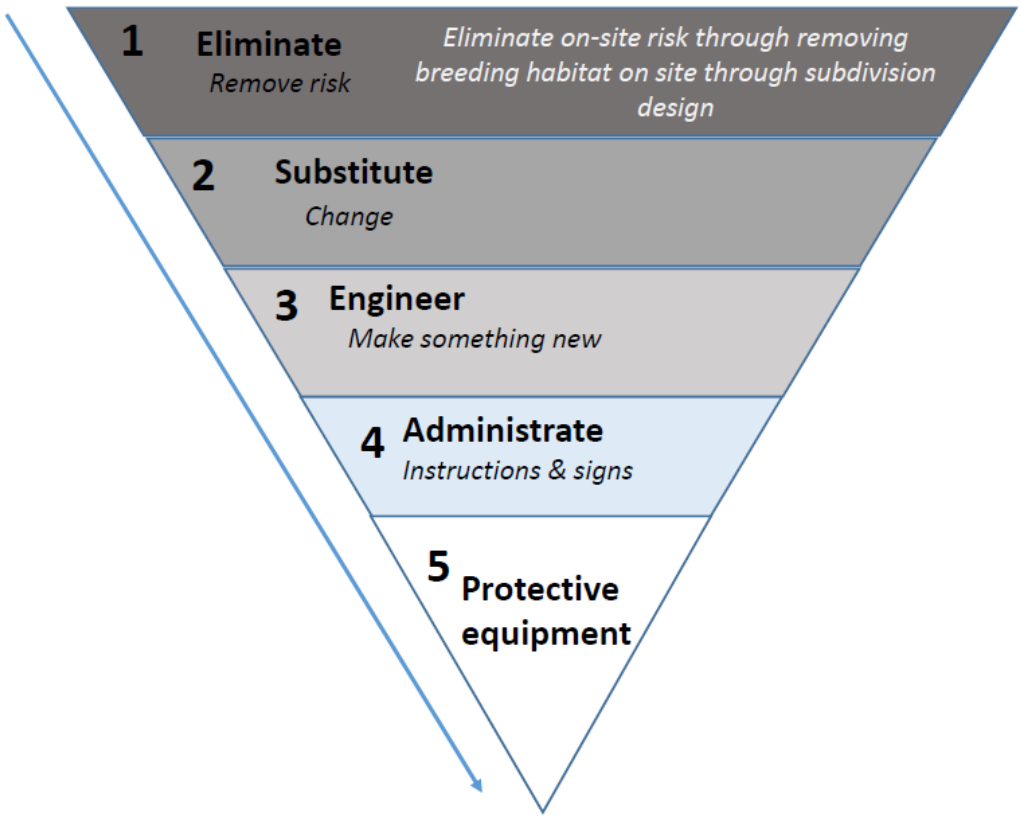


Plate 1: Hierarchy of risk control

4.2 Physical control measures

4.2.1 Separation zones

Separation zones from standing water provide a buffer between potential habitats and residential areas. The closest wetland considered to have the greatest potential for mosquito breeding is the Canning River.

The development is less than 50 m east of open water in Canning River. Prevailing winds in summer (the most likely time for mosquito breeding) are from the south and east in the morning and from the west in the afternoon. There is a risk that the prevailing summer afternoon wind can assist in the dispersal of mosquitos from the Canning River location to the Project Area.

4.2.2 Weed control

Nutrient stripping vegetation within bioretention basins and detention basins will be planted at specific densities and managed in accordance with any bushfire risk requirements and the requirements of the LWMS.

Weed growth and dead plant material will be managed/ removed from POS and drainage areas in accordance with the POS Landscape Plans, bushfire management requirements and the UWMP. Removal of weeds and dead plant material will ensure that potential sources of mosquito/midge habitat are reduced wherever possible.

4.3 Subdivision and stormwater design control

4.3.1 Overview

The Project has been designed to provide a range of R40, R60 and R80 residential lots, and approximately 0.7 ha of POS for recreation and stormwater management. There will be no artificial water bodies present on site. POS areas are identified in **Figure 2.**

The water management system planned for the Project Area is designed to minimise the potential for standing water by ensuring that stormwater events are infiltrated within 96 hours to reduce health risks from mosquitoes. A Local Water Management Strategy (LWMS) has been prepared to support the Structure Plan (Bayley Environmental, 2022).

With these design measures, it is anticipated that the risk of mosquito breeding within the Project Area will be reduced. Mosquito breeding may occur within future residential lots, should stagnant water be made available, but this will be limited through public education measures to inform residents of the risks associated with stagnant water and how to minimise the availability of breeding habitat.

Key elements related to urban water management will be finalised in subsequent planning stages and the development of the Urban Water Management Plan. However, the following elements are expected:

- Retention of the first 15mm of rainfall with soak wells on residential lots;
- Runoff from building roofs will be piped to detention basins, bypassing the road drainage network and thus avoiding contamination. The option exists to bypass these flows past the detention basins, thus reducing the required size of the basins while at the same time increasing the quantity of small, clean flows to the Canning River.
- Runoff from paved ground within private lots (e.g. driveways) will be partly captured by lawns and gardens, with the excess flowing into the road drainage system.
- Road runoff from storms up to 1 year ARI, 1 hour duration (about 17.6mm) will be captured by the piped drainage network and wholly infiltrated in bioretention basins (rain gardens), which will be engineered and vegetated to achieve high removal of contaminants while avoiding prolonged ponding of stormwater.
- Runoff from larger storms up to 100-year ARI will be conveyed by a combination of piped and pavement flow to detention basins, from where they will be infiltrated or progressively released to the Canning River. The size of the basins and the overflows will be designed to maintain the peak flows from the site at predevelopment levels

- Incorporate a drainage system within the road reserve capable of conveying stormwater up to and inclusive of the 1% AEP event and being passable during the 20% AEP event
- Retention of stormwater inclusive of the 1% AEP event in allocated drainage POS areas
- Provide temporary storages to retain stormwater inclusive of the 1% event prior to ultimate development of drainage POS areas
- Removal of debris to prevent blockages
- Maintenance of vegetation in Bio-retention Systems/ Storages; and
- Cleaning of sediment build-up and litter layer on the bottom of Storages.

4.3.2 Public Open Space design

The design of landscaping in POS areas will consider the following:

- Minimisation of fertilisers to be used or use of minimal qualities of slow release fertiliser
- Ensuring infrastructure does not hold ponded water
- No permanent water features; and
- Avoid dense planting at the base of any drainage basins where nutrient stripping requirements permit.

4.4 Chemical control measures

There are two forms of chemical control for mosquitoes; larvicides that are used to kill larvae; and adulticides that are used to kill adult mosquitoes and midges.

When required, the use of chemical controls will be implemented to complement physical control measures, where there is evidence of a potential risk to public health. Chemical control measures will only be used where mosquito and/or midge numbers exceed the trigger levels (refer to Table 5.1) identified by the DoH in consultation with CoA.

All staff employed in carrying out any treatment will be qualified and/or licenced as required by DoH in mosquito control and will have completed the mosquito management course run by the DoH. Environmental approval must be obtained from the relevant agencies before undertaking the chemical control program. In addition, key stakeholders and community groups will be consulted.

4.5 Cultural control measures

4.5.1 Public education

New lot owners of the development will be provided with an educational package, which will include information on how to avoid creating mosquito breeding habitat and reduce the risk of exposure to mosquito-borne diseases when in affected areas.

The public have a key role and responsibility in any integrated program to manage midges and mosquitoes on their property. There are a number of forms this information can take, including:

- Provision of educational pamphlets through letter drops and signage within POS areas informing and educating the public about their responsibilities for personal preventative measures and backyard mosquito control; and
- Advising the public of any planned mosquito control activities.

Mosquito breeding in backyards can significantly contribute to local populations. Management measures that can be implemented around the home include:

- Disposing of all containers of water
- Keeping ornamental ponds stocked with mosquito-eating fish
- Emptying pot plant drip trays once a week or fill with sand
- Emptying and clearing animal drinking water once a week
- Keep swimming pools well chlorinated, filtered and free of dead leaves

- Filling in or draining depressions in the ground that hold water
- Avoiding over-watering lawns
- Vent pipes on septic tanks systems must be fitted with mosquito proof cowls
- Screening rainwater tanks and/or add paraffin oil to cover the surface
- Ensuring roof guttering does not hold water

Personal preventative measures that can be used by individuals to avoid being bitten by mosquitoes include:

- Avoid being outside at dawn and dusk when mosquitoes are most active
- Ensuring insect screens on houses are installed and intact
- Installing café blinds or screens in outdoor entertainment areas to prevent mosquitoes entering these areas
- Wearing long, light-coloured, loose fitting clothing when outdoors in mosquito-prone areas and at dawn and dusk
- Applying personal repellents containing DEET or picaridin to all areas of exposed skin
- In outdoor entertainment areas using midge repellents to repel midges;
- Recognising and avoiding areas of mosquito and midge activity; and
- Turning off outdoor lights to reduce midges that area attracted to light.

An education program together with the “built form response” is an important component in managing midges. The built form response includes encouraging residents to:

- Fit all doors and windows with insect screens
- Replace exterior lights of houses with yellow globes and located lighted away from doorways
- Use blockout blinds and curtains
- Install café blinds in outdoor areas
- Use mulch in gardens instead of thick groundcover
- Plant shrubs and plants that have open canopies to allow plenty of light and wind movement, thereby making them less likely to harbour mosquitos and midges during the day
- Not plant vines or dense foliage plants next to the walls of houses; and
- Avoid plants such as bromeliads that hold water in the core of the plant and can provide ideal breeding conditions for some mosquito and midge species.

The education program will also provide residents with contract information while the sales office is operational during the development phase of the project, should there be concerns regarding mosquitoes and midges.

4.6 Management actions

A summary of indirect and direct management strategies is presented in Table 4.1.

Table 4.1: Mosquito management actions

Parameter	Management action	Timing	Responsibility
Physical control measures			
Weed control	Undertake weed control program within POS areas if determined to be required	As required (in accordance with the Landscape POS plan) and for two years post completion of development	Developer for two years post completion of development, until relinquishment to local government authority
	Undertake weed control including thinning of POS and drainage areas comprising reeds if applicable	As required (in accordance Landscape POS plan and UWMP) and for two years post completion of development	Developer for two years post completion of development, until relinquishment to local government authority
Revegetation and landscaping	Minimise fertiliser use on turfed areas	At all times	Developer until relinquishment to local government authority
	Grassed areas mowed and grass clippings removed from site	Throughout construction and for two years post completion of development	Developer for two years post completion of development until relinquishment to local government authority
Drainage maintenance	Inspect infiltration basins and outflows for blockages	Biannually and for two years post completion of development	Developer for two years post completion of development until relinquishment to local government authority
	Maintain infiltration basins and outflows as determined by results of inspection	Following inspection and for two years post completion of development	Developer for two years post completion of development until relinquishment to local government authority
Chemical control measures			
Chemical control	Implement chemical control measures in consultation with CoA if monitoring of physical control measures shows chemical control is required	For two years post completion of development, and following inspection and exceeds specified monitoring targets (refer to Table 5.1)	Developer for two years post completion of development, until relinquishment to local government authority
Cultural control measures			
Community education	Develop a community education program to advise residents of the risk of mosquito-borne disease and nuisance insects in the area	For two years post construction of each subdivision stage until all lots are sold	Developer for two years post construction of each subdivision stage until all lots are sold
	Ensure community education program includes the WA Department of Health's "Fight the Bight" public education resources subject to copyright approval from the DoH	For two years post construction of each subdivision stage until all lots are sold	Developer for two years post construction of each subdivision stage until all lots are sold

Parameter	Management action	Timing	Responsibility
Complaints register	Maintain a complaint register and document all findings with regard to mosquito and midge management. Developer to submit a report to CoA summarising all findings within three months of management phase.	Within three months of management phase.	Developer
Monitoring measures			
Monitoring sites	Determine at least three monitoring sites in consultation with the CoA for high-risk areas.	Two years post completion of development	Developer for two years post completion of development.
Mosquito traps	Install mosquito traps in appropriate monitoring locations (if required when advised by CoA)	During monitoring program, and for two years post completion of development.	Mosquito and midge monitoring specialist

5. Monitoring

Monitoring (if required) will be undertaken to ensure that mosquito and midge breeding is not occurring on the Project Area, as outlined in Table 4.1. All monitoring results will be included in the summary report to be provided to the CoA.

Monitoring locations will be identified in consultation with the CoA, following approval of the Project Area UWMP.

Table 5.1: Monitoring program

Monitoring action	Timing	Responsibility
Monitor drainage and stormwater infrastructure to ensure infiltration within 96 hours.	May to August: Monthly inspection September to May: fortnightly inspection	Developer until relinquishment of POS to CoA.
Monitor drainage and stormwater infrastructure for larval populations. Findings to be summarised and reported to the CoA as per Section 7.	May to August: monthly inspection. September to May: fortnightly inspection.	Developer for two years post construction
Reed and weed growth maintained to a minimum within infiltration basins and swales.	In accordance with landscape plans and LWMS	Developer until relinquished of POS to CoA.

An acceptable threshold of larval densities that require treatment with a larvicide is considered greater than 50 per square meter of surface area. Densities less than 50/m^2 can be treated at the operator's discretion.

6. Contingency actions

Contingency actions will be undertaken as outlined in Table 6.1.

Table 6.1: Contingency actions

Trigger	Action	Timing	Responsibility
96 hours of standing water in drainage systems.	Undertake mosquito monitoring at a selected monitoring location (monitoring locations to be finalised prior to construction), as per Section 5.	May to August: monthly inspection. September to April: fortnightly inspection (while water is present).	Developer for two years post construction.
Reasonable residents' complaints are received on the volume of midges within the Project Area.	Undertake mosquito monitoring at a selected monitoring location (monitoring locations to be finalised prior to construction), as per Section 5.	May to August: monthly inspection. September to April: fortnightly inspection (while water is present).	Developer for two years post construction.
More than 10 larvae per water body (stormwater basin or swale).	Undertake larval treatments of habitat using chemical control based on procedures outlined in Section 4.4. A log will be kept detailing the areas treated, date treated, by whom, chemical used, and application rate.	Following exceedance of trigger value.	Developer for two years post construction.
Larval densities are greater than 50 m^2	Undertake larval treatments of habitat using chemical control based on procedures outline in Section 4.4. A log will be kept detailing the areas treated, date treated, by whom, chemical used, and application rate.	Following exceedance of trigger value.	Developer for two years post construction.

7. Reporting

A summary report will be provided to the CoA within 3 months of the conclusion of the two year post development management period. The report will include:

- Results of all larval monitoring undertake
- Details of any contingency triggers me
- Maintenance works to drainage basins; and
- Remedial works undertaken from midge control, including time estimates of works carried out and documentation of all chemical treatments for larvae.

8. References

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APPENDIX G

Flora, Vegetation and Black Cockatoo Assessment (Western Environmental)

LOTS 1, 11 & 12 CLIFTON ST AND 11 & 12 BROOKSIDE AVE, KELMSCOTT

Flora, Vegetation and Black Cockatoo Assessment

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Flora, Vegetation and Black Cockatoo Assessment

Report No:
A23.010-RPT-FVSR_
Issue Date:
2-May-2023
Status
FINAL

Prepared for:
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Distribution Record

Copies	Document ID / Version	Date	Received by
1	A23.010-RPT-FVSR_0_FINAL	2-May-2023	Euan Sutherland

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Environmental Conclusions

In accordance with the scope of services, WEPL has conducted environmental field monitoring and/or testing in the preparation of this report. The nature and extent of monitoring and/or testing conducted is described in this report.

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Executive Summary

EDS Environmental, on behalf of Harley Dykstra, commissioned Western Environmental Pty Ltd (WEPL) to undertake a flora and vegetation survey and Black Cockatoo habitat assessment of Lots 1, 11 & 12 Clifton St and 11 & 12 Brookside Ave Kelmscott (the Survey Area). The Survey Area is 5.76 ha in area. This report provides information to support a Structure Plan submission and subsequent planning stages.

The scope of works included:

- A "Reconnaissance" level field survey as per the Environmental Protection Authority (EPA) Technical Guidance for Flora and Vegetation Surveys (2016) comprising the following:
    - Desktop assessment including DBCA database searches for Threatened and Priority Flora locations and Threatened and Priority Ecological Communities
    - An assessment of likelihood of occurrence for Threatened and Priority Flora and Ecological Communities identified by the desktop assessment and based on survey results.
    - Reconnaissance level flora and vegetation survey.
    - Vegetation condition mapping and significant weed survey.
- An assessment of any potentially significant habitat trees or foraging areas for threatened fauna, specifically Black Cockatoo species which commonly occur in the area.
- Present the desktop and survey results in a concise technical report, supported by mapping displaying desktop results, vegetation type, vegetation condition, potential Black Cockatoo breeding trees and foraging habitat.
- Supply a geospatial data package prepared in accordance with Index of Biodiversity Surveys for Assessments (IBSA) requirements.

The survey was undertaken on 22 February 2023.

Flora and Vegetation

A total of 23 vascular flora species were recorded from within the Survey Area from one relevé and opportunistic observations. Nineteen of these (82.6%) were non-native. Native species diversity was observed to be low overall, likely due to a history of clearing for urban development and disturbance. No State or Commonwealth listed Threatened or Priority Flora were recorded in the Survey Area or were assessed as having a high-medium likelihood of occurrence.

Grass weeds, particularly Perennial veldt grass and Wild oat (*Ehrharta calycina* and *Avena barbata*), were highly abundant in the floodplain on the western edge of the Survey Area, covering 70-100% of the ground. Additionally, one woody weed species Flinders Range wattle (Acacia iteaphylla) were also recorded from this location. Within the residential lots, maintained lawn grasses and exotic gardens plants covered > 90%.

One vegetation type (*Eucalyptus rudis* over parkland cleared) covered 0.85 ha of the Survey Area and was considered not representative of intact remnant native vegetation. The remaining 4.91 ha of the Survey Area comprised of gardens and paddocks. The vegetation of the Survey Area was Completely Degraded throughout as a result of historical clearing for rural residential /urban development and other disturbances associated with residential uses. VT01 is present across the majority of the area classed as a conservation wetland, located on the western edge of the Survey Area.

Vegetation in the Survey Area was not representative of existing broad scale vegetation, soil and land system mapping for the area. The vegetation present is not representative of a State or Commonwealth listed Threatened Ecological Community (TEC) or DBCA listed Priority Ecological Community (PEC).

Black Cockatoo Habitat Assessment

A total of 139 potential breeding trees (Diameter at Breast Height (DBH) > 500 mm) were recorded, of these 121 trees did not show signs of potential nesting hollow development. Two trees were assessed as possessing hollows with sufficient entry diameter to potentially support a suitable nesting hollow. No evidence of nesting behaviour such as chew marks at hollow entrance was recorded. Sixteen trees were assessed as possessing small hollows which are of an insufficient size to support nesting for Black Cockatoos.

0.85 ha was classified as low quality foraging habitat and the remaining 4.91 ha as negligible. Foraging evidence for Carnaby's Back Cockatoo was identified at one location of the Survey Area where six small (< 500 mm DBH) Marri trees (*Corymbia calophylla*) were located. The trees were considered to be too small to support valuable foraging habitat for Black Cockatoos.

Known roost sites were located 2 km south and 3 km north of the Survey Area. No evidence of night roosting (e.g. piles of scats, feeding debris or chewed trees) were recorded within the Survey Area. During the field survey, individuals of Forest Red-tailed Black Cockatoos was observed flying in the adjacent areas, however this observation is not sufficient to determine if a regular roosting site is present. Habitat type FHT02 contained stands of tall eucalypts which may provide suitable roosting habitat. Access to permanent water is present from the river directly adjacent to the Survey Area.

Acronyms and Abbreviations

Abbreviation	Full Title
BAM Act	*Biosecurity and Agriculture Management Act 2007*
BC Act	*Biodiversity Conservation Act 2016*
CR	Critically Endangered
DBCA	Department of Biodiversity, Conservation and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DEWHA	Department of the Environment Water Heritage and the Arts
DPIRD	Department of Primary Industries and Regional Development
DRF	Declared Rare Flora
DWER	Department of Water and Environmental Regulation
DWER	Department of Water and Environmental Regulation
EIA	Environmental Impact Assessment
EN	Endangered
EP Act	*Environmental Protection Act 1986*
EPA	Environmental Protection Authority
EPBC Act	*Environment Protection Biodiversity and Conservation Act 1999*
ESA	Environmentally Sensitive Area
GDE	Groundwater Dependent Ecosystem
GIS	Geographic Information System
GPS	Global Positioning System
ha	Hectare
IBRA	Interim Biogeographic Regionalisation for Australia
IBSA	Index of Biodiversity Surveys for Assessments
km	Kilometres
m	Metres
MA	Marine
MI	Migratory
MNES	Matters of National Environmental Significance
NVIS	National Vegetation Information System
OS	Other Specially Protected
P	Priority
PEC	Priority Ecological Community
PF	Priority Flora
PMST	Protected Matters Search Tool

Abbreviation	Full Title
T	Threatened
TEC	Threatened Ecological Community
TPFL	Threatened and Priority Flora Database
TPFRF	Threatened and Priority Flora Report Forms
VU	Vulnerable
WA	Western Australia
WAH	Western Australian Herbarium
WC Act	*Wildlife Conservation Act 1950*
WEPL	Western Environmental Pty Ltd
WoNS	Weeds of National Significance

Table of Contents

1. Introduction 10

1.1 Project Background 10

1.2 Location 10

1.3 Objectives 10

1.4 Survey Limitations and Constraints 13

2. Existing Environment 15

2.1 Pre-European Vegetation Types 15

2.2 Wetlands and Hydrology 16

2.3 Environmentally Sensitive Areas and Conservation Estate 16

2.4 Land Use History 16

3. Methodology 18

3.1 Desktop Assessment 18

3.1.1 Database Searches 18

3.1.2 Likelihood of Occurrence 18

3.2 Flora and Vegetation Survey 19

3.2.1 Floristic Relevé 19

3.2.2 Vegetation Description and Classification 20

3.2.3 Vegetation Condition Assessment 20

3.2.4 Field Survey Timing and Survey Team 20

3.3 Fauna Survey 20

3.3.1 Black Cockatoo Habitat Assessment 20

4. Results 23

4.1 Desktop Assessment and Likelihood of Occurrence 23
4.2 Flora and Vegetation 36
4.2.1 Flora 36
4.2.2 Vegetation 38
4.3 Fauna 45
4.3.1 Black Cockatoo Habitat Assessment 45
5. Discussion 53
6. References 56

Tables

Table 1: Limitations and Constraints of the Flora and Vegetation Survey 13
Table 2: Pre-European Vegetation Association Representation 15
Table 3: Pre-European Regional Vegetation Complexes 16
Table 4: Database Searches of the Survey Area 18
Table 5: Likelihood of Occurrence Criteria 19
Table 6: Black Cockatoo Potential Breeding Tree Class 22
Table 7: Flora Database Search Results (DBCA Database Search using 10 Km Buffer, PMST 10 km buffer), Likelihood and Flora Survey Records 24
Table 8: Threatened Ecological Communities Database Search Results (DBCA Database Search using 10 Km Buffer, PMST 10 km buffer) 33
Table 9: Flora Inventory and Site x Species List 37
Table 10: Vegetation Condition Extents (as per EPA, 2016 condition scale) 38
Table 11: Vegetation Present in Survey Area 40
Table 12: Black Cockatoo Nesting Hollow Characteristics 45
Table 13: Potential Nesting Hollows Recorded in the Survey Area 47
Table 14: Foraging Quality Scoring Tool (DCCEEW, 2022) 50
Table 15: WEPL Foraging Habitat Score 51
Table 16: Summary of Discussion 54

Figures

Figure 1: Survey Area 12
Figure 2: Wetlands and Environmentally Sensitive Areas 17

Figure 3: Database Search Results Flora and Communities 35
Figure 4: Vegetation Types Present within the Survey Area 43
Figure 5: Conservation Category Wetland within the Survey Area 44
Figure 6: Location of Suitable Breeding Trees 49
Figure 7: Black Cockatoo Foraging Habitat Score 52

Appendices

Appendix A Legislation
Appendix B Definitions and Criteria
Appendix C Floristic Quadrat and Relevé Data Sheets
Appendix D Potential Black Cockatoo Breeding Habitat
Appendix E Black Cockatoo Foraging Habitat Scoring Tool

1. Introduction

1.1 Project Background

EDS Environmental, on behalf of Harley Dykstra, commissioned Western Environmental Pty Ltd (WEPL) to undertake a flora and vegetation survey and Black Cockatoo assessment of Lots 1, 11 & 12 Clifton St and 11 & 12 Brookside Ave Kelmscott (the Survey Area) to provide information to support a Structure Plan submission.

1.2 Location

The Survey Area is located in Kelmscott in the Swan Coastal Plain region (SWP02) of Western Australia. The Survey Area covers 5.76 ha (Figure 1).

1.3 Objectives

The purpose of the survey was to delineate key flora, vegetation and Black Cockatoo habitat values within the Survey Area and identify potential environmental sensitivities and values that may occur.

The scope of works included:

- Undertake a "Reconnaissance" level field survey as per the Environmental Protection Authority (EPA) *Technical Guidance for Flora and Vegetation Surveys* (2016) comprising the following:
    - Desktop assessment including DBCA database searches for Threatened and Priority Flora locations and Threatened and Priority Ecological Communities.
    - An assessment of likelihood of occurrence for Threatened and Priority Flora and Ecological Communities identified by the desktop assessment and based on survey results.
    - Reconnaissance level flora and vegetation survey.
    - Vegetation condition mapping and significant weed survey.
- Undertake an assessment of any potentially significant habitat trees or foraging areas for threatened fauna, specifically Black Cockatoo species which may occur in the area.
- Present the desktop and survey results in a concise technical report, supported by mapping displaying desktop results, vegetation type, vegetation condition, potential Black Cockatoo breeding trees and foraging habitat.
- Supply a geospatial data package prepared in accordance with Index of Biodiversity Surveys for Assessments (IBSA) requirements.

This report presents the results of the field survey undertaken to support the above objectives.





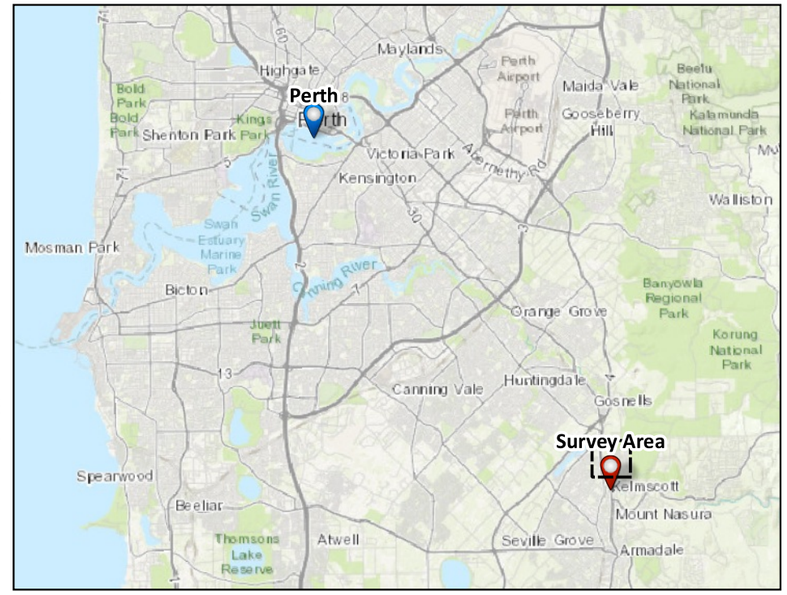


Figure 1: Site Location

N

0 25 50 75 100 m

PROJECT/REPORT NAME	Flora, Vegetation and Black Cockatoo Assessment Lot 1, 11 & 12 Clifton St and 11 & 12 Brookside Ave, Kelmscott
SCALE	1:2,000
SHEET SIZE	A3 COLOUR
CLIENT	EDS Environmental
COORDINATE REFERENCE SYSTEM	GDA2020 / MGA zone 50
PROJECT NUMBER	A23.010
VERSION	0
DATA SOURCE	LANDGATE AERIAL IMAGERY 2022
DRAWN BY / REVIEWED BY	AC / LT
DATE	2/3/2023

Legend

Survey Area

No	Description	Drawn	Approved	Date
A	Original issue	AC	LT	2/3/2023

NOTES:

Cadastral boundary (LGATE-002). Base map ESRI Topo. Townsites (LGATE-248).

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1.4 Survey Limitations and Constraints

Limitations and constraints of the flora and vegetation survey as outlined in the Flora and Vegetation Technical Guidance are detailed below in Table 1.

Table 1: Limitations and Constraints of the Flora and Vegetation Survey

Possible Limitation	Degree of Limitation (Significant, Moderate or Negligible)	Potential Constraints on Survey Outcomes
Survey Level/ Scope	Negligible	The reconnaissance flora and vegetation survey was undertaken in accordance with the Flora and Vegetation Technical Guidance and was considered appropriate to provide broad information required to support the development of the master plan.
Availability of contextual information at a regional and local scale	Negligible	All data required to complete the scope of works including regional and local contextual information was available. DBCA data was reviewed as part of the desktop assessment.
Site Access	Negligible	The Survey Area was accessed by vehicle and on foot. The entire of the Survey Area containing vegetation was traversed by foot.
Survey Intensity and Extent	Negligible	Survey effort for the reconnaissance flora and vegetation survey was suitable with one relevè sampled across the Survey Area with additional mapping notes, undertaken to aid vegetation and condition mapping and delineation. Survey effort for specific targeted habitat assessments for Black Cockatoos was suitable to adequately sample habitats present. Assessment of potential Black Cockatoo nesting hollows was from ground-based assessment only, with limited drone inspection. A follow up detailed hollow inspection may be required to confirm suitability.
Experience	Negligible	The ecologist leading the field survey (Andrew Fry) has been conducting flora and vegetation surveys and fauna habitat assessments in Western Australia for over 10 years.
Timing, weather, season	Negligible	The recommended primary survey period for flora and vegetation surveys for the region as per the EPA Technical Guidance occurs in spring (September-November). The survey was completed in late February. The seasonal timing was considered appropriate considering the objectives of the survey. No annual or timing dependant Threatened or Priority flora are expected to occur within the Survey Area.
Proportion of the flora and fauna recorded and/or collected, and any identification issues	Negligible	23 vascular flora taxa were recorded, as per a reconnaissance survey a comprehensive flora inventory was not collected. Native species diversity was observed to be depauperate for the Survey Area due to the degraded condition. Considering this the 23 species identified are considered likely to represent a high proportion of the species present.
Mapping Reliability	Negligible	The majority of the Survey Area was traversed by foot and mapping reliability is considered high.

Possible Limitation	Degree of Limitation (Significant, Moderate or Negligible)	Potential Constraints on Survey Outcomes
Disturbances (fire, flood etc.)	Negligible	Areas of disturbance associated with historic clearing for residential purposes and weeds were recorded but were not a constraint on the results of the survey.

2. Existing Environment

2.1 Pre-European Vegetation Types

During the 1970s, John Beard and associates conducted a systematic survey of native vegetation, describing the vegetation systems in Western Australia at a scale of 1:250 000 in the south-west and at a scale of 1:1,000,000 in less developed areas (Beard, 1976).

Beard's mapping attempted to depict the native vegetation as it was presumed to be at the time of settlement and is known as the pre-European vegetation type and extent. Beard's vegetation maps are maintained in digital form by DPIRD (2019). Extents are updated periodically by Department of Biodiversity, Conservation and Attractions (DBCA) (GoWA, 2018). This mapping indicates that the Survey Area intersects two pre-European vegetation associations:

- Pinjarra_3: Forest.
- Pinjarra_968: Woodland Southwest.

The pre-European vegetation association identified from the Survey Area (DPIRD-006) and its pre-European and current extents are listed in Table 2 (GoWA, 2018).

Table 2: Pre-European Vegetation Association Representation

Vegetation Association	Original Extent (ha)	Current Extent (ha)	% Remaining	% Managed for Conservation
Pinjarra_3	13,738.98	1,586.73	11.55	1.53
Pinjarra_968	135,999.02	8,996.33	6.61	1.19

Regional vegetation for the Swan Coastal Plain (at vegetation complex level) was mapped by Heddle *et al*. (1980) and are maintained in digital form by DBCA (2018). The mapping indicates that the Survey Area intersects one pre-European regional vegetation complex:

- Swan Complex (39): Fringing woodland of *Eucalyptus rudis* (Flooded Gum) - *Melaleuca rhaphiophylla* (Swamp Paperbark) with localised occurrence of low open forest of *Casuarina obesa* (Swamp Sheoak) and *Melaleuca cuticularis* (Saltwater Paperbark).

The pre-European regional vegetation complex identified from the Survey Area (DBCA-046) and its' pre-European and current extents are listed in Table 3 (GoWA, 2017).

Table 3: Pre-European Regional Vegetation Complexes

Vegetation Complex Name	System 6 Mapping Unit Number	Original Extent (ha)	Current Extent (ha)	% Remaining	% Managed for Conservation
Swan Complex	33	15,194.13	2,055.56	13.53	56.54

2.2 Wetlands and Hydrology

The southwestern corner of the Survey Area intersects with one conservation category, palusplain wetland (UID 15689) and one multiple use palusplain wetland (UID 15666), both of which are associated with the Canning River Floodplain (DBCA-019). Additionally, the lots are directly adjacent to Canning River (DWER-031). See Figure 2.

2.3 Environmentally Sensitive Areas and Conservation Estate

Environmentally Sensitive Areas (ESAs) are declared by the Department of Water and Environmental Regulation (DWER) to prevent the degradation of important environmental values such as Threatened Flora, Threatened Ecological Communities (TECs) or significant wetlands.

The majority of the Survey Area overlaps with multiple ESAs (DWER-046). These are associated with the Canning River Floodplain conservation category wetland and the buffer zone of a TEC. See Figure 2.

The Survey Area is not identified as intersecting a Conservation Area (DBCA-011). The nearest conservation area is:

- The Swan River Trust-River Reserve (R 48327) located approximately 40 m to the west.
- A Bush Forever (61) site is located < 1 km from the Survey Area (DPLH-019),

2.4 Land Use History

The Survey Area has been historically developed for agriculture, gardens and housing.

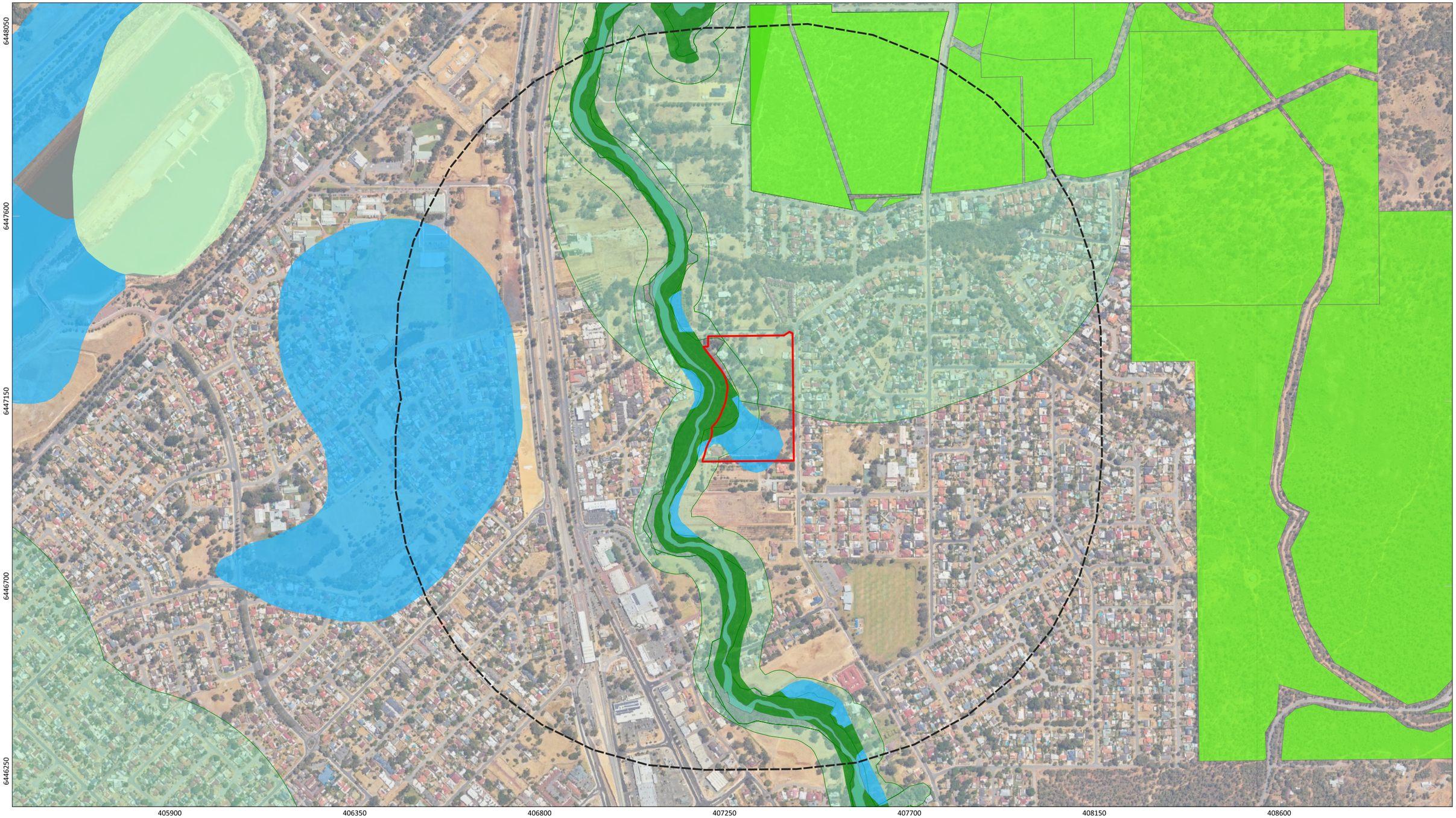


Figure 2: Environmentlly Sensitive Areas, Wetlands and Conservation Estate

N

0 100 200 300 400 m

PROJECT/REPORT NAME	Flora, Vegetation and Black Cockatoo Assessment Lot 1, 11 & 12 Clifton St and 11 & 12 Brookside Ave, Kelmscott
SCALE	1:9,000
SHEET SIZE	A3 COLOUR
CLIENT	EDS Environmental
COORDINATE REFERENCE SYSTEM	GDA2020 / MGA zone 50
PROJECT NUMBER	A23.010
VERSION	0
DATA SOURCE	LANDGATE AERIAL IMAGERY 2022
DRAWN BY / REVIEWED BY	AC / LT
DATE	17/4/2023

Legend

- Survey Area
- 750m Buffer
- Clearing Regulations - Environmentally Sensitive Areas (DWER-046)

DBCA - Legislated Lands and Waters (DBCA-011)

- SCRM Act - River Reserve
- Crown Freehold - Dept Managed

Geomorphic Wetlands, Swan Coastal Plain (DBCA-019)

- Conservation
- Multiple Use
- Not Applicable
- Resource Enhancement

No	Description	Drawn	Approved	Date
A	Original issue	AC	LT	17/4/2023

NOTES:

Cadastral boundary from LANDGATE 2022

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3. Methodology

3.1 Desktop Assessment

3.1.1 Database Searches

Database searches were undertaken to compile a list of potential conservation significant flora and ecological communities within or surrounding the Survey Area (Table 4). In addition, an EPBC Protected Matters Search Tool (PMST) was undertaken to identify the potential for Matters of National Environmental Significance (MNES) to occur within or surrounding the Survey Area (DEECCW, 2022).

Table 4: Database Searches of the Survey Area

Database Name	Date Received and Reference Number	Search Type	Search Area
Threatened and Priority Ecological Communities database search (Department of Biodiversity Conservation and Attractions)	20/02/2023 39-0223EC	TECs and PECs	10 km buffer around the Survey Area
Threatened and Priority Flora (TPFL) database search (Department of Biodiversity Conservation and Attractions)	21/02/2023 43-0223	Threatened and Priority Flora	10 km buffer around the Survey Area
Western Australian Herbarium (WAHerb) flora database search (Department of Biodiversity Conservation and Attractions)	21/02/2023 43-0223FL	Threatened and Priority Flora	10 km buffer around the Survey Area
Protected Matters Search Tool Department of Agriculture Water and the Environment, 2022a)	27/02/2023	Commonwealth listed Threatened Flora and fauna and TECs	10 km buffer around the Survey Area

3.1.2 Likelihood of Occurrence

Conservation listed flora communities identified from the desktop assessment were assessed to determine the likelihood of their occurrence within the Survey Area, both prior to and post field survey. The assessment was completed based on the likelihood of occurrence criteria presented in Table 5.

Only species either recorded within the Survey Area or considered as having a high likelihood of occurrence in post field survey assessment will be discussed in detail. Species classified as having a low likelihood of occurrence will not be discussed unless a justification for this classification is required.

Table 5: Likelihood of Occurrence Criteria

Likelihood	Criteria
Recorded	Recorded in the Survey Area from database searches, previous survey by others or by current survey.
High	• Records of flora species <1 km from the Survey Area. With record <20 years old. • Records of fauna species <5 km from the Survey Area. With record <20 years old; or • For species with well understood and specific habitat preference/ requirements, when specific habitat is present in the Survey Area, and records present <10 km from the Survey Area. • Species with general habitat preference, which is present in the Survey Area, and records present <5 km from the Survey Area.

Medium	• There are records <10 km from the Survey Area, however:
	  • The species is strongly linked to a specific habitat, which is marginally suitable or small in extent in the Survey Area; or
	  • Species has a general habitat preference, but small extent of suitable habitat is present.
	• There is suitable habitat in the Survey Area, but records are >10 km from Survey Area.

Low	• Records are historical only, or are pre mapping procedures (e.g. records assigned to towns or place names). • The species has a well understood and specific habitat preference/ requirements, which is absent from the Survey Area; or • Suitable habitat is present, however there are no existing records of the species from the region despite reasonable previous search effort; or • There is some suitable habitat in the Survey Area, however the species is very infrequently recorded in the locality (e.g. migratory bird species). •

3.2 Flora and Vegetation Survey

3.2.1 Floristic Relevé

Relevé locations were selected using aerial photography, vegetation values and field observations to best represent the vegetation types present.

The following information was collected from within each relevé:

- Observer.
- Date.
- Quadrat/site number.
- Global Position System (GPS) location (GDA2020) of the north-west corner.
- Digital photograph (spatially referenced with a reference number), taken from the north-west corner, looking diagonally across the quadrat.
- Broad soil type and colour.

- Topography.
- List of flora species recorded with total foliar cover within the quadrat for each species.
- National Vegetation Information System (NVIS) Vegetation description (as per below).
- Vegetation condition.

Relevés, being an unmeasured area of approximately the same size as quadrats, were used to record vegetation as per requirements of a Reconnaissance level survey.

3.2.2 Vegetation Description and Classification

Vegetation was described using the height and estimated cover of dominant and characteristic species of each stratum based on NVIS, recorded at Level V (NVIS Technical Working Group, 2017). Up to three species per stratum from each stratum (upper, mid and ground) were used to formulate vegetation descriptions for each quadrat and each vegetation type. Vegetation type descriptions were created by combining relevé descriptions and modifying, where necessary, based on the wider vegetation.

3.2.3 Vegetation Condition Assessment

Vegetation condition was assessed at each relevé and during traverses of the Survey Area using the Vegetation Condition Scale for the appropriate bioregion as per the Flora and Vegetation Technical Guidance (EPA, 2016). As relevés are deliberately located in the best condition parts of a vegetation type, the condition rating of the relevé may not match that of the broader vegetation type due to the scale of mapping.

3.2.4 Field Survey Timing and Survey Team

The field survey was conducted on 22 February 2023. The survey was undertaken by leading WEPL senior ecologist Andrew Fry (Flora Licence FB62000002-2) and WEPL graduate environmental scientist Lovisa Thambert (Flora Licence FB62000468). Andrew has 10 years' experience in undertaking ecology surveys in WA.

3.3 Fauna Survey

A habitat assessment for Black Cockatoos were undertaken as per *Commonwealth referral guidelines for Threatened Black Cockatoos* (DCCEEW, 2022).

3.3.1 Black Cockatoo Habitat Assessment

The Swan Coastal Plain is used by Black Cockatoos primarily for foraging resources, with some small patches of breeding habitat. Vegetation used by Black Cockatoos is dominated by *Banksia* spp. and tuart (*Eucalyptus gomphocephala*) woodlands, as well as marri (*Corymbia calophylla*) and jarrah (*E. marginata*) (DCCEEW, 2022).

On the Swan Coastal Plain, Baudin's Black Cockatoo and Carnaby's Black Cockatoo are most commonly present from February through to September, with Forest Red-tailed Black Cockatoo presence being flexible across the year. The timing of the survey in February provided good opportunity to record foraging individuals and nesting for Carnaby's Black Cockatoo. If no individuals are present, searching for foraging evidence is a reliable alternative as it will generally persist in the landscape (particularly marri nut chews) (DCCEEW, 2022).

The Black Cockatoo habitat field survey followed the *Commonwealth referral guidelines for Threatened Black Cockatoos* (DCCEEW, 2022) for identifying breeding, foraging and roosting habitat.

Breeding Habitat Assessment

The Commonwealth defines breeding habitat as trees species, known to support breeding, within the range of the species, which either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) (1.3 m from the ground) to develop a hollow, including:

- Greater than 500 mm DBH for most Eucalypts (jarrah, marri or tuart); or
- 300 mm in the case of wandoo and salmon gum (MRWA, 2022).

All trees of species with the potential to form hollows (typically jarrah, marri and tuart) and with sufficient diameter (i.e. DBH >500 mm) were recorded using a GPS. The following was recorded for each such tree:

- Species
- DBH (approximately 1.3 m from the ground)
- Tree health (such as presence of dieback (*Phytophthora cinnamomi)* or marri canker (*Quambalaria coyrecup*) and other threatening processes); and
- Presence of hollows (as observable form the ground).

In addition to Commonwealth guidelines for assessing potential breeding trees, a scoring system based on that developed by Dr Mike Bamford was applied to class potential breeding trees.

Table 6: Black Cockatoo Potential Breeding Tree Class

Class	Description of Tree and Hollows/Activity
1	Active nest observed; adult (or immature) bird seen entering or emerging from hollow, eggs present.
2	Hollow of suitable size and angle visible with chew marks around entrance.
3	Potentially suitable hollow visible but no chew marks present; or potentially suitable hollow present (as suggested by structure of tree, such as large, vertical trunk broken off at a height of >10m).
4	Tree with hollows or broken branches that might contain hollows, but hollows or potential hollows are not of a suitable size, or are aligned or obstructed so as to prevent access
5	Tree lacking large hollows or broken branches that might have large hollows; a tree with more or less intact branches and a spreading crown.

Foraging Habitat Assessment

The Commonwealth defines foraging habitat as areas including plants of species known to support foraging within the range of each Black Cockatoo species. Marri (*Corymbia calophylla*) and jarrah (*Eucalyptus marginata*) woodlands are particularly important to Baudin's Black Cockatoo and the Forest Red-tailed Black Cockatoo, while proteaceous heaths (shrublands dominated by *Banksia, Hakea* and *Grevillea* species) are primarily utilised by Carnaby's Black Cockatoo (DEECCW 2022).

The potential of the habitat within the Survey Area to support foraging was described, and any evidence was recorded, along with opportunistic sightings of any Black Cockatoo individuals.

Vegetation mapping of the Survey Area was used in conjunction with the site assessment to determine the foraging quality using the Foraging Habitat Scoring Tool (DCCEEW, 2022). In addition to the DCCEEW (2022) Foraging Habitat Scoring Tool a secondary assessment was undertaken using a scoring tool developed by Dr Mike Bamford in 2018 which produces a numerical foraging habitat score value for each identified fauna habitat type. See Appendix E for detailed scoring tool methodology.

Information collected for the Survey Area was also contextualised with consideration to the wider availability of foraging habitat for Black Cockatoo's in the surround area (12 km radius).

Roosting Habitat Assessment

During the field survey, searches were conducted for evidence of roosting (e.g. piles of scats, feeding debris or chewed trees).

4. Results

4.1 Desktop Assessment and Likelihood of Occurrence

Flora

DBCA database searches identified 102 conservation listed flora species occurring within 10 km of the Survey Area or identified by Commonwealth PMST as potentially occurring in the region (see Figure 3 and Table 7). The likelihood of occurrence assessment identified that all species had low likelihood of occurrence.

Ecological Communities

Fourteen State listed Threatened Ecological Communities (TEC) and Priority Ecological Community (PEC) occur within 10 km of the Survey Area or are identified by Commonwealth PMST as potentially occurring in the region (see Figure 3 and Table 8). The likelihood of occurrence assessment identified that:

- The Survey Area intersects a buffer of the Banksia Woodland of Swan Coastal Plain TEC. This community is not present as there is no intact native vegetation and no diagnostic features that are characteristic for this TEC. This TEC was assessed of having low likelihood of occurrence.
- The remaining 13 communities were assessed as having a low likelihood of occurrence due to unsuitable geology, soils or hydrology association; or lack of characteristic vegetation community.

Table 7: Flora Database Search Results (DBCA Database Search using 10 Km Buffer, PMST 10 km buffer), Likelihood and Flora Survey Records

Species	Conservation Status		Source		Flowering Period	Preferred Habitat	Habitat Occurs Within the Survey Area	Pre-Survey Likelihood of Occurrence	Post-Survey Likelihood of Occurrence
	DBCA	EPBC	PMST	DBCA					
Acacia anomala	T	VU	x		Aug to Sep	Lateritic soils. Slopes.	No	Low	Low
Acacia aphylla	T	VU	x	x	Aug-Oct	Sand, loam, clay loam. Granite outcrops, hills.	No	Low	Low
Andersonia gracilis	T	EN	x	x	Sep-Nov	White/grey sand, sandy clay, gravelly loam. Winter-wet areas, near swamps.	No	Low	Low
Anthocercis gracilis	T	VU	x	x	Sep-Oct	Sandy or loamy soils. Granite outcrops.	No	Low	Low
Austrostipa bronweniae	T	EN	x		Oct to Nov	Growing in grey-brown sandy loam or dark brown loam over clay in low-lying winter wet areas.	No	Low	Low
Austrostipa jacobsiana	T	CR	x	x		Roadside on coastal plain. Dry white/grey sand, well drained.	No	Low	Low
Banksia mimica	T	EN	x	x	Dec or Jan to Feb	White or grey sand over laterite, sandy loam.	No	Low	Low
Caladenia huegelii	T	EN	x	x	Sep to Oct	Grey or brown sand, clay loam.	No	Low	Low
Calytrix breviseta* subsp. *breviseta	T	EN	x	x	Oct to Nov	Sandy clay. Swampy flats.	No	Low	Low
Chamelaucium lullfitzii	T	EN	x				No	Low	Low
Conospermum undulatum	T	VU	x	x	May to Oct	Grey or yellow-orange clayey sand.	No	Low	Low

Species	Conservation Status		Source		Flowering Period	Preferred Habitat	Habitat Occurs Within the Survey Area	Pre-Survey Likelihood of Occurrence	Post-Survey Likelihood of Occurrence
	DBCA	EPBC	PMST	DBCA					
Darwinia apiculata	T	EN	x	x	Oct	Lateritic soils.	No	Low	Low
Diplolaena andrewsii	T	EN	x	x	Jul to Oct	Loam, clay. Granite outcrops & hillsides.	No	Low	Low
Diuris drummondii	T	VU	x		Nov to Dec or Jan	Sandy or loamy soils. Granite outcrops.	No	Low	Low
Diuris micrantha	T	VU	x		Sep to Oct	Brown loamy clay. Winter-wet swamps, in shallow water.	No	Low	Low
Diuris purdiei	T	EN	x	x	Sep to Oct	Grey-black sand, moist. Winter-wet swamps.	No	Low	Low
Drakaea elastica	T	EN	x	x	Oct to Nov	White or grey sand. Low-lying situations adjoining winter-wet swamps.	No	Low	Low
Drakaea micrantha	T	VU	x	x	Sep to Oct	White-grey sand.	No	Low	Low
Eleocharis keigheryi	T	VU	x	x	Aug to Nov	Clay, sandy loam. Emergent in freshwater: creeks, claypans.	No	Low	Low
Eremophila glabra* subsp. *chlorella	T	EN	x	x	Jul to Nov	Sandy clay. Winter-wet depressions.	No	Low	Low
Eucalyptus x balanites	T	EN	x	x	Oct to Dec or Jan to Feb	Sandy soils with lateritic gravel.	No	Low	Low
Goodenia arthrotricha	T	EN	x	x	Oct to Nov	Gravel. Granite rocks, slopes.	No	Low	Low
Grevillea curviloba **(Previously Grevillea curviloba subsp. Incurva)**	T	EN	x		Aug to Oct	Grey sand, sandy loam. Winter-wet heath.	No	Low	Low
Grevillea thelemanniana	T	CR	x	x	May to Nov	Sand, sandy clay. Winter-wet low-lying flats.	No	Low	Low

Species	Conservation Status		Source		Flowering Period	Preferred Habitat	Habitat Occurs Within the Survey Area	Pre-Survey Likelihood of Occurrence	Post-Survey Likelihood of Occurrence
	DBCA	EPBC	PMST	DBCA					
Lasiopetalum pterocarpum	T	EN	x		Aug to Dec	Dark red-brown loam or clayey sand over granite. On sloping banks near creeklines.	No	Low	Low
Lepidosperma rostratum	T	EN	x	x		Peaty sand, clay.	No	Low	Low
Macarthuria keigheryi	T	EN	x		Sep to Dec or Feb to Mar	White or grey sand.	No	Low	Low
Morelotia australiensis	T			x			No	Low	Low
Ptilotus pyramidatus	T	CR	x	x			No	Low	Low
***Synaphea* sp. Fairbridge Farm (D. Papenfus 696)**	T	CR	x		Oct	Sandy with lateritic pebbles. Near winter-wet flats, in low woodland with weedy grasses.	No	Low	Low
***Synaphea* sp. Pinjarra Plain (A.S. George 17182)**	T	EN	x		Sep to Nov	Grey sandy loam or clay, grey-brown clayey sand, brown clayey loam, laterite. Flats, seasonally wet areas, railroad reserves often with wet depressions or drains.	No	Low	Low
***Synaphea* sp. Serpentine (G.R. Brand 103)**	T	CR	x	x			No	Low	Low
Thelymitra dedmaniarum	T	EN	x		Nov to Dec or Jan	Granite.	No	Low	Low
Thelymitra magnifica	T			x		Stony ridges.	No	Low	Low
Thelymitra stellata	T	EN	x	x	Oct to Nov	Sand, gravel, lateritic loam.	No	Low	Low
***Acacia lasiocarpa* var. *bracteolata* long peduncle variant (G.J. Keighery 5026)**	P1			x	May or Aug	Grey or black sand over clay. Swampy areas, winter wet lowlands.	No	Low	Low

Species	Conservation Status		Source		Flowering Period	Preferred Habitat	Habitat Occurs Within the Survey Area	Pre-Survey Likelihood of Occurrence	Post-Survey Likelihood of Occurrence
	DBCA	EPBC	PMST	DBCA					
Bolboschoenus fluviatilis	P1			x			No	Low	Low
Calandrinia uncinella	P1			x	Aug-Oct	Seasonally wet swamps or on saline river flats on ground or embankments just above water, growing in soils described as grey-brown sandy or silty loams or white to creamy sands over clays usually with poor drainage.	No	Low	Low
Calytrix simplex* subsp. *simplex	P1			x	Oct to Nov	On sandplain. With Eucalyptus tetragona, etc.	No	Low	Low
Drosera oreopodion	P1			x	Sep to Oct	Clayey sand sometimes mixed with lateritic pebbles	No	Low	Low
Eriochilus glareosus	P1			x			No	Low	Low
Ptilotus sericostachyus* subsp. *roseus	P1			x	Sep to Oct		No	Low	Low
***Schoenus* sp. Beaufort (G.J. Keighery 6291)**	P1			x		Mud. Winter-wet claypans.	No	Low	Low
Acacia benthamii	P2			x	Aug-Sep	Sand. Typically on limestone breakaways.	No	Low	Low
***Andersonia* sp. Blepharifolia (F. & J. Hort 1919)**	P2			x			No	Low	Low
Calectasia grandiflora	P2			x	Jun-Nov	White, grey or yellow sand, sandy clay, gravel, laterite, granite. Swampy areas, rock outcrops, flats, slopes, ridges.	No	Low	Low
Comesperma griffinii	P2			x	Oct	Yellow or grey sand. Plains.	No	Low	Low
Diuris brevis	P2			x			No	Low	Low

Species	Conservation Status		Source		Flowering Period	Preferred Habitat	Habitat Occurs Within the Survey Area	Pre-Survey Likelihood of Occurrence	Post-Survey Likelihood of Occurrence
	DBCA	EPBC	PMST	DBCA					
Haloragis aculeolata	P2			x	Sep or Dec	Black sand or clay over limestone. Winter-wet areas.	No	Low	Low
Johnsonia pubescens* subsp. *cygnorum	P2			x	Sep	Grey-white-yellow sand. Flats, seasonally wet sites.	No	Low	Low
Lepyrodia curvescens	P2			x	Sep to Nov	Sand, laterite. Seasonally inundated swampland.	No	Low	Low
Paracaleana ferricola	P2			x			No	Low	Low
Poranthera moorokatta	P2			x			No	Low	Low
Schoenus loliaceus	P2			x	Aug to Nov	Sandy soils. Winter-wet depressions.	No	Low	Low
Stenanthemum sublineare	P2			x	Oct to Dec	Littered white sand. Coastal plain.	No	Low	Low
***Thysanotus* sp. Badgingarra (E.A. Griffin 2511)**	P2			x	Dec	Grey sand with lateritic gravel.	No	Low	Low
Acacia horridula	P3			x	May to Aug	Gravelly soils over granite, sand. Rocky hillslopes.	No	Low	Low
Allocasuarina grevilleoides	P3			x		Sand over laterite, gravel.	No	Low	Low
Asteridea gracilis	P3			x	Sep to Dec	Sand, clay, gravelly soils.	No	Low	Low
Babingtonia urbana	P3			x		Brown clay over ironstone. Heath of Calothamnus hirsutus, Jacksonia, Melaleuca and Baeckea emergent.	No	Low	Low

Species	Conservation Status		Source		Flowering Period	Preferred Habitat	Habitat Occurs Within the Survey Area	Pre-Survey Likelihood of Occurrence	Post-Survey Likelihood of Occurrence
	DBCA	EPBC	PMST	DBCA					
Banksia kippistiana* var. *paenepeccata	P3			x	Oct to Nov	Lateritic gravelly soils.	No	Low	Low
Beaufortia purpurea	P3			x	Oct to Dec or Jan to Feb	Lateritic or granitic soils. Rocky slopes.	No	Low	Low
Byblis gigantea	P3			x	Sep to Dec or Jan	Sandy-peat swamps. Seasonally wet areas.	No	Low	Low
Carex tereticaulis	P3			x	Sep-Oct	Black peaty sand.	No	Low	Low
Chamaescilla gibsonii	P3			x	Sep	Clay to sandy clay. Winter-wet flats, shallow water-filled claypans.	No	Low	Low
Comesperma rhadinocarpum	P3			x	Oct to Nov	Sandy soils.	No	Low	Low
***Eryngium pinnatifidum* subsp. *palustre* (G.J. Keighery 13459)**	P3			x	Oct-Nov	Clay, sandy clay. Claypans, seasonally wet flats	No	Low	Low
***Eryngium* sp. Subdecumbens (G.J. Keighery 5390)**	P3			x	Oct-Nov	Clay, grey sand. Seasonally wet flats, claypans, swamps	No	Low	Low
Halgania corymbosa	P3			x	Aug to Nov	Gravelly soils, soils over granite.	No	Low	Low
Isopogon autumnalis	P3			x	Feb-May	Sandy soils, often in Banksia woodlands.	No	Low	Low
Isotropis cuneifolia* subsp. *glabra	P3			x	Sep	Sand, clay loam. Winter-wet flats.	No	Low	Low
Jacksonia gracillima	P3			x			No	Low	Low
Lasiopetalum glutinosum* subsp. *glutinosum	P3			x		Open woodland and low scrub, mostly on the Darling Scarp near the Avon Wheatbelt, Jarrah	No	Low	Low

Species	Conservation Status		Source		Flowering Period	Preferred Habitat	Habitat Occurs Within the Survey Area	Pre-Survey Likelihood of Occurrence	Post-Survey Likelihood of Occurrence
	DBCA	EPBC	PMST	DBCA					
						Forest, Swan Coastal Plain.			
Meionectes tenuifolia	P3			x			No	Low	Low
Myriophyllum echinatum	P3			x	Nov	Winter-wet flats.	No	Low	Low
Schoenus benthamii	P3			x	Oct-Nov	White, grey sand, sandy clay. Winter-wet flats, swamps.	No	Low	Low
Schoenus capillifolius	P3			x	Oct-Nov	Brown mud. Claypans.	No	Low	Low
Schoenus pennisetis	P3			x	Aug to Sep	Grey or peaty sand, sandy clay. Swamps, winter-wet depressions.	No	Low	Low
***Stackhousia* sp. Red-blotched corolla (A. Markey 911)**	P3			x			No	Low	Low
Stylidium aceratum	P3			x	Oct-Nov	Sandy soils. Swamp heathland.	No	Low	Low
Stylidium paludicola	P3			x	Oct-Nov	Peaty sand over clay. Winter wet habitats. Marri and Melaleuca woodland, Melaleuca shrubland.	No	Low	Low
Styphelia filifolia	P3			x			No	Low	Low
Thysanotus anceps	P3			x	Oct to Dec	White or grey sand, lateritic gravel, laterite.	No	Low	Low
Acacia oncinophylla* subsp. *patulifolia	P4			x	Aug to Nov or Nov to Dec	Granitic soils, occasionally on laterite.	No	Low	Low
Aponogeton hexatepalus	P4			x	Jul-Oct	Mud. Freshwater: ponds, rivers, claypans.	No	Low	Low

Species	Conservation Status		Source		Flowering Period	Preferred Habitat	Habitat Occurs Within the Survey Area	Pre-Survey Likelihood of Occurrence	Post-Survey Likelihood of Occurrence
	DBCA	EPBC	PMST	DBCA					
Calothamnus accedens	P4			x		Sandy soils over laterite. Road verge.	No	Low	Low
Calothamnus graniticus* subsp. *leptophyllus	P4			x	Jun to Aug	Clay over granite, lateritic soils. Hillsides.	No	Low	Low
Cyanothamnus tenuis	P4			x	Aug-Dec	Laterite and granite in stony soils.	No	Low	Low
Drosera occidentalis	P4			x	Oct-Dec or Jan	Sandy & clayey soils. Swamps & wet depressions.	No	Low	Low
Grevillea pimeleoides	P4			x	May-Nov	Gravelly soils over granite. Rocky hillsides.	No	Low	Low
Hydrocotyle lemnoides	P4			x	Aug-Oct	Swamps.	No	Low	Low
Jacksonia sericea	P4			x	Dec or Jan-Feb	Calcareous & sandy soils.	No	Low	Low
Microtis quadrata	P4			x			No	Low	Low
Ornduffia submersa	P4			x			No	Low	Low
Pimelea rara	P4			x	Dec to Jan	Lateritic soils.	No	Low	Low
Schoenus natans	P4			x	Oct	Winter-wet depressions.	No	Low	Low
Stylidium longitubum	P4			x	Oct-Dec	Sandy clay, clay. Seasonal wetlands.	No	Low	Low
Thysanotus glaucus	P4			x	Oct to Dec or Jan to Mar	White, grey or yellow sand, sandy gravel.	No	Low	Low

Species	Conservation Status		Source		Flowering Period	Preferred Habitat	Habitat Occurs Within the Survey Area	Pre-Survey Likelihood of Occurrence	Post-Survey Likelihood of Occurrence
	DBCA	EPBC	PMST	DBCA					
***Tripterococcus* sp. Brachylobus (A.S. George 14234)**	P4			x		Grey, black or peaty sand winter-wet flats.	No	Low	Low
Verticordia lindleyi* subsp. *lindleyi	P4			x	Mar or Nov - Dec or Jan	Sand, sandy clay. Winter-wet depressions.	No	Low	Low

Table 8: Threatened Ecological Communities Database Search Results (DBCA Database Search using 10 Km Buffer, PMST 10 km buffer)

Floristic Community Type/ Common ID	Community name	Conservation Status		Source		Likelihood of Occurrence
		State	Commonwealth	PMST	DBCA	
Banksia WL SCP	Banksia Woodlands of the Swan Coastal Plain ecological community	P3	Endangered	x	x	Buffer intersects Survey Area, still considered Low
SCP10a	Shrublands on dry clay flats (floristic community type 10a as originally described in Gibson et al. (1994))	Endangered	Critically Endangered		x	Low
Claypans with shrubs over herbs	Claypans with mid dense shrublands of Melaleuca lateritia over herbs	P1	Critically Endangered	x	x	Low
SCP07	Herb rich saline shrublands in clay pans (floristic community type 7 as originally described in Gibson et al. (1994))	Vulnerable	Critically Endangered		x	Low
SCP08	Herb rich shrublands in clay pans (floristic community type 8 as originally described in Gibson et al. (1994))	Vulnerable	Critically Endangered		x	Low
	Tuart (Eucalyptus gomphocephala) Woodlands and Forests of the Swan Coastal Plain ecological community	Priority 3	Critically Endangered	x		Low
SCP20c	Shrublands and woodlands of the eastern side of the Swan Coastal Plain (floristic community type 20c as originally described in in Gibson et al. (1994))	Critically Endangered	Endangered		x	Low
SCP3a	Corymbia calophylla - Kingia australis woodlands on heavy soils, Swan Coastal Plain (floristic community type 3a as originally described in Gibson et al. (1994))	Critically Endangered	Endangered	x	x	Low

Floristic Community Type/ Common ID	Community name	Conservation Status		Source		Likelihood of Occurrence
		State	Commonwealth	PMST	DBCA	
Muchea Limestone	Shrublands and woodlands on Muchea Limestone of the Swan Coastal Plain	Endangered	Endangered		x	Low
SCP20a	Banksia attenuata woodlands over species rich dense shrublands (floristic community type 20a as originally described in Gibson et al. (1994))	Endangered	Endangered		x	Low
SCP20b	Banksia attenuata and/or Eucalyptus marginata woodlands of the eastern side of the Swan Coastal Plain (floristic community type 20b as originally described in Gibson et al. (1994))	Endangered	Endangered		x	Low
SCP21c	Low lying Banksia attenuata woodlands or shrublands	P3	Endangered		x	Low
SCP22	Banksia ilicifolia woodlands	P3	Endangered		x	Low
	Corymbia calophylla - Xanthorrhoea preissii woodlands and shrublands of the Swan Coastal Plain		Endangered	x		Low
Central Granite Shrublands (Com 5, Markey)	Central Northern Darling Scarp Granite Shrubland Community	P4			x	Low
SCP3b	Corymbia calophylla - Eucalyptus marginata woodlands on sandy clay soils of the southern Swan Coastal Plain (floristic community type 3b as originally described in Gibson et al. (1994))	Vulnerable			x	Low

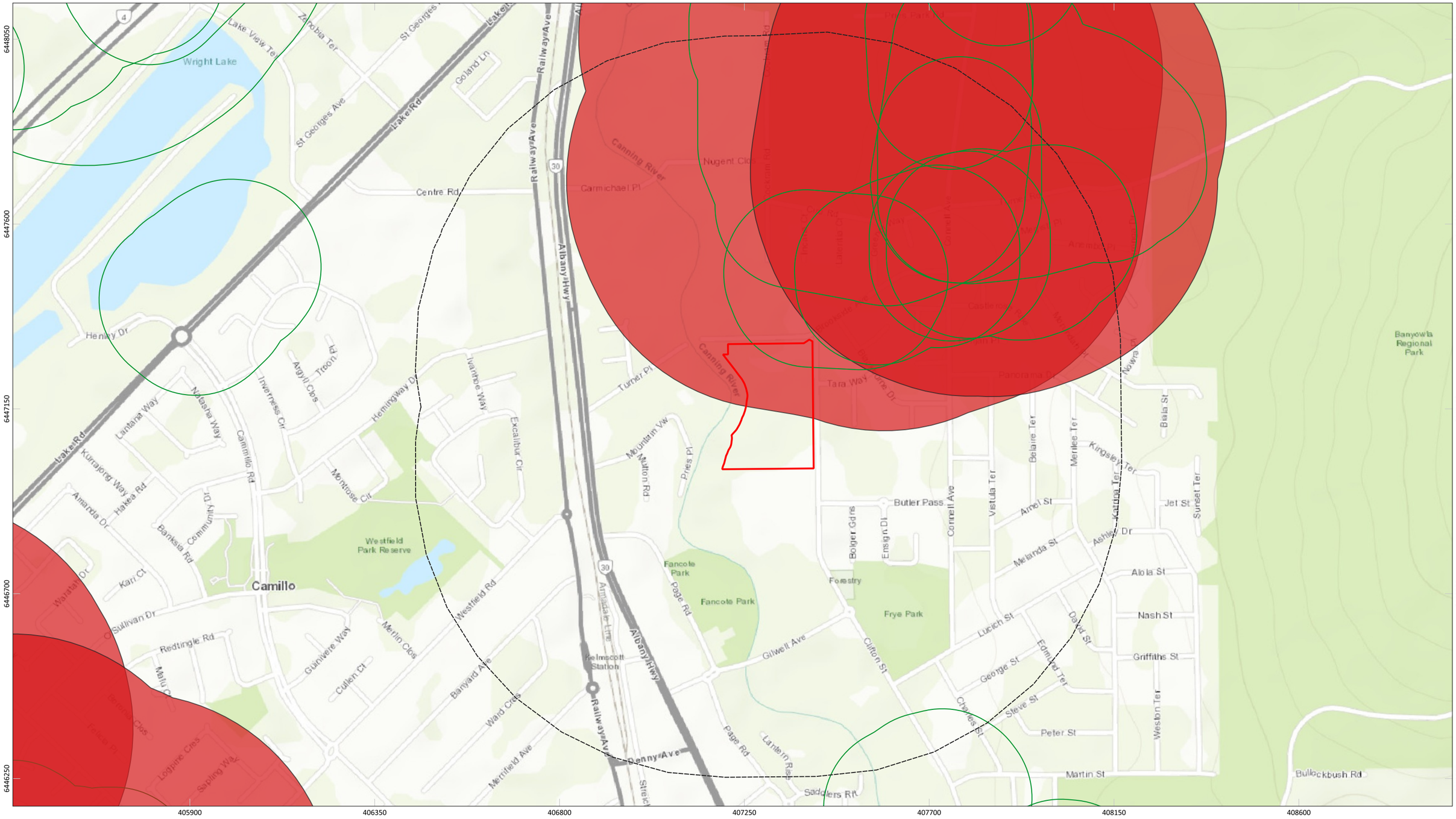


Figure 3: DBCA Database Search Results Flora and Communitites

N

0 100 200 300 400 m

PROJECT/REPORT NAME	Flora, Vegetation and Black Cockatoo Assessment Lot 1, 11 & 12 Clifton St and 11 & 12 Brookside Ave, Kelmscott
SCALE	1:9,000
SHEET SIZE	A3 COLOUR
CLIENT	EDS Environmental
COORDINATE REFERENCE SYSTEM	GDA2020 / MGA zone 50
PROJECT NUMBER	A23.010
VERSION	0
DATA SOURCE	LANDGATE AERIAL IMAGERY 2022
DRAWN BY / REVIEWED BY	AC / LT
DATE	17/4/2023

Legend

- Survey Area
- 2km Buffer
- **DBCA TEC**
  - Priority 3
  - Endangered

No	Description	Drawn	Approved	Date
A	Original issue	AC	LT	17/4/2023

NOTES:

Cadastral boundary from LANDGATE 2022

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4.2 Flora and Vegetation

4.2.1 Flora

Flora Species

A total of 23 vascular flora species were recorded from within the Survey Area from one relevé and opportunistic observations. Nineteen of these (82.6%) were non-native. Native species diversity was observed to be low due to Survey Area comprising cleared gardens and paddocks. As per requirements for a Reconnaissance level survey, flora sampling focused on dominant and characteristic species.

The flora inventory, presented as a site by species table is provided below in Table 9.

Threatened and Priority Flora

No Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC) listed, or State *Biodiversity Conservation Act 2016* (BC Act) listed Threatened Flora were recorded in the Survey Area or were assessed as having a high-medium post survey likelihood of occurrence.

Flora of Other Significance

Flora may be considered of other conservation significance if it is a novel taxon or represents a range extension. None of the recorded taxa may be considered flora of other conservation significance.

Introduced Flora

A total of 19 introduced taxa were recorded within the Survey Area, representing 82.6% of the total taxa recorded, see Table 9. Grass weeds particularly *Ehrharta calycina, Avena barbata* and *Eragrostis curvula* were highly abundant along the floodplain, with 70-100% ground cover. Throughout the rest of the Survey Area, within the residential lots, weedy paddock and maintained lawn grasses, assorted garden plants and fruit trees covered > 90% of the ground.

One woody weed species considered to have potentially significant impact on bushland through forming thickets were also recorded, this being Flinders Range wattle (*Acacia iteaphylla*).

Table 9: Flora Inventory and Site x Species List

Family	Species	Introduced	Cons. Code	Range Extension	Opps	R01
Arecaceae	*Washingtonia filifera*	*				*
Bignoniaceae	*Jacaranda mimosifolia*	*				*
Fabaceae	*Acacia dealbata*	*				*
Fabaceae	*Acacia iteaphylla*	*				*
Fabaceae	*Erythrina ×sykesii*	*				*
Fabaceae	*Robinia pseudoacacia*	*				*
Juncaceae	*Juncus pallidus*					*
Moraceae	*Ficus carica*	*				*
Myrtaceae	*Corymbia calophylla*				*	
Myrtaceae	*Corymbia citriodora*	*			*	
Myrtaceae	*Eucalyptus camaldulensis x*	*			*	
Myrtaceae	*Eucalyptus maculata*	*			*	
Myrtaceae	*Eucalyptus rudis*					*
Myrtaceae	*Leptospermum laevigatum*	*				*
Myrtaceae	*Melaleuca raphiophylla*					*
Platanaceae	*Platanus x hispanica*	*				*
Poaceae	*Arundo donax*	*				*
Poaceae	*Avena barbata*	*				*
Poaceae	*Briza maxima*	*				*
Poaceae	*Cynodon dactylon*	*				*
Poaceae	*Ehrharta calycina*	*				*
Poaceae	*Eragrostis curvula*	*				*
Rutaceae	*Zanthoxylum piperitum*	*				*
	Assorted fruit trees				*	
	Assorted garden plants				*	
	Paddock and lawn grasses					*

4.2.2 Vegetation

Vegetation Types

The vegetation present throughout the Survey Area was considered not to be representative of intact remnant native vegetation and was described from one relevé. Due to the degraded condition of the vegetation, vegetation type by one relevé alone was considered suitable. Additionally, due to the degraded condition, low native species abundance from the Survey Area, being cleared parkland and paddocks, floristic analysis was not undertaken in defining vegetation types. The vegetation present within the Survey Area is described below in Table 11 and shown in Figure 4.

The western part of the Survey Area intersects with a conservation category wetland (CCW) associated with Canning River Floodplain. The CCW intersects both vegetation types identified in the Survey Area, with VT01 associated with the majority of the CCW (Figure 5). VT01 has an upper stratum of Flooded gum which are wetland species.

Vegetation Condition

The vegetation of the Survey Area was considered Completely Degraded throughout (Table 10). The vegetation of the Survey Area has been degraded as a result of historic clearing for urban development and replaced by planted eucalyptus, maintained lawn and paddock grasses, assorted fruit trees and exotic garden plants. Native species cover in the ground stratum is <1% and exotic plants, grasses and weed covers >90% of the ground stratum. No vegetated areas show signs of native regeneration.

Table 10: Vegetation Condition Extents (as per EPA, 2016 condition scale)

Vegetation Condition	Extent (ha)	Extent (%)
Excellent	-	-
Very Good	-	-
Good	-	-
Degraded	-	-
Completely Degraded	5.76	100
Total	**5.76**	**100**

Threatened and Priority Ecological Communities

No vegetation types were identified as comprising a State or Commonwealth listed Threatened Ecological Community (TEC) or DBCA listed PEC.

The northern half of the Survey Area was identified in DBCA ecological community database search as intersecting with the buffer of the Banksia Woodlands of the Swan Coastal Plain TEC. The field survey determined that the vegetation present does not represent an intact native vegetation remnant and consists of non-endemic species or planted natives. Vegetation present does not meet any key diagnostic

characteristic of the TEC. Additionally, the present vegetation is in Completely Degraded condition and does not provide any connectivity between patches of Banksia Woodland (DoTEE, 2016).

Vegetation of Other Significance

As per the EPA Flora and Vegetation Technical Guidance (EPA, 2016), vegetation may be considered of significance for a range of reasons, other than a listing as a TEC or a PEC, including:

- Pre-European vegetation extent being below a threshold level.
- Scarcity.
- Unusual species.
- Novel combinations of species.
- A role as a refuge.
- A role as a key habitat for threatened species or large populations representing a significant proportion of the local to regional total population of a species.
- A restricted distribution.

The Survey Area is within the mapped extent of the Swan complex and contains some key species as per the structural description in Heddle *et. al*, 1980. Key species are *Eucalyptus rudis* and *Melaleuca rhaphiophylla.* The state-wide vegetation statistics as per GoWA, 2017 report current extent of this vegetation complex is 13.53 % of pre-European extent. This is below the 30% of pre-European extent national objective and targets for biodiversity conservation in Australia (Commonwealth of Australia, 2001). Due to the vegetation present being in Completely Degraded condition it is not considered to represent an intact remnant of the Swan complex vegetation type.

Table 11: Vegetation Present in Survey Area

Vegetation Present and Description	Total Area, Proportion (%) of the Survey Area	Sites	Vegetation Condition	Photograph
V01 ***Eucalyptus rudis* mid open forest over cleared gardens and weedy paddock grasses.** **Native species are not present in the mid and ground stratum.**	0.85 ha 14.76 %	R01	Completely Degraded Vegetation has been significantly altered by clearing for gardens and paddocks. Upper stratum includes planted native and non-native eucalyptus. Mid and ground stratum native species removed with no evidence of regeneration.	

Vegetation Present and Description	Total Area, Proportion (%) of the Survey Area	Sites	Vegetation Condition	Photograph
<u>Gardens and Paddock</u> **Areas cleared for garden and paddock, upper stratum includes planted *Corymbia citriodora, Eucalyptus camaldulensis x, Eucalyptus maculata* and *Eucalyptus rudis* mid isolated trees over planted maintained lawn grasses, garden plants and assorted fruit trees.** **No native mid or ground story species present.**	4.91 ha 85.24 %		Completely Degraded Parkland cleared	 

Vegetation Present and Description	Total Area, Proportion (%) of the Survey Area	Sites	Vegetation Condition	Photograph
Total	5.76 ha 100%			

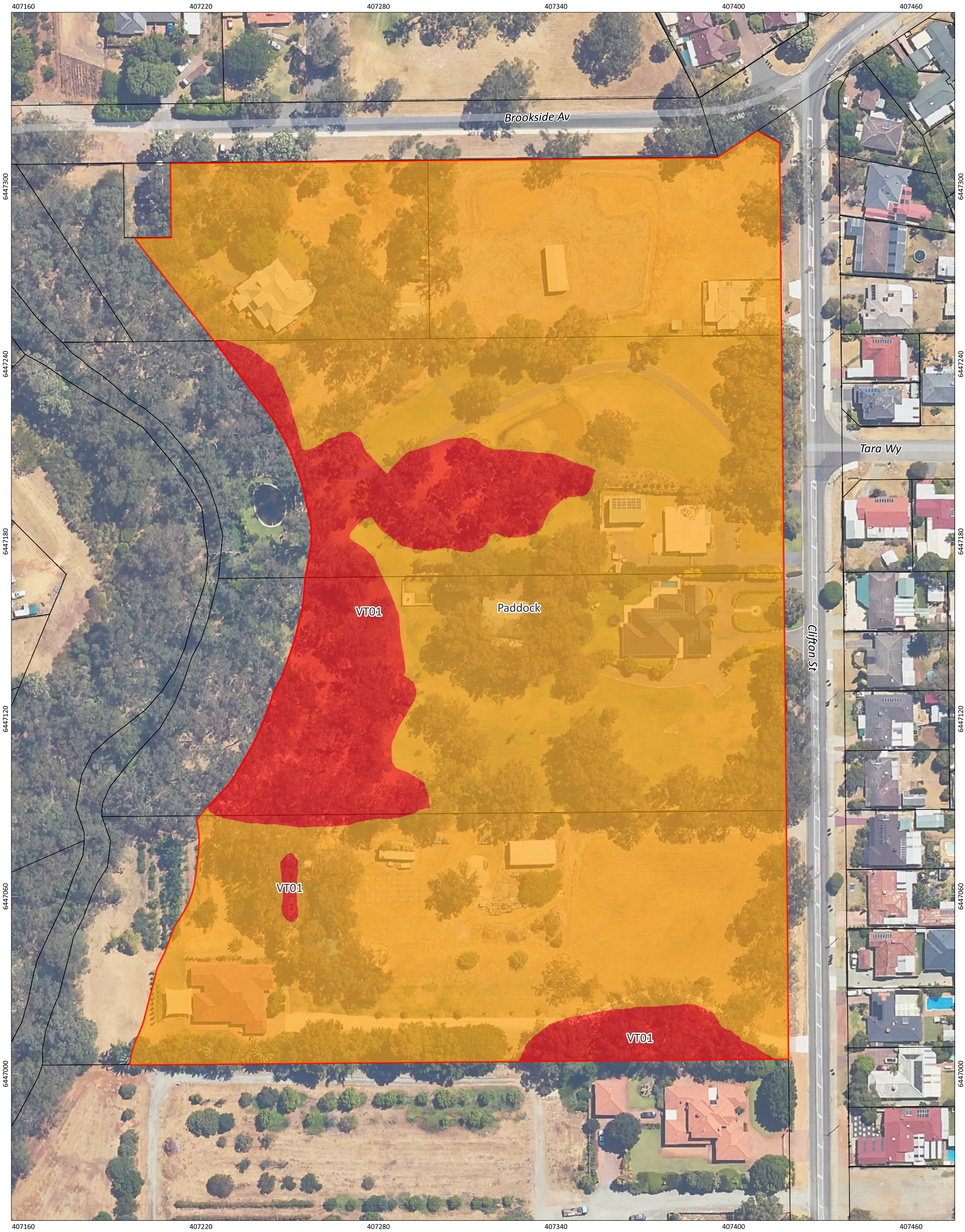


Figure 4: Vegetation Types

0 10 20 30 40 m

N

PROJECT/REPORT NAME	Flora, Vegetation and Black Cockatoo Assessment Lot 1, 11 & 12 Clifton St and 11 & 12 Brookside Ave, Kelmscott
SCALE	1:1,200
SHEET SIZE	A3 COLOUR
CLIENT	EDS Environmental
COORDINATE REFERENCE SYSTEM	GDA2020 / MGA zone 50
PROJECT NUMBER	A23.010
VERSION	0
DATA SOURCE	LANDGATE AERIAL IMAGERY 2022
DRAWN BY / REVIEWED BY	AC / LT
DATE	17/4/2023

Legend

- Survey Area
- Cadastre (No Attributes) (LGATE-001)

Vegetation Type

- VT01
- Paddock

No	Description	Drawn	Approved	Date
A	Original issue	AC	LT	17/4/2023

NOTES:

Cadastral boundary (LGATE-002)

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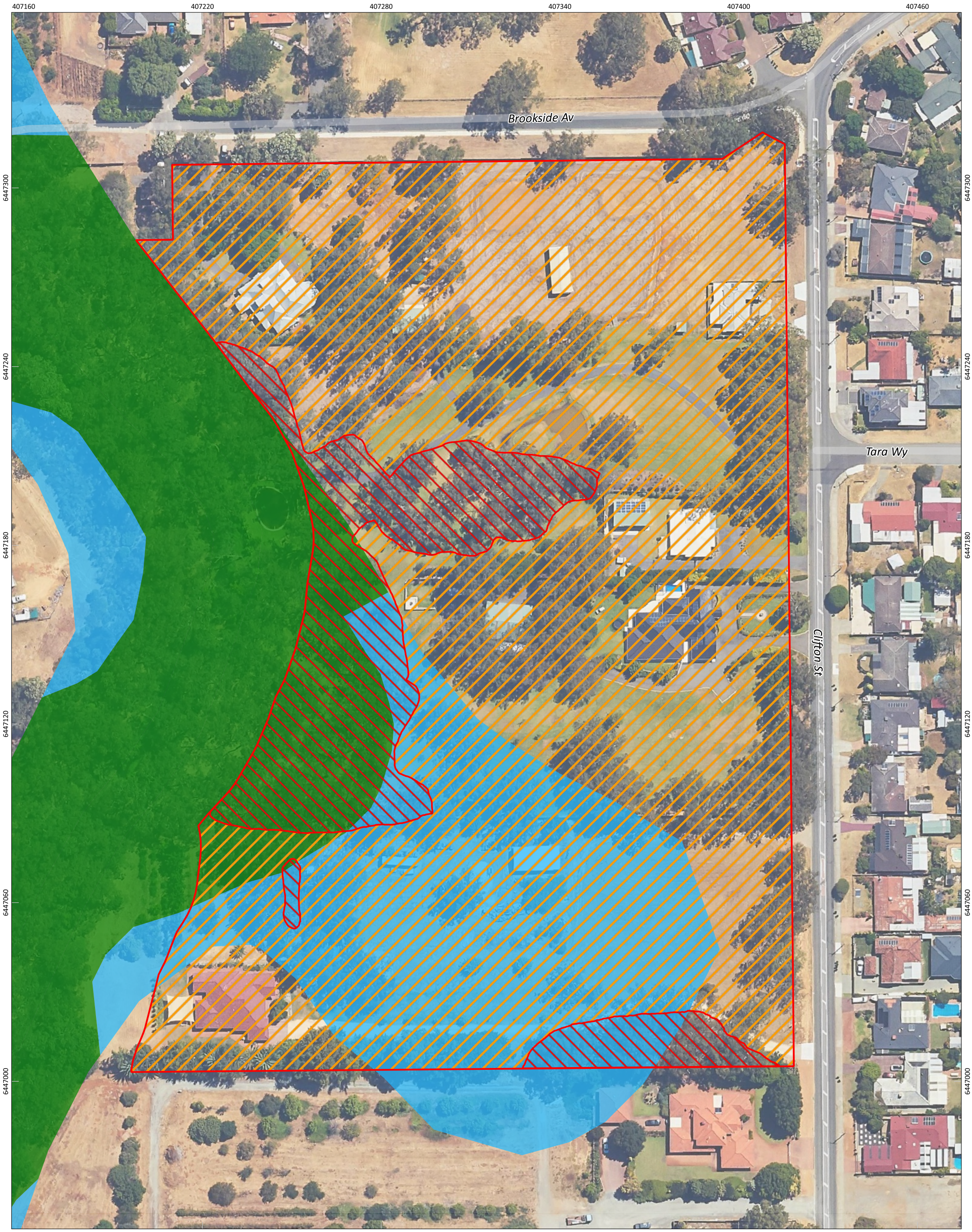


Figure 5: Conservation Class Wetland within the Survey Area

0 10 20 30 40 m
N

SCALE: 1:1,200	SHEET SIZE: A3 COLOUR	CLIENT: EDS Environmental	
COORDINATE REFERENCE SYSTEM: GDA2020 / MGA zone 50		PROJECT NUMBER: A23.010	VERSION: 0
DATA SOURCE: LANDGATE AERIAL IMAGERY 2022		DRAWN BY / REVIEWED BY: AC / LT	DATE: 17/4/2023

PROJECT/REPORT NAME: Flora, Vegetation and Black Cockatoo Assessment
Lot 1, 11 & 12 Clifton St and 11 & 12 Brookside Ave, Kelmscott

Legend

- Survey Area

Vegetation Type

- Paddock
- VT01

Geomorphic Wetlands, Swan Coastal Plain (DBCA-019)

- Conservation
- Multiple Use

No	Description	Drawn	Approved	Date
A	Original issue	AC	LT	17/4/2023

NOTES:
Cadastral boundary (LGATE-002)

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4.3 Fauna

The field survey determined that there were no intact vegetation and hence it can be concluded that there was no suitable habitat for ground dwelling fauna species.

Although not specifically targeted as part of the scope, scats from Brushtail Possums were found from several locations along the floodplain on the western edge of the Survey Area. Additionally, there were scratch marks, potentially from possums, around smaller hollows (< 10 cm in diameter) that were considered too small to be utilised by Black Cockatoo species. It was concluded that the floodplain and the vegetation along the river may act as a movement corridor for the possums for foraging and resting purposes. Brushtail Possums are not on the Threatened or Priority fauna list (WAM, 2022) and hence does not hold specific conservation significance.

Other common hollow using species that may uses the smaller hollows around the site include Ringneck Parrot, Wood Duck and non-native Rainbow Lorikeet.

4.3.1 Black Cockatoo Habitat Assessment

A Black Cockatoo habitat assessment was undertaken by WEPL ecologists during the field survey in February 2023.

Observations and Previous Records

The Survey Area falls within the modelled distribution for all three Black Cockatoo species (DCCEEW, 2022). Numerous records of the three species were present in DBCA database search results within 1 km of the Survey Area. Foraging evidence (chewed marri nuts) for Carnaby's Black Cockatoo was opportunistically recorded during the field survey at one location on the fringe of the Survey Area. Additionally, calls were heard, and individuals of Forest Red-tailed Black Cockatoos were seen flying adjacent to the Survey Area.

Breeding Habitat Assessment

Potential Black Cockatoo breeding trees are defined as those which either have a suitable nest hollow or are of a suitable DBH (> 500 mm for most species) to develop a hollow (DEECCW 2022). Breeding typically occurs in native eucalypt species particularly marri, jarrah, wandoo and tuart however many species of eucalypt including non-endemic species may develop suitable hollows for breeding (DEECCW 2022). A summary of understood suitable nesting hollow characteristics for the three species is provided below in Table 12.

Table 12: Black Cockatoo Nesting Hollow Characteristics

Species	Baudin's Black Cockatoo	Carnaby's Black Cockatoo	Forest Red-tailed Black Cockatoo
Tree species and hollow characteristic	Nesting mainly in karri, marri, jarrah, wandoo, bullich, and tuart	Nesting mainly in salmon gum, wandoo, tuart, jarrah, flooded gum, karri and marri.	Nesting mainly in jarrah, marri, karri, wandoo, bullich, blackbutt and tuart

Species	Baudin's Black Cockatoo	Carnaby's Black Cockatoo	Forest Red-tailed Black Cockatoo
	Preferred hollow dimensions have not been specifically studies but are considered likely to be similar to that of the Carnaby's Black Cockatoo	Utilise hollows from 10-65 cm diameter (average 26 cm) and >1 m deep	Utilise hollow from 12-150 cm diameter (average 34 cm) and >1 m depth
Sources	DCCEEW, 2022.	DCCEEW, 2022, Saunders *et al.,* 2014a, Saunders *et al.,* 2014b.	DCCEEW, 2022, Johnstone *et al.,* 2013.

A total of 139 potential breeding trees (DBH > 500 mm) were recorded. Of these the large majority (121 trees) did not show signs of potential nesting hollow development (Class 5 trees). Two trees were assessed as actually possessing a hollow with sufficient entry diameter to potentially support a suitable nesting hollow (Class 3 trees), see Table 13. One of these trees was outside the Survey Area boundary. A detailed inspection of internal dimensions vial pole camera would be required to confirm if hollows are actually suitable. No evidence of usage from Black Cockatoos e.g., chew marks around the entrances were observed. Sixteen trees were assessed as possessing small hollows which are of an insufficient size to support nesting, however these trees are of sufficient age and growth form to be developing hollows (Class 4 trees). See Figure 6 for locations. See Appendix D for summary of tree locations, species, DBH and tree health.

Table 13: Potential Nesting Hollows Recorded in the Survey Area

Tree ID	Species	ClassBamfo	DBH (mm)	Hollow Comment	Photo
19	*Eucalyptus rudis*	3	700	Vertical opening hollow at fork mid trunk. 20 cm entrance, drone inspection showed has internal chamber, depth not confirmed. No evidence of chewing. outside the Survey Area boundary by a few meters.	

Tree ID	Species	ClassBamfo	DBH (mm)	Hollow Comment	Photo
39	*Eucalyptus rudis*	3	800	Several hollows around 10 cm. Drone inspected. Could not assess internal dimensions. Highest hollow entrance 10-15 cm, side entry opening mid trunk (top photo). Shows chew marks at entrance likely Galah. Marginal for Black Cockatoos to utilise. Lower spout hollow, 15 cm, no chews (bottom photo).	

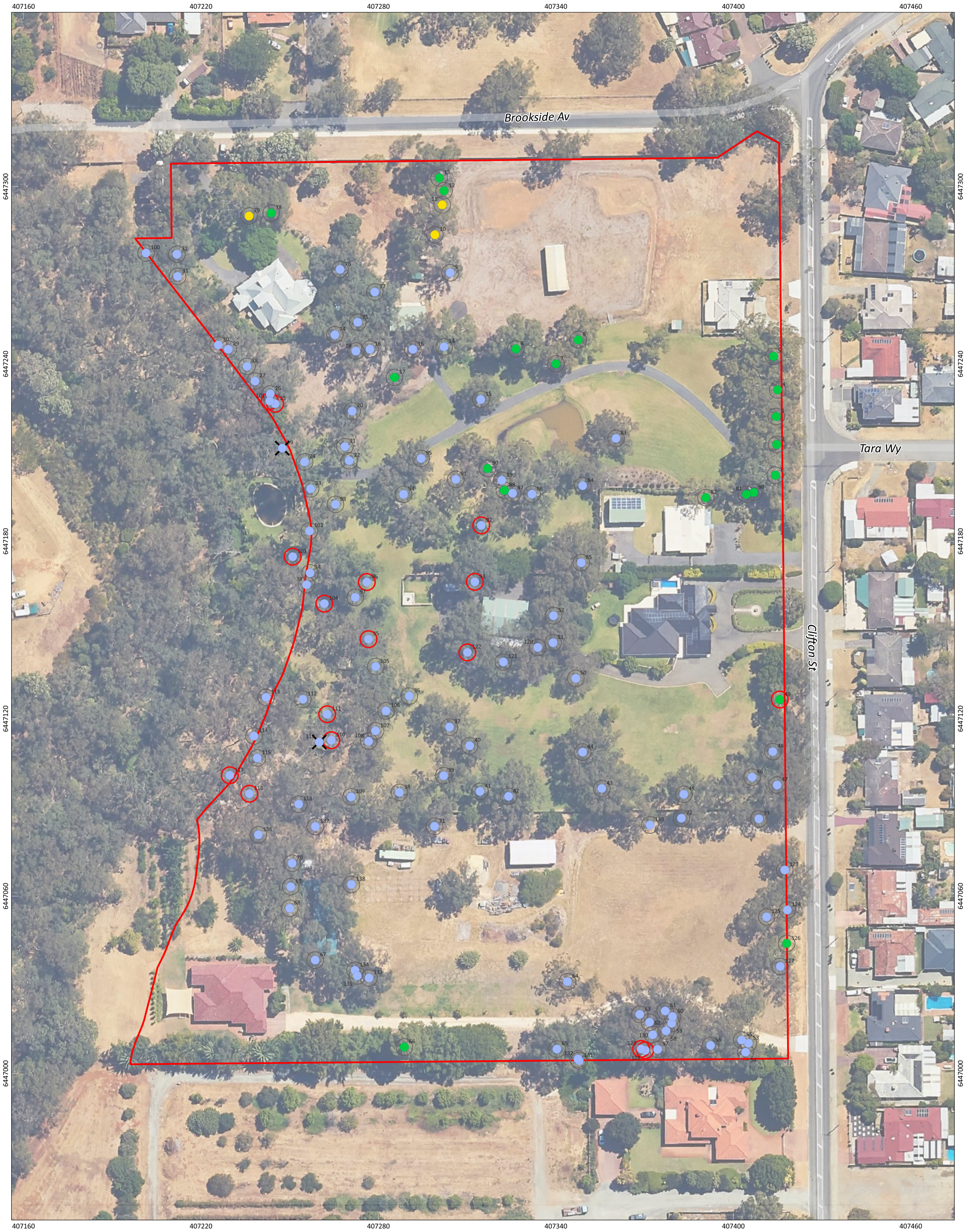


Figure 6: Black Cockatoo Habitat Assessment

0 9 18 27 36 m

N

PROJECT/REPORT NAME	Flora, Vegetation and Black Cockatoo Assessment Lot 1, 11 & 12 Clifton St and 11 & 12 Brookside Ave, Kelmscott
SCALE	1:1,200
SHEET SIZE	A3 COLOUR
CLIENT	EDS Environmental
COORDINATE REFERENCE SYSTEM	GDA2020 / MGA zone 50
PROJECT NUMBER	A23.010
VERSION	0
DATA SOURCE	LANDGATE AERIAL IMAGERY 2022
DRAWN BY / REVIEWED BY	AC / LT
DATE	17/4/2023

Legend

- Survey Area

Tree Species

- Eucalyptus
- Flooded Gum
- Other

Bamford Tree Class

- 3
- 4
- 5

No	Description	Drawn	Approved	Date
A	Original issue	AC	LT	17/4/2023

NOTES:

Cadastral boundary (LGATE-002)

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Foraging Habitat Assessment

The vegetation present within the Survey Area contains primarily flooded gum. There were six small Marri trees (< 500 mm DBH) at one location on the edge of the Survey Area that had foraging evidence from Carnaby's Black Cockatoos. The extent of habitat provided by these trees however was considered too small to comprise significant or high value foraging habitat for Black Cockatoos. The large majority of the Survey Area comprises paddocks or areas of planted eucalypts which have low to no foraging habitat value.

The Commonwealth referral guidelines provides a foraging quality scoring tool to guide referral information (DCCEEW, 2022). The tool advises that if the Survey Area contains native vegetation used for foraging at any time by a Black Cockatoo species and is >1 ha in size, that it is considered at face value to be of very high quality and assigned a starting score of 10. The tool then allows for subtractions if attributes are present which reduce the functionality of the foraging habitat. The Commonwealth referral guidelines specify that the tool is to be applied once to the entire impact area even if there is more than one type of foraging habitat present. The calculated foraging habitat quality score is shown below in Table 14. Scores of 5-10 are identified as representing high value foraging habitat.

Table 14: Foraging Quality Scoring Tool (DCCEEW, 2022)

Attribute	Baudin's Black Cockatoo	Carnaby's Black Cockatoo	Forest Red-tailed Black Cockatoo
Starting score	10- contains native eucalypt woodland with marri	10- contains native eucalypt woodland with marri	10- contains marri woodland
Foraging potential (-2 if no foraging evidence)	-2, foraging evidence not present	No change, foraging evidence present	-2, foraging evidence not present
Connectivity (-2 if no other foraging habitat in 12km)	No change, other foraging habitat <1 km away	No change, other foraging habitat <1 km away	No change, other foraging habitat <1 km away
Proximity to breeding habitat (-2 if no breeding habitat in 12km)	-2, breeding site >12 km away	No change, breeding habitat within 12 km	No change, breeding habitat within 12 km
Proximity to roosting (-1 if >20km from known night roost)	No change, known roosting site <20 km distant	No change, known roosting site <20 km distant	No change, known roosting site <20 km distant
Impact from significant plant disease (-1 if >50% impact)	No change, impact from plant disease affecting <50% of foraging plants	No change, impact from plant disease affecting <50% of foraging plants	No change, impact from plant disease affecting <50% of foraging plants
Total score	**6**	**10**	**8**

The Black Cockatoo referral guidance allows for the inclusion of additional information for foraging habitat which may be considered during an assessment, such as the extent and density of recognised foraging plants within a Survey Area. As an additional source of information, WEPL provides an assessment of foraging habitat quality using a scoring tool developed by Dr Mike Bamford in 2018 to produce a numerical foraging habitat score value for each identified habitat type. The WEPL foraging habitat score and habitat extents are summarised below in Table 15 with detailed scoring tool calculator provided in Appendix E. Foraging habitat mapping is shown in Figure 7.

Table 15: WEPL Foraging Habitat Score

Habitat Type	Foraging Habitat Score	Justification	Area (ha) and % of Survey Area
VT01 Flooded Gum over Cleared Parkland and Paddock	2-Low	Scattered foraging plants of small fruited eucalypt species (flooded gum) which are not preferred foraging species. Canopy intact.	0.85, 25.76%
Paddock with Isolated Trees	Negligible	Isolated foraging plants of small fruited eucalypt species including flooded gum, red rive gum and lemon-scented gum which are not preferred foraging species.	4.91. 75.24%
Total			**5.76 100%**

Application of foraging habitat quality scoring: 0- None; 1-2-Low; 3-Low Moderate; 4- Moderate; 5-Moderate to High; 6- High; 7-10 Very High.

The total Survey Area comprises 5.76 ha and described as cleared parkland and paddocks with planted native and non-native eucalyptus. The Commonwealth foraging tool identified the Survey Area to have high quality foraging habitat for all three Black Cockatoos. The WEPL foraging habitat scoring tool identified vegetation type 1 (VT01), an area of 0.85 ha, to have Low (2) foraging habitat and the remainder 4.91 ha was considered negligible due to the lack of foraging species.

Roosting Habitat Assessment

Known roost sites are present 2 km south and 3 km north of the Survey Area (DBCA-064). No evidence of night roosting (e.g. piles of scats, feeding debris or chewed trees) were recorded within the Survey Area .

Night roosting locations are typically in proximity to foraging habitat (Black Cockatoos mainly foraging within 20km of night roosts) and with access to water points <2km from roosting location (DCCEEW, 2022). Any groups of tall trees, particularly large native eucalypts in proximity to water sources may provide night roosting habitat (DCCEEW, 2022). Throughout the Survey Area, isolated stands of tall (> 10 m) eucalypts are scattered which may provide suitable roosting habitat. Adjacent bush lands with foraging potential were located < 1 km from the Survey Area and access to permanent water was present from Canning River that flows directly adjacent to the west of the Survey Area.



Figure 7: Black Cockatoo Foraging Habitat

N

0 10 20 30 40 m

PROJECT/REPORT NAME: Flora, Vegetation and Black Cockatoo Assessment Lot 1, 11 & 12 Clifton St and 11 & 12 Brookside Ave, Kelmscott		
SCALE: 1:1,200	SHEET SIZE: A3 COLOUR	CLIENT: EDS Environmental
COORDINATE REFERENCE SYSTEM: GDA2020 / MGA zone 50	PROJECT NUMBER: A23.010	VERSION: 0
DATA SOURCE: LANDGATE AERIAL IMAGERY 2022	DRAWN BY / REVIEWED BY: AC / LT	DATE: 17/4/2023

Legend

- Survey Area

Black Cockatoo Foraging Habitat

- 1-Negligible to Low
- 2-Low Category

No	Description	Drawn	Approved	Date
A	Original issue	AC	LT	17/4/2023

NOTES:

Cadastral boundary (LGATE-002)

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5. Discussion

The finding of this flora, vegetation and Black Cockatoo survey are summarised below in Table 16.

Although outside of the scope of works for this survey, scats were opportunistically observed from the common brushtail possum within the floodplain, indicating the species is likely to be present using the river reserve as a movement corridor.

Table 16: Summary of Discussion

Aspect	Discussion
Flora species diversity	Native species diversity was observed to be low overall, likely due to a history of clearing, urban development and exotic plants. This finding is consistent with vegetation typically encountered in degraded urban vegetated areas.
Threatened and Priority Flora	No Threatened or Priority Flora were assessed as having a high-medium post survey likelihood of occurrence. Hence, no Threatened or Priority Flora were expected to be recorded.
Introduced Flora	The high level of exotic species and weeds are consistent with vegetation typically encountered in degraded urban cleared parkland.
Vegetation Types	The vegetation present was considered to not represent intact remnant native vegetation. This is common in areas developed for residential purposes due to the constant disturbance from human activities. The conservation category wetland intersects mainly with VT01 on the western side of the Survey Area. VT01 contains Flooded gum which are associated with riparian vegetation and are common in floodplains inundated during winter (WRC, 1997). Flooded gum has important value to the fringing vegetation as it provides essential functions that helps maintain and support the ecosystems within the waterway (WRC, 1997). VT01 is in Completely Degraded condition.
Threatened and Priority Ecological Communities	No vegetated areas were identified as being a part of this or any other State or Commonwealth listed Threatened Ecological Community (TEC) or DBCA listed PEC. The northern part of the Survey Area is mapped within the buffer of Banksia Woodland of the Swan Coastal Plain TEC. It is clear that the TEC is not present within the Survey Area, as it has no intact remnant native vegetation and does not obtain any key diagnostic characteristic or meet any thresholds of the threatened community.
Vegetation Condition	The vegetation condition throughout the Survey Area, including the area mapped as conservation category wetland, was considered Completely Degraded. Degradation has occurred through historical clearing, urban development, weed invasion and likely modifications to fire regime.
Black Cockatoo Habitat Assessment	Although there were a significant number of trees (139) with suitable size (DBH > 500 mm) to develop hollows, majority (121) did not show signs of any hollow development. While generally not specifically studied, it is considered that the timeframe of between 100-200 years for eucalyptus trees to form a suitable hollow observed in WA endemic species is likely reasonable to apply to non-native species as well. Due to the age of plantings in the area it is considered unlikely that the planted endemic and non-endemic trees present would be of a sufficient age class to be forming suitable hollows. There were six Marri trees at one location on the edge of the Survey Area but all had a DBH <500 mm and were of a younger age class.

Aspect	Discussion
	The large majority of the Survey Area comprises of flooded gum over cleared parkland. Flooded gum may be foraged (DCCEEW, 2022) but are generally recognised as providing lower quality foraging habitat. Foraging evidence were observed under the Marri trees, however this patch was not considered to support or increase the quality of foraging habitat present. Known roost sites are present 2 km south and 3 km north of the Survey Area. Roosting habitat is potentially present as tall trees, which was present throughout the Survey Area. However, lack of primary or secondary evidence may indicate that good quality roosting habitat with significant value may not be present.

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Appendix A
Legislation

Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act aims to protect matters of national environmental significance (MNES). Under the EPBC Act, the Commonwealth Department of Climate Change, Energy and the Environment lists threatened species and communities in categories determined by criteria set out in the EPBC Act.

Projects likely to cause a significant impact on MNES should be referred to the DCCEEW for assessment under the EPBC Act.

Biodiversity Conservation Act 2016

The Biodiversity Conservation Act 2016 aims to conserve and protect biodiversity and biodiversity components within the State and to promote ecologically sustainable use of biodiversity components in the State.

Environmental Protection Act 1986

Declared Rare Flora (DRF) and Threatened Ecological Communities (TECs) are given special consideration in environmental impact assessments and have special status as Environmentally Sensitive Areas (ESAs) under the EP Act and the Environmental Protection (Clearing of Native Vegetation) Regulations 2004. Exemptions for a clearing permit do not apply in an ESA. In addition, habitat necessary for the maintenance of indigenous fauna is considered in the clearing principles and assessed during consideration of applications for a clearing permit.

Biosecurity and Agricultural Management Act 2007

Plants may be 'Declared' by the Minister for Agriculture and Food under the BAM Act. The Western Australian Organism List contains information on the area(s) in which a plant is declared and the control and keeping categories to which it has been assigned in Western Australia. A declaration may apply to the whole State, to districts, individual properties or even to single paddocks. If a plant is 'Declared', landholders are obliged to control that plant on their properties.

Weeds of National Significance

The Australian Government along with the State and Territory governments has endorsed 32 WoNS. Four major criteria were used in determining WoNS:

- The invasiveness of a weed species.
- A weed's impacts.
- The potential for spread of a weed.
- Socio-economic and environmental values.

Each WoNS has a national strategy and a national coordinator, responsible for implementing the strategy. WoNS are regarded as the worst weeds in Australia because of their invasiveness, potential for spread, and economic and environmental impacts.

Department of Biodiversity, Conservation and Attractions Priority Lists

DBCA lists 'Priority' flora and fauna that have not been assigned statutory protection as "Threatened" under the BC Act and are under consideration for declaration as Threatened. Flora and fauna assessed as Priority 1-3 are considered to be in urgent need of further survey. Priority 4 flora requires monitoring every 5 -10 years.

DBCA maintains a list of Priority Ecological Communities (PECs) which identifies plant communities that require further investigation before possible nomination for TEC status. Once listed, a community becomes a PEC and, when endorsed by the WA Minister for Environment, becomes a TEC and protected as an ESA under Environmental Protection (Clearing of Native Vegetation) Regulations 2004.

Informal Recognition of Flora and Fauna

Certain populations or communities of flora and/or fauna may be of local significance or interest because of their patterns of distribution and abundance. For example, specific locations of flora and may be locally significant because they are range extensions to the previously known distribution, or are newly discovered taxa (and have the potential to be of more than local significance). In addition, many species are in decline as a result of threatening processes (land clearing, grazing, and changed fire regimes) and relict populations of such species assume local importance for DBCA. It is not uncommon for DBCA to make comment on these species of interest.

Appendix B
Definitions and Criteria

EPBC Act Categories for Flora, Fauna and Ecological Communities

Category	Threatened Species	Threatened Ecological Communities
Extinct	A native species is eligible to be included in the extinct category at a particular time if, at that time, there is no reasonable doubt that the last member of the species has died.	N/A.
Extinct in the wild	A native species is eligible to be included in the extinct in the wild category at a particular time if, at that time: (a) it is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or (b) it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.	N/A.
Critically Endangered (CE)	A native species is eligible to be included in the critically endangered category at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.	An ecological community is eligible to be included in the critically endangered category at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
Endangered (EN)	A native species is eligible to be included in the endangered category at a particular time if, at that time: (a) it is not critically endangered; and (b) it is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.	An ecological community is eligible to be included in the endangered category at a particular time if, at that time: (a) it is not critically endangered; and (b) it is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
Vulnerable (VU)	A native species is eligible to be included in the vulnerable category at a particular time if, at that time: (a) it is not critically endangered or endangered; and (b) it is facing a high risk of extinction in the wild in the medium term future, as determined in accordance with the prescribed criteria.	An ecological community is eligible to be included in the vulnerable category at a particular time if, at that time: (a) it is not critically endangered or endangered; and (b) it is facing a high risk of extinction in the wild in the medium term future, as determined in accordance with the prescribed criteria.
Conservation Dependent	A native species is eligible to be included in the conservation dependent category at a particular time if, at that time: (a) the species is the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered; or (b) the following subparagraphs are satisfied: (i) the species is a species of fish. (ii) the species is the focus of a plan of management that provides for management actions necessary to stop the	N/A.

Category	Threatened Species	Threatened Ecological Communities
	decline of, and support the recovery of, the species so that its chances of long-term survival in nature are maximised. (iii) the plan of management is in force under a law of the Commonwealth or of a State or Territory. (iv) cessation of the plan of management would adversely affect the conservation status of the species.	

Conservation Codes for Western Australian Flora and Fauna (DBCA)

Conservation Codes for Western Australian Flora and Fauna	
Threatened, Extinct and Specially Protected fauna or flora[1] are species[2] which have been adequately searched for and are deemed to be, in the wild, threatened, extinct or in need of special protection, and have been gazetted as such. **The Wildlife Conservation (Specially Protected Fauna) Notice 2018 and the Wildlife Conservation (Rare Flora) Notice 2018 have been transitioned under regulations 170, 171 and 172 of the Biodiversity Conservation Regulations 2018 to be the lists of Threatened, Extinct and Specially Protected species under Part 2 of the *Biodiversity Conservation Act 2016*.** **Categories of Threatened, Extinct and Specially Protected fauna and flora are:**	
T	**Threatened species** Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act). Threatened fauna is that subset of 'Specially Protected Fauna' listed under schedules 1 to 3 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for Threatened Fauna. Threatened Flora is that subset of 'Rare Flora' listed under schedules 1 to 3 of the Wildlife Conservation (Rare Flora) Notice 2018 for Threatened Flora. The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using International Union for Conservation of Nature (IUCN) Red List categories and criteria as detailed below.
CR	**Critically endangered species** Threatened species considered to be "facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines". Listed as critically endangered undersection 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for critically endangered fauna or the Wildlife Conservation (Rare Flora) Notice 2018 for critically endangered flora.
EN	**Endangered species** Threatened species considered to be "facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines". Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for endangered fauna or the Wildlife Conservation (Rare Flora) Notice 2018 for endangered flora.

Conservation Codes for Western Australian Flora and Fauna	
VU	**Vulnerable species** Threatened species considered to be "facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines". Listed as vulnerable undersection 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for vulnerable fauna or the Wildlife Conservation (Rare Flora) Notice 2018 for vulnerable flora.
Extinct species **Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild.**	
EX	**Extinct species** Species where "there is no reasonable doubt that the last member of the species has died", and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act). Published as presumed extinct under schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for extinct fauna or the Wildlife Conservation (Rare Flora) Notice 2018 for extinct flora.
EW	**Extinct in the wild species** Species that "is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form", and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act). Currently there are no threatened fauna or Threatened Flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.
Specially protected species **Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.** **Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.**	
MI	**Migratory species** Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act). Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species. Published as migratory birds protected under an international agreement under schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018.
CD	**Species of special conservation interest (conservation dependent fauna)** Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act). Published as conservation dependent fauna under schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018.

Conservation Codes for Western Australian Flora and Fauna	
OS	**Other specially protected species** Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act). Published as other specially protected fauna under schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018.
P	**Priority species** Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora. Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring. Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.
1	**Priority 1: Poorly-known species** Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.
2	**Priority 2: Poorly-known species** Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.
3	**Priority 3: Poorly-known species** Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.
4	**Priority 4: Rare, Near Threatened and other species in need of monitoring** (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands. (b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent. (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

[1] The definition of flora includes algae, fungi and lichens.

DBCA Definitions and Criteria for TECs and PECs

Criteria	Definition
Threatened Ecological Communities	
Presumed Totally Destroyed (PD)	An ecological community that has been adequately searched for but for which no representative occurrences have been located. The community has been found to be totally destroyed or so extensively modified throughout its range that no occurrence of it is likely to recover its species composition and/or structure in the foreseeable future. An ecological community will be listed as presumed totally destroyed if there are no recent records of the community being extant and either of the following applies (A or B): A. Records within the last 50 years have not been confirmed despite thorough searches of known or likely habitats or B. All occurrences recorded within the last 50 years have since been destroyed.
Critically Endangered (CR)	An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or that was originally of limited distribution and is facing severe modification or destruction throughout its range in the immediate future, or is already severely degraded throughout its range but capable of being substantially restored or rehabilitated. An ecological community will be listed as Critically Endangered when it has been adequately surveyed and is found to be facing an extremely high risk of total destruction in the immediate future. This will be determined on the basis of the best available information, by it meeting any one or more of the following criteria (A, B or C): A. The estimated geographic range, and/or total area occupied, and/or number of discrete occurrences since European settlement have been reduced by at least 90% and either or both of the following apply (i or ii): i. geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is imminent (within approximately 10 years). ii. modification throughout its range is continuing such that in the immediate future (within approximately 10 years) the community is unlikely to be capable of being substantially rehabilitated. B. Current distribution is limited, and one or more of the following apply (i, ii or iii): i. geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the immediate future (within approximately 10 years). ii. there are very few occurrences, each of which is small and/or isolated and extremely vulnerable to known threatening processes. iii. there may be many occurrences but total area is very small and each occurrence is small and/or isolated and extremely vulnerable to known threatening processes. C. The ecological community exists only as highly modified occurrences that may be capable of being rehabilitated if such work begins in the immediate future (within approximately 10 years).
Endangered (EN)	An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or was originally of limited distribution and is in danger of significant modification throughout its range or severe modification or destruction over most of its range in the near future. An ecological community will be listed as Endangered when it has been adequately surveyed and is not Critically Endangered but is facing a very high risk of total destruction in the near future. This will be determined on the basis of the best available information by it meeting any one or more of the following criteria (A, B, or C):

Criteria	Definition
	A. The geographic range, and/or total area occupied, and/or number of discrete occurrences have been reduced by at least 70% since European settlement and either or both of the following apply (i or ii): i. the estimated geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is likely in the short term future (within approximately 20 years). ii. modification throughout its range is continuing such that in the short term future (within approximately 20 years) the community is unlikely to be capable of being substantially restored or rehabilitated. B. Current distribution is limited, and one or more of the following apply (i, ii or iii): i. geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the short term future (within approximately 20 years). ii. there are few occurrences, each of which is small and/or isolated and all or most occurrences are very vulnerable to known threatening processes. iii. there may be many occurrences but total area is small and all or most occurrences are small and/or isolated and very vulnerable to known threatening processes. The ecological community exists only as very modified occurrences that may be capable of being substantially restored or rehabilitated if such work begins in the short-term future (within approximately 20 years).
Vulnerable (VU)	An ecological community that has been adequately surveyed and is found to be declining and/or has declined in distribution and/or condition and whose ultimate security has not yet been assured and/or a community that is still widespread but is believed likely to move into a category of higher threat in the near future if threatening processes continue or begin operating throughout its range. An ecological community will be listed as Vulnerable when it has been adequately surveyed and is not Critically Endangered or Endangered but is facing a high risk of total destruction or significant modification in the medium to long-term future. This will be determined on the basis of the best available information by it meeting any one or more of the following criteria (A, B or C): A. The ecological community exists largely as modified occurrences that are likely to be capable of being substantially restored or rehabilitated. B. The ecological community may already be modified and would be vulnerable to threatening processes, is restricted in area and/or range and/or is only found at a few locations. C. The ecological community may be still widespread but is believed likely to move into a category of higher threat in the medium to long term future because of existing or impending threatening processes.
Priority Ecological Communities	
Priority One	**Poorly known ecological communities** Ecological communities with apparently few, small occurrences, all or most not actively managed for conservation (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) and for which current threats exist. Communities may be included if they are comparatively well-known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.
Priority Two	**Poorly known ecological communities** Communities that are known from few small occurrences, all or most of which are actively managed for conservation (e.g. within national parks, conservation parks, nature reserves,

Criteria	Definition
	state forest, unallocated Crown land, water reserves, etc.) and not under imminent threat of destruction or degradation. Communities may be included if they are comparatively well known from one or more localities, but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under threat from known threatening processes.
Priority Three	**Poorly known ecological communities** i. Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or. ii. Communities known from a few widespread occurrences, which are either large or within significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat, or. iii. Communities made up of large, and/or widespread occurrences, that may or may not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, and inappropriate fire regimes. Communities may be included if they are comparatively well known from several localities, but do not meet adequacy of survey requirements and / or are not well defined, and known threatening processes exist that could affect them.
Priority Four	**Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list**. These communities require regular monitoring. i. Rare. Ecological communities known from few occurrences that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change These communities are usually represented on conservation lands. ii. Near Threatened. Ecological communities that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable. iii. Ecological communities that have been removed from the list of threatened communities during the past five years.
Priority Five	**Conservation Dependent Ecological Communities** Ecological Communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.

Appendix C
Floristic Quadrat and Relevé Data Sheets

Flora Site Sheet			
Project Name	A23.010		
Site	R01		
Location	GDA 2020	**mE 407211.82**	**mN 6447277.081**
Described By	Lovisa Thambert		
Date	22/02/2023		
Type	Relevé		
Landform	Mid slope		
Slope	Gentle		
Rock Type	None		
Soil Type	Sand		
Soil Colour	Grey		



Vegetation	*Eucalyptus rudis* mid open forest over cleared parkland		
Condition	Degraded- >90% weed cover	**Disturbance**	Weeds, clearing, residential development
Fire Age	>10 years		

SPECIES LIST

Taxon	Cover (%)	Naturalised
Acacia dealbata	**<1**	*
Acacia iteaphylla	**<1**	*
Arundo donax	**<1**	*
Avena barbata	**2**	*
Briza maxima	**<1**	*
Cynodon dactylon	**20**	*
Ehrharta calycina	**2**	*
Eragrostis curvula	**<1**	*
Erythrina ×sykesii	**<1**	*
Eucalyptus rudis	**5**	
Ficus carica	**<1**	*
Jacaranda mimosifolia	**<1**	*
Juncus pallidus	**<1**	
Leptospermum laevigatum	**<1**	*
Melaleuca raphiophylla	**<1**	

Flora Site Sheet		
Paddock grasses and weeds	50	
Platanus x hispanica	<1	*
Robinia pseudoacacia	2	*
Washingtonia filifera	<1	*
Zanthoxylum piperitum	5	*

Appendix D
Potential Black Cockatoo Breeding Habitat

Tree #	*Species*	Class BAMfo	DBH (mm)	Hollow notes	Location (GDA2020 / MGA50)		Photo
					Easting	Northing	
1	*Eucalyptus* sp.	5	970		407414.1995	6447202.333	
2	*Eucalyptus* sp.	5	1000		407414.6582	6447212.729	
3	*Eucalyptus* sp.	5	1100		407414.5053	6447222.208	
4	*Eucalyptus* sp.	5	1600		407414.964	6447231.228	
5	*Eucalyptus* sp.	5	1800		407413.588	6447242.542	
6	*Eucalyptus* sp.	5	850		407347.5328	6447248.141	
7	*Eucalyptus* sp.	5	650		407340.014	6447240.011	
8	*Eucalyptus* sp.	5	750		407326.4628	6447245.081	
9	*Eucalyptus rudis*	5	700		407304.2337	6447270.831	
10	*Corymbia citriodora*	5	600		407299.0571	6447283.669	
11	*Corymbia citriodora*	5	600		407301.5419	6447293.815	
12	*Eucalyptus camaldulensis x*	5	700		407302.1631	6447298.578	
13	*Eucalyptus camaldulensis x*	5	900		407300.5066	6447302.926	
14	*Eucalyptus rudis*	5	700		407302.1631	6447245.777	
15	*Eucalyptus rudis*	5	600		407314.5869	6447227.969	
16	*Eucalyptus rudis*	5	900		407291.6029	6447244.949	
17	*Eucalyptus camaldulensis x*	5	600		407285.391	6447235.424	
18	*Eucalyptus rudis*	5	1000		407277.1084	6447244.949	
19	*Eucalyptus rudis*	5	1500		407272.346	6447244.327	

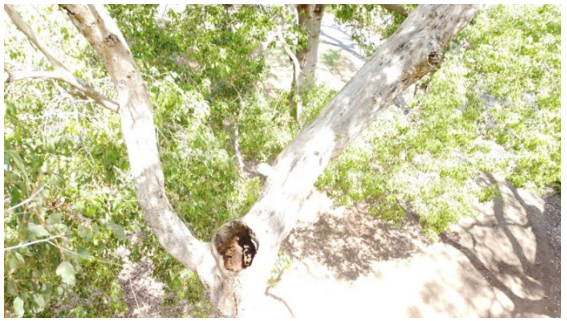
Tree #	*Species*	Class BAMfo	DBH (mm)	Hollow notes	Location (GDA2020 / MGA50)		Photo
					Easting	Northing	
20	*Eucalyptus rudis*	5	1100		407271.1036	6447224.035	
21	*Eucalyptus rudis*	5	550		407268.6189	6447212.026	
22	*Eucalyptus rudis*	5	700		407270.0683	6447207.263	
23	*Eucalyptus rudis*	5	1100		407255.5739	6447201.051	
24	*Eucalyptus rudis*	5	650		407254.9872	6447206.849	
25	*Eucalyptus rudis*	4	950		407245.0482	6447226.52	
26	*Eucalyptus rudis*	5	1100		407243.3917	6447229.833	
27	*Eucalyptus rudis*	5	750		407238.2151	6447234.181	
28	*Eucalyptus rudis*	5	700		407235.5233	6447239.151	
29	*Eucalyptus rudis*	5	1150		407221.3595	6447248.82	
30	*Eucalyptus rudis*	5	680		407225.8281	6447246.405	
31	*Eucalyptus rudis*	5	750		407212.06	6447269.593	
32	*Eucalyptus rudis*	5	800		407211.8184	6447277.081	
33	*Eucalyptus rudis*	5	1100		407255.6871	6447165.301	
34	*Eucalyptus rudis*	5	850		407256.8498	6447169.287	
35	*Eucalyptus rudis*	4	800	Small hollow <10 cm. Not suitable for Black Cockatoos	407276.6155	6447146.864	
36	*Eucalyptus rudis*	5	800		407290.4018	6447127.597	
37	*Eucalyptus rudis*	5	650		407304.0219	6447117.132	
38	*Eucalyptus rudis*	5	550		407287.0798	6447095.041	
39	*Eucalyptus rudis*	5	600	A couple of broken branches that could	407302.0287	6447100.689	

Tree #	*Species*	Class BAMfo	DBH (mm)	Hollow notes	Location (GDA2020 / MGA50)		Photo
					Easting	Northing	
				develop hollows, however no hollows visible			
40	*Eucalyptus rudis*	5	600		407310.832	6447110.821	
41	*Eucalyptus rudis*	5	650		407314.32	6447095.373	
42	*Eucalyptus rudis*	5	770		407323.9538	6447093.712	
43	*Eucalyptus rudis*	5	1080		407355.5126	6447096.37	
44	*Eucalyptus rudis*	5	750		407349.0347	6447108.661	
45	*Eucalyptus rudis*	5	550		407383.2511	6447094.377	
46	*Eucalyptus rudis*	5	800		407406.3389	6447100.19	
47	*Eucalyptus rudis*	5	650		407414.8099	6447097.533	
48	*Eucalyptus rudis*	5	1150		407414.3117	6447106.004	
49	*Eucalyptus camaldulensis x*	4	680	Has several small hollows <10 cm, mid trunk side entrance. Not suitable for Black Cockatoos. No chew marks.	407415.6958	6447126.434	
50	*Eucalyptus rudis*	5	600		407346.7272	6447133.621	
51	*Eucalyptus rudis*	5	620		407339.0138	6447145.667	

Tree #	*Species*	Class BAMfo	DBH (mm)	Hollow notes	Location (GDA2020 / MGA50)		Photo
					Easting	Northing	
52	*Eucalyptus rudis*	5	1050		407339.1588	6447154.798	
53	*Eucalyptus rudis*	5	550		407405.0755	6447010.197	
54	*Eucalyptus rudis*	5	500		407404.1287	6447007.168	
55	*Eucalyptus rudis*	5	670		407402.8032	6447011.239	
56	*Eucalyptus rudis*	5	530		407392.2941	6447009.44	
57	*Eucalyptus rudis*	5	500		407374.4002	6447008.115	
58	*Eucalyptus rudis*	5	570		407377.2405	6447014.363	
59	*Eucalyptus rudis*	5	630		407379.1341	6447016.92	
60	*Eucalyptus rudis*	5	720		407379.4181	6447019.192	
61	*Eucalyptus rudis*	5	580		407376.9565	6447021.085	
62	*Eucalyptus rudis*	5	500		407371.6546	6447017.298	
63	*Eucalyptus rudis*	5	500		407368.3409	6447019.949	
64	*Eucalyptus rudis*	5	510		407343.9144	6447031.026	
65	*Eucalyptus rudis*	5	600		407340.3315	6447008.214	
66	*Eucalyptus camaldulensis x*	5	1140		407288.7287	6447008.915	
67	*Eucalyptus rudis*	5	570		407258.5749	6447038.315	
68	*Eucalyptus rudis*	5	680		407249.9805	6447055.828	
69	*Eucalyptus rudis*	5	610		407250.3048	6447063.126	
70	*Eucalyptus rudis*	5	580		407250.7913	6447071.071	
71	*Eucalyptus rudis*	5	570		407298.9523	6447083.558	
72	*Eucalyptus rudis*	5	500		407382.4091	6447086.299	

Tree #	*Species*	Class BAMfo	DBH (mm)	Hollow notes	Location (GDA2020 / MGA50)		Photo
					Easting	Northing	
73	*Eucalyptus rudis*	5	500		407408.6168	6447086.09	
74	*Eucalyptus rudis*	5	950		407265.2278	6447249.852	
75	*Eucalyptus rudis*	5	700		407272.9615	6447254.094	
76	*Eucalyptus rudis*	5	600		407267.0055	6447271.962	
77	*Eucalyptus rudis*	5	550		407278.7473	6447264.304	
78	*Eucalyptus camaldulensis x*	5	650		407243.692	6447291.021	
79	*Corymbia citriodora*	5	600		407236.2044	6447290	
80	*Eucalyptus camaldulensis x*	5	70		407406.8856	6447196.511	
81	*Eucalyptus camaldulensis x*	5	70		407404.4369	6447195.839	
82	*Eucalyptus camaldulensis x*	5	60		407390.7204	6447194.771	
83	*Eucalyptus rudis*	5	50		407360.3244	6447214.809	
84	*Eucalyptus rudis*	5	50	Multi stem tree.	407349.0532	6447198.809	
85	*Eucalyptus rudis*	5	120	Very large tree. No hollows	407348.5614	6447172.746	
86	*Eucalyptus rudis*	5	60	Multi stem tree	407331.9188	6447195.939	
87	*Eucalyptus rudis*	5	60		407325.3421	6447196.244	
88	*Eucalyptus camaldulensis x*	5	50		407322.5721	6447197.209	
89	*Eucalyptus rudis*	5	60		407321.6688	6447200.634	
90	*Eucalyptus camaldulensis x*	5	50		407316.8256	6447204.626	

Tree #	*Species*	Class BAMfo	DBH (mm)	Hollow notes	Location (GDA2020 / MGA50)		Photo
					Easting	Northing	
91	*Eucalyptus rudis*	5	60		407306.1454	6447200.924	
92	*Eucalyptus rudis*	4	100	Snapped branches and early shallow hollow formation. Not developed to size or depth.	407314.7397	6447185.369	
93	*Eucalyptus rudis*	4	120	Small or shallow only, very large multi stem tree	407312.5663	6447166.269	
94	*Eucalyptus rudis*	5	50		407288.4709	6447195.875	
95	*Eucalyptus rudis*	5	60		407294.3991	6447207.986	
96	*Eucalyptus rudis*	4	90	Small under 10 cm side opening hollow	407276.0442	6447166.21	
97	*Eucalyptus rudis*	5	60		407272.1241	6447161.026	
98	*Eucalyptus rudis*	5	70		407265.4356	6447192.467	
99	*Eucalyptus rudis*	3	70	Vertical opening hollow at fork mid trunk. 20 cm entrance, drone inspection showed has internal chamber, depth not confirmed. No evidence of chewing. Prob outside boundary by a few meters	407247.4514	6447211.485	
100	*Eucalyptus rudis*	5	60		407201.3818	6447277.502	

Tree #	*Species*	Class BAMfo	DBH (mm)	Hollow notes	Location (GDA2020 / MGA50)		Photo
					Easting	Northing	
101	*Eucalyptus rudis*	4	50	Vertical opening hollow in fork mid trunk. 25 cm opening, drone inspection confirmed hollow does not have chamber or suitable depth present. Approx 30 cm deep open cup type. 6 m from ground, scratch marks and wear but no cockatoo chewing.	407243.1903	6447227.437	
102	*Eucalyptus rudis*	5	70		407256.6382	6447183.457	
103	*Eucalyptus rudis*	4	80	Small side entrance hollow mid trunk	407250.9698	6447174.777	
104	*Eucalyptus rudis*	4	60	Small hollows	407261.6687	6447158.893	
105	*Eucalyptus rudis*	5	50		407279.0776	6447137.61	
106	*Eucalyptus rudis*	5	70		407282.5585	6447122.614	
107	*Eucalyptus rudis*	5	80		407278.9946	6447115.868	
108	*Eucalyptus rudis*	5	70		407276.6821	6447112.349	
109	*Eucalyptus rudis*	5	70		407270.7386	6447093.526	
110	*Eucalyptus rudis*	4	80	Several hollows under 10cm. None of cockatoo size.	407264.0454	6447112.675	
111	*Eucalyptus rudis*	4	60	Several small hollows	407262.6437	6447121.469	
112	*Eucalyptus rudis*	5	55		407254.4139	6447126.547	
113	*Eucalyptus rudis*	5	50		407241.9975	6447127.201	
114	*Eucalyptus rudis*	5	55		407237.8739	6447114.101	

Tree #	*Species*	Class BAMfo	DBH (mm)	Hollow notes	Location (GDA2020 / MGA50)		Photo
					Easting	Northing	
115	*Eucalyptus rudis*	5	50		407239.0053	6447106.664	
116	*Eucalyptus rudis*	4	80	Several small hollows	407236.3336	6447094.586	
117	*Eucalyptus rudis*	4	80	Several small hollows	407229.7138	6447100.832	
118	*Eucalyptus rudis*	5	100		407253.0276	6447091.042	
119	*Eucalyptus rudis*	3	80	Several hollows around 10 cm. Drone inspected. Could not assess internal dimensions. Highest hollow entrance 10-15 cm, side entry opening mid trunk. Shows chew marks at entrance likely Galah. Marginal for BC. Lower spout hollow, 15 cm, no chews.	407259.9632	6447112.065	
120	*Eucalyptus rudis*	5	80		407333.8571	6447144.077	
121	*Eucalyptus rudis*	5	70		407322.2221	6447139.173	
122	*Eucalyptus rudis*	4	90	Several small hollows	407310.0499	6447142.395	
123	*Eucalyptus rudis*	5	50		407417.3803	6447068.786	

Tree #	*Species*	Class BAMfo	DBH (mm)	Hollow notes	Location (GDA2020 / MGA50)		Photo
					Easting	Northing	
124	*Eucalyptus rudis*	5	50		407418.2499	6447055.267	
125	*Eucalyptus rudis*	5	50		407411.253	6447052.913	
126	*Eucalyptus camaldulensis x*	5	55		407418.0273	6447043.928	
127	*Eucalyptus rudis*	5	55		407415.8693	6447036.146	
128	*Eucalyptus rudis*	4	90	Several small hollows	407370.1818	6447007.785	
129	*Eucalyptus rudis*	4	70	One 20cm vertical opening hollow mid trunk. Inspected with drone, confirm does not have sufficient depth or a chamber present. No evidence of chewing or nesting	407368.8098	6447008.264	
130	*Eucalyptus rudis*	5	60		407372.7202	6447013.053	
131	*Eucalyptus rudis*	5	60		407347.8598	6447004.303	
132	*Eucalyptus rudis*	5	60		407347.4547	6447004.863	
133	*Eucalyptus rudis*	5	50	Multi stem tree.	407276.7961	6447032.26	
134	*Eucalyptus rudis*	5	55		407272.0569	6447034.856	
135	*Eucalyptus rudis*	5	50		407272.8338	6447032.984	
136	*Eucalyptus rudis*	5	80		407239.3588	6447080.707	
137	*Eucalyptus rudis*	5	50		407258.6469	6447083.489	
138	*Eucalyptus rudis*	5	70		407270.817	6447063.888	

Tree #	*Species*	Class BAMfo	DBH (mm)	Hollow notes	Location (GDA2020 / MGA50)		Photo
					Easting	Northing	
139	*Eucalyptus rudis*	5	80		407371.8239	6447084.019	

Appendix E
Black Cockatoo Foraging Habitat Scoring Tool

Bamford 2018 Foraging Habitat Scoring Tool Method

Application of the Offset Assessment Guide (offsets guide) developed by the federal environment department for assessing Black Cockatoo foraging habitat requires the calculation of a score out of 10. The following system has been developed by Bamford Consulting to provide an objective scoring system that is practical and can be used by trained field zoologists with experience in the environments frequented by the species.

Calculating the total score (out of 10) requires the following steps:

a) Determining a score out of six for the vegetation composition, condition and structure; plus

b) Determining a score out of three for the context of the site; plus

c) Determining a score out of one for species density.

d) Determining the total score out of 10, which may require moderation for context and species density with respect to the vegetation composition.

Calculation of scores and the moderation process are described in detail below.

Site Score	Description of Vegetation Values		
	Carnaby's Cockatoo	**Baudin's Cockatoo**	**Forest Red-tailed Cockatoo**
0	No foraging value. No Proteaceae, eucalypts or other potential sources of food. Examples: Water bodies (e.g. salt lakes, dams, rivers);Bare ground; Developed sites devoid of vegetation (e.g. infrastructure, roads, gravel pits).	No foraging value. No Proteaceae, eucalypts or other potential sources of food. Examples: Water bodies (e.g. salt lakes, dams, rivers);Bare ground; Developed sites devoid of vegetation (e.g. infrastructure, roads, gravel pits).	No foraging value. No Proteaceae, eucalypts or other potential sources of food. Examples: Water bodies (e.g. salt lakes, dams, rivers);Bare ground; Developed sites devoid of vegetation (e.g. infrastructure, roads, gravel pits).
1	Negligible to low foraging value. Examples: Scattered specimens of known food plants but projected foliage cover of these is < 2%. This could include urban areas with scattered foraging trees; Paddocks that are partly vegetated with melons or other known food-source weeds (e.g. Erodium spp.) that represent a short-term and/or seasonal food source; Blue Gum plantations (foraging by Carnaby's Cockatoos has been reported but appears to be unusual).	Negligible to low foraging value. Scattered specimens of known food plants but projected foliage cover of these < 1%. This could include urban areas with scattered foraging trees	Negligible to low foraging value. Scattered specimens of known food plants but projected foliage cover of these < 1%. This could include urban areas with scattered foraging trees
2	Low foraging value. Examples: Shrubland in which species of	Low foraging value. Examples: Woodland with scattered	Low foraging value. Examples: Woodland with scattered

Site Score	Description of Vegetation Values		
	Carnaby's Cockatoo	**Baudin's Cockatoo**	**Forest Red-tailed Cockatoo**
	foraging value, such as shrubby banksias, have < 10% projected foliage cover; Woodland with tree banksias 2-5% projected foliage cover; Open eucalypt woodland/mallee of small-fruited species; Paddocks that are densely vegetated with melons or other known food-source weeds (e.g. Erodium spp.) that represent a short-term and/or seasonal food source.	specimens of known food plants (e.g. Marri and Jarrah) 1-5% projected foliage cover; Urban areas with scattered foraging trees.	specimens of known food plants (e.g. Marri, Jarrah or Sheoak) 1- 5% projected foliage cover; Urban areas with scattered food plants such as Cape Lilac, Eucalyptus caesia and E. erythrocorys.
3	Low to Moderate foraging value. Examples: Shrubland in which species of foraging value, such as shrubby banksias, have 10-20% projected foliage cover; Woodland with tree banksias 5-20% projected foliage cover; Eucalypt Woodland/Mallee of small fruited species; Eucalypt Woodland with Marri < 10% projected foliage cover.	Low to Moderate foraging value. Examples: Eucalypt Woodland with known food plants (especially Marri) 5-20%projected foliage cover; Parkland-cleared Eucalypt Woodland/Forest with known foodplants 10-40% projected foliage cover (poor long-term viability without management);Younger areas of (managed)revegetation with known foodplants 10-40% projected foliage cover (establishing food sources with good long-term viability).	Low to Moderate foraging value. Examples: Eucalypt Woodland with known food plants (especially Marri and Jarrah) 5-20% projected foliage cover; Parkland-cleared Eucalypt Woodland/Forest with known food plants 10-40% projected foliage cover (poor long-term viability without management); Younger areas of (managed) revegetation with known food plants 10-40% projected foliage cover (establishing food sources with good long-term viability).
4	Moderate foraging value. Examples: Woodland/forest with tree banksias 20- 40% projected foliage cover; Eucalypt Woodland/Forest with Marri 20-40% projected foliage cover.	Moderate foraging value. Examples: Marri-Jarrah Woodland/Forest with 20-40% projected foliage cover; Marri-Jarrah Forest with 40-60% projected foliage cover but vegetation condition reduced due to weed invasion and/or some tree deaths. Eucalypt Woodland/Forest with diverse, healthy understorey and known food trees (especially Marri) 10-20% projected foliage cover. Orchards with highly desirable food sources (e.g. apples, pears, some stone fruits).	Moderate foraging value. Examples: Marri-Jarrah Woodland/Forest with 20-40% projected foliage cover; Marri-Jarrah Forest with 40-60% projected foliage cover but vegetation condition reduced due to weed invasion and/or some tree deaths; Sheoak Forest with 40-60% projected foliage cover.
5	Moderate to High foraging value. Examples: Banksia Forest with 40-60% projected foliage cover; Banksia Forest with > 60% projected foliage cover but vegetation condition reduced due to weed invasion and/or	Moderate to High foraging value. Examples: Marri-Jarrah Forest with 40-60% projected foliage cover; Marri-Jarrah Forest with > 60% projected foliage cover but vegetation condition reduced due to weed	Moderate to High foraging value. Examples: Marri-Jarrah Forest with 40-60% projected foliage cover; Marri-Jarrah Forest with > 60% projected foliage cover but vegetation condition reduced due to weed invasion and/or some tree

Site Score	Description of Vegetation Values		
	Carnaby's Cockatoo	**Baudin's Cockatoo**	**Forest Red-tailed Cockatoo**
	some tree deaths; Pine plantations with trees more than 10 years old.	invasion and/or some tree deaths.	deaths. Sheoak Forest with > 60% projected foliage cover.
6	High foraging value. Example: Banksia Forest with > 60% projected foliage cover and vegetation condition good with low weed invasion and/or low tree deaths (indicating it is robust and unlikely to decline in the medium term).	High foraging value. Example: Marri-Jarrah Forest with > 60% projected foliage cover and vegetation condition good with low weed invasion and/or low tree deaths (indicating it is robust and unlikely to decline in the medium term).	High foraging value. Example: Marri-Jarrah Forest with > 60% projected foliage cover and vegetation condition good with low weed invasion and/or low tree deaths (indicating it is robust and unlikely to decline in the medium term).

Vegetation structural class terminology follows Keighery (1994).

Site context.

The maximum score is given in situations where foraging habitat is supporting breeding birds. It can also be given in fragmented landscapes where there is little foraging habitat remaining and thus what is left has a high contextual value. The site context score is species-specific as it depends upon factors such as the vegetation type and extent, and the presence of breeding birds, and the following table, developed by Bamford consulting in conjunction with DEE, provides a guide to the assignation of site context scores (note that 'local area' is defined as within a 12 km radius of the centre point of the study site).

Site context score	Percentage of the existing native vegetation within the "local" area that the study site represents	
	'Local' breeding known/likely	'Local' breeding unlikley
3	>5%	>10%
2	1-5%	5-10%
1	0.1-1%	1-5%
0	<0.1%	<0.1%

Species density

Assignation of the species density score (0 or 1) is based upon the Black Cockatoo species being either abundant or not abundant and is species specific. A score of 1 is used where the species is seen or reported regularly and/or there is abundant foraging evidence. Regularly is when the species is seen at intervals of every few days or weeks for at least several months of the year. A score of 0 is used when the species is recorded or reported very infrequently and there is little or no foraging evidence.

Note that context and species density scores are affected by the vegetation score and this is discussed below.

Moderation of scores for the calculation of a value out of 10

The foraging value score provides a numerical value that reflects the suitability of vegetation as foraging habitat for Black Cockatoos, and this numerical value is designed to provide the information needed by the Federal Department of the Environment and Energy (DoEE) to assess impact significance and offset requirements. The foraging value of the vegetation depends upon the type, density and condition of trees and shrubs in an area, and can be influenced by the context such as the availability of foraging habitat nearby. The BCE scoring system for value of foraging habitat has three components as detailed above. These three components are drawn from the DoEE offsets guide but the scoring approach was developed by Bamford Consulting Ecologists.

a. A score out of six for the vegetation composition, condition and structure

b. A score out of three for the context of the site

c. A score out of one for species density.

Foraging value can thus be assigned a score out of six, based upon site vegetation characteristics, or a score out of 10 if context and species density are considered. Assigning a score out of 10 represents step D and may require moderation rather than simple addition.

The score out of six for vegetation characteristics and value can be compared across a site, while a score out of 10 is the overall foraging value and is used for the purposes of aiding offset calculations. The calculation out of 10 requires the vegetation characteristics (out of 6) to be combined with the scores given for context and species density. It is considered that the context and density scores are not independent of vegetation characteristics; otherwise habitat of absolutely no value for Black Cockatoo foraging (such as concrete or a wetland) could get a foraging score out of 10 as high as 4 if it occurred in an area where the species breed (context score of 3) and are abundant (species density score of 1). Similarly, vegetation of negligible or low characteristics which could not support Black Cockatoos could be assigned a score as high as 6 out of 10. In that case, the score of 6 would be more a reflection of nearby vegetation of high characteristics than of the foraging value of the negligible to low scoring vegetation. The Black Cockatoos would only be present because of vegetation of high characteristics, so applying the context and species density scores to vegetation of low characteristics would not give a true reflection of their foraging value.

For this reason, the context and species density scores need to be moderated for the vegetation characteristic score to prevent vegetation of little or no foraging value receiving an excessive score out of 10. A simple approach is assigning a context and species density score of zero to with a characteristic score of low (2), negligible (1) or none (0), on the basis that birds will not use such areas unless they are adjacent to at least low-moderate quality foraging habitat (>3). The approach to calculating a score out of 10 can be summarised as follows.

Vegetation composition, condition and structure score	Context score	Species density score
3-6 (low/moderate to high value)	Assessed as per B above	Assessed as per C above

Vegetation composition, condition and structure score	Context score	Species density score
0-2 (no to low value)	0	0

APPENDIX H

Statement relating to the location of Drainage Basins (EDS Environmental)

Memorandum

To: Kyle Shaw, Harley Dykstra

From: Euan Sutherland, Director, EDS Environmental

Date: May 2023

Subject: **Clifton Street North Precinct – Drainage Basin Location - Environmental Justification**

1. Background

Harley Dykstra has prepared a Local Structure Plan (LSP) for Lots 1, 11 and 12 Clifton St and Lots 11 and 12 Brookside Avenue (the Project area), Kelmscott, within the City of Armadale (CoA). The LSP proposes to subdivide the subject land, totalling about 7ha, into a range of R40, R60 and R80 residential lots. The LSP also proposes approximately 0.7ha of Public Open Space, comprising about 12% of the total developable area. A further 1.16ha (approximately), comprising the river foreshore and most of the floodway, will be ceded as Regional Open Space.

The Project area is shown in **Figure 1**.

Following submission of the LSP for assessment, it was determined by the CoA that there was insufficient information provided to facilitate the assessment of the LSP. The CoA, on 15 November 2022, provided a request for further information (RFI) to enable both the assessment and advertising of the LSP to commence. Item (j) of the RFI states:

"*Provide justification for locating drainage basins in CCW/Bushforever based on an assessment of environmental values identified in the section on biodiversity and natural assets (flora & fauna) discussed above*."

2. Purpose

The purpose of this Memorandum is to provide the requested justification, as stipulated in item (j), based on the findings of the biological survey undertaken by Western Environmental (2023), and to support the assessment of the LSP.

3. Site Environmental Values

3.1 Flora and Vegetation

Regional vegetation

The Project area occurs within the Swan Coastal Plain IBRA Region and Perth IBRA subregion which is dominated by Banksia or Tuart on sandy soils, *Casuarina obesa* on outwash plains and paperbark (Melaleuca) in swampy areas (Mitchell et al. 2002).

Vegetation occurring within the region was initially mapped at a broad scale (1: 1 000 000) by Beard during the 1970s. This dataset formed the basis of several regional mapping systems, including the biogeographical region dataset (IBRA) for Western Australia (GoWA, 2019), physiographic regions defined by Beard (1981), and System 6 Vegetation Complex mapping undertaken by Heddle et al. (1980).

The Project area comprises two Beard (1981) vegetation associations (VA), VA 3 and VA 968. The current remaining extent of these two regional VAs is 11.5% and 6.61% respectively within the Swan Coastal Plain IBRA bioregion (GoWA, 2019).

Project area Vegetation description

Vegetation extent and condition within the Project area was assessed by Western Environmental (2023). The assessment concluded that the vegetation within the Project area was not representative of intact remnant vegetation and contained a low abundance of native vegetation species. The entire Project area was assessed to be in a 'Completely Degraded' condition, as per the condition scale prescribed in EPA 2016).

One vegetation type was described within the Project area:

- VT01 - *Eucalyptus rudis* mid open forest over cleared gardens and weedy paddock grasses.

VT01 accounts for 0.85 ha (14.76%) of the Project area, with the majority of its mapped extent coinciding with the proposed POS area. The remaining extent of the Project area was assessed as 'Gardens and Paddock' with an upper stratum comprised of planted *Corymbia citriodora*, *Eucalyptus camaldulensis* x, E*ucalyptus maculate* and *Eucalyptus rudis* mid isolated trees over planted maintained lawn grasses, garden plants and assorted fruit trees.

Vegetation within the Project area and its condition is presented in **Figure 2** and **Figure 3.**

Conservation significant vegetation

No vegetation types were identified as comprising a State or Commonwealth listed Threatened Ecological Community (TEC) or DBCA listed Priority Ecological Community (PEC).

Flora

Western Environmental (2023) recorded 23 vascular flora species were recorded from within the Project area from one relevé and opportunistic observations. Nineteen of these (82.6%) were non-native.

No State or Commonwealth listed Threatened and/or Priority Flora taxa were recorded in the Project area or were assessed as having a high-medium post survey likelihood of occurrence.

3.2 Terrestrial Fauna

General Fauna Assemblage

Western Environmental (2023) concluded that due to the completely degraded nature of the vegetation that it would not provide suitable habitat for ground dwelling fauna habitat. During the survey, opportunistic records of brush-tailed possum scats were identified within the fringing vegetation of the Canning River.

Black Cockatoos

The Project area falls within the modelled distribution for all three Black Cockatoo species (DCCEEW, 2022). Numerous records of the three species were present in DBCA database search results within 1 km of the Project area.

Western Environmental (2023) were commissioned to undertake a targeted Black Cockatoo habitat assessment of the Project area. A summary of this assessment is provided below:

- 139 potential breeding trees (DBH > 500 mm) were recorded, of these 121 did no have observed hollows suitable for breeding. Two trees were observed to contain suitable diameter, with one tree located outside of the Project area. The second tree showed no external evidence, such as chew marks around the entrance, that would indicate use by black cockatoos.
- Within the Project area suitable foraging habitat comprises mostly of flooded gum (*Eucalyptus rudis*), with isolated occurrences of marri also providing a foraging resource. Evidence of foraging by Carnaby's cockatoo, in the form of chewed marri nuts, was observed during the field survey. The field assessment determined that the overall foraging quality within the Project area was 'Low'.
- Roosting habitat is known to occur within 3 km of the Project area. No evidence of night roosting was recorded within the Project area.

Figure 4 presents recorded black cockatoo habitat in the context of the proposed LSP.

4. Justification for Basin Siting

The siting of the basins have been influence by best practise design for the management of stormwater in the urban environment. The LWMS (Bayley Environmental, 2022) establishes the justification for the siting with regards to the management of water and run-off that will be further described in the LWMP.

As evident from the biological survey, due to historic clearing and disturbance, the Project area is absent any significant environmental values. As shown in **Figure 4** the siting of the basins will not impact any potential breeding habitat for black cockatoos and as there is now middle story shrubs (such as Banksia) within the Project area, the exclusion of trees will mean that no loss of any potential foraging habitat will occur.

It should be further noted that the basins and the designated POS will be subject to revegetation that will be further defined at the subdivision stage. This revegetation will introduce species and planting arrangements that will result in a net-positive outcome for the local ecosystem.

5. Conclusions

Based on the findings of the biological survey and the information provided in the LWMS, it can be concluded that:

- The location of the basins will not result in any adverse impact to the local ecology of the Canning River and associated fringing vegetation
- There will be no loss or impact to conservation significant flora species, or significant vegetation communities.
- Vegetation coinciding with the basin locations has been assessed as ‘Completely Degraded’ due to historic land clearing, and not representative of intact remnant native vegetation extents.
- Basins have been located to avoid large trees that may provide habitat for black cockatoos
- Representatives from both DBCA and WAPC were advised of the locations during site visits. No objections or concerns have been raised, and
- The basins and surrounding Public Open Space area will be subject to revegetation that will result in an overall improvement to ecosystem function than what occurs currently within the Project area and its immediate surrounds.

Euan Sutherland
Director, EDS Environmental

Figures



Legend

Project Area

Clifton Street North Precinct
Lot 1, Lot 11 and Lot 12 Clifton Street &
Lot 1 and Lot 12 Brookside Avenue, Kelmscott

Figure 1: Project Area

0 35 70 140 m

Scale: 1:2,500

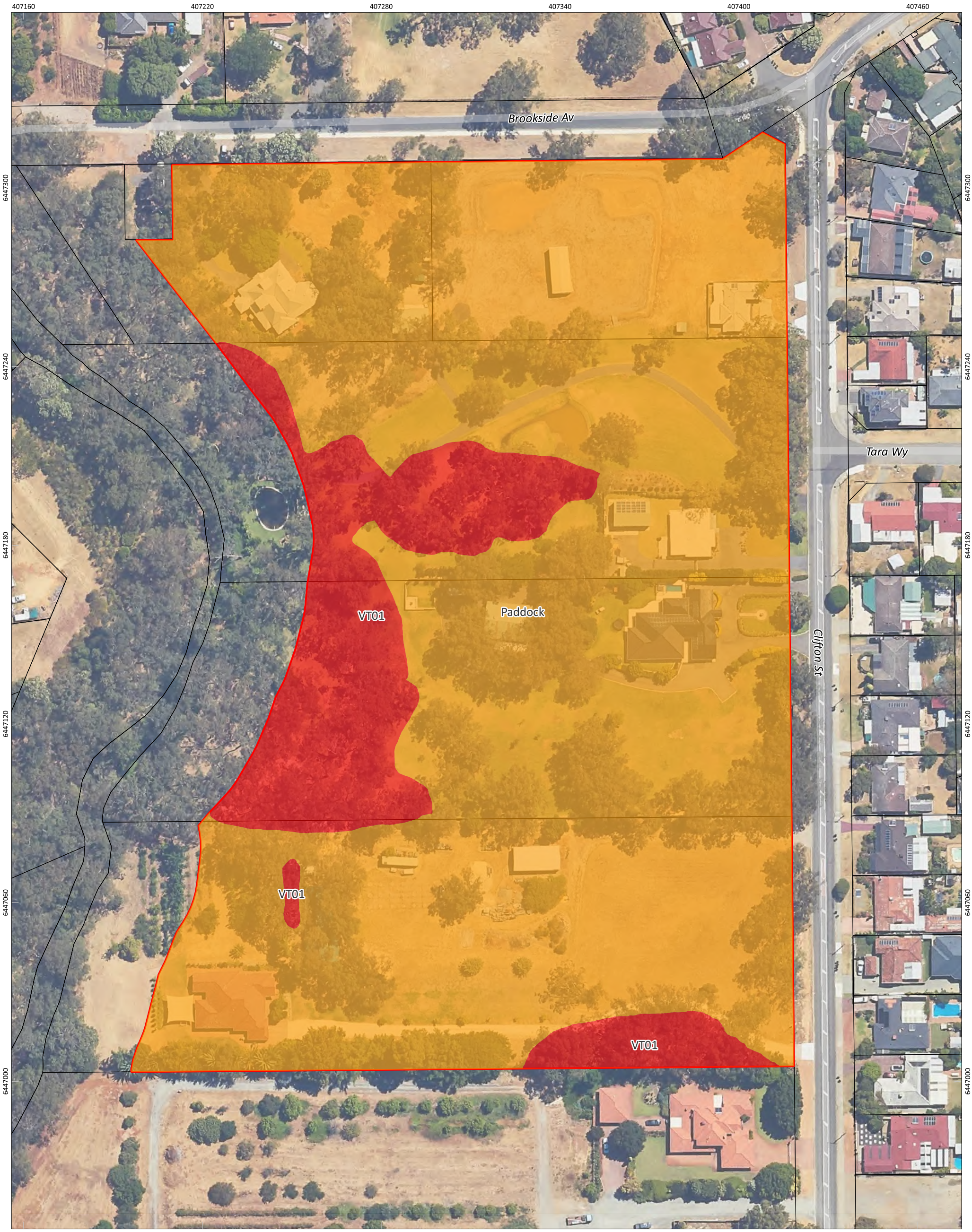


Figure 2: Vegetation Types

N

0 10 20 30 40 m

PROJECT/REPORT NAME	Flora, Vegetation and Black CockatooAssessment Lot 1, 11 & 12 Clifton St and 11 & 12 Brookside Ave, Kelmscott
SCALE	1:1,200
SHEET SIZE	A3 COLOUR
CLIENT	EDS Environmental
COORDINATE REFERENCE SYSTEM	GDA2020 / MGA zone 50
PROJECT NUMBER	A23.010
VERSION	0
DATA SOURCE	LANDGATE AERIAL IMAGERY 2022
DRAWN BY / REVIEWED BY	AC / LT
DATE	17/4/2023

Legend

- Survey Area
- Cadastre (No Attributes) (LGATE-001)

Vegetation Type

- VT01
- Paddock

No	Description	Drawn	Approved	Date
A	Original issue	AC	LT	17/4/2023

NOTES:

Cadastral boundary (LGATE-002)

WESTERN ENVIRONMENTAL

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08 6244 2310 | enquiries@westenv.com.au
Level 3/25 Prowse St, West Perth WA 6005
westenv.com.au

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Designed and Automated by AC

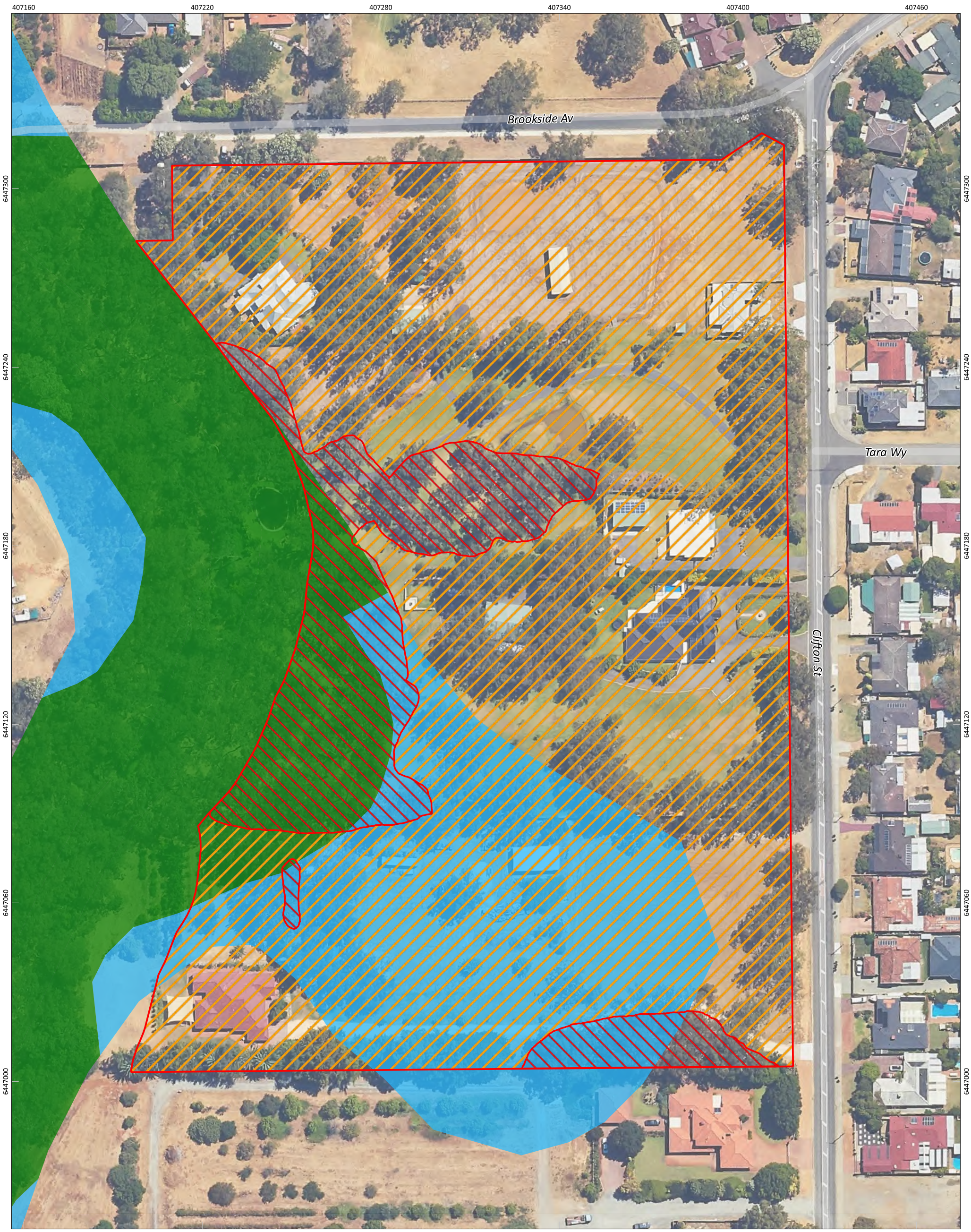


Figure : Conservation Class Wetland within the Survey Area

0 10 20 30 40 m

N

PROJECT/REPORT NAME	Flora, Vegetation and Black Cockatoo Assessment Lot 1, 11 & 12 Clifton St and 11 & 12 Brookside Ave, Kelmscott
SCALE	1:1,200
SHEET SIZE	A3 COLOUR
CLIENT	EDS Environmental
COORDINATE REFERENCE SYSTEM	GDA2020 / MGA zone 50
PROJECT NUMBER	A23.010
VERSION	0
DATA SOURCE	LANDGATE AERIAL IMAGERY 2022
DRAWN BY / REVIEWED BY	AC / LT
DATE	17/4/2023

Legend

- Survey Area

Vegetation Type

- Paddock
- VT01

Geomorphic Wetlands, Swan Coastal Plain (DBCA-019)

- Conservation
- Multiple Use

No	Description	Drawn	Approved	Date
A	Original issue	AC	LT	17/4/2023

NOTES:

Cadastral boundary (LGATE-002)

WESTERN ENVIRONMENTAL

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Legend

- Project_area
- Indicative drainage locations

Potential BC Habitat Trees

Tree Class

- 3
- 4
- 5

OPEN SPACE

Bush Forever Areas - 2000 (DPLH-019)

0 15 30 60 m

Scale: 1:1,200

Clifton North Precinct

Figure 4: Black Cockatoo potential habitat within Project

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Beard JS 1981, Swan, 1:1000000 vegetation series: explanatory notes to sheet 7: the vegetation of the Swan area, University of Western Australia Press, Nedlands, Western Australia.

Government of Western Australia (2019). Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2019. WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca.

Mitchell, D., Williams, K. and Desmond, A. (2002). Swan Coastal Plain 2 (SWA2 – Swan Coastal Plain subregion). In: (CALM (Ed) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002, pp. 606 – 623. Department of Conservation and Land Management, Perth, Western Australia.

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APPENDIX I

Landscaping Plan
(Harley Dykstra)



LEGEND

- Subject Land
- Residential (R40-R80)
- Wetland Revegetation
- Managed Landscape
- Verge
- Bush Forever
- Draiange Basin
- Proposed Shared Path
- Existing Habitat Tree
- Existing Vegetation to be Retained
- Proposed Small Tree
- Proposed Large Tree

SPECIES KEY

Managed Landscape Planting (0.5m) Proposed Trees

Anigozanthus Flavidus 'yellow'	*Allocasurina Fraseriana*
Astartea Fascicularis	*Wa Sheoak*
Banksia Dallanneyi	*Banksia Attenuata*
Conostylis Aculeata	*Candle Stick Banksia*
Grevillea Bipinnatifida	*Banksia Menziesii*
Hypocalymma Angustifolium	*Firewood Banksia*
Hypocalymma Robustum	*Casuarina Obesa*
Ficinia Nodosa	*Swamp Sheoak*
Kennedia Postrata	*Corymbia Calophylla*
Lechenaultia Floribunda	*Marri*
Leptocarpus Tenax	*Eucalpytus Rudis*
Melaleuca Incana 'nana'	*Flooded Gum*
Mesomelaena Stygia	*Melaleuca Preissiana*
Patersonia Occidentalis	*Swamp Paperbark*
Scholtzia Involcutta	*Xanthorrhoea Preissii*
	Grass Tree

Wetland Revegetation (0.5m-2.5m)

Banksia Dallanneyi	*Leptospermum Obovatum*
Banksia Sessilis	*Leptospermum Scoparium*
Banksia Nivea	*Leptospermum Spinescens*
Beaufortia Elegans	*Leptocarpus Tenax*
Carex Appressa	*Olearia Axillaris*
Dianella Revoluta	*Patersonia Occidentalis*
Eremophila Glabra	*Rhagodia Baccata*
Ficinia Nodosa	*Scaevola Crassifolia*
Kingia Australis	*Sholtzia Laxiflora*
Kennedia Prostrata	*Verticordia Nitens*
Melaleuca Huegelii	*Verticordia Plumosa*
Melaleuca Radula	*Xanthorrhoea Preissii*
Melaleuca Teretifolia	
Myoporum Parvifolium	

LANDSCAPING PLAN

Clifton Street North Precinct, KELMSCOTT

Plan No. | 20233-15
Date | 09/05/23
Drawn | NP
Checked | KS
Revision | A

Scale | 1:1500@A3

0 20m 40m

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NOTE: This plan has been prepared for planning purposes. Areas, Contours and Dimensions shown are subject to survey

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APPENDIX J

Erosion and Sediment Worksheet

POLICY ATTACHMENT 1

EROSION AND SEDIMENT CONTROL MANUAL - WORK SHEET

Site Location (Lot No.) Clifton Street North Precinct, Corner of Clifton Street and Brookside Avenue

Proposed area of disturbance at the site 6.0449ha

Catchment area upslope of the site Canning River Catchment

Upslope catchment characteristics (ie % cleared) ~20% cleared with Banyowla Regional Park the main upslope feature

Average gradient of the site _____
(Note slope gradients may be changed by works at the site).
Other features such as the natural drainage lines etc. Canning River

EROSION RISK ASSESSMENT

Table 1 Soil Erodibility Potential

Soil Erodibility Potential	Soil Description	Group Symbol	Emerson Class No.
Low	Sandy gravels	GP	>2
Moderate	Non dispersive and slightly dispersive clays and clayey sands, clayey gravels, silty gravels, sands	CH, CL, CI, SC, GC, GM, SP	>2
High	Silts, silty sands, fine sands, dispersive clays and clayey sands, water repellent sands	ML, SM, CH, CL, CI, SC	1, 2

Table 2 Erosion Risk Assessment by Soil Loss Class

Soil Erodibility Potential (as defined in Table 1)	Site Slope 5% - 10%	Site Slope 10% - 20%	Site Slope > 20%
Low	1	1	1
Moderate	1	1	2
High	1	2	2

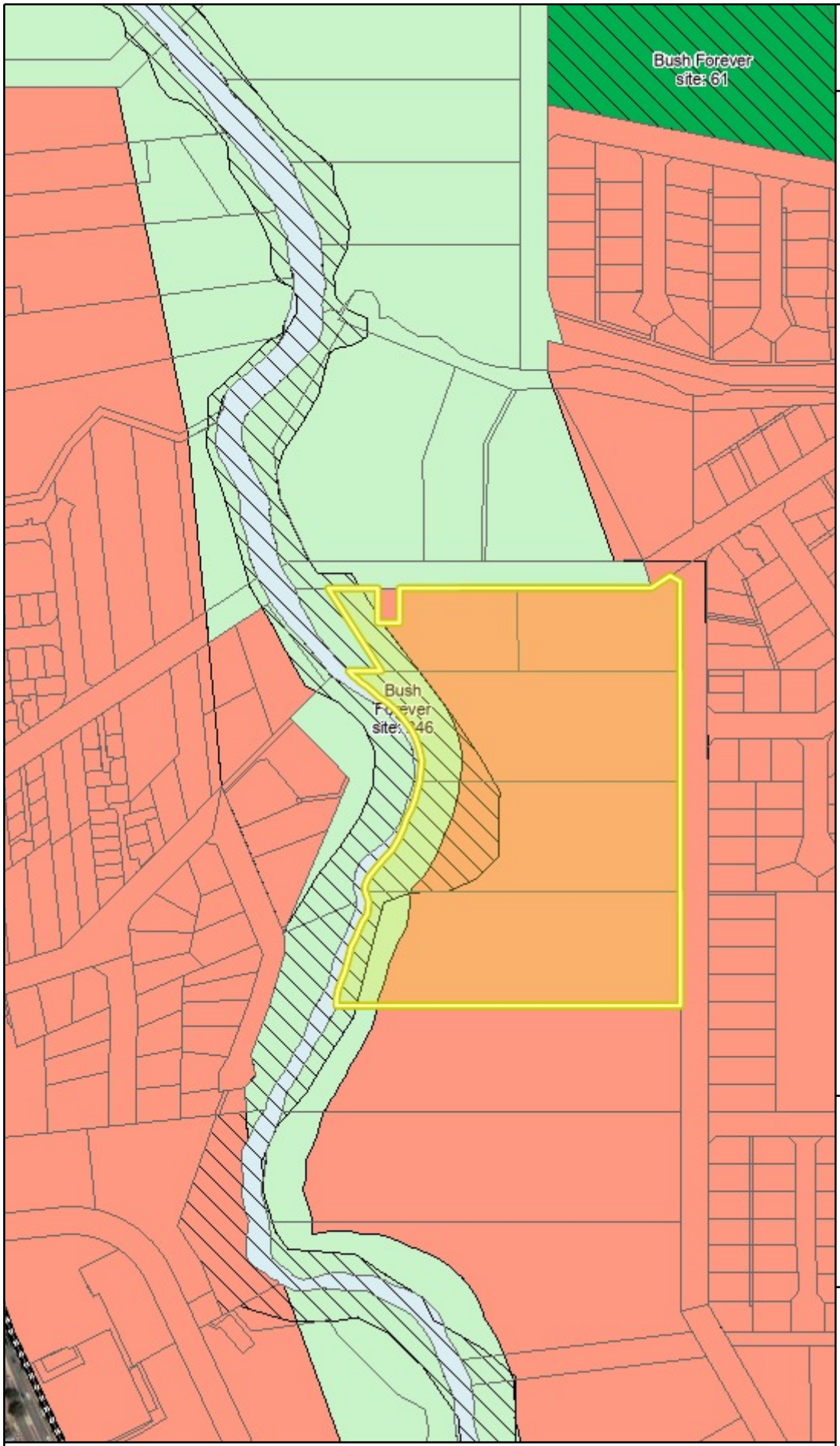
Table 3 Development Approaches

Development Approaches	Soil Loss Class 1 Action	Soil Loss Class 2 Action
Planning of control measures as part of an ESCP	Recommended	Required
Implement control measures described in Section 3 of the Manual where appropriate	Required	Required
Staged Construction and Progressive rehabilitation	Consider	Required
Divert runoff around the site	Consider	Required

Site Soil Loss Class (based on Tables 1 and 2) 1

Proposed Control Measures Revegetation of POS, staged development ESCP to be developed at subdivision stage.

D106/6/03 **Development Services Committee 9 June 2003 - Adopted by Council 16 June 2003**
D160/9/04 **Development Services Committee 13 Sept 2004 - Adopted by Council 20 Sept 2004**
D25/4/13 **Development Services Committee 15 April 2013 - Adopted by Council 22 April 2013**



Department of **Planning, Lands and Heritage**

GOVERNMENT OF WESTERN AUSTRALIA

Legend

- Cadastre (View 1)
- RS Application Redevelopment Act Area
- RS Application Redevelopment Scheme Area
- Region Scheme Boundary
- Region Scheme Bush Forever Areas
- Region Scheme Zones and Reserves
  - Regional open space
  - Rural
  - Urban
  - Waterways

N

0 0.10 0.20

Kilometres

1: 5,000

at A4

Notes:

* The data that appears on the map may be out of date, not intended to be used at the scale displayed, or subject to license agreements. The map should only be used in matters related to Department of Planning, Lands and Heritage business.

* This map is not intended to be used for measurement purposes.

Map was produced using DPLH's InQuiry.

A5 - MRS Zoning

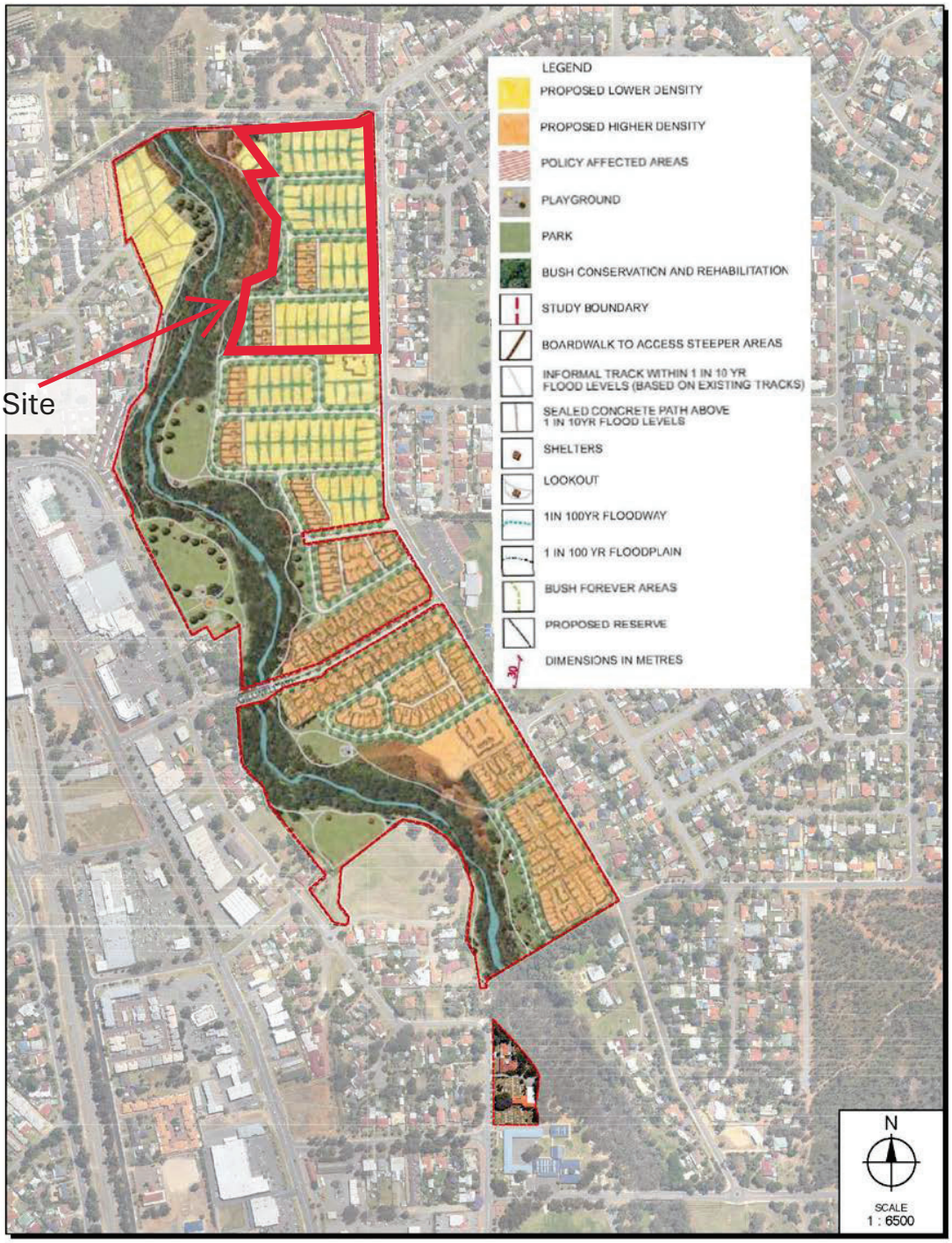
DPLH BUSINESS USE ONLY

Internal Spatial Viewer
Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere
Graticules (if visible): GDA 1994 Latitude/Longitude

Aerial photography © Nearmap and/or © Western Australian Land Information Authority.

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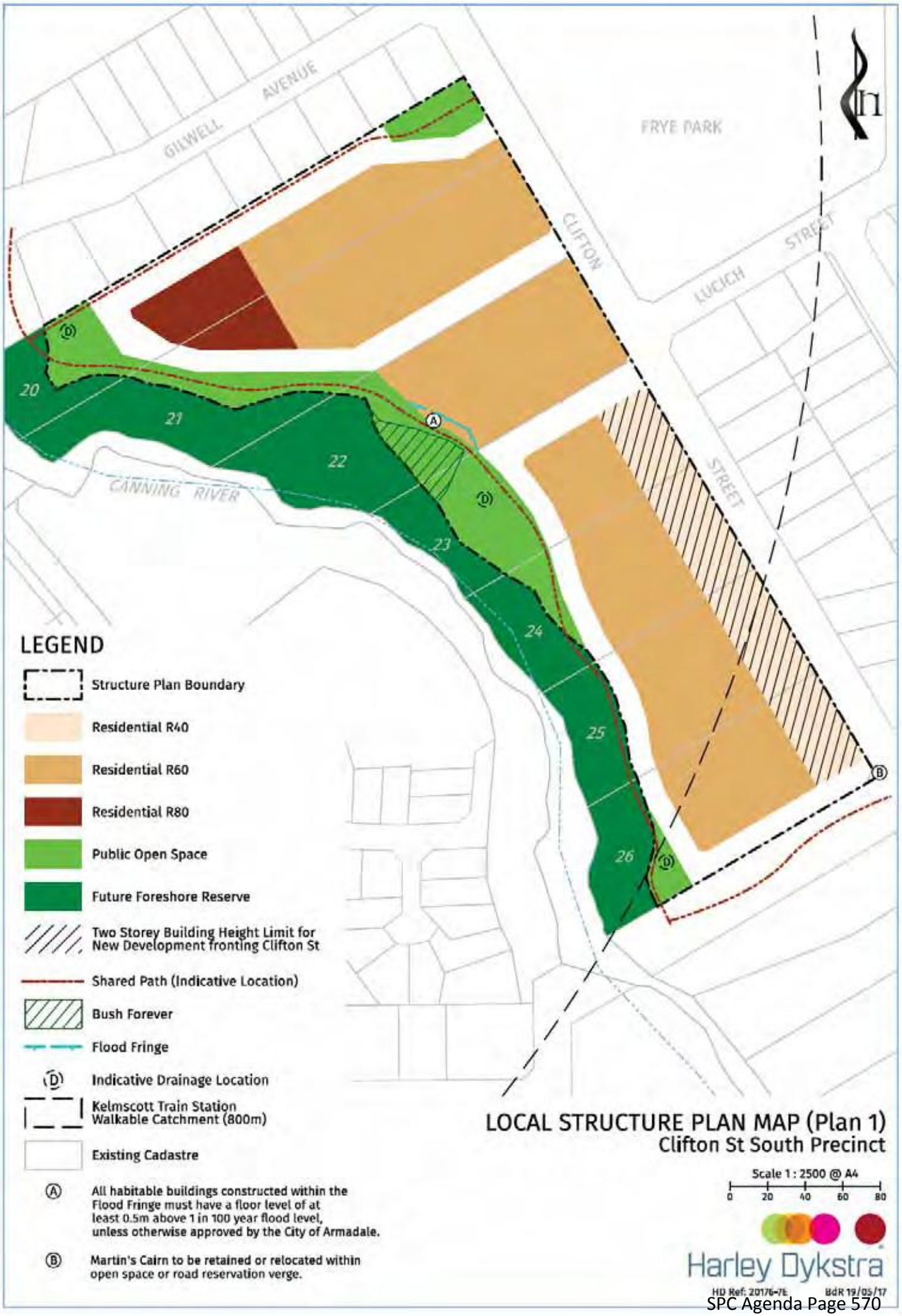
Date produced: 07-Aug-2026



CONCEPT STRUCTURE PLAN
CANNING RIVER PRECINCT STUDY

DATE 30 January 2013 - REVISION 1301

CITY OF Armadale


GILWELL AVENUE
FRYE PARK
CLIFTON STREET
LUCICH STREET
CANNING RIVER
20
21
22
23
24
25
26
A
B
D
LEGEND
Structure Plan Boundary
Residential R40
Residential R60
Residential R80
Public Open Space
Future Foreshore Reserve
Two Storey Building Height Limit for New Development fronting Clifton St
Shared Path (Indicative Location)
Bush Forever
Flood Fringe
Indicative Drainage Location
Kelmscott Train Station Walkable Catchment (800m)
Existing Cadastre
A All habitable buildings constructed within the Flood Fringe must have a floor level of at least 0.5m above 1 in 100 year flood level, unless otherwise approved by the City of Armadale.
B Martin's Cairn to be retained or relocated within open space or road reservation verge.
LOCAL STRUCTURE PLAN MAP (Plan 1)
Clifton St South Precinct
Scale 1 : 2500 @ A4
0 20 40 60 80
Harley Dykstra
HD Ref: 20176-7L
BdR 19/05/17

Public Submissions				
No.	Submission Topic	Summary of Submission	City Response	DPLH Response
1	Impact on the natural environment	▪ The LSP will result in a loss of flora, fauna (including habitat) and will result in clearing and loss of biodiversity.	• Support in part. LSP supported by Environmental Assessment Report which indicated environmental values were limited and/or degraded. Fauna relocation can be addressed at the subdivision stage.	• Not supported. The site has been identified as urban development with the Canning River and significant vegetation to be protected through a foreshore reserve and additional POS.
		▪ Concern regarding the adequacy of the Environmental Assessment Report and timing of field surveys.	• Support in part. DWER and DBCA did not raise concerns regarding the timing of field survey.	• Not supported. DWER and DBCA did not raise concern regarding the EAR.
		▪ Concerns regarding urban stormwater pollutants impacting the Canning River ecosystem.	• Support, modifications to the LWMS are required to ensure urban stormwater be managed in accordance with best practice.	• Support in part, modifications to the LWMS have been recommended (Modification 40)
		▪ Development will result in loss of mature trees	• Support in part, the LSP identifies trees for retention within the foreshore and POS areas. Consideration to be given to retention of trees outside these areas at the subdivision stage.	• Noted, the LSP proposes the retention of Bush forever site 246 and foreshore vegetation within the foreshore reserve and POS. Consideration for retention of additional trees outside this area will be addressed at the subdivision stage.
		▪ Concerns regarding proximity of development to the Canning River and lack of a 50m buffer.	• Support in part, modification recommended to require a 30m wide buffer to the Bush forever site and CCW.	• Not supported. The extent of the Foreshore reserve was determined under MRS Amendment 1202/41.
		▪ Development will result in lowering or rising of the water table due to urban development.	• Not supported, water level rises post urban development are generally less than one metre with a negligible impact on development. LWMS recommends monitoring groundwater levels for 2 years post development.	• Not supported in line with City's comments.
		▪ Concern regarding construction impacts on the Canning River.	• Support, concerns capable of being resolved during the subdivision process.	• Construction impacts can be managed through the subdivision process.

	Housing Density and Built Form Outcomes	▪ The structure plan area is located outside of the walkable catchment of the Kelmscott Train Station and therefore the densities proposed are too high.	• Support in part, Structure Plan and map to be modified to remove references to R60 and R80 with a maximum density of R40 applied across the site.	• Agreed. Structure Plan to be modified to reflect a maximum density of R40.
		▪ The densities proposed are not compatible with the surrounding area.	• Support in part, as per above recommendation.	• Support in part as per above. The amenity provided by the Canning River supports higher densities.
		▪ Proposed building height, bulk and scale permitted by higher density are inconsistent with surround neighbourhood and will impact on views.	• Support in part, built form can be addressed at the development application/approval process and through LDP's.	• Support in part as per City's recommendation.
		▪ Proposed densities exceed the minimum average residential target of 15 dwellings per gross urban zoned hectare for the locality.	• Not supported, targets represent a minimum target only and it is expected that densities higher than R15 would be applied in close proximity to existing amenities (ie public transport and Kelmscott city centre).	• Not supported as per City's recommendation.
		▪ Insufficient depth is provided within the street blocks to service R60 and R80 development.	• Not supported, the issue is capable of being addressed as a structure plan amendment or at the subdivision stage.	• Supported in part. Road connections to Clifton Street to be reduced from three to two.
		▪ Housing density not suitable for families.	• Not supported, the City supports housing and household diversity especially locations with nearby services and amenities.	• Not supported as per City's recommendation.
		▪ Concern regarding potential social housing and development targeted at lower socio-economic status which will result in an increase in anti-social behaviour and crime.	• Not supported, there is no information to suggest the structure plan will result in any of the potential concerns raised.	• Not supported as per City's recommendation.
	Social and Community Infrastructure	▪ Insufficient capacity within local schools to cater for increased population.	• Not supported, DoE advised the development yield will not significantly impact on the accommodation capacity of existing schools.	• Not supported as per City's recommendation.

		▪ Concern regarding the adequacy of hospitals and other medical establishments and a decline in level of health service due to additional residents. ▪ Concern regarding the capacity of service (utility) infrastructure to service the additional development. ▪ Concern regarding capacity of local commercial services to cater for additional residents. ▪ Concerns regarding the adequacy of public transport to service the development.	• Not supported. • Not supported, service provision is addressed in the Servicing Report. • Not supported, additional population would support the existing business and their growth. • Not supported, Development of the structure plan will not have detrimental impact on public transport services and is likely to increase public transport use.	• Not supported as per City's recommendation. • Not supported as per City's recommendation. • Not supported as per City's recommendation. • Not supported as per City's recommendation. .
	Bushfire Management	▪ The structure plan is within a bushfire prone area and lacks adequate escape routes. References made to the 2011 Kelmscott bushfires where Connel Avenue (which connects to Tonkin Hwy) was closed to traffic which delayed evacuation of the areas. ▪ The structure plan will increase population within a bushfire prone area.	• Not supported. The BMP addressed bushfire evacuation requirements. • Not supported, a modified BMP will address bushfire hazard/risk in the structure plan area.	• Not supported. The BMP satisfactorily address vehicular access requirements of SPP 3.7 and the associated guidelines. Some modifications to the BMP are required (see modification39) to address comments from the City and DFES to ensure all habitable development is located in an area that has a low to moderate bushfire hazard (i.e. BAL-29 or below). • Not supported as above.
	Loss of Character and Visual Amenity	▪ Raised concerns regarding impact on rural style community, bushland and rural landscape as well as views to the river.	• Support in part, the proposed POS and foreshore reserve will preserve some of the visual amenity of the locality and streetscape design can be addressed through the subdivision process.	Not supported as: • The area is appropriately zoned for urban development; • The change from rural to urban character has been a feature of

				strategic and statutory planning by the City for many years; • A portion of river foreshore will be retained and managed for the public to enjoy.
	Traffic and Transport Infrastructure	▪ Concerns regarding the capacity and safety of Clifton Street.	• Support. TIA should be modified to consider local area traffic management to address speeding on Clifton Street and a shared path to be located on the west side of Clifton Street.	• Supported as per City's recommendation (see Modifications 3, 27-32 and 41).
		▪ Concerns regarding inadequate site light distance at the Brookside Ave and Clifton St intersection.	• Support, TIA should be modified to analyse and provide recommendations for the Brookside Ave/Clifton Street intersection.	• Supported as per City's recommendation (see Modifications 3, 27-32 and 41).
		▪ Concerns the TIA does not account for traffic from Clifton Hills Primary School and future traffic from further residential development in the Canning River Urban Development Precinct.	• Support. The TIA should be modified to address the requirements of WAPC's *Transport Impact Assessment Guidelines* including traffic from Clifton Hills Primary School and traffic from future residential development in the rest of the Precinct.	• Supported as per City's recommendation (see Modifications 3, 27-32 and 41).
		▪ Concerns regarding increased traffic congestion e.g. Clifton Street and Gilwell Avene, the adequacy of road widths, the performance of intersections with increased traffic and the need for a traffic bridge at Brookside Ave /Turner Place.	• Support. The TIA should be modified to address traffic generation from existing and future development within 800 metres of the Structure Plan area and other recommended modifications of the City, Main Roads WA and Department of Transport.	• Supported as per City's recommendation (see Modifications 3, 27-32 and 41).
		▪ Concerns regarding lack of parking (including illegal parking) in local streets (some associated with Clifton Hills Primary School) and in the Structure Plan area due to higher density housing and the Structure Plan's proposal to accommodate future housing	• Supported. Future housing developments to meet parking requirements as specified under the Residential Design Codes.	

		developments' visitor parking in public roads. ▪ A landowner within the structure plan area recommended removal of the local road network except for the road adjacent to the public open space as the provision of roads is dependent on landowner development timeframes.	• Support in part. Only two entry roads from Clifton Street (one at Tara Way as a roundabout) should be detailed on the Structure Pan Map.	• Supported. Parking to be provided in accordance with the requirements of the Residential Design Codes. • Support in part, Modification 3 requires amendment of the movement network to show a maximum of two connection points to Clifton Street.
	Heritage	▪ Concern that impact to Aboriginal Heritage Site (3538) – Canning River, including lack of an assessment report (including survey for artifacts) and consultation with relevant interest groups (i.e. Aboriginal Land and Sea Council), and impact to 'European' Heritage Site (18987) – Swan Canning Riverpark has not been addressed within the LSP	• Support. The Structure Plan report should be modified to map and comment on Aboriginal Heritage Site (3538) – and Heritage Site (18987) – Swan Canning Riverpark and implications if any to the Structure Plan	• Support. Refer to modification 36.
	Public Open Space	▪ POS and drainage infrastructure has not been distributed equally over the structure plan landholdings with one landholding contributing no POS/drainage. ▪ POS recreation function is limited due to the protection of the Bush forever site and CCW and location of drainage basins.	• Support in part. For the purposes of the Structure Plan, land for POS provision should primarily come from the four lots adjoining the river in order to address State Policy requirements and expectations of a river foreshore. The City would recommend Lot 1 (No.11) Clifton Street provide its 10% POS contribution separately at the subdivision stage and this could form a land component if trees could be effectively retained, or as an equivalent cash-in-lieu contribution to go towards providing improvements to the proposed POS adjacent to the foreshore.	• Support in part. Modification 2 and 33 have been recommended to the structure plan to ensure the provision of a suitable useable pocket park adjacent to the foreshore reserve, equitable distribution of unconstrained POS across the four lots fronting the Canning River and allowance for a cash-lieu contribution towards the development of the foreshore reserve to be provided by Lot 11 Brookside Avenue.

			• Support. Structure plan to be modified to provide for a small pocket park.	• Support as above.
	Agency submissions Submitter	Summary of Submission	Council Response to Submission	DPLH Comment
	Telstra	No objections.	Noted, no changes required.	Noted.
	Water Corporation	No objections. The developers/landowners would be required to provide all water and sewer reticulation to service the Structure Plan area to Water Corporation standards as well as pay infrastructure upgrade contributions.	Noted, standard Water Corporation advice, no change to structure plan required.	Noted.
	Department of Education	No objections. The Structure Plan area is within the catchments of Clifton Hills Primary School and Kelmscott Senior High School and that the DoE anticipates the dwelling yield of 365 would not significantly impact the accommodation capacity of these schools.	Noted, no change to the Structure Plan is required.	Noted.
	DFES	The Applicant's Bushfire Management Plan (BMP) is inconsistent with the WAPC's *Statement of Planning Policy 3.7 Planning in Bushfire Prone Areas* and the Guidelines; and requires modification prior to DFES support. The main issues are: • Vegetation management of the POS (including CCW and Bush Forever) as low threat vegetation is not supported by evidence of agreement and responsibility for management by the City;	Supported. BMP to be modified to address DFES concerns. • Vegetation management - The City does not agree to maintain proposed POS as low fire threat to achieve asset protection zone (APZ) requirements. The City cannot guarantee maintenance of its POS especially during high to extreme fire danger summer months where use of equipment - movers etc may be prohibited due to risk of causing fire/ignition. Bushfire	Noted. BMP to be modified to address DFES concerns as per Modification 39.

			assessment should be based on vegetation being unmanaged.	
		• A 1% downward slope is applied in determining the bushfire ratings in the river locality however a 5% downward slope is recommended to comply with the Guidelines.	• Slope - Supported, slope analysis should be consistent with the WAPC SPP 3.7 Planning for Bushfire Guidelines.	
		• The BMP does not achieve the WAPC Guidelines' criteria for the location and siting and design of development. Future residential lots would be subject to a bushfire attack level of BAL40/FZ but the Guidelines indicate BAL29 or below is required to meet the abovementioned criteria. Refer to section Bushfire Management Plan below for further comments.	• Location and Siting - The City agrees with the DFES analysis and identification of the above issues as being inconsistent with WAPC's SPP 3.7 Planning for Bushfire Guidelines which indicates residential lots must be subject to a BAL 29 or below to meet the criteria Location and Sitting and Design criteria of SPP 3.7 Bushfire Guidelines.	
	DBCA	• All the Bush Forever and CCW land should be MRS Parks and Recreation and protected by a 30-metre-wide buffer;	• Not Supported - the DBCA recommendation for the entire Bush Forever Area 246 and CCW along the Canning River to be included in Regional Parks and Recreation reserve is inconsistent with Environmental Review Canning River Precinct 23 September 2009 for MRS Amendment 1202/41 that rezoned the Structure Plan area Urban and retained the identified Regional Parks and Recreation reserve in the Rural zone.	• Not supported. The extent of the Foreshore reserve was determined under MRS Amendment 1202/41.
		• The Structure Plan requires a Foreshore Management Plan;	• Supported. The Applicant has not submitted a Foreshore Management Plan which is required under the City's Town Planning Scheme No.4	• A foreshore management plan will be required as a condition of subdivision.

			Development (Structure Plan) Area 44 clause 44.3 (v) providing Canning River foreshore reserves and management.	
		• Further information is recommended to support removal of vegetation and to investigate retention of mature trees; and	• Supported. The City can recommend a condition on subdivision approval for the identification of vegetation on site worthy of protection prior to subdivision works commencing including vegetation outside the POS area and/or CCW and Bush Forever land.	• Support in part, the LSP identifies trees for retention within the foreshore and POS areas. Consideration to be given to retention of trees outside these areas at the subdivision stage.
		• Stormwater management needs to address State Government Policy frameworks and best practice stormwater management by: ○ detaining stormwater higher in the catchment; ○ reducing the size and number basins and pipe outfalls to the Canning River; ○ locating basins outside Bush Forever/CCW; and ○ consider a living stream opportunity on the southern boundary of Lot 12Clifton Street; and,	• Supported. the issues of the BDCA regarding the LWMS are generally consistent with those of the City. The applicant was requested to submit a revised LWMS that addressed the issues and modifications of the City and the DBCA but has not done so within the agreed timeframe end of February 2025. Refer to Agenda Report – Analysis – Local Water Management Strategy and Schedule of Issue and Modifications.	• Supported. LWMS to be updated as per Modification 40.
		• The BMP should be updated to reference the CCW and remove reference to CCW/Bush Forever being managed as low threat vegetation but rather re-vegetated to Forest with appropriate development setbacks.	• Supported. Table 1 of the bushfire management should identify Conservation Category Wetland (UFI: 15689). The maintenance of CCW/Bush Forever as low fire threat for bushfire management/asset protection zone is not supported by the City. Refer to comments above on DFES submission under	• Supported. BMP to be updated as per Modification 39.

			heading – Issue: Vegetation Management.	
	DWER	DWER defers its comments/recommendation to DBCA - Conservation and Ecosystem Management Division, Rivers and Estuaries Branch.	Noted.	Noted.
	Main Roads	The Structure Plan's Transport Impact Assessment (TIA) requires modification prior to Main Roads WA approval. The main issues included: • Justification for the use of the traffic trip generation rates in the TIA; • Correction of inconsistencies between the Structure Plan report and TIA on the number of dwellings; • 2021 traffic survey data is out-of-date due to changes in the road network and requires updating; • Crash analysis data is recommended for the wider road network; • Correction of inconsistencies on the number of entry roads from Clifton Street proposed in the Structure Plan report and TIA; and, • Modifications to traffic modelling values.	The Structure Plan and TIA be modified to address the issues and revisions recommended by Main Roads WA specifically: • TIA trip generation rates should be consistent with those indicated in the WAPC's Transport Impact Assessment Guidelines. • Dwelling numbers in the TIA should be consistent with the Structure Plan dwelling numbers for consistency and appropriate traffic modelling. • More recent traffic data will ensure more accurate traffic modelling. • • The crash data requested by MRWA would assist with designing for traffic safety. • The City's Technical Services only supports 2 entry roads to the structure plan area. The Structure Plan and TIA should be modified to detail only 2 entry roads. • SIDRA data should be to MRWA requirements.	Supported. The Structure Plan and TIA to be modified in accordance with Main Roads requirements.

	Department of Health	No objections subject to the site being connected to reticulated sewer	• Supported. The Structure Plan area will be required to be connected to reticulated sewer. No change to the Structure Plan is required.	Supported.

SCHEDULE OF SUBMISSIONS
PROPOSED STRUCTURE PLAN –
CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT

NO	SUBMITTER	SUPPORT, OBJECT, COMMENT	SUMMARY OF SUBMISSION	CITY OF ARMDALE COMMENT/RECOMMENDATION
1.	Landowner	Object (requests modification)	1.1 Structure Plan prepared by minority of landowners with Structure Plan area without input from other owners. 1.2 Public Open Clpace (POS)/drainage is inequitable distributed over land holdings with Lot 11 (cnr Clifton St & Brookside Ave) having no POS/drainage contribution. 1.3 Structure Plan does not address how stormwater from Lot 11 (cnr Brookside Ave & Clifton) will be conveyed through adjacent landholdings in the event it is developed first. 1.4 An associated developer contribution plan to compensate landowners required to accommodate other landholdings stormwater should be prepared before structure plan approval. 1.5 The north-south roads run across the natural slope of the land, resulting in the need for larger amounts of retaining, and to redirect stormwater runoff around the street blocks before it can access the detention basins adjacent to the river. 1.6 The depths of the street blocks (40m) results in 20m lot depths limiting future housing typologies most required depths of 25m-30m. 1.7 Four separate full movement intersections to the external road network is excessive only a one access to Brookside Ave and Clifton St is required. Besides these roads other internal roads should be determined through subdivision. 1.8 Don't support 4-way intersection to Tara Way as a roundabout will be required. 1.9 Structure plan should provide further detail a preliminary earthworks and staging plan that demonstrates how levels and retaining will be coordinated across landholdings. 1.10 The Structure Plan should be modified as follows: a. The proponent's land (lot 11 Brookside Avenue) provide a minimum of 10% POS including sufficient stormwater retention within the lot boundary, or alternatively a suitable cost sharing arrangement be put in place prior to approval of the structure plan to ensure an equitable distribution of open space and drainage infrastructure. b. The structure plan map be modified to delete all internal roads with the exception of the foreshore interface road.	1.1 Supported, the Applicants landholding Lot 1 (11) Clifton Street (cnr Brookside Ave) is approximately 11% of the Structure Plan area. 1.2 Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns. 1.3 Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns. 1.4 Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns. The City would not operate a Development Contribution Plan just for developer drainage when landowners can resolve and manage themselves. 1.5 Not supported, the land outside the proposed POS/foreshore is general flat. The need for retaining would be determined at subdivision stage through civil engineering designs/plans. 1.6 Issue 2 - Housing Density and Built Form Concerns (2e). 1.7 Issue 7 -Traffic and Trasport Infrastructure Concerns (7f). 1.8 Issue 7 -Traffic and Trasport Infrastructure Concerns (7f). 1.9 Supported in part, refer to heading Local Water Management Strategy. The requirement for retaining can be considered at subdivision stage noting that with the exception of the river area the land is relatively flat. Staging is dependent on landowner decisions, so it is not possible to detail staging in the structure plan. 1.10 a) Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns. b) Issue 7 -Traffic and Trasport Infrastructure Concerns (7f) c) Issue 7 -Traffic and Trasport Infrastructure Concerns (7f) d) Refer to 1.9 above.

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
			c. All intersections with Clifton Street be deleted and a provision be included requiring suitable intersections to be resolved at subdivision stage once the form of subdivision is determined. d. A preliminary earthworks and staging plan be provided that demonstrates how the interface between the proponent's land and the surrounding landholdings will be managed, recognising that they are unlikely to be developed at the same time.	
2.	Landowner	support	2.1 Close to train station ideal for medium to high-density and reduce car dependency/ traffic congestion. 2.2 Close to local amenities i.e. shops and reduce car dependency/ traffic congestion. 2.3 Compatibility with similar developments i.e. two and three-storey developments in Cannington. 2.4 Increase access to the River (currently private) for residents and Frye Park. 2.5 Close to schools within walking distance. 2.6 Bushfire safety can be addressed and area located away from Scarp bushfire threat. 2.7 Improve river with urban water runoff management. 2.8 City should consider cash in lieu of POS due to existing POS in the locality.	2.1 Supported in part, the proximity of the train station still provides an opportunity for park and cycle and ride. 2.2 Supported, some shops are within the 800m walking distance. 2.3 Noted, there is no information provided on the location of the developments in Cannington. 2.4 Supported, Frye Park is within 800m walking distance of the Structure Plan area. 2.5 Supported Clifton Hills Primary School is within 800m walking distance of the Structure Plan area. 2.6 Issue 4 - Bushfire Safety Concerns 2.7 Issue 1 - Environment Impact Concerns & heading Local Water Management Strategy. 2.8 Supported in part, the City would recommend a cash-in-lieu of POS for Lo1 11 (1) Clifton St (cnr Brookside Ave).
3.	Landowner	object	3.1 Proposal will ruin character and what brings people to Clifton Hills. 3.2 Concerned that road infrastructure can't support 300 plus cars.	3.1 Issue 6 - Change/loss of Character and Visual Amenity 3.2 Issue 7 -Traffic and Trasport Infrastructure Concerns
4.	Landowner	object	4.1 Clifton Hills Primary School can't support extra students, no space for classrooms and parking and traffic problems. 4.2 Concerned that Clifton St is small two-way street and can't cope with increase traffic.	4.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 4.2 Issue 7 -Traffic and Trasport Infrastructure Concerns
5.	Landowner	object	5.1 Concerned that Clifton St will become too busy. 5.2 Too many houses for the location. 5.3 Schools already struggle with parking.	5.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 5.2 Issue 2 - Housing Density and Built Form Concerns 5.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concern

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
6.	Landowner	object	6.1 High density could set a precedent for same residential developments along much of this section of the Canning River. 6.2 Inconsistent with R-Code on east side of Clifton Street. 6.3 Walking distance to the central shopping area and railway station is to great to justify density. 6.4 Should be a condition of any development approval to create the river reserve, walkways and associated landscaping along the river. 6.5 Trees on eastern and western boundary should be preserved. 6.6 The high-density development and 100year flood level will require significant construction fill and would likely destroy the mature trees. 6.7 Concern that fill and construction activity will impact river ecosystem. 6.8 New roads should not boarder river but additional landscaping should be provided. 6.9 Stormwater proposals to discharge into the river should be referred to Department of Biodiversity, Conservation and Attractions and the Swan River Trust. 6.10 Development will result in contaminates in stormwater entering the river. 6.11 Project will generate a significant increase in traffic movement in the area during the construction stage. 6.12 Increase in residents will cause a significant increase in road traffic along Clifton Street, together with a possible hazardous intersection at Brookside Avenue. Traffic calming and speed devices will definitely be required. 6.13 Impact to way of life and enjoyment of scenery. 6.14 This Structure Plan is piecemeal and the whole river foreshore should be re-examined from Brookside Avenue down to Gilwell Avenue for an appropriate design for the existing residential area.	6.1 Issue 10 – Other Concerns 6.2 Issue 2 - Housing Density and Built Form Concerns 6.3 Issue 2 - Housing Density and Built Form Concerns 6.4 Supported, a landscape plan acceptable to the City will be required as part of the structure plan and subdivision if approved. 6.5 Supported in part, refer to heading Natural Environment & Tree Retention. 6.6 Issue 1 - Environment Impact Concerns 6.7 Issue 1 - Environment Impact Concerns 6.8 Not supported, a road boarding the river provides public access and demarks the public river reserve/open space from the private residential land. 6.9 Supported, the proposal has been referred to both the mentioned agencies. 6.10 Issue 1 - Environment Impact Concerns 6.11 Issue 7 -Traffic and Trasport Infrastructure Concerns 6.12 Issue 7 -Traffic and Trasport Infrastructure Concerns 6.13 Issue 6 - Change/loss of Character and Visual Amenity 6.14 Not supported, the structure plan area is considered sufficient in area for urban planning and the outcome will guide future development of the Urban Development zone down to Gilwell Ave.
7.	Landowner	object	7.1 Too many houses for the location. 7.2 Appreciate retention of POS, bushland & foreshore.	7.1 Issue 2 - Housing Density and Built Form Concerns 7.2 Noted.
8.	Landowner	object	8.1 Development will impact our views why we brought property. 8.2 Concern development is Homeswest and increase in crime. 8.3 Concern regarding roads capacity and traffic. 8.4 Concerns regarding evacuation. 8.5 Concern development will cause rates to rise	8.1 Issue 2 - Housing Density and Built Form Concerns 8.2 Issue 5 - Social Impact Concerns 8.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 8.4 Issue 4 - Bushfire Safety Concerns 8.5 Issue 10 – Other Concerns

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NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
			8.6 property values to decline. 8.7 Concern regarding impact to wildlife.	8.6 Issue 10 – Other Concerns 8.9 Issue 1 - Environment Impact Concerns
9.	Landowner	object	9.1 Concern regarding size and density. 9.2 Concern regarding impact to school. 9.3 Concern regarding impact river eco-system.	9.1 Issue 2 - Housing Density and Built Form Concerns 9.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 9.3 Issue 1 - Environment Impact Concerns
10.	Landowner	object	10.1 Concern regarding impact to adjacent residential area. 10.2 Concern regarding roads capacity and traffic. 10.3 Clifton Hills Primary School can't support extra students. 10.4 Concern regarding increase in crime.	10.1 Issue 6 - Change/loss of Character and Visual Amenity 10.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 10.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 10.4 Issue 5 - Social Impact Concerns
11.	Landowner	object	11.1 Concern regarding additional traffic including congestion on Brookside Ave and Clifton St at school drop-off time.	11.1 Issue 7 -Traffic and Trasport Infrastructure Concerns
12.	Landowner	object	12.1 Height (2+ storeys), bulk, scale or appearance of buildings will impact outlook/views of the river land, it's trees and vegetation. Maximum R40 should apply. 12.2 Development will decrease property values. 12.3 Increased population levels would increase traffic, noise and smell affecting health (including mental). 12.4 Increase in pollution – litter and hazardous and human type waste with greater population. 12.5 Increase in traffic congestion at intersections Clifton St/Gilwell Ave, Brookside Ave/Connell Ave, and Butler Pass/Tara Wy accessing the Clifton Hills Primary School. 12.6 Increase in traffic on Connell Ave has not been evaluated. 12.7 Environmental impacts such as air or water pollution or land degradation. 12.8 Health and safety concerns including bushfire risk/evacuation concerns due to extra residents and limited egress routes from the area noting 2011 bushfires and Connell Ave was closed. 12.9 Increase in crime rate. 12.10 Concerns regarding capacity of local schools for additional/ students/pupils including traffic and parking issues. 12.11 Train and bus station parking is already full.	12.1 Issue 2 - Housing Density and Built Form Concerns 12.2 Issue 10 – Other Concerns 12.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 12.4 Issue 1 - Environment Impact Concerns 12.5 Issue 7 -Traffic and Trasport Infrastructure Concerns 12.6 Issue 7 -Traffic and Trasport Infrastructure Concerns 12.7 Issue 1 - Environment Impact Concerns 12.8 Issue 4 - Bushfire Safety Concerns 12.9 Issue 5 - Social Impact Concerns 12.10 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 12.11 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 12.12 Supported, an Acid Sulfate Soils assessment and management plan (if required) would be required at subdivision stage. 12.13 Issue 1 - Environment Impact Concerns 12.14 Issue 1 - Environment Impact Concerns

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			12.12 Concern regarding Acid Sulfate Soils and impact to river during construction. 12.13 Concern regarding monitoring of ground water levels. 12.14 Concern regarding run-off to the river due to low soil permeability and R60 and R80 density.	
13.	Landowner	object	13.1 Against small block size, larger block sizes are what Kelmscott has going for it.	13.1 Issue 2 - Housing Density and Built Form Concerns
14.	Landowner	object	14.1 Proposals takes away from character of area – big blocks, space and nature and lifestyle. 14.2 We pay our rates to maintain area the way we like.	14.1 Issue 6 - Change/loss of Character and Visual Amenity & Issue 1 - Environment Impact Concerns 14.2 Issue 6 - Change/loss of Character and Visual Amenity
15.	Landowner	object	15.1 Clifton Hills Primary School can't support extra students, no space for classrooms and parking and traffic problems especially on Clifton and Butler Pass at peak time. 15.2 Removal of trees will displace animals and upset local ecosystem. 15.3 R80 density is too high and R40 and R60 density only.	15.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 15.2 Issue 1 - Environment Impact Concerns 15.3 Issue 2 - Housing Density and Built Form Concerns
16.	Landowner	object	16.1 Concern regarding adequacy of existing infrastructure. 16.2 School is too small. 16.3 Bushfire evacuation escape route concerns. 16.4 Concern regarding increase in crime. 16.5 Concern regarding provision of sewer as some properties are on septic systems. 16.6 Blocks should be 500sqm for families.	16.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 16.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 16.3 Issue 4 - Bushfire Safety Concerns 16.4 Issue 5 - Social Impact Concerns 16.5 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 16.6 Issue 2 - Housing Density and Built Form Concerns
17.	Landowner	object	17.1 Concern regarding extra traffic. 17.2 Concern regarding impact to river and wildlife. 17.3 Concern regarding crime and anti-social behaviour.	17.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 17.2 Issue 1 - Environment Impact Concerns 17.3 Issue 5 - Social Impact Concerns
18.	Landowner	object	18.1 Concern regarding environmental impacts. 18.2 Concern regarding social impacts.	18.1 Issue 1 - Environment Impact Concerns 18.2 Issue 5 - Social Impact Concerns
19.	Landowner	object	19.1 Concern new houses will be low quality. 19.2 Concern regarding property devaluation. 19.3 Concern regarding increase in anti-social behaviour.	19.1 Not supported, houses are required to be built to National Construction Code Standards. 19.2 Issue 10 – Other Concerns

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
			19.4 Concern regarding adequacy of infrastructure.	19.3 Issue 5 - Social Impact Concerns 19.4 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
20.	Landowner	object	20.1 Development negatively impacts community amenity. 20.2 Concern regarding adequacy of infrastructure – roads, school and medical centre. 20.3 Concern regarding clearing close to the river. 20.4 Small blocks are detrimental to local environment.	20.1 Issue 6 - Change/loss of Character and Visual Amenity 20.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 20.3 Issue 1 - Environment Impact Concerns 20.4 Issue 2 - Housing Density and Built Form Concerns
21.	Landowner	object	21.1 No comments provided.	21.1 Noted.
22.	Landowner	object	22.1 Bushfire safety concerns lack of escape routes only Gilwell Ave/bridge.	22.1 Issue 4 - Bushfire Safety Concerns
23.	Landowner	object	23.1 Concern regarding increase traffic. 23.2 Concerns new housing will be cheap rentals for unfavourable people. 23.3 Concern small lots will reduce trees for wildlife.	23.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 23.2 Issue 5 - Social Impact Concerns 23.3 Issue 1 - Environment Impact Concerns and heading Natural Environment & Tree Retention
24.	Landowner	object	24.1 Came to the area to send kids to school and get away from surrounding area. 24.2 Development will bring unsavoury characters to the area.	24.1 Issue 6 - Change/loss of Character and Visual Amenity 24.2 Issue 5 - Social Impact Concerns
25.	Landowner	object	25.1 Concern regarding impact to river and flora and fauna. 25.2 Concern regarding adequacy of road infrastructure roads in and out of the area are single carriageways and attract through traffic. 25.3 Clifton Hills Primary School and Kelmscott high schools are at capacity.	25.1 Issue 1 - Environment Impact Concerns 25.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 25.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
26.	Landowner	comment	26.1 Local road networks need upgrading. 26.2 If a vehicle crossing bridge at Brookside Ave/Turner Pl is not required Clifton St and Gilwell Ave need to be upgraded. 26.3 Traffic management at Clifton St/Butler Pass is required due to congestion associated with school drop off pick up. 26.4 Pedestrian Safety on Clifton Street due to increase traffic and speeding needs to be addressed. 26.5 Traffic estimates need to consider traffic from Structure Plan area to the south of Gilwell St not just the proposed structure plan.	26.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 26.2 Issue 7 -Traffic and Trasport Infrastructure Concerns. The City recommends the TIA address the need for a traffic bridge at Turner Pl / Brookside Ave. 26.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 26.4 Issue 7 -Traffic and Trasport Infrastructure Concerns 26.5 Issue 7 -Traffic and Trasport Infrastructure Concerns
27.	Landowner	object	27.1 Against high density in the area.	27.1 Noted.

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28.	Landowner	object	28.1 Concern regarding capacity of schools, roads and local amenities. 28.2 Concern regarding impact to Canning River.	28.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns & Issue 7 -Traffic and Trasport Infrastructure Concerns 28.2 Issue 1 - Environment Impact Concerns
29.	Landowner	object	29.1 High density not in keeping with the area and will ruin it.	29.1 Issue 6 - Change/loss of Character and Visual Amenity
30.	Landowner	object	30.1 Bushfire evacuation concerns as no extra escape routes proposed. 30.2 Concern regarding loss of trees. 30.3 Concern regarding loss of sense of community.	30.1 Issue 4 - Bushfire Safety Concerns 30.2 Issue 1 - Environment Impact Concerns & heading 30.3 Natural Environment & Tree Retention
31.	Landowner	object	31.1 Concern regarding capacity of schools for new students. 31.2 Concern regarding loss of semi-rural feel. 31.3 Large apartments need to be close to centres.	31.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 31.2 Issue 6 - Change/loss of Character and Visual Amenity 31.3 Issue 2 - Housing Density and Built Form Concerns
32.	Landowner	object	32.1 Concern regarding adequacy of roads. 32.2 Concern regarding capacity of Clifton Hills Primary School for new students.	32.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 32.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
33.	Landowner	object	33.1 No comments provided.	33.1 Noted.
34.	Landowner	object	34.1 Bushfire evacuation concerns. 34.2 Clifton Hills Primary School can't support extra students, no space for classrooms and parking and traffic problems. 34.3 Concerns development will increase crime i.e. drug use and break-ins. 34.4 Concern regarding loss of trees and impact to river. 34.5 Concern regarding loss of character and community feel. 34.6 Property devaluation concerns.	34.1 Issue 4 - Bushfire Safety Concerns 34.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 34.3 Issue 5 - Social Impact Concerns 34.4 Issue 1 - Environment Impact Concerns and Natural Environment & Tree Retention 34.5 Issue 6 - Change/loss of Character and Visual Amenity 34.6 Issue 10 – Other Concerns
35.	Landowner	object	35.1 Population increase for this area and would put pressure on schools and roads, especially Gilwell Ave. 35.2 High-density is out of character for the location with blocks being significantly smaller than nearby blocks in the area. 35.3 Increase in population would make it difficult for residence to evacuate in the event of a bush fire. 35.4 Train station is greater than 800m when walking distance is measured.	35.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns & Issue 7 -Traffic and Trasport Infrastructure Concerns 35.2 Issue 2 - Housing Density and Built Form Concerns 35.3 Issue 4 - Bushfire Safety Concerns 35.4 Issue 2 - Housing Density and Built Form Concerns

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NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
36.	Landowner	object	36.1 Already too much high density in Kelmscott. 36.2 Development will bring unsavoury people, more break-ins, noise complaints and litter. 36.3 Development will destroy and pollute river system. 36.4 Development will killing off native fauna and flora.	36.1 Issue 2 - Housing Density and Built Form Concerns 36.2 Issue 5 - Social Impact Concerns 36.3 Issue 1 - Environment Impact Concerns 36.4 Issue 1 - Environment Impact Concerns and regarding roadkill, signage along the proposed POS interface road could be installed to alert drives to the potential for wildlife crossing roads.
37.	Landowner	object	37.1 Development will lead to increase traffic. 37.2 Disrupt school community. 37.3 Safety concerns. 37.4 Disrupt neighbourhood charm.	37.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 37.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 37.3 Issue 5 - Social Impact Concerns 37.4 Issue 6 - Change/loss of Character and Visual Amenity
38.	Landowner	object	38.1 Structure Plan design acceptable subject to following changes: i. Half number of dwellings ii. Redesign Brookside/Clifton intersection. iii. Build a road bridge to link Brookside Ave and Turner Place. iv. No laneway lots. v. Upgrade Gliwell Ave/Page Rd intersection.	38.1 i. Issue 2 - Housing Density and Built Form Concerns ii. Issue 7 -Traffic and Trasport Infrastructure Concerns iii. Supported in part, the City recommends the TIA address the need for a traffic bridge at Turner Pl / Brookside Ave. iv. Not supported, laneway lots are common at medium densities and provided for in Liveable Neighbourhoods Policy. v. Issue 7 -Traffic and Trasport Infrastructure Concerns
39.	Landowner	object	39.1 R40 and R60 is too ‘sudden’ of a transition and will contrast to the existing urban fabric. 39.2 The target market for this density is investors who don’t care about the social fabric of the neighbourhood. 39.3 Concern regarding small living areas and building orientation. 39.4 Poor building design will devalue existing properties in the area. 39.5 Concern smaller housing and roads will not be able to accommodate larger vehicles. and extra vehicles of family members. 39.6 POS/Foreshore beneficial to community. 39.7 Bushfire evacuation concerns due to traffic congestion and only 3 escape routes.	39.1 Issue 2 - Housing Density and Built Form Concerns 39.2 Not supported, future land tenure is not a consideration in urban planning. 39.3 Noted, dwellings will be required to comply with R-Codes living area requirements and dwellings will be orientated north south east west to maximise solar access. 39.4 Issue 2 - Housing Density and Built Form Concerns 39.5 Issue 7 -Traffic and Trasport Infrastructure Concerns 39.6 Supported, ceding of the POS/foreshore allows for public access.

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				39.7 Issue 4 - Bushfire Safety Concerns
40.	Landowner	object	40.1 Damage to riverbank and removal of bushland. 40.2 Adequacy of infrastructure i.e. supermarket parking. 40.3 Bushfire evacuation concerns.	40.1 Issue 1 - Environment Impact Concerns 40.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 40.3 Issue 4 - Bushfire Safety Concerns
41.	Landowner	object	41.1 Bushfire evacuation concerns due to additional traffic using 3 evacuation routes. 41.2 Clifton Hills Primary School can't support extra students.	41.1 Issue 4 - Bushfire Safety Concerns 41.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
42.	Landowner	object	42.1 Density is too high for existing roads resulting in gridlock and noise pollution. 42.2 Add stress to electrical infrastructure.	42.1 Issue 2 - Housing Density and Built Form Concerns & Issue 7 -Traffic and Trasport Infrastructure Concerns 42.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
43.	Landowner	object	43.1 Negative impact i.e. illegal dumping to Canning River wildlife and bushland with public access. 43.2 Negative impact to existing atmosphere and lifestyle of the community 43.3 Increase in traffic issues including blind corner at Clifton St and Brookside Ave.	43.1 Issue 1 - Environment Impact Concerns 43.2 Issue 6 - Change/loss of Character and Visual Amenity 43.3 Issue 7 -Traffic and Trasport Infrastructure Concerns
44.	Landowner	object	44.1 Increased traffic. 44.2 Clifton Hills Primary School can't support extra students. 44.3 Anti-social behaviour. 44.4 Too many dwellings so infrastructure can't cope.	44.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 44.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 44.3 Issue 5 - Social Impact Concerns 44.4 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
45.	Landowner	object	45.1 Schools, roads and facilities are not adequate without upgrades. 45.2 Pedestrian safety issues from extra traffic at school time. 45.3 Bushfire evacuation concerns due to limited access to Albany Hwy.	45.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 45.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 45.3 Issue 4 - Bushfire Safety Concerns
46.	Landowner	object	46.1 Moved from Seville Grove to area to escape crime i.e. drug dealing, run down urban environment and safety concerns. 46.2 Concern regarding adequacy of shops, school, parks and roads form development. 46.3 Concern regarding impact to community.	46.1 Issue 5 - Social Impact Concerns 46.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 46.3 Issue 6 - Change/loss of Character and Visual Amenity

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NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
47.	Landowner	object	47.1 Stormwater management concerns as structure plan report infers that stormwater drainage could be discharged into the river and the installation of other services could have a significant adverse impact on the health of the Canning River. Small rainfall events best managed at sources to reduce POS basin size. 47.2 Concern development will increase run-off to river containing contaminates. 47.3 Size and locations of the stormwater basins proposed in the POS compromise its function and would result unusable/ untraversable space often cutting off access between different areas of POS completely. 47.4 The bulk and scale of the buildings due to the high-density unfriendly and unwelcoming atmosphere proposed on the river-side would overshadow the POS. Density would look out of place given existing density in the area. 47.5 Density exceeding the target set out in Perth and Peel@3.5 million strategic document. 47.6 Unclear whether 50m estuaries in clause 6.1.1 of SPP Guideline 2.9 setback is being achieved. 47.7 DBCA should be consulted to determine the appropriate setback. 47.8 Concerns regarding overcrowding of Clifton Hill Primary School. 47.9 Concerns regarding pedestrian safety due to increase in traffic associated with development. 47.10 High density development will set a precedent for similar developments.	47.1 Issue 1 - Environment Impact Concerns 47.2 Issue 1 - Environment Impact Concerns 47.3 Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns & heading Foreshore & Public Open Space Provision. 47.4 Issue 2 - Housing Density and Built Form Concerns 47.5 Issue 2 - Housing Density and Built Form Concerns 47.6 Issue 1 - Environment Impact Concerns 47.7 Issue 1 - Environment Impact Concerns 47.8 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 47.9 Issue 7 -Traffic and Trasport Infrastructure Concerns 47.10 Issue 10 – Other Concerns
48.	Landowner	object	48.1 Against high density and development over 2 storeys. 48.2 Moved to the area for friendly community and care for bushland, river and wildlife. 48.3 Concern regarding capacity of Clifton Hill Primary School. 48.4 Development driven by greedy landowners.	48.1 Issue 2 - Housing Density and Built Form Concerns 48.2 Issue 6 - Change/loss of Character and Visual Amenity 48.3 Noted.
49.	Landowner	object	49.1 Destructive to calm beautiful suburb. 49.2 Concern about new residents and drug use. 49.3 Family will leave if development occurs.	49.1 Issue 6 - Change/loss of Character and Visual Amenity 49.2 Issue 5 - Social Impact Concerns 49.3 Noted.
50.	Landowner	object	50.1 Impact to community wellbeing. 50.2 Impact to environment and landscapes. 50.3 Area is for families and retirees. 50.4 Capacity of roads and schools.	50.1 Issue 5 - Social Impact Concerns and/or Issue 6 - Change/loss of Character and Visual Amenity 50.2 Issue 1 - Environment Impact Concerns and/or Issue 6 - Change/loss of Character and Visual Amenity

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				50.3 Issue 5 - Social Impact Concerns 50.4 Issue 7 -Traffic and Trasport Infrastructure Concerns
51.	Landowner	object	51.1 Concern regarding adequacy of roads for more traffic. 51.2 Loss of tree canopy. 51.3 Adequacy of schools and other social infrastructure to accommodate students from development. 51.4 Area should be R25 to match existing residential density.	51.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 51.2 Issue 1 - Environment Impact Concerns 51.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 51.4 Issue 2 - Housing Density and Built Form Concerns
52.	Landowner	object	52.1 Puts pressure on the schools and the roads. 52.2 Demolish the small knit community that Cliffton Hills. 52.3 Will move is development goes ahead.	52.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns and Issue 7 -Traffic and Trasport Infrastructure Concerns 52.2 Issue 6 - Change/loss of Character and Visual Amenity 52.3 Noted.
53.	Landowner	object	53.1 Bushfire evacuation routes are limited to Connel Ave and Gilwell Ave.	53.1 Issue 4 - Bushfire Safety Concerns
54.	Landowner	object	54.1 Concerned regarding impact to both 20 Turner Place & 26 Connell Avenue, Kelmscott. 54.2 Density is too high should be R40 only. 54.3 Pedestrian access over Brookside Ave /Turner Pl bridge should be maintained.	54.1 Noted. 54.2 Issue 2 - Housing Density and Built Form Concerns 54.3 Supported, pedestrian access will be maintained.
55.	Landowner	object	55.1 Degradation to the area and school community and students will struggle. 55.2 Will devalue properties.	55.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 55.2 Issue 10 – Other Concerns
56.	Landowner	object	56.1 No comments provided.	56.1 Noted.
57.	Landowner	object	57.1 Area is not close to city centre and multi-storey development will be an eyesore. 57.2 new residents not the type of people to improve the area. 57.3 Infrastructure – shops, parking and traffic management inadequate.	57.1 Issue 2 - Housing Density and Built Form Concerns 57.2 Issue 5 - Social Impact Concerns 57.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
58.	Landowner	object	58.1 Bushfire evacuation more difficult with more residents/traffic. 58.2 Retain bushland and river as is.	58.1 Issue 4 - Bushfire Safety Concerns 58.2 Issue 1 - Environment Impact Concerns
59.	Landowner	object	59.1 Existing roads cannot support another 395 dwellings. In particular Gilwell Ave is going to be heavily congested during peak hours therefore not safe during bushfire evacuation.	59.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 59.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns

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			59.2 Both Clifton Hills Primary School and Kelmscott Senior High School would struggle with a large influx of extra students. 59.3 Lack of parking at Clifton Hills Primary School during peak hour would become more of a problem. 59.4 Pedestrian (school kids) safety concerns due to parking and extra traffic. 59.5 Increase in crime due to smaller dwellings gardens and indoor pace. 59.6 Concerned that removal of trees and greenery pollution brought to the area will negatively affect the river, wildlife and biodiversity in the region. 59.7 Concern regarding urban heat island effect due to high density buildings. 59.8 Concern regarding train station parking to accommodate new resident's vehicles. 59.9 Loss of small-town community feel by adding hundreds of tiny dwellings.	59.3 Issue 7 -Traffic and Trasport Infrastructure Concerns & Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 59.4 Issue 7 -Traffic and Trasport Infrastructure Concerns 59.5 Issue 5 - Social Impact Concerns 59.6 Issue 1 - Environment Impact Concerns 59.7 Issue 1 - Environment Impact Concerns 59.8 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 59.9 Issue 6 - Change/loss of Character and Visual Amenity
60.	Landowner	object	60.1 High density flats are an eyesore, will encourage vandalism, graffiti and dumping. 60.2 Infrastructure can't cope with extra population. 60.3 Will impact wildlife in the area. 60.4 Will impact scenery and feel of the area.	60.1 Issue 2 - Housing Density and Built Form Concerns & Issue 5 - Social Impact Concerns 60.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 60.3 Issue 1 - Environment Impact Concerns 60.4 Issue 6 - Change/loss of Character and Visual Amenity
61.	Landowner	object	61.1 High density will have a detrimental environmental impact to river front and surrounding bushland flora and fauna. 61.2 High turnover of future residents will create social, security and community issues. 61.3 Current services and infrastructure i.e., schools, supermarkets, roads, medical will not support such an influx. 61.4 Current community bought in the area based on the lifestyle and current planning not high density.	61.1 Issue 1 - Environment Impact Concerns 61.2 Issue 5 - Social Impact Concerns 61.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 61.4 Issue 6 - Change/loss of Character and Visual Amenity
62.	Landowner	object	62.1 Height (2+ storeys), bulk, scale or appearance of buildings would be visually out of place in single storey area. 62.2 R40 to R80 at odds with adjoining R15/25 coding. 62.3 Increased population levels would increase traffic, noise, smell and light in the area.	62.1 Issue 2 - Housing Density and Built Form Concerns 62.2 Issue 2 - Housing Density and Built Form Concerns 62.3 Not supported, these are normal considerations in planning processes. 62.4 Issue 4 - Bushfire Safety Concerns 62.5 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
			62.4 Health and safety concerns including bushfire risk/evacuation concerns due to extra residents and retirees in development are vulnerable and would be at risk. 62.5 Concerns regarding capacity of local schools for additional/ students/pupils and not addressed in proposal. 62.6 Concern regarding adequacy of local medical including Armadale Hospital and local GPs.	62.6 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
63.	Landowner	object	63.1 High density will impact the surrounding community and the environment 63.2 Extra pupils and traffic is already straining roads and infrastructure at pick up and drop off times. 63.3 Future housing will be rentals with constant turnover of tenants and rubbish dumped within the complex along the Canning River.	63.1 Issue 1 - Environment Impact Concerns & Issue 6 - Change/loss of Character and Visual Amenity 63.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 63.3 Not supported, the City does not control housing tenure and the concern lacks evidenced that rubbish dumping will occur and Issue 5 - Social Impact Concerns.
64.	Landowner	object	64.1 Density is too high. 64.2 Concern regarding urban heat island effect. 64.3 Concern regarding adequacy of sewer and power grid. 64.4 Clifton Hills Primary School can't support extra students and increase in student teach ratio.	64.1 Issue 2 - Housing Density and Built Form Concerns 64.2 Issue 1 - Environment Impact Concerns 64.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 64.4 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
65.	Landowner	object	65.1 Increase in population will lead to a significant surge in traffic congestion, especially on Clifton St /Brookside Ave and impact quality of life. 65.2 Additional students at local school will lead to parking issues erode the sense of community. 65.3 Proposal does not align with the character and scale of our neighbourhood leading to the loss of green spaces, increased noise levels, and a decline in the overall quality of life. 65.4 A higher crime rates due to increased population density and anonymity.	65.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 65.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 65.3 Issue 6 - Change/loss of Character and Visual Amenity 65.4 Issue 5 - Social Impact Concerns
66.	Landowner	object	66.1 High density will bring low-income families and drag the community down.	66.1 Issue 5 - Social Impact Concerns
67.	Landowner	object	67.1 Devalue properties from increase traffic. 67.2 Clifton Hills Primary School can't support extra students.	67.1 Issue 10 – Other Concerns 67.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
			67.3 Bushfire evacuation concerns only Gilwell Ave and Turner Place/Brookside Ave footbridge for residents.	67.3 Issue 4 - Bushfire Safety Concerns
68.	Landowner	object	68.1 Exist on Gilwell Ave has traffic problems and roads are not designed for more traffic.	68.1 Issue 7 -Traffic and Trasport Infrastructure Concerns
69.	Landowner	object	69.1 No comments provided.	69.1 Noted.
70.	Landowner	object	70.1 Concern regarding impact to Hospital.	70.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
71.	Landowner	object	71.1 Addition of multiple two-storey buildings with an extremely large number of residents would be out of place with adjacent quite suburb. 71.2 Volumes of traffic on the local roads with the related increase in road noise effecting the whole of Clifton Street and connecting streets. 71.3 There would also be severe disruptions to roads during construction. 71.4 Bushfire safety concerns regarding retirement village in the development. 71.5 Bushfire evacuation concerns due to limited exists and made worse by more residents. 71.6 Clifton Hills Primary School is already at capacity and using portable buildings also impact to Kelmscott Primary School. 71.7 Impact to Armadale Hospital is not considered especially as development includes retirement village. 71.8 Impact to commercial amenities such as supermarkets, gyms, and cafés has not been considered which impact the lifestyle of current resident. 79.9 Would contribute to climate change.	71.1 Issue 6 - Change/loss of Character and Visual Amenity 71.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 71.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 71.4 Not supported, development of the structure plan area would reduce the fire risk in the locality. The City requested removal of the retirement village use in the Structure Plan as it was not adequately justified however the use could be considered subject to a development application. Refer to Agenda Report Issue 4b for further comments. 71.5 Issue 4 - Bushfire Safety Concerns 71.6 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 71.7 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 71.8 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 71.9 Not supported, the submission does not demonstrate this impact.
72.	Landowner	object	72.1 Extra traffic will cause congestion. 72.2 Hard impact to local schools. 72.3 disruption to land and wildlife. 72.4 High density housing completely changing the look of our area.	72.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 72.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 72.3 Issue 1 - Environment Impact Concerns 72.4 Issue 6 - Change/loss of Character and Visual Amenity
73.	Landowner	object	73.1 Don’t want more people in our safe community.	73.1 Issue 5 - Social Impact Concerns
74.	Landowner	object	74.1 No comments provided.	74.1 Noted.

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
75.	Landowner	object	75.1 Will increase crime. 75.2 Will destroy the river and bush. 75.3 Future low budget housing will be occupied by drug uses and troublemakers.	75.1 Issue 5 - Social Impact Concerns 75.2 Issue 1 - Environment Impact Concerns 75.3 Issue 5 - Social Impact Concerns
76.	Landowner	object	76.1 Will it adversely affect the natural habitat, flora/fauna of the river reserve. 76.2 Will adversely affect the Clinton hills community. 76.3 Roads will not cope with the level of traffic generated. 76.4 Local schools will not be able to support potential large influx of students. 76.5 Concern regarding impact to property values. 76.6 Concern regarding lower socio-economic graphic, increase in crime, trash and uncleanliness etc typically come with these dense developments. 76.7 Should be larger blocks 800m².	76.1 Issue 1 - Environment Impact Concerns 76.2 Issue 6 - Change/loss of Character and Visual Amenity 76.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 76.4 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 76.5 Issue 10 – Other Concerns 76.6 Issue 5 - Social Impact Concerns 76.7 Not supported-Issue 2 - Housing Density and Built Form Concerns
77.	Landowner	object	77.1 Will congest the roads. 77.2 Will attract the wrong type of people into the community which is quiet, peaceful and close knit.	77.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 77.2 Issue 5 - Social Impact Concerns
78.	Landowner	object	78.1 The appeal of the area - quieter, less crowded, more space, less parking issues, less traffic, more natural space semi-rural feel and why we live here will be lost. 78.2 If approved similar projects will follow and change the area so I may move out.	78.1 Issue 6 - Change/loss of Character and Visual Amenity 78.2 Noted.
79.	Landowner	object	79.1 Will ruin the suburb and bring the wrong people into the area.	79.1 Issue 5 - Social Impact Concerns
80.	Landowner	object	80.1 Development will result in too much traffic. 80.2 Schools and day care will be overloaded. 80.3 The future housing will be occupied by low-income people and families resulting in crime and will be afraid to go out in public place.	80.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 80.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 80.3 Issue 5 - Social Impact Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
81.	Landowner	object	81.1 No one wants this.	81.1 Noted.
82.	Landowner	object	82.1 Concern regarding impact to their property.	80.1 Noted.
83.	Landowner	object	83.1 Extra roof tops will be ugly.	83.1 Issue 2 - Housing Density and Built Form Concerns
84.	Landowner	object	84.1 Will cause excessive traffic and noise pollution. 84.2 Two storey homes facing Clifton Street takes away the privacy in our home with multiple homes facing ours. 84.3 Pedestrian Safety concerns due to increase in traffic. 84.4 Destruction of local wildlife. 84.5 Will bring anti-social behaviour. 84.6 Residents facing it should be compensated for the noise pollution from trucks and building works as well as the view that we will lose with two story buildings being built opposite.	84.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 84.2 Issue 2 - Housing Density and Built Form Concerns 84.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 84.4 Issue 1 - Environment Impact Concerns 84.5 Issue 5 - Social Impact Concerns 84.6 Not supported, the WAPC's processes does not provide for compensation loss of views or other potential impacts.
85.	Landowner	object	85.1 No comments provided.	85.1 Noted.
86.	Landowner	object	86.1 Property devaluation concerns. 86.2 Increase traffic and safety concerns.	86.1 Issue 10 – Other Concerns 86.2 Issue 7 -Traffic and Trasport Infrastructure Concerns
87.	Landowner	object	87.1 Local school is at capacity. 87.2 Road are already very busy especially in the morning and afternoon. 87.3 More crime in the area. 87.4 Concern regarding urban water run off affecting river and wildlife. 87.5 Concern regarding loss of views and enjoyment of rural style community.	87.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 87.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 87.3 Issue 5 - Social Impact Concerns 87.4 Issue 1 - Environment Impact Concerns 87.5 Issue 6 - Change/loss of Character and Visual Amenity
88.	Landowner	object	88.1 Concerned with increase in crime and traffic. 88.2 Concerned with impact to local wildlife. 88.3 Bushfire evacuation concerns due to lack of road exists.	88.1 Issue 5 - Social Impact Concerns & Issue 7 -Traffic and Trasport Infrastructure Concerns 88.2 Issue 1 - Environment Impact Concerns 88.3 Issue 4 - Bushfire Safety Concerns
89.	Landowner	object	89.1 Local area offers bigger blocks and a nice country feel and a great community. There is no need to introduce tiny blocks and estate style living.	89.1 Issue 2 - Housing Density and Built Form Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
90.	Landowner	object	90.1 Impact to 41 Roberts Road, Kelmscott. 90.2 Concern regarding increase crime. 90.3 Concern regarding increase traffic 90.4 Concern regarding impact to local wildlife 90.5 Bushfire evacuation concerns as not enough exit roads. 90.6 Local school is too small for extra students. 90.7 Density will destroy beautiful area what people love here.	90.1 Noted. 90.2 Issue 5 - Social Impact Concerns 90.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 90.4 Issue 1 - Environment Impact Concerns 90.5 Issue 4 - Bushfire Safety Concerns 90.6 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 90.7 Issue 6 - Change/loss of Character and Visual Amenity
91.	Landowner	object	91.1 No comments provided.	91.1 Noted.
92.	Landowner	object	92.1 Schools, shops and environment can't cope.	92.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns & Issue 1 - Environment Impact Concerns
93.	Landowner	object	93.1 Refer to Submission 6.1 to 6.14 above. 93.2 Concern with repetitive built form. 93.3 Concern where development will be sewered. 93.4 Bushfire evacuation concerns due to only 2 bridges.	93.1 Refer to Submission 6.1 to 6.14 above. 93.2 Issue 2 - Housing Density and Built Form Concerns 93.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 93.4 Issue 4 - Bushfire Safety Concerns
94.	Landowner	object	94.1 Turn suburb into a ghetto. 94.2 Road capacity concerns 94.3 School capacity concerns.	94.1 Issue 5 - Social Impact Concerns 94.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 94.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
95.	Landowner	object	95.1 Concerns regarding increase population density in comparison to current density in the area. 95.2 Proposal is contrary to City of Armadale Urban Forestry Strategy vision for diverse landscapes and trees and proactive landscape planning. 95.3 Population increase into would strain electricity, water and sewage services. 95.4 Concern regarding capacity of Clifton Hill Primary School and Kelmscott High School to accommodate extra students from development and impact to education standards. 95.5 Concern regarding capacity of train to accommodate more commuters.	95.1 Issue 2 - Housing Density and Built Form Concerns 95.2 Issue 1 - Environment Impact Concerns & Agenda Report heading Natural Environment & Tree Retention 95.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 95.4 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 95.5 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
96.	Landowner	comment	96.1 Concerns regarding traffic. 96.2 Concerns regarding capacity of Clifton Hills Primary School. 96.3 Concerns regarding impact to river habitat. 96.4 Community safety concerns. 96.5 Developer should respond to community feedback.	96.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 96.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 96.3 Issue 1 - Environment Impact Concerns 96.4 Issue 5 - Social Impact Concerns 96.5 Supported, the City has requested the applicant modify the Structure Plan in response to relevant issues and concerns.
97.	Landowner	object	97.1 Does not agree with high rise housing and 1500 extra people.	97.1 Issue 2 - Housing Density and Built Form Concerns
98.	Landowner	object	98.1 Development is too big.	98.1 Issue 2 - Housing Density and Built Form Concerns
99.	Landowner	object	99.1 Opposed to the high density and its impact to adjacent area of low density with larger blocks. 99.2 High density has minimal space for green space and trees. 99.3 Lack of canopy cover will lead to urban heat island impacts. 99.4 Development removes vital river habitat corridor. 99.5 Disagree with the TIA applying a 1 percent annual growth rate to traffic as the development of the size proposed will significant impact more than 1 per cent. 99.6 Concern regarding increase traffic on Clifton St between Brookside Ave and Gilwell Ave. 99.7 Development would cause damage to nature of our area and the amenity residents. 99.8 Put a strain on the existing infrastructure.	99.1 Issue 2 - Housing Density and Built Form Concerns 99.2 Issue 2 - Housing Density and Built Form Concerns 99.3 Issue 1 - Environment Impact Concerns 99.4 Issue 1 - Environment Impact Concerns 99.5 Supported in part, the City. has requested modelling of traffic based on development of the entire Canning River Clifton Street Urban Development Precinct to more accurately establish future traffic volumes/flows. 99.6 Issue 7 -Traffic and Trasport Infrastructure Concerns 99.7 Issue 1 - Environment Impact Concerns 99.8 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
100.	Landowner	object	100.1 Concern regarding environmental impact especially the local river and bush areas where the flora and fauna are already struggling. 100.2 Infrastructure, roads sewage and power are not able to support this high-density development. 100.3 Low-cost housing will result in crime. 100.4 Property values will decline. 100.5 Increase traffic on Clifton Street. 100.6 Negative impact to semi-rural, peaceful and beautiful corner of Kelmscott and big block character. 100.7 Bushfire evacuation concerns as only 2 bridges over the river and Connell Ave was blocked due to fire during the 2011 bushfires roads became gird locked. 100.8 Proposed densities are too high in comparison to adjacent residential R15. 100.9 Concern regarding impact to river and fauna and rubbish and silt entering the river and disturbing wildlife. 100.10 Concern regarding built form impact of high density. 100.11 Concern about removal of trees and Structure Plan reports don't address nesting sites for birds other than Cockatoos. 100.12 Concern regarding consultation with Aboriginal community.	100.1 Issue 1 - Environment Impact Concerns 100.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 100.3 Issue 5 - Social Impact Concerns 100.4 Issue 10 – Other Concerns 100.5 Issue 7 -Traffic and Trasport Infrastructure Concerns 100.6 Issue 6 - Change/loss of Character and Visual Amenity 100.7 Issue 4 - Bushfire Safety Concerns 100.8 Issue 2 - Housing Density and Built Form Concerns 100.9 Issue 1 - Environment Impact Concerns 100.10 Issue 2 - Housing Density and Built Form Concerns 100.11 Issue 1 - Environment Impact Concerns 100.12 Issue 8 - Heritage Concerns
101.	Landowner	object	101.1 Disruptive to our quiet community and not in keeping with area. 101.2 Bushfire evacuation concerns as not enough exit roads.	101.1 Issue 6 - Change/loss of Character and Visual Amenity 101.2 Issue 4 - Bushfire Safety Concerns
102.	Landowner	support	102.1 Will provide economically viable housing. 102.2 Request wastewater (sewerage) services connection to my property in conjunction with this development.	102.1 Supported, the development would increase smaller varied housing stock. 102.2 Not supported, the landowner/developer is not obliged to connect properties outside the structure plan area to sewer.
103.	Landowner	object	103.1 Developments height, scale and appearance unacceptable in comparison to natural landscape and existing residential. 103.2 Height will impact privacy and streetscapes. 103.3 Negative impact on the traffic of the local area. 103.4 Concern regarding construction impacts - lengthy road works and air pollution impacting health. 103.5 Bushfire risk due to growing bottleneck with more residents.	103.1 Issue 2 - Housing Density and Built Form Concerns 103.2 Issue 2 - Housing Density and Built Form Concerns 103.4 Issue 7 -Traffic and Trasport Infrastructure Concerns 103.5 Issue 4 - Bushfire Safety Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
104.	Landowner	object	104.1 Refer to Submission 6.1 to 6.14 above.	104.1 Refer to Submission 6.1 to 6.14 above.
105.	Landowner	object	105.1 Will lose community feel. 105.2 Increased risk of injury due to the density of traffic. 105.3 Development will disturb visual relief from built up suburbs. 105.4 Concern regarding cultural heritage and protection of important sites for future generations. 105.5 Concern high density is too close to Canning River/Bush Forever. 105.6 Concern regarding increase in litter and dumping in the river. 105.7 Concern regarding stormwater contaminants entering the river. 105.8 Height, bulk, scale and appearance of dwellings would be visually out of place with existing area. 105.9 Development will increase noise pollution smell and lighting. 105.10 No proposals to address Brookside Ave/Clifton St dangerous blind corner. 105.11 Pedestrian safety concerns due to speeding on Clifton Street. 105.12 Bushfire evacuation concerns due to limited escape routes – Turner Pl/ Brookside Ave footbridge and Gilwell Ave bridge i.e. 2011 bushfires. 105.13 Concerns regarding urban heat island effect. 105.14 Concerns regarding capacity of Armadale Hospital.	105.1 Issue 6 - Change/loss of Character and Visual Amenity 105.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 105.3 Issue 6 - Change/loss of Character and Visual Amenity 105.4 Issue 8 - Heritage Concerns 105.5 Issue 1 - Environment Impact Concerns 105.6 Issue 1 - Environment Impact Concerns & Issue 5 - Social Impact Concerns 105.7 Issue 1 - Environment Impact Concerns 105.8 Issue 2 - Housing Density and Built Form Concerns 105.9 Issue 1 - Environment Impact Concerns 105.10 Issue 7 -Traffic and Trasport Infrastructure Concerns 105.11 Issue 7 -Traffic and Trasport Infrastructure Concerns 105.12 Issue 4 - Bushfire Safety Concerns. The City recommends the TIA address the need for a traffic bridge at Turner Pl / Brookside Ave. 105.13 Issue 1 - Environment Impact Concerns 105.14 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
106.	Landowner	object	106.1 School cannot accommodate more residents. 106.2 Bushfire risk not enough roads in and out of area.	106.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 106.2 Issue 4 - Bushfire Safety Concerns
107.	Landowner	object	107.1 Concern that roads are not designed for high traffic volumes. 107.2 Concern regarding safety of children due to increase in traffic. 107.3 Negative impact to existing lifestyle and why we bought in the area. 107.4 Negative impact to property values. 107.5 Potential increase in crime.	107.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 107.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 107.3 Issue 6 - Change/loss of Character and Visual Amenity 107.4 Issue 10 – Other Concerns 107.5 Issue 5 - Social Impact Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
108.	Landowner	object	108.1 Environmental impact to the river due to rubbish and chemical run-off. 108.2 Noise pollution. 108.3 Construction work impacts. 108.4 Concern regarding the capacity of Clifton Hill Primary School and Kelmscott Primary School to accommodate additional students from development including lack of parking, traffic/pedestrian safety issues and decline in education standards/outcomes. 108.5 Block sizes will be too small for garden should be R40 minimum. 108.6 Bushfire evacuation concerns due to only 3 escape routes with possible closure due to works or bushfire itself. 108.7 Small house lack outdoor space for recreation and visitors. 108.8 Concern development will become run down like apartments in Kelmscott city centre.	108.1 Issue 1 - Environment Impact Concerns 108.2. Supported in part, the general rise in noise level due to urban development is not a planning consideration, but instance of noise activity can be investigated by the City in accordance with the Noise Regulations. 108.3 Issue 1 - Environment Impact Concerns 108.4 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 108.5 Issue 2 - Housing Density and Built Form Concerns 108.6 Issue 4 - Bushfire Safety Concerns 108.7 Issue 2 - Housing Density and Built Form Concerns 108.8 Issue 5 - Social Impact Concerns
109.	Landowner	object	109.1 Object to the proposed high-density development too dense. 109.2 Will bring problems to roads and traffic and schools. 109.3 Concern regarding environmental impact being so close to the river and the removal of trees.	109.1 Issue 2 - Housing Density and Built Form Concerns 109.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 109.3 Issue 1 - Environment Impact Concerns
110.	Landowner	support	110.1 Against urban sprawl and support infill of existing residential areas. 110.2 Area is close to public transport and amenities so it's a good location for increased housing density. 101.3 Will activate the Canning River and will be a great benefit to the local community.	110.1 Supported, the structure plan area is well located in respect to public amenities i.e., Clifton Hills Primary School and local parks and Kelmscott Commercial centre and transport hub. 110.2 Supported, refer to 110.1 above. 110.3 Supported, ceding of the foreshore and POS allows for public access/enjoyment.
111.	Landowner	object	111.1 Increase in people in suburb with limited access/egress also placing pressure on local amenities and schools.	111.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
112.	Landowner	object	112.1 Concern regarding overpopulation, environmental, social and economic sustainability. 112.2 Infrastructure and roads inadequate and not safe for emergency issues.	112.1 Issue 1 - Environment Impact Concerns & Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 112.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
113.	Landowner	object	113.1 Concern regarding increase traffic congestion particularly on Gilwell Ave and associated pedestrian safety. 113.2 Increase traffic will negatively impact the tranquillity and comfort of our residential neighbourhood including noise and pollution. 1133 Additional bridge over the river required to alleviate the potential burden on Gilwell Ave.	113.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 113.2 Issue 6 - Change/loss of Character and Visual Amenity 113.3 Issue 7 -Traffic and Trasport Infrastructure Concerns. The TIA need to consider the need for a traffic bridge at Turner Pl / Brookside Ave.
114.	Landowner	object	114.1 Moved to Clifton Hills for quite lifestyle. 114.2 Concerned with parking for small houses when families become multi-generational. 114.3 School will become overcrowded. 114.4 Bushfire evacuation concerns due to more road congestion. 114.5 high density will bring undesirable people to the area and reduce safety. 114.6 land clearing will result in loss of habitat and more pollution.	114.1 Issue 6 - Change/loss of Character and Visual Amenity 114.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 114.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 114.4 Issue 4 - Bushfire Safety Concerns 114.5 Issue 5 - Social Impact Concerns 114.6 Issue 1 - Environment Impact Concerns
115.	Landowner	object	115.1 Concerns regarding increase traffic, speed and pedestrian safety. 115.2 School is already at capacity. 115.3 Will devalue properties.	115.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 115.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 115.3 Issue 10 – Other Concerns
116.	Landowner	object	116.1 This is silly please plant trees instead.	116.1 Issue 1 - Environment Impact Concerns
117.	Landowner	object	117.1 Concerned about speeding and pedestrian safety.	117.1 Issue 7 -Traffic and Trasport Infrastructure Concerns
118.	Landowner	object	118.1 Detrimental to biology and environmental values of river zone. 118.2 Concern regarding extra traffic as roads in the areas are inadequate. 118.3 Will increase anti-social behaviour.	118.1 Issue 1 - Environment Impact Concerns 118.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 118.3 Issue 5 - Social Impact Concerns
119.	Landowner	object	119.1 Will bring extra traffic to Clifton St Brookside Ave which is already bad at peak school pick up drop off. 119.2 Schools are already full.	119.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 119.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
120.	Landowner	object	120.1 No comments provided.	120.1 Noted.
121.	Landowner	object	121.1 High density housing in such a concentrated location would affect the environment and river system. 121.2 Effect property values. 121.3 Will bring low-socioeconomic status persons and crime. 121.4 Chose the area for tranquillity.	121.1 Issue 2 - Housing Density and Built Form Concerns 121.2 Issue 10 – Other Concerns 121.3 Issue 5 - Social Impact Concerns 121.4 Issue 6 - Change/loss of Character and Visual Amenity

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
122.	Landowner	object	122.1 Will increased traffic and noise level. 122.2 Schools will not be able to cope with the increased number of children. 122.3 Environment concerns in general.	112.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 122.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 122.3 Issue 1 - Environment Impact Concerns
123.	Landowner	object	123.1 Concerned regarding impact on the river 123.2 Concerned regarding number of high-density dwellings proposed at this site does not align with surrounding area.	123.1 Issue 1 - Environment Impact Concerns 123.2 Issue 2 - Housing Density and Built Form Concerns
124.	Landowner	object	124.1 Increase in traffic and potentially lowering the demographic.	124.1 Issue 7 -Traffic and Trasport Infrastructure Concerns
125.	Landowner	object	125.1 Refer to Submission 6.1 to 6.14 above.	125.1 Refer to Submission 6.1 to 6.14 above.
126.	Landowner	object	126.1 Refer to Submission 6.1 to 6.14 above.	126.1 Refer to Submission 6.1 to 6.14 above.
127.	Landowner	object	127.1 Risk of overcrowding, fire and pollution of the river and cutting of trees and to wildlife.	127.1 Issue 2 - Housing Density and Built Form Concerns and Issue 1 - Environment Impact Concerns
128.	Landowner	object	128.1 Area will lose of areas the tranquil vibe. 128.2 Local schools, parks and road will not be able to cope with influx of people. 128.3 Bushfire evacuation concerns due to additional people and roads becoming grid locked. 128.4 Cheap housing will attract low socio-economic residents which will increase crime in the area. 128.5 Environmental impacts to native wildlife and river system.	128.1 Issue 6 - Change/loss of Character and Visual Amenity 128.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns & Issue 7 -Traffic and Trasport Infrastructure Concerns 128.3 Issue 4 - Bushfire Safety Concerns 128.4 Issue 5 - Social Impact Concerns 128.5 Issue 1 - Environment Impact Concerns
129.	Landowner	object	129.1 Adding more low socioeconomic housing in the area with up to 1000 residents will add to break ins, theft vandalism in the area. 129.2 Moved to area as it is nice quiet neighbourhood compared to other side of train station which will be no longer is plan goes ahead. 129.3 Property devaluation concerns.	129.1 Issue 5 - Social Impact Concerns 129.2 Issue 6 - Change/loss of Character and Visual Amenity 129.3 Issue 10 – Other Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
130.	Landowner	object	130.1 Concern regarding removal of mature trees, a habitat for birds including white tailed Black Cockatoo. 130.2 Development will cause urban heat island. 130.3 Against R80 adjacent to environmentally sensitive river. 130.4 Increase in traffic will cause pollution, noise and congestion. 130.5 Bushfire emergency consequences could be fatal. 130.6 A traffic bridge at Turner Pl/Brookside Ave should be considered. 130.7 Concern regarding capacity of Clifton Hills Primary School and high school. 130.8 Develop should have bigger blocks, more POS and environmentally sustainable designed housing.	130.1 Issue 1 - Environment Impact Concerns 130.2 Issue 1 - Environment Impact Concerns 130.3 Issue 2 - Housing Density and Built Form Concerns 130.4 Issue 7 -Traffic and Trasport Infrastructure Concerns 130.5 Issue 4 - Bushfire Safety Concerns 130.6 Issue 7 -Traffic and Trasport Infrastructure Concerns. The City recommends the TIA address the need for a traffic bridge at Turner Pl / Brookside Ave. 130.7 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 130.8 Issue 2 - Housing Density and Built Form Concerns
131.	Landowner	support	131.1 More houses in a safe area for families near schools, shops, doctors, public transport - Kelmscott train station and good for elderly people and students (non-drivers). 131.2 Will reducing cars on the roads. 131.3 Good for businesses in the area. 131.4 Public space near the river allows everyone to enjoy not just the landowners.	131.1 Supported, the structure plan area is well located in respect to public amenities i.e., Clifton Hills Primary School and local parks and Kelmscott Commercial centre and transport hub. 131.2 Supported, 131.3 Supported, the development of the structure plan area will increase the business population catchment. 131.4 Supported.
132.	Landowner	object	132.1 Lots are too small in comparison to exiting area large blocks with trees.	132.1 Issue 2 - Housing Density and Built Form Concerns

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
133.	Landowner	object	133.1 Addition of multiple two-storey buildings with an extremely large number of residents would be out of place with adjacent quite suburb. 133.2 Volumes of traffic on the local roads with the related increase in road noise effecting the whole of Clifton Street and connecting streets. 133.3 There would also be severe disruptions to roads during construction. 133.4 Bushfire safety concerns regarding retirement village in the development. 133.5 Bushfire evacuation concerns due to limited exists and made worse by more residents. 133.6 Clifton Hills Primary School is already at capacity and using portable buildings also impact to Kelmscott Primary School. 133.7 Impact to Armadale Hospital is not considered especially as development includes retirement village. 133.8 Impact to commercial amenities such as supermarkets, gyms, and cafés has not been considered which impact the lifestyle of current resident. 133.9 Not enough space for trees and bushland for local wildlife and ecosystem to supplement the building development. 133.10 Would contribute to climate change.	133.1 Issue 2 - Housing Density and Built Form Concerns 133.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 133.3 Issue 1 - Environment Impact Concerns 133.4 Issue 4 - Bushfire Safety Concerns 133.5 Issue 4 - Bushfire Safety Concerns 133.6 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 133.7 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 133.8 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 133.9 Issue 2 - Housing Density and Built Form Concerns 133.10 Not supported, the submission does not demonstrate this impact.
134.	Landowner	object	134.1 Concern regarding traffic impact with more housing. 134.2 Will have a harmful impact on nature reserves and river and wildlife. 134.3 School can't cope with influx of new residents. 134.4 Crime and hooning (speeding) will increase. 134.5 damage peaceful and tight kinit community.	134.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 134.2 Issue 1 - Environment Impact Concerns 134.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 134.4 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 134.5 Issue 5 - Social Impact Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
135.	Landowner	object	135.1 Proposal will cause habitat destruction and disrupt local wildlife. Protecting our natural environment and biodiversity should take high priority. 135.2 Proposal will increase traffic congestion and pose a safety risks. 135.3 The quiet, peaceful environment that attracted residents to this area will be compromised. 135.4 Proposal will lead to overcrowding and increase in crime. 135.5 There will be insufficient parking. 135.6 High-density will increased noise levels and pollution from construction activities. 135.7 Will alter the serenity and close-knit feel of community.	135.1 Issue 1 - Environment Impact Concerns 135.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 135.3 Issue 6 - Change/loss of Character and Visual Amenity 135.4 Issue 2 - Housing Density and Built Form Concerns & Issue 5 - Social Impact Concerns 135.5 Issue 7 -Traffic and Trasport Infrastructure Concerns 135.6 Issue 6 - Change/loss of Character and Visual Amenity
136.	Landowner	object	136.1 Concern the development won't have sufficient parking. 136.2 Density is too high as limited road access in an out of the area. 136.3 Public open space provision is insufficient as most is Bush Forever and drainage and unusable so POS should be increased for recreation.	136.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 136.2 Issue 2 - Housing Density and Built Form Concerns 136.3 Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns
137.	Landowner	object	137.1 Medium to high density development in Clifton Hills (Kelmscott) is inconsistent with current neighbourhood character. 137.2 Proposal has not taken into consideration the existing neighbourhood character such as lot sizes, streetscape, front setbacks, architectural style, building form, height, building materials, location and size of private open space. 137.3 A compromise R20 coding zoning should be agreed. 137.4 A 2 storey height limit should be imposed. 137.5 Local primary school will become overcrowded and education standard will decline. 137.6 Current trains services cannot cope with existing passenger numbers let alone more. 137.7 Traffic concerns local roads will become congested nad dangerous for children as traffic is already backed up along Gilwell Ave past Page Rd and the bridge on Gilwell Ave. 137.8 Additional residents/students will contribute to parking problems as Clifton Hills Primary School. 137.9 Proposal will increase urban heat island effect. Verge should be wider for shade trees and larger shade trees with developments.	137.1 Issue 2 - Housing Density and Built Form Concerns 137.2 Issue 2 - Housing Density and Built Form Concerns 137.3 Issue 2 - Housing Density and Built Form Concerns 137.4 Issue 2 - Housing Density and Built Form Concerns 137.5 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 137.6 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 137.7 Issue 7 -Traffic and Trasport Infrastructure Concerns 137.8 Issue 7 -Traffic and Trasport Infrastructure Concerns 137.9 Issue 1 - Environment Impact Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
138.	Landowner	object	138.1 A local development plan (LDP) for R60 and R80 be considered to limit parking to 1 bay possibly some without parking bays as close to station. 138.2 Concern regarding increase in traffic including limited access in and out of the area. 138.3 POS has limited recreation function due to basins and Bush Forever and should be increased in area.	138.1 Issue 2 - Housing Density and Built Form Concerns 138.2 Issue 1 - Environment Impact Concerns 138.3 Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns
139.	Landowner	object	139.1 Will lead to overcrowding and traffic congestion on local roads. 139.2 Potential harm to environmentally significant areas including animal habitat like the reserve and Bush Forever land. 139.3 Potential to obstruct views. 139.4 Potential to disrupt peaceful community.	139.1 Issue 2 - Housing Density and Built Form Concerns & Issue 7 -Traffic and Trasport Infrastructure Concerns 139.2 Issue 1 - Environment Impact Concerns 139.3 Issue 2 - Housing Density and Built Form Concerns 139.4 Issue 6 - Change/loss of Character and Visual Amenity
140.	Landowner	object	140.1 Development will destroy eco-system and displace thousands of species of wildlife including the local magpies. 140.2 The Brookside Ave/Clifton St corner is already dangerous. 140.3 Clifton Hills Primary School is already overcrowded and demountable classrooms occupying oval/play space. 140.4 Bushfire evacuation concerns due to roads becoming grid locked in 2011 bushfires and more residents/cars worsening the problem. 140.5 Not enough day cares in the area for more demand. 140.6 Closure of train service will put more pressure on roads. 140.7 Impact to the semi-rural lifestyle, why I moved here.	140.1 Issue 1 - Environment Impact Concerns 140.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 140.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 140.4 Issue 4 - Bushfire Safety Concerns 140.5 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 140.6 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 140.7 Issue 6 - Change/loss of Character and Visual Amenity
141.	Landowner	support	141.1 Infill to reduce urban sprawl and destruction of vegetation. 141.2 More people to live in close proximity to public transport. 141.3 Higher density allows people to get into the housing market with smaller reasonably priced homes. 141.4 Will provide public open space along the river to benefit the wider community which is now restricted to the public. 141.5 River can be rehabilitated; weeds reduced and promote river health.	141.1 Supported, The structure plan area is well located in respect to public amenities i.e., Clifton Hills Primary School and local parks and Kelmscott Commercial centre and transport hub. 141.2 Supported in part, the City recommends the R60 and R80 be removed and replaced with R40 (medium) density. The proximity of the train station still provides an opportunity for park or cycle and ride. 141.3 Supported, the City supports affordable housing types. 141.4 Supported, agreed. 141.5 Supported, the POS/Foreshore would be rehabilitated by the developer at subdivision stage.

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NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
142.	Landowner	object	142.1 Bushfire evacuation concerns due to limited escape routes including closer of Connell Ave and Orlando St during 2011 bushfires. An additional bridge over the river is required. 142.2 Aboriginal peoples should be consulted regarding impact to local ecosystem.	142.1 Issue 4 - Bushfire Safety Concerns. The City recommends the TIA address the need for a traffic bridge at Turner Pl / Brookside Ave. 142.2 Issue 8 - Heritage Concerns
143.	Landowner	object	143.1 Purchased due to the friendly and safe nature of the area which will change with high density. 143.2 Views would be blocked by 2-3 storey buildings. 143.3 High density brings safety concerns.	143.1 Issue 6 - Change/loss of Character and Visual Amenity 143.2 Issue 2 - Housing Density and Built Form Concerns 143.3 Issue 5 - Social Impact Concerns
144.	Landowner	object	144.1 No comments provided.	144.1 Noted.
145.	Landowner	object	145.1 Bushfire evacuation concerns especially for elderly/people with children/disabilities due to only 3 exits to Albany Highway (Gilwell Bridge, Orlando Bridge, Connell Avenue), and if the bushland along Connell is on fire, there's only 2 main exits example being 2011 bushfires. Extra housing/population will worsen traffic congestion situation. 145.2 Loss of large trees and bushland around the river. 145.3 Buffer zone around the river is not wide enough. 145.4 Concern development is built in the flood plain. 145.5 Rubbish and fertilisers from the development will pollute the river. 145.6 Lack of parking in high density developments. 145.7 Multi-storey homes, overlooking each other and into backyards, causing issues with privacy for some people. 145.8 Prefer development with larger block sizes. 145.9 Concern regarding adequacy of train service to accommodate extra patrons from development.	145.1 Issue 4 - Bushfire Safety Concerns 145.2 Issue 1 - Environment Impact Concerns 145.3 Issue 1 - Environment Impact Concerns 145.4 Issue 1 - Environment Impact Concerns 145.5 Issue 1 - Environment Impact Concerns 145.6 Issue 7 -Traffic and Trasport Infrastructure Concerns 145.7 Issue 2 - Housing Density and Built Form Concerns 145.8 Issue 2 - Housing Density and Built Form Concerns 145.9 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
146.	Landowner	object	146.1 If proposal goes ahead, it will bring huge amounts of traffic and petty crime to the area. 146.2 Density is too high. 146.3 Residents value the space and tranquillity that the suburb provides and would agree this will not bring any benefit.	146.1 Issue 7 -Traffic and Trasport Infrastructure Concerns & Issue 5 - Social Impact Concerns 146.2 Issue 2 - Housing Density and Built Form Concerns 146.3 Issue 6 - Change/loss of Character and Visual Amenity

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
147.	Landowner	support	147.1 Plan allows more people to live in Kelmscott. 147.2 I can downsize to a smaller property in the area. 147.3 The foreshore can be rehabilitated. 147.4 Will assist in preventing urban sprawl.	147.1 Supported, agreed. 147.2 Supported, agreed. 147.3 Supported, the POS/Foreshore would be rehabilitated by the developer at subdivision stage. 147.4 Supported, the structure plan area is well located in respect to public amenities i.e., Clifton Hills Primary School and local parks and Kelmscott Commercial centre and transport hub.
148.	Landowner	object	148.1 Concerned regarding height and appearance of buildings. 148.2 Traffic will be a problem especially around the school and lack of parking. 148.3 Damage will be done to river and birds that come to the area. 148.4 Train Station is too remote. 148.5 School can't cope with student influx.	148.1 Issue 2 - Housing Density and Built Form Concerns 148.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 148.3 Issue 1 - Environment Impact Concerns 148.4 Issue 2 - Housing Density and Built Form Concerns 148.5 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
149.	Landowner	object	149.1 Will increase crime rate. 149.2 Will increase traffic and noise.	149.1 Issue 5 - Social Impact Concerns 149.2 Issue 7 -Traffic and Trasport Infrastructure Concerns
150.	Landowner	object	150.1 Density too high. 150.2 Will increase crime.	150.1 Issue 2 - Housing Density and Built Form Concerns 150.2 Issue 5 - Social Impact Concerns
151.	Landowner	support	151.1 Will provide homes for families and will help with rental and housing crisis.	151.1 Supported, agreed.
152.	Landowner	object	152.1 Proposal will devalue properties. 152.2 unnecessarily overcrowding. 152.3 Will affect the riverside nad nature. 152.4 Developed areas wouldn't be able to handle a development of this size, traffic, amenities etc. 152.5 Will take away country/city lifestyle.	152.1 Issue 10 – Other Concerns 152.3 Issue 2 - Housing Density and Built Form Concerns 152.3 Issue 1 - Environment Impact Concerns 152.4 Issue 7 -Traffic and Trasport Infrastructure Concerns & Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 152.5 Issue 6 - Change/loss of Character and Visual Amenity
153.	Landowner	support	153.1 Need young families any youth in the area. 153.2 Support access to the Canning River (POS).	153.1 Supported, the City supports diversity in household types and affordable housing. 153.2 Supported, the POS/Foreshore would be rehabilitated by the developer at subdivision stage.

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
154.	Landowner	object	154.1 Too many dwellings on the river front will ruin the areas tranquillity and peacefulness. 154.2 Concerned about traffic management.	154.1 Issue 2 - Housing Density and Built Form Concerns 154.2 Issue 7 -Traffic and Trasport Infrastructure Concerns
155.	Landowner	comment	155.1 Support lower density development. 155.2 A new bridge over river to Albany Highway is required for bushfire evacuation.	155.1 Issue 2 - Housing Density and Built Form Concerns 155.2 Issue 4 - Bushfire Safety Concerns. The TIA need to consider the need for a traffic bridge at Turner Pl / Brookside Ave.
156.	Landowner	object	156.1 Development too intense and infrastructure can't cope. 156.2 Bushfire evacuation concerns if more homes added. 156.3 Supports retaining country feel with larger blocks.	156.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 156.2 Issue 4 - Bushfire Safety Concerns 156.3 Issue 6 - Change/loss of Character and Visual Amenity

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
157.	Landowner	object	157.1 Built form impacts including: 2 storeys buildings will impact the current landscape, impact privacy and overlooking my home and no requirements regarding appearance and materials. 157.2 Impacts on air quality/pollution or smells, and overall land degradation from development. 157.3 Concern regarding Traffic Impact Assessment (TIA) data including COVID 19 and Denney Avenue level crossing. 157.4 TIA does not include proposals for road upgrades. 157.5 TIA makes reference to proposed school which will increase traffic which is not considered. 157.6 Concern regarding limited parking including lack of detail on visitor parking being provided in roads. 157.7 Concerns regarding construction impacts i.e. vehicles, large plant equipment, earthmovers, cranes etc. 157.8 Concerns regarding erosion, earth movement/subsidence, impacting surrounding properties, as well insufficient attention to the impact of acid and sulphate soils. 157.9 Increase prevalence of mosquitos and midges, and associated pathogens from development. 157.10 Impact on local fauna habitats, eg Black Cockatoos and other fauna who utilise the area as a movement corridor. 157.11 Consultation should be sought from Aboriginal groups. 157.12 Concern regarding adequacy of utility services – water, power and sewer. 157.13 Concern regarding telecommunications coverage in bushfire situations. 157.14 Lack of information of how new dwellings will fit within the current landscape and planting of trees.	157.1 Issue 2 - Housing Density and Built Form Concerns 157.2 Issue 1 - Environment Impact Concerns 157.3 Issue 7 -Traffic and Trasport Infrastructure Concerns & heading 157.4 Issue 7 -Traffic and Trasport Infrastructure Concerns 157.5 Issue 7 -Traffic and Trasport Infrastructure Concerns 157.6 Issue 7 -Traffic and Trasport Infrastructure Concerns 157.7 Issue 1 - Environment Impact Concerns 157.8 Issue 1 - Environment Impact Concerns 157.9 Not supported, the matter would be addressed in a revised Midge and Mosquito Management Plan acceptable to the City. 157.10 Issue 1 - Environment Impact Concerns 157.11 Issue 8 - Heritage Concerns 157.12 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 157.13 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 157.14 Issue 2 - Housing Density and Built Form Concerns
158.	Landowner	object	158.1 Concern regarding increase in traffic and capacity of roads. 158.2 More cars will cause pollution in a valley area and pedestrian traffic will decrease. 158.3 Concern regarding tall buildings. 158.4 Concern regarding loss of vegetation.	158.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 158.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 158.3 Issue 2 - Housing Density and Built Form Concerns 158.4 Issue 1 - Environment Impact Concerns

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
159.	Landowner	object	159.1 Negative affect on local shops and amenities. The schools cannot and wont handle such a large influx. 159.2 The schools cannot and wont handle such a large influx. 159.3 Worsen speeding on Connell Ave. 159.4 Environmental impact the river will have with rubbish and added pollution. 159.5 increase in theft and break ins.	159.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 159.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 159.3 Not supported, there is no evidence/information provided that the development will cause speeds to increase on Connell Ave. 159.4 Issue 1 - Environment Impact Concerns 159.5 Issue 5 - Social Impact Concerns
160.	Landowner	object	160.1 It would affect our peace and serenity, why we bought here. 160.2 Concerned about safety with new residents.	160.1 Issue 6 - Change/loss of Character and Visual Amenity 160.2 Issue 5 - Social Impact Concerns
161.	Landowner	object	161.1 I do not support this proposed structure plan.	161.1 Noted
162.	Landowner	object	162.1 Objection to the High Density 162.2 Clifton Hills Primary School and Kelmscott Primary School are at their limit for the number of pupils parking for parents picking up and dropping off students for school is limited and dangerous. 162.3 Armadale Hospital parking is also limited won't be able to cope with more patients. 162.4 The corner of Brookside Ave and Clifton Stis a dangerous corner. 162.5 The addition of 3 storey buildings close to the Canning River will cause some problems for the wildlife. 162.6 Concern with access via Gilwell Ave to the Highway in the case of bushfire as was the case in 2011. With more people/cars in the area evacuation will be more difficult. 162.7 Units for elderly people in the area wishing to downsize would be a better option.	162.1 Issue 2 - Housing Density and Built Form Concerns 162.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 162.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 162.4 Issue 7 -Traffic and Trasport Infrastructure Concerns 162.5 Issue 1 - Environment Impact Concerns 162.6 Issue 4 - Bushfire Safety Concerns 162.7 Supported, medium densities proposed can provide downsizing options.
163.	Landowner	object	163.1 Concern regarding environment damage to the area. 163.2 This area is not the right area for this sort of housing. 163.3 It will be awful for the school traffic.	163.1 Issue 1 - Environment Impact Concerns 163.2 Issue 2 - Housing Density and Built Form Concerns 163.3 Issue 7 -Traffic and Trasport Infrastructure Concerns
164.	Landowner	object	164.1 No comments provided.	164.1 Noted.

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
165.	Landowner	object	165.1 Concern regarding environment damage to the area. 165.2 Proposed housing not suited to area. 165.2 Increase in school traffic.	165.1 Issue 1 - Environment Impact Concerns 165.2 Issue 2 - Housing Density and Built Form Concerns 165.3 Issue 7 -Traffic and Trasport Infrastructure Concerns
166.	Landowner	Comment	166.1 Concerns regarding the density and proposed height of dwellings. A maximum height of buildings along Brookton Avenue should be set at 2 stories in line with Clifton Street. 166.2 Concern no maximum height for R80 development. 166.3 Population increase will put pressure on social amenities. 166.4 Concerns regarding increase in traffic on Clifton Street.	166.1 Issue 2 - Housing Density and Built Form Concerns 166.2 Issue 2 - Housing Density and Built Form Concerns 166.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 166.4 Issue 7 -Traffic and Trasport Infrastructure Concerns
167.	Landowner	object	167.1 Proposed density is inconsistent with R-Code on east side of Clifton Street. 167.2 High density could set a precedent for same residential developments along much of this section of the Canning River. 167.3 Trees will be removed to accommodate the high-density development. 167.4 Clifton St and Brookside Ave are one lane streets combine with construction traffic along with local traffic would cause congestion problems for the locals who use these roads, including emergency services. 167.5 Concern urban stormwater run-off form development will pollute the river with oil, fuel, fertilisers and herbicide. 167.6 Bushfire evacuation concerns due to one exit to Albany Hwy. 167.7 High density development will endanger river marine life and bird life in the area.	167.1 Issue 2 - Housing Density and Built Form Concerns 167.2 Issue 10 – Other Concerns 167.3 Issue 1 - Environment Impact Concerns & Report heading Natural Environment & Trees 167.4 Issue 7 -Traffic and Trasport Infrastructure Concerns 167.5 Issue 1 - Environment Impact Concerns 167.6 Issue 4 - Bushfire Safety Concerns 167.7 Issue 1 - Environment Impact Concerns
168.	Landowner	comment	168.1 Proposed housing will change to areas character including loss of river and trees. 168.2 Loss of community feel.	168.1 Issue 6 - Change/loss of Character and Visual Amenity & Issue 1 - Environment Impact Concerns 168.2 Issue 6 - Change/loss of Character and Visual Amenity
169.	Landowner	object	169.1 3 Storeys not in keeping with existing housing. 169.2 Development will increase traffic and noise. 169.3 Clifton Hills Primary School is too small for extra students. 169.4 Increased traffic on Clifton St nad bushfire evacuation concerns. 169.5 Concern regarding building works impacting river. 169.6 Density is too high.	169.1 Issue 2 - Housing Density and Built Form Concerns 169.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 169.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 169.4 Issue 7 -Traffic and Trasport Infrastructure Concerns 169.5 Issue 1 - Environment Impact Concerns 169.6 Issue 2 - Housing Density and Built Form Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
170.	Landowner	object	170.1 Concern regarding impact to existing community.	170.1 Issue 6 - Change/loss of Character and Visual Amenity & Issue 5 - Social Impact Concerns
171.	Landowner	object	171.1 Concern regarding wind borne material and runoff to the river during construction phase. 171.2 Proposed density of the estate is not at all fitting with the existing housing in Kelmscott. 171.3 Proposed housing density leads to an increase in ambient temperature and contribute to climate change.	171.1 Issue 1 - Environment Impact Concerns 171.2 Issue 2 - Housing Density and Built Form Concerns 171.3 Not supported,
172.	Landowner	object	172.1 Concern regarding impact to land nature and waterways. 172.2 Concern regarding increase traffic and access to and from Albany Highway. 172.3 Local school can't accommodate more student and education standards will drop. 172.4 Increase in crime and dumping of rubbish in bush.	172.1 Issue 1 - Environment Impact Concerns 172.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 172.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 172.4 Social Impact Concerns
173.	Landowner	object	173.1 Lack of social infrastructure in the area. 173.2 Concern regarding increase in crime i.e. vandalism. 173.3 Concern regarding impact to exist community.	173.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 171.2 Issue 5 - Social Impact Concerns 171.3 Issue 6 - Change/loss of Character and Visual Amenity & Issue 5 - Social Impact Concerns
174.	Landowner	object	174.1 Development will set a precedent for further development along the river. 174.2 Will impact to river ecosystem plants and animals. 174.3 Heat Island effect. 174.4 Loss of trees and canopy cover. 174.5 Construction would create runoff during the building process and damage river. 174.6 Clifton Street would be become congested. 174.7 Traffic safety due to poor visibility at Brookside intersection. 174.8 Car parking concerns due to development. 174.9 Development would result in major change to the area and the liveability ratings and not in keeping with reason people live here.	174.1 Issue 10 – Other Concerns 174.2 Issue 1 - Environment Impact Concerns 174.3 Issue 1 - Environment Impact Concerns 174.4 Issue 1 - Environment Impact Concerns & refer to Report heading Natural Environment & Trees 174.5 Issue 1 - Environment Impact Concerns & refer to Report heading Natural Environment & Trees 174.6 Issue 1 - Environment Impact Concerns 174.7 Issue 7 -Traffic and Trasport Infrastructure Concerns 174.8 Issue 7 -Traffic and Trasport Infrastructure Concerns 174.9 Issue 7 -Traffic and Trasport Infrastructure Concerns 174.10 Issue 6 - Change/loss of Character and Visual Amenity

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
175.	Landowner	object	175.1 Concern regarding runoff/pollution impact to river and downstream. 175.2 Development will constrain social and commercial services – schools, retail. 175.3 Don't support high density.	175.1 Issue 1 - Environment Impact Concerns 175.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 175.3 Issue 2 - Housing Density and Built Form Concerns

176.	Landowner	object	176.1 R40 interface is not in keeping to existing housing density and style and will reduce natural light. 176.2 Density not in keeping with character – bushland. 176.3 R40 density should be serviced with laneways to reduce garage and access impacts to Clifton Street. 176.4 Density is too high for location. 176.5 Proposed POS is encumbered by Bush Forever. 176.6 Concern regarding financial viability of development. 176.7 Clifton Street is not wide enough for additional traffic. 176.8 Concern regarding driveway access to Clifton Street due to increase traffic. 176.9 Pedestrian safety concerns especially associated with school and crossing of Clifton Street and no footpath of the development side of Clifton Street. 176.10 Concern regarding Gilwell/Page Rd intersection being insufficient and creating a traffic hazard. 176.11 Brookside/Clifton to Connell Ave traffic management which has not been mentioned in the proposal. 176.12 Connell Avenue issues speeding, accidents. 176.13 Development will cause roadkill. 176.14 Traffic safety concerns at intersection of Turner Road by cars speeding down the hill at blind corner. 176.15 Local schools are already at capacity no room for more students and walkability concerns. 176.16 There is a lack of medical/doctor in the area. 176.17 Kelmscott shopping centres car parks are inadequate and not walkable from the development. 176.18 Proposal is greater than 800 metres walking distance to train station and therefore does not meet the criteria for high density development. 176.19 Future residents will need to drive and there are inadequate parking bays at the train station. 176.20 Concern regarding lack of consultation and compliance with Aboriginal heritage. 176.21 Lack of detail on letter management and concern regarding litter impact to river. 176.22 Concern regarding impact to river from high density development. 176.23 Concern regarding loss of trees and impact to birdlife. 176.24 Proposal will impact our current lifestyle.	176.1 Issue 2 - Housing Density and Built Form Concerns 176.2 Issue 2 - Housing Density and Built Form Concerns 176.3 Issue 2 - Housing Density and Built Form Concerns 176.4 Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns 176.5 Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns 176.6 Noted. 176.7 Issue 7 -Traffic and Trasport Infrastructure Concerns 176.8 Not supported, driveway access to Clifton St will be maintained and Clifton St generally has good sight lines for reversing vehicle. 176.9 Issue 7 -Traffic and Trasport Infrastructure Concerns 176.10 Issue 7 -Traffic and Trasport Infrastructure Concerns 176.11 Issue 7 -Traffic and Trasport Infrastructure Concerns & Report heading Road Network and Traffic Management 176.12 Not supported, there is no evidence that speeding will increase on Connell Ave. 176.13 Supported, signage along the proposed POS interface road could be installed to alert drives to the potential for wildlife crossing roads. 176.14 Issue 7 -Traffic and Trasport Infrastructure Concerns 176.14 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 176.15 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 176.16 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 176.17 Issue 2 - Housing Density and Built Form Concerns 176.18 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 176.19 Issue 8 - Heritage Concerns 176.20 Issue 1 - Environment Impact Concerns 176.21 Issue 1 - Environment Impact Concerns 176.22 Issue 1 - Environment Impact Concerns 176.23 Issue 6 - Change/loss of Character and Visual Amenity
177.	Landowner	object	177.1 Concern regarding limited (2 access) street to Albany Hwy and increase in traffic congestion and accidents.	177.1 Issue 7 -Traffic and Trasport Infrastructure Concerns

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
178.	Landowner	object	178.1 Concerns about the impact on the natural environment including trees and wildlife that currently exist along the Canning River. 178.2 Concern that stormwater entering the river may be a significant risk to the biodiversity and conservation of the river. 178.3 R60 & R80 dwelling are not in keeping the existing dwelling in the Clifton Hills/Kelmscott area. 178.4 Development will impact the natural beauty of the river and local area. 178.5 Additional dwellings along the river will set a precedent for further developments along the Canning River. 178.6 Increase in local traffic and impact to safety of children walking to school. 178.7 Lack of traffic management on Clifton Street. 178.8 Concern local school can't accommodate extra students from development. 178.9 Concern local medical facility can't accommodate extra population from development.	178.1 Issue 1 - Environment Impact Concerns & Report heading Natural Environment & Tree Retention 178.2 Issue 1 - Environment Impact Concerns 178.3 Issue 2 - Housing Density and Built Form Concerns 178.4 Issue 6 - Change/loss of Character and Visual Amenity 178.5 Issue 10 – Other Concerns 178.6 Issue 7 -Traffic and Trasport Infrastructure Concerns 178.7 Issue 7 -Traffic and Trasport Infrastructure Concerns 178.8 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 178.9 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns
179.	Landowner	object	179.1 Concern with overlooking from 2 and 3 storey houses. 179.2 Gilwell Ave won't be able to cope with traffic and noise. 179.3 Impacts to air and water quality. 179.4 Public School and hospital capacity concerns. 179.5 Bushfire safety concerns. 179.6 Proposals to near retirement units on Brookside.	179.1 Issue 2 - Housing Density and Built Form Concerns 179.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 179.3 Issue 1 - Environment Impact Concerns 179.4 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 179.5 Issue 4 - Bushfire Safety Concerns 179.6 Noted.
180.	Landowner	object	180.1 Concern regarding increase on traffic on Brookside Ave and Clifton St and road capacity to accommodate. 180.2 Concern regarding elderly pedestrians. 180.3 Impact to local wildlife. 180.4 More Crime.	180.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 180.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 180.3 Issue 1 - Environment Impact Concerns 180.4 Issue 5 - Social Impact Concerns
181.	Landowner	object	181.1 Refer to Submission 6.1 to 6.14 above.	181.1 Refer to Submission 6.1 to 6.14 above.

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
182.	Landowner	object	182.1 Primary schools will loss green space for temporary classrooms because of increase in population. 182.2 Height, bulk and scale of the proposed buildings is not in keeping with the established homes. 182.3 Impact on the river, flora and inhabitants during construction due to habitat loss and run off. 182.4 The loss of large trees (habitat) and if replaced would take years to establish and are required to prevent riverbank erosion. 182.5 Bushfire evacuation concerns due to inadequate road infrastructure. 182.6 Amenity impacts due to increase noise and traffic 182.7 Roadkill increase. 182.8 Pedestrian safety concerns due to increase traffic and no proposed road or footpath upgrades. 182.9 Black spot at Clifton and Brookside Intersection. 182.10 Train station is greater than walking distance so residents will use cars.	182.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 182.2 Issue 2 - Housing Density and Built Form Concerns 182.3 Issue 1 - Environment Impact Concerns 182.4 Issue 1 - Environment Impact Concerns & refer to Report heading Natural Environment & Tree Retention 182.5 Issue 4 - Bushfire Safety Concerns 182.6 Issue 7 -Traffic and Trasport Infrastructure Concerns 182.7 Supported, signage along the proposed POS interface road could be installed to alert drives to the potential for wildlife crossing roads. 182.8 Issue 7 -Traffic and Trasport Infrastructure Concerns 182.9 Issue 7 -Traffic and Trasport Infrastructure Concerns 182.10 Issue 2 - Housing Density and Built Form Concerns
183.	Landowner	object	183.1 Moved here for foothills living space not traffic jam packed streets. 183.2 Concern environmental impacting water/air pollution & land degradation, birdlife and wildlife. 183.3 Object to height, bulk & scale of future buildings and loss of privacy. 183.4 Concern regarding impact to streetscapes. 183.5 Not compatible with this development in foothills environment. 183.6 Concern regarding adequate public infrastructure includes health & safety. 183.7 Concern regarding increase in rubbish and personal safety.	183.1 Issue 6 - Change/loss of Character and Visual Amenity 183.2 Issue 1 - Environment Impact Concerns 183.3 Issue 2 - Housing Density and Built Form Concerns 183.4 Issue 2 - Housing Density and Built Form Concerns 183.5 Issue 6 - Change/loss of Character and Visual Amenity 183.6 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 183.7 Issue 5 - Social Impact Concerns
184.	Landowner	object	184.1 Refer to Submission 6.1 to 6.14 above.	184.1 Refer to Submission 6.1 to 6.14 above.

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
185.	Landowner	object	185.1 Density is too high. 185.2 Bushfire evacuation concerns due to limited escape route being Gilwell Ave as Connell Ave was blocked off. 185.3 Increase in traffic concerns. 185.4 Parking concerns due to more cars especially around the school. 185.5 Impact to streetscape of 2 storey buildings with minimal setbacks. 185.6 Concern regarding additional run off and pollution into the river. 185.7 Concern regarding impacts of construction site works. 185.8 Concern regarding precedent for further development.	185.1 Issue 2 - Housing Density and Built Form Concerns 185.2 Issue 4 - Bushfire Safety Concerns 185.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 185.4 Issue 7 -Traffic and Trasport Infrastructure Concerns 185.5 Issue 2 - Housing Density and Built Form Concerns 185.6 Issue 1 - Environment Impact Concerns 185.7 Issue 1 - Environment Impact Concerns 185.8 Issue 10 – Other Concerns
186.	Landowner	object	186.1 We object as of many reasons.	186.1 Noted
187.	Landowner	object	187.1 No.	187.1 Noted
188.	Landowner	object	186.1 Concern regarding contaminates entering the river and impacting aquatic wildlife. 188.2 Concern with maintain water flow to the river. 188.3 Concern regarding aboriginal heritage and consultation.	188.1 Issue 1 - Environment Impact Concerns 188.2 Issue 1 - Environment Impact Concerns 188.3 Issue 8 - Heritage Concerns
189.	Landowner	object	189.1 Concerned about risk of bushfires with so many homes/people in such a small area very with limited ways out of the area will be dangerous. 189.2 Concern regarding impact of traffic, noise and smell and land degradation to birds and animals in Canning River.	189.1 Issue 4 - Bushfire Safety Concerns 189.2 Issue 7 -Traffic and Trasport Infrastructure Concerns & Issue 1 - Environment Impact Concerns
190.	Landowner	comment	190.1 Increase traffic and noise will impact our area. 190.2 More trees should be planted along the river.	190.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 190.2 Supported, refer to report heading Natural Environment & Tree Retention.
191.	Landowner	object	191.1 Increase in traffic will threaten both motorists and pedestrians, particularly schoolchildren and the elderly particularly Clifton St and Gilwell Ave. 191.2 Density and height of the proposal is excessive for the area and is not used elsewhere in the City of Armadale. 191.3 Run-off with contaminants will enter the river and be detrimental to fauna and native flora. 191.4 Bushfire evacuation concerns due to roads become gridlocked like 2011 bushfires. Brooks side pedestrian bridge should be upgrade to traffic bridge. 191.5 Area is not suited to high density as trains station is 20 minute of foot, too far.	191.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 191.2 Issue 2 - Housing Density and Built Form Concerns 191.3 Issue 1 - Environment Impact Concerns 191.4 Issue 4 - Bushfire Safety Concerns. The City recommends the TIA address the need for a traffic bridge at Turner Pl / Brookside Ave. 191.5 Issue 2 - Housing Density and Built Form Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
192.	Landowner	object	192.1 Should be built in Byford.	192.1 Noted
193.	Landowner	object	193.1 Lack of consultation with Aboriginal Land and Sea Council. 193.2 Areas walking distance to train station is understated should be approximately 1.3km. 193.3 Traffic survey data of 2017 is outdated. 193.4 Concerns regarding bushfire evacuated during the bushfires in 2011 and it took 45 minutes to get to a safe area the other side of the Canning River via Gilwell Avenue. Connell Avenue was closed in 2011 due to fire. Theres in no plan or proposal is Structure Plan for any new bridges to alleviate this problem. 193.5 Proposed verges are too narrow for large tree/canopy cover and will lead to heat island effect. 193.6 Concerned regarding Clifton streetscape due to 2 storey development in comparison to existing residential on opposite side. Single storey is more in keeping.	193.1 Issue 8 - Heritage Concerns 193.2 Issue 2 - Housing Density and Built Form Concerns 193.3 Issue 7 -Traffic and Trasport Infrastructure Concerns & refer to heading 193.4 Issue 4 - Bushfire Safety Concerns. T The City recommends the TIA address the need for a traffic bridge at Turner Pl / Brookside Ave. 193.5 Issue 2 - Housing Density and Built Form Concerns 193.6 Issue 2 - Housing Density and Built Form Concerns
194.	Landowner	object	194.1 Will have detrimental effects on the surrounding area, the native flora and fauna is already being encroached on, the wildlife in the area is already being forced out and killed daily on our roads. 194.2 Development should be confined to two road frontages.	194.1 Issue 1 - Environment Impact Concerns and regarding roadkill, signage along the proposed POS interface road could be installed to alert drives to the potential for wildlife crossing roads. 194.2 Not supported, the Urban Development zone extend to the proposed river foreshore reserve so may be considered for urban development.
195.	Landowner	comment	195.1 Object to the height and density of the proposed dwellings which should be less. 195.2 Main concern is the health of the river, a bush corridor for wildlife, land degradation and removal of old jarrah, Marri trees along with bush destroys homes for out wildlife. Endangered Black Cockatoos, Brushtail Possums, quendas, lizards, birds require.	195.1 Issue 2 - Housing Density and Built Form Concerns 195.2 Issue 1 - Environment Impact Concerns

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
196.	Landowner	object	196.1 Proposed high-density will create traffic problems as access to the town centre will be almost entirely over Gilwell Avenue. 196.2 The 400 new dwellings on just 3.6 ha has no room for garages, thus many vehicles will park on the streets, thus restricting access and traffic. 196.3 Proposed dwellings have no compatibility with existing housing in the area. 196.4 Rubbish collection of the 800 new bins required in the precinct would be a problem. 196.5 Small house have no gardens for children and the river may be dangerous for play. 196.6 Will cause flies to breed. 196.7 Will damage the most vulnerable section and only natural aquatic walk in Kelmscott. 196.8 Would also set a precedent in areas north and south of this site in the future for similar development.	196.1 Issue 2 - Housing Density and Built Form Concerns 196.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 196.3 Issue 2 - Housing Density and Built Form Concerns 196.4 Not supported, there are areas with similar densities in the metropolitan area where waste service operates effectively. The concern can be addressed at subdivision and/or development application stage. 196.5 Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns 196.6 Not supported, the assertion is not supported with information/rationale. 196.7 Issue 1 - Environment Impact Concerns 196.8 Issue 10 – Other Concerns
197.	Landowner	comment	197.1 City of Armadale is for “Country Style Living”. - peaceful and quiet environment. 197.2 Access concerns limited to Gilwell Avenue with poor sight lines. 197.3 River needs protection as a linear park. 197.4 Clifton St has footpaths and roundabouts enjoyed by residents. 197.5 Concern regarding Clifton St Brookside Ave intersection. 197.6 New traffic bridge required over the river but creates traffic problems 197.7 Kelmscott is poor served by main sewer.	197.1 Issue 6 - Change/loss of Character and Visual Amenity 197.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 197.3 Issue 1 - Environment Impact Concerns 197.4 Noted. 197.5 Issue 7 -Traffic and Trasport Infrastructure Concerns 197.6 Issue 7 -Traffic and Trasport Infrastructure Concerns. The City recommends the TIA address the need for a traffic bridge at Turner Pl / Brookside Ave. 197.7 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
198.	Landowner	object	198.1 Development is too dense, town houses are not in character with neighbouring houses only single storey with gardens family homes. 198.2 Will impact semi-rural character of area. 198.3 Local roads would not support the extra traffic and only three exit points to the Albany Highway. 198.4 A traffic bridge at Brookside Ave and Turner Pl is required. 198.5 Local school can't cope with extra students. 198.6 Parking concerns due to high density. 198.7 Groundwater contamination concerns. 198.8 Foreshore management plan required to control erosion and sediment. 198.9 Construction impacts – noise, dust stock piling and complaints management required. 198.10 Buildings to address bushfire safety. 198.11 Concern regarding urban stormwater contamination of river.	198.1 Issue 2 - Housing Density and Built Form Concerns 198.2 Issue 6 - Change/loss of Character and Visual Amenity 198.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 198.4 Supported, The City recommends the TIA address the need for a traffic bridge at Turner Pl / Brookside Ave. 198.5 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 198.6 Issue 7 -Traffic and Trasport Infrastructure Concerns 198.7 Not supported, residential is not considered land use with a high capacity for contamination and likely less than rural or industrial land uses. 198.8 Supported, refer to report heading Foreshore & Public Open Space Provision 198.9 Issue 1 - Environment Impact Concerns 198.10 Supported, the matter can e dealt with at development stage. 198.11 Issue 1 - Environment Impact Concerns
199.	Landowner	comment	199.1 Concerned regarding high density 2-3 storey building height and scale and loss of privacy. 199.2 Concern regarding increase in noise and crime in area especially as a retirement village is close by. 199.3 Concern regarding air and water pollution, land degradation and impact all native wildlife in the affected area. The river will be affected dust and most likely building materials.	199.1 Issue 2 - Housing Density and Built Form Concerns 199.2 Issue 5 - Social Impact Concerns 199.3 Issue 1 - Environment Impact Concerns
200.	interest group	object	200.1 Concerned that sand fill during and after construction will have a major impact on river habitat and inability of the City to ensure compliance with sediment management plans. 200.2 Conservation Category Wetland (CCW) should have a 50m buffer. 200.3 No foreshore management plan has been prepared for the proposal. 200.4 Stormwater detention basins in the CCW buffer is an issue. 200.5 High density and its impermeable surfaces will increase urban runoff carrying pollutants, sediment and refuse into the river.	200.1 Issue 1 - Environment Impact Concerns 200.2 Issue 1 - Environment Impact Concerns 200.3 Supported, refer to report heading Foreshore & Public Open Space Provision 200.4 Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns 200.5 Issue 1 - Environment Impact Concerns
201.	Landowner	object	201.1 Refer to Submission 47.1 to 47.12 above.	201.1 Refer to Submission 47.1 to 47.12 above.

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
202.	Landowner	comment	202.1 Will increase the traffic during peak times so what will be done to cater for that. 202.2 Recent Denny Ave changes increase traffic greatly for a period of time with detours and made it difficult to exit my driveway. 202.3 Regarding views/outlook perspective it would be more pleasing to local residents and visitors walking/picnicking by the river looking back on a 3 to 4 storey apartment complex or on town houses/villas with a nice garden. 202.4 Concern regarding loss of country/community feel.	202.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 202.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 202.3 Issue 6 - Change/loss of Character and Visual Amenity 202.4 Issue 6 - Change/loss of Character and Visual Amenity
203.	Landowner	object	203.1 Object to R40 and R80 zoning. 203.2 The flora and fauna surrounding the Canning River would be greatly affected by the construction the finals structures. 203.3 Concern regarding overcrowding and increases in crime and litter. 203.4 Development here would only divide the existing community.	203.1 Issue 2 - Housing Density and Built Form Concerns 203.2 Issue 1 - Environment Impact Concerns 203.3 Issue 2 - Housing Density and Built Form Concerns & Issue 5 - Social Impact Concerns 203.4 Issue 5 - Social Impact Concerns
204.	Landowner	comment	204.1 Concerns about the height of the proposed buildings as they could look out straight over my fence into my backyard. 204.2 Trees to be remove will reduce windbreak. 204.3 Concern regarding pedestrian safely due to increase traffic on Clifton Street. 204.4 There will also be an increase in unwanted noise in a quiet neighbourhood.	204.1 Issue 2 - Housing Density and Built Form Concerns 204.2 Not supported, wind impacts are not required to be addressed in the WAPC's Guidance for Structure Plans, August 2023. 204.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 204.4 Issue 6 - Change/loss of Character and Visual Amenity

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
205.	Landowner	object	205.1 Increase traffic concerns due to limited 3 exits points out of this area another one at Turner Place/Brookside Ave needs to be upgraded for vehicle traffic. 205.2 Clifton Hills Primary School backs up on Clifton Street at school pickup/drop off times and there not enough parking. 205.3 It is dangerous to cross the roads as there are no traffic wardens to direct and assist for safety reasons. 205.4 Bushfire evacuation safely concerns due to limited exit and 2 got blocked off during 2011 bushfire. 205.5 Environment impact concerns to surrounding bush and wildlife. 205.6 Developer should pay for infrastructure, not rate payers of Clifton Hills. 205.7 Concern increase traffic will make getting in and out of their own driveways. 205.8 The residents who live across from development bought when it was peace and quiet. They need to be compensated by the developers for the noise and disruption and decreased value of their own properties. 205.9 Too many people in a small area will impact their quality of life and the river surrounding them. 205.10 Development of Canning River Clifton Street (south) Structure Plan area will worsen traffic.	205.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 205.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 205.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 205.4 Issue 4 - Bushfire Safety Concerns 205.5 Issue 1 - Environment Impact Concerns 205.6 Issue 10 – Other Concerns 205.7 Not supported, the City would consider traffic calming on Clifton Street if need be so vehicles egressing abutting properties would be safer. 205.8 Issue 6 - Change/loss of Character and Visual Amenity 205.9 Issue 2 - Housing Density and Built Form Concerns 205.10 Issue 7 -Traffic and Trasport Infrastructure Concerns
206.	Landowner	object	206.1 Bushfire evacuation concerns due to lack of escape routes and Turner Pl/Brookside Ave bridge is inadequate for future residents. 206.2 Speeding around the blind corner of Brookside Ave and Clifton St. 206.3 Sand and silt will flow into river during construction and damage river and fauna.	206.1 Issue 4 - Bushfire Safety Concerns. The City recommends the TIA address the need for a traffic bridge at Turner Pl / Brookside Ave. 206.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 206.3 Issue 1 - Environment Impact Concerns
207.	Landowner	object	207.1 Refer to Submission 6.1 to 6.14 above.	207.1 Refer to Submission 6.1 to 6.14 above.

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SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
208.	Landowner	object	208.1 The land is currently zoned R15/40 and it has been proposed that the zoning be changed to R40 to R80 in an area which has limited access and no services. 208.2 River is in danger of being polluted. 208.3 Concerned ratepayers have to pay the bill when the water level rises (the site is at the bottom of a steep hill) and the new buildings are flooded. 208.4 Concern regarding consultation with traditional owners. 208.5 Concern regarding increase in traffic from development and limited access in and out or area. 208.6 Bushfire evacuation concerns due to limited access.	208.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns & Issue 7 -Traffic and Trasport Infrastructure Concerns 208.2 Issue 1 - Environment Impact Concerns 208.3 Issue 10 – Other Concerns 208.4 Issue 8 - Heritage Concerns 208.5 Issue 7 -Traffic and Trasport Infrastructure Concerns 208.6 Issue 4 - Bushfire Safety Concerns

209.	Landowner	object	209.1 Public consultation time was insufficient. 209.2 Density is too high and 2 storey development is not in keep with the area. 209.3 Clifton Hills Primary School is already at capacity using demountable classrooms and additional students will make matters worse. 209.4 There is no direct bus route to Kelmscott Senior High School to service area. 209.5 Concern regarding how servicing and provision of POS/foreshore reserve will be coordinated. 209.6 POS is insufficient. 209.7 Concern regarding retirement village impact to estimated population. 209.8 Housing infill should be direct to established areas (east Kelmscott) 209.9 Density exceed Directions 2031objective/target of 15 dwellings per hectare. 209.10 Proposal does not adequately discuss requirements of PLN 2.6 Water Sensitive Design. 209.11 Proposal does not detail contributions, new facilities, infrastructure and service provision as indicated in the City's LPS 2016 Housing Strategy. 209.12 Development would result in loss of trees outside POS/foreshore. 209.13 No POS is allocated within residential area. 209.14 Bush Forever should be rehabilitated. 209.15 Proposal does not address Swan and Canning River Management Act 2006 209.16 Concern regarding adequacy of service (utilities) to meet demand of development. 209.17 Pedestrian safety concerns due to poor lighting especially nearby river bridges and not proposed improvement/contribution in proposal. 209.18 The proposal is greater than 800 metres walking distance to train station. 209.19 Transport Impact Assessment (TIA) data of 2017 is out of date. 209.20 Proposal does not consider temporary closure of Armadale train line. 209.21 Concern proposals will lead to erosion of the foreshore due to urban water runoff. 209.22 Lack of detail regarding Aboriginal heritage consultation. 209.23 Proposal does not create local employment. 209.24 Various statements in the structure plan report stating the proposal meets objectives requirements of various state planning frameworks are opinion and not supported by evidence. 209.25 Various errors in Structure Plan report and technical studies including spelling, dwelling yield, property description, page numbering, inconsistent terminology and other errors and inconsistencies.	209.1 Not supported, the public consultation period was a minimum 42 days in accordance with planning legislation. 209.2 Issue 2 - Housing Density and Built Form Concerns 209.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 209.4 Noted, High School student have other travel options including drop-off by parents and cycling, 209.5 Supported, the coordination would be resolved at subdivision stage. 209.6 Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns 209.7 Supported in part, the Applicant decided to remove the retirement village use from the structure plan but could be considered under a development application subject to appropriate technical studies including a bushfire management plan. 209.8 Not supported, the area is zoned for Urban development and can be developed for housing subject to planning/development approvals. 209.9 Issue 2 - Housing Density and Built Form Concerns 209.10 Supported, the City recommends further detail on how the Proposal including LWMS achieves the requirements of PLN 2.6 in the City's Schedule of Issue and Modifications attached to the Agenda Report. 209.11 Not supported, a structure plan of scale proposed need only provide appropriate POS. 209.12 Issue 1 - Environment Impact Concerns & Report heading Natural Environment & Tree Retention 209.13 Not supported, the most suitable land for POS is adjacent to the proposed Canning River foreshore reserve. 209.14 Supported, a landscape plan and foreshore management plan acceptable to the City can provide for rehabilitation of the Bush Forever land. 209.15 Not supported, the proposed structure plan has been referred to the DBCA - Conservation and Ecosystem Management Division Rivers and Estuaries Branch for comments. Refer to Agenda Report heading State Government Agencies' Submissions. 209.16 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
				209.17 Supported, lighting of the proposed POS can be addressed in a landscape plan at subdivision stage. 209.18 Issue 2 - Housing Density and Built Form Concerns 209.19 Supported, refer to Agenda Report heading Road Network and Traffic Management 209.20 Not supported, the train line is schedule to be reopened in October 2025 long before the Structure Plan area could be developed. 209.21 Issue 1 - Environment Impact Concerns 209.22 Issue 8 - Heritage Concerns 209.23 Not supported, the construction phase would result in some demand for local goods and services and future development would also increase demand for local goods and services a driver for local employment. 209.24 Supported in part, the City recommends further detail on how the proposal meets various State and local planning policies in the City's Schedule of Issue and Modifications attached to the Agenda Report. 209.25 Supported, the City recommends various correction to the Structure Plan report and technical studies.

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
210.	Landowner	object	210.1 Local schools are already at capacity no more room for extra students. 210.2 Bushfire evacuation concerns due to limited routes in and out of the locality. 210.3 Increased traffic and congestion on Clifton Street. 210.4 Intersection Clifton St and Brookside Avenue is hazardous. 210.5 Pedestrian safety concerns on Clifton St due to lack of footpaths. 210.6 Construction impact concerns – noise and operating hours. 210.7 Risk to current quality of lifestyle.	210.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 210.2 Issue 4 - Bushfire Safety Concerns 210.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 210.4 Issue 7 -Traffic and Trasport Infrastructure Concerns 210.5 Issue 7 -Traffic and Trasport Infrastructure Concerns 210.6 Issue 1 - Environment Impact Concerns 210.7 Issue 6 - Change/loss of Character and Visual Amenity

211.	Landowner	object	211.1 Height, bulk, scale or appearance of future buildings in comparison to single storey houses on the east side of Clifton Street. 211.2 Proposed density exceeds by more than 4 times Sub-Regional Planning Framework 25 dwellings per residential site hectare. 211.3 Impacts to streetscapes (i.e. blank wall to Cilfton Street). 211.4 Impact to adjoining properties privacy and overlooking. 211.5 Loss of quality of lifestyle of the area the reason current residents chose to live here. 211.6 Loss of mature trees and canopy cover resulting in urban heat island effect. 211.7 Construction impacts – noise, smell, light and dust especially for residents on Clifton St. 211.8 Increase traffic volume on local roads and queuing times at intersections. 211.9 The safety of motorists and pedestrians, particularly school children and the elderly will be at greater risk. 211.10 Transport Impact Assessment (TIA) 2017 data is out of date and should model traffic from school pick-up and drop-off times. 211.11 Emergency vehicle access associated with evacuation needs to be considered. 211.12 Adequacy of Gilwell Rd bridge and a new traffic bridge at Brookside/Turner Pl needed. 211.13 Lack of Aboriginal Heritage report. 211.14 Proposal is greater than 800m walking distance to train station and therefore does meet criteria of DCP 1.6 for higher density development. 211.15 The area is in the Canning River flood plain and subject to flooding. 211.16 Bushfire evacuation concerns due to traffic jam made worse by increase residents. 211.17 Development will set an undesirable precedent for further development along the river with environmental impacts. 211.18 Ecological impact to river from increase urban runoff. 211.19 Construction impacts of fill entering river and impact to aquatic life. 211.20 The river should be allocated a 50m buffer zone on either side. 211.21 Concern regarding basins in Bush Forever/POS. 211.22 Inconsistency of DUP location in Structure Plan Maps. 211.23 Concern that environmental report concluded that there was no suitable habitat for ground dwelling fauna species. A proper fauna assessment is required. 211.24 Concern regarding narrow street widths suitability for rubbish truck manoeuvring. 211.25 Roundabout at Clifton/Tara Wy needed for traffic safety and evacuation. 211.26 Expansion of hospitals and more GPs required for new residents.	211.1 Issue 2 - Housing Density and Built Form Concerns 211.2 Issue 2 - Housing Density and Built Form Concerns 211.3 Not supported, development fronting Clifton St would be serviced by laneways. 211.4 Issue 2 - Housing Density and Built Form Concerns 211.5 Issue 6 - Change/loss of Character and Visual Amenity 211.6 Issue 1 - Environment Impact Concerns 211.7 Issue 1 - Environment Impact Concerns 211.8 Issue 7 -Traffic and Trasport Infrastructure Concerns 211.9 Issue 7 -Traffic and Trasport Infrastructure Concerns 211.10 Supported, refer to Agenda Report heading Road Network and Traffic Management 211.11 Not supported, the Department of Fire and Emergency Services was consulted and did not raise concerns regarding emergency vehicle access. 211.12 Issue 7 -Traffic and Trasport Infrastructure Concerns. The City recommends the TIA address the need for a traffic bridge at Turner Pl / Brookside Ave. 211.13 Issue 8 - Heritage Concerns 211.14 Issue 2 - Housing Density and Built Form Concerns 211.15 Issue 1 - Environment Impact Concerns 211.16 Issue 4 - Bushfire Safety Concerns 211.17 Issue 10 – Other Concerns 211.18 Issue 1 - Environment Impact Concerns 211.19 Issue 1 - Environment Impact Concerns 211.20 Issue 1 - Environment Impact Concerns 211.21 Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns 211.22 Supported, the City recommend Structure Plan Maps be consistent across reports in the City's Schedule of Issues and Modifications in the Agenda Attachments. 211.23 Issue 1 - Environment Impact Concerns 211.24 Supported, at subdivision stage the City's waste services will be consulted to ensure adequate waste vehicle manoeuvring. 211.25 Issue 7 -Traffic and Trasport Infrastructure Concerns 211.26 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
212.	Landowner	object	212.1 Risk and damage to the river system, the quality of the water (pollution) from runoff and stabilization of the riverbanks. 212.2 Impacts to river flora and fauna downstream and in general. 212.3 Bushfire evacuation concerns due to limited access in and out of area.	212.1 Issue 1 - Environment Impact Concerns 212.2 Issue 1 - Environment Impact Concerns 212.3 Issue 4 - Bushfire Safety Concerns
213.	Landowner	support	213.1 With the rental and housing crisis we need more homes for people/families. 213.2 Will support locals schools, shops and deli.	213.1 Supported, development of the structure plan areas would increase housing stock in the locality including smaller housing options currently lacking. 213.2 Supported, structure plan development will increase local catchment population for existing local businesses.
214.	Landowner	object	214.1 Bushfire safety concerns. 214.2 Land degradation. 214.3 Privacy/overlooking concerns.	214.1 Issue 4 - Bushfire Safety Concerns 214.2 Not supported, the Environmental Review report concluded most of the land was already environmentally degraded. 214.3 Issue 2 - Housing Density and Built Form Concerns
215.	Landowner	object	215.1 A full public environmental assessment should be undertaken on the impacts to the soil, vegetation and river system from construction of this development and ongoing impacts from high density living (i.e. road run off, chemical weed control etc). 215.2 More than the required 10% public open/green space should be provided to embed the City as a nature hub in Perth. 215.3 Support contemporary medium density to mitigate impacts. 215.4 Support crime prevention through appropriate design. 215.5 Support further public consultation.	215.1 Issue 1 - Environment Impact Concerns 215.2 Not supported, the developer only need provide as much public open space as required under State Government planning policies. 215.3 Issue 2 - Housing Density and Built Form Concerns 215.4 Issue 5 - Social Impact Concerns 215.5 Supported in part, public consultation/advertising has been conducted in accordance with the Planning Regulations 2015. Submitters will be advised of the WAPC's determination on the Structure Plan.

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
216.	Landowner	support	216.1 Close to local schools and can be accessed on foot. 216.2 Close shopping, medical and other commercial services which can be accessed by footbridge at Turner Pl/Brookside Ave reduce car dependency. 216.3 Proximity to bus and train transportation hubs. 216.4 Access to recreation along the river. 216.5 Preservation of river foreshore and bush Forever. 216.6 Zoning (R-Codes) provides housing options suitable for singles and couples and create a inclusive divers community. 216.7 This river and tree backdrop enhances the aesthetic appeal and contributes to a tranquil and harmonious living environment.	216.1 Supported, some shops and Clifton Hills Primary School are within 800m walking distance. 216.2 Supported, see 216.1 above 216.3 Supported in part, the City recommends R60 and R80 (high) density be removed and replaced with R40 (medium) density. The proximity of the train station still provides an opportunity for park or cycle and ride. 216.4 Supported, ceding of POS/Foreshore would provide public access, 216.5 Supported, the Bush Forever areas would be rehabilitated by the developer. 216.6 Supported, the City supports varied built form and home sizes to varying household types. 216.7 Supported, agreed.
217.	Landowner	object	217.1 Proposal does not include detail regarding any necessary infrastructure. When infrastructure is inadequate, mental health and social behaviours are impacted. 217.2 Concern regarding increase in traffic and adequacy of roads and no proposal for additional traffic bridge over the river i.e. Turner Pl/ Brookside Ave. 217.3 Structure Plan does not include proposal to improve pedestrian safety in the locality especially during peak hours and to amenity areas schools and shops. 217.4 Concern regarding capacity issues at local schools with more residents/pupils. 217.5 Concern regarding impact to bushland. 217.6 Concern regarding building height. 217.7 Concern regarding vehicle parking for residents. 217.8 Concern regarding landscaping in development. 217.9 Density of development is excessive.	217.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 217.2 Issue 7 -Traffic and Trasport Infrastructure Concerns. The City recommends the TIA address the need for a traffic bridge at Turner Pl / Brookside Ave.217.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 217.4 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 217.5 Issue 1 - Environment Impact Concerns 217.6 Issue 2 - Housing Density and Built Form Concerns 217.7 Issue 7 -Traffic and Trasport Infrastructure Concerns 217.8 Supported, the City will require the developer to prepare a landscape plan acceptable to the City. 217.9 Issue 2 - Housing Density and Built Form Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
218.	Landowner	object	218.1 Object to existing density of R15/40 changed to much higher density R40 to R80. 218.2 Concerns regarding impact to health of the Canning River, particularly if other properties similarly developed. 218.3 Concern regarding pit and pipe stormwater drainage and big basins in POS. More at source treatment to reduce basin size. 218.4 Concern regarding construction traffic, machinery, materials storage areas, parking and so on impact on the river ecosystem. 218.5 Bushfire evacuation concerns due to extra traffic from development and only three exists in and out of area. 218.6 High density no suited to area.	218.1 Issue 2 - Housing Density and Built Form Concerns 218.2 Issue 1 - Environment Impact Concerns 218.3 Supported, refer to Agenda Report heading Local Water Management Strategy for further comments. 218.4 Issue 1 - Environment Impact Concerns 218.5 Issue 4 - Bushfire Safety Concerns 218.6 Issue 2 - Housing Density and Built Form Concerns
219.	Landowner	support	219.1 Proximity to public transport within 800-metre radius of the train station and reduced car dependence. 219.2 Shops, local school parks (Frye Park) and amenities in walking distance. 219.3 Consistency with existing developments near train stations and shopping precincts, such as Cannington, blending seamlessly with the environment. 219.4 Improved access to river foreshore and Turner Pl footbridge. 219.5 Increase housing diversity with high-density for smaller residences suitable for older residents or couples. 219.6 Will address housing shortage. 219.7 Improve bushfire safety. 219.8 Protection of river via urban water management (drainage). 219.9 Protection of river foreshore vegetation.	219.1 Supported in part, the proximity of the train station still provides an opportunity for park and cycle and ride. 219.2 Supported, some shops are within the 800m walking distance. 219.3 Not supported, there is no information provided on the location of the developments in Cannington. 219.4 Supported, the proposed interface road to the river will improve public access. 219.5 Supported, the development would assist in promoting housing diversity in the locality where single house current dominate. 219.6 Supported, the development in small can assist with the housing shortage. 219.7 Issue 4 - Bushfire Safety Concerns 219.8 Supported, an LWMS acceptable to the City could address urban water management. 219.9 Supported, ceding of the POS/Foreshore will protect and allow for rehabilitation of vegetation.

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
220.	Landowner	object	220.1 Loss of natural vegetation/ habitats for wildlife on the properties including the Canning River. 220.2 Destruction of environmentally significant flora and fauna. 220.3 Urban heat island effect would have detrimental effects to the natural environment and to the occupants of the dwellings. 220.4 Concerns regarding capacity of schools and hospitals with increase in population. 220.5 Bushfire evacuation concerns given limited exit points from the area. 220.6 Higher density leads to increase in crime. 220.7 Not compatible with current Clifton Hills area with most properties being more than 500m² and single storey. 220.8 The unique Clifton Hills community and atmosphere would be altered.	220.1 Issue 1 - Environment Impact Concerns 220.2 Issue 1 - Environment Impact Concerns 220.3 Issue 1 - Environment Impact Concerns 220.4 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 220.5 Issue 4 - Bushfire Safety Concern 220.6 Issue 5 - Social Impact Concerns 220.7 Issue 2 - Housing Density and Built Form Concerns 220.8 Issue 6 - Change/loss of Character and Visual Amenity
221.	Landowner	support	221.1 Lack of sewer in the area means development will leach into soil and damage river and flora and fauna. 221.2 Concern regarding the capacity of the power grid. 221.3 Underground power will destabilise the soil and around the Canning River.	221.1 Not supported, the structure plan development would be required to be sewered. 221.2 Not supported, upgrades to the power grid to service the structure plan development would be required. 221.3 Not supported, there is no evidence to support this claim.
222.	Landowner	object	222.1 Limited access to major road arteries will cause considerable congestion in what otherwise are quiet suburban roads. 222.2 Safety concerns for residents living on Clifton Street. 222.3 Adversely affect to the Canning River both during and after construction. 222.4 Concern regarding litter and oil on the river eco-system.	222.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 222.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 222.3 Issue 1 - Environment Impact Concerns 222.4 Issue 1 - Environment Impact Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
223.	Landowner	object	223.1 Density proposed would look out of place given existing density in the area. 223.2 The bulk and scale of the buildings due to the high-density unfriendly and unwelcoming atmosphere proposed on the river-side would overshadow the POS. 223.3 Basins would be a maintenance burden to the City. 223.4 Concern regarding visitor resident parking due to high density. 223.5 Concern regarding speeding on Clifton St and Brookside Ave especially corner of these roads and no traffic calming proposals in Structure Plan. 223.6 Development will increase traffic. 223.7 Concern regarding need to widen Gilwell Ave bridge. 223.8 Concerns regarding overcrowding of Clifton Hills Primary School. 223.9 Concerns regarding impact to Canning River. 223.10 Will undermine sense of community.	223.1 Issue 2 - Housing Density and Built Form Concerns 223.2 Issue 2 - Housing Density and Built Form Concerns 223.3 Supported, the number of basins in the POS is considered excessive. Refer to Agenda Report heading Local Water Management Strategy. 223.4 Issue 2 - Housing Density and Built Form Concerns 223.5 Issue 7 -Traffic and Trasport Infrastructure Concerns 223.6 Issue 7 -Traffic and Trasport Infrastructure Concerns 223.7 Issue 7 -Traffic and Trasport Infrastructure Concerns 223.8 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 220.9 Issue 1 - Environment Impact Concerns 220.10 Issue 6 - Change/loss of Character and Visual Amenity and/or Issue 5 - Social Impact Concerns
224.	Landowner	object	224.1 R80 and R60 are too high a density for the land area as it is only 1/3 of the development area so further development at the same density would result in approximately 1000 dwelling and 2500 people based on ABS 2.6 persons per dwelling in the area. 224.2 Local infrastructure, roads and facilities were not designed to account for this volume of people above current numbers. 224.3 Traffic air borne pollution impact to Clifton Hills Primary School. 224.4 Increase in potential for accidents. 224.5 The bridge on Gilwell Avenue a natural choke point can become heavily congested. 224.6 Bushfire evacuation concerns due to increase in residents and limited access i.e. bushfires 2011. 224.7 Concern regarding impact to river due to polluted stormwater during the construction phase. 224.8 Concern regarding impact to river due to fertilizer to maintain proposed POS. 224.9 Development doesn't provide a 50m buffer in accordance with State Government policy. 224.10 Density should be reduced.	224.1 Issue 2 - Housing Density and Built Form Concerns 224.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 224.3 Issue 7 -Traffic and Trasport Infrastructure Concerns, Issue 1 - Environment Impact Concerns and Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 224.4 Issue 7 -Traffic and Trasport Infrastructure Concerns 224.5 Issue 7 -Traffic and Trasport Infrastructure Concerns 224.6 Issue 4 - Bushfire Safety Concerns 224.7 Issue 1 - Environment Impact Concerns 224.8 Issue 1 - Environment Impact Concerns 224.9 Issue 1 - Environment Impact Concerns 224.10 Issue 2 - Housing Density and Built Form Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
225.	Landowner	object	225.1 Density of development premature as there are already plenty of land with infill capability. 225.2 Development is not in keeping with area character. 225.3 Bushfire evacuation concerns due to limited escape routes as occurred in 2011 bushfires. 225.4 High rise will create safety issues especially for elderly. 225.5 Land should be developed for a retirement village.	225.1 Issue 2 - Housing Density and Built Form Concerns 225.2 Issue 6 - Change/loss of Character and Visual Amenity 225.3 Issue 4 - Bushfire Safety Concerns 225.4 Not supported, there is no information provided that future development will not be safe for the elderly. 225.5 Noted. the applicant decided to remove the retirement village use from the structure plan but could be considered under a development application subject to appropriate technical studies including a bushfire management plan.
226.	Landowner	object	226.1 Proposal will cause habitat destruction and disrupt local wildlife. Protecting our natural environment and biodiversity should take high priority. 226.2 Proposal will increase traffic congestion and pose a safety risk. 226.3 Bushfire evacuation concerns due to additional traffic and limited escape routes Gilwell Ave and the other being Canning Mills Rd. 226.4 The quiet, peaceful environment that attracted residents to this area will be compromised. 226.5 Development will overwhelm schools, parks, healthcare facilities, and other essential services and services may decline. 226.6 Proposal will lead to overcrowding and increase in crime. 226.7 High-density will increased noise levels and pollution from construction activities. 226.8 Local schools are not equipped to handle the numbers of students. 226.9 Would alter the community's character and disrupt the sense of unity among its residents.	226.1 Issue 1 - Environment Impact Concerns 226.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 226.3 Issue 4 - Bushfire Safety Concerns 226.4 Issue 6 - Change/loss of Character and Visual Amenity 226.5 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 226.6 Issue 5 - Social Impact Concerns 226.7 Issue 1 - Environment Impact Concerns 226.8 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 226.9 Issue 6 - Change/loss of Character and Visual Amenity & Issue 5 - Social Impact Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
227.	Landowner	object	227.1 Increase traffic on Clifton St and Brookside Ave including excessive speed even with existing slow points. 227.2 Pedestrian safety concerns especially students making their way to and from school. 227.3 Increase parking problems including around the school at pick-up drop-off times. 227.4 Waste collection concerns. 227.5 Potential traffic accidents Clifton St and Tara Wy. 227.6 Concern regarding impact to local wildlife. 227.7 Bushfire evacuation concerns due to limited escape routes. 227.8 Railway Station is greater than 800m from structure plan area. 227.9 Development does not fit in with the existing landscape including larger owner occupier blocks of Clifton St/Brookside Ave. 227.10 Concern regarding adequacy of shops and parking to accommodate demand of more residents. 227.11 Concern regarding loss of privacy. 227.12 Concern regarding impact to river including erosion of riverbank and pollution. 227.13 Retirement village over 55s more fitting. 227.14 Concern regarding adequacy of schools to accommodate increase students.	227.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 227.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 227.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 227.4 Supported, at subdivision stage the City's waste services would be consulted to ensure adequate waste vehicle manoeuvring and verge area for bins. 227.5 Issue 7 -Traffic and Trasport Infrastructure Concerns 227.6 Issue 1 - Environment Impact Concern 227.7 Issue 4 - Bushfire Safety Concerns 227.8 Issue 2 - Housing Density and Built Form Concerns 227.9 Issue 2 - Housing Density and Built Form Concerns 227.10 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 227.11 Issue 2 - Housing Density and Built Form Concerns 227.12 Issue 1 - Environment Impact Concerns 227.13 Noted, the applicant decided to remove the retirement village use from the structure plan but could be considered under a development application subject to appropriate technical studies including a bushfire management plan. 227.14 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
228.	Landowner	comment	228.1 Proposal doesn't meet the Transit Orientated Development requirements of DCP 1.6 Planning to Support Transit Use and Transit Oriented Development for higher density as area is excess of 1km walk to train station. 228.2 No mixed-use development with verandas/canopies along the walkable routes to train station for shade/pedestrian amenity. 228.3 Bus service in the locality are not high frequency. 228.4 This proposed Structure Plan is not in keeping with the natural river environment and low-density urban amenity of its surrounds. 228.5 Streetscaping and landscaping concerns of the development. 228.6 Local Development Plans and Design Guidelines would need to be prepared to ensure that development is consistent with the character and amenity of the local area. 228.7 Consultation is required to ensure that the community voice is taken into consideration in the process of determining of the LSP and in the development of future planning policies and guidelines for the development. 228.8 Upgrade to Gillan Drive is required for increased traffic flow. 228.9 Bushfire evacuation concerns/issues as occurred in 2011. 228.10 Concern regarding lack of commercial services to service increased population. 228.11 Concern regarding lack of on-street parking due to reliance on cars. 228.12 Landscaping is insufficient and will result in heat island effect. 228.13 Concern regarding impact to river from usage of proposed POS the use of board walks is recommended. 228.14 Dedicate children's playground required to prevent damage to river. 228.15 Concern regarding impact to turtles: a study is required. 228.16 Concern regarding loss of trees/Cockatoo habitat. 228.17 Concern regarding impact to Aboriginal heritage. 228.18 Proposal would set a precedent for further residential developments along the Canning River and require upgrades to local infrastructure – community facilities schools bridges over the Canning River. 228.19 Lack of doctors in the area.	228.1 Issue 2 - Housing Density and Built Form Concerns 228.2 Not supported, the development is proposed as residential and there in no requirement to provide canopies over the street. 228.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 2278.4 Issue 6 - Change/loss of Character and Visual Amenity 228.5 Supported, a landscape plan acceptable to the City would be required at subdivision stage. 228.6 Issue 2 - Housing Density and Built Form Concerns 228.7 Supported, public consultation/advertising has been conducted in accordance with the Planning Regulations 2015. Submitters will be advised of the WAPC's determination on the Structure Plan. Advertising of planning instruments i.e. local development plans associate with the structure plan/future subdivision will be considered at the time of lodgement. 228.8 Issue 7 -Traffic and Trasport Infrastructure Concerns 228.9 Issue 4 - Bushfire Safety Concerns 228.10 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 228.11 Issue 7 -Traffic and Trasport Infrastructure Concerns 228.12 Issue 1 - Environment Impact Concerns 228.13 Issue 1 - Environment Impact Concerns 228.14 Supported, the City recommends a pocket park 228.15 Issue 1 - Environment Impact Concerns 228.16 Issue 1 - Environment Impact Concerns & Agenda Report heading Natural Environment and Trees. 228.17 Issue 8 - Heritage Concerns 228.18 Issue 10 – Other Concerns 228.19 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
229.	Landowner	object	229.1 Public review period inadequate. 229.2 Bushfire risk concerns for new and existing residents. 229.3 Concern regarding adequacy of public utilities – sewer, water, power, gas telecommunications. 229.4 Risk to wetlands and "bush forever" areas - high density development and increased population will place unacceptable risk of the fragile environment along the Canning River. 229.5 Proposed public open space is inadequate. 229.6 Traffic safety concerns from speeding particularly Clifton Street and Gilwell Avenue and at school pickup and drop off times. 229.7 Concerns regarding adequacy of road infrastructure to accommodate increase in traffic including Gilwell roundabout turning onto Albany Highway. 229.8 Lack of high frequency bus service in the locality for residents. 229.9 Proposal should provide for R40 only subject to appropriate urban design and service infrastructure and landscaping provision. 229.10 Proposal does not consider 18-month closure of Armadale train line. 229.11 240 bus should extend into development. 229.12 Road design should improve pedestrian crossing of Clifton Street.	229.1 Not supported, the adverting period was in accordance with the Planning and Development (Schemes) Regulations 2015. 229.2 Issue 4 - Bushfire Safety Concerns 229.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 229.4 Issue 1 - Environment Impact Concerns 229.5 Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns 229.6 Issue 7 -Traffic and Trasport Infrastructure Concerns 229.7 Issue 7 -Traffic and Trasport Infrastructure Concerns 229.8 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 229.9 Issue 2 - Housing Density and Built Form Concerns 229.10 Not supported, the train line is schedule to be reopened in October 2025 long before the Structure Plan area could be developed. 229.11 Noted, modifications to bus routes is the responsibility of the State Government's Public Transport Authority that was consulted on the proposed structure plan. 229.1 Issue 7 -Traffic and Trasport Infrastructure Concerns
230.	Landowner	object	230.1 Building height 2 to 3 Storey not in keeping with locality. 230.2 Concern regarding impact to streetscape. 230.3 Loss of privacy and overlooking. 230.4 Concern regarding air and water land pollution and land degradation. 230.5 Bushfire safety concerns due to more residents. 230.6 Concerns with speeding on Clifton Street and congestion at Butler Pass intersection from school traffic. 230.7 Loss of tranquillity.	230.1 Issue 2 - Housing Density and Built Form Concerns 230.2 Issue 2 - Housing Density and Built Form Concerns 230.3 Issue 2 - Housing Density and Built Form Concerns 230.4 Issue 1 - Environment Impact Concerns 230.5 Issue 4 - Bushfire Safety Concerns 230.6 Issue 7 -Traffic and Trasport Infrastructure Concerns 230.7 Issue 6 - Change/loss of Character and Visual Amenity

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
231.	Landowner	object	231.1 Increase in population and dwelling numbers is too high. 231.2 Overlooking and privacy concerns from 2 Storey development on Clifton Street 231.3 Will impact wildlife and river 231.4 Parking concerns and plan doesn't show parking. 231.5 Concern regarding anti-social behaviour and crime 231.6 Concern regarding adequacy of Clifton Street including speeding and congestion due to increase in traffic from development. 231.7 Concern regarding lack of traffic bridge proposal at Brookside Ave with increased traffic especially in bushfire situation with limited escape routes. 231.8 Concern regarding construction impacts including air and noise pollution. 231.9 Concern regarding increase to City rates to repair roads from construction activity. 231.10 Loss of semi-rural and beauty of the area due to development.	231.1 Issue 2 - Housing Density and Built Form Concerns 231.2 Issue 2 - Housing Density and Built Form Concerns 231.3 Issue 1 - Environment Impact Concerns 231.4 Issue 7 -Traffic and Trasport Infrastructure Concerns 231.5 Issue 5 - Social Impact Concerns 231.6 Issue 7 -Traffic and Trasport Infrastructure Concerns 231.7 Supported, the City recommends the matter of a need for a traffic bridge at Turner Pl / Brookside Ave be investigate in a revise TIA. 231.8 Issue 1 - Environment Impact Concerns 231.9 Issue 10 – Other Concerns 231.10 Issue 6 - Change/loss of Character and Visual Amenity
232.	Landowner	object	232.1 Concerns regarding increase noise, cars speeding on Clifton Street pedestrian safety and inadequate lighting on a single lane road. 232.2 Concern regarding multi-storey development interface to Clifton Street. 232.3 Concern regarding bulk, scale and appearance of new buildings. 232.4 Concerned regarding ant-social behaviour from future residents 232.5 Bushfire evacuation concerns due to limited escape routes made worse by more residents and no proposal for traffic bridge at Brookside Avenue. 232.6 Lack of detail on parking for residents and visitors 232.7 High rise not in keeping with semi-semi-rural character of area 232.8 Concerned regarding the environmental impacts on air, water pollution and land degradation. 232.9 Concern regarding construction impacts including increase traffic air and noise pollution. 232.10 Consultation period not long enough. 232.11 Proposal will set a precedent for development of land near mercy care to the south. 232.12 Bushfire evacuation concerns.	232.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 232.2 Issue 2 - Housing Density and Built Form Concerns 232.3 Issue 2 - Housing Density and Built Form Concerns 232.4 Issue 5 - Social Impact Concerns 232.5 Issue 4 - Bushfire Safety Concerns 232.6 Issue 7 -Traffic and Trasport Infrastructure Concerns 232.7 Issue 6 - Change/loss of Character and Visual Amenity 232.8 Issue 1 - Environment Impact Concerns 232.9 Issue 7 -Traffic and Trasport Infrastructure Concerns 232.10 Not supported, the adverting period was in accordance with the Planning and Development (Schemes) Regulations 2015. 232.11 Issue 10 – Other Concerns 232.12 Issue 4 - Bushfire Safety Concerns

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
233.	Landowner	object	233.1 Proposal not in keeping with the appearance or natural tranquil nature of the area. 233.2 Concern regarding loss of turtle habitat and breeding area outside river. 233.3 River health will be impacted by urban water runoff/ pollution. 233.4 Development will result in loss of trees and bird habitat. 233.5 Density/ building height not in keeping with the existing residential of the suburb. 233.6 Bushfire evacuation concerns. 233.7 Road capacity concerns with increased traffic.	233.1 Issue 6 - Change/loss of Character and Visual Amenity 233.2 Issue 1 - Environment Impact Concerns 233.3 Issue 1 - Environment Impact Concerns 233.4 Issue 1 - Environment Impact Concerns heading Natural Environment and Trees. 233.5 Issue 2 - Housing Density and Built Form Concerns 233.6 Issue 4 - Bushfire Safety Concerns 233.7 Issue 7 -Traffic and Trasport Infrastructure Concerns
234.	Landowner	object	234.1 Refer to Submission 6.1 to 6.14 above.	234.1 Refer to Submission 6.1 to 6.14 above.
235.	Landowner	object	235.1 Concern with destruction of trees to make way for houses and damage to the riverbank which and negative impact on the Wood Ducks that live on the river. 235.2 Proposal doesn't meets the Transit Orientated Development requirements as area is excess of 1km walk to train station. 235.3 Bushfire evacuation concerns due to traffic congestion made worse by additional residential development. 235.4 Lack of visitor parking. 235.5 The size of the blocks is not in keeping with the garden / native bushland vibe of the area. 235.6 Development will set an undesirable precedent for similar development along the river.	235.1 Issue 1 - Environment Impact Concerns and report heading Natural Environment & Tree Retention 235.2 Issue 2 - Housing Density and Built Form Concerns 235.3 Issue 4 - Bushfire Safety Concerns 235.4 Issue 7 -Traffic and Trasport Infrastructure Concerns 235.5 Issue 6 - Change/loss of Character and Visual Amenity 235.6 Issue 10 – Other Concerns
236.	Landowner	object	236.1 Concern regarding bushfires. 236.2 Higher density development is not suitable for the land in question due to flood plain, heavy clay soil and very high infrastructure costs.	236.1 Issue 4 - Bushfire Safety Concerns 236.2 Issue 1 - Environment Impact Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
237.	Landowner	object	237.1 R40-R80 is not in-keeping with nearby R15 properties 237.2 Infrastructure adequacy concerns schools, roads, shops and parking. 237.3 Bushfire evacuation concerns due to bottlenecks in 2011 bushfire will be worse due to increase in population. 237.4 Potential accidents where Brookside Ave enters Clifton Street. 237.5 Concern regarding impact to river and Bush Forever during and after construction, impacting local amenity including traffic, noise, smell and light. 237.6 Lack of Environmental Impact Assessment. 237.7 Concerns regarding impact to lifestyle and amenity.	237.1 Issue 2 - Housing Density and Built Form Concerns 237.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 237.3 Issue 4 - Bushfire Safety Concerns 237.4 Issue 7 -Traffic and Trasport Infrastructure Concerns 237.5 Issue 1 - Environment Impact Concerns 237.6 Issue 1 - Environment Impact Concerns 237.7 Issue 6 - Change/loss of Character and Visual Amenity
238.	Landowner	object	238.1 Physical destruction of the area (loss of food source, sanctuary, population stress), pollution and littering will adversely impact the habitat of the numerous animals, birds, reptiles and insects reliant on the river and its surround. 238.2 Object to high density and multistorey buildings. R80 development on Lot 1, and R60 development on Lot 12 Brookside Ave are too close to the river. 238.3 Concern regarding hard visual impact of high density, overlooking and artificial lighting at night. 238.4 Concern clearing of vegetation will increasing heat of tree canopy cover cannot be restored, a recognised problem in new suburbs. 238.5 Road layout will create wind tunnels for hot easterly winds. 238.6 Concern regarding noise , litter and other pollutants. 238.7 Objects to road running adjacent to the river as it will affect wildlife and attract hoons and antisocial behaviour.	238.1 Issue 1 - Environment Impact Concerns 238.2 Issue 2 - Housing Density and Built Form Concerns 238.3 Issue 2 - Housing Density and Built Form Concerns 238.4 Issue 1 - Environment Impact Concerns 238.5 Not supported, wind impacts are not required to be addressed in the WAPC's Guidance for Structure Plans, August 2023. 238.6 Issue 1 - Environment Impact Concerns & Issue 5 - Social Impact Concerns 238.7 Not supported, there is no information/ evidence that a road adjacent the river will cause speeding anti-social behaviour.
239.	Landowner	object	239.1 River/environmental health concerns. 239.2 School capacity concerns. 239.3 Increase traffic concerns. 239.4 Noise pollution concerns.	239.1 Issue 1 - Environment Impact Concerns 239.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 239.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 239.4 Not support, noise would be managed in accordance with Noise Regulations administered by the City.

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
240.	Landowner	object	240.1 The scale and appearance of the development will have a detrimental effect on the landscape, privacy, traffic congestion and local amenities such as schools. 240.2 Will also cause more noise and pollution in the area and to the river. 240.3 The local school is already at capacity. 240.4 Bushfire evacuation/safety concerns.	240.1 Issue 6 - Change/loss of Character and Visual Amenity, Issue 2 - Housing Density and Built Form Concerns, Issue 7 -Traffic and Trasport Infrastructure Concerns and Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 240.2 Issue 1 - Environment Impact Concerns 240.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 240.4 Issue 4 - Bushfire Safety Concerns
241.	Landowner	object	241.1 Concerned regarding impact on the Canning River. 241.2 Bushfire risk from Banyowla Park to the east and evacuation concern due to increase traffic congestion and limited escape routes i.e. Turner Rd footbridge only and Clifton Street for vehicles exiting to Albany Highway via the Gilwell Ave bridge or further along Clifton St to Orlando Rd bridge or even to Connell Ave via Martin though this would most likely be closed as during 2011 bushfires. 241.3 Concern regarding off-street parking for development. 241.4 Development is over 800m walking distance to train station/Kelmscott trains station so will not reduce use of cars. 241.5 Lack of cycle paths in the locality for cycle travel mode and danger for pedestrians if paths are used for e-scooters bicycle especially students at Clifton Hills Primary School. 241.6 Who will replant the Bush Forever and who will maintain it? 241.7 Concern regarding roadkill. 241.8 Will result in urban water run-off and loss of trees 241.9 Natural gas for development should not be used as it will damage environment and climate.	241.1 Issue 1 - Environment Impact Concerns 241.2 Issue 4 - Bushfire Safety Concerns 241.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 241.4 Issue 2 - Housing Density and Built Form Concerns 241.5 Issue 7 -Traffic and Trasport Infrastructure Concerns 241.6 The developer would be responsible for rehabilitation of the Bush Forever and the City for ongoing management maintenance. 241.7 Supported, signage along the proposed POS interface road could be installed to alert drives to the potential for wildlife crossing roads. 241.8 Issue 1 - Environment Impact Concerns and report heading Natural Environment & Tree Retention 241.9 Not supported, the use of natural gas for domestic purposes is a State Government matter.
242.	Landowner	object	242.1 Does fit with existing social and environmental objective of the surrounding area. 242.2 Environmental Impact Assessment should be done. 242.3 Bushfire evacuation assessment should be done.	242.1 Issue 1 - Environment Impact Concerns & Issue 5 - Social Impact Concerns 242.2 Issue 1 - Environment Impact Concerns 242.3 Issue 4 - Bushfire Safety Concerns
243.	Landowner	object	243.1 Refer to submission 47.1 to 47.12 above.	243.1 Refer to submission 47.1 to 47.12 above.
244.	Landowner	object	244.1 No comments provided.	244.1 Noted.

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
245.	Landowner	object	245.1 Concern regarding environmental impact to biodiversity, habitat and river flora and fauna. 245.2 Concern regarding loss of trees. 245.3 Will cause erosion of riverbank. 245.4 More riverside vegetation should be retained. 245.5 More people from development will pollute the river.	245.1 Issue 1 - Environment Impact Concerns 245.2 Issue 1 - Environment Impact Concerns & report heading Natural Environment & Tree Retention 245.3 Issue 1 - Environment Impact Concerns 245.4 Issue 1 - Environment Impact Concerns 245.5 Issue 1 - Environment Impact Concerns
246.	Landowner	object	246.1 Refer to Submission 47.1 to 47.12 above.	246.1 Refer to Submission 47.1 to 47.12 above.
247.	Landowner	object	247.1 Refer to Submission 47.1 to 47.12 above.	247.1 Refer to Submission 47.1 to 47.12 above.
248.	Landowner	object	248.1 No comments provided.	248.1 Noted.
249.	Landowner	object	249.1 Area could be put to a better use such as a leisure or wellness centre or an indoor sport centre.	249.1 Note supported, the City can only assess the structure plan as proposed.
250.	Landowner	object	250.1 High density living brings low socio-economic problems. 250.2 Strain on utilities and local school. 250.3 Property devaluation concerns caused by more dwellings. 250.4 Increase in crime and anti-social behaviour. 250.5 Negative impact on the Canning River and its cultural significance. 250.6 Increase in strain and pollution to natural surrounds.	250.1 Issue 5 - Social Impact Concerns 250.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 250.3 Issue 10 – Other Concerns 250.4 Issue 5 - Social Impact Concerns 250.5 Issue 1 - Environment Impact Concerns & Issue 8 - Heritage Concerns 250.6 Issue 1 - Environment Impact Concerns
251.	Landowner	object	251.1 Object due to stormwater runoff and sediment being detrimental to the health of the Canning River. 251.2 Bushfire evacuation concerns due to extra residents and limited exit point from the area. 251.3 Local school capacity concerns due to additional students. 251.4 Loss of canopy cover and urban heat island impact. 251.5 Environmental impacts to local wildlife. 251.6 Height and scale of buildings proposed impacting cultural heritage value of the area. 251.7 Increased in traffic and noise in the area reducing quiet enjoyable amenity of current residents.	251.1 Issue 1 - Environment Impact Concerns 251.2 Issue 4 - Bushfire Safety Concerns 251.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 251.4 Issue 1 - Environment Impact Concerns 251.5 Issue 1 - Environment Impact Concerns 251.6 Issue 2 - Housing Density and Built Form Concerns 251.7 Issue 7 -Traffic and Trasport Infrastructure Concerns & Issue 6 - Change/loss of Character and Visual Amenity
252.	Landowner	support	252.1 Extra house in the area will alleviate housing crisis.	252.1 Supported.

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
253.	Landowner	object	253.1 Small housing impacts physical and mental health of families living their living in them i.e. lack of garden and children's play area. 253.2 Lack of parking for visitor -family and friends to high density development. 253.3 High density has no room for trees and gardens will increase urban heat island effect. 253.4 Bushfire safety concerns with more residents. 253.5 Local primary school and Kelmscott High school capacity concern due to more residents. 253.6 Increase traffic concerns.	253.1 Issue 2 - Housing Density and Built Form Concerns 253.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 253.3 Issue 1 - Environment Impact Concerns 253.4 Issue 4 - Bushfire Safety Concerns 253.5 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 253.6 Issue 7 -Traffic and Trasport Infrastructure Concerns
254.	Landowner	object	254.1 Disaster.	254.1 Noted
255.	Landowner	object	255.1 Bushfire evacuation concerns due to increase in residents and gridlocked roads that occurred in 2011 fires and limited escape routes - Gilwell Ave and Orlando St and no additional traffic bridge at Turner Pl/ Brookside Ave. 255.2 The Traffic Impact Assessment (TIA) assumes 1% growth in traffic doesn't account for proposals 395 dwellings. 255.3 Concern regard increase traffic on Clifton St especially during school peak times and potential accidents at intersections. 255.4 Kelmscott train station is greater than 800m walking distance from structure plan area. 255.5 A 50m buffer to estuary/wetland should be applied in accordance with SPP 2.9 255.6 Drainage basins detract from use POS for recreation. 255.7 A follow up detailed tree hollow inspection should be undertaken using drone inspection. 255.8 Concerned sand required to address the clay soils will eventually finding its way into the river as sediment impacting the health of the river. 255.9 Density should match exiting area.	255.1 Issue 4 - Bushfire Safety Concerns 255.2 Issue 7 -Traffic and Trasport Infrastructure Concerns & Road Network and Traffic Management 255.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 255.4 Issue 2 - Housing Density and Built Form Concerns 255.5 Issue 1 - Environment Impact Concerns 255.6 Issue 9 - Public Open Space, Drainage and Cost Sharing Concerns & heading Foreshore & Public Open Space Provision 255.7 Supported in part, the matter can be considered at subdivision stage. 255.8 Issue 1 - Environment Impact Concerns 255.9 Issue 2 - Housing Density and Built Form Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
256.	Landowner	object	256.1 Development on the banks of the Canning River would have a detrimental effect of plants and animals living in the area. 256.2 Supports decreasing coding and number of storeys of development. 256.3 Not in keeping with the local amenity and will detract from the semi-rural lifestyle that the hills side of Kelmscott. 256.4 Housing is important, but protection of the river and the environment, animals and plants need to be at forefront.	256.1 Issue 1 - Environment Impact Concerns 256.2 Issue 2 - Housing Density and Built Form Concerns 256.3 Issue 6 - Change/loss of Character and Visual Amenity 256.4 Issue 1 - Environment Impact Concerns
257.	Landowner	object	257.1 Development will increase traffic in the area. 257.2 Concern regarding consultation with Swan River Trust. 257.3 Concern regarding stormwater management and pollution to river. 257.4 Concern regarding increase in crime.	257.1 Issue 7 -Traffic and Trasport Infrastructure Concerns 257.2 Supported, the Swan River Trust has been consulted through the DBCA - Conservation and Ecosystem Management Division Rivers and Estuaries Branch. Refer to Report Government Agencies' Submissions. 257.3 Issue 1 - Environment Impact Concerns 257.4 Issue 5 - Social Impact Concerns
258.	Landowner	object	258.1 Loss of vegetation and density of the development would greatly affect the character of the area. 258.2 Increase in traffic will put a strain on facilities within the area which are currently unable to cope with demand e.g., difficulty getting doctor's appointments. Facilities should be upgraded before development. 258.3 Lack of commercial service nearby to service current population. 258.4 Area is too far away from the Kelmscott Commercial Centre to allow people to walk comfortably. 258.5 Lack of high frequency of public transport in the area. 258.6 Traffic would increase causing parking issues within the development and require an upgrade to Gilwell Ave bridge. 258.7 Development should retain more of the mature trees and have better landscaping.	258.1 Issue 1 - Environment Impact Concerns 258.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 258.3 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 258.4 Issue 2 - Housing Density and Built Form Concerns 258.5 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 258.6 Issue 7 -Traffic and Trasport Infrastructure Concerns 258.7 Supported, the City recommends a revised LWMS to consider further tree retention outside the POS/foreshore area. At subdivision stage the City can recommend a condition for identification of trees on site worthy of retention.

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
259.	Landowner	object	259.1 Increase in residents will lead to an increase in crime and pollution in the area as seen around the housing development on Davis/Streich. 259.2 The current infrastructure can't support the current people in the area and the plan to add 987 more people. 259.3 Increase in domestic animals not kept within their homes will greatly impact the native wildlife. 259.4 Will increase crime at shopping centre.	259.1 Issue 5 - Social Impact Concerns 259.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 259.3 Not supported, the City required pets to be managed in accordance with local laws. 259.4 Issue 5 - Social Impact Concerns
260.	Landowner	comment	260.1 Site is greater than 800m walking distance to train station. 260.2 Increase traffic concerns on Brookside Ave and Clifton St including at Clifton Hills Primary School peak pick up and drop off times. 260.3 Structure Plan does not provide footpaths. 260.4 Concern regarding impact to river habitat and fauna. 260.5 Proposed density/housing not in keeping with surrounding single storey houses.	260.1 Issue 2 - Housing Density and Built Form Concerns 260.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 260.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 260.4 Issue 1 - Environment Impact Concerns 260.5 Issue 2 - Housing Density and Built Form Concerns
261.	Landowner	object	261.1 Concern future housing will deteriorate to resemble poorly maintained buildings, reminiscent of locations associated with illicit drug use or impoverished neighbourhoods. 261.2 Stormwater drainage of the area will pollute river.	260.1 Issue 2 - Housing Density and Built Form Concerns & Issue 5 - Social Impact Concerns 260.2 Issue 1 - Environment Impact Concerns
262.	Landowner	object	262.1 Refer to Submission 6.1 to 6.14 above.	262.1 Refer to Submission 6.1 to 6.14 above.
263.	Landowner	object	263.1 High density will invite higher crime rates. 263.2 High density will increase traffic on a road that is already affected by speeding and unsafe drivers. 263.3 Development will disrupt the habitat of native wildlife. 263.4 Will result in 'Roadkill' of wildlife.	263.1 Issue 5 - Social Impact Concerns 263.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 263.3 Issue 1 - Environment Impact Concerns 263.4 Supported, signage along the proposed POS interface road could be installed to alert drives to the potential for wildlife crossing roads.

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
264.	Landowner	object	264.1 Transport Impact Assessment (TIA) 2017 traffic volumes is out-dated. 264.2 TIA peak period of analysis 7:45 - 8:45 and 15:30 - 16:30 is one hour however MRWA Operational Modelling Guidelines indicates 3 hours of data should be collected for each peak period, so TIA data is inaccurate. 264.3 Section 5.2.2 Volume Upscale Factor on Page 15 states that surveyed traffic volume data was determined to indicate equivalent data to pre-covid years (prior to 2020). This is outdated almost 4 years old now which provide inaccurate assumptions and/or conclusions. 264.4 Section 5.2.3 Other Assumptions on Page 15, it's noted that an "annual growth rate of 1.0% is applied to the 2021 traffic volumes to obtain 2024 and 2031 traffic flows. This is based on the historical traffic growth calculated from the available traffic counts within the surrounding road network. Although this is only an assumption, it is incorrect prediction of future traffic flows in the area. 264.5 The traffic data is inaccurate as it was collected in days when road closures were in place. 264.6 Concern with environmental assessment that Black Cockatoo nesting hollows were determined using ground-based survey and limited use of drones and loss of tree habitat. 264.7 Concern regarding height and density of buildings increasing towards the river will have a negative impact on current fauna and flora. 264.8 High density proposed development is excessive and disproportionate to the suitability of this land/area and should be scaled back.	264.1 Supported, refer to heading Road Network and Traffic Management 264.2 Not supported, the TIA uses WAPC Transport Impact Assessment Guidelines methodology. 264.3 Supported, refer to heading Road Network and Traffic Management for recommended modifications. 264.4 Supported in part, the City. has requested modelling of traffic based on development of the entire Canning River Clifton Street Urban Development Precinct to more accurately establish future traffic volumes/flows. 264.5 Supported, refer to heading Road Network and Traffic Management for recommended modifications. 264.6 Issue 1 - Environment Impact Concerns 264.7 Issue 2 - Housing Density and Built Form Concerns 264.8 Issue 2 - Housing Density and Built Form Concerns

265.	Landowner	object	265.1 Height, bulk, scale, appearance of building including 3 to 4 storey development and overlooking concerns.is excessive in contrast to surrounding suburb. 265.2 Residential density exceeds 15 dwelling per gross hectare of Sub-regional planning framework. 265.3 Housing and population increase is too high resulting in 36% increase in both in the Kelmscott locality. 265.4 Number of dwellings is 60% more than Canning Rivier Clifton Street South Structure Plan. 265.5 Multi storey development not suitable for retirees. 265.6 Concern regarding visitor parking in street/verge. 265.7 Concern regarding the capacity of road to accommodate bins. 265.8 Structure plan will change the look, feel & quality of lifestyle forever, the reason my family lives here. 265.9 Local amenity impact due to the removal of hundreds of mature trees. 265.10 Increase in noise and traffic and no noise impact assessment. 265.11 Urban Heat Island effect. 265.12 Small lots narrow verges don't provide enough room for landscaping. 265.13 Concern regarding traffic, noise, smell impacts as area has limited public transport and Clifton Hills Primar School students are driven to school. 265.14 Concern regarding multiple drainage basins in POS. 265.15 Concern regarding dust issues during construction phase. 265.16 Brookside Ave/ Clifton St intersection is dangerous. 265.17 Brookside Ave is too narrow without drainage and line markings, and no upgrades propose to Clifton Street. 265.18 No Aboriginal Heritage Assessment undertaken. 265.19 Concern regarding risk of erosion of the banks of the river and sediment entering the river. 265.20 Clay soils are not suitable for development. 265.21 Structure Plan does not include independent environmental assessment and government agency advice. 265.22 Concern regarding State Government agreement to buffer zone to Canning River. 265.23 Concern regarding changes to ground water levels. 265.24 Bushfire concerns including high density in bushfire prone areas and 2011 bushfires. 265.25 Concern regarding safety risk for pedestrians (including school students) on Clifton Street. 265.26 Proposal is greater than 800m walking distance to train station.	265.1 Issue 2 - Housing Density and Built Form Concerns 265.2 Issue 2 - Housing Density and Built Form Concerns 265.3 Issue 2 - Housing Density and Built Form Concerns 265.4 Issue 2 - Housing Density and Built Form Concerns 265.5 Not supported, developments of 3 storeys and above require lifts. 265.6 Issue 7 -Traffic and Trasport Infrastructure Concerns 265.7 Supported, the matter could be considered at subdivision stage. 265.8 Issue 6 - Change/loss of Character and Visual Amenity 265.9 Supported in part, refer to heading Natural Environment & Tree Retention and Local Water Management Strategy 265.10 Issue 7 -Traffic and Trasport Infrastructure Concerns 265.11 Issue 1 - Environment Impact Concerns 265.12 Supported in part, the Structure Plan's Landscape Plan propose smaller trees due to limited verge space. 265.13 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 265.14 Supported refer to heading Local Water Management Strategy 265.15 Issue 1 - Environment Impact Concerns 265.16 Issue 7 -Traffic and Trasport Infrastructure Concerns 265.17 Issue 7 -Traffic and Trasport Infrastructure Concerns 265.18 Issue 8 - Heritage Concerns 265.19 Issue 1 - Environment Impact Concerns 265.20 Supported in part, refer to heading Local Water Management Strategy 265.21 Issue 1 - Environment Impact Concerns 265.22 Issue 1 - Environment Impact Concerns 265.23 Issue 1 - Environment Impact Concerns 265.24 Issue 4 - Bushfire Safety Concerns 265.25 Issue 7 -Traffic and Trasport Infrastructure Concerns 265.26 Issue 2 - Housing Density and Built Form Concerns 265.27 Issue 7 -Traffic and Trasport Infrastructure Concerns 265.28 Issue 10 – Other Concerns

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
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			265.27 Concern development does not account for further development of the Canning River Clifton Street South Precinct. 265.28 Concern rate payers will pay cost for infrastructure upgrades.	

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
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266.	Landowner	object	266.1 It is setting a dangerous precedent for building so many more dwellings so close to the river. 266.2 Concern regarding contaminants in stormwater entering Canning River and impacting wildlife. 266.3 Bushfire evacuation concerns with more residents given only 2 exits from the area with roads gridlocked with traffic. 266.4 Density should be minimised.	266.1 Issue 10 – Other Concerns 266.2 Issue 1 - Environment Impact Concerns 266.3 Issue 4 - Bushfire Safety Concerns 266.4 Issue 2 - Housing Density and Built Form Concerns
267.	Landowner	object	267.1 Not enough services are available in the area for increase in population. 267.2 Low-cost housing will impact views. 267.3 Low-cost housing occupants will result in crime – drugs and drinking issues.	266.1 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 266.2 Issue 2 - Housing Density and Built Form Concerns 266.3 Issue 5 - Social Impact Concerns
268.	interest group	object	268.1 Proposal could set a precedent for high-density development in other areas of the State. 268.2 International examples of rehabilitation of rivers. 268.3 Other parts of the Canning River downstream from this proposal, should provide examples of what to do with a river frontage. Wilson, Ferndale, Cannington, Gosnells etc have kept wide reserves to the Canning River. 268.4 River flooding concerns. 268.5 Concern regarding filling of land for large scale development near river.	268.1 Issue 10 – Other Concerns 268.2 Noted. 268.3 Noted. 268.4 Issue 1 - Environment Impact Concerns 268.5 Issue 1 - Environment Impact Concerns
269.	Landowner	object	269.1 Moved to the area to take advantage of the peace and tranquillity of the natural environment. 269.2 If proposal is approved it will open the flood gates to developers to submit similar proposals along the river. 269.3 Development will destroy habitat for wildlife e.eg. native ducks, turtles, skinks. 269.4 Swan River Trust has power to stop proposal. 269.5 Proposal will impact on the volume traffic on the roads as we all travel on Clifton Street and Gilwell Avenue to get to the shopping centre. 269.6 Proposal will change the 'community' feel of this area.	269.1 Issue 6 - Change/loss of Character and Visual Amenity 269.2 Issue 10 – Other Concerns 269.3 Issue 1 - Environment Impact Concerns 269.4 Noted, the Swan River Trust has been consulted through the DBCA - Conservation and Ecosystem Management Division Rivers and Estuaries Branch. Refer to Report Government Agencies' Submissions. 269.5 Issue 7 -Traffic and Trasport Infrastructure Concerns 269.6 Issue 6 - Change/loss of Character and Visual Amenity

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270.	Landowner	object	270.1 Train station is greater than 800m walking distance from structure plan area. 270.2 Limited commercial/food shopping within 800m. 270.3 Concern regarding increase in traffic on roads due to distance to train station and most employments centres away from train service. 270.4 Impact to native wildlife due to use of Bush Forever for POS/drainage. 270.5 Drainage basins and amended soils will impact health of river. 270.6 Impact to native birds due to removal of trees including nesting hollows. 270.7 Bushire concerns regarding ember attack to evaporative air conditioners and provision of adequate water supply. 270.8 Heat Island effect due to removal of trees/canopy cover. 270.9 Density suggested is not in keeping with ambience of Kelmscott which is a quiet natural environment and existing community. 270.10 Development will set a precedent for further such development along the river.	270.1 Issue 2 - Housing Density and Built Form Concerns 270.2 Issue 3 - Social and Commercial Infrastructure Adequacy Concerns 270.3 Issue 7 -Traffic and Trasport Infrastructure Concerns 270.4 Issue 1 - Environment Impact Concerns 270.5 Issue 1 - Environment Impact Concerns 270.6 Issue 1 - Environment Impact Concerns 270.7 Issue 4 - Bushfire Safety Concerns 270.8 Issue 1 - Environment Impact Concerns 270.9 Issue 6 - Change/loss of Character and Visual Amenity 270.10 Issue 10 – Other Concerns
271.	Landowner	object	271.1 The change from present Clifton Hills' zoning of R15 to R50 to R60 proposed is far too severe. 272.2 35% increase in population impacts too greatly on road access, noise and general living. 272.3 Flooding of the river especially in times of heavy rainfall especially on future R80 high density housing.	271.1 Issue 2 - Housing Density and Built Form Concerns 271.2 Issue 7 -Traffic and Trasport Infrastructure Concerns 271.3 Issue 1 - Environment Impact Concerns
272.	Landowner	object	272.1 Need to ensure adequate parking is supplies for visitors and trades people.	272.1 Issue 7 -Traffic and Trasport Infrastructure Concerns
273.	Landowner	object	273.1 People who live in high rise accommodation would be unable to walk in bushland in Kelmscott Area. 273.2 Possible that run-off from units would affect effect river.	273.1 Not supported, there is nothing preventing existing or future occupants of medium//high density using parks. 273.2 Issue 1 - Environment Impact Concerns
274.	Landowner	comment	274.1 East side of Clifton Street should be rezoned with the same codes.	274.1 Not supported, the east side of Clifton Street is developed and has development potential to R25. The Canning River Clifton Street Urban Development Precinct is zoned Urban Development and housing density is determined in a structure plan.
GOVERNMENT AGENCIES AND SERVICE PROVIDER SUBMISSIONS				

Attachment 9

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
1	Telstra - Planned Services Field Services Group	comment	No objections	Noted, no change to the Structure Plan is required.
2	Water Corporation	comments	Reticulated water is currently available to the subject area. All water main extensions, if required for the development site, must be laid within the existing and proposed road reserves, on the correct alignment and in accordance with the Utility Providers Code of Practice. Water Corporation will undertake high level reticulation network planning and provide to the applicant as part of the subdivision process. Reticulated sewerage is currently available to the subject area. All sewer main extensions, if required for the development site, should be laid within the existing and proposed road reserves, on the correct alignment and in accordance with the Utility Providers Code of Practice. The development will connect into the wastewater pump station in the northwest corner of the subject site via extension of the existing reticulation network. The developer is expected to provide all water and sewerage reticulation as well as pay Infrastructure Contributions for Water and Sewerage.	Noted, standard Water Corporation advice, no change to structure plan required.
3	Department of Education	comments (no objections)	The proposed Structure Plan site falls within the student enrolment intake areas of Clifton Hills Primary School and Kelmscott Senior High School. Based on current and future student enrolment and residential growth projections, it is anticipated that the dwelling yield of 365 lots would not significantly impact on the accommodation capacity of the subject schools. Notwithstanding this, the Department will continue to monitor the student enrolments and residential growth in the broader locality. In view of the above, the Department has no in principle objections to the proposed Structure Plan.	Noted, no change to the Structure Plan is required.

4	Department of Fire & Emergency Services (DFES)	comments	Introduction This advice relates only to State Planning Policy 3.7 Planning in Bushfire Prone Areas (SPP 3.7) and the Guidelines for Planning in Bushfire Prone Areas (Guidelines). It is the responsibility of the proponent to ensure the proposal complies with all other relevant planning policies and building regulations where necessary. This advice does not exempt the applicant/proponent from obtaining necessary approvals that may apply to the proposal including planning, building, health or any other approvals required by a relevant authority under other written laws. Assessment • It is noted that the area is currently zoned as Urban Development and the Local Structure Plan seeks to change residential density and proposes R40 to R80 with an estimated 395 dwellings. • It is unclear how the lots in R80 would be developed to their full potential without future buildings being impacted by BAL40/FZ. • Further clarification is required within the BMP of the requirements of SPP 3.7, and the supporting Guidelines as outlined in our assessment below. 1. Policy Measure 6.3 a) (ii) Preparation of a BAL Contour Map Issue: Vegetation Management Assessment: - Management of Bush Forever and conservation category wetland (CCW) A low threat exclusion has been applied to a 6-metre strip of the adjacent bush forever however, there is no evidence of a legally binding agreement to detail who is responsible for the management of this area or how it will be achieved. Technical evidence and verification should be included in the BMP to qualify the vegetation exclusion can be achieved and under what legislative instrument it is enforceable in perpetuity. The management of this area does not achieve BAL-29 on the urban cells adjacent to the bush forever, it only reduces the area of the lot covered by BAL-40. Furthermore, the draft SPP 2.9 states that no bushfire mitigation strategies are to be contained within a waterway foreshore area or wetland buffer. It is unclear if this area is within the Canning River foreshore area. Action: Modification to the BMP required. Method 2 - DFES notes that there is some lack of clarity around definitions for inputs to Method 2 calculations, of particular relevance to this application are those regarding effective slope. In the absence of clear instruction to the contrary, DFES considers that the Method 2 normative procedure should apply the 5-degree increments for effective slope, as per Method 1, rather than discrete figures. Deviation from this would require a comprehensive Performance Solution that complies with the relevant Bushfire Resistance Performance Requirements of the National Construction Code (NCC).	Issue: Vegetation Management Assessment: Supported. The City does not agree to maintain proposed POS as low fire threat to achieve asset protection zone (APZ) requirements. The City cannot guarantee maintenance of its POS especially during high to extreme fire danger summer months where use of equipment - movers etc may be prohibited due to risk of causing fire/ignition. Bushfire assessment should be based on vegetation being unmanaged. WAPC SPP 3.7 Planning for Bushfire Guidelines indicates the prior agreement of the City is required for maintenance of public land as low fire threat vegetation and relevant information is to be included in the BMP. This has not occurred and would not be supported for the reason above. The City would also be concerned that low fire threat landscaping of POS may not achieve the City's objectives for POS areas. Issue: Method 2 Supported, slope analysis should be consistent with the WAPC SPP 3.7 Planning for Bushfire Guidelines. Issue: Location & Siting and Design and Extreme bushfire hazard and/or BAL-40/ BAL-FZ applies to residential land. Supported. The City agrees with the FESA analysis and identification of the above issues as being inconsistent with WAPC's SPP 3.7 Planning for Bushfire Guidelines which indicates residential lots must be subject to a BAL 29 or below to meet the criteria Location and Sitting and Design criteria of SPP 3.7 Bushfire Guidelines. The BMP should not be supported on the basis of the comments above. The Structure Plan and BMP be revised to address the issues of DFES.

			The BMP applies a 1-degree downslope for some calculations, which should instead use a 5-degree downslope to comply with the Method 2 normative procedure. In addition, the transects to support the inputs have not been provided, they should be illustrated on the BAL Contour Map. Accordingly, DFES advises that the Method 2 outputs cannot be validated. It should be noted that a Method 2 will not result in the required separation distance to achieve lots in BAL-29 as per the policy requirements. In order to provide a Performance Solution, the relevant verification method is GV5 Buildings in bushfire prone areas. G5V is a means to verify the appropriate risk of ignition from a bushfire in order to meet the bushfire resistance requirements of GP5.1. For further guidance, refer to the ABCB Buildings in Bushfire Prone Areas Verification Method Handbook. Action: Modification to the BMP required. 2. Policy Measure 6.3 c) Compliance with the bushfire protection criteria Location & Siting and Design Assessment: Location & Siting and Design A1.1 & A2.1 – not demonstrated. The BAL ratings cannot be validated, as the vegetation classification inputs associated with the Method 2 and Bush Forever vegetation management strategies cannot be validated. The BMP states that Element 1 has been achieved as the subject lot is impacted by a moderate or low bushfire hazard in the post development scenario. The subject lot has an extreme hazard remaining within the lot boundary which directly impacts the proposed urban development. The BMP also states that Element 2 has been achieved as an area of BAL-29 will be available on the future lots to accommodate a building. This focusses on the future dwelling which is not relevant at the structure plan stage and relies on a 10.5m setback on lots proposed to be R80. The urban development cell impacted by BAL-40 is zoned R80 which has a minimum required setback of 1 metre in the Residential Design Codes. Given the high density zoning it is unclear how the lots would be developed to their full potential without future buildings being impacted by BAL40/FZ. Given the Method 2 and vegetation management strategy in the POS area and Bush Forever area cannot be validated, the lot would be impacted by 15 metres of BAL-FZ/40. If the vegetation management strategy in the POS area and Bush Forever is supported by the City, this would reduce to 10 metres impacted, which has informed the proposed setback. The structure plan should be redesigned to ensure adequate separation from areas of environmental value and avoid the need for vegetation clearing. It should consider increasing hazard separation in the form of managed public open space, wider	

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			perimeter roads and consider the density zoning to ensure good planning outcomes at subsequent planning stages. Action: Modification to the BMP required. The structure plan should be redesigned to achieve all lot in BAL-29 or lower. 3. Policy Measure 6.7 Strategic planning proposal, in areas where an extreme BHL and/or BAL-40 or BAL-FZ applies Issue: Extreme bushfire hazard and/or BAL-40/ BAL-FZ applies Assessment: Subdivision and development applications for vulnerable or high-risk land uses in areas of BAL-40/BAL-FZ will not be supported unless they comply with policy measure 6.7, clause 6.7.1 / 6.7.2 of SPP3.7. The proposal is not considered to meet the definition of minor or unavoidable development. Action: Comment only. Recommendation – compliance with acceptable solutions not demonstrated – modifications required. The BMP does not adequately address the policy requirements of SPP 3.7 and the Guidelines. DFES has assessed the structure plan and accompanying BMP. There are several issues that need to be addressed prior to support of the proposal (refer to the tables above). The application has not demonstrated that future compliance to the following elements can be achieved: • Element 1: Location, • Element 2: Siting and Design	

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5	Department of Biodiversity Conservation and Attractions	comments	In reference to your correspondence dated 24 July 2023, the Swan Region office of the Department of Biodiversity Conservation and Attractions (DBCA) will defer to DBCA's Rivers and Estuaries Branch who will provide comment on the Structure Plan to the City of Armadale.	Noted, refer to DBCA - Conservation and Ecosystem Management Division Rivers and Estuaries Branch submission below.

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6	Main Roads WA	Comments	In response to your correspondence received on 26 July 2023 and 30 August 2023, Main Roads provides the following comments regarding the above structure plan. 1. Transport Impact Assessment Based on the review of the Transport Impact Assessment (TIA) (Ref CW1199700, Rev A, dated 24 June 2022) prepared by Cardno (now Stantec), there is uncertainty regarding the level of traffic impact associated with development of the structure plan area. The TIA is to be revised addressing the following matters: a) Further justification is required for the use of trip generation rates for 'Multifamily Housing (mid-rise)' which have been sourced from 'high density residential flat dwellings' in RMS Technical Direction TDT 2031/04a. These rates were determined using surveys of developments that are greater than six storeys and are not considered appropriate for single residential dwellings. Applicant is to revise the trip generation rates used. b) The development yield in Table 5-3 of the TIA (397 dwellings) is to be revised to align with the estimated 395 dwellings in the Structure Plan report. c) Traffic survey information used was from November 2021, where lane closures were in place along Albany Highway, right-turning movements to/from Gilwell Avenue were restricted and taken prior to the commissioning of traffic signals at the intersection of Albany Highway and Fancote Street. Whilst it is noted that assumptions and sensitivity testing was included to account for missing data, a sense check of traffic volumes confirms turning movements provided in the TIA does not reflect current demands. It is recommended that traffic volumes are updated and modelled accordingly. d) The TIA provides crash information for intersections in the immediate vicinity of the structure plan area. It is recommended to consider the crash data of the wider transport network. e) Section 3.2 of the TIA shows three access points along Clifton Street and does not align with the intersections assessed under Section 5. Please clarify and amend accordingly. f) SIDRA gap acceptance values have been modified from the default values. The modelling should be revised to use default values or justification provided for the modified values. Should the City disagree with the above advice, Main Roads requests an opportunity to meet and discuss the proposal further, prior to a final determination being made.	1a) Supported in part. The City does not support justification for the trip generating rates used in the TIA but rather the TIA trip generation rates should be consistent with those indicated in the WAPC's Transport Impact Assessment Guidelines. 1b) Supported. Dwelling numbers in the TIA should be consistent with the Structure Plan dwelling numbers for consistency and appropriate traffic modelling. 1c) Supported. More recent traffic data will ensure more accurate traffic modelling. d) Supported. The crash data requested by MRWA would assist with designing for traffic safety. e) Supported in Part. The City's Technical Services only supports 2 entry roads to the structure plan area. The Structure Plan and TIA should be modified to detail only 2 entry roads. f) Supported - SIDRA data should be to MRWA requirements. The Structure Plan and TIA be modified to address the issues and revisions recommended by Main Roads WA.

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7	Department of Health	Comments	In relation to the management of wastewater, the Department of Health has no objection to the proposal, subject to all new development proposals being connected to reticulated sewerage.	Supported. The Structure Plan area will be required to be connected to reticulated sewer. No change to the Structure Plan is required.

8	Department of Biodiversity Conservation and Attractions - Conservation and Ecosystem Management Division Rivers and Estuaries Branch	objection	DBCA advises that it cannot support the proposed Structure Plan until the following issues are addressed and the plans amended accordingly. Foreshore Areas and Buffers The Structure Plan area includes a 30m wide area of 'Rural' zoned foreshore land that runs adjacent to the Canning River. It is understood from the Structure Plan report that this land was zoned 'Rural' as an interim measure with the intention of it becoming Parks and Recreation (P&R). The Structure Plan refers to this land as 'Foreshore Reserve' and proposes to cede it along with an adjoining 0.7ha of Public Open Space comprising the extent of Bush Forever Area 246, most of the area categorised as Conservation Category Wetland (CCW) (UFI: 15689) and the 100-year floodway and flood fringe area. DBCA considers that the entire Bush Forever Area 246 and CCW area should be included in the P&R reserve. Further, the CCW and Bush Forever Area 246 would best be protected through the implementation of a minimum 30m wide buffer area. The buffer is necessary to provide for protection of the CCW, the river environment and its associated conservation and landscape values. Further, it will also provide opportunities for comprehensive and coordinated rehabilitation and foreshore management and is in keeping with Guidance Statement No. 33: Environmental Guidance for Planning and Development (EPA 2008), that seeks to provide for buffers for high conservation value wetland areas. Foreshore Management Plan The Structure Plan should be supported by a Foreshore Management Plan to outline how stormwater management, bushfire management, landscaping, development interface and subdivision works will not adversely impact on the Canning River and the associated foreshore. The Foreshore Management Plan should outline rehabilitation of the Bush Forever Area, CCW and the extent of replanting within the 30m buffer area. Further, the Foreshore Management Plan should include provision for passive recreation such as a public access pathway to be implemented in a coordinated approach. Protection of vegetation The Structure Plan report states that the majority of the lots are cleared of native vegetation. Further evidence should be provided to support the removal of the vegetation throughout the development. DBCA considers that opportunities for retaining mature vegetation throughout the urban development area should be further explored in line with the City of Armadale Urban Forest Strategy and Better Urban Forest Planning Guidelines (WAPC, 2023). Local Water Management Strategy (LWMS) Stormwater management for the site should address Corporate Policy Statement 49: Planning for Stormwater Management Affecting the Swan Canning Development Control Area, the Department of Water and Environmental Regulation's Stormwater Management Manual for Western Australia (2004-2007), Decision Process for	Foreshore Areas and Buffers Extend the Foreshore Area Not Supported - the DBCA recommendation for the entire Bush Forever Area 246 and CCW along the Canning River to be included in Regional Parks and Recreation reserve is inconsistent with Environmental Review Canning River Precinct 23 September 2009 for MRS Amendment 1202/41 that rezoned the Structure Plan area Urban and retained the identified Regional Parks and Recreation reserve in the Rural zone. This proposal is also inconsistent with the City's Town Planning Scheme No.4 Development (Structure Plan) Area 44 clause 44.3 (iv) suitable provision of 10% standard Public Open Space contributions, predominantly by augmenting and extending the width of the Canning River foreshore reserve area, creating pocket parks, or in accordance with policies of the Western Australian Planning Commission equivalent cash in lieu contributions which can be used to improve public recreation opportunities and facilities in the foreshore POS reserve areas. 30m wide buffer Supported in part – the City supports the statement for coordinated rehabilitation and foreshore management and, Not supported in part – a buffer to the river was determined in the Environmental Review Canning River Precinct, 23 September 2009. Foreshore Management Plan Supported. The Applicant has not submitted a Foreshore Management Plan which is required under the City's Town Planning Scheme No.4 Development (Structure Plan) Area 44 clause 44.3 (v) providing Canning River foreshore reserves and management. Refer to Agenda Report – Analysis – Foreshore and Public Open Space Provision and Schedule of Issue and Modifications for further details. Protection of vegetation Supported. The City can recommend a condition on subdivision approval for the identification of vegetation on site worthy of protection prior to subdivision works commencing including

			Stormwater Management in Western Australia (2017) and be consistent with principles of water sensitive urban design. The proposed strategy for managing stormwater runoff from the development, is to direct the water through pits and pipes to a number of large, constructed basins within the public open space adjacent to the river. These basins have been sized to infiltrate the first 15mm and detain up to a 1% AEP. This approach is not consistent with best practice water sensitive urban design for the following reasons: - Stormwater retention and/or detention should occur as high in the catchment and as close to the run-off source as possible. Further opportunity to retain or detain as much of the smaller rainfall events (i.e. first 15mm) within the road reserves (i.e. tree pits, rain gardens, roadside vegetated swales and biofilters) should be considered as part of the LWMS. The size and number of basins is considered excessive. Large, deep basins do not provide appropriate aesthetic or useability outcomes and are not supported, particularly in areas of known conservation value such as Bush Forever or mapped CCW areas. - Pipe outfalls into the Canning River shown on Figure 5 of the LWMS are considered excessive and should be minimised. Opportunities for overland flow paths should be utilised as an alternative to the proposed outfalls. DBCA does not support the proposed location of the stormwater detention basins in the Bush Forever and CCW areas. The proposed basins will prevent the proper rehabilitation of the CCW and Bush Forever areas and necessitates unnecessary removal of vegetation. Further, construction of large basins will be difficult to manage without damaging additional vegetation. Appendix H, Statement relating to the location of Drainage Basins (EDS Environmental, 2023) does not provide adequate justification for siting basins in these areas. Piping roof runoff directly to the river was discussed in the LWMS as an option to manage volumes of stormwater, however this is not supported by DBCA as it would require an excessive amount of additional pipework, may cause erosion issues from additional pipe outfalls to the river, and is not in line with best practice water sensitive urban design. Roof runoff would best be managed closer to the source, higher up in the catchment. Section 3.2 of the Local Structure Plan report references a constructed drainage line that flows along the southern boundary of Lot 12 Clifton Street and across the western part of the lot. Opportunities for utilising this existing flow path should be explored, through the potential conversion of the drain to a living stream. The living stream would improve the quality of the water discharging to the Canning River and have the added benefit of enhancing the environmental values of the area through the addition of native vegetation and creation of habitat. Bushfire Management The Bushfire Management Plan states in Table 1: Ecological database assessment, that the land is not affected by a conservation wetland or buffer. This should be	vegetation outside the POS area and/or CCW and Bush Forever land. Local Water Management Strategy (LWMS) Supported. the issues of the BDCA regarding the LWMS are generally consistent with those of the City. The applicant was requested to submit a revised LWMS that addressed the issues and modifications of the City and the DBCA but has not done so within the agreed timeframe end of February 2025. Refer to Agenda Report – Analysis – Local Water Management Strategy and Schedule of Issue and Modifications. Bushfire Management Supported. Table 1 of the bushfire management should identify Conservation Category Wetland (UFI: 15689) Supported in part – the maintenance of CCW/Bush Forever as low fire threat for bushfire management/asset protection zone is not supported by the City. Refer to comments above on DFES submission under heading – Issue: Vegetation Management. The Structure Plan and above-mentioned technical reports be revised/or prepared to address the issues of DBCA that are supported or supported in part above by the City.

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
			amended to include the classification of Conservation Category Wetland (UFI: 15689). The plan should be updated to include the full extent of the Bush Forever Area and CCW in the area proposed to be revegetated to forest. DBCA does not support the Bush Forever area or CCW being managed in a low threat state to reduce the development setbacks required to be provided by the developers. DBCA officers are happy to assist with further information regarding the issues outlined above. In its current form the Structure Plan is not supported, however should the WAPC be considering approving the plan, please contact the officer above for recommended conditions and advice.	

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
9	Department of Water and Environmental Regulation	comments	The Department has identified that the proposal has the potential for impact on water values and management. While the Department does not object to the proposal, key issues and recommendations are provided below and these matters should be addressed: Given the proposed structure plan is adjacent to the Canning Rivere foreshore area and falls within the Swan River Trust Development Control Area, the Department defers to the Department of Biodiversity, Conservation and Attractions for comments. The Department of Biodiversity, Conservation and Attractions should be consulted regarding their requirements for the adjacent Canning River foreshore and Conservation Category Wetland (CCW) area.	Noted. Refer to DBCA Conservation and Ecosystem Management Division Rivers and Estuaries Branch submission above.
10	Department of Planning Lands and Heritage Aboriginal Heritage	comments	A review of the Register of Places and Objects as well as the Department of Planning, Lands and Heritage (DPLH) Aboriginal Heritage Database concludes that the subject area intersects with Aboriginal Registered Site ID 3538 (Canning River). Therefore, based on the current information held by DPLH, approvals under the Aboriginal Heritage Act 1972 (AHA) will be required for future works within the subject area. Please refer future proponents to the DPLH website at Aboriginal Heritage Approvals (www.wa.gov.au) for information on 'Land use under the Aboriginal Heritage Act 1972' for the types of approvals available under the AHA and how to apply. I also advise future proponents to regularly check the Aboriginal Cultural Heritage Inquiry System (ACHIS) should new Aboriginal Cultural Heritage be reported within the subject area. You can search ACHIS by using the following link: Aboriginal Cultural Heritage Inquiry System (dplh.wa.gov.au).	Supported, a review of mapping of Aboriginal Registered Site indicates ID 3538 is primarily within the proposed foreshore reserve which would protect it from clearing/ development works however the Structure Plan report did not adequately comment on and map ID 3538. The Structure Plan report be revised to more accurately comment of on Aboriginal Registered Site ID 3538 through mapping and commentary.

SCHEDULE OF SUBMISSIONS PROPOSED STRUCTURE PLAN – CANNING RIVER & CLIFTON STREET (NORTH) PRECINCT, KELMSCOTT				
NO	**SUBMITTER**	**SUPPORT, OBJECT, COMMENT**	**SUMMARY OF SUBMISSION**	**CITY OF ARMDALE COMMENT/RECOMMENDATION**
11	Department of Transport (DoT)	comments	The Urban Mobility (UM) division of DoT has reviewed the submitted documents and has no objection to the proposal in principle, however recommends the following issues are addressed before progressing to formal lodgement with the Western Australian Planning Commission (WAPC). 1. Per the submitted Local Structure Plan report (Harley Dykstra, dated 23/5/2023) the proposed movement network and pedestrian and cycle network will be detailed at subdivision stage (part 2, section 5.4.6 and 5.4.7). Part 1, section 4.5 states that "pedestrian pathways are to be constructed by the subdivider in the locations shown on the Structure Plan and to the specifications of the City of Armadale." (page i), however this level of detail is not included in the Structure Plan, except for the proposed north-south shared path, which is denoted as 'indicative location'. 2. The Transport Impact Assessment (TIA) does not include a safe walk to school assessment, as detailed in the TIA guidelines vol 2 section 10.10.9. Clear and safe routes for pedestrians/people on bikes must be provided from the subject area to Clifton Hills Primary. 3. The TIA does not include road cross sections. These should be provided in accordance with TIA guidelines vol 2, section 10.6. Road cross sections should also detail proposed footpaths. 4. Proposed roads reserves should be consistent with Liveable Neighbourhoods and provide good amenity between the adjacent residential area to the east and the future foreshore area within the subject site for non-car modes. 5. Further detail regarding the interface with/future connections through the adjacent land to the south should be provided, given the location of the subject site within the 800m walkable catchment of Kelmscott station and It is therefore recommended that the TIA be amended to include road cross sections and a safe walk to school assessment, and that the structure plan be updated to include pedestrian path locations, to ensure the proposed paths for non-car modes are legible and integrated with the existing movement network, along logical desire lines.	Supported. The information requested by the DoT is generally consistent with the information requirements indicated in the WAPC's Transport Impact Assessment Guidelines. The TIA and Structure Plan be revised to address the issues of the Department of Transport.



Walkability Plan - Clifton St North Local Structure Plan

Attachment 11: Schedule of Modifications
Clifton Street North Local Structure Plan (SPN/2357)

The local structure plan is to be modified to the satisfaction of the Western Australian Planning Commission (WAPC) on the advice of the Department of Planning, Lands and Heritage (DPLH), in accordance with the following schedule of modifications and the duly modified local structure plan is to be resubmitted to the DPLH for consideration.

No.	Section	Modification
Structure plan Map		
1	Map	Amend residential density to replace the R80 designation with R60 with all remaining areas to reflect a maximum density of R40.
2	Map	Amend depiction of POS areas to: • Include remaining area of CCW and BF Site outside of the foreshore reserve within POS • Provide for a pocket park outside of the CCW and BF Site. • Consider equitable distribution of POS between landholdings.
3	Map	Amend movement network to show: • Continuous road abutting foreshore reserve and adjoining POS located in consideration of modifications required in relation to POS distribution and drainage basin location and in consideration of retention of significant vegetation. • Maximum of two connection points to Clifton Street with a road connection located on Lot 12 and Lot 1 Clifton Street.
4	Map	Amend map to show CCW boundary
5	Map	Amend map to show pump station buffer
6	Map	Amend map to show all drainage infrastructure located outside of the CCW, foreshore reserve and bush forever site 246.
7	Map	Shared path location to include shared path along south side of Brookside Avene and west side of Clifton Street.
Structure Plan Part One – Implementation		
8	Executive Summary	Remove reference to retirement village and reword relevant paragraphs accordingly. Remove reference to R80 density and all subsequent references to R80 throughout the remainder of the LSP Part One and Two.
9	Executive Summary	Update Structure Plan Summary table to reflect amended residential density and development outcome.

10	4.0 Subdivision and Development Requirements	Separate provisions into subdivision and development requirements. Include statement regarding road network and need for updated TIA at subdivision stage. Include requirement for foreshore management plan to be prepared, prior to the lodgement of subdivision application, as applicable, to the satisfaction of the relevant authority. Include maximum building height requirement for lots abutting Clifton Street. Include statement regarding requirement for minimum 10 per cent public open space to be provided in accordance with LSP Map, with cash-in-lieu contribution to be required for Lot 11 towards improvement of foreshore POS Include minimum floor level requirement for habitable buildings within the flood fringe.
11	4.1	Replace current wording of 4.1 with *Subdivision within the Structure Plan area is to be in accordance with the land uses and residential density code prescribed by the Structure Plan*
12	4.3	Include Fauna Management Plan as a strategy that may be required as a condition of subdivision.
13	4.4	Amend wording to remove reference to lots abutting POS and reword to address LDP may be required to address: • Rear loaded lots • Dwelling orientation • Height restrictions • Garage and crossover locations
Part Two – Explanatory Section		
14	1.1 Introduction and purpose	Remove references to R80. Amend paragraph 2 in relation to ultimate objective to clarify that “developing urban environment” is the balance of the Canning River Clifton Street Urban Development Precinct to the south and also include commentary regarding integration with the existing residential area and the future Canning River Public Open Space and foreshore reserve. Remove dot points with lot yield estimates for R80 and recalculate lot yield based on R40 and R60.
15	1.2 Area and Land Use	Remove reference to higher residential density in proximity to the Canning river. Amend reference to ‘primarily cleared of native vegetation’ to include commentary regarding stands of remnant vegetation adjacent to the Canning river and along boundaries.
16	1.3 Background	Include overview of the history of planning for the site, including rationale for the determination of the foreshore reserve.
17	Table of TPS 4 provisions	Amend dot point regarding foreshore reserve to reference Canning River Precinct Environmental Study and remove reference to consultation involving WAPC, EPA, DWER, DBCA and the City by Bayley Environmental Services. Amend dot point related to solar access to remove reference to increasing densities. Provide commentary based on LN Policy Element 3 lot layout.

18	Water Sensitive Design (PLN 2.6)	Provide more detail commentary on how the LSP achieves the requirements of PLN 2.6, i.e., include reference to the LWMS (as revised) and/or Flora Vegetation/Black Cockatoo assessment as appropriate.
19	State Planning Policy 2.10	Amend the table detailing applicant responses to SPP 2.10 Part 7.4 provisions to provide an applicant response to provisions 7.4.7, 7.4.13 and 7.4.15 in lieu of not relevant and noted.
20	3.1 Topography	Provide some detail on levels AHD across the site and degree/percent of slopes, fall across the site.
21	Figure 6 – Location of Significant trees	Modify Figure 6 to include an overlay of the structure plan map, including foreshore reserve and POS boundary.
22	4.2 Bushforever	Provide further details regarding the existing swale located within BF 246 within Lot 12 and whether this is a natural or formalised drainage basin, noting the location of drainage basins is not supported within BF or the CCW.
23	4.5 Southern and Northern interfaces	Revise text to comment that the rural land to the north is identified as an Urban Investigation Area in the *Southeast Metropolitan and Peel Sub-regional Structure Plan, 2018.* Consider and provide commentary and recommendations for Structure Plan interface to Brookside Avenue.
24	5.3.1 Land Uses and Residential Density	Reword to reflect modified R40 and R60 development outcome and remove references toR80.
25	5.3.2 Lot Layout	Revise text commentary to address relevant *LN* policy information requirements (Refer to Page 14 of LN policy) Revise dwelling yield based on R40 and R60. Compare proposed density with target density of State Planning Frameworks
26	5.3.3 Residential Lot size	Amend to reflect R40 and R60 density
27	5.4.2 Local Road Network	Provide further detail on the existing road network includingdescription of Clifton Street and Brookside Avenue (classification, standard, footpath, consideration of need for upgrades/improvements including local area traffic management and recommendations of TIA) Modify all references to Clifton Road to Clifton Street through Part One and Two and supporting documents.
28	5.4.3 Road Widths	Remove commentary regarding road/laneway widths determined at subdivision plan stage. Revise commentary to include discussion of road reserve and pavement widths for road types based on expected vehicle moments within SP area. Foreshore road reserve width should include consideration of a possible wider road with on-street parking and the shared path which may be used for APZ purposes.
29	5.4.4 Intersection	Revise in consideration of Modification 3 and 41. TIA (as revised) to consider sight line issue of Clifton St/ Brookside Ave intersection and provide recommendations.
30	5.4.6 Pedestrian and Cycle Network	Include commentary that a shared use path is required on the west side of Clifton Street and south side of Brookside Avenue to connect to the shared path further south on Clifton Street same side of the road. Include commentary that footpaths on internal subdivision roads are required

31	5.4.7 Proposed Movement Network	Include description of proposed movement network, including requirement for road abutting foreshore/POS reserves, indicative road network considerations and intersection treatments and road widths.
32	5.4.8 Proposed Movement Capacity	Amend to adjust vehicle numbers with revised development density. Remove reference to retirement village.
33	5.5 Public Open Space	Resolve the inconsistency between Table 1 and Figure 7 restricted open space, 1:1 ARI and LWMS surface area and calculations in the Shawmac Drainage Report which are larger areas, noting POS/drainage provision will be impacted by matters identified above under heading Structure Plan Map and in the LWMS (as recommended to be revised). Include commentary regarding POS distribution rational including POS contribution per lot. This should include area/% provided per lot subject to CCW/BF designation, area restricted POS and area unrestricted to provide greater clarity on the POS contribution per landowner. Consider cash in lieu contribution for Lot 11 Clifton Street to contribute to the development of POS contribution provided. Insert Table currently included within Figure 7 within body of text.
34	5.6.1 Local Development Plans	Remove dot point referring to lots directly abutting public open space.
35	5.6.2 Minimum Two Storey Height Limit	Remove Section 5.6.2
36	5.8 Heritage	Provide subheadings Aboriginal Heritage and European Heritage. Revise text commentary to accurately reflect the impact of Aboriginal heritage site (3538) and heritage place 18987 on the structure plan area. Confirm the extent of these heritage places is confined to the proposed foreshore area or otherwise. Provide a plan of these heritage sites superimposed on the Structure Plan Map for clarity utilising DPLH Aboriginal Heritage Inquiry System and Heritage Council InHerit online services for site mapping information. Address the advice of the DPLH – Aboriginal Heritage submission.
37	5.9 Bushfire Management	Include summary of post development bushfire hazard and proposed management measures.
38	5.11 Servicing and Staging	Include commentary on how staging may impact servicing ie drainage and how this will be managed in staged approach Confirm fill requirements and how this will managed in a staged approach.
Technical Documents		
39	Bushfire Management Plan	BMP be modified to the satisfaction of the WAPC in consultation with the City of Armadale to • acknowledge and address CCW in the Structure Plan area and that the site is within an Environmental Sensitive Area designation. • remove reference to APZ within areas of Bush forever and/or CCW.

		• Demonstrate all residential areas capable of achieving achieve BAL Rating of BAL-29 or less beyond front setback line.
40	LWMS	The LWMS to be modified to the satisfaction of the WAPC in consultation with the City of Armadale, DWER and DBCA to address the following: • Remove proposed dual pipe strategy; • Investigate the potential to amalgamate catchments and/or basins with due regard to land ownership; • Locate Basins outside CCW/Bush Forever areas; • Basin design to consider access, potential for construction disturbance to CCW/Bush forever land and ongoing maintenance implications. • Basins sizing and design is to be based on a primary drainage strategy for the structure plan area including proposals to address site soil infiltration issues. A combination of earthworks/ and fill to provide lot (a source) infiltration and detention/storage with overflow connections to the street drainage network and detention in down-stream basins in POS is preferred, or other design as may be agreed to by the City. -
41	TIA	TIA to be modified to the satisfaction of the WAPC in consultation with the City of Armadale to address: • Assessment of proposed internal road network including: - road reservation widths - road hierarchy based of LN policy speed limits - road cross-sections (for example, two lane or four lane, and also show pedestrian, cycling and/or public transport facilities) • Access arrangements to demonstrate: - How are the proposed roads designed to connect with Clifton Street and what intersection treatments are being proposed. - Additional truncation (if required) to support the intersection treatments (note: landholdings on the east side of Clifton Street should not be impacted by the need for additional truncations) • Shared path requirements to include: - a shared path on the west side of Clifton St (development boundary) to link up with the shared path on Clifton St south of Gilwell Ave and provide pedestrian crossings at suitable spacing along Clifton St - footpaths to be provided on new roads within the Structure Plan area, connecting with the existing/proposed shared path network.

		• Revise the vehicle trip generation rate per dwelling as per WAPC Guidelines -(WAPC) *Transport Impact Assessment Guidelines Volume 2 – Planning Schemes, Structure Plans & Activity Centre Plans* (2016) should be utilised. • Revise the TIA to factor in traffic from the urban development of land (lots) immediately south of the structure plan area - Lots 14, 15, 16 and 17 Clifton Street, and the Canning River Clifton Street (South) Precinct Structure Plan area into scenarios (specifically scenario 3) • Revise the TIA to factor in the nearby primary school as a major attractor/traffic generator within 800m of the structure plan area. Refer to 10.8 of the WAPC's TIA *Transport Impact Assessment Guidelines Volume 2*.
42	Appendix H	Delete – DBCA have objected to the location of basins in the CCW/Bushforever land
43	Appendix I – Landscape Management	Amend Landscape Management Plan to: • Indicate revegetation of CCW/Bushforever areas, to a self managed state. • Provide a small pocket park subject to stie and development constraints. • Identify hard landscape elements requirements in regard to recreation needs of the community.

WAPC Western Australian Planning Commission

REPORT TO	Statutory Planning Committee		
Meeting date	23 September 2026	**File number**	SPN/2398
Title	Precinct Structure Plan – Albany Highway, Town of Victoria Park - Determination		
Purpose	For decision		
Head of power	Schedule 2, Part 4, clause 22(1) of the Planning and Development (Local Planning Schemes) Regulations 2015		
Confidentiality	Non-confidential		
Responsible officer	Dale Sanderson – Planning Director, Metro Central		**Responsible Officer Conflict of Interest**: Nil
Date DPLH received / conformed	25 June 2025		
Processing days	455 days on 23 September 2026		
SITE DETAILS			
Region(s)	Metropolitan (Central)		
Local government(s)	Town of Victoria Park		
Region Scheme / Zoning	Metropolitan (MRS) – Urban, Primary Regional Roads and Other Regional Roads		
Local Scheme / Zoning	District Centre, Mixed Use and Residential		
Landowner/s	Various landowners		
Applicant/s	Town of Victoria Park		
Local Government recommendation/s	Approve		
ATTACHMENTS			
A1 – Location Plan A2 – Precinct Structure Plan Report A3 – Technical Appendices A4 - Schedule of Submissions A5 - DPLH Schedule of Modifications A6 - Submissions Report A7 - Town's Schedule of Modifications A8 – SPP 7.2 Design Assessment A9 – Built Form A10 - DPLH Primary Controls A11 - DPLH Plot Ratio Testing A12 – Community Benefit Feasibility Calculations			

EXECUTIVE SUMMARY

The Town of Victoria Park (the Town) has prepared and submitted the draft Albany Highway Precinct Structure Plan (PSP) for Western Australian Planning Commission (WAPC) approval to coordinate

the future development of land abutting and in proximity to Albany Highway within the Town of Victoria Park, **Attachment 1 – Location Plan**). The PSP aims to facilitate expansion of commercial, mixed-use and residential development throughout six sub-precinct areas, which include the Victoria Park secondary activity centre and East Victoria Park district centre and includes provisions to manage the built form transition to the surrounding residential areas (**Attachment 2 – Precinct Structure Plan Report**).

The proposed built form controls to facilitate the intended development are supported, however, modifications are recommended to base building heights, plot ratio values, major site provisions, public space requirements, sustainability requirements, and the community benefit framework that merit readvertising.

The Town initiated Amendment No. 2 (Amd No. 2) to the Town's Local Planning Scheme No. 2 (LPS 2) concurrently with the PSP to implement the zoning, coding, development controls, and community benefit provisions reflected in the PSP.

Due to the significant modifications proposed and the extent of the interrelation between the PSP and Amd No. 2, it is recommended that the PSP is modified and re-advertised, and the Town be requested to do this concurrently with advertising Amd No. 2 and to submit a report on the revised modifications prior to further consideration on the PSP by the WAPC.

The PSP is presented to the Statutory Planning Committee (SPC) for a decision consistent with WAPC delegations as the proposed modifications represent a significant departure from the Town's recommendation.

RECOMMENDATION

That the Statutory Planning Committee resolves to:

1. ***require that the Town of Victoria Park advertise the Albany Highway Precinct Structure Plan with the modifications included in Attachment 5 pursuant to Clause 22(2) of Schedule 2 - Deemed Provisions for Local Planning Schemes, Planning and Development (Local Planning Schemes) Regulations 2015 (Deemed Provisions);***

2. ***request the Town of Victoria Park to advertise the modified Albany Highway Precinct Structure Plan concurrently with Scheme Amendment No. 2 required to implement the PSP; and***

3. ***request that the Town of Victoria Park subsequently provides a report on the Albany Highway Precinct Structure Plan modifications to the Western Australian Planning Commission in accordance with clause 20 of the Deemed Provisions to inform a subsequent decision of the Commission under Clause 22(1).***

PROPOSAL DETAILS

The PSP has been prepared over a 127.4 ha area extending from the Causeway Bus Transfer Station to where Albany Highway meets Shepperton Road within the Town of Victoria Park to coordinate the long-term strategic vision for development and infrastructure and public realm upgrades. If built to 85 percent capacity it will provide up to 6,900 additional dwellings beyond the current zoning. The advertised PSP proposes:

- six sub-precincts containing 27 distinct sub-precinct zones, each zoned R-AC0 with associated base and bonus building heights and plot ratios, setback and frontage primary controls;

- high-density mixed use development to be concentrated in eight major sites (up to 32 storeys), mid to high-rise mixed use development outside major sites (up to 18 storeys), and mid-rise residential development (up to 8 storeys) providing a transition to the low density residential outside the PSP area;
- general development requirements relating to building height, plot ratio, setbacks, and frontage and access, and parking and end of trip facilities;
- sustainability provisions applicable to the entire PSP area including minimum sustainability certification and energy efficiency requirements, restrictions on gas connections, water management and tree canopy requitements;
- site specific provisions for:

    - sensitive interfaces, contributory frontages, and heritage protections to mitigate impact on existing low density residential and heritage sites;
    - solar access to public areas;
    - the creation of new public open space, pedestrian links, rights-of-way and creative and cultural floorspace;
    - the provision of additional community and cultural floorspace; and
    - contaminated sites and acid sulphate soils;
    - major site provisions relating to open space and pedestrian links, interface to the surrounding areas, land use ratios, biodiversity, community and cultural floorspace, tree retention and built form restrictions; and
    - building height and plot ratio bonuses for each lot in the PSP area up to the bonus value assigned in the primary controls subject to the provision of a community benefit contribution.

The proposed community benefit contribution is based on the criteria outlined in the associated community benefit framework to be provided as a monetary contribution and/or through on-site delivery supported by a community needs assessment, management plan, and valuation. It is to contribute to one or more specified preferred community benefits consisting of:

- public realm enhancement, including upgrades to existing streetscapes, POS, and drainage sumps outside development sites;
- the provision of creative and cultural floorspace (such as live performance space, artist studios, and woodwork production areas) within a development;
- the delivery of or contribution towards a community infrastructure item identified in the Town's Social and Community Infrastructure Strategy;
- the delivery of new POS, publicly accessible private open space, or pedestrian link;
- provision of energy efficiency infrastructure and/or building performance exceeding primary requirements; and
- the provision of 10 percent affordable dwellings in a development in partnership with an approved housing provider or similar.

The PSP comprises four components being the Executive Summary, Part 1 Implementation, Part 2 Explanatory, and an appendix of supporting technical reports as outlined below (**Attachment 3 - Technical Appendices**):

- a draft Community Benefits Framework with a place and needs analysis, a rationale for bonus development, and technical notes related to the community benefit calculation, feasibility and a draft procedural guide (2025, **Attachment 3.1**);
- a draft Public Realm Strategy (2023, **Attachment 3.2**);
- a draft Built Form Strategy (2023, **Attachment 3.3**);
- Preliminary Heritage Control Recommendations (2022, **Attachment 3.4**);
- a Market Feasibility Assessment (2022, **Attachment 3.5**);

- an Economic, Retail and Employment Strategy (2023, **Attachment 3.6**), containing a floorspace analysis, socio-economic analysis, and a needs assessment;
- a Mobility Access Report (2023, **Attachment 3.7**);
- a High Level Traffic Analysis (2024, **Attachment 3.8**);
- a Water Management Strategy (2024, **Attachment 3.9**); and
- a Sustainability Strategy (2024, **Attachment 3.10**).

BACKGROUND

Local Context and Planning Framework

The PSP area is predominantly zoned Urban under the Metropolitan Region Scheme (MRS), with Shepperton Road reserved Primary Regional Roads (PRR), Welshpool Road and Miller/Kent Streets reserved Other Regional Roads, and the Causeway area reserved PRR and Regional Open Space. Under LPS 2, it is currently zoned Mixed-use, Residential, District Centre and Special Use, and includes reserves for Public Open Space, Civic and Community, District and Local Distributor Roads, and Education purposes. The zoned land in the PSP area has R-Coding ranging from R30 to R80.

The PSP area is:

- well serviced by eight bus routes, one of which is high frequency;
- within walkable catchments of the Victoria Park, Carlisle, and Oats Street train stations;
- approximately 1.3km south-east of the Perth Central Business District;
- adjacent to the Carlisle and Oats Street station precincts (being within the Station Precincts Improvement Plan No. 65 area); and
- approximately 2km north-east of the Bentley/Curtin specialised activity centre.

The *Perth and Peel @ 3.5 Million, Central Sub-regional Planning Framework* (2018) (the Framework) identifies the PSP area as an activity centre and an urban corridor. Under *State Planning Policy 4.2 – Activity Centres* (SPP 4.2), the PSP area includes two activity centres: Victoria Park, a secondary centre, and East Victoria Park, a district centre.

The Town's Local Planning Strategy (the Strategy), which was endorsed by the WAPC in 2022, sets the strategic direction in the Town for the next 10 to 15 years. It identifies the need for a precinct structure plan along Albany Highway to coordinate the local planning framework for the area, upgrades to the public realm and infrastructure, and economic development initiatives. The Strategy supports the intensification of commercial and residential development in the area, while ensuring an appropriate built form and scale transition to the surrounding lower density areas. It recommends that the PSP area be considered as a single secondary centre as the district centre classification of East Victoria Park does not accurately represent the growth potential of this area due to its strategic location, Major Sites, and civic assets and both Victoria Park and East Victoria Park are functionally and economically integrated.

Scheme Amendment

The Town resolved to initiate proposed Amendment No. 2 to the Scheme (Amd No. 2) concurrently with endorsing the draft PSP. Amd No. 2 will ensure consistency with and implement the draft PSP. It proposes to:

- delete Additional Site and Development Requirements ASR 11 through 16 to improve consistency with the draft PSP;
- include primary building controls and a community benefit framework;
- require subdivision and development in accordance with the draft PSP for the area nominated as Structure Plan Area No. 2;

- rezone lots within the draft PSP area to Residential, Mixed Use or District Centre in accordance with the draft PSP; and
- apply an R-Coding of R-AC0 for all urban zoned lots.

Consultation

The PSP was initially advertised for 70 days from 7 November 2024 to 16 January 2025. This was followed by an additional letter drop from 17 February 2025, which extended the advertising period until 13 March 2025, for a total of 94 days. The extended period was agreed with the Department of Planning, Lands and Heritage (Department) to ensure the public and stakeholders have sufficient time to review the proposal and provide a submission.

32 written submissions, one petition (with 76 signatures) and 135 online surveys were received in this period (**Attachment 4 – Schedule of Submissions**). Of the 135 survey responses, 84 supported the general direction of the PSP, while 37 opposed the PSP and 13 were unsure. Key matters raised in the submissions were:

- development height and density
- community;
- security and safety;
- public realm and environment;
- transport and mobility;
- overshadowing and overlooking;
- property values; and
- equitable and balanced development.

Five of these submissions were from State government agencies being the Department of Education (DoE), Main Roads WA (MRWA), Department of Communities (DoC), the Heritage Council of Western Australia (HCWA), and the Department of Transport (DoT):

- DoE raised no objection to the PSP, but noted that primary schools in the area will not be able to accommodate the long-term student demand in the area at the proposed densities.
- DoC generally supported the proposal and requested a clear definition for affordable housing be included in the PSP and social housing should be included as a community benefit.
- MRWA provided no recommendation but advised that the plan for the Causeway Bus Transfer Station in the PSP does not align with MRWA planning and so Major Site 1 should be removed, and that a Developer Contribution Plan and intersection assessment should be prepared.
- HCWA raised concerns related to inconsistencies between the heritage provisions in the PSP and the *Heritage Act 2018*.
- DoT raised concerns around the small frame area in the PSP and the lack of a maximum parking rate and recommended a broader strategy including the area between Berwick Street and Armadale Train Line be prepared.

The Town's responses to these submissions in **Attachment 4** are supported, although additional modifications are recommended to address the concerns of MRWA and HCWA as referenced in **Attachment 5 – DPLH Schedule of Modifications**.

The Council considered a recommendation for modifications on the PSP on 17 June 2025, in response to submissions and to correct administrative errors (**Attachment 6 - Submissions Report** and **Attachment 7 - Town's Schedule of Modifications**). These included:

- reclassification of mixed use CE2 and CE3 areas in the central sub-precinct to residential CE1 to reflect existing residential character as requested by the petition;
- correcting properties classified as heritage to ensure consistency with current listings;

- modifying Plan 1 to indicate the Causeway Bus Transfer Station Major Site 1 as an investigation area;
- include solar modelling images in Part 2 to address overshadowing concerns;
- increasing the base building height of Major Site 7 from eight to 10 storeys;
- introduction of a new higher density mixed use zone EE3 in East End sub-precinct; and
- modifications to address concerns raised by several submissions that the cumulative contribution requirements in the draft PSP could disincentivize development, being the:

    - removal of Public Open Space (POS) Cash-in-lieu contribution requirement;
    - modification of the community benefit framework by introducing a tiered contribution methodology;
    - removal of minimum POS contribution areas for several Major Sites; and
    - modification of the public art contribution to only apply to base development costs for Mixed Use and Centre zone developments, with any additional art provision contributing toward community benefit.

While the Council broadly supported the proposed modifications, it did not support the:

- the modifications to address the cumulative contributions requirements in the PSP;
- the introduction of additional community benefit categories; and
- rezoning of the property at the corner of Geddes Street and Albany Highway from CW4 to CW3, instead rezoning it to CW2.

The Council did not support these modifications as it considered the contributions are needed to address POS shortfall in the area; to facilitate funding of POS enhancement, public realm, and community infrastructure projects; and to provide community benefits for the wider community. The Council endorsed the draft PSP subject to the Schedule of Modifications outlined above, and directed the draft PSP be referred to the WAPC for approval under clause 20 of Schedule 2 - Deemed Provisions for Local Planning Schemes, Planning and Development (Local Planning Schemes) Regulations 2015 (Deemed Provisions).

Two additional submissions were provided to the Department after the PSP was submitted.

One requested the reduction of the rear setback to podium for EE3 from six metres as this was considered excessive compared to the three-metre requirement under EE2, particularly because there is also a four metre (to be widened to six metre) wide laneway separating EE3 from the EE1 residential area. This is supported given the laneway will mitigate any impact from EE3 to EE1. The Town also supports this modification.

The second submission requests the bonus building height for CW1 be increased from six to nine storeys to provide a more gradual transition between M2 and CW2, to reflect the Causeway sub-precincts status as a key growth area, and to provide more incentive for redevelopment, despite the contributory frontage requirement. This is not supported as:

- The primary controls and intended building typology of CW1 are designed to protect the contributory frontage nature of the properties.
- The built form controls are consistent with VP1, which is immediately adjacent to CW1 and has similar contributory frontages.
- The PSP Part 1 cl. 3.5.2 provides for an additional storey of building height where the contributory frontage requirements demonstrably impact the ability of a development to meet the permitted plot ratio.

Framework and Policy Assessment Overview

Legislation, Policies and Framework	Consistency
Metropolitan Region Scheme	Fully consistent
Town of Victoria Park Local Planning Scheme No. 2	Fully consistent
Town of Victoria Park Local Planning Strategy	Broadly consistent, some discretion required
Planning and Development (Local Planning Scheme) Regulations 2015	Fully consistent
Perth and Peel @ 3.5 Million, Central Sub-regional Planning Framework	Fully consistent
Residential Design Codes	Broadly consistent, some discretion required
State Planning Policy 4.2 – Activity Centres	Broadly consistent, some discretion required
State Planning Policy 7.0 - Design of the Built Environment	Broadly consistent, some discretion required
State Planning Policy 7.2 - Precinct Design	Broadly consistent, some discretion required

DISCUSSION

The PSP has been assessed under both *State Planning Policy 7.2 - Precinct Design* (SPP 7.2) and its associated Guidelines, SPP 4.2 and other relevant planning documents. The design of the PSP is generally consistent with the Design Elements and their Intent, Objectives, Considerations and Guidance outlined in SPP 7.2 (**Attachment 8 – SPP 7.2 Design Assessment**). Key matters arising from the Department's assessment are discussed below.

Density and built form strategy

The maximum scale and distribution of built form proposed by the PSP, illustrated in **Attachment 9 – Built Form,** including building height and plot ratio bonuses, are broadly supported as:

- the advertised PSP exceeds 40 dwellings per hectare within 800 metres of Albany Highway, exceeding the 25+ dwellings per hectare requirement for secondary centres without immediate access to a train station as per SPP 4.2;
- the Framework classifies the entire length of Albany Highway within the Town as an activity centre and an urban corridor;
- the proposed mid to high-rise built form is consistent with the typical built form outlined for secondary centre activity centres in SPP 4.2;
- the addition of 6,900 new dwellings (at 85 percent uptake) to the 2,493 additional dwelling capacity provided for under the current density which has the potential to provide a significant contribution towards fulfilling the Town's 2050 dwelling target of 19,320 dwellings; and
- it is supported by detailed background information including:
    - the Town's Local Planning Strategy (2022), which identifies the area for a future PSP;
    - the Albany Highway Tomorrow document published by the Town;

- two preferred growth scenarios that were developed in collaboration with a Community Reference Group, which included local residents and business owners and a Project Control Group that included the Department; and
- the Market Feasibility Report (2022, **Attachment 3.5**) and draft Built Form Strategy (2023, **Attachment 3.3**), discussed further below.

Feasibility of the built form

The feasibility of the proposed built form is based on the Market Feasibility Report (2022) by Cygnet West (**Attachment 3.5**), which consists of an evaluation of both the Distributed and Concentrated growth scenarios proposed as part of stage 2 to assess the commercial viability of the proposed built forms. This report indicated that the feasibility of development in the short term is limited by high land prices, high costs and somewhat low accommodation prices, and that increasing building heights is unlikely to stimulate development in the current market. As a result, building heights should be set based on a realistic and desirable future land use and built form, and the market will undertake development in accordance with this vision once it becomes feasible. It noted that the height and massing in the two scenarios proposed for Albany Highway were reasonable and providing the market flexibility to pursue one or both scenarios was recommended.

The draft Built Form Strategy reiterates the approach proposed in the Market Feasibility Report and applies these principles to the built form proposed, which have been used to inform the advertised built form in the PSP. Given the limited feasibility and fragmentation of the PSP area, the approach to built form feasibility outlined in the Market Feasibility Report, and reflected in the draft Built Form Strategy and draft PSP, is supported.

Building height

It is recommended that the proposed bonus building height values for sub-precinct zones EV1, CE1, EV2, EE1 and SJ1 are increased from four or five storeys to six storeys (**Attachment 9**). The Town is concerned this increase will not provide a sensitive interface in the CE1, EV2 and SJ1 zones to the surrounding low density residential development outside the PSP area and is inconsistent with the petition raised in the consultation section above, which requested the bonus building height of CE1 be reduced from five to four storeys. The Town considers its proposed five storey limit provides a balance between expectations for a secondary centre and the views of the community.

While this position is acknowledged, the increase of these areas to six storeys is recommended as:

- the relevant sub-precinct objectives in the PSP state that the four residential areas listed above (CE1, EV2, EE1 and SJ1) are intended to support mid-rise residential infill;
- the Residential Design Codes Vol. 2 (the R-Codes) indicates R-AC3(mid-rise centres) are to have a maximum building height of six-storeys;
- the PSP area is a strategically important area with good access to public transport;
- the interface of these areas to the surrounding low density residential area is protected through a PSP sensitive interface provision, which requires lots designated in sub-precinct plans as sensitive interfaces (which includes these sub-precinct boundaries) to have a six-metre building setback to the relevant boundary; and
- any residential or mixed-use development on these lots will be subject to the visual privacy provision in the R-Codes.

Base building height calibration

To calibrate the base and bonus requirements for the implementation of the community benefit framework, the following modifications are recommended:

- Increase the base building heights for sub-precinct zones M2, M3, M4, M5, M7, and CW4 to provide a differential of approximately 50 percent between the base and bonus building heights (**Attachment 9**). This is recommended as, while the community benefit calculation for the PSP is based on a contribution of three percent of the total construction costs, it is proportional to the number of storeys proposed above the base height compared to the base height (discussed further below).

  For example, the advertised PSP provides the M4 area with a base building height of eight storeys and bonus building height of 24, which amounts to a 200 percent increase and results in a community benefit contribution of six percent of the total construction costs. This, in conjunction with potential public open space and public art contributions, has the potential to undermine feasibility and disincentivise development where a bonus is being sought. The culminative impact of these contributions was raised as an issue in several submissions.

- Set the base building height for all sub-precinct zones with a bonus height of eight or less to their bonus value thereby removing any community benefit contribution requirement. This is recommended as:

  - a building height of six storeys should be available as of right in the activity centre area given the strategic location of the precinct and the secondary centre classification under SPP 4.2;
  - in many instances, the revised base building height aligns more closely with the assigned building height for the relevant precinct in the draft Built Form Strategy;
  - it would maximise the flexibility of the built form in accordance with the principles outlined in the Market Feasibility Report and the draft Built Form Strategy;
  - a community benefit contribution has the potential to impact feasibility;
  - the Market Feasibility Report indicates that community benefit contributions are not supported by feasibility; and
  - the alternative community benefit pathway for lower density areas is being removed, as discussed in the community benefit section below.

Attachment 10 – DPLH Primary Controls provides a detailed account of the recommended changes. The Town raised no objection to either of these modifications.

Plot ratio

The SPP 7.2 Guidelines state that plot ratio should be tested against the desired built form to ensure it is coordinated with the building envelope, height, setbacks, and other site requirements. To address this, the plot ratio values were tested against the relevant building heights and setback provisions as seen in **Attachment 11 – DPLH Plot Ratio Testing**, which indicates some of the proposed plot ratio values are insufficient to provide for the proposed maximum building height, despite being similar to the plot ratio requirements in the R-Codes Vol. 2 Table 2.1 for equivalent building heights.

Additionally, much like the building heights, the differential between base and bonus plot ratio is excessive in some circumstances. For example, M3 has a base plot ratio of 2.0 and a bonus plot ratio of 5.0, amounting to a 150 percent increase. To address these issues, and to accommodate the increased building height in some sub-precinct zones, it is recommended the base and bonus plot ratio values be increased in several precinct zones, in accordance with **Attachment 10**.

It is noted that the urban zoned land in the PSP area is zoned R-AC0, therefore the primary controls that include plot ratio and building height are independent of those set out in the R-Codes Vol. 2. The PSP does envisage the area outside major sites to have mid-rise built form which equates to the R-AC3 code. The R-Codes are currently under review and further consideration of the primary controls in the PSP may be needed accordingly. This can occur after the PSP is readvertised when the R-Codes review has been progressed.

Community Benefit

The Community Benefit Framework is supported in principle as it is broadly consistent with the intent outlined for community benefit in the R-Codes and the SPP 7.2 Guidelines, has been informed by significant community engagement, and is warranted given the significant bonus development potential that is being provided for in the PSP area. However, several modifications are proposed to improve equitability, consistency, and alignment with these policies as discussed further below. This will result in the Community Benefit Framework only being applied to areas in the PSP where high density development is being concentrated.

Community benefit calculation

The PSP proposes a community benefit contribution calculation of three percent of the total contract sum multiplied by the number of storeys above the base height divided by the base height, as shown in **Table 1**. There is no relevant feasibility modelling to support the proposed PSP calculation as the feasibility calculations shown in **Attachment 12 - Community Benefit Feasibility Calculations**, which was provided to elaborate on the six case study examples mentioned in **Attachment 3.1**, do not reflect the calculation proposed for the PSP. As seen in **Table 1**, the proposed community benefit calculation differs from a similar formula used in the South Perth Activity Centre Plan (ACP), the draft Leederville Precinct Structure Plan, and the Canning Bridge ACP.

***Table 1** – Albany Highway Precinct Structure Plan community benefit calculation compared to South Perth Activity Centre Plan (differences shown in red).*

Document	Calculation	Example
Albany Highway Precinct Structure Plan	(3% x total contract sum) x (number of storeys above the base standard ÷ base number of storeys)	(3% x $150,000,000) x (16 ÷ 8) = $9,000,000 or 6% of total construction costs.
South Perth Activity Centre Plan	(3% x total contract sum) x (number of storeys above the base standard ÷ total number of storeys)	(3% x $150,000,000) x (16 ÷ 24) = $3,000,000 or 2% of total construction costs.

The South Perth ACP formula has been informed by several independent feasibility assessments and has been implemented in the South Perth ACP area since 21 December 2021. If applied to a hypothetical development in the M4 area proposing the maximum 24 total storeys and construction costs of $150,000,000, the PSP calculation would result in a contribution equal to six percent of the total construction costs compared to two percent for the South Perth ACP calculation. The higher contribution rate, in conjunction with potential public open space and public art contributions, has the potential to disincentivize development, as noted in several submissions. In short, the proposed formula sets a higher rate, that increases at a faster rate, than the formula that has been implemented through multiple recent decisions of the WAPC.

Therefore, to reduce the feasibility impact from the community benefit contribution, it is recommended that the community benefit contribution calculation be modified consistent with the approach taken for the South Perth ACP, the draft Leederville Precinct Structure Plan, and the Canning Bridge ACP Amendment No. 7.

Preferred community benefits

Many of the preferred community benefit items would either already be required through subdivision and/or development conditions or through the Town's infrastructure program; or would not provide a clear benefit to the community, above what the community would ordinarily expect the Town to provide through its infrastructure programme. This is inconsistent with the approach implemented through multiple recent decisions of the WAPC.

An example of this is the repaving, kerb rectification and planting of the streetscape abutting a development site for a minimum frontage length of 50 metres. Such works could be conditioned through the development process in accordance with *State Planning Policy 3.6 – Infrastructure Contributions* Schedule 1 and/or provided by the Town through its infrastructure program.

To address this, an alternative preferred community benefit list (Table 12 in the PSP Part 1) is recommended as outlined in **Attachment 5**. Additionally, a modification is recommended to require community benefit contributions be provided in accordance with Table 12, with the following text being deleted:

> 'or *an alternative contribution which is considered to benefit the broader community to the satisfaction of the Responsible Authority*'.

Alternative community benefit pathway and street tree provision

The PSP provides an alternative community benefit pathway that allows proposals subject to density bonuses with a base building height of three or four storeys to fulfill their community benefit obligation by providing medium sized mature street trees.

The intent to reduce the administrative burden on the Town and the applicant is acknowledged, however, it does not ensure the contribution is proportional to the additional development entitlement, which is inconsistent with the R-Codes and SPP 7.2. Therefore, it is recommended this pathway be removed.

As an alternative, it is recommended that the PSP be modified to require the planting of new street trees adjacent to a subdivision or development approval in the PSP area where no street tree currently exists. This will address the low canopy coverage in the Town and the importance of urban greening identified through earlier community consultation as seen in **Attachment 3.1** and would be implemented without administrative burden on either the applicant or the Town compared to the community benefit contribution. A similar street tree provision requirement was included in the Kardinya District Centre Precinct Structure Plan, approved by the WAPC on 4 November 2025. As the recommended street tree requirement will ensure street trees are provided, it is recommended all sub-precinct zones with a base building height of three or four have their base building height and plot ratio increased to the proposed bonus level as mentioned above in the built form section above.

Classification of a community benefit

To ensure any community infrastructure required through other mechanisms is not also considered a community benefit contribution, it is recommended the following text be added:

> *Where an item listed in Table 12 is required due to a mechanism unrelated to Part 4 (such as POS required through the State planning framework, or a street tree required under Part 3.4.6), the provision of this item shall not contribute towards the community benefit contribution requirement.*

The Town objected to this modification due to its potential impact on the feasibility of development. However, legitimate community benefits need to be additional to what would be usually required through other mechanisms. The modification will prevent the community benefit framework being undermined through the provision of community benefits that would be required regardless.

<u>Public Open Space</u>

The proportion of the PSP area classified as POS differs between the Summary Table indicating 5.8ha (4.6 percent), Table 21 indicating 8.3ha (6.5 percent) and Table 22 indicating 7.9ha (6.2

percent). A modification is recommended to ensure the proportion of POS is consistent throughout the PSP.

Importantly, these figures indicate the PSP contains an under supply of POS compared to the 10 percent gross subdivisible area prescribed in the WAPC's *Position Statement: Public Open Space* (POS Position Statement) and *Liveable Neighbourhoods*.

The PSP requires a five percent POS contribution for all residential development (including built strata). The POS Position Statement exempts any infill subdivision between 19 December 2025 and 18 December 2027 from a POS contribution unless required for under a local planning scheme. Additionally, for infill subdivisions proposed on 19 December 2027 or after, proposals comprising five lots or less and all built strata subdivisions are not required to contribute POS unless justified through a local planning strategy or local planning scheme. The exemption for built strata subdivisions proposing six or more lots expires if the associated development application is approved after 19 December 2029 or if the subdivision is approved after 19 December 2033. As neither the LPS 2 nor the Strategy address this, the five percent POS contribution requirement in the PSP is not consistent with the POS Position Statement. To correct this, it is recommended this requirement be removed. This will allow POS contributions to be provided through the subdivision process in accordance with the requirements of the contemporary State planning framework.

Open Space, Pedestrian Links, Rights-of-way and Creative and Cultural Floorspace

In addition to the five percent POS requirement outlined above, the PSP includes several mandatory provisions requiring open space, rights-of-way, pedestrian links, and creative and cultural floorspace, all of which are also listed in Table 12 as preferred community benefits. These consist of:

- S. 3.1.2 Creative and Cultural Uses, which requires a portion of creative and cultural floorspace for development in a District Centre or Mixed Use zoned areas exceeding 1,000m^2 gross floor area.
- S. 3.5.4 Provision of Public Space, Pedestrian Links and Right of Way, which requires public space, rights-of-way, and pedestrian links to be provided in a location generally consistent with the sub-precinct plans. The public space is to be provided as publicly accessible private open space or public open space ceded free of cost to the Town.
- Table 11 in s. 3.5.7 Major Sites, which requires any development in:
    - six of the eight Major Site areas to provide creative and cultural floorspace consistent with the Community Benefit provisions;
    - six Major Site areas to provide either 500m^2 (M8), 1,500m^2 (M2 and M4) or 2,000m^2 (M6 and M7) areas of open space in the location shown in the sub-precinct plans; and
    - five Major Site areas to provide pedestrian links in the location shown in the sub-precinct plans.

The Town advised that these contributions intended to be required regardless of whether a bonus is being sought, would contribute to any necessary community benefit contribution requirement, and are necessary because:

- the additional intensification provided for on major sites is significant compared to the surrounding area, which warrants the provision of additional open space and pedestrian links outside the community benefit framework; and
- the open space and pedestrian links required through these provisions are fundamental requirements, not appropriate to be included in the community benefit framework.

Such mandatory community benefits are inconsistent with the intent of community benefits as an optional mechanism, as outlined in SPP 7.2 Guidelines and the R-Codes Vol 2. Additionally, these

requirements penalise developments that are not seeking to achieve any bonus without any corresponding benefit being provided. To ensure the equitable provision of these community benefits through the community benefit framework, it is recommended that the mandatory provisions be deleted and replaced by provisions providing additional guidance in the provision of open space, rights-of-way, pedestrian links, and creative and cultural floorspace through the community benefit framework.

Sustainability

The PSP includes sustainability provisions for development in cl. 3.4.6 that include:

- a minimum Green Star rating of four stars when greater than 3,000m^2 ground floor area, or a minimum Green Star rating of five stars when exceeding 5,000m^2 ground floor area;
- a NatHERS rating at least 1 star above the minimum required in the National Construction Code for residential;
- no gas connection and encouraged to be fully electric and powered by renewables;
- a minimum of 50 percent of site area as green roof, rooftop agriculture, and/or photovoltaic array;

A submission requested that the minimum Green Star rating requirement be removed as certification is very expensive for developers. The Green Star is a national sustainability rating scheme developed by the Green Building Council of Australia which provides certification based on a building's performance against a variety of environmental design criteria. A minimum Green Star rating of four or five stars are reasonable design criteria that are included in several other structure plans such as the South Perth ACP (four stars) and the Canning Bridge ACP (either four or five stars; **Attachment 3.10**). Because of this, and to support sustainable development within the precinct in accordance with the policy objectives of SPP 4.2 and SPP 7.2, this requirement is supported.

The NatHERS rating and the green roof, rooftop agriculture and/or photovoltaic array requirements outlined above are variations to the R-Codes Element 4.15. As Element 4.15 is listed in s.1.2.3 of the R-Codes, WAPC approval is required for this variation. The Town supported the removal of the NatHERS rating requirement and the modification of the green roof provision to change site area to roof area but did not support the removal of this requirement in its entirety as it did not want to eliminate a legitimate environmental standard. Despite this, it is recommended these provisions are removed as they can be managed through the R-Codes Vol. 2, as Acceptable Outcome A4.15.1 requires all dwellings to exceed minimum NatHERS requirements by 0.5 stars or to incorporate one significant energy efficiency initiative exceeding minimum practice.

Parking

The PSP includes general development requirements for Parking and End of Trip Facilities under cl. 3.4.5, which are designed to facilitate mode shift from driving to walking, cycling or public transport use in the PSP area. Most notably, Table 9 prescribes no minimum private car parking requirement for developments in the precinct. This is a significant modification to the R-Codes Vol. 2, which requires 0.75/1 resident bays per dwelling and one visitor bay per four dwellings up to 12 dwellings and one visitor bay per eight dwellings above 12 dwellings.

In response to this, seven submissions raised concerns regarding availability of public car parking with the increase in residential density and removal of private car parking requirements. In response, the Town recommended that cl. 3.4.5 be modified to require private car parking minimums to be as required by the R-Codes for residential development (**Attachment 6**, modification 9).
While the community's concern regarding the impact of the PSP on public parking demand are noted, the PSP area benefits from:

- eight bus routes along Albany Highway (one of which is high frequency);
- significant portions of the area being within walking distance (800 metres) of either Victoria Park, Carlisle or Oats Street train stations, and/or other bus routes along Berwick Street or Shepperton Road; and
- access to the Causeway Bus Transfer Station, which hosts several other high-frequency bus routes.

Additionally, one of the key objectives of the PSP is to facilitate modal shift and reduce car dependency, which is consistent with the objectives of SPP 4.2 and SPP 7.2. This objective would be undermined if vehicle parking minimums were required in accordance with the R-Codes. Therefore, it is recommended that no minimum vehicle parking requirement be required.

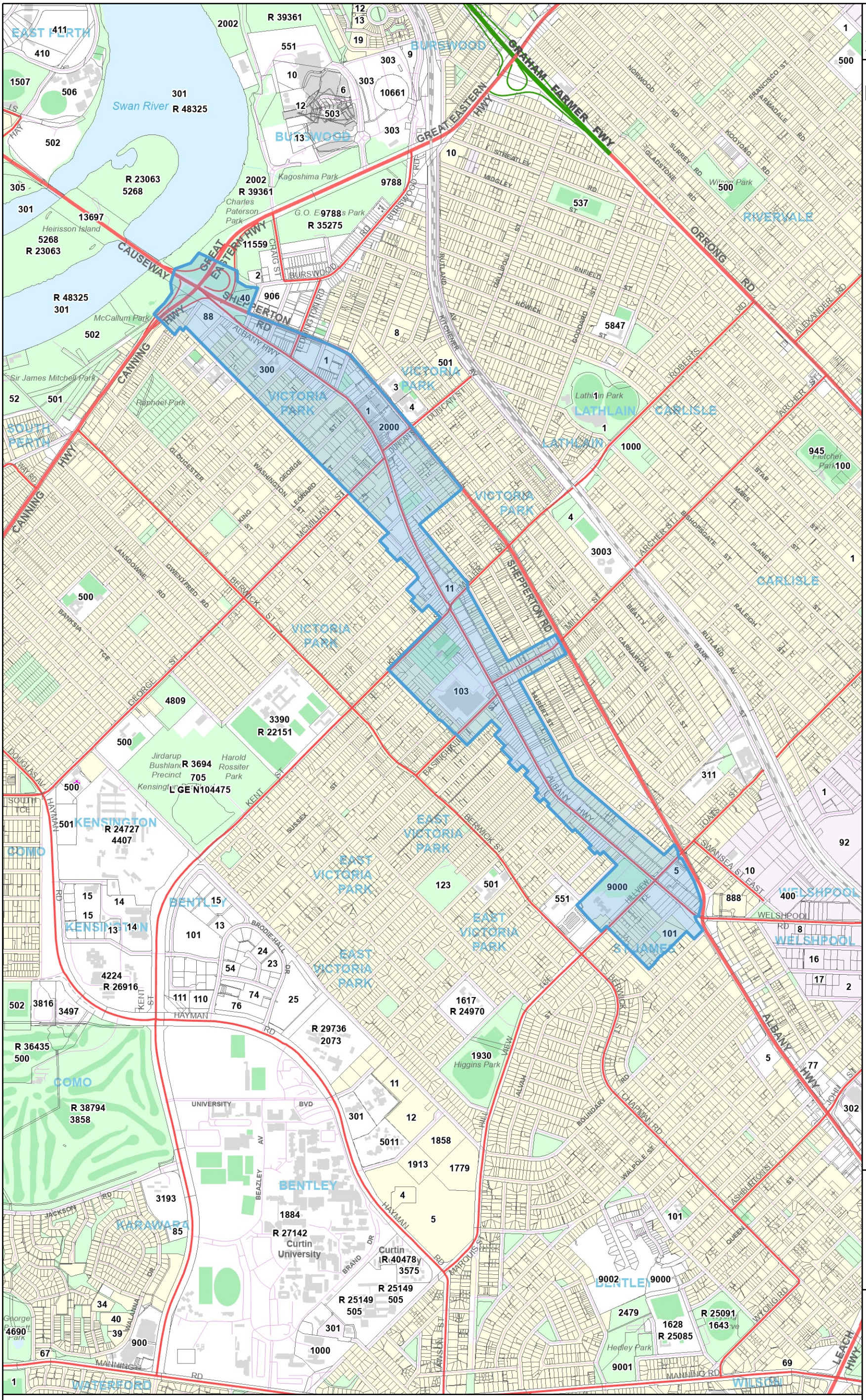
Readvertising

It is recommended that the modified PSP be readvertised concurrently with Amd No. 2 due to the extent of modifications proposed to the building height and plot ratio values, major site provisions, public space requirements, sustainability requirements, and the community benefit framework, which have not previously been advertised. As Amd No. 2 is to be advertised in accordance with r. 47 of the Planning and Development (Local Planning Scheme) Regulations 2015, and Amd No. 2 and the PSP are highly interrelated, advertising them concurrently will provide the public and relevant stakeholders a complete understanding of how the framework will function. Clause 22(3) of the Deemed Provision provides WAPC the option of requiring readvertising before determining a PSP if major modifications have been made.

CONCLUSION

The PSP will facilitate mid to high-rise mixed-use and residential re-development in a key strategic urban corridor and activity centre in close proximity to the CBD. This will improve efficiency of existing public transport infrastructure, allow for significant public realm improvements through community benefit contributions, while preserving valued aspects of the precinct's existing character consistent with WAPC and State policy.

The proposal is generally consistent with the State planning framework and is therefore supported subject to the modifications in **Attachment 5**. Due to major changes to the primary controls, the major site provisions, open space requirements, and the community benefit framework, it is recommended that the Town be required to readvertise the PSP concurrently with Amd No. 2.



Department of **Planning, Lands and Heritage**

GOVERNMENT OF WESTERN AUSTRALIA

Legend

- Cadastre (View 1)

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Notes:

* The data that appears on the map may be out of date, not intended to be used at the scale displayed, or subject to license agreements. The map should only be used in matters related to Department of Planning, Lands and Heritage business.
* This map is not intended to be used for measurement purposes.

Map was produced using DPLH's InQuiry.

Attachment 1 - Location Plan

DPLH BUSINESS USE ONLY

Internal Spatial Viewer
Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere
Graticules (if visible): GDA 1994 Latitude/Longitude

Aerial photography © Nearmap and/or © Western Australian Land Information Authority (Landgate).

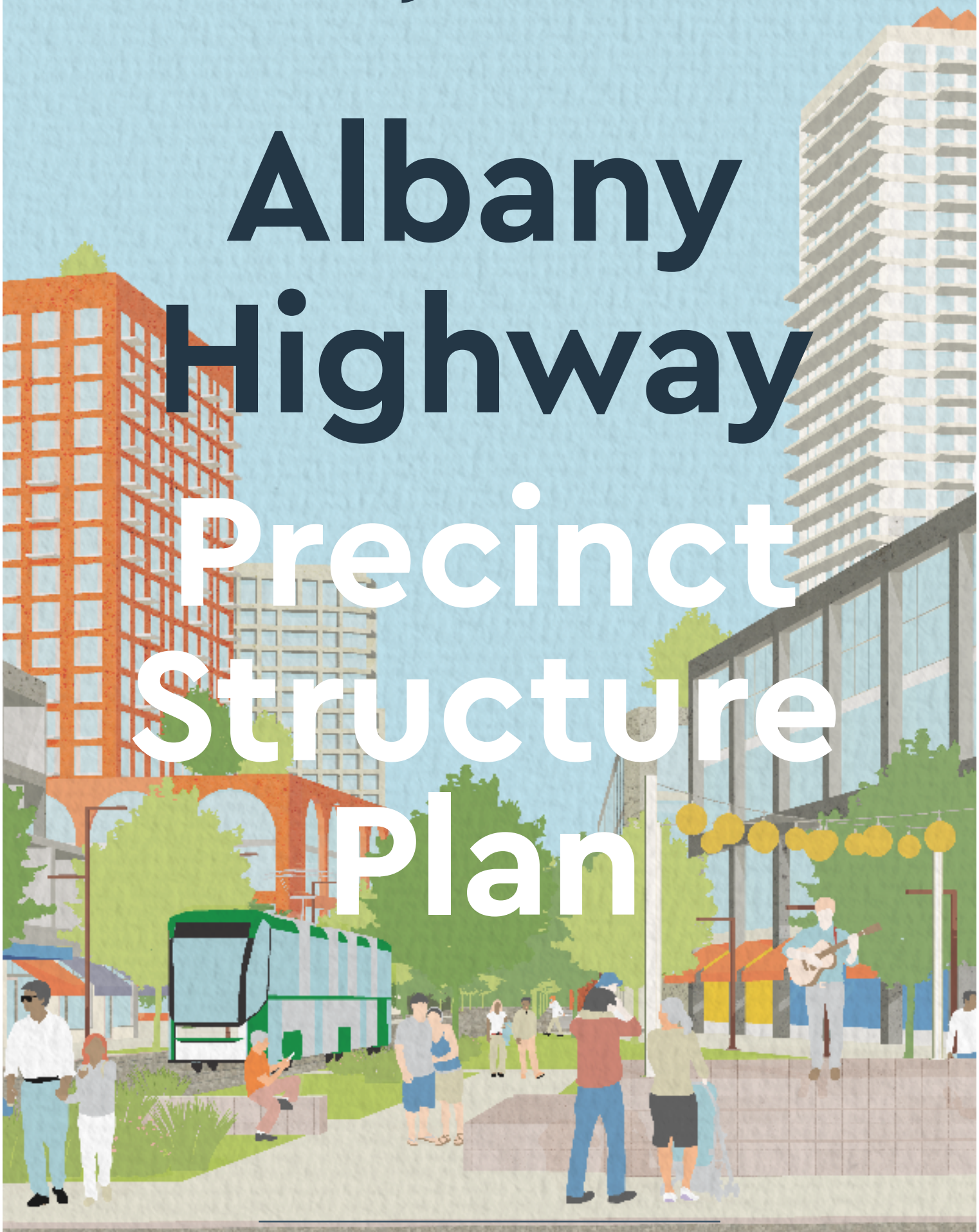
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Date produced: 27-Mar-2026

ATTACHMENT 2

TOWN OF VICTORIA PARK

Albany Highway Precinct Structure Plan



Prepared for the Victoria Park Secondary Centre

Document Information

Version	Status	Author	Reviewer	Issue Date
A	Draft	KV	AB	22/02/2024
B	Draft	KV	AB	16/08/2024
C	Draft	KV	AB	20/09/2024

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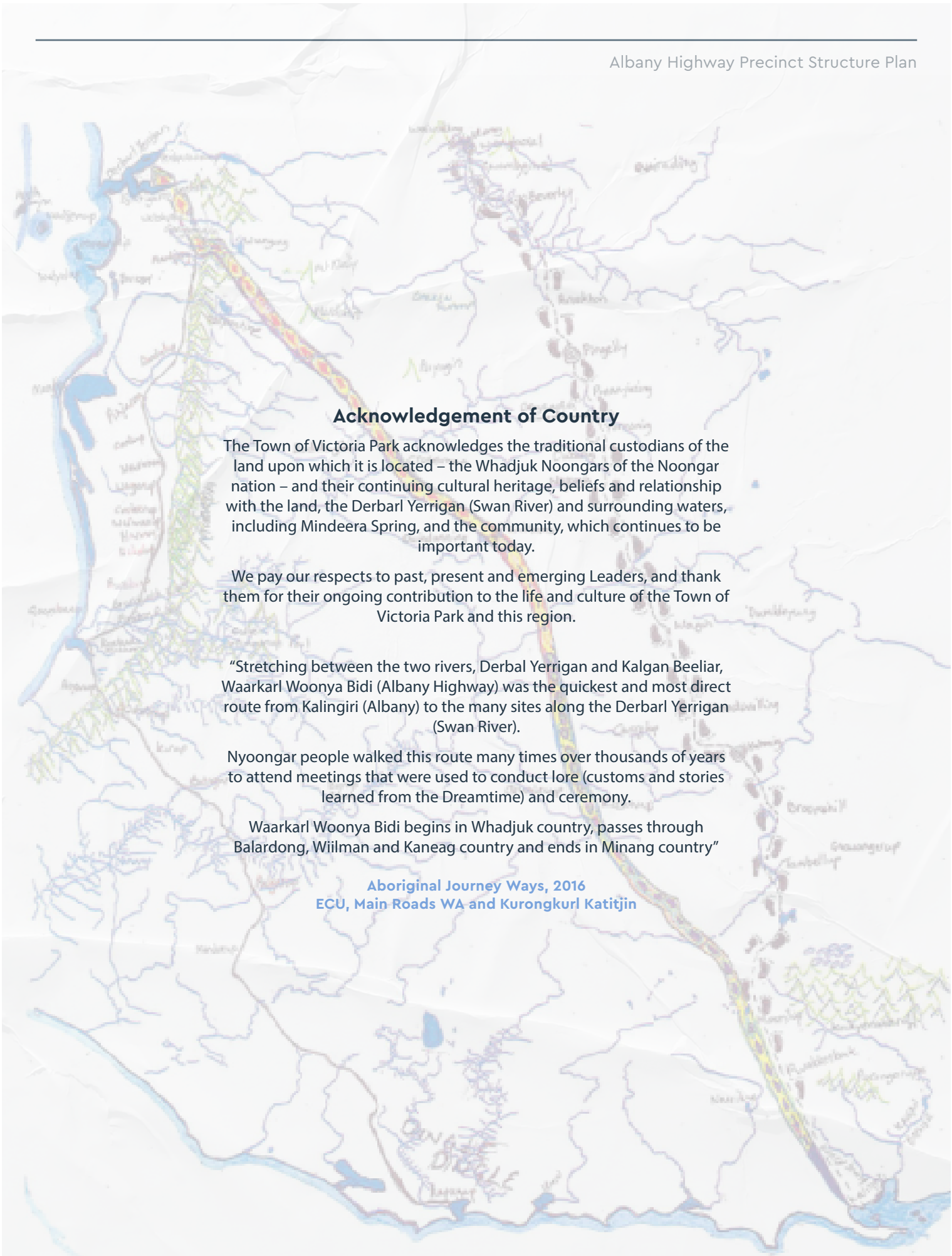
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Acknowledgement of Country

The Town of Victoria Park acknowledges the traditional custodians of the land upon which it is located – the Whadjuk Noongars of the Noongar nation – and their continuing cultural heritage, beliefs and relationship with the land, the Derbarl Yerrigan (Swan River) and surrounding waters, including Mindeera Spring, and the community, which continues to be important today.

We pay our respects to past, present and emerging Leaders, and thank them for their ongoing contribution to the life and culture of the Town of Victoria Park and this region.

"Stretching between the two rivers, Derbal Yerrigan and Kalgan Beeliar, Waarkarl Woonya Bidi (Albany Highway) was the quickest and most direct route from Kalingiri (Albany) to the many sites along the Derbarl Yerrigan (Swan River).

Nyoongar people walked this route many times over thousands of years to attend meetings that were used to conduct lore (customs and stories learned from the Dreamtime) and ceremony.

Waarkarl Woonya Bidi begins in Whadjuk country, passes through Balardong, Wiilman and Kaneag country and ends in Minang country"

Aboriginal Journey Ways, 2016
ECU, Main Roads WA and Kurongkurl Katitjin

Endorsement

This Precinct Structure Plan is prepared under the provisions of the Town of Victoria Park Local Planning Scheme No.2.

IT IS CERTIFIED THAT THIS PRECINCT STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

Date

Signed for and on behalf of the Western Australian Planning Commission:

an officer of the Commission duly authorised by the Commission pursuant to section 16 of the Planning and Development Act 2005 for that purpose, in the presence of:

Witness

Date

Date of Expiry

Table of Amendments

Amendment No.	Summary of the Amendment	Amendment type	Date approved by WAPC

Summary Table

Item	Data	Precinct Structure Plan Ref (section no.)
Total area	127.4 ha	Part 2, Section 3.0
Area of each land use proposed	Residential: 24.8 ha (19.5%) District Centre: 33.0 ha (25.9%) Mixed Use: 46.6 ha (36.6%) Civic: 4.9 ha (3.8%) Public Purpose: 1.1 ha (0.9%) Regional Road: 11.1 ha (8.7%)	
Total estimated lot yield	N/A	
Estimated number of dwellings	8,345 (+6,900)	Part 2, Section 6.2 (Objective 6)
Estimated gross residential density	40 dwellings per gross urban zoned hectare	
Estimated population	17,525	
Estimated commercial floor space (net lettable area)	491,000 sqm	Part 2, Section 6.5 (Objective 12)
Number of high schools	0	Part 2, Section 6.5 (Objective 13)
Number of primary schools	1	
Estimated area and percentage of public open space given over to open space	5.8 ha (4.6%)	Part 2, Section 6.3 (Objective 7)



Executive Summary

The Albany Highway Precinct Structure Plan will guide the implementation of a bold, community-led vision for the Victoria Park Secondary Centre. It aims to transform the area into a network of distinct, diverse, sustainable, and loveable places that maintain a strong local focus while appealing to the wider region.

The Structure Plan is the culmination of many years of collaboration and hard work, guided by State Planning Policy (SPP) 7.2 Precinct Design Guidelines, commencing with the Shape Albany Highway community engagement campaign and the preparation of site analysis and visioning, detailed in the Albany Highway Today and Tomorrow Reports.

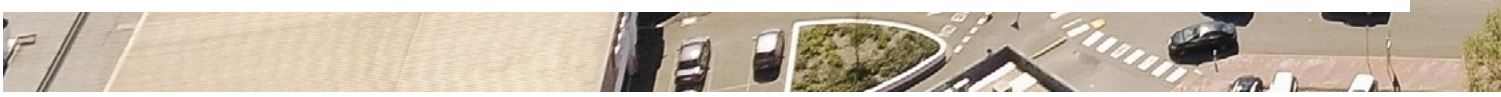
Both were structured around the 6 x Precinct Planning Elements, with the Tomorrow Report establishing a blueprint of Key Ideas to guide the concept design and scenario testing undertaken in the next design phase. At the heart of this was a Community Reference Group (CRG) process, with representation from residents, businesses, community and different demographic groups. Rigorous technical analysis was also undertaken and refined concepts presented back to the CRG.

The outcome was clear direction on Urban Structure, Urban Ecology, Movement and Public Realm concepts, as well as a preferred Built Form and Land Use Growth Scenario, with nuanced feedback received for each of the 6 sub-precincts. DPLH, who form part of a Project Control Group, were re-engaged, together with State agencies and major landowners.

On this basis, a Preferred Concept Design was released for public comment via a community survey. It was supported by a Built Form Strategy, Transport Strategy and Public Realm Strategy. The response was overwhelmingly supportive, which provided Elected Members with the confidence to endorse a preffered growth scenario and the commencement of this Precinct Structure Plan Report.

Part 1 – Implementation comprises General Requirements, Specific Development Requirements and Sub Precinct Requirements. It adopts a place-based approach in response to the unique existing qualities and community priorities for each sub-precinct.

Part 2 – Explanatory consists of Site and Physical Analysis, Opportunities and Constraints, Precinct Boundary and Hierarchy, Stakeholder and Community Engagement, Vision, Design Response to the 6 Precinct Planning Elements and Sub Precinct Specific concepts and actions for implementation. Detailed technical reports are included as appendices.





Albany Highway from above East Victoria Park, 2021

Table of Contents

Part 1 Implementation

1. Operation 14

1.1 Precinct Structure Plan Area 14
1.2 Precinct Structure Plan Map 14
1.3 Precinct Structure Plan Operation 14
1.3.1 Relationship to Policies 14
1.3.2 Relationship to the Residential Design Codes 14
1.4 Exercise of Discretion 15
1.5 Interpretations 15

2. Objectives 18

3. Development Requirements 20

3.1 Zoning and Land Use 20
3.1.1 Residential Density Coding 20
3.1.2 Creative and Cultural Uses 20
3.2 Subdivision 20
3.2.1 Cash-in-Lieu for POS 20
3.2.2 Notifications on Title 20
3.3 Sub-Precinct Primary Controls 21
3.4 General Development Requirements 36
3.4.1 Plot Ratio 36
3.4.2 Building Height 37
3.4.3 Building Setbacks 38
3.4.4 Frontage and Access 39
3.4.5 Parking and End of Trip Facilities 43
3.4.6 Sustainability and Environmental Performance 44
3.5 Specific Development Requirements 45
3.5.1 Heritage Places 45
3.5.2 Contributory Frontages 46
3.5.3 Sensitive Interfaces 47
3.5.4 Provision of Public Space, Pedestrian Links and Rights of Way 48
3.5.5 Solar Access 49
3.5.6 Contaminated Sites and Acid Sulphate Soils 49
3.5.7 Major Sites 50

4. Community Benefit 53

Part 2 Explanatory

1. Site and Physical Analysis 58

1.1 Physical Context 58
1.1.1 Location 58
1.1.2 Surrounding Area and Land Use 59
1.1.3 Tenure, Ownership and Buildings 60
1.1.4 Environment 61
1.1.5 Physical Infrastructure and Services 62
1.1.6 People Movement 63
1.2 Community Context 64
1.2.1 People 64
1.2.2 Housing 64
1.2.3 Economy 65
1.2.4 Culture, Value and Identity 66
1.2.5 Social Infrastructure and Services 68
1.3 Governance Context 69
1.3.1 Environment 69
1.3.2 Planning 70
1.3.3 Community and Economic Development 78
1.3.4 Existing Plans and Projects 79

2. Opportunities and Constraints 80

3. Precinct Boundary and Hierarchy 82

3.1 Rationale 82
3.2 Proposed Secondary Centre Classification 83

4. Stakeholder and Community Engagement 84

4.1 Consultation Process 84
4.1.1 Shape Albany Highway Stage 1 84
4.1.2 Shape Albany Highway Stage 2 84
4.1.3 Shape Albany Highway Stage 3 85
4.2 Key Messages and Findings 86
4.2.1 Scale and Extent of Change 87
4.2.2 Sub-Precinct Aspirations 88
4.2.3 Community Benefit from Development 89

5. Vision 90

5.1 Albany Highway 90

6. Design Response **93**

6.1 Urban Ecology 94
6.1.1 Response to Context 94
6.1.2 Community Priorities 94

6.2 Urban Structure 100
6.2.1 Response to Context 100
6.2.2 Community Priorities 100

6.3 Public Realm 116
6.3.1 Response to Context 116
6.3.2 Community Priorities 116

6.4 Movement 124
6.4.1 Response to Context 124
6.4.2 Community Priorities 124

6.5 Land Use 132
6.5.1 Response to Context 132
6.5.2 Community Priorities 132

6.6 Built Form 144
6.6.1 Response to Context 144
6.6.2 Community Priorities 144

7. The Future of the Precinct **157**

7.1 Causeway 158
7.1.1 Detailed Design Concept 158
7.1.2 Implementation & Parallel Actions 160

7.2 Victoria Park 162
7.2.1 Detailed Design Concept 162
7.2.2 Implementation & Parallel Actions 164

7.3 Central 166
7.3.1 Detailed Design Concept 166
7.3.2 Implementation & Parallel Actions 168

7.4 East Victoria Park 170
7.4.1 Detailed Design Concept 170
7.4.2 Implementation & Parallel Actions 172

7.5 East End 174
7.5.1 Detailed Design Concept 174
7.5.2 Implementation & Parallel Actions 176

7.6 St James 178
7.6.1 Detailed Design Concept 178
7.6.2 Implementation & Parallel Actions 180



Figures

Figure 1: Centre Frontage Type 40
Figure 2: Commercial Frontage Type 41
Figure 3: Residential Frontage Type 42
Figure 4: Design of Car Parking 43
Figure 5: Extent of Contributory Frontage Retention 46
Figure 6: Sensitive Interface Types 47
Figure 7: Major Sites 50
Figure 8: Regional Context 58
Figure 9: Sub-Precinct Vision Diagram 90
Figure 10: Key Ideas (Albany Highway Tomorrow Report) 92
Figure 11: Conceptual Illustration of Vision and Objectives 93
Figure 12: Sub-Precinct Boundaries 102
Figure 13: Major Sites 103
Figure 14: Example Major Site Opportunity (M1) 105
Figure 15: M1 Design Principles 106
Figure 16: M2 Design Principles 107
Figure 17: M3 Design Principles 108
Figure 18: M4 Design Principles 109
Figure 19: M5 Design Principles 110
Figure 20: M6 Design Principles 111
Figure 21: M7 Design Principles 112
Figure 22: M8 Design Principles 113
Figure 23: Precinct Boundary Expansion Areas (Previous R-Coding) 115
Figure 24: Park Improvement, Sump Conversion and New Open Space Plan 119
Figure 25: Public Realm Interventions 121
Figure 26: Public Realm Strategy Example Outcomes 122
Figure 27: Movement and Place Hierarchy 126
Figure 28: Proposed streetscape enhancement for Albany Highway (typical treatment outside urban cores) 128
Figure 29: Proposed shared space zone cross section with Urban Cores (Vic Park, East Vic Park and St James) 128
Figure 30: Proposed streetscape enhancement for Stations (Duncan, Mint and Archer and Oats Street) 128
Figure 31: Distribution of Building Typologies 150
Figure 32: Distribution of Street Interface Typologies 151
Figure 33: Street Interface Desired Outcomes 152
Figure 34: Extent of Applicable Heritage Requirements 153
Figure 35: Extent of Solar Access Requirements 154
Figure 36: Extent of Sensitive Interface Requirements 155
Figure 37: Current: TPS1 Zoning 157
Figure 38: Proposed: Precinct Structure Plan 157
Figure 39: Causeway Sub-Precinct Axonometric Diagram (Not to Scale) 158
Figure 40: Causeway Sub-Precinct Conceptual Rendering (Not to Scale) and Precedent Imagery 159
Figure 41: Victoria Park Sub-Precinct Axonometric Diagram (Not to Scale) 162
Figure 42: Victoria Park Sub-Precinct Precedent Imagery 163
Figure 43: Central Sub-Precinct Axonometric Diagram (Not to Scale) 166
Figure 44: Central Sub-Precinct Conceptual Rendering (Not to Scale) and Precedent Imagery 167
Figure 45: East Victoria Park Sub-Precinct Axonometric Diagram (Not to Scale) 170
Figure 46: East Victoria Park Sub-Precinct Conceptual Rendering (Macmillan Precinct) and Precedent Imagery 171
Figure 47: East End Sub-Precinct Axonometric Diagram (Not to Scale) 174
Figure 48: East End Sub-Precinct Conceptual Rendering (Not to Scale) and Precedent Imagery 175
Figure 49: St James Sub-Precinct Axonometric Diagram (Not to Scale) 178
Figure 50: St James Sub-Precinct Precedent Imagery 179

Tables

Table 1: Causeway Sub-Precinct Primary Controls 25
Table 2: Victoria Park Sub-Precinct Primary Controls 27
Table 3: Central Sub-Precinct Primary Controls 29
Table 4: East Victoria Park Sub-Precinct Primary Controls 31
Table 5: East End Sub-Precinct Primary Controls 33
Table 6: St James Sub-Precinct Primary Controls 35
Table 7: Minimum Floor-to-Ceiling Heights 37
Table 8: Frontage Type Design Requirements 40
Table 9: Parking and End of Trip Requirements 43
Table 10: Sensitive Interface Requirements 47
Table 11: Additional Major Site Requirements 51
Table 12: Schedule of Priority Public Benefits 54
Table 13: Environment Governance Context 69
Table 14: State Planning Framework Context 70
Table 15: Local Planning Framework Context 73
Table 16: Local Planning Policy Context 75
Table 17: Community and Economic Development Context 78
Table 18: Existing Plans and Projects 79
Table 19: Opportunities and Constraints Analysis 80
Table 20: Residential Density 115
Table 21: Summary of key issues and Structure Plan response 117
Table 22: Existing Precinct Public Spaces to be Enhanced 118
Table 23: Existing Sumps to be Enhanced 119
Table 24: Preferred Locations for New Public Spaces 119
Table 25: Summary of key issues and Structure Plan response 125
Table 26: Existing and Proposed Mode Share 127
Table 27: Summary of key issues and Structure Plan response 133
Table 28: Retail and Non-Retail Floorspace Growth Forecasts (sqm) 134
Table 29: Indicative Sub-Precinct Distribution of Future Retail and Non-Retail Floorspace 136
Table 30: Residential Yield Target by Sub-Precinct 138
Table 31: Ground Floor Creative Uses 140
Table 32: Summary of key issues and Structure Plan response 145
Table 33: Building Typologies 150
Table 34: Street Interface Typologies 151
Table 35: Causeway Sub-Precinct Implementation & Parallel Actions 160
Table 36: Victoria Park Sub-Precinct Implementation & Parallel Actions 164
Table 37: Central Sub-Precinct Implementation & Parallel Actions 168
Table 38: East Victoria Park Sub-Precinct Implementation & Parallel Actions 172
Table 39: East End Sub-Precinct Implementation & Parallel Actions 176
Table 40: St James Sub-Precinct Implementation & Parallel Actions 180

Part 1
Implementation



This Part sets out the vision for the area and provides guidance for the implementation of the Precinct Structure Plan. It is to be read in conjunction with the Town of Victoria Park Local Planning Scheme No. 2.



1.0 Operation

1.1 Precinct Structure Plan Area

The Albany Highway Precinct Structure Plan (AHPSP) applies to the Victoria Park Secondary Centre, which comprises the land contained within the inner edge of the line denoting the AHPSP Area on the Precinct Structure Plan Map (Plan 1).

1.2 Precinct Structure Plan Map

Plan 1 allocates land to sub-precinct areas and shows the zoning and residential density code of land within the AHPSP area.

1.3 Precinct Structure Plan Operation

In accordance with Schedule 2 of the Planning and Development (Local Planning Scheme) Regulations 2015 (the Deemed Provisions), the AHPSP shall become operational upon its approval by the Western Australian Planning Commission (WAPC).

The AHPSP is made pursuant to **Part 4** of the Deemed Provisions and is to be read in conjunction with the Town of Victoria Park Local Planning Scheme No. 2 (LPS2) or any subsequent Scheme. In the event of any inconsistency between the AHPSP and the Scheme, the Scheme shall prevail to the extent of the inconsistency.

The provisions of Part 1 of the AHPSP are to be given due regard in determining development applications as required by Clauses 27(1), 56 and 67(h) of the Deemed Provisions.

1.3.1 Relationship to Policies

Where the AHPSP is inconsistent with the Town's policies, the AHPSP shall prevail to the extent of any inconsistency.

Where a matter is dealt within a relevant Planning code or State Planning Policy, but not in the AHPSP, the relevant matters in the Planning Code or State Planning Policy shall apply in addition to the requirement of the AHPSP.

1.3.2 Relationship to the Residential Design Codes

The development of Single Houses and Grouped Dwellings shall be in accordance with the requirements of State Planning Policy 7.3 (SPP 7.3) Residential Design Codes Volume 1 – Part C unless specifically varied by Part 1 of this AHPSP.

The development of Multiple Dwellings (including dwelling components of mixed-use developments) shall be in accordance with the requirements of the Residential Design Codes Volume 2 unless specifically varied by Part 1 of this AHPSP.

Acceptable Outcome provisions of the R-Codes Volume 2 that are amended or replaced by this AHPSP are done so in accordance with Part 1.2 of SPP 7.3, and are as follows:

- Section 2.2 – Building Height
- Section 2.3 – Street Setbacks
- Section 2.4 – Side and rear setbacks
- Section 2.5 – Plot Ratio
- Section 3.6 – Public Domain Interface
- Section 3.8 – Vehicle Access
- Section 3.9 – Car and Bicycle Parking

The Sub-Precinct Primary Controls specified in Section 3.3 of this Part supersede the Primary Controls Table (Table 2.1) of the R-Codes Volume 2.

1.4 Exercise of Discretion

The requirements of this Part may be varied at the discretion of the Town of Victoria Park where it considers that the proposed variation satisfies the objectives of the provision to which a variation is sought and further considers that:

i. The variation is consistent with all relevant objectives of the AHPSP;

ii. The extent of variation sought is generally consistent with the context of the intended scale and character of the relevant sub-precinct having regard for sub-precinct objectives;

iii. The variation does not result in excessive impact to a heritage place(s), contributory frontage(s), the public realm or the movement network and does not excessively impact the amenity or development potential of adjoining properties;

iv. The proposal achieves good design in accordance with State Planning Policy 7.0, having regard to the recommendation of the Town of Victoria Park Design Review Panel and/or State Design Review Panel; and

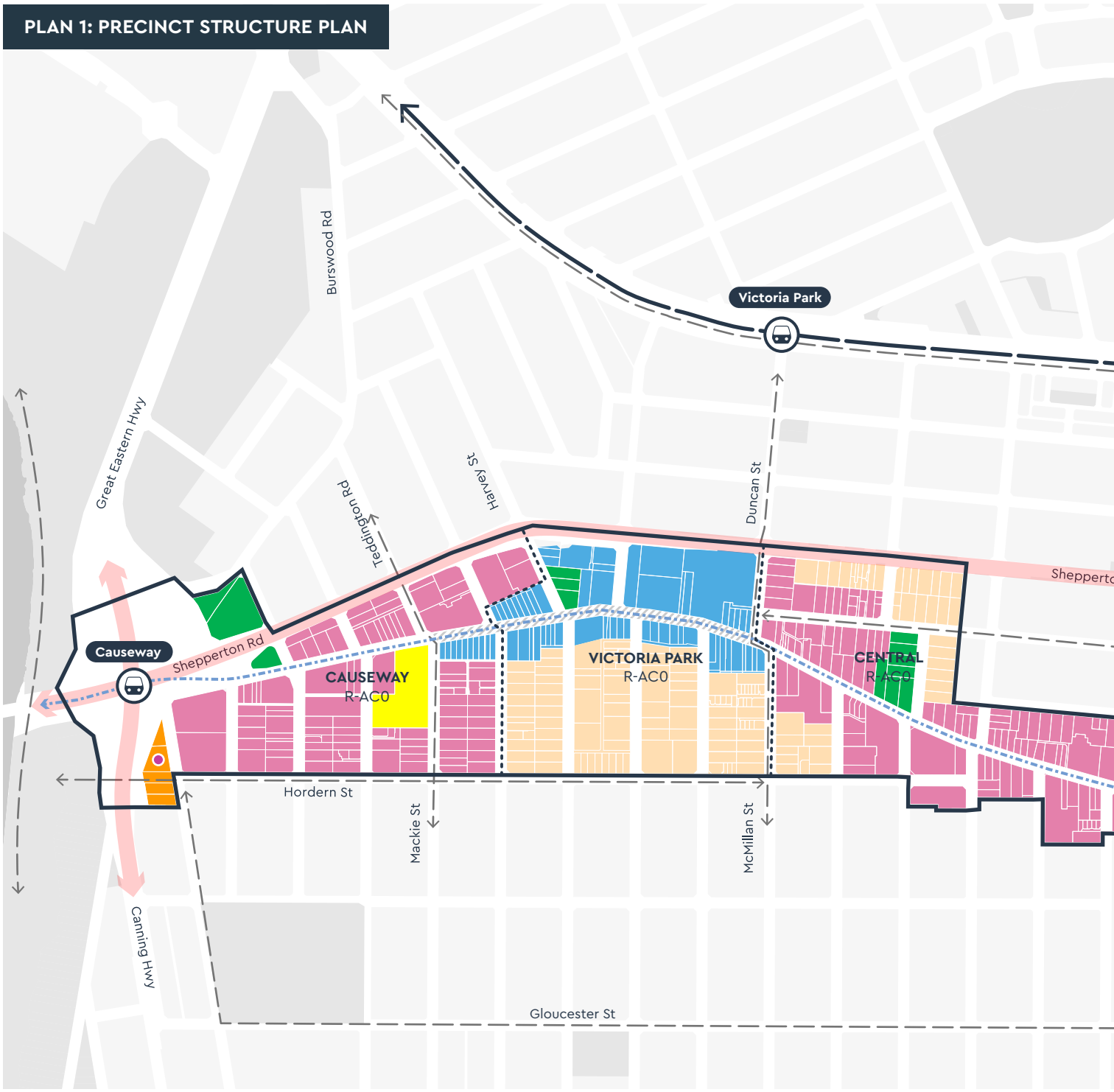
v. The development does not contribute to or serve as a precedent for the cumulative under- or- over-development of the sub-precinct or precinct generally contrary to the sub-precinct/ precinct objectives or the intended built form and structure of the sub-precinct or precinct generally.

1.5 Interpretations

The AHPSP applies the same definitions as set out in the Planning and Development Act 2005 or State Planning Policy 7.3 Residential Design Codes (Volume 1 and 2). Unique definitions or interpretations for the AHAHPSP are set out as follows:

- **Sub-precinct Area** means an area shown as a sub-precinct area on Plan 1: Activity Centre Plan area, for which specific development requirements apply.
- **Major Site** means a site which is significant to the future development of the AHPSP area owing to its size, visual prominence, accessibility and suitability to accommodate a significant quantum of new development.
- **Frontage Type** means a combination of design and land use requirements regulating how development interfaces with a public street, Right of Way (ROW) or Public Open Space, for which specific development requirements apply.
- **Podium** means the lower portion of a building, up to the street wall height, serving as a distinct base for the upper building element.
- **Upper Building Element** means a portion of a development above podium height with no structural connections to other part of the development above podium height.
- **Additional overshadowing above podium height** means any shadow cast by a development beyond the shadow cast by existing development or the maximum podium height of permitted development.
- **Publicly Accessible Private Open Space** means privately owned land that is made available for free use by the general public but is managed by a private owner.
- **Creative and Cultural Use** means non-residential floorspace provided exclusively for creative and cultural activities in line with Section 3.1.2.
- **Affordable** means workspace or housing provided in perpetuity at rents maintained at least 20% below the current market rate.
- **Car Share Scheme** means a fleet of privately managed vehicles available for short-term use by building tenants via a booking system, operated by either the building strata or a third-party provider.

PLAN 1: PRECINCT STRUCTURE PLAN



Legend

- PSP Boundary
- Sub-Precinct Boundary
- Wastewater Pump Station

Metropolitan Region Scheme Reserves

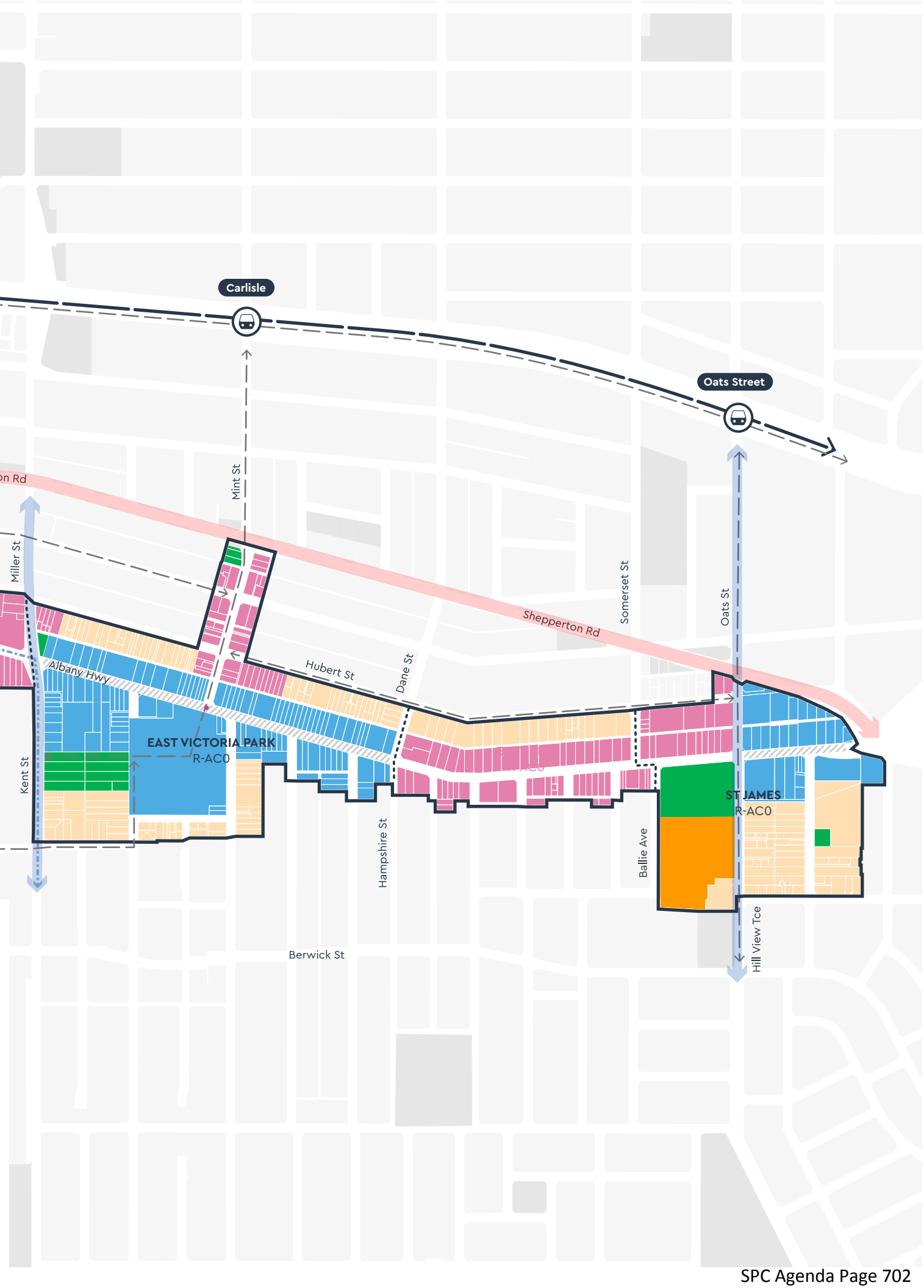
- Primary Regional Road
- Other Regional Road
- Parks and Recreation

LPS2 Zones and Reserves

- District Centre
- Mixed Use
- Residential
- Public Open Space
- Public Purpose
- Civic and Cultural

Movement

- Train/Bus Station
- Future Mid-Tier Transit Route
- PSP Micromobility Routes
- Shared Space


Carlisle
Oats Street
Mint St
Miller St
Shepperton Rd
Somerset St
Oats St
Albany Hwy
Hubert St
Dane St
EAST VICTORIA PARK
R-AC0
Kent St
ST JAMES
R-AC0
Hampshire St
Ballie Ave
Berwick St
Hill View Tce

2.0 Objectives

Urban Ecology

i. Protect and enhance ecological features in a manner that recognises and supports Caring for Country principles.

ii. Protect, enhance and celebrate Albany Highway's limited ecological features, with an aim of reconnecting the Highway as a wildlife corridor with the Swan River habitat.

iii. Ensure the Victoria Park Secondary Centre is a place where sustainable development is encouraged through building design and precinct management.

iv. Retain significant trees and substantially increase tree canopy and local biodiversity on public and private land.

Urban Structure

viii. Achieve a cohesive precinct character by retaining Albany Highway's fine-grain urban fabric and narrow lot pattern.

ix. Enhance the legibility of Albany Highway as an activity corridor, improving walkability of the Precinct and its connection to the surrounding residential neighbourhood, train line, Swan River, City of Perth and beyond.

x. Transform Major Sites through mixed-use development with new internal connections and public spaces to improve the functionality and permeability of the Precinct.

xi. Integrate development along side streets and activate laneways as an integral part of the precinct to support movement.

Public Realm

v. Expand and diversify public open space by repurposing roads, upgrading drainage areas, and creating new public areas within Major Sites.

vi. Improve existing public realm through streetscape and park upgrades, tree planting, and water-sensitive urban design.

vii. Support development that enhances community interaction by activating and integrating private space with public space to improve the attractiveness of the pedestrian environment.

Movement

v. Redesign the precinct movement network to discourage unnecessary car trips and deliver safe and attractive transport infrastructure that supports modal shift to walking, cycling and public transport

vi. Improve Public Transport and micromobility infrastructure with a view to a future transition to mid-tier transport along Albany Highway

vii. Discourage private parking in new development to reduce car dependence while ensuring sufficient public parking.

Land Use

i. Drive economic vitality by increasing office-based employment and expanding retail and hospitality floorspace in line with the precinct's Secondary Centre function and population growth.

ii. Support creative industries and the evening economy through delivery of affordable workspace and cultural infrastructure in appropriate locations.

iii. Accommodate population growth with mixed-use development offering diverse and affordable housing.

iv. Protect entertainment and hospitality uses from noise-sensitive development conflicts.

Built Form

viii. Encourage innovative and sustainable development that intergrates harmoniously with Albany Highway's character, allowing for diverse building heights and styles

ix. Protect and restore heritage buildings and contributory fabric, ensuring new development complements heritage places.

x. Maintain adequate solar access and comfortable wind conditions in key public areas

xi. Ensure new development responds sensitively to adjacent lower-density residential character areas.

3.0 Development Requirements

3.1 Zoning and Land Use

Land use permissibility within the AHAHPSP shall be determined in accordance with the Town of Victoria Park Local Planning Scheme No. 2, based on the distribution of zoning and reservations outlined on **Plan 1**.

3.1.1 Residential Density Coding

The applicable density coding for the entirety of the AHPSP area is R-AC0, as outlined on Plan 1. This density coding is intended to entirely replace the applicable provisions of State Planning Policy 7.3 – Residential Design Codes (as amended) with those specified at **Part 3.3** Sub-Precinct Primary Controls.

3.1.2 Creative and Cultural Uses

Development on land zoned as District Centre or Mixed Use within the AHPSP area which exceeds 1,000 sqm gross floor area must include non-residential space dedicated to creative production and cultural activities.

This includes affordable premises for artists and creative businesses, performance and exhibition spaces, and related uses including but not limited to:

i. The display, production or sale of art and craft;

ii. Live entertainment, including the delivery or rehearsal of live or pre-recorded music, film, theatre, comedy, dance or other performance; and

iii. Office, commercial and light industrial floorspace suited to use by businesses in the design, media, film and technology sectors.

The quantity of creative and cultural space must comply with the Community Benefits Framework in **Part 4**.

The approved cultural and creative space must be maintained for the duration of the consent and cannot be converted to other uses except for other creative and cultural uses.

3.2 Subdivision

Subdivision of land is generally not supported where it contributes to further fragmentation of land and development of single and grouped dwellings at undesirably low densities. Subdivision may be appropriate in the following circumstances:

i. To amalgamate properties into a larger development site without compromising established fine grain character of the precinct

ii. To facilitate the staged development of an identified Major Site consistent with an approved Development Application or Local Development Plan that sets out whole site staging

iii. To realign lot boundaries without increasing the number of lots

iv. To protect and conserve heritage-listed and contributory places

v. To allow for the provision of roads, public utilities, community facilities and Public Open Space

vi. Where required as a condition of Development Approval

3.2.1 Cash-in-Lieu for POS

For all residential subdivision (including built strata title subdivision), a minimum standard of 5 per cent of the gross subdivisible area is to be ceded free of cost for POS, or the equivalent cash in lieu, unless otherwise agreed by the Responsible Authority.

3.2.2 Notifications on Title

All lots within the AHPSP area containing new development that will be exposed to high levels of noise (including transport noise and entertainment precinct noise) shall incorporate a notification on the relevant certificate(s) of title pursuant to Section 70A of the Transfer of Land Act 1893 pertaining to road noise and/or entertainment noise. Notice of this notification is to be included on the diagram or plan of survey.

The required wording of the notification is to be specified as a requirement of development approval.

3.3 Sub-Precinct Primary Controls

This Part sets out primary controls that apply to all proposed development within the relevant AHPSP sub-precinct and should be read in conjunction with **Part 3.4 General Requirements** and **Part 3.5 Specific Requirements** which set out further requirements and interpretations.

3.3.1 Causeway

Sub-Precinct Intent
Causeway will undergo transformative change to become a significant employment centre with high-density office, residential, and tourist accommodation, supported by redevelopment of the Canning Highway road interchange and future establishment of mid-tier transit. Enhanced public spaces will improve pedestrian access and recognise Aboriginal heritage.

Sub-Precinct Objectives

a. Establish the Causeway as a significant office-based employment hub through transformative mixed-use development of sites bounded by Shepperton Rd, Armargh St and Mackie St.

b. Transform the gateway to Victoria Park through redevelopment of the Canning Highway road interchange and bus station.

c. Promote mixed-use development along Albany Highway, prioritising commercial, office, entertainment, and retail uses at street level including laneways, with office, accommodation, and residential uses on upper levels.

d. Retain car sales and related activity only where located within the podium of mixed-use development fronting Shepperton Rd.

e. Improve micromobility routes parallel to Albany Highway along Hordern St and improve connections to the Swan River Pedestrian Bridge.

f. Facilitate public realm and biodiversity improvements to all sub-precinct streetscapes and appropriately recognise and respond to the historic location of Mindeera Spring and Aboriginal Lands Trust land.

3.3.2 Victoria Park

Sub-Precinct Intent
Victoria Park will see sensitive change, with heritage shopfronts and fine-grain development along the Highway preserved and complemented by high-density development within Major Sites. Enhancements to the public realm will support increased retail, entertainment and cultural activity and sustain a vibrant local economy.

Sub-Precinct Objectives

a. Reinforce Albany Highway between Mackie St and Duncan St as a focal point of retail and evening hospitality activity, complemented by a shared space public realm treatment to the Highway road reserve.

b. Encourage transformative development of Major Sites between Harvey St and Duncan St to deliver retail, accommodation, office and residential floorspace, including creative and cultural space.

c. Limit significant retail floorspace and building height to Major Sites, ensuring other development aligns with established fine-grain character.

d. Promote mixed-use redevelopment along Albany Highway, focusing on hospitality, entertainment, and retail at street level, with commercial and residential spaces above.

e. Support high-rise residential infill between McMaster St and MacMillan St, with an emphasis on generous landscaping and setbacks, to establish a diverse residential neighbourhood.

f. Improve precinct connectivity to Victoria Park Train Station along Duncan St and enhance micromobility routes along Hordern St.

g. Facilitate public realm and biodiversity improvements to all sub-precinct streetscapes and Memorial Gardens.

3.3.3 Central

Sub-Precinct Intent
Central will undergo transformative change, evolving into a dynamic residential district supported by diverse service commercial, office and creative and cultural uses at street level. New development will be complemented by pedestrian-friendly streetscapes, heritage preservation and the enhancement of Read Park as a central community amenity.

Sub-Precinct Objectives

a. Promote transformative development of Major Sites between Kent St and Basinghall St, including a focus on local cultural and creative space as an activity anchor.

b. Encourage mixed-use redevelopment fronting Albany Highway, prioritising office, service commercial, cultural, and minor retail uses at street level, with predominantly residential uses to upper levels and fronting laneways.

c. Support mid-rise residential infill fronting Salford St, Hordern St, Temple St, and Lichfield St, with an emphasis on generous landscaping and setbacks, to establish a diverse residential neighbourhood.

d. Improve micromobility routes parallel to Albany Highway along Lichfield Street.

e. Facilitate public realm and biodiversity improvements to all sub-precinct streetscapes, Read Park and drainage sumps.

3.3.4 East Victoria Park

Sub-Precinct Intent
East Victoria Park will see sensitive change, retaining its fine-grain character and diversity of independent businesses along the Highway. New mixed-use development will be complemented by streetscape enhancements, with significant population and employment growth delivered through high-density redevelopment of identified Major Sites.

Sub-Precinct Objectives

a. Reinforce Albany Highway between Mint and Dane St as a focal point for independent retail and evening hospitality activity, complemented by a shared space public realm treatment to the Highway road reserve.

b. Promote transformative development of Major Sites between Kent St and Basinghall St to create a diverse retail and commercial hub with expanded retail, accommodation, office and other non-residential floorspace, in addition to creative and cultural space and significant new community facilities.

c. Limit significant additional floorspace and building height to Major Sites, ensuring other development aligns with established fine-grain character.

d. Promote mixed-use redevelopment along Albany Highway, prioritising hospitality, entertainment, and retail uses at street level including laneways, with commercial and residential uses above.

e. Support mid-rise residential infill fronting Basinghall St, Moorgate St, and Hubert St with an emphasis on generous landscaping and setbacks, to moderate the transition from Albany Highway to surrounding lower-scale areas.

f. Improve precinct connectivity to Carlisle Train Station along Mint St and enhance micromobility routes parallel to Albany Highway along Hordern St and Swansea St.

g. Facilitate public realm and biodiversity improvements to all sub-precinct streetscapes, John Macmillan Park, Isaia Corner, and drainage sumps.

3.3.5 East End

Sub-Precinct Intent
East End will see sensitive change, with mixed-use development supporting population growth complemented by minor commercial, retail and creative and cultural development. Development will respect surrounding residential character while increasing housing diversity.

Sub-Precinct Objectives

a. Ensure new development aligns with existing character and does not adversely impact surrounding lower-scale residential areas.

b. Encourage mixed use redevelopment along Albany Highway, allowing for small-scale commercial, cultural and creative, and retail uses at ground level with residential uses to upper levels and fronting laneways.

c. Support mid-rise residential infill fronting Hubert St, with an emphasis on generous landscaping and setbacks, to moderate the transition from Albany Highway to surrounding lower-scale areas.

d. Enhance micromobility routes parallel to Albany Highway along Hubert Street.

e. Facilitate public realm and biodiversity improvements to all sub-precinct streetscapes and drainage sumps.

3.3.6 St James

Sub-Precinct Intent
St. James will undergo transformative change, emerging as a commercial gateway with retained and expanded large-format retail and service commercial uses within mixed-use development. Improved pedestrian spaces and cultural attractions, centered around Edward Millen, will enhance liveability.

Sub-Precinct Objectives

a. Reinforce Albany Highway between Oats St and Welshpool Rd as a focal point of retail and hospitality activity, complemented by a shared space public realm treatment.

b. Encourage transformative development of Major Sites between Shepperton Rd and Albany Highway to create a diverse retail and commercial hub with expanded large-format retail, service commercial, light industrial and office floorspace, in addition to creative and cultural space.

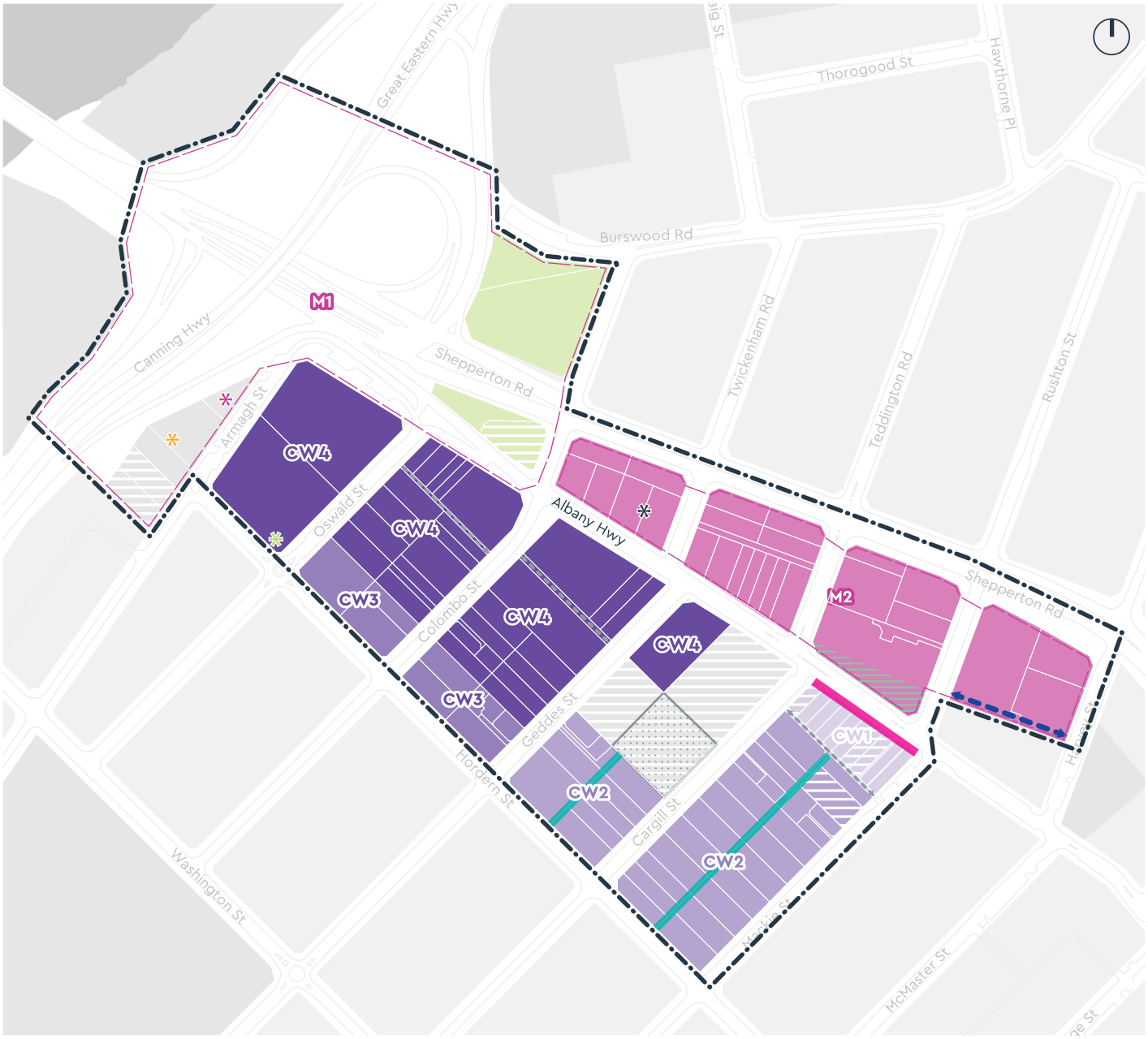
c. Encourage mixed-use redevelopment fronting Albany Highway, with service commercial and retail on the ground floor and to laneways, with residential and commercial uses above.

d. Support mid-rise residential infill fronting Alday St, Hill View Tce and Hubert St, with an emphasis on generous landscaping and setbacks, to create a diverse residential neighbourhood.

e. Strengthen connectivity to Oats Street Train Station and improve micromobility routes parallel to Albany Highway along Hubert Street.

f. Facilitate public realm and biodiversity improvements to all sub-precinct streetscapes, Edward Millen Park and Alday Street Reserve.

Plan 2.1: Causeway Sub-Precinct Plan



Sub-Precinct Primary Controls

- CW1 (6 st)
- CW2 (6 st)
- CW3 (8 st)
- CW4 (18 st)
- Major Site (Ref. 3.5.7)

Specific Requirements

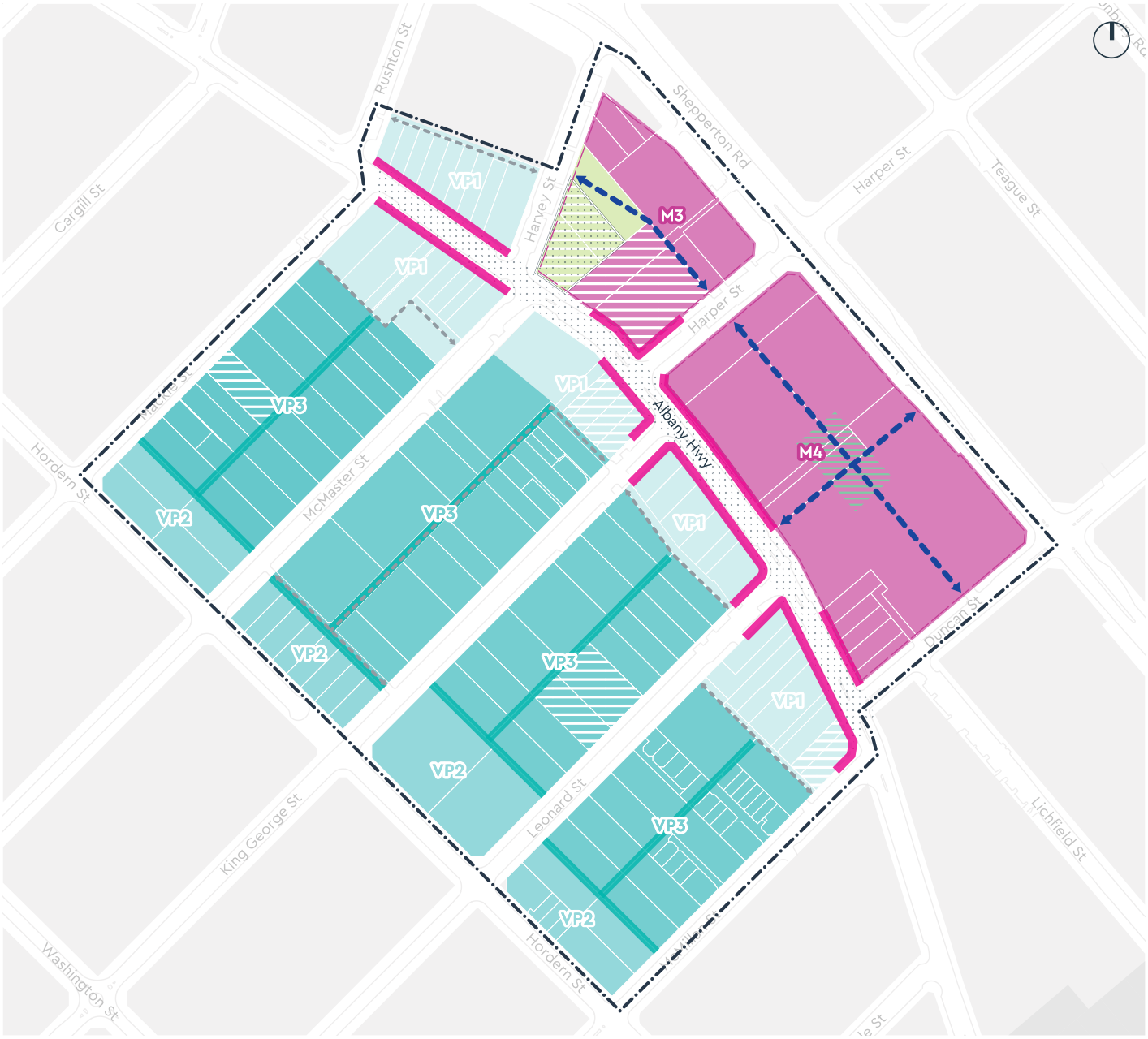
- Heritage Place (Ref. 3.5.1)
- Contributory Frontage (Ref. 3.5.2)
- Sensitive Interface (Ref. 3.5.3)
- Open Space (Ref. 3.5.4)
- R.O.W. (Ref. 3.5.4)
- Pedestrian Link (Ref. 3.5.4)
- Solar Access (Ref. 3.5.5)
- Contaminated Site (Ref. 3.5.6)
- Sub-Precinct Boundary
- Existing POS
- Not subject to **Part 3.3**
- Location of Mindeera Spring
- Aboriginal Lands Trust land
- Wastewater Pump Station

Table 1: Causeway Sub-Precinct Primary Controls

Causeway Sub-Precinct Development Requirements	CW1	CW2	CW3	CW4	M1	M2
a. **Zoning**	Centre	Mixed Use	Mixed Use	Mixed Use	Mixed Use	Varies
b. **R-Code**	R-AC0	R-AC0	R-AC0	R-AC0	R-AC0	R-AC0
c. **Plot Ratio**	1.5	1.5	2.0	3.0	3.0	3.0
d. **Bonus Plot Ratio**	3.5	2.5	3.0	3.5	4.0[1]	5.5[1]
e. **Building Height** (storeys)	3	4	6	8	12	12
f. **Bonus Building Height** (storeys)	6	6	8	18	22[1]	32[1]
g. **Podium Height** (storeys)	2	2[2]	3	3	4	4
h. **Primary and Secondary Street Setback** a) to podium	Nil	4.0m	2.0m	1.0m	1.0m	1.0m
b) above podium height	6.0m	4.0m	4.0m	4.0m	6.0m	6.0m
i. **Side Setback** a) to podium	Nil	3.0m	Nil	Nil	Nil	Nil
b) above podium height	Nil	5.0m	4.0m	4.0m	4.0m	4.0m
j. **Rear Setback** a) to podium	Nil	6.0m	6.0m	Nil	Nil	Nil
b) above podium height	3.0m	6.0m	6.0m	6.0m	6.0m	6.0m
k. **Frontage Type** (Ref. 3.4.4)	Centre	Residen-tial	Commer-cial	Centre	Centre	Centre

Notes
1. Subject to satisfaction of Major Site Development Requirements (Ref. 3.5.7)
2. Applies to first 10.0m of a secondary street frontage, thereafter minimum 2.0m setback applies
3. Minimum 3m colonnade or setback required to Major Site frontage to Albany Hwy
4. Podium boundary wall permitted on one side boundary, and shall not exceed 2/3 length

Plan 2.2: Victoria Park Sub-Precinct Plan



Sub-Precinct Primary Controls

- VP1 (4 st)
- VP2 (6 st)
- VP3 (8 st)
- Major Site (Ref. 3.5.7)

Specific Requirements

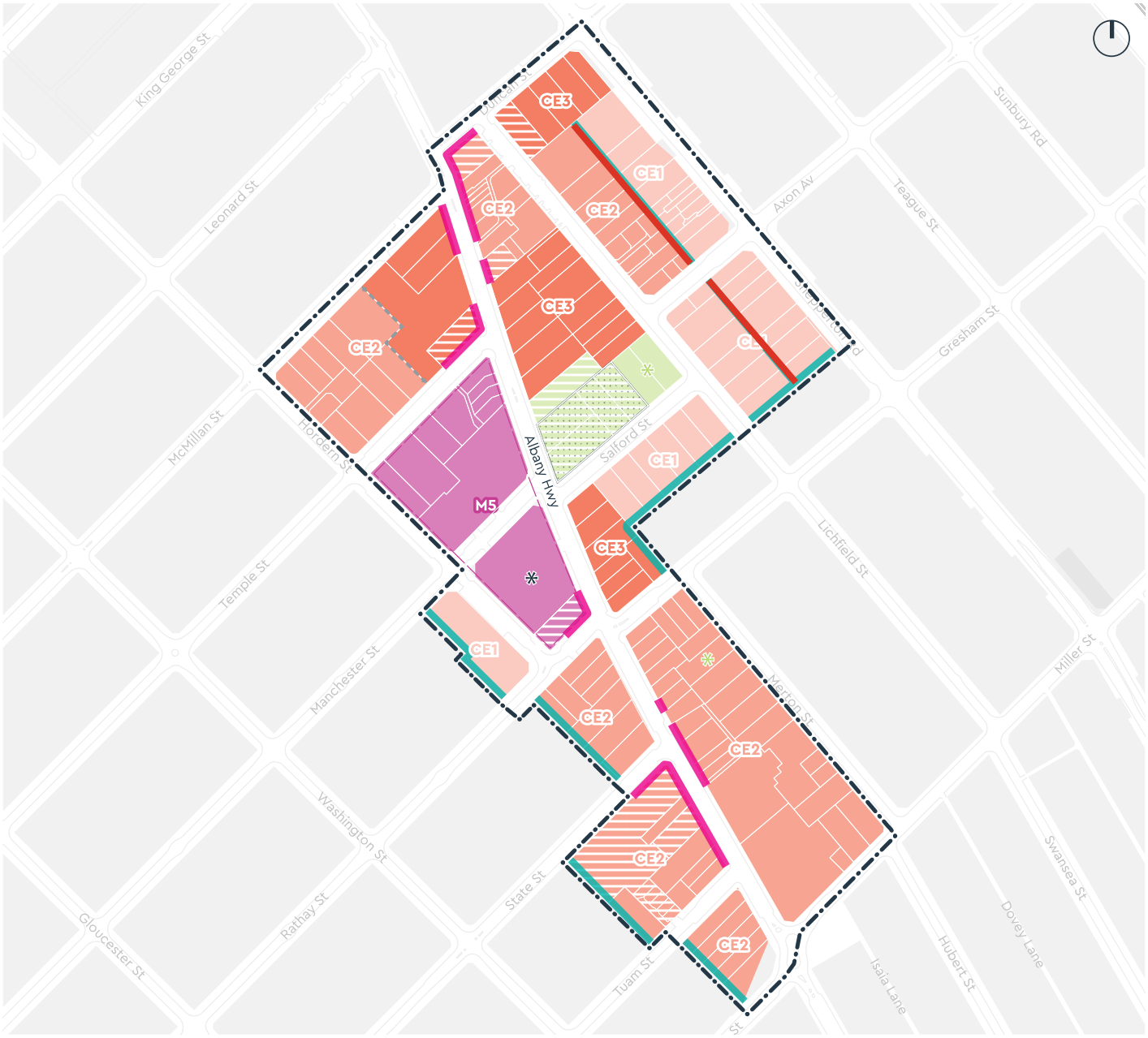
- Heritage Place (Ref. 3.5.1)
- Contributory Frontage (Ref. 3.5.2)
- Sensitive Interface (Ref. 3.5.3)
- Open Space (Ref. 3.5.4)
- R.O.W. (Ref. 3.5.4)
- Pedestrian Link (Ref. 3.5.4)
- Solar Access (Ref. 3.5.5)
- Sub-Precinct Boundary
- Existing POS
- Not subject to **Part 3.3**

Table 2: Victoria Park Sub-Precinct Primary Controls

Victoria Park Sub-Precinct Development Requirements	VP1	VP2	VP3	M3	M4
a. **Zoning**	Centre	Residential	Residential	Centre	Centre
b. **R-Code**	R-AC0	R-AC0	R-AC0	R-AC0	R-AC0
c. **Plot Ratio**	1.5	1.0	2.0	2.0	2.0
d. **Bonus Plot Ratio**	2.5	2.5	3.0	5.0[1]	5.0[1]
e. **Building Height** (storeys)	3	3	5	8	8
f. **Bonus Building Height** (storeys)	6	6	8	22[1]	24[1]
g. **Podium Height** (storeys)	2	2	2	3	3
h. **Street Setback** a) to podium	Nil	4.0m	4.0m	Nil[2]	Nil[2]
b) above podium height	6.0m[3]	4.0m	4.0m	4.0m	4.0m
i. **Side Setback** a) to podium	Nil	3.0m	3.0m	Nil	Nil
b) above podium height	Nil	5.0m	5.0m	6.0m	6.0m
j. **Rear Setback** a) to podium	Nil	6.0m	6.0m	Nil	Nil
b) above podium height	3.0m	6.0m	6.0m	6.0m	6.0m
k. **Frontage Type** (Ref. 3.4.4)	Centre	Residential	Residential	Centre	Centre

Notes
1. Subject to satisfaction of Major Site Development Requirements (Ref. 3.5.7)
2. Minimum 3m colonnade or setback required to Major Site frontage to Shepperton Rd
3. Secondary street setback may be reduced to nil for a maximum of 4 storeys
4. Boundary Wall permitted on one side boundary, and shall not exceed 2/3 length

Plan 2.3: Central Sub-Precinct Plan



Sub-Precinct Primary Controls

- CE1 (5 st)
- CE2 (8 st)
- CE3 (10 st)
- Major Site (Ref. 3.5.7)

Specific Requirements

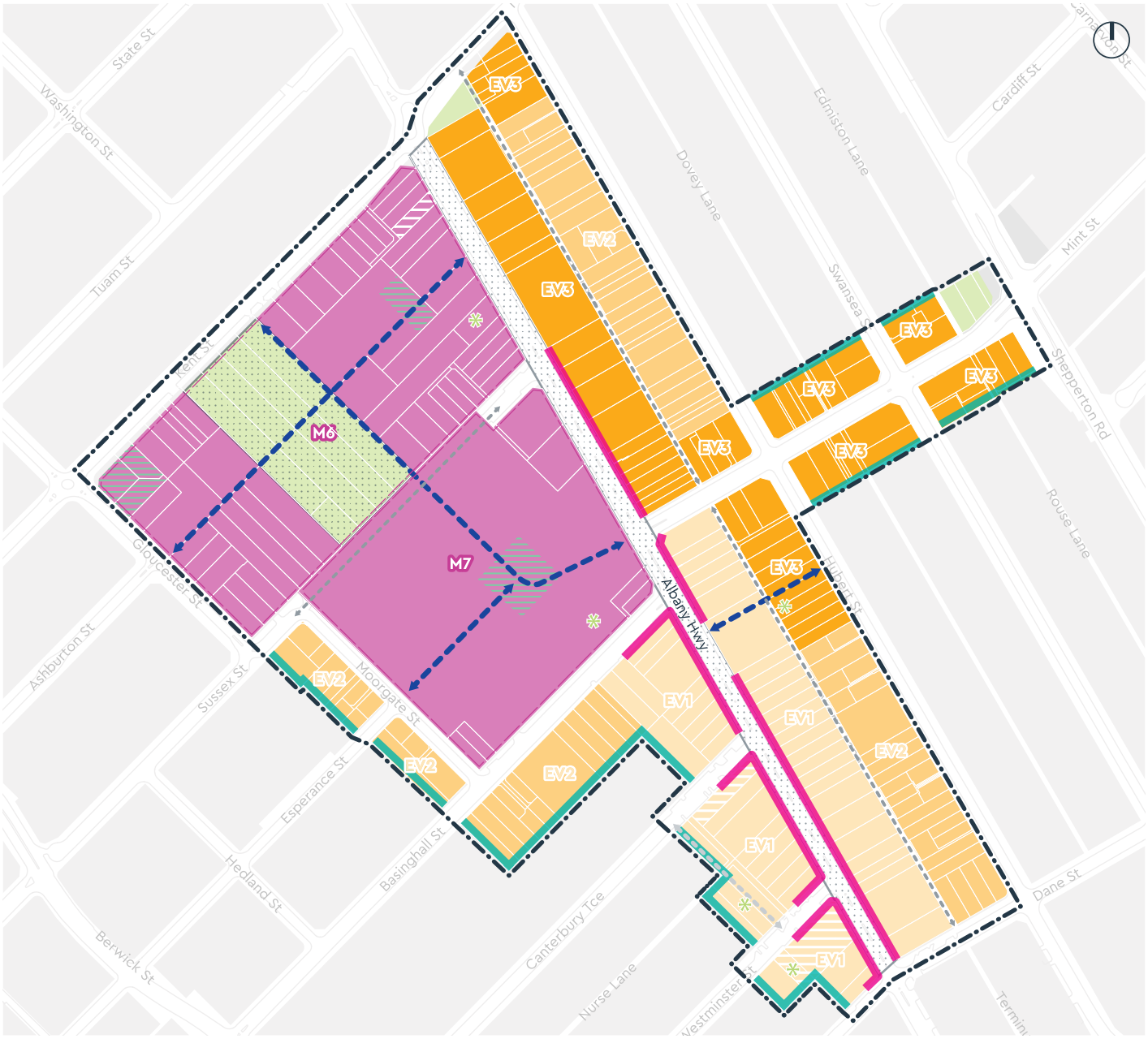
- Heritage Place (Ref. 3.5.1)
- Contributory Frontage (Ref. 4.2.2)
- Sensitive Interface (Ref. 3.5.3)
- R.O.W. (Ref. 3.5.4)
- Pedestrian Link (Ref. 3.5.4)
- Solar Access (Ref. 3.5.5)
- Contaminated Site (Ref. 3.5.6)
- Sub-Precinct Boundary
- Existing POS
- Existing Sump
- Not subject to **Part 3.3**

Table 3: Central Sub-Precinct Primary Controls

Central Sub-Precinct Development Requirements	CE1	CE2	CE3	M5
a. **Zoning**	Residential	Mixed Use	Mixed Use	Mixed Use
b. **R-Code**	R-AC0	R-AC0	R-AC0	R-AC0
c. **Plot Ratio**	1.0	2.0	2.5	2.5
d. **Bonus Plot Ratio**	2.0	2.5	3.0	4.0[1]
e. **Building Height** (storeys)	3	5	6	8
f. **Bonus Building Height** (storeys)	5	8	10	16[1]
g. **Podium Height** (storeys)	2	3	3	4
h. **Street Setback** a) to podium	4.0m	Nil[2]	Nil[2]	Nil[3]
b) above podium height	6.0m	4.0m	4.0m	6.0m
i. **Side Setback** a) to podium	3.0m[4]	Nil	Nil	Nil
b) above podium height	4.0m	4.0m	4.0m	6.0m
j. **Rear Setback** a) to podium	6.0m	Nil	Nil	Nil
b) above podium height	6.0m	6.0m	6.0m	6.0m
k. **Frontage Type** (Ref. 3.4.4)	Residential	Commercial	Commercial	Commercial

Notes
1. Subject to satisfaction of Major Site Development Requirements (Ref. 3.5.7)
2. Applies to first 10.0m of a secondary street frontage, thereafter minimum 2.0m setback applies
3. Minimum 3m colonnade or setback required to Major Site frontage to Albany Hwy
4. Podium boundary wall permitted on one side boundary, and shall not exceed 2/3 length

Plan 2.4: East Victoria Park Sub-Precinct Plan



Sub-Precinct Primary Controls

- EV1 (4 st)
- EV2 (5 st)
- EV3 (5 st)
- Major Site (Ref. 3.5.7)

Specific Requirements

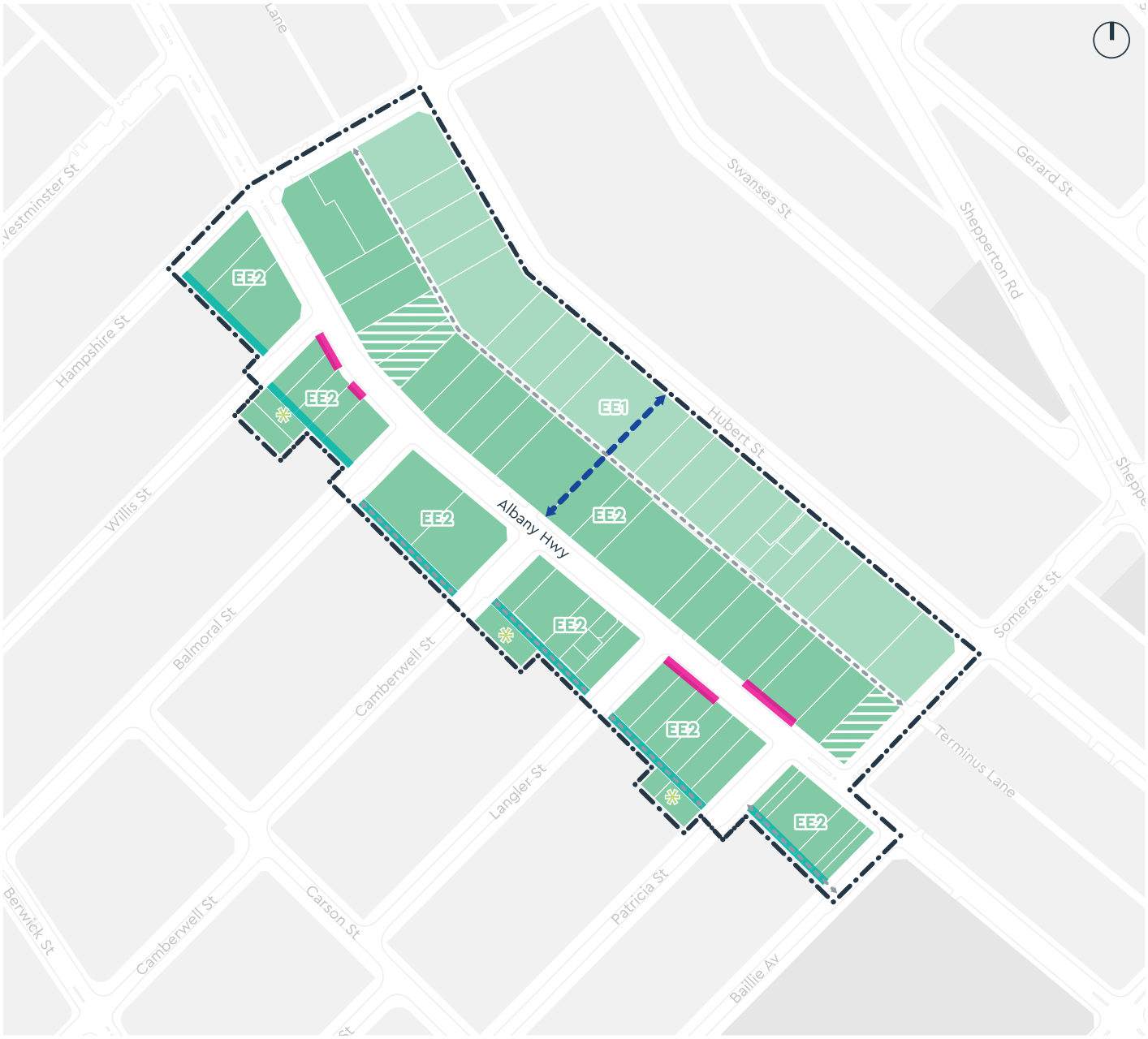
- Heritage Place (Ref. 3.5.1)
- Contributory Frontage (Ref. 3.5.2)
- Sensitive Interface (Ref. 3.5.3)
- Open Space (Ref. 3.5.4)
- R.O.W. (Ref. 3.5.4)
- Pedestrian Link (Ref. 3.5.4)
- Solar Access (Ref. 3.5.5)
- Sub-Precinct Boundary
- Existing POS
- Existing Sump
- Not subject to **Part 3.3**

Table 4: East Victoria Park Sub-Precinct Primary Controls

East Victoria Park Sub-Precinct Development Requirements	EV1	EV2	EV3	M6	M7
a. **Zoning**	Centre	Residential	Centre	Centre	Centre
b. **R-Code**	R-AC0	R-AC0	R-AC0	R-AC0	R-AC0
c. **Plot Ratio**	1.5	1.0	1.5	3.0	2.0
d. **Bonus Plot Ratio**	1.5	2.0	2.5	4.0[1]	5.0[1]
e. **Building Height** (storeys)	3	3	4	8	8
f. **Bonus Building Height** (storeys)	4	5	6	10[1]	22[1]
g. **Podium Height** (storeys)	2	2	3	3	3
h. **Street Setback** a) to podium	Nil	4.0m	Nil	Nil[2]	Nil[2]
b) above podium height	6.0m[3]	4.0m	6.0m[3]	Nil	6.0m
i. **Side Setback** a) to podium	Nil	3.0m[4]	Nil	Nil	Nil
b) above podium height	Nil	3.0m	Nil	6.0m	6.0m
j. **Rear Setback** a) to podium	Nil	Nil	Nil	Nil	Nil
b) above podium height	2.0m	2.0m	2.0m	Nil	Nil
k. **Frontage Type** (Ref. 3.4.4)	Centre	Residential	Centre	Centre	Centre

Notes
1. Subject to satisfaction of Major Site Development Requirements (Ref. 3.5.7)
2. Minimum 3m colonnade or setback required to Major Site frontage to Albany Hwy
3. Secondary street setback may be reduced to nil for a maximum of 4 storeys
4. Boundary Wall permitted on one side boundary, and shall not exceed 2/3 length

Plan 2.5: East End Sub-Precinct Plan



Sub-Precinct Primary Controls

- EE1 (5 st)
- EE2 (6 st)

Specific Requirements

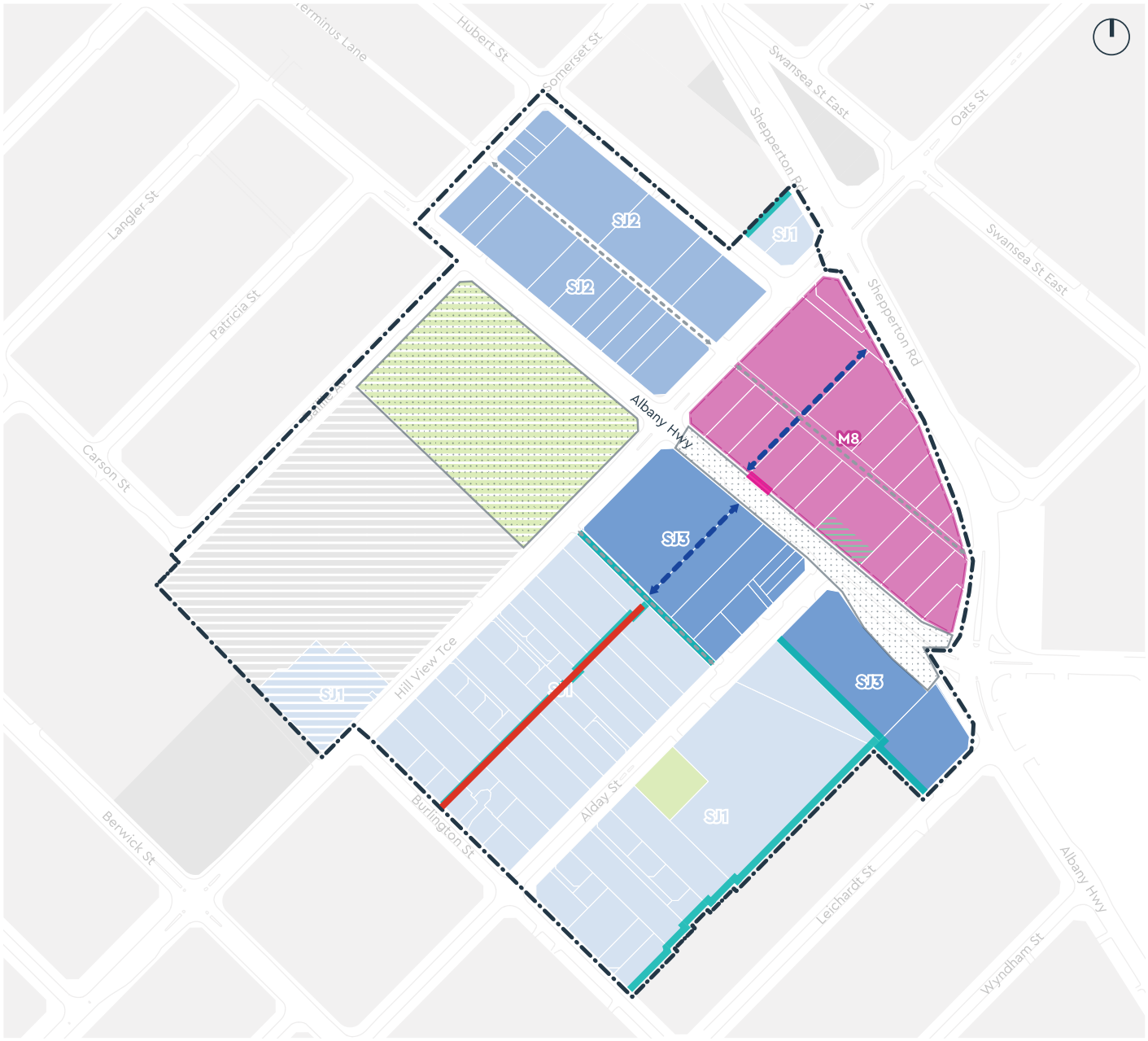
- Heritage Place (Ref. 3.5.1)
- Contributory Frontage (Ref. 3.5.2)
- Sensitive Interface (Ref. 3.5.3)
- R.O.W. (Ref. 3.5.4)
- Pedestrian Link (Ref. 3.5.4)
- Sub-Precinct Boundary
- Existing Sump
- Not subject to **Part 3.3**

Table 5: East End Sub-Precinct Primary Controls

East End Sub-Precinct Development Requirements	EE1	EE2
a. **Zoning**	Residential	Mixed Use
b. **R-Code**	R-AC0	R-AC0
c. **Plot Ratio**	1.0	1.5
d. **Bonus Plot Ratio**	2.0	2.0
e. **Building Height** (storeys)	3	3
f. **Bonus Building Height** (storeys)	5	6
g. **Podium Height** (storeys)	2	2
h. **Street Setback** a) to podium	4.0m	Nil[1]
h. b) above podium height	6.0m	4.0m
i. **Side Setback** a) to podium	3.0m[2]	Nil
i. b) above podium height	3.0m	4.0m
j. **Rear Setback** a) to podium	Nil	Nil
j. b) above podium height	3.0m	3.0m
k. **Frontage Type** (Ref. 3.4.4)	Residential	Commercial

Notes
1. Applies to first 10.0m of a secondary street frontage, thereafter minimum 2.0m setback applies
2. Boundary Wall to podium height permitted on one side boundary, and shall not exceed 2/3 length

Plan 2.6: St James Sub-Precinct Plan



Sub-Precinct Primary Controls

- SJ1 (5 st)
- SJ2 (8 st)
- SJ3 (12 st)
- Major Site (Ref. 3.5.7)

Specific Requirements

- Heritage Place (Ref. 3.5.1)
- Contributory Frontage (Ref. 3.5.2)
- Sensitive Interface (Ref. 3.5.3)
- Open Space (Ref. 3.5.4)
- R.O.W. (Ref. 3.5.4)
- Pedestrian Link (Ref. 3.5.4)
- Solar Access (Ref. 3.5.5)
- Sub-Precinct Boundary
- Existing POS
- Not subject to **Part 3.3**

Table 6: St James Sub-Precinct Primary Controls

St James Sub-Precinct Development Requirements	SJ1	SJ2	SJ3	M8
a. **Zoning**	Residential	Mixed Use	Centre	Centre
b. **R-Code**	R-AC0	R-AC0	R-AC0	R-AC0
c. **Plot Ratio**	1.5	2.0	3.0	3.0
d. **Bonus Plot Ratio**	2.0	3.0	3.5	4.0[1]
e. **Building Height** (storeys)	3	5	8	8
f. **Bonus Building Height** (storeys)	5	8	12	16[1]
g. **Podium Height** (storeys)	2	3	3	3
h. **Street Setback** a) to podium	4.0m	Nil[2]	Nil[2]	Nil[3]
b) above podium height	6.0m	4.0m	6.0m	6.0m
i. **Side Setback** a) to podium	3.0m[4]	Nil	Nil	Nil
b) above podium height	3.0m	4.0m	4.0m	4.0m
j. **Rear Setback** a) to podium	6.0m	Nil	Nil	Nil
b) above podium height	6.0m	2.0m	6.0m	6.0m
k. **Frontage Type** (Ref. 3.4.4)	Residential	Commercial	Centre	Centre

Notes
1. Subject to satisfaction of Major Site Development Requirements (Ref. 3.5.7)
2. Applies to first 10.0m of a secondary street frontage, thereafter minimum 2.0m setback applies
3. Minimum 3m colonnade or setback required to Major Site frontage to Albany Hwy and Shepperton Rd
4. Boundary Wall to podium height permitted on one side boundary, and shall not exceed 2/3 length

3.4 General Development Requirements

All proposed development within the AHPSP area must comply with the requirements of this Part, which should be read in conjunction with the specific development parameters set out in **Part 3.3 Sub-Precinct Requirements as well as Vol.1 and Vol.2 of SPP 7.3**.

3.4.1 Plot Ratio

Element Objectives

i. Development bulk is consistent with the desired scale and character of each sub-precinct

ii. Plot ratio is calibrated to encourage separate buildings and architectural articulation within the building envelope.

iii. Excessive building bulk which does not suitably provide for internal amenity and outlook, deep soil zones, cross-ventilation or modulation of building form is not supported.

Development Requirements

a. Plot Ratio

Development shall not exceed the maximum Plot Ratio specified in **Part 3.3.**

b. Bonus Plot Ratio

Where a development complies with the requirements of **Part 4** and provides a public benefit contribution, it may be granted bonus plot ratio exceeding the primary plot ratio, up to the maximum bonus plot ratio specified in **Part 3.3.**

A major site designated in **Part 3.3** must satisfy the requirements of **3.5.7 Major Sites** to be eligible to receive bonus plot ratio.

Bonus Plot Ratio is presented inclusive of, and not in addition to, the primary Plot Ratio.

3.4.2 Building Height

Element Objectives

i. A cohesive hierarchy and distribution of building height is achieved along Albany Highway, with a coherent transition in height from the precinct to surrounding residential areas

ii. Tall development is contained within identified Major Sites where visual and overshadowing impact is able to be mitigated, with lower development on other sites

iii. New development creates a human scale street environment which responds to the parapet height of heritage fabric, mitigates wind effects and maintains adequate solar access

iv. Building height is calibrated to accommodate anticipated growth of the precinct in an orderly fashion

v. Under-development of sites within the precinct is avoided

Table 7: Minimum Floor-to-Ceiling Heights

Storey	Minimum Height
Ground Floor	4.0m
Podium Floor/s	4.0m within the Causeway, Victoria Park and East Victoria Park sub-precincts, otherwise 3.0m
Other Floors	3.0m

Development Requirements

a. Building Height

The total height of a development should not exceed the primary Building Height in storeys specified in **Part 3.3** except for the following:

i. Non-habitable architectural features not more than 3.0 metres in height;

ii. Building services and communal amenities set back at least 3.0 metres behind the building façade and screened from public view; and

iii. Development which meets Bonus Building Height requirements.

b. Bonus Building Height

Where a development complies with the requirements of **Part 4** and provides a public benefit contribution, it may be granted bonus building height up to the maximum bonus height specified in **Part 3.3.**

A major site designated in **Part 3.3** must satisfy the requirements of **3.5.7 Major Sites** to be eligible to receive bonus building height.

c. Podium Height

Development should not exceed the maximum podium height in storeys, as outlined in **Part 3.3**, except where it is necessary to match the height of an adjoining heritage building or other relevant contextual feature.

At street intersections, development may exceed the maximum podium height by 2 storeys within 30 metres of the building corner, measured from the intersection of each street-fronting lot boundary.

d. Minimum Floor-to-Ceiling Height

Building height shall reflect the minimum floor to ceiling heights specified in **Table 7**.

Development may exceed specified floor-to-ceiling heights within all sub-precincts where mixed use, non-residential or adaptive floorspace is proposed.

e. Minimum Building Height

Development shall have a minimum building height of 2 storeys, except for the following:

i. Temporary use and extensions or other modifications to existing development; and

ii. Small buildings and kiosks forming part of a larger development scheme.

3.4.3 Building Setbacks

Element Objectives

i. Desired street character is supported by new development including appropriate provision of landscaping and publicly accessible space within street setback areas

ii. Where permitted, tall development is suitably set back to mitigate building bulk through restrained tower footprints

iii. Setback requirements support the retention of the Highway's fine-grain lot pattern

iv. Efficient building form is supported with multiple stepped setbacks discouraged

Development Requirements

a. Podium Setbacks

Podiums should be set back from a primary or secondary street boundary, side boundary or rear boundary to the minimum distances specified in **Part 3.3,** measured from the lot boundary.

Where a podium setback to the street is required, the setback area should provide for landscaping or hardscaping consistent with **3.4.4 Frontage and Access**.

Where a nil setback to the street is required, development may be recessed at the ground floor street frontage to create a Publicly Accessible Private Open Space.

b. Upper Level Setbacks

Development above podium height should be set back from a primary or secondary street boundary, side boundary or rear boundary to the minimum distances specified in **Part 3.3**, measured from the lot boundary.

Architectural features, balconies and shading projections are permitted to encroach into upper level street and side boundary setback area by a maximum of 0.5m.

c. Additional Setbacks Above 12 Storeys

For developments exceeding 12 storeys, any part of the building above the twelfth storey must be set back such that its width and depth do not exceed a maximum horizontal dimension of 26 meters.

Multiple separate building parts above the twelfth storey are permitted on the same site, provided each part complies with this limit.

d. Podium Street Corner Truncations

Notwithstanding podium street setback requirements, all development shall maintain a visual or actual street corner truncation of 3 metres by 3 metres measured from the corner of the lot.

3.4.4 Frontage and Access

Element Objectives

i. Development positively enhances street activity, pedestrian safety and achieves good design to all public frontages

ii. Residential and non-residential ground floor land uses are provided in appropriate locations.

iii. Adequate parking, loading and servicing arrangements are provided to support commercial activity without impinging on pedestrian comfort or design quality

Development Requirements

a. Frontage Design

Development must adhere to the Centre, Commercial or Residential Frontage type standards specified in **Table 8**, as designated in **Part 3.3**.

b. Vehicle Access Siting

Development must adhere to the following vehicle access requirements:

i. Development with direct access to a R.O.W. must provide all vehicle access via this frontage rather than the Primary or Secondary street.

ii. Development with access to a Primary and Secondary Street must provide all vehicle access via the Secondary Street.

c. Vehicle Access Restrictions

Vehicle access directly from Shepperton Road or Albany Highway is prohibited, except where no alternative access is feasible.

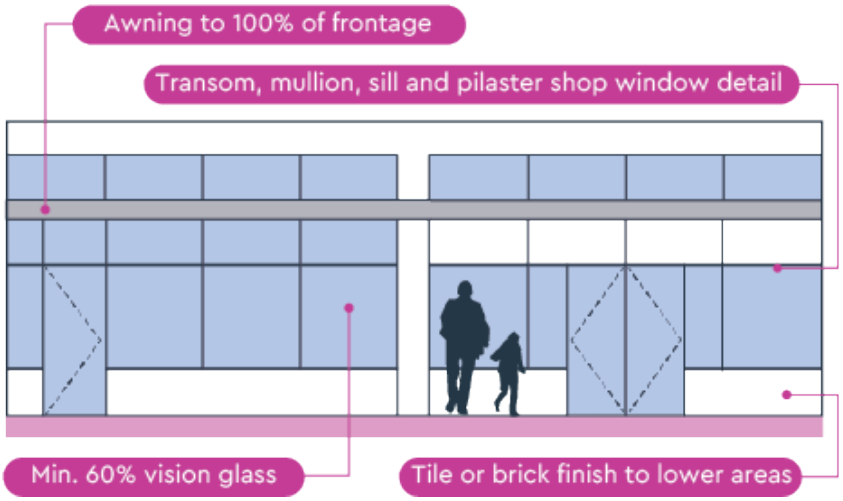
In cases where access from Shepperton Road or Albany Highway is unavoidable, driveways must be limited to a maximum width of 6 meters, and all visible internal driveway walls and ceilings must be treated with architectural finishes that are consistent with the building exterior.

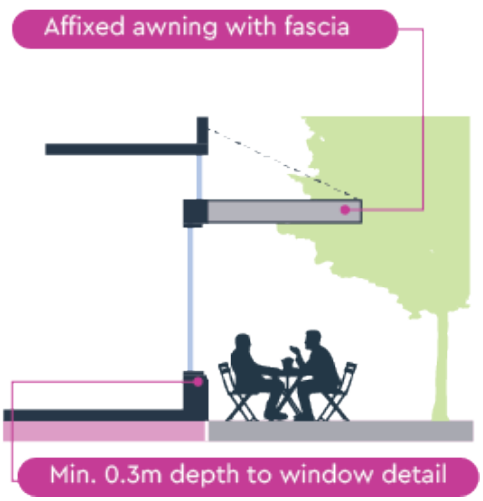
Where feasible, alternative access solutions such as site amalgamation, the creation of access easements, rights of way (R.O.W.), or no vehicular access are strongly encouraged.

Table 8: Frontage Type Design Requirements

Centre Frontage Type	
Centre frontages should maximise fine-grain activation along Albany Highway and key secondary streets, encouraging vibrant retail and hospitality activity at ground level, as shown in **Figure 1**. Frontages comprise richly detailed, narrow shopfronts typically built to the street with the potential for ground level setbacks on Major Sites. Entrances, lobbies, and building services are discreetly integrated to maximise active frontage area. Secondary Streets and Laneways are also activated to promote increased activity.	
Component	**Requirements**
Primary Street, Pedestrian Link or POS Frontage	a. **Awning:** 100% of frontage provided with a separately affixed canopy typically comprising a structural frame clad in an opaque material with fascia. Transparent awnings are not permitted. Fabric awnings preferred for pedestrian links. b. **Glazing:** Minimum 60% of the ground floor facade comprises clear vision glass, free from decals, frosting, or tinting. c. **Tenancy Width:** Maximum 10m d. **Shopfront Design:** Incorporate design details including stall-risers, sills, pilasters, and clerestory windows with a minimum 0.5m depth difference between building frontage and retail tenancy doorway e. **Materials:** Use tile, glazed brick, face brick, wood, or metal cladding for solid facade areas within 1.5 meters of ground level.
Secondary Street Frontage	f. As per Centre Primary Frontage or Commercial Primary Frontage requirements.
Laneway Frontage	g. Direct access commercial units provided minimum 50% of rear boundary width h. Design inactive frontage as an integral part of the development with high quality materials, landscaping or public art
Ground Floor Activation	i. Minimum tenantable space at ground level (excluding parking) equal to 40% of total site area
Preferred Ground Floor Use	j. Non-residential: Shop, Market, Restaurant/café, art gallery, brewery, civic use, community purpose, tavern, small bar, nightclub, recreation – private

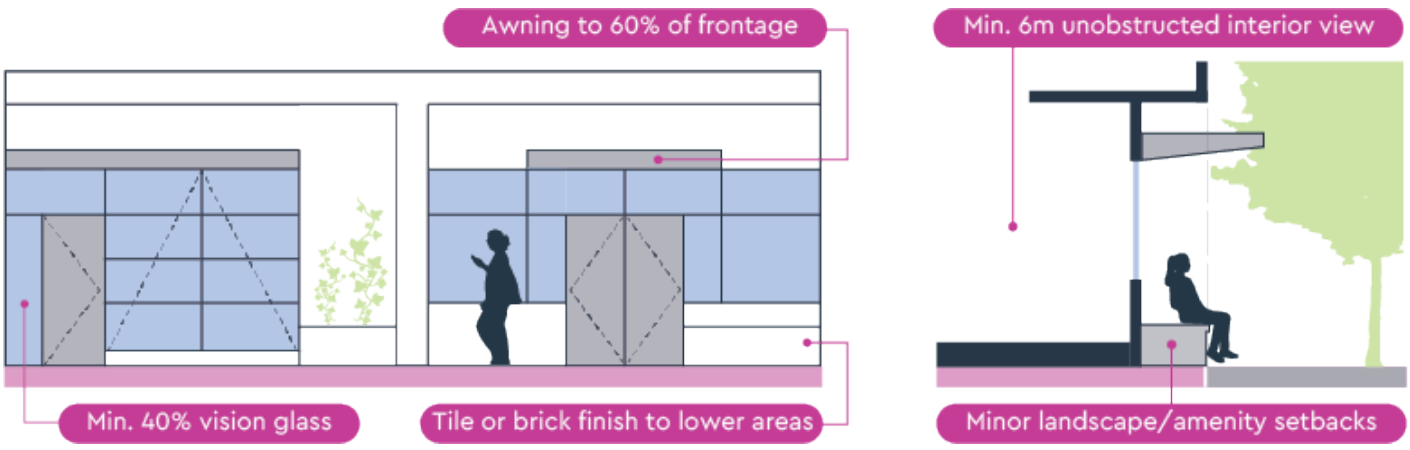
Figure 1: Centre Frontage Type





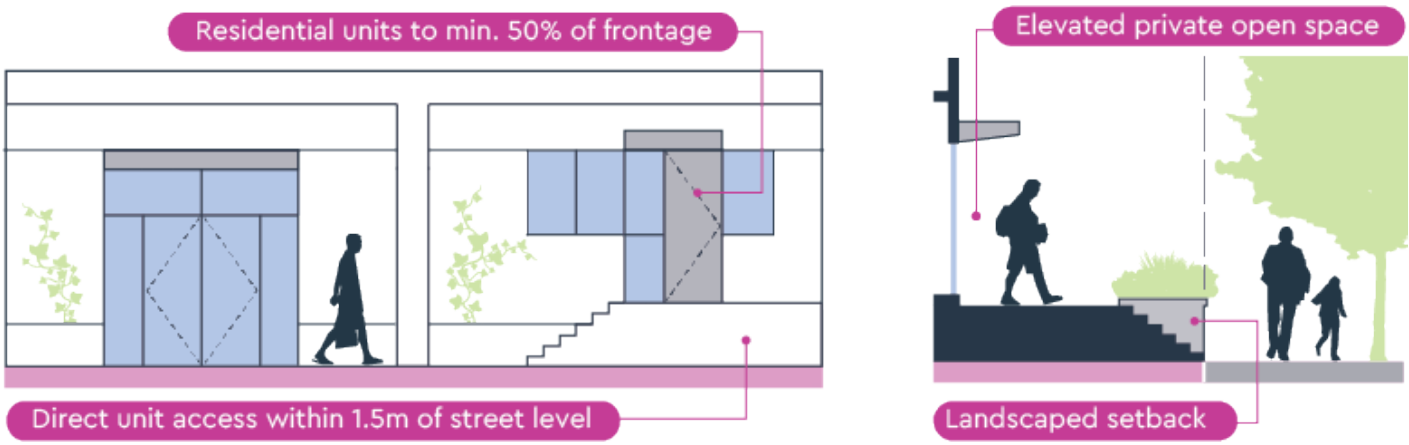
Commercial Frontage Type	
Commercial frontages are designed to enable direct visual and physical contact between the street building interior while accommodating a mix of commercial, office, creative and lower-order retail uses at ground level which support the precinct's vitality and economic function without diluting or competing with core retail areas, as shown in **Figure 2**. Street activity is maintained by ensuring clear visibility into tenancy interiors from the street and shallow urban setbacks that provide for landscaping or public amenities such as seating.	
Component	**Requirements**
Primary Street, Pedestrian Link or POS Frontage	a. **Awning:** 60% of frontage provided with an awning or canopy comprising fabric or a structural frame clad in an opaque material with fascia. Transparent awnings are not permitted. b. **Glazing:** Minimum 40% of the ground floor facade comprises clear vision glass, free from decals, frosting, or tinting. c. **Tenancy Width:** Maximum 10m d. **Materials:** Use tile, glazed brick, face brick, wood, or metal cladding for solid facade areas within 1.5 meters of ground level. e. **Visibility:** Tenancy interiors provide a minimum 6m unobstructed interior view depth from the street. f. **Setbacks:** Minor setbacks for hardscaping and pedestrian amenity encouraged
Secondary Street Frontage	g. As per Commercial Primary Frontage or Residential Primary Frontage requirements
Laneway Frontage	h. Direct access residential or commercial units provided to 40% of rear boundary i. Inactive frontage is appropriately screened and landscaped
Ground Floor Activation	j. Minimum tenantable space at ground level (excluding parking) equal to 30% of total site area
Preferred Ground Floor Use	k. Non-residential: Creative and cultural uses, Industry light, office, art gallery, brewery, bulky goods showroom, child care premises, civic use, community purpose, consulting rooms, convenience store, educational establishment, exhibition centre, fast food outlet, tavern, small bar, recreation – private

Figure 2: Commercial Frontage Type



Residential Frontage Type	
Residential frontages are predominantly passive and characterised by landscaped street setbacks, as shown in **Figure 3** They generally not promote commercial activity except where this is compatible with the residential character and amenity of the street. Frontages accommodate residential lobbies alongside ground-level residential units which are directly accessible from the street. Clear definition between public and private realms is achieved through landscaped setbacks, level changes and the design of private open space.	
Component	**Requirements**
Primary Street, Pedestrian Link or POS Frontage	a. **Residential use:** Minimum 50% of building frontage should consist of residential units with individual street access or non-residential use. b. **Unit width:** Maximum residential unit width of 10 meters c. **Unit access**: Main unit entrance to be directly accessible from the street and situated at or within 1.5 meters of grade level, connected by stairs or a ramp. d. **Setback area**: Enhance entrances by incorporating features such as low walls, steps, and porches and landscaping
Secondary Street Frontage	e. Residential Primary Frontage requirements apply
Laneway Frontage	f. Direct access residential units provided to 50% of rear boundary g. Inactive frontage area is appropriately screened and landscaped
Ground Floor Activation	h. No minimum applies
Preferred Ground Floor Use	i. Multiple dwelling, shop, restaurant/café, child care premises, holiday apartment, home businesses, home store, hotel, independent living complex, residential aged care facility, serviced apartment, hotel, creative and cultural uses, recreation – private

Figure 3: Residential Frontage Type



3.4.5 Parking and End of Trip Facilities

Element Objectives

i. A sufficient supply of public parking to support the Town economy is maintained

ii. Reduce car dependency and facilitate modal shift towards active travel supported by appropriate facilities

iii. Parking is not visible from public areas and is able to be converted to alternative uses or support electric vehicle charging in the future

Table 9: Parking and End of Trip Requirements

	Residential Use	Non-Residential Use
Car Parking	No minimum applies	
Bicycle Parking and End of Trip Facilities	In accordance with Planning Design Codes and contained within an enclosed bicycle storage area within the building.	1 employee bicycle bay and 1 visitor bicycle bay per 100sqm of net lettable area 1 shower per 10 bicycle parking bays and 1 locker per bicycle parking bay

Development Requirements

a. Rate of Provision

Car Parking, Bicycle Parking and End of Trip Facilities must be provided in accordance with the rates specified in **Table 9**, rounded to the nearest whole number.

b. Design of Car Parking

Car parking located at or above ground level must meet the following design requirements, as shown in **Figure 4:**

i. Be fully sleeved with active or residential uses to all public frontages including laneways;

ii. Incorporate minimum 3.2m floor to ceiling heights to enable future adaptation; and

c. Car Share Schemes

Any development with more than 30 residential dwellings that includes private car parking must incorporate parking bays for use as part of a residential car share scheme.

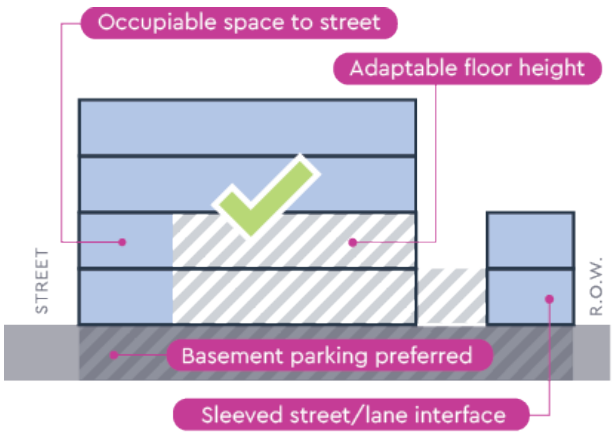
The car share scheme must be operated in accordance with a management plan prepared as a condition of Development Approval.

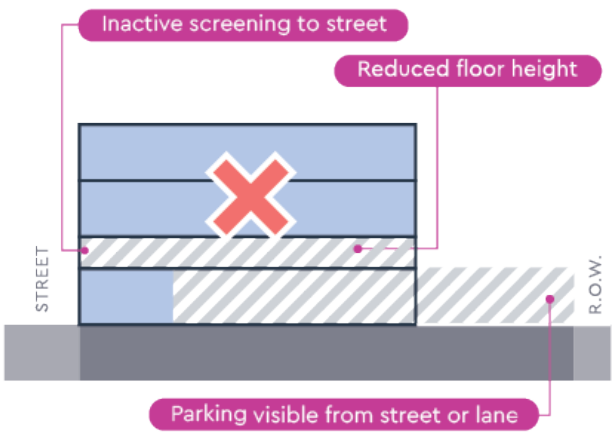
d. Electric Vehicle Charging

Where car parking is proposed, developments shall allow for future capacity to supply electric vehicle charging points at a minimum 20 per cent of total bays.

Each parking bay allocated to a dwelling must be equipped with a general power outlet suitable for vehicle charging.

Figure 4: Design of Car Parking





3.4.6 Sustainability and Environmental Performance

Element Objectives

i. Address the climate crisis through sustainable and low carbon development

ii. Reduce energy consumption, water use and waste generation in new development

iii. Incorporate water sensitive urban design principles in new development to improve water management, natural features and public open space, and reduce flooding risk

iv. New development considers future climate risks and adopts resilient design solutions

v. Support active and sustainable modes of transport and reduce car parking on-site

Development Requirements

a. Minimum Sustainability Certification

Development shall achieve and provide certification of the following Green Star Buildings rating under the Green Building Council of Australia (GBCA) or other formally recognised equivalent sustainability rating certification:

i. Minimum 4 Star rating for developments greater than 3,000 sqm GFA.

ii. Minimum 5 Star rating for developments greater than 5,000 sqm GFA.

Developments under 3,000 sqm GFA must demonstrate compliance with this clause through an Environmentally Sustainable Development report.

Where a Green Star equivalent rating system is used, it must be holistic in nature, covering a range of sustainability issues, and demonstrate that the development meets all expectations of Green Star Buildings.

b. Minimum Residential Energy Efficiency

All residential development should achieve at least 1 star above the minimum National Construction Code (NCC) NatHERS requirements. For example, if a multi-residential development is required to achieve an average 6 Star NatHERs, then the development should achieve 7 Star NatHERS average for the development.

c. All Electric Development

Development shall not provide a gas connection to development for individual residential unit usage. Refurbishment should consider removal of gas connections where they exist. Development is encouraged to be fully electric and powered by renewables.

d. Urban Heat Island Reduction

Development shall provide a minimum 50% of site area as green roof, rooftop agriculture and/or photovoltaic array.

e. Tree Canopy and Deep Soil Zones

All Residential and Non-Residential development shall achieve the Element Objectives and applicable provisions of the Residential Design Codes – Volume 2 with respect to tree canopy and deep soil areas.

f. Water Management

A Development Water Management Report (DWMR) shall be submitted with a development application or Local Development Plan to demonstrate how the design criteria and objectives contained within the Albany Highway Local Water Management Strategy (LWMS) are met with respect to implementing sustainable water management principles including water use efficiency, stormwater management, water-wise landscaping and groundwater quality management.

3.5 Specific Development Requirements

The provisions of this Part apply only to specific sites within the AHPSP area as identified in **Part 3.3 Sub-Precinct Primary Controls**. Where these provisions apply, they prevail over **Part 3.4 General Development Requirements** to the extent of any inconsistency.

3.5.1 Heritage Places

Element Objectives

i. Protect and reinforce the heritage value of the Highway's heritage buildings and places while encouraging adaptive reuse and restoration

Development Requirements

a. Development of Heritage Places

Notwithstanding any provisions in this Part, development applications for sites recorded on the State Register of Heritage Places or Local Heritage List as identified in **Part 3.3** must demonstrate:

i. How the proposed building height, podium height, massing and design appropriately responds to the heritage significance of the site and satisfies applicable legislative requirements; and

ii. Compliance with all applicable state or local Heritage requirements.

This must be demonstrated through the submission of a Heritage Impact Statement prepared in accordance with Heritage Council requirements.

b. Development Adjoining Heritage Places

Notwithstanding any provisions in this Part, development which directly abuts a place recorded on the State Register of Heritage Places or Local Heritage List as identified in **Part 3.3** must demonstrate how the proposed building height, podium height, massing and design appropriately responds to the heritage significance of the adjoining place.

This must be demonstrated through the submission of a Heritage Impact Statement prepared in accordance with Heritage Council requirements.

Aboriginal Heritage

Where a development is proposed within any registered Aboriginal site, advice should be sought from the Department of Planning, Lands and Heritage to understand obligations under the Aboriginal Heritage Act 1972.

3.5.2 Contributory Frontages

Element Objectives

i. Maximise retention and conservation of unlisted contributory building facades including historic shopfronts within new development

ii. The height and style of new development adjoining contributory frontages is sympathetic in form, scale, materiality and provides suitable spatial separation

Development Requirements

a. Condition Assessment

Development applications for sites identified in **Part 3.3** as containing a contributory frontage must provide an assessment of whether the existing structure is of high, moderate or low contributory value to determine the required extent of retention and development interface. This assessment must have regard for:

i. Extent of preserved internal and external features such as parapets, windows, tiling and canopy;

ii. Overall structural condition, integrity and safety;

iii. Individual uniqueness of architectural character within the wider precinct; and

iv. Collective significance alongside neighbouring contributory frontages.

This must be demonstrated through the submission of a Heritage Impact Statement prepared in accordance with Heritage Council requirements.

b. Extent of Retention

Development of sites containing a contributory frontage must adopt the following design response, as shown in **Figure 5**, to the satisfaction of the Town of Victoria Park Design Review Panel:

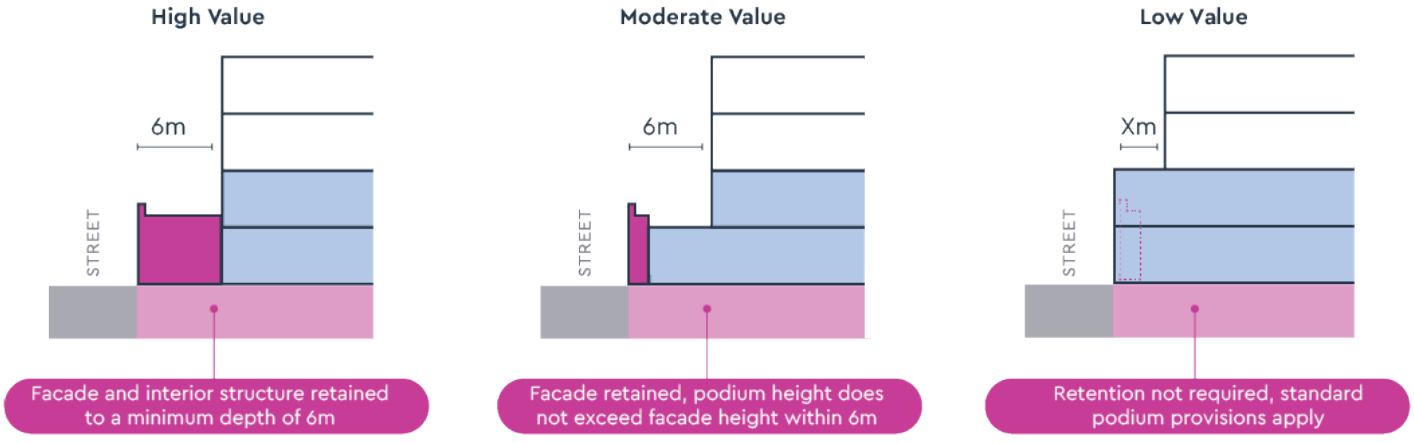
i. Frontages of high contributory value must be suitably restored and retained in situ, including interior features, to a minimum 6-metre depth measured from the façade's outer face, or as otherwise agreed.

ii. Frontages of moderate value should be retained to façade depth or reinterpreted through the form and materiality of new development, including the use of recycled materials where practical, with podium height not to exceed the uppermost height of the retained frontage for a minimum of 6 metres.

c. Plot Ratio Transfer

Subject to **Part 1.2.3**, development which retains a Highly Contributory frontage consistent with 3.5.2(b) is permitted an additional storey of building height where it can be demonstrated that this is necessary to accommodate permitted plot ratio which is unable to be developed within the portion of the site containing the retained frontage.

Figure 5: Extent of Contributory Frontage Retention



3.5.3 Sensitive Interfaces

Element Objectives

i. Development maintains an appropriate setback and sensitive interface to adjoining lower-scale residential areas in which higher-density development is not proposed or in which incremental intensification is planned

ii. Development with a sensitive interface suitably responds to the presence or absence of a R.O.W.

Development Requirements

a. Sensitive Interface

Development abutting a Sensitive Interface designated in **Part 3.3** must comply with the applicable interface requirements of **Table 10**, as shown in **Figure 6.**

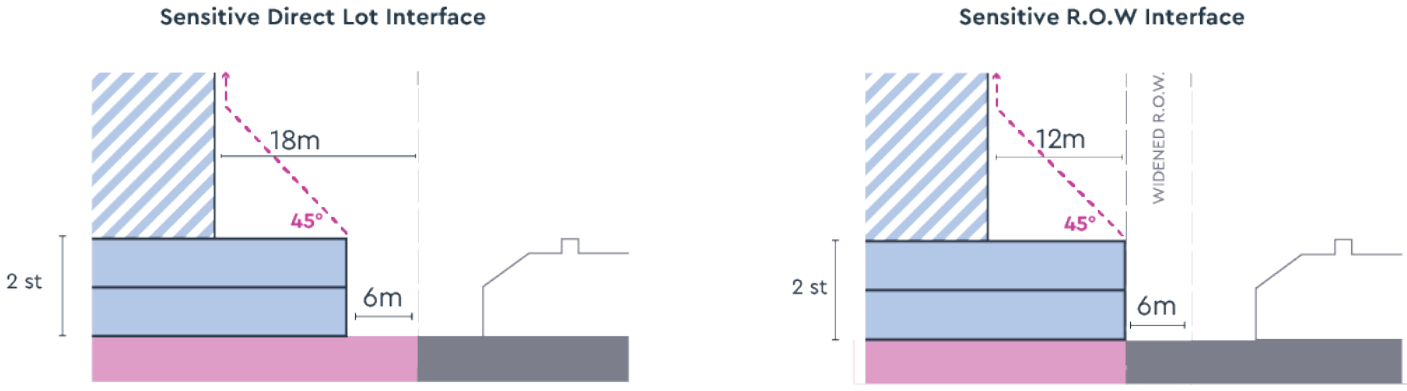
The applicable Sensitive Interface requirement shall be determined based on whether the identified Sensitive Interface abuts a R.O.W. or directly interfaces with a neighbouring lot.

Where an inconsistency exists between Sensitive Interface requirements and Building Height or Side or Rear Building Setback requirements, the former shall prevail.

Table 10: Sensitive Interface Requirements

Interface Type	Interface Setback to Podium	Interface Building Height
Direct Lot Interface	6m	Development above 2 storeys within 18m of the Sensitive Interface must be contained within a 45 degree envelope, as shown in Figure 6.
R.O.W. Interface	Nil	Development above 2 storeys within 12 metres of the Sensitive Interface must be contained within a 45 degree envelope, as shown in Figure 6.

Figure 6: Sensitive Interface Types



3.5.4 Provision of Public Space, Pedestrian Links and Rights of Way

Element Objectives

i. Provide adequate access arrangements and public space to support intensified development

ii. Support the coordinated realisation of the intended urban structure of the precinct

Development Requirements

a. Public Space Provision

Where identified in **Part 3.3**, development must provide for unrestricted public access in a location generally consistent with that shown in the form of Public Open Space ceded free of cost to the Town or Publicly Accessible Private Open Space maintained by the landowner.

b. R.O.W. Provision

Where identified in **Part 3.3**, development must provide a Right of Way in a location generally consistent with that shown. Where widening is required to achieve a minimum width of 6m, this area shall be ceded free of cost to the Town with any required widening apportioned as follows:

a. Equally between each lot fronting a R.O.W. where both properties fall within the AHPSP area; or

b. Fully within the lot fronting a R.O.W. that is contained within the AHPSP area where the adjacent lot is outside of the AHPSP area.

c. Pedestrian Link Provision

Where identified in **Part 3.3**, development must provide for a Pedestrian Link in a location generally consistent with that shown. Pedestrian Links must maintain clear and unobstructed public access with a minimum vertical clearance to any overhanging building element of 1.5 times width or 6 metres, whichever is less.

d. Contribution to Public Benefit

Where provided as stipulated in this Part, the provision of a Public Space, R.O.W or Pedestrian Link within a development may be included in the calculation of any community benefit contribution as set out in **Part 4.**

3.5.5 Solar Access

Element Objectives

i. Safeguard public open space, schools and sections of Albany Highway within key retailing and dining areas from excessive overshadowing caused by new development.

ii. Reasonably define solar access requirements so as not to unduly constrain development potential

Development Requirements

a. Overshadowing of Reserved Land

Where identified in **Part 3.3**, development above podium height must not cast any additional overshadowing above podium height between 10am and 2pm on June 21 within identified portions of a Public Open Space or Public Purpose Reserve.

b. Overshadowing of Albany Highway

Where identified in **Part 3.3**, Development above podium height must not cast any additional overshadowing between 10am and 2pm on September 22 to the southern footpath of Albany Highway within areas identified on **Plan 2**, measured as a 4.0 metre distance from the property boundary.

3.5.6 Contaminated Sites and Acid Sulphate Soils

Element Objectives

i. Development must appropriately responds to risks presented by site contamination and acid sulphate soils

Development Requirements

a. Contaminated Sites

Lot 101 on Plan 46176 is identified as 'Contaminated – remediation required' and Lots 3 and 4 on Plan 2908 are identified as 'Contaminated – restricted use'.

Prior to any development approval, further investigation is required to determine the extent of remediation requirements and land use suitability in accordance with DWER guidelines.

b. Acid Sulphate Soils

Where development or construction activities will disturb acid sulfate soils, an Acid Sulfate Soil Management Plan is required to be prepared in accordance with DWER guidelines.

Preparation of an Acid Sulfate Soil Management Plan will be required as a condition of development approval.

3.5.7 Major Sites

Element Objectives

i. Major sites contribute to the realisation of the intended urban structure of the precinct

ii. Necessary access arrangements, community benefits and desired placemaking outcomes are realised within Major Sites as a precondition to permitting an increased scale of development

iii. Flexibility is provided to accommodate site-specific variations and detailed master planning of Major Sites

Development Requirements

a. Major Site Requirements

Any new development, extension to existing development or subdivision of land within a Major Site as designated in **Part 3.3** and **Figure 7** must satisfy the requirements of **Table 11** through a Development Application and related approval conditions or the preparation of a Local Development Plan (LDP).

A Development Application or LDP for a Major Site must be accompanied by schematic drawings and technical documentation necessary to demonstrate satisfaction of the requirements outlined in **Table 12**.

The following development is exempt from these requirements:

i. Temporary uses or changes of use; and

ii. Internal modifications or minor extensions to existing development.

b. Local Development Plan Preparation

A LDP may be prepared for a designated Major Site to give effect to the requirements of this Part, establish specific development parameters and vary any requirement of this AHPSP subject to **Part 1.4.**

LDP boundaries should reflect those designated in **Part 3.3** and incorporate all landholdings contained therein, unless otherwise agreed with the Town.

A Major Site LDP should address:

i. Development parameters, including maximum development height, setbacks, plot ratio, land use distribution, parking and access arrangements, public open space and deep soil zone location, and tree retention and any variations to **Part 4** requirements;

ii. Development staging including identification of development sites in alignment with land ownership boundaries and any subdivision required to facilitate development; and

iii. Where bonus height or plot ratio is sought, a schedule of specific public benefits to be provided for at development application stage consistent with **Part 4**.

Figure 7: Major Sites

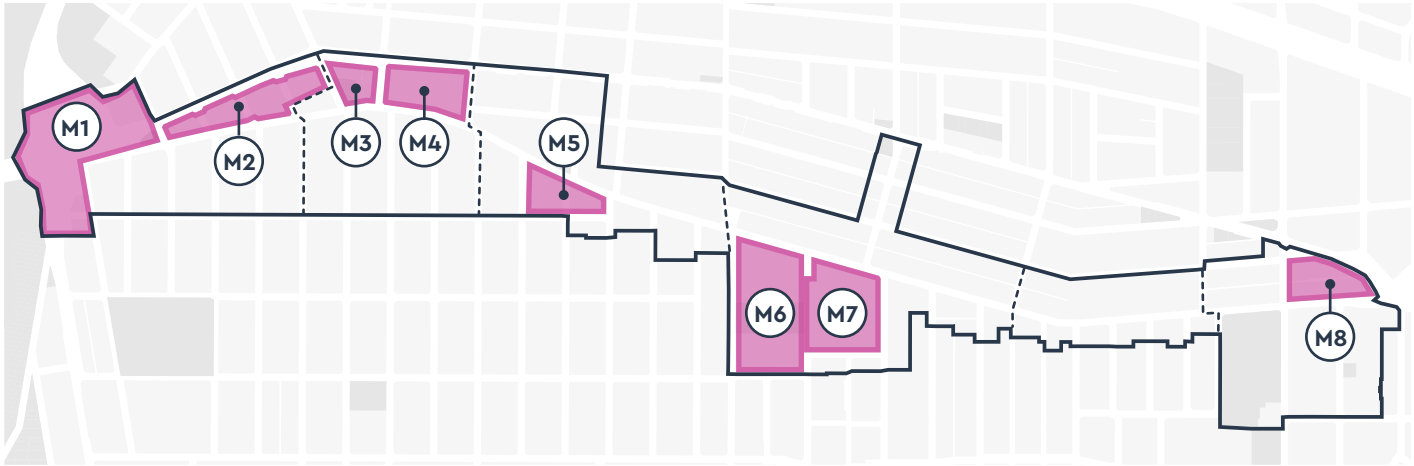


Table 11: Additional Major Site Requirements

Major Site	Requirements
M1 Causeway	a. Development must provide a suitable replacement of the existing overpass with an at-grade intersection and improve pedestrian and cyclist connectivity to the Swan River b. Development must achieve at least 50% non-residential plot ratio c. Development must provide a minimum of two public connections between Shepperton Rd and G.O. Edwards Park. d. Retain mature trees within new development where practicable while providing for a net gain in site biodiversity and demonstrating best practice water mangement. e. Ensure active interface to Shepperton Road adopts a contextually suitable design interface with colonnades or setbacks of at least 3m.
M2 Causeway	a. Notwithstanding **Part 3.3**, development within 15m of Albany Highway lot boundary must not exceed 6 storeys. b. Development must achieve at least 20% non-residential plot ratio. c. Maximum of two building elements exceeding 12 storeys per street block. d. Development must provide a public space on Albany Highway with a minimum area of 1,500m², in a location generally consistent with **Part 3.3**. e. Development must provide for a net gain in site biodiversity and demonstrate best practice water mangement. f. Development must incorporate a quantum of community and cultural floorspace consistent with **Part 4**.
M3 Victoria Park	a. Development must ensure an active interface to Memorial Gardens. b. Develop must provide public link from Harper Street to Harvey Street through Memorial Gardens in a location generally consistent with **Part 3.3**. c. Development must preserve significant trees in Memorial Gardens and on adjacent private land. d. Development must provide for a net gain in site biodiversity and demonstrate best practice water mangement. e. Notwithstanding **Part 3.3**, development fronting Shepperton Road must demonstrate a contextually suitable design interface with colonnades or setbacks of at least 3m.
M4 Victoria Park	a. Maximum of four building elements exceeding 12 storeys consistent with **Part 3.3**. b. Notwithstanding **Part 3.3**, development within 15m of Albany Highway lot boundary must not exceed 6 storeys. c. Development must establish an internal public realm network with connections generally as shown in **Part 3.3**. d. Development must provide a mid-block publicly accessible private open space with a minimum area of 1,500m², in a location generally consistent with **Part 3.3**. e. Development must provide an improved pedestrian connection with the existing Shepparton Rd underpass to enhance safety and school access. f. Development must achieve at least 20% non-residential plot ratio. g. Development must provide for a net gain in site biodiversity and demonstrate best practice water mangement. h. Development must incorporate a quantum of community and cultural floorspace consistent with Part 4.

Major Site	Requirements
M5 Central	a. Development must achieve at least 10% non-residential plot ratio. b. Development must provide for a net gain in site biodiversity and demonstrate best practice water mangement. c. Development must incorporate a quantum of community and cultural floorspace consistent with **Part 4**. d. Development must consolidate deep soil zones in a central mid-block location to maximize the contiguous surface area of landscaped space.
M6 East Victoria Park	a. Development must achieve at least 20% non-residential plot ratio. b. Development must preserve significant trees in John Macmillan Park and on adjacent private land where possible. c. Development must provide two mid-block public spaces with a combined minimum area of 2,000m², in a location generally consistent with **Part 3.3**. d. Development must establish an internal public realm network with connections generally as shown in **Part 3.3**. e. Development must provide for a net gain in site biodiversity and demonstrate best practice water mangement. f. Development must incorporate a quantum of community and cultural floorspace consistent with **Part 4**.
M7 East Victoria Park	a. Maximum of six building elements exceeding 12 storeys consistent with **Part 3.3**. b. Notwithstanding **Part 3.3**, development within 15m of Albany Highway, Moorgate St, and Basinghall St lot boundary must not exceed 6 storeys. c. Development must provide for unrestricted public vehicular access along Sussex St between Moorgate St and Albany Highway. d. Development must provide mid-block public space with a minimum area of 2,000m², in a location generally consistent with **Part 3.3**. e. Development must provide public space at Sussex St/Albany Highway corner in a location generally consistent with **Part 3.3**, ensuring retention of existing mature trees. f. Development must achieve at least 20% non-residential plot ratio. g. Development must establish an internal public realm network with connections generally as shown in **Part 3.3**. h. Development must maintain public access to on-site parking during trading hours, with management requirements at the discretion of the operator. i. Development must provide for a net gain in site biodiversity and demonstrate best practice water mangement. j. Development must incorporate a quantum of community and cultural floorspace consistent with **Part 4**.
M8 St James	a. Notwithstanding **Part 3.3**, development within 15m of Albany Highway must not exceed 6 storeys. b. Development must provide public space fronting Albany Highway within a minimum area of 500m², in a location generally consistent with **Part 3.3**. c. Development must establish an internal public realm network with connections generally as shown in **Part 3.3**. d. Development must provide for a net gain in site biodiversity and demonstrate best practice water mangement. e. Development must incorporate a quantum of community and cultural floorspace consistent with **Part 4**.

4.0 Community Benefit

Element Objectives

i. To provide clear prerequisites to be met for approval of bonus plot ratio and bonus height above the primary limit.

ii. To ensure additional development potential corresponds with community benefit contributions

iii. To ensure that requirements to secure bonus plot ratio and bonus height is fair, consistent and legible

Development Requirements

a. Requirement for Community Benefit

A community benefit contribution is required for any proposed development which seeks to increase building height or plot ratio above the maximum height or plot ratio specified in **Part 3.3**, subject to the following requirements:

i. The proposed development is generally consistent with **Part 2.0 Precinct Objectives**, **Part 3.3 Sub Precinct Objectives** and satisfies all criteria for discretion outlined in **Part 1.4 Exercise of Discretion**; and

ii. Where relating to a Major Site as designated in **Part 3.3**, the proposed development satisfies all requirements of **Part 3.5.7 Major Sites**.

b. Provision of Community Benefit

Where under **Part 4(a)** a community benefit contribution is required, the contribution is to be in the form of one or more of the benefit categories outlined in **Table 12** or an alternative contribution which is considered to benefit the broader community to the satisfaction of the Responsible Authority.

A community benefit is to be provided in one of the following ways:

i. a monetary contribution paid to the local government to be expended on items within the ACP area; or

ii. on-site delivery or in kind works to the equivalent monetary contribution value; or

iii. a combination of both.

A community benefit must have a minimum monetary value calculated in accordance with the AHPSP Community Benefits Framework and Procedural Guide

Where a community benefit provides a direct financial benefit to the development, its monetary value as a community benefit shall be proportionately discounted or excluded from the above formula.

c. Supporting Documentation

Where a public realm or community benefit is proposed as part of a development application, it must be supported by:

i. A **Community Needs Assessment** to demonstrate and provide evidence for the existing or future need within the AHPSP area for the proposed contribution item;

ii. A **Management Plan** demonstrating how any community benefit will be maintained and operated in perpetuity or ceded to the Town free of cost;

iii. A **Valuation** of the proposed contribution in the context of the formula outlined in **Part 4(b)**

Table 12: Schedule of Priority Public Benefits

Category	Description
Public Realm Enhancement	The upgrade of public streetscapes, drainage sump and/or Public Open Space within the AHPSP area but not forming part of a development site, consistent with the Albany Highway Public Realm Strategy, including: a. Repaving, kerb rectification and planting of the streetscape abutting the development site to the required specification for a minimum frontage length of 50 metres b. Creation of a raised pedestrian threshold crossing a street intersection perpendicular to Albany Highway to the required specification c. Creation of a pocket park, kerb extension or other public open space within the Albany Highway road reserve or adjoining street intersection to the required specification, where identified in the Albany Highway Public Realm Strategy d. Landscaping enhancement to a Public Open Space or Drainage sump to the required specification e. A monetary contribution for the above and similar public realm enhancements
Creative and Cultural Floorspace	Provision of creative and cultural floorspace within a development consistent with clause 3.1.2, ceded free of cost to the Town or exclusively maintained for creative and cultural activities at rents below the market rate for that space for the life of the development, including but not limited to the following: a. Live performance spaces such as event halls, theatrettes, rehearsal space, meeting rooms b. Light industrial creative production space, such as ceramics, glass, woodwork and metalwork c. Artist studios d. Photography, film and music production facilities e. Affordable workspace equipped for use by creative sector businesses managed by a charity or other suitable provider or ceded free of cost to the Town
Social and Community Infrastructure	Delivery of a community infrastructure item identified in the Towns' Social and Community Infrastructure Strategy or a monetary contribution towards the same
Public Space or Pedestrian Link	Delivery of new Public Open Space or publicly accessible private open space or pedestrian a link including where specified in part 4.3 or where additional to **Part 3.3** where agreed with the Town
Sustainability	Provision of energy efficiency infrastructure and/or building performance that exceeds primary requirements including but not limited to: a. 6 star or Green Star rating or equivalent; b. landscaping and deep soil zones exceeding primary requirements; c. Site or District energy generation; d. Recycling and composting infrastructure; and e. Rainwater and greywater recycling.
Affordable Housing	Applicant has entered into a contract to deliver a minimum 10% affordable dwellings in partnership with an approved housing provider or not-for-profit organisation recognised by the Department of Communities

Part 2
Explanatory



Part 2 sets out Physical Analysis, Opportunities and Constraints, Precinct Boundary and Hierarchy, Stakeholder and Community Engagement, Vision, Design Response to the Six Precinct Planning Elements, Sub-Precinct Specific Concepts and Implementation Actions.



1.0 Site and Physical Analysis

1.1 Physical Context

1.1.1 Location

Albany Highway is centrally positioned in Perth's inner east, serving as one of four key urban corridors that link the CBD with the broader region. It plays a vital role as both a critical transport route and a regional activity centre, offering local and regional visitors access to a diverse range of amenities, services, and job opportunities.

At almost 4km in length, Albany Highway is Perth's longest high street, three times longer than Rokeby Road. Its alignment parallel to the Armadale rail line is unique among other urban corridors, providing convenient access to public transport along its entire length.

The precinct is situated close to Greater Curtin, one of Perth's largest economic drivers, and is also well connected to Crown Perth and Optus Stadium, which both attract millions of visitors each year.

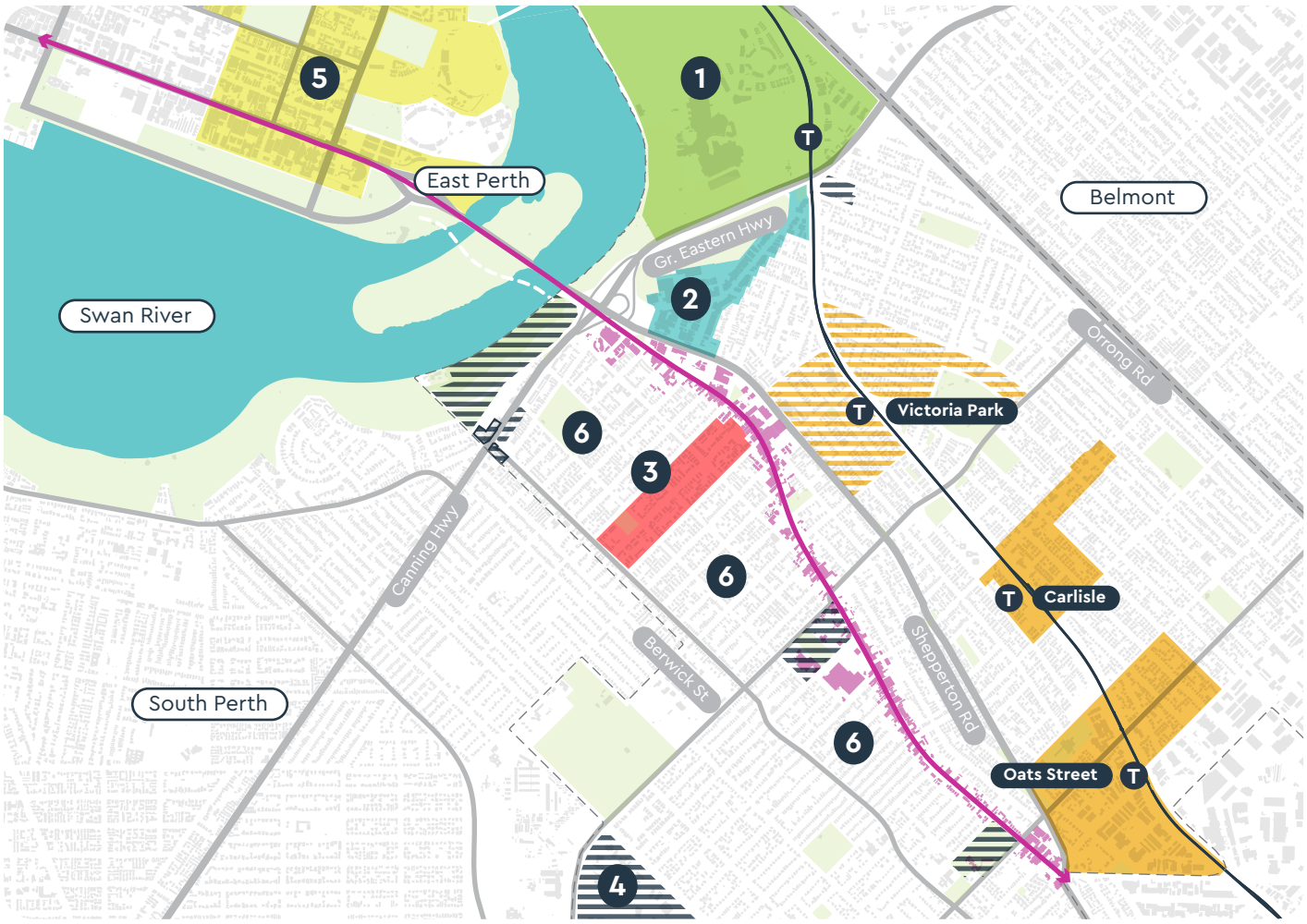


Figure 8: Regional Context

1.1.2 Surrounding Area and Land Use

Albany Highway is surrounded by several key activity centres, growth precincts, and state and local development projects that are set to impact the precinct and the broader inner-east area in the coming years. These are shown in **Figure 8**.

1. **Burswood Peninsula:** the Burswood Peninsula is a significant entertainment hub within Victoria Park, home to some of Perth's biggest tourist attractions such as Crown Perth, Optus Stadium and Belmont Park Racecourse. In addition to being a major entertainment hub, Burswood will be undergoing significant change with plans to increase office and retail spaces that will compete with Albany Highway
2. **Burswood South:** Located at the eastern Gateway to Perth, Burswood South is home to numerous businesses in a unique parkland setting. Immediately north of Albany Highway, approved planning controls seek to deliver significant intensification up to 16 storeys, leading to a changed context for the western end of the precinct.
3. **Ridge Precinct:** The Ridge precinct is a historic high density neighbourhood that sits along the hilltop between McMaster and Leonard Streets. Closely connected to the highway, this area plays an important role in the supply of affordable and smaller housing. It is also one of the most diverse areas in Perth, with up to 60% born overseas.
4. **Greater Curtin:** This area is the forefront of WA's knowledge economy, that creates opportunities for high-value job growth and provides support for the growing economy within the Town. Albany Highway plays an important role for this precinct as it supports the growing residents and visitors within that area.
5. **East Perth**: East Perth is significantly transforming to include high density residential projects that will result in much of City of Perth's population residing in this area by 2050, which may see additional demand placed on Albany Highway's catchment area presenting a significant opportunity for new development to be supported.
6. **Residential Character Areas**: The character of residential areas surrounding Albany Highway also has a significant influence on the area precinct. Surrounding streets are predominantly characterised by low-density, single dwellings with some surviving stock dating to the original development of the area intermixed with more recent development.

1.1.3 Tenure, Ownership and Buildings

The highway's built fabric and underlying ownership is a key influence in the scale and nature of any future development. These factors have been carefully researched and considered in the development of the AHPSP, with key considerations summarised below. Detailed exploration of these issues is contained in the Albany Highway Today appendix document.

1.1.3.1 Building Scale and Character

Albany Highway's character is shaped by various building types, including a significant number of heritage-listed structures. Most buildings are low-rise ranging from 1–2 storeys, with the tallest reaching 9 storeys. Current planning rules allow development up to 12 storeys in certain areas, but generally, the precinct is currently restricted to 3 storeys in height. Recent development mainly comprises mixed-use buildings up to 3 storeys, with the recent Vic Quarter development reaching 7 storeys at its highest point.

Albany Highway's existing buildings fall into three main categories defining the precinct's character:

- Fine-grain shopfronts which enhance the precinct's character with their architectural diversity and active presence, featuring consistent streetwalls, generous awnings, and detailed frontages and glazing.
- Large-format commercial buildings which support economic activity by accommodating large retailers but can negatively impact the streetscape with prominent car parking and inactive shopfronts.
- Mixed-use apartment buildings that blend commercial and residential uses, which match the area's scale but lack the architectural quality required to complement local character.

1.1.3.2 Tenure Constraints and Opportunities

Land ownership in the precinct is fragmented, with many small lots owned independently or co-owned by multiple entities, making land acquisition and development more complex. Core retail areas typically feature lots between 300–600m², with 6–10m frontages. This fragmentation, while challenging for development, fosters a vibrant retail scene and contributes to the precinct's unique character.

Conversely, several large sites under single or limited ownership exist, including properties owned by John Hughes Group, Vicinity Centres, Youngs Group, and Hawaiian Group. These sites offer significant development potential due to their size and consolidated ownership.

The Town of Victoria Park and the State of WA are also prominent landowners in the precinct, with key assets such as Edward Millen Park, John Macmillan Park, Leisurelife and Bowls Club, car parks, drainage sumps, and land near the Great Eastern Highway interchange.



1.1.4 Environment

The environmental context of Albany Highway, encompassing the public realm, climate, landform, biodiversity, site contamination, and water cycle, significantly influences the potential for future development within the precinct. Analysis and consideration of these factors have informed the development of the AHPSP, with key findings summarised below. Further in-depth analysis of these matters can be found in the **Albany Highway Today** appendix and **Local Water Management Strategy**.

1.1.4.1 Landscape Features

Albany Highway links with various green spaces, both small and regionally significant. To the north, it is close to McCallum Park and the Swan Foreshore however connectivity is limited by the Causeway road interchange. Within the precinct, Albany Highway adjoins Edward Millen Park, the largest green space in St James, and connects to Macmillan Park in East Victoria Park and Reid Park in Victoria Park. Along its route, Albany Highway also features several small open spaces, including the historic Memorial Gardens in Victoria Park and the Causeway windmill.

1.1.4.2 Climate

The climate along Albany Highway is expected to mirror broader Perth trends, with reduced rainfall and higher average temperatures over coming decades. Future planning for Albany Highway must address challenges such as water scarcity for irrigation, loss of poorly adapted street trees, and an increase in heat-related illnesses. The area is particularly susceptible to the "urban heat island effect" due to limited vegetation and the heat-retaining properties of concrete and asphalt, which are exacerbated by climate change.

1.1.4.3 Landform and Soils

Albany Highway features varied topography, with elevation changes from 20m AHD in the southeast to 5m AHD in the northwest. Underlying soil characteristics are identified as Alluvium and Spearwood Dunes and Bassendean complex. Landform variation is most notable between Rushton and Duncan Streets, and between Dane St and Camberwell St, affecting building heights, views, and the street environment. These topographical differences have important implications for planning, particularly in terms of view preservation, shadowing, and street interface.

1.1.4.4 Biodiversity

Vegetation cover along Albany Highway is sparse, limiting support for urban biodiversity. The Town of Victoria Park's canopy cover was only 10% in 2016, with the Highway area being one of the least covered. While tree planting efforts are ongoing under the Urban Forest Strategy, presence of understorey flora and water-sensitive planting within drainage infrastructure remain key gaps. Moreover, only 12% of trees along the Highway are native to the Perth region, impacting the local ecosystem and native fauna habitat availability.

1.1.4.5 Site Contamination

Records from the Department of Water and Environmental Regulation indicate that four sites within the precinct are contaminated by petrol byproducts. Remediation is required before development for some sites, while others are subject to future use restrictions that prohibit child care, open space, housing, and other sensitive uses. Additionally, Albany Highway's western end has a low clearance to groundwater, with key sites between Shepperton Road and Albany Highway having a depth to groundwater as low as 1–3 meters (Urbaqua, 2021), posing a high to moderate risk of Acid Sulfate Soils.

1.1.5 Physical Infrastructure and Services

As an established corridor, Albany Highway's services have evolved over time resulting in some localised constraints on development. Servicing arrangements on the Highway are complex but analysis indicates these can be scaled to accommodate future growth. A summary of relevant infrastructure matters is provided below with further detail contained in the **Albany Highway Today** appendix and **Infrastructure Servicing Report**.

1.1.5.1 Water Supply

The precinct is supplied with water along its length. Local potable water interconnections will likely need to be upgraded or replaced locally with development to be compliant to demands of building code, most specifically with regard to fire services. This will be developer funded. It is expected that major upgrades will be delivered through the Water Corporation "Pipes for Perth" capital works program, funded through accrued fees and charges, which has been replacing higher-order infrastructure since 2016.

1.1.5.2 Sewer

Albany Highway primarily relies on 'back of house' connections to sewer through laneways or private property easements, which introduces servicing challenges. Most notably, a significant sewer line runs within private property between Albany Highway and Shepperton Road in Victoria Park, potentially limiting major site development in this area.

Localised sewer upgrades within private properties will be required as part of future development, involving the replacement of existing infrastructure with PVC piping and resolution of basement construction interface issues. Major infrastructure upgrades are expected to include Water Corporation duplication of the Armagh Street pressure main by 2030 to enhance capacity. At present the precinct's primary collector sewer (Victoria Park Section 1) does not require expansion but this may require reassessment in the context of significant future development.

1.1.5.3 Electricity Infrastructure

The precinct is impacted by two significant aerial networks: a 132kv crossing at Oats Street and a 66kv crossing at Gresham St. These high-voltage corridors may impose constraints on development, aligning with Western Power standards and requirements that necessitate further investigation. While power along the Albany Highway corridor has previously been undergrounded, overhead power lines remain in the stretch of the Highway north of Teddington Road, specifically around the John Hughes site at the northern end of the precinct.

The Western Power Network Capacity Mapping Tool indicates substantial capacity in the overarching network to support additional development demand. Localised upgrades are expected to be required, along with associated infrastructure such as transformers, in line with code requirements.

1.1.5.4 Drainage

Precinct drainage is predominantly managed by the Town of Victoria Park's drainage system within and adjacent to the precinct, comprising nineteen sumps and two underground storage tanks. There is also one privately owned sump located at the Park Centre shopping centre in the Study Area.

This local drainage system is generally not connected to the Water Corporation's primary drainage system located east of the precinct (Victoria Park Main Drain) with the notable exception of the drainage network between Harper Street and Twickenham Road, which lacks local storage systems and directly connects to the Main Drain despite being outside the declared drainage catchment boundary maintained by the Water Corporation.

Previous analysis has indicated that several of the sumps within the precinct are operating at capacity and are susceptible to flooding during minor (1:5 year) rainfall events. This necessitates broader planning and investment in precinct drainage infrastructure to ensure suitability and improve water quality. However, given the highly urbanised nature of the existing precinct, redevelopment is expected to have a minimal impact on stormwater runoff volumes.

1.1.6 People Movement

Albany Highway plays a significant and multifaceted role as a movement corridor, attracting both shoppers and commuters using various modes of transportation. A concise overview of key movement considerations is presented below, with detailed information available in the Albany Highway Today appendix and Transport Strategy.

1.1.6.1 Walking and Cycling

Active transport represents a modest share of commuting within the precinct, with only 1.6% of workers walking and 4% cycling to work, aligning with broader Town and Perth averages. Active transport is more prevalent for accessing public transport services, with 78% of Victoria Park train station users opting for active modes.

Pedestrian crossings on Albany Highway are limited, with only four formal crosswalks available (roughly one per kilometer), despite pedestrian monitor data indicating over 1.8 million pedestrian visits annually in select locations.

Dedicated cycle lanes are currently absent along Albany Highway and adjacent streets, hindering safe cyclist connectivity to established regional routes along the Armadale line and foreshore.

1.1.6.2 Public Transport

Albany Highway enjoys robust bus and train service access, connecting it to the CBD, Curtin University, and the eastern suburbs. The corridor accommodates eight bus routes, offering extensive regional connections. Despite the proximity of three train stations—Victoria Park, Carlisle, and Oats Street—train ridership remains low, with a combined daily boarding of 3,112 across all stations, falling well below figures for comparable stations such as Maylands.

A proposed mid-tier transit link connecting UWA and Curtin University via Albany Highway remains a strategic priority, recommended for advancement under the Draft State Infrastructure Strategy (2021).

1.1.6.3 Vehicle Traffic

Vehicle traffic on Albany Highway exhibits significant variation, indicating a level of network redundancy when considered alongside Shepperton Road. Traffic counts from different locations along the Highway show varying usage, ranging from 5,400 vehicles per day near the Causeway up to 16,600 near Welshpool Road.

Traffic often exceeds the posted 40km speed limit, indicating that the current road design encourages speeding and lacks adequate pedestrian safety measures.

Regional traffic volumes from eastern Perth towards the Causeway have markedly declined since the opening of the Graham Farmer Freeway in 2000. Causeway traffic has dwindled from 107,000 vehicles per day to around 45,000 today, well below historical forecasts which projected 130,000 vehicles per day in 2025.

1.1.6.4 Parking

Car parking along Albany Highway is heavily utilised during peak visitation hours, including evenings. The precinct offers approximately 600 public parking spaces managed by the Town of Victoria Park, in addition to substantial private parking within shopping centres.

Parking usage within the precinct has surpassed pre-COVID levels in recent years, in spite of policies aimed at reducing car dependency.

1.2 Community Context

1.2.1 People

1.2.1.1 Population

Victoria Park's population has steadily grown from 27,900 in 2006 to 38,300 in 2021, with projections indicating it may reach 57,500 by 2041. The Albany Highway precinct has not kept pace with this growth and currently houses just 4,630 residents or 13.2% of the Town's population. This reflects low population density within the precinct, which ranges from 20 persons per hectare in some areas to a maximum of 42 persons, with the Ridge precinct outside the AHPSP area reaching up to 64 persons by comparison.

1.2.1.2 Diversity

The local population is characterised by a substantial proportion of younger working-age individuals, with 46% falling within the 20–50 years age bracket. Ethnic diversity is also notable, particularly at the northern end of Albany Highway, where a majority of residents were born outside Australia, with the largest group originating from Asian countries.

1.2.1.3 Income

The typical personal income of residents at the northern end of Albany is 5% higher than the Town average and above greater Perth, while resident income in southern areas is 2% higher. This is consistent with resident employment levels which are notably higher than the Town average. The typical annual expenditure of precinct residents is around $1,000 more compared to the wider Town population.

1.2.2 Housing

1.2.2.1 Current Stock

As of 2021 there are 1,857 dwellings within the Albany Highway corridor and surrounding streets, equating to 11.0% of Victoria Park's total housing stock. Housing numbers are relatively low because the Highway is largely made up of commercial buildings, while surrounding streets are generally low-density single dwellings.

The composition of housing stock in suburbs traversed by Albany Highway is significantly more diverse than the Perth average, with single dwellings accounting for just 37% of homes in Victoria Park compared to 77% in Greater Perth, with the balance comprising apartments and grouped dwellings. Other parts of the precinct are substantially less diverse, with single dwellings accounting for 65% and 69% of total stock in East Victoria Park and St James respectively.

1.2.2.2 Housing Affordability

Housing in East Victoria Park is notably most expensive than the broader Perth average, with houses being 29% more expensive and units 13%. Similarly, Victoria Park records a 29% premium for houses while units are also 13% more expensive. This means that, on average, it costs $135,000 to $150,000 more to purchase a house and $45,000 to $65,000 more to acquire a unit in these areas compared to the broader Perth region. In St James, prices align with the Perth average. These values reflect housing prices in 2021 prior to post-COVID changes in migration and economic conditions.

1.2.2.3 Supply Trends

Over the period from 2009 to 2021, new housing development in the Albany Highway precinct has contributed an average of approximately 40 new dwellings per year. This pace of new housing supply indicates a relatively slow rate of development in the area compared to the wider Town and greater Perth. If these trends persist, the precinct would see total growth of just 800 dwellings by the year 2041.

1.2.3 Economy

1.2.3.1 Employment

The precinct currently sustains approximately 6,800 jobs, representing roughly a fifth of all jobs within the Town of Victoria Park. Employment within the precinct varies considerably across sectors and geographically along the length of Albany Highway. While Food & Beverage Services is the largest employment sector, it accounts for only 15% of total precinct jobs. The largest non-retail industry is Professional, Scientific, and Technical Services, comprising 12% of jobs in the precinct. Precinct employment is primarily driven by local resident needs rather than strategic, value-added jobs that contribute to economic growth and resilience. The precinct's share of strategic jobs falls well below that of other centres like Mount Lawley, Subiaco, Leederville, and Claremont.

1.2.3.2 Employment Floorspace

Albany Highway supports a variety of commercial, residential and community land uses, establishing it as one of Perth's largest and most diverse activity centres with approximately 203,700 sqm of commercial floorspace (PlanWest, 2018).

In comparison to other centres' such as Mount Lawley, Subiaco, Leederville, and Claremont, Albany Highway's retail and commercial floorspace displays greater diversity. It encompasses more service, other retail, storage, manufacturing, and community service floorspace, contributing to the center's resilience and reflected in lower vacancy rates compared to benchmarked centres'. Notably, over a third of the Highway's commercial floorspace is located outside the core retail strips in Victoria Park and East Victoria Park. These areas predominantly feature car sales and related services, forming a unique cluster of activity within the wider Perth region.

1.2.3.3 Precinct Visitation

Albany Highway attracts visitors from across Perth due to its unique concentration of food and beverage operators in addition to its more general retail offering, resulting in distinct visitation patterns.

Pedestrian count data collected since 2013 reveals that in East Victoria Park, pedestrian numbers tend to rise in the evening, peaking between 7 pm and 8 pm, reflecting its role as a major hospitality destination for the Town and the wider region. This trend also highlights a relative lack of visitation during daytime hours, particularly mornings. In contrast, Victoria Park maintains a steady flow of visitor traffic throughout the day, with the peak occurring around noon, followed by a sharp decline in visitation after 5 pm. This pattern likely arises from the substantial daytime workforce in the area which sustains daytime activity but is not effectively retained during the evening.

1.2.4 Culture, Value and Identity

1.2.4.1 Historic context

Albany Highway is said to follow a bidi walked by generations of Whadjuk Noongar people, past hills and natural springs in what was once dense forest that stretched from the top of the Darling Scarp to the banks of the Swan River.

"During the Koora Korra (long time ago), Waarkarl Woonya Bidi (Albany Highway) was the quickest and most direct route from Kalingiri (Albany) to the many sites along the Derbarl Yerrigan (Swan River) that were used to conduct lore (customs and storeys learned from the Dreamtime) and ceremony. When the British arrived, they used the same track to create a direct link between Perth and Albany."

Source: Aboriginal Journey Ways, Main Roads WA and Kurongkurl Katitjin.



'Albany Road' in Victoria Park c.1880s, believed to be the current site of the Broken Hill Hotel (Victoria Park Library)

Early settlement of the Victoria Park district in the colonial period was influenced by the Highway's role as an important regional connection. Historic landmarks like the Broken Hill Hotel emerged to offer weary travellers a place to stop and rest between Perth and Albany.

The suburb as it is known today was created by commercial land developers who subdivided and sold property to working class migrant families beginning in the late 1890s. The area was rapidly developed over a 50 year period, resulting in a consistent urban form of modest worker's cottages which are of recognised heritage value. The fine-grain pattern of shopfronts along Albany Highway reflects this original residential subdivision pattern laid out a century ago.

As Victoria Park's population grew, entrepreneurs established shops along the Highway, bolstered by the extension of a tram network in the early 1900s. Throughout the early 20th century, Albany Highway emerged as a vibrant commercial centre supporting fresh food grocers, furniture makers and other local retailers. Rapid suburbanisation and the rise of the motor vehicle saw its fortunes change, a large shopping malls in outer suburbs draw footfall away and large swaths of the highway including Victoria Park's original town hall were demolished to accommodate similar malls and car yards.

Following a period of decline in which many traditional retailers closed or moved away, the Highway reemerged as a vibrant and multicultural culinary destination with a plethora of small, migrant-owned hospitality businesses. This reinvention preempted the digital disruption that has challenged brick-and-mortar retail globally, establishing Albany Highway as a pleasant and distinctive destination that allowed it to thrive where other centres in Perth have struggled.

1.2.4.2 Aboriginal Heritage

"For at least 38,000 years Whadjuk people cultivated cultural landscapes in alignment with local climate and weather patterns. Prior to colonisation the Town was maintained through an array of community and Lore systems that aligned with the six seasons.

The swales of the area created seasonal creek lines and swamps that crossed with the swan and canning river. The Town contains significant areas that were used for food resources and facilitated an array of Aboriginal communities in being able to travel across the land. The Ballarok and Nagarnook Whadjuk Noongar people used the change of seasons to influence their movement. As wetter Noongar seasons encroached, people would begin moving away from riverbanks to avoid being flooded, and travel further inland. Despite the devastating impacts of colonisation, Whadjuk people still follow Lore and cultural customs."

Source: Jordanna Rebbeck (April 2023). Mindeera Advisory Group Member with editorial assistance from Dirima Cuthbert and Joe Dortch.



In 1983, the Victoria Park Town Hall (c. 1899) on Rushton St was demolished to make way for expanding car yards. (BA1766/2)

1.2.4.3 European Heritage

Albany Highway's post-colonial heritage is strongly reflected in its built environment which exhibits a sparse but eclectic historic character that reflects its incremental evolution over time.

Many historic buildings within the precinct are State and Municipal heritage listed, contributing to its distinct character. Notable state heritage sites include the Windmill and Wishing Well, Victoria Park Primary School, Broken Hill Hotel, Victoria Park Post Office, Victoria Park Police Station, and Edward Millen House.

Local heritage sites also enrich the area, including the Alexandra Theatre, Victoria Park Hotel, Balmoral Hotel, and various significant houses. It is important to note that unlisted buildings make a significant heritage contribution, particularly non-heritage shopfronts recognised for their original masonry, ornate detailing, and continuous awning canopies.

Albany Highway also holds broader historical and social significance as the primary route between Perth and Albany, and its surrounding settlements. As one of the State's longest commercial strips, it carries a rich social, civic, and commercial history.

1.2.4.4 Place Character

The current day character of Albany Highway is influenced by various aspects of its built form and public realm including scale, materiality and street interface. Strong contributors to place character include the continuous awning lines and shopfronts which frame vistas along the varied and winding alignment of Albany Highway. Landmark buildings and open spaces break from this continuous form, and are typically located on street corners where they make a prominent contribution to the streetscape. Key among these are the Highway's iconic Broken Hill, Victoria Park and Balmoral hotels alongside Memorial Gardens and Edward Millen House.

The Highway's established buildings reflect a variety of architectural styles, including ornately detailed masonry facades of Federation and Art Deco buildings and more restrained 1970s brick developments. Recent residential and commercial developments reflect simpler building styles and construction forms such as tilt-up concrete and glazing.

Albany Highway's character is also shaped by its surroundings, such as its proximity to the Armadale railway corridor and the physical separation created by Shepperton Road and the Causeway road interchange. Surrounding streets with existing original residential fabric, including early 1900s worker cottages, also contribute to the area's character, although the preservation and quality of these areas vary.

Finally, the community and business environment significantly define the character, most importantly its rich connection to significant Aboriginal places and storeys that have endured for millennia. The highway's uniquely multicultural business base centered on food is also central to its character, as is its broader role as a gathering place for the entire community, regardless of age, cultural background, or economic means.



Albany Highway in East Victoria Park on 26 March, 1956 (114127PD)

1.2.5 Social Infrastructure and Services

The Albany Highway vicinity is equipped with a wide range of social infrastructure and services designed to cater to the community's needs. This encompasses local music venues, dance studios, and an arts studio, enhancing the cultural and recreational offerings available to residents. Services within the precinct are concentrated within the Macmillan Precinct, situated in East Victoria Park. This community hub hosts essential Town facilities, including Leisurelife, the Town library and other related community services. These facilities are instrumental in promoting community engagement and provide vital gathering spaces for residents, thereby playing a crucial role in fostering community interaction and cohesion.



1.3 Governance Context

1.3.1 Environment

Planning in the AHPSP area has been guided by a key environmental policies and strategies, with those relevant to the precinct summarised in **Table 14**.

Table 13: Environment Governance Context

Document	Policy Analysis
Western Australian Climate Policy	Outlines the Government's commitment to climate-resilient communities and a low-carbon future with net zero achieved by 2050. Emphasizes local government collaboration for climate risk management, with actions for the precinct including low-carbon transport, resilient urban development, and leadership in governance.
Town of Victoria Park Urban Forest Strategy	Focuses on expanding the Urban Tree Canopy, addressing challenges posed by increased housing density. Actions relevant to future planning and management of Albany Highway include planting and protecting mature trees to meet canopy targets, enhancing community involvement, diversifying tree species, and improving vegetation health and urban ecology.
Public Open Space Strategy	Aims to provide equitable access to Public Open Spaces (POS) in the Town of Victoria Park, with specific mention of Read Park and Edward Millen Reserve. Strategies applicable to Albany Highway include improving pedestrian access to established open spaces including regional open spaces fronting the Swan River, and enhancing existing open space assets in residential areas through infrastructure improvements.
Town of Victoria Park Climate Emergency Plan	Sets a target for the Town to reduce its internal operating emissions to net zero by 2030, while also supporting wider community and business efforts towards this goal. Ambitions relevant to Albany Highway include improving logistics efficiency, promoting organic waste recycling, incentivising waste reduction, facilitating the adoption of solar energy, and providing education on sustainable practices.

1.3.2 Planning

1.3.2.1 State Planning Framework

Planning in the AHPSP area is guided by a range of strategic planning documents and policies including higher-order strategies, State Planning Policies (SPP), and statutory instruments. Those relevant to Albany Highway are summarised in **Table 15**.

Table 14: State Planning Framework Context

Document Name	Policy Analysis
State Planning Strategy	Provides strategic context for planning and development across the state, focusing on creating liveable, inclusive, and diverse communities through collaboration and access to essential services. Albany Highway is recognised as being able to play a significant role in promoting social, economic and environmental objectives outlined in the Strategy.
Perth and Peel @ 3.5 million – Central Sub Regional Planning Framework	A strategic document to manage growth in the Perth and Peel region, the Framework emphasises a need for increased residential density and development around activity centres linked to transport networks. Within the Framework, the Central Sub-Regional Planning Framework details the local strategy to accommodate additional dwellings within the sub-region, focusing on high-density and mixed-use development to support a 'connected city' growth pattern. The local planning strategy identifies how the Town of Victoria Park will accommodate an additional 18,000 dwellings to reach a total of 35,090 dwellings by 2050. Albany Highway is identified in the Framework as a key urban corridor and activity centre suitable for infill development The framework also addresses the over-arching influence of Government investment in METRONET which will provide Perth with a world-class public transport system with integrated land use planning. The AHPSP area and wider surrounds are impacted by METRONET in the Armadale line level crossing removal project which is expected to increase rail patronage and stimulate station precinct development outside of the AHPSP area.
Metropolitan Region Scheme	The Metropolitan Region Scheme (MRS) guides development at a regional level by defining general land-use zones, designating areas for regional open space, environmental protection, and various regional infrastructure needs. Local government planning, including local planning schemes, must align with the MRS's broad land-use designations. The MRS predominantly zones the AHPSP area as "Urban", with key roads designated as "Primary Regional Road" and "Other Regional Road" to carry regional traffic and facilitate connections between urban segments.

Document Name	Policy Analysis
State Planning Policy 3.6 Development Contributions for Infrastructure	This policy aims to facilitate the provision of infrastructure and facilities that are essential to meet the demands that are arising from a growing population. New development that occurs within the precinct area may be subject to contributions required under this policy.
State Planning Policy 4.2 Activity Centres for Perth and Peel	This policy seeks to ensure development of Activity Centres provides a suitable mix of land uses that support community needs, economic growth, and community wellbeing. It highlights the desired future role of Victoria Park (Secondary Centre) and East Victoria Park (District Centre) within the regional economy and metropolitan activity centre hierarchy. In discussions with DPLH and WAPC, the Town has confirmed that the justification for the centre to be considered as one Secondary Centre would be borne out through the precinct planning process. This precinct plan seeks to confirm its status as a single, diverse centre recognised as a Secondary Centre.
State Planning Policy 3.6 Development Contributions for Infrastructure	This policy Mandates contributions for essential infrastructure from new developments to accommodate population growth, ensuring developers contribute to necessary community facilities.
State Planning Policy 5.4 Road and Rail Noise (SPP 5.4)	This policy aims to minimise road and rail noise impacts on nearby land uses, requiring new developments to consider proximity to noise sources for the well-being of residents. The Albany Highway Precinct falls within a noise trigger from Shepperton Road and therefore new developments within the vicinity of these noise sources must have regard to this policy.
State Planning Policy 7.0 Design of the Built Environment	Provides design principles for Western Australia's built environment, covering 10 key principles ranging from context and character to development aesthetics, applicable across all planning levels. These principles area applicable to the provisions of the AHPSP itself and all future development within the precinct.
State Planning Policy 7.2 Precinct Design	SPP 7.2 provides guidance for precinct planning with the intent of achieving good planning and design outcomes with a wide range of supporting guidelines. Precinct types defined by the policy include activity centres, station precincts, urban corridors, residential infill and heritage precincts. The AHPSP has been prepared on the basis that Albany Highway is appropriately recognized as an Urban Corridor type precinct, which is reflected in the definition of the precinct boundary and related density and zoning provisions which adopt a narrow, linear scope.

Document Name	Policy Analysis
State Planning Policy 7.3 Residential Design Codes Volumes 1 and 2	This policy provides the basis for the control of residential development, seeking to ensure built form outcomes respect local amenity and are sustainable amongst other objectives. The policy makes provision for certain design elements to be varied through the local planning framework, which the AHPSP has adopted for all applicable Primary Development Controls contained in R-Codes Volume 2, adopting similar terminology and structure wherever possible to aid interpretation. SPP 7.3 Residential Design Codes Volume 1 and 2 should be read in conjunction with AHPSP Part 1 provisions.
State Planning Policy 2.10 Swan Canning River System Policy	The policy provides broad guidance on ensuring the Swan River is protected and enhanced by future development. The intent of the policy is that Precinct Structure Plans are intended to correlate with the river precincts as described within the policy, with the The Causeway section of Albany Highway falling within the "Perth Water" precinct.
Safe Places by Design CPTED Planning Guidelines	Focuses on Crime Prevention Through Environmental Design (CPTED) to improve area safety, emphasizing surveillance, space management, and access control in development plans. The policy has informed provisions of the AHPSP and remains applicable to future developments within the precinct.
Car Parking Requirements for Non-Residential Land Uses in Perth and Peel – Draft Interim Guidance	This policy sets out interim guidance for non-residential car parking, aiming for consistency across districts with established minimums and maximums. Reflecting this guidance the AHPSP establishes a minimum parking requirement of zero for all uses but does not establish a maximum rate.

1.3.2.2 Local Planning Framework

The Town of Victoria Park maintains a strong local planning framework which set clear expectations and guidance for the planning and future development of the precinct. Key documents applicable to the Highway are set out in **Table 16**.

Table 15: Local Planning Framework Context

Document Name	Policy Analysis
Town of Victoria Park Local Planning Strategy	The Strategy outlines a comprehensive approach to urban development within the Town, focusing on sustainability, accessibility, and community well-being. It establishes specific growth objectives relevant to Albany Highway which include: • Developing a range of opportunities for business, community activities, employment, and high-density living in appropriate areas. • Ensuring new developments contribute positively to the pedestrian experience with well-considered, responsive designs. • Enhancing the integration and connectivity of green networks. • Supporting a gradual shift from existing low-density to future high-density developments. • Prioritising pedestrian, cyclist, and public transport user needs over private vehicle use in planning, and • Increasing active transport facilities, such as more bike parking at activity centres, while aiming to decrease car parking dependency. The Strategy also recognises Albany Highway as a prospective consolidated Secondary Activity Centre with potential for new mixed-use residential and commercial development, whilst also recognising the challenges posed by the evolving retail landscape, notably the shift towards online shopping and heightened competition from neighbouring regional centres. In response to these challenges strategy highlights the importance of supporting the precinct's diverse hospitality offering and enhancing the public realm.
Town Planning Scheme No.1	The current Scheme includes a mix of zones within the Precinct Structure Plan Area, guiding development control and providing a unified approach to development. The Victoria Park, East Victoria Park and St James retail strips are zoned "District Centre" under the Scheme which permits a mix of retail, commercial, shop and residential uses but does not allow light industry or uses relating to car sales or repair. Adjacent areas are typically zoned for Commercial, Office/Residential, or Residential/Commercial, imposing tighter restrictions on retail and commercial activities. Residential zones cover most surrounding streets. Development controls for sites along Albany Highway are detailed in Precinct Plan P11 – Albany Highway Precinct, with surrounding areas covered by Precinct Plans P5 – Raphael, P10 – Shepperton, and P12 – East Victoria Park. The existing development entitlements afforded under the current Scheme were modelled and tested, highlighting a range of challenges that have led the development of AHPSP provisions.

Document Name	Policy Analysis
Draft Local Planning Scheme No.2	The Town is well advanced in its drafting of a new Scheme, which will replace the existing Town Planning Scheme No. 1 upon gazettal. The new scheme achieves conformance with the format and contents of the Model Scheme Text, doing away with a precinct-based structure. Existing provisions applicable to the Highway have been carried through into the draft scheme. These provisions will be revised as part of the AHPSP adoption process to ensure that the scheme and Precinct Plan function together to provide a unified approach to development control and guidance in the precinct.
Draft Activity Centre Strategy	The draft strategy seeks to guide the planning of activity centres within the Town, with Albany Highway established as a core commercial axis. It recommends retaining the "strip" character of the precinct while consolidating shopping, leisure, and community uses within distinct nodes at Victoria park and East Victoria Park, concentrating future development to bolster the precinct's identity and functionality.

1.3.2.3 Local Planning Policies

The AHPSP area is subject to a range of adopted Local Planning Policies which form part of a Town's Local Planning Framework. It is anticipated that a range of amendments and revocations to established policies will be required to ensure consistency with the AHPSP and streamline the development application and assessment process in line with State guidance. Key LPPs that apply to Albany Highway are summarised in **Table 17** below.

Table 16: Local Planning Policy Context

Document Name	Policy Analysis
LPP 2 Home-Based Business	The policy recognises that while some home-based employment is acceptable within a residential environment, there are limits on the compatibility of home-based business activities with residential uses. This policy will continue to apply to development within Residential-zoned land within the AHPSP area.
LPP 3 Non-Residential Uses in or Adjacent to Residential Areas	The policy recognises that while some home-based employment is acceptable within a residential environment, there are limits on the compatibility of home-based business activities with residential uses.
LPP 4 Mixed Use and Residential Uses in Non-Residential Areas	The policy encourages residential development alongside non-residential activities. This policy will be superseded by land use and development controls within the AHPSP area.
LPP 7 Development and Vehicle Access to Properties	The policy aims to improve development outcomes and streetscape through better access and right-of-way use, enhancing the interface and activation of development. This policy will be superseded by land use and development controls within the AHPSP area which incorporates key objectives and requirements of the policy.
LPP 10 Pedestrian Walkways	The policy sets requirements for pedestrian walkways and arcades, promoting safe and convenient movement. This policy will be superseded by land use and development controls within the AHPSP area which incorporates key objectives and requirements of the policy.
LPP 11 Control and Location of Amusement Centres	The policy guides the placement of amusement centres to ensure they complement the Town's character and do not adversely affect the amenity. This policy will be superseded by land use and development controls within the AHPSP area.
LPP 14 Industrial Uses in Proximity to Residential Areas	The policy ensures that industrial uses do not negatively impact residential amenity, relevant for maintaining the liveability around Albany Highway. This policy will be superseded by land use and development controls within the AHPSP area which seek to encourage appropriately designed light industrial uses into development.

Document Name	Policy Analysis
LPP 15 East Victoria Park Gateway Shopping Area Design Guidelines	The policy aims to enhance the retail character of Albany Highway, integrating new developments with the existing streetscape and promoting pedestrian-friendly pathways. This policy will be rescinded given that land use and development controls within the AHPSP wholly supersede the policy.
LPP 16 Albany Highway Residential/Commercial Design Guidelines	The policy encourages mixed-use development to support population growth, emphasizing the compatibility of new developments with the area's character and ensuring residential amenities are preserved. This policy will be rescinded given that land use and development controls within the AHPSP wholly supersede the policy.
LPP 17 Street Frontage Design Guidelines for District Centres and Commercial Areas Along Albany Highway	The policy aims to enhance pedestrian comfort and area attractiveness through thoughtful frontage design, including considerations for façade, security, heritage, and alfresco dining. This policy will be rescinded given that land use and development controls within the AHPSP wholly supersede the policy.
LPP 20 Design Guidelines for Development with Buildings Above 3 Storeys	The policy sets design standards for high-density developments, focusing on scale, environmental contribution, and sustainability to enhance the precinct's appeal. This policy will be superseded by land use and development controls within the AHPSP area.
LPP 23 Parking Policy	The policy provides guidelines for car parking, aiming to balance accessibility needs with pedestrian, cyclist, and motorist safety. This policy will be superseded by land use and development controls within the AHPSP area.
LPP 24 Loading and Unloading	The policy establishes requirements for efficient loading/unloading areas that align with local character without adversely impacting residential areas This policy will continue to apply to development within the AHPSP area with amendments.
LPP 25 Streetscape	The policy ensures residential developments contribute positively to the streetscape, reflecting the area's character through design elements like landscaping and building materials. This policy will be superseded by land use and development controls within the AHPSP area, with the policy amended to remove sites within the AHPSP area currently subject to the policy.
Draft LPP 'Residential Character Retention Guidelines'	The policy guides the preservation of streetscape character in new developments, advocating for innovative designs that respect the existing form and scale. Application of the policy to the AHPSP area will be subject to finalisation of the policy contents.
LPP 29 Public Art Private Developer Contribution	The policy promotes community identity and character through public art contributions in developments, enhancing the visual and cultural landscape. This policy will continue to apply to development within the AHPSP area.

Document Name	Policy Analysis
LPP 30 Car Parking Standards for Development Along Albany Highway	The policy specifies reduced car parking ratios for shops and restaurants to support the precinct's urban density and activity levels. The policy specifies reduced car parking ratios for shops and restaurants to support the precinct's urban density and activity levels.
LPP 31 Service Apartments and Residential Buildings Including Short Term Accommodation	The policy encourages accommodation options near key precincts and transport hubs, supporting the area's growth and accessibility. This policy will continue to apply to development within the AHPSP area.
LPP 32 Exemptions from Development Approval	The policy identifies developments exempt from approval to streamline the planning process, focusing on compatible land uses that meet specific criteria. This policy will continue to apply to development within the AHPSP area.
LPP 33 Guide to Concessions on Planning Requirements for Mixed Use, Multiple Dwelling and Non-Residential Developments	The policy outlines guidance for the granting concessions for development proposals that facilitate favorable planning outcomes. This policy will be superseded by land use and development controls within the AHPSP area and associated bonus and discretionary decision-making guidance.
LPP 36 Climate Control (Energy Efficiency)	The policy addresses energy efficiency in site and building design to promote sustainability within the Town. This policy will be superseded by land use and development controls within the AHPSP area including prescribed sustainability standards.
LPP 38 Signs	The policy regulates signage to enhance building interest and compatibility with the area's character, maintaining aesthetic and heritage values. This policy will continue to apply to development within the AHPSP area.
LPP 39 Tree Planting and Retention	The policy aims to increase tree density and canopy cover, supporting the Urban Forest Strategy and enhancing ecological and aesthetic value. This policy will continue to apply to development within the AHPSP area.
LPP 42 Vehicle Access from Residential Development	The policy ensures residential development vehicle access does not detract from the surrounding area's character, prioritising safety and aesthetic considerations. This policy will be superseded by land use and development controls within the AHPSP area.
LPP 43 Heritage List (and Local Heritage Survey)	Focuses on the conservation and enhancement of heritage buildings within the Albany Highway precinct, guiding new developments to consider historical impacts.

1.3.3 Community and Economic Development

Planning in the AHPSP area is informed by a number of state and local strategies and plans relating to economic development and community wellbeing. Those relevant to Albany Highway are summarised in **Table 18**.

Table 17: Community and Economic Development Context

Document Name	Policy Analysis
Streets Ahead Action Plan	Developed by the community, this plan proposes gradual enhancements to Albany Highway and adjacent areas, emphasizing greening, public areas, paths for walking and cycling, safety, and community involvement to boost livability and appeal. It has significantly shaped the AHPSP. Proposed improvements include more trees in median strips, revitalising underused spaces like Memorial Gardens, encouraging major land redevelopment, establishing cycle paths, lowering speed limits to 30 km/h, and exploring alternative funding models for these initiatives.
State Housing Strategy	Aims to enhance housing choices and affordability, emphasizing diversity in dwelling stock to support all ages and ensure resilient communities. Advocates for empowerment in housing decisions, directly impacting the Albany Highway area's development.
Strategic Community Plan (2017–2032)	This strategy outlines the Town's vision and priorities for population growth, urbanisation, and inclusivity. Key aspirations relevant to Albany Highway include people-centric urban design, community empowerment, commerce, sustainable transport, green spaces, and increased vegetation.
Economic Development Strategy (2018–2023)	This strategy outlines a blueprint for sustainable economic growth, focused on Albany Highway as a crucial driver of the Town economy. Relevant strategies include infrastructure investment, destination marketing, business support, and improved transport, aimed at bolstering economic competitiveness.
Social Infrastructure Strategy	Addresses the need for a framework to support a growing population through social infrastructure, highlighting the role of the Macmillan precinct District Hub. Proposes a Developer Contribution Plan for future investment in social facilities, contributing to the precinct's development.
Arts and Culture Plan	The Plan seeks to ensure the Town remains a place where arts, culture and heritage is valued and accessible to all; empowering the community with a sense of pride, safety and belonging. Building on the Making Space for Culture study, it promotes collaborative and innovative community spaces for learning and project development, enhancing the cultural and educational landscape of the area.

1.3.4 Existing Plans and Projects

In addition to wider policies and strategic documents, The AHPSP area is also influenced by a wide range of ongoing State and Local Government initiatives that are actively under construction or ongoing planning. Key projects relevant to the AHPSP are summarised in **Table 19**.

Table 18: Existing Plans and Projects

Project Name	Project Summary
Metronet Level Crossing Removal Project	State Government delivery of elevated rail on the Armadale line to improve public transport efficiency and safety, create new public spaces and address traffic congestion.
Mid Tier Transport Planning	Town of Victoria Park advocacy to secure investment in new mid-tier transport technology to better connect with the community through improved services, encouraging sustainable transport along Albany Highway.
Phase 1 960 'Superbus' Route	State Government installation of bus priority lanes and restricting certain vehicle movements to enhance traffic flow on Albany Highway and surrounding roads.
Oats Street Precinct Structure Planning Project	Town investment in renewal of spaces for community use, with traffic calming, verge planting, and pedestrian zones at Albany Highway's western end in Victoria Park.
Old Spaces New Programs (OSNP3)	Town investment in renewal of spaces for community use, with traffic calming, verge planting, and pedestrian zones at Albany Highway's western end in Victoria Park.
Macmillan Precinct Redevelopment Concept Plan	Ongoing town planning to redevelop a major landholding and enhance community facilities within the precinct.
Edward Millen Adaptive Heritage and Landscape Redevelopment	Ongoing Town project in partnership with the private sector to enhance Edward Millen House and surrounding area with food, beverage, and community facilities.
Causeway Pedestrian and Cyclist Bridge	State Government construction of a new active travel bridge to facilitate improved pedestrian and cyclist access between Victoria Park and Perth CBD.
McCallum Park Masterplan	Town-funded open space enhancements to bolster climate resilience and establish a gateway open space encouraging visitation to the Swan River foreshore.
Archer and Mint Streets Streetscape Improvement Project	Ongoing Town project to improve streetscapes and enhance cycle and pedestrian access between Orrong Road and Albany Highway.

2.0 Opportunities and Constraints

Detailed investigations into how Albany Highway functions and feels today has led to the identification of a series of opportunities and constraints to which the AHPSP will respond.

These are presented in **Table 20**.

Table 19: Opportunities and Constraints Analysis

Domain	Opportunities	Constraints
People & Place	• Capitalise on a **diverse, youthful demographic** to foster innovative businesses and cultural activity • Leverage existing **connectivity and integration** to nearby destinations including the Perth CBD, Burswood and Curtin University • Highlight **significant Aboriginal places and storeys** to enrich connection to place	• **Housing supply and affordability** issues are a barrier to meeting growing demand • There is **limited strategic employment** to provide jobs for local residents despite attractive amenities and proximity to City
Urban Ecology	• Increase **native flora**, **tree canopy** and develop more **green spaces** • Actively pursue **sustainability initiatives** to mitigate climate change effects, implement best practices in stormwater management and pollution reduction	• **Limited biodiversity** within existing green space and public realm is a barrier to enhancing urban ecology • **Contaminated sites** and presence of acid sulphate soils may impact local ecological health • **Climate impacts**, including increased heat days due to climate change and urban heat island effect, may impact liveability
Urban Structure	• Capitalise on redevelopment opportunities presented by historically consolidated **Major Sites**, aiming for transformative mixed-use developments that can revitalise the precinct • Build on the Highway's **narrow shopfronts** as a positive attribute, including heritage and built form controls	• Only parts of the Highway are serviced by **rear lanes** with constraints on parking access and loading • **Servicing constraints** such as remnant overhead power lines in the precinct are constraints to redevelopment • Small lots and **complex land ownership** as a barrier to urban growth

Domain	Opportunities	Constraints
Public Realm	• Implement **comprehensive streetscape upgrades** and improve pedestrian infrastructure to significantly enhance the public realm experience along the Highway • **Activate existing public spaces** with features that encourage community engagement and use	• Inconsistent and varying quality of **pedestrian amenities** • Existing public spaces are passive and **lack key features** which limits vibrancy • Parts of the public realm contain **historically significant** trees, objects, places and storeys that are not adequately recognised
Land Use	• Foster a **diverse mix** of commercial, residential, and community land uses to reinforce the Highway's status as a premier activity center • Explore zoning and incentives to encourage **cultural infrastructure** and creative sector businesses, enhancing the area's attractiveness and vibrancy. • Promote **entertainment and hospitality** within the precinct to attract visitors and tourists, leveraging the area's established regional significance.	• **Low office floorspace** and pressure from **competing regional centres'** challenge economic diversity and resilience • Current zoning discourages **car-related uses**, yet these account for a high proportion of commercial floorspace and employment • Cultural infrastructure and **creative sector businesses** are limited
Built Form	• Adopt policies and incentives that encourage **heritage building conservation** and the integration of new development in a manner that respects the area's historical context • Encourage development that embraces mixed uses and mid-rise forms, reflecting and enhancing the **unique character** of the Highway. • Unlock opportunities for more **taller buildings** within Major Sites where impacts can be mitigated	• **Limited recent development**, mostly small-scale and incremental with no development of Major Sites • Existing **Planning controls** are not sufficient to achieve population growth targets • Lack of formal recognition for **contributory heritage buildings** as a challenge to preserving the area's historical and architectural integrity.

3.0 Precinct Boundary and Hierarchy

3.1 Rationale

The proposed boundary of the Precinct Plan has been defined through technical analysis and stakeholder consultations, with several minor adjustments and additions compared to the boundary in the Town's adopted Local Planning Strategy. The existing SPP 4.2 designates two activity centres within the Albany Highway Precinct: Victoria Park Secondary Centre and East Victoria Park District Centre. The AHPSP recommends reclassifying the entire urban corridor as a Secondary Centre under SPP 4.2.

These modifications are based on the following key principles:

1. Maintaining a linear and narrowly defined precinct boundary consistent with the established urban character of Victoria Park and the nature of the precinct as an Activity Corridor
2. Recognising the scope for separate precinct planning initiatives to address changes in urban character within Station Precincts and other areas identified for intensification within the Town's Planning Strategy such as Burswood South
3. Ensuring areas with established higher density and mixed-use development pattern adjacent to the Highway are incorporated into the precinct
4. Aligning the precinct boundary with adjacent strategic planning and investigation areas considering higher density development as outlined in the Local Planning Strategy
5. Incorporating sites that interface with those adjoining the Highway to allow for enhanced coordination and more consistent transition in scale and height to surrounding areas
6. Recognising and respecting unique residential neighborhood character within single residential areas surrounding Albany Highway including areas of intact original weatherboard workers cottages of recognised heritage significance

Based on these principles the following boundary adjustments are proposed:

- **Causeway and Victoria Park Precincts**: The boundary has been expanded southward to Hordern Street.
- **Central Precinct**: The boundary has been extended southward to encompass key sites along Hordern Street and northward to Hubert Street, further west to Shepperton Road beyond Gresham Street to create continuity with the future investigation area surrounding Victoria Park Station, as designated in the LPS.
- **East Victoria Park Precinct**: The boundary has been expanded northward to Hubert Street and along Mint Street to Shepperton Road to facilitate transitional development. Additionally, lots fronting Bassinghall Street and Moorgate Street opposite the Park Centre have been included.
- **East End Precinct**: No boundary adjustments have been made, as the existing boundary already extends to Hubert Street, and sensitive residential areas lie to the south.
- **St James Precinct**: The boundary has been expanded northward to Shepperton Road to align with the Oats Street LPS Precinct, and southward to include mixed-density sites along Hill View Terrace and Alday Street in response to planned improvements to Edward Millen Park.

3.2 Proposed Secondary Centre Classification

It is proposed that Victoria Park and East Victoria Park be consolidated into one Secondary Centre under State Planning Policy 4.2 Activity Centres for Perth and Peel. This is proposed based on their functional integration and complementary economic roles. The current classification of East Victoria Park as a separate District Centre to the Victoria Park Secondary Centre does not accurately represent the existing and planned distribution of employment-generating activity and retail floorspace, particularly given the growth potential within East Victoria Park due to its strategic location, Major Sites and proximity to civic assets. This change aims to enhance planning coherence and capitalise on the synergies between activity centres.



4.0 Stakeholder and Community Engagement

4.1 Consultation Process

4.1.1 Shape Albany Highway Stage 1

In 2021, the Shape Albany Highway community engagement initiative commenced with the goal of understanding the aspirations of the Victoria Park community for the development of the Albany Highway Precinct.

Stage 1 of Shape Albany Highway focused on exploring the sentiments of local residents, businesses, and visitors concerning the present state of the area and the potential for future growth and transformation. The outcomes of Stage 1 are documented in two reports:

- "**Albany Highway Today**," offering insights into the current state and functioning of the Highway; and
- "**Albany Highway Tomorrow**," which provides a comprehensive overview of the precinct's aspirations and future ideas derived from community engagement.

As part of Stage 1, a survey garnered 212 responses, while online and in-person idea boards received a total of 320 ideas. Additionally, 12 local businesses participated in a separate survey, and 14 key stakeholders were interviewed individually or in groups. These stakeholders included the Mindeera Advisory Group, Vic Park Collective Community Group, and various landowners.



4.1.2 Shape Albany Highway Stage 2

Stage 2 of Shape Albany Highway expanded upon the feedback received in Stage 1 to develop a range of conceptual precinct planning options encompassing built form, public realm, and transportation. These options were aimed at establishing the direction for the Precinct Structure Plan. To guide the development of these options, a Community Reference Group (CRG) was formed, consisting of local residents and business representatives. Three CRG sessions were conducted between October and November 2022:

- **Session #1** focused on drawing ideas related to Ecology, Public Realm, and Movements, defining priorities and objectives, and creating two draft concept scenarios.
- **Session #2** centered on gathering ideas for Land Use, Built Form, and Urban Structure while further defining community priorities, objectives, and the refinement of the same two draft concept scenarios.
- **Session #3** concentrated on reviewing and refining the conceptual scenarios related to built form and public realm.

The feedback obtained from the CRG sessions was integrated with a comprehensive technical and feasibility assessment to formulate preferred Part 1 planning provisions, including general height and plot ratio controls.

This process culminated in the publication of three draft strategies that would significantly shape the drafting of the Precinct Structure Plan:

- **Draft Built Form Strategy**: Outlining key principles and urban design priorities for sub-precincts to inform planning controls.
- **Draft Transport Strategy**: Identifying crucial transport planning priorities and physical interventions to support precinct growth.
- **Draft Public Realm Strategy**: Providing a framework for incremental and tactical interventions to public spaces including park enhancement, sump conversion, and streetscape upgrades, aimed at enhancing liveability, resilience and biodiversity.

4.1.3 Shape Albany Highway Stage 3

Stage 3 of Shape Albany Highway involved the public advertisement of the draft informing strategies developed in Stage 2, seeking broader community feedback to capture comments and concerns. This step ensures that the initial community feedback and vision outlined in the Albany Highway Tomorrow report were preserved and reflected throughout the process.

The feedback obtained during this stage informed the detailed drafting of the Albany Highway Precinct Structure Plan (AHPSP), which was subsequently released for further consultation, in accordance with statutory requirements.







4.2 Key Messages and Findings

Urban Ecology

- Address climate crisis with a commitment to zero carbon and circular economy principles.
- Enhance street trees, landscaping, and green development initiatives.
- Increase greenery in parks and along the Highway through innovative development.

Urban Structure

- Retain and enhance the Highway's high street scale and eclectic shopfront pattern.
- Manage scale transition between the Highway and surrounding lower-scale streets effectively.
- Extend the Highway's urban structure to activate continuous activity corridors.

Public Realm

- Convert paved areas into green spaces to increase shade and greenery along the Highway.
- Redesign the Highway for temporary pedestrian-priority events.
- Enhance parks and green spaces to accommodate diverse community activities.

Movement

- Enhance pedestrian amenities with wider footpaths, more street trees, and furniture.
- Improve connections to public transport from the Highway.
- Shift towards public transit and active travel alternatives, while also addressing parking concerns

Land Use

- Expand creative and artistic spaces along the Highway.
- Create a more dynamic town centre with diverse food, dining, and entertainment options.
- Transform inactive commercial zones to improve flow and leverage vacant sites.

Built Form

- Reflect the Highway's midrise scale in development, focusing on architectural merit and low environmental impact.
- Adhere to high sustainability standards and improve design quality in future developments.
- Prioritise retail diversity, public realm enhancements, and better connectivity over simply adding more housing.

4.2.1 Scale and Extent of Change

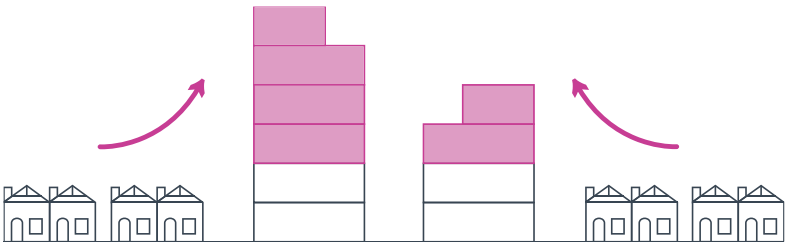
Consultation efforts focused on gathering feedback on the scale and extent of change preferred by stakeholders. Various scenarios and approaches were explored to create a built form framework and precinct boundary that align with local aspirations while meeting broader planning requirements.

Testing was conducted using a digital model of the site, which accurately captured existing development, landform, tree height and location, and solar orientation. This platform enabled precise analysis of visual impact, overshadowing effects, and growth implications from multiple development scenarios, which were then used to solicit feedback.

Initially, two scenarios were tested: a Concentrated Scenario that focused future growth in specific areas, and a Distributed Scenario that promoted lower intensity growth across a broader area. This process led to the Combined Scenario, the preferred outcome of the CRG, which was confirmed through a community survey and became the basis for the draft strategy. The scenarios are illustrated in the diagram below.

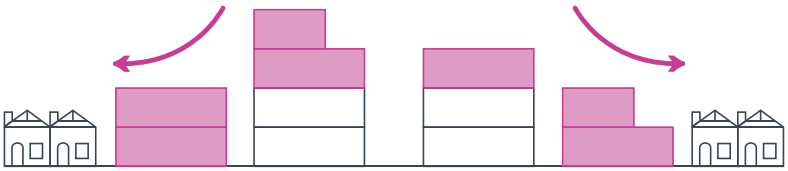
Scenario 1
Concentrate Growth

Contain the extent of growth to the Highway only, with demand met through increased development on Major Sites



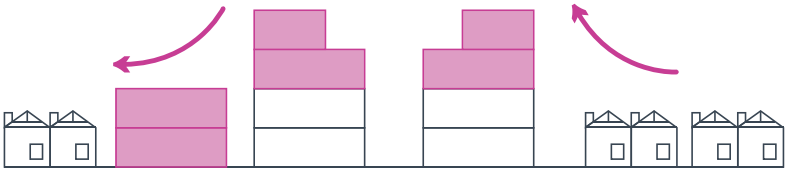
Scenario 2
Distribute Growth

Limit maximum building height, with future growth accommodated both along the Highway and in some surrounding areas



Scenario 3
Combined Scenario

Varied approach in response to precinct character, with a combination of concentrated and distributed approaches proposed along the Highway



4.2.2 Sub-Precinct Aspirations

Consultation feedback revealed diverse aspirations for different parts of the precinct. Stakeholders emphasised that Albany Highway is a complex area, with distinct neighbourhoods, each with unique characteristics and needs. In response, six sub-precincts were delineated within the AHPSP area, aligning with stakeholder expectations for the preferred scale and scope of future changes in built form, land use, and economic activity.

4.2.2.1 Causeway

Overall community sentiment towards the current Causeway area is poor, with all qualities rated below average. Over two thirds of respondents wish to see transformative change in this area, encompassing bold reinvention of built form and land uses.

Popular stakeholder ideas and suggestions for the future of the Causeway area included:

- Improving pedestrian connectivity to the Causeway Bus Interchange and Swan River
- Growing the area as an extension of the CBD with offices, apartments and retail
- Re-imagining car yards to accommodate higher intensity uses while retaining their employment function
- Improved streetscapes and street trees, including play-focused amenities near Primary School

4.2.2.2 Victoria Park

Overall community sentiment towards the current Victoria Park is positive, with all qualities rated at or above average. Over two thirds of respondents wish to see sensitive change in this area, being evolutionary and in keeping with existing buildings and activities. Popular stakeholder ideas and suggestions for the future of the Victoria Park area included:

- Improving safety and wayfinding for pedestrians crossing Shepperton Rd
- Slowing traffic down to allow pedestrian use
- More diverse uses such as small bars and a cinema
- Refreshing public realm and adding nighttime feature lighting
- Facilitate redevelopment and intensification of vacant/underused sites while protecting and restoring heritage facades

4.2.2.3 Central

Overall community sentiment towards the current Central area is poor, with all qualities rated the lowest on the Highway. More than 4 in 5 respondents wish to see transformative change in this area, encompassing bold reinvention of built form and land uses. Popular stakeholder ideas and suggestions for the future of the Causeway area included:

- More street trees and traffic calming, improved pedestrian crossing points along Highway Street lighting and safety in evenings
- Encouraging amalgamation of vacant land for new development
- Expanded options for entertainment and dining
- Improved transport connectivity

4.2.2.4 East Victoria Park

Overall community sentiment towards East Vic Park area is very positive, with all qualities rated the highest out of the entire Highway. 4 in 5 respondents wish to see sensitive or limited change in this area, being evolutionary and in keeping with existing buildings and activities. Popular stakeholder ideas and suggestions for the future of the East Victoria Park area included:

- Encouraging renewal and redevelopment of Park Centre and Macmillan Precinct, with a focus on activating the Highway edge
- Improving access from Berwick Street
- Improvements to amenity, safety and activity along laneway areas
- Managing traffic in peak hours, closing the Highway to traffic in evenings and during events
- Increasing the diversity of evening uses

4.2.2.5 East End

Overall community sentiment towards the current East End is mixed, with all qualities except for ease of access rated below average. Around two thirds of respondents wish to see transformative change in this area, encompassing bold reinvention of built form and land uses, while a third would prefer to see a more sensitive evolution. Popular stakeholder ideas for the future of the East End area included:

- Redevelopment of vacant/dilapidated sites for predominantly residential purposes
- Strengthening connectivity to East Victoria Park
- Improve connectivity to Somerset Pool and TAFE
- Improving parking and pedestrian access
- Protecting weatherboard character precinct through transitional controls for new buildings

4.2.2.6 St James

Overall community sentiment towards the current St James area is mixed, with qualities other than variety of things to do rated below average. An even split of respondents wish to see transformative change in this area or sensitive to limited change.

- Popular stakeholder ideas and suggestions for the future of the St James area included:
- Mixed Use development and more commercial opportunities
- Improved use and connectivity to Ed Millen Park
- Increase safety of major intersections
- Greater diversity of retail offerings consistent with other parts of the Highway

4.2.3 Community Benefit from Development

Stakeholder consultation emphasised the need for new development to provide significant public benefits, addressing the expected needs of a growing population and business base within the precinct.

The most important benefits prioritised by stakeholders are as follows:

- **Streetscape Enhancements**
  Upgrades to Albany Highway and surrounding streets, including significant tree planting, implementation of water-sensitive urban design, and improvements to paving and street furniture.

- **Pedestrian Connectivity**
  Creation of new pedestrian connections, particularly within Major Sites where opportunities arise for active extensions of the public realm accompanied by retail and cultural spaces.

- **Public Open Space Development**
  The creation of new public open spaces within Major Sites and enhancements to existing public space, including landscaping improvements and assets such as playgrounds and event space.

- **Design Excellence**
  A commitment to design excellence, with a particular focus on elevating sustainability standards and architectural innovation.

- **Community Infrastructure**
  Addressing local needs through the provision of dedicated space for community activities, cultural and creative pursuits, and facilitating the delivery of new community assets within the Macmillan Precinct.

5.0 Vision

5.1 Albany Highway

Set against Perth's shimmering skyline, Albany Highway will emerge as Perth's premier high street, proudly showcasing Victoria Park's rich diversity and valued heritage throughout its vibrant shopfronts and green public spaces. Not only a bustling cultural and culinary destination, it will become a major employment precinct and residential neighborhood, attracting visitors from near and far while also supporting a growing local population.

Parks and streetscapes will be transformed to increase greenery and biodiversity and reallocate space from cars to create inviting, social, and enjoyable civic spaces. Improved walking, cycling, and public transit infrastructure will strengthen regional connectivity, community health and sustainability. Transformative development of Major Sites will deliver new attractions and amenities while integrating seamlessly with the Highway's historic fine-grain fabric and eclectic character.

The Albany Highway Vision is supported by 6 sub-precinct ambitions and 18 goals for the future of the precinct as outlined on the following pages.

Causeway

The Causeway will develop into a thriving hub for business and community life. Development of underutilised sites will capitalise on stunning city views, riverfront address and future investment in mid-tier transport to deliver significant employment, housing, and tourism development. Sustainability and walkability will be core features, alongside a celebration of the area's Indigenous heritage.

Victoria Park

Victoria Park will sensitively integrate new residential, office, and creative spaces with its historic architecture and shopfronts, enriching its cultural offering and evening economy. Transformation of the Victoria Park Central Site and the enhancement of streets and public spaces will sustain a lively community atmosphere with year-round activities and events.

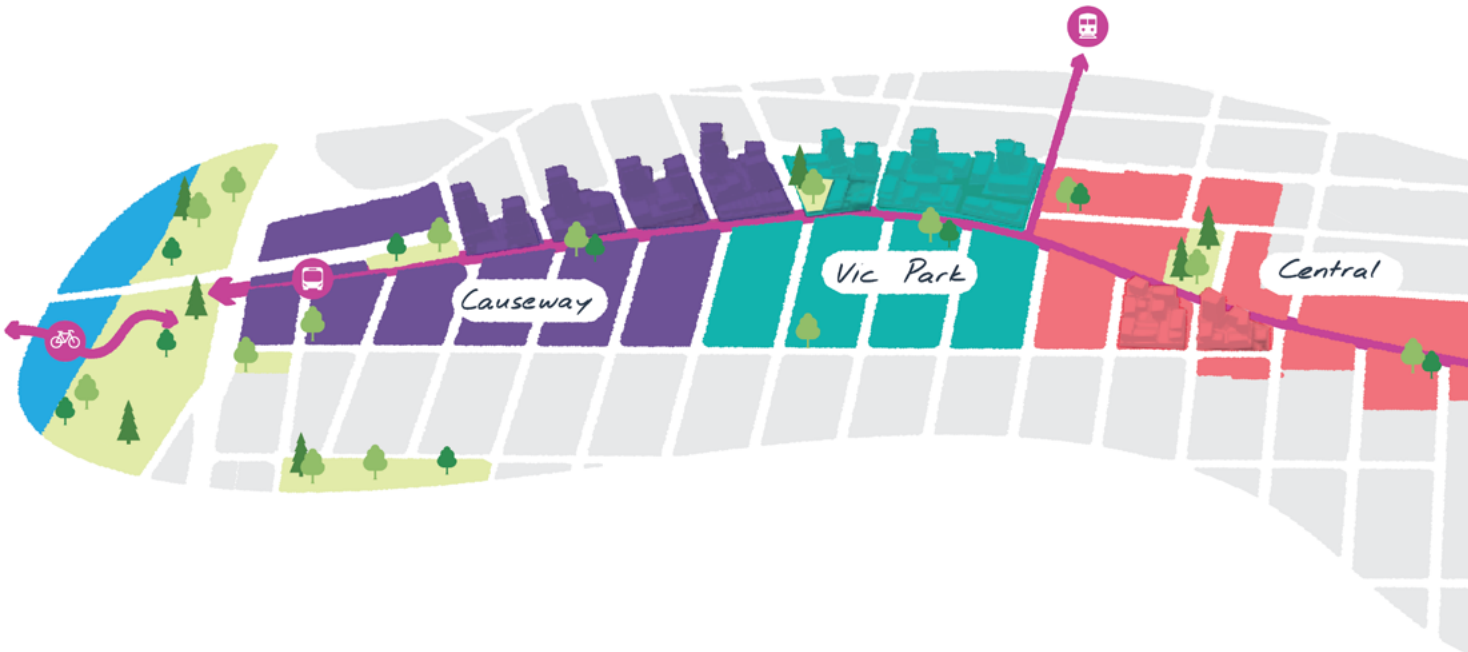


Figure 9: Sub-Precinct Vision Diagram

Central

Central will be reimagined as a dynamic place to live and work, blending light industry and creative workspace with preserved heritage and significant residential expansion. A transformed Read Park will anchor this growth, emerging a bustling, green community heart.

East End

The East End will bridge the divide between East Victoria Park and St James with lower scale and carefully considered residential growth set within greener streets, complemented by new workspace and retail offerings at ground level that cater to local needs.

East Vic Park

East Victoria Park will build on its identity as Perth's culinary hub through sensitive development and public realm investment, maintaining its eclectic character and diverse independent businesses. Resilience and diversity will be added through transformation of the Park Centre and Macmillan Precinct into an exemplar of sustainable mixed-use development.

St James

St. James will emerge as Perth's eastern gateway, a commercial and service hub of regional significance that also offers everyday essentials for local residents. New development will frame and enliven Edward Millen House, while Edward Millen Baillie House will emerge as a key attraction and community hub within this growing precinct.

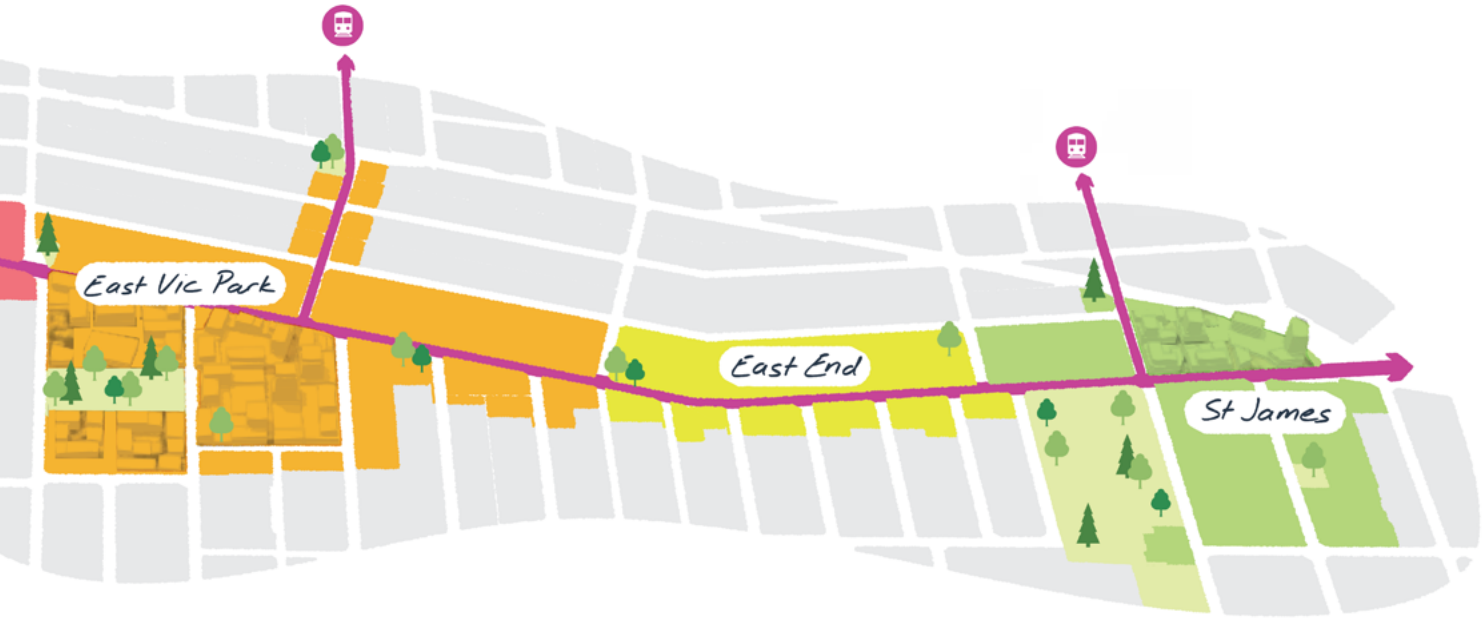


Figure 10: Key Ideas (Albany Highway Tomorrow Report)

Urban Ecology
A Sustainable Highway

Establish the Highway as a Low Carbon Leader
Increase Albany Highway's Biodiversity
Recognise Aboriginal Connection to Country

Urban Structure
A Fine-Grain Highway

Focus Growth and Change within Major Sites
Integrate Adjoining Streets and Station Precincts
Transform the Gateway to Victoria Park

Public Realm
A Pedestrian Highway

Reallocate Highway Space from Cars to People
Deliver New Open Spaces within Major Sites
Enhance Surrounding Parks and Streets

Movement
A Connected Highway

Improve Walking, Cycling and Transit Infrastructure
Reduce the Negative Impacts of Vehicle Traffic
Rethink Parking Supply and Management

Land Use
A Diverse Highway

Increase Commercial Floorspace and Employment
Preserve Major Drivers of Employment and Visitation
Recognise Aboriginal Connection to Country

Built Form
A Distinctive Highway

Create Areas of Unique Place Character
Develop New Height and Density Controls
Promote Vibrant Streetfronts and Public Life

6.0 Design Response

This section provides a comprehensive overview of how the Precinct Structure Plan and its Part 1 Provisions contribute to achieving the vision and objectives for Albany Highway.

It outlines how the AHPSP interacts with the separately prepared Public Realm Strategy and Transport Strategy, which offer additional supportive actions and initiatives that are needed to bring the overarching vision for the precinct to fruition.

These supplementary strategies can be found in Part 3 **Technical Appendices.**

Figure 11: Conceptual Illustration of Vision and Objectives



6.1 Urban Ecology



6.1.1 Response to Context

Albany Highway Today is characterised by limited tree canopy and fauna habit, exposure to climate change and the effects of urban heat island, acid sulphate soils and hydrocarbon contamination, which threaten healthy ecology along the Highway while also having significant implications for human health and wellbeing. Current sustainability requirements lag behind best practice, while management of stormwater and drainage does not maximise opportunities to improve the local water cycle. Recognition of the Aboriginal heritage and culturally significant places and natural processes is also limited.

Albany Highway Tomorrow will reduce its waste production and carbon emissions by adopting leading environmental standards for private development, increasing urban biodiversity within the public realm and exploring innovative opportunities for integrated district energy, water and waste systems that future-proof against the predicted impacts climate change.

Future public and private development will seek to highlight the ongoing relationship of Aboriginal people to the area and celebrating its local, place-specific cultural identity in partnership with Aboriginal-owned businesses and organisations.

6.1.2 Community Priorities

Community engagement highlighted the following community priorities for Urban Ecology on Albany Highway:

Climate Action: Taking strong action to address the climate crisis is a prevailing community priority.

Sustainable Development: Feedback included a desire to see more innovative and greener development, including zero carbon development and the adoption of circular economy principles.

Biodiversity and Greening: Many want to see more street trees and landscaping along the Highway itself, throughout surrounding parks and incorporated into new development.

Key Issue	Current Conditions	Plan Response
Recognition of Country	Limited recognition of the Aboriginal significance of the precinct or specific sites including the former Mindeera spring	Establishes Aboriginal land knowledge as a key objective and identified opportunities to protect, restore and celebrate significant natural features and identifies specific sites reflecting consultation with Mindeera Advisory Group.
Biodiversity	Current biodiversity is limited, with relatively few areas of vegetated Public Open Space and limited tree canopy in the public realm. Endemic species representation is low.	Emphasis on increasing tree canopy within both public and private lands, protecting significant trees in new developments, setting overshadowing controls to protect existing open space, and promoting asphalt conversion to green spaces within the Public Realm Strategy.
Climate Reference	Expected increase in extremely hot days due to climate change, exacerbated by the urban heat island effect due to limited tree canopy and extensive asphalt surfaces	Public Realm Strategy and Sustainability provisions enhance energy, water, and waste performance for new development while supporting a significant increase in tree canopy and native vegetation.
Sustainability Standards	Sustainability initiatives lag best practice, with no planning provisions relating to low carbon construction, renewable power or energy efficiency and limited precinct-wide strategies.	Embeds new standards for building sustainability in new development and motivates Major Sites to pursue Australian and global excellence, recommending further actions including district energy, advanced recycling, and food waste composting.
Water Cycle and Drainage	Current drainage system and extensive network of legacy sumps do not adequately filter and clean stormwater before it enters the Swan River, contributing to pollution.	Identifies opportunities to improve the precinct drainage network including the conversion of sumps into ecologically functional public spaces.
Landform, Groundwater, and Site Conditions	The highway's natural topography varies considerably with implications for development impact and feasibility, whilst there are concentrated areas at risk of acid sulfate and hydrocarbon contamination.	Built form modelling considers topographic effects when determining building heights. Formalises need to address ASS and contamination risk in the development of Major Sites.

Objective 1

Protect and enhance ecological features while honoring Aboriginal custodianship and knowledge

Why is this an objective?

There is significant social and economic value to be unlocked from incorporating ecological systems into urban areas, in addition to environmental benefits. There is room for significant improvement in the provision of vegetation and habitat throughout the precinct and increasing the prominence of Aboriginal custodianship, cultural practices, and knowledge of the country.

How does the Precinct Structure Plan Respond?

The AHPSP prioritises protection and enhancement of ecological systems while acknowledging Aboriginal custodianship and knowledge. It aligns with the Town's 'Reflect' Reconciliation Action Plan, promoting inclusivity through community engagement. This collaboration covers the precinct's open spaces, historical interpretation, and infrastructure delivery. The AHPSP Public Realm Strategy outlines opportunities like converting Highway road space into open spaces, rejuvenating parks like Memorial Gardens, and enhancing Swan River connectivity.

The former site of Mindeera Spring and the identified Aboriginal Lands Trust property at Great Eastern Highway are specifically identified to lay the groundwork for future consultations and action.

There are further opportunities to engage with the Mindeera Advisory Group on key development applications and public realm enhancement approvals to ensure a designing with country approach is applied and that culturally significant sites like Mindeera Spring are appropriately recognised and celebrated. As part of this, there are also opportunities to deliver a new facility or other infrastructure which supports the precinct's Aboriginal community, either through private development or potentially making use of Aboriginal Lands Trust land.

Objective 2

Demonstrate sustainability leadership through building design and precinct management

Why is this an objective?

Environmentally sustainable design features in new buildings help to mitigate the environmental impacts of construction. Incorporating energy efficiency and other sustainable design features into new development is critical for reducing the precinct's greenhouse gas emissions and advancing towards a net-zero carbon future.

How does the Plan Respond?

The AHPSP provides new requirements applicable to new development requiring higher environmental performance to reduce greenhouse gas emissions and move towards net zero carbon. AHPSP requirements also provide flexibility to accommodate improved performance including encouraging the use of rooftops for biodiversity or energy generation, and encouraging Major Sites to meeting higher environmental performance standards.

At a Precinct-wide level, there are also wider opportunities to introduce local energy production and storage, business recycling and composting programmes and infrastructure, and the introduction of water sensitive urban design and increased tree canopy within the public realm as part of the Public Realm Strategy.

A review of waste management practices for each development application will be undertaken by the local authority on a case-by-case basis to ensure the adoption of waste minimisation practices, efficiency of collection and storage of waste onsite in a suitable location.

There are further opportunities to engage with major landowners and State Authorities such as Western Power and Water Corporation to investigate opportunities for district-level sustainability and energy infrastructure to meet future demand.

Objective 3

Retain significant trees and substantially increase tree canopy on public and private land

Why is this an objective?

Vegetation cover and tree canopy plays a crucial role in supporting ecological quality, combating the public health impacts of climate change and improving the aesthetic quality of both public and private land. Significant additional greening is needed within the precinct to achieve these outcomes.

How does the Plan Respond?

The AHPSP aims to substantially expand the diversity and extent of vegetation across all land types, fostering greater ecological health and climate resilience. This includes enhancing the stormwater management system to improve groundwater quality, increasing flora habitats, and creating additional public green spaces.

The plan identifies priority greening initiatives along Albany Highway and mandates protective measures for significant trees to ensure their retention during major site redevelopments. It encourages the incorporation of biophilic design, such as rooftop gardens and green walls, to integrate nature into urban environments actively.

The Water Management Strategy and Public Realm Strategy support redefining the environmental role of the Highway's sumps, transforming them into multifunctional green and blue infrastructure spaces that serve the community and environment alike.



6.2 Urban Structure



6.2.1 Response to Context

Albany Highway Today is distinguished by its fine-grained shopfronts and historic landmarks, which animate the precinct and foster a diverse tenant ecosystem. However, this texture is frequently disrupted by larger commercial buildings that detract from precinct amenity but offer potentially transformative development opportunities.

Albany Highway Tomorrow will strengthen and evolve its main street structure, preserving fine-grain heritage character while welcoming transformative development that fits in with what makes the Highway unique and positively influences how people live, work and travel through the precinct. Strengthened and renewed commercial nodes along the Highway's length will be better-connected by new development, which will contribute a new layer of urban structure to the area through fine-grain laneways, mews and streets supporting a vital mix of new businesses and residents.

6.2.2 Community Priorities

Community engagement highlighted the following community priorities for Urban Structure on Albany Highway:

Scale and Character: Increase in creative and artistic spaces due to a current lack of performance spaces, theaters and similar.

Sensitivity to Context: Increase diversity for food, dining and entertainment during the day and later at night. Create a more dynamic town centre with more events and festivals

Filling the Gaps: less active commercial zones to be transformed, enhancing the entire centre's flow and leveraging untapped potential of vacant sites

Key Issue	Current Conditions	Plan Response
Precinct of Boundary	The current precinct boundary closely follows the alignment of Albany Highway. While this reflects the Town's history and precinct structure, it limits the availability of developable sites due to high commercial land values along the Highway and presents challenges in integrating new development with surrounding areas.	The plan increases the precinct boundary by approximately 55% from 73 to 113 hectares, incorporating significant additional residential areas which support greater development diversity and improved transition and interface from the Highway to surrounding residential areas.
Lot Structure	The traditional rhythm of narrow lots interspersed with larger sites holds collective heritage significance as one of Perth's earliest and longest high streets. However, the mix of lot sizes and heritage sites makes renewal and development difficult, with small site areas and high property values. Large, consolidated sites with fewer landowners offer the best opportunities for transformative change.	The plan applies a 'narrow midrise' typology within core areas with reduced side setbacks, encouraging new development to retain narrow small lot structure characteristic of these areas. Fine-grain development is further defined and expressed in street interface provisions and Major Site objectives.
Tenure & Ownership	Albany Highway is characterised by diverse and fragmented ownership, with few major landholders outside of key Major Sites. While strata subdivision rates remain relatively low, they are increasing in the surrounding residential areas, further limiting the precinct's developable capacity.	The plan recognises and responds to tenure constraints by significantly increasing developable capacity within identified Major Sites that benefit from consolidated ownership. It also extends development potential to surrounding residential sites that tend to be larger and less constrained by commercial land values.
Utilities	Albany Highway is well serviced by water, sewer, and electricity, but faces some localised constraints, such as 'back of house' sewer positioning on private properties and laneways, as well as some overhead power infrastructure.	The plan has been informed by an assessment local utility supply and future requirements which has not identified any critical short term capacity constraints to development.

Objective 4

Achieve a cohesive precinct character which responds to the Highway's fine-grain subdivision and eclectic built fabric

Why is this an objective?

Far from being a single uniform precinct, Albany Highway is a complex and layered place made up of many distinct neighbourhoods.

To create a nuanced and impactful plan for the Highway's future, distinct sub-areas within the precinct need to be defined as the basis for establishing preferred variations in built form, land use and economic activity.

How does the Precinct Structure Plan Respond?

Sub-Precinct Structure

To establish a robust precinct character and support the designed built form and land use outcomes, a new sub-precinct structure has been established for the precinct, based on analysis of regional contextual influences and local variations in land use and built character.

As identified in **Figure 12,** contextual analysis determined that there were a number of defined sub-precincts in the precinct based on land use, mobility, regional proximity, heritage and community preferences, which warrant localised land use and built form controls. The definition of sub-precincts has considered the following key influences:

- Variations in land use, lot size and heritage fabric which influence suitability for development and require alternative building typologies, core retail and hospitality areas with established heritage fabric at Victoria Park and East Victoria Park from relatively less constrained predominantly commercial areas at the Causeway, Central and St James areas
- Varying proximity to the CBD, irregular walking distance to train stations and recognition that the likely route of potential future Mid Tier Transit will terminate at Mint Street that influence development potential and suitability for population growth
- Recognition of community feedback regarding a preference for sensitive and restrained future development within Victoria Park, East Victoria Park and East End Sub-Precincts and a desire for more transformational change in the St James, Central and the Causeway areas

These areas form the basis of the Precinct Plan's structure and implementation, helping to create a diverse place with varying character and differing degrees of change along the Highway's length. Varying ambitions for land use and built form outcomes within each sub precinct are reflected throughout Part 1 development requirements.

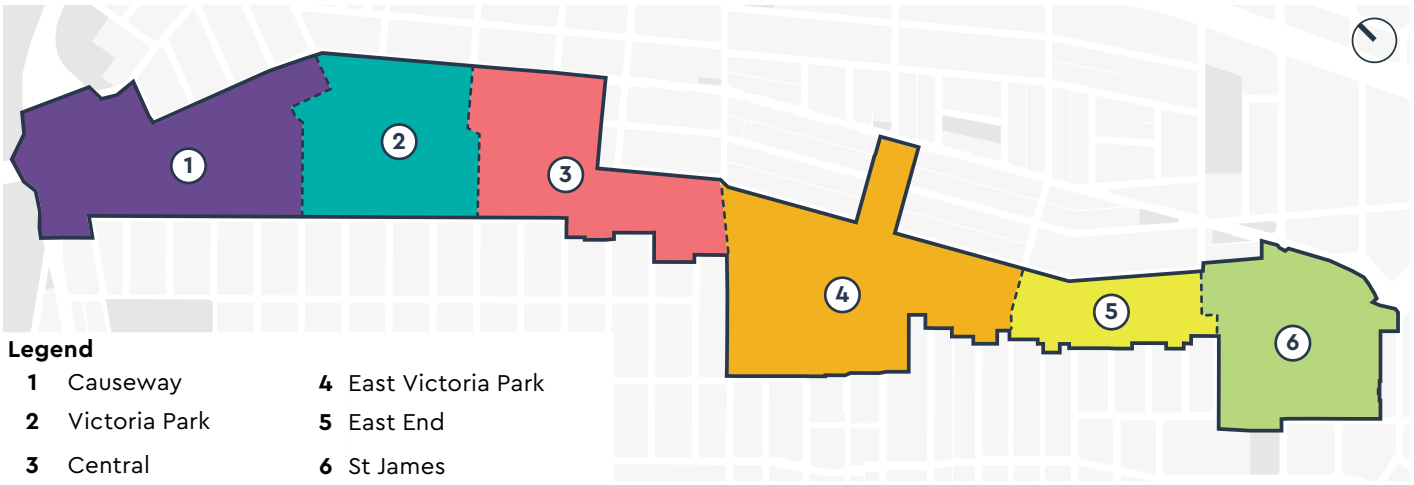


Figure 12: Sub-Precinct Boundaries

Objective 5

Transform Major Sites through mixed-use development with new internal connections and public spaces

Why is this an objective?

Albany Highway includes several large sites requiring site-specific policy direction to appropriately respond to unique characteristics, site size, and local context.

These sites provide an opportunity to deliver significantly greater development outcomes compared to surrounding sites, however it is important to ensure that this development provides the requisite design quality, diverse and affordable housing options and cultural and commercial amenities to shape a complete community.

How does the Precinct Structure Plan Respond?

Major Site Requirements

The AHPSP grants significantly increased development entitlements (height and plot ratio) for identified Major Sites identified in **Figure 13** while setting clear expectations for design quality and public benefits from their redevelopment.

To formalise these expectations and coordinate the development of these large, complex landholdings, Part 1 establishes additional development requirements with specific obligations for each site.

This approach ensures that expected precinct outcomes are achieved on Major Sites with significant development potential while allowing flexibility in site planning and design to maintain long-term commercial viability.

Part 1 outlines matters to be resolved through an LDP or Development Application but does not prescribe specific outcomes. These outcomes will be detailed and agreed upon through the assessment process in consultation with the Town.

To support this process, the following section further explains the Part 1 provisions for each Major Site, including high-level planning and urban design principles for all sites and site-specific planning and urban design directions.

Each site also has a conceptual illustration showing one possible interpretation of Part 1 requirements. The locations of site components are indicative, with design responses considered if they equally or better address the planning and urban design principles outlined in the Plan.

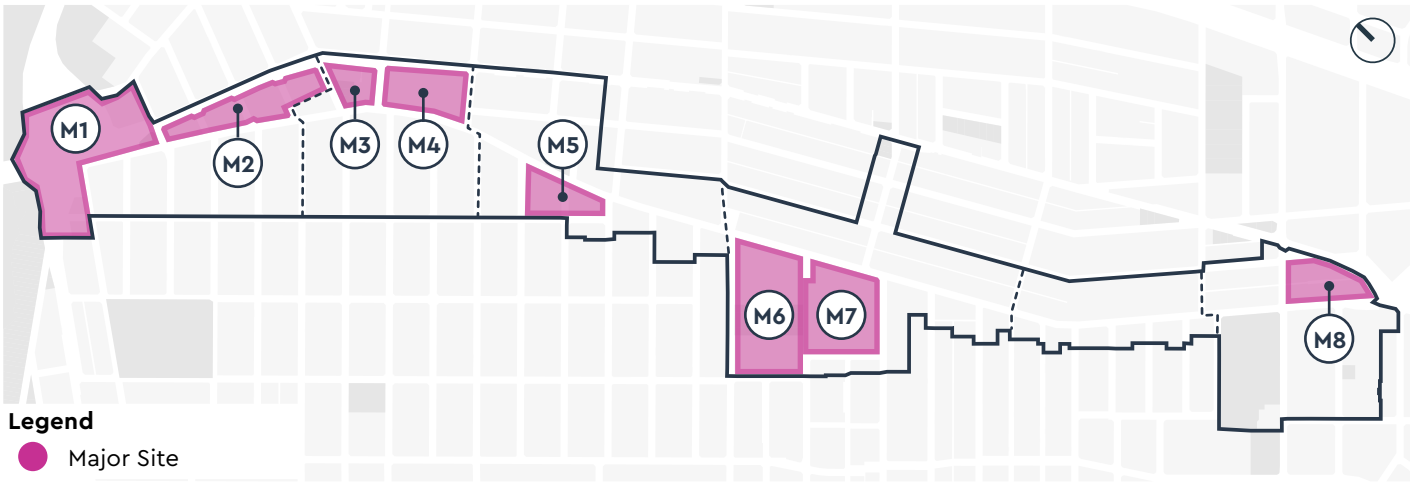


Figure 13: Major Sites

Overarching Major Site Principles



Achieve a best practice standard of sustainability through site design, architecture, building energy use, energy systems, total water cycle management and water sensitive urban design



Provide a mix of housing types and tenures that consider community needs, including Affordable Housing opportunities such as key worker housing, student accommodation and build-to-rent



Ensure that strategic opportunities for tall buildings are carefully managed to ensure generous building separation, minimise overshadowing impacts to surrounding areas, and create a respectful relationship with the surrounding neighbourhood



Deliver significant enhancements to surrounding public realm consistent with the Albany Highway Public Realm Strategy and create new streets, lanes and other public through-connections that improve accessibility



Ensure ground level frontages maximise active edges and support a vibrant pedestrian environment, including retail, commercial and community spaces



Maximise opportunities to integrate community supporting amenities that serve the development and the broader community and support precinct economic development objectives (e.g. childcare, creative workspace, performance and evening economy venues)

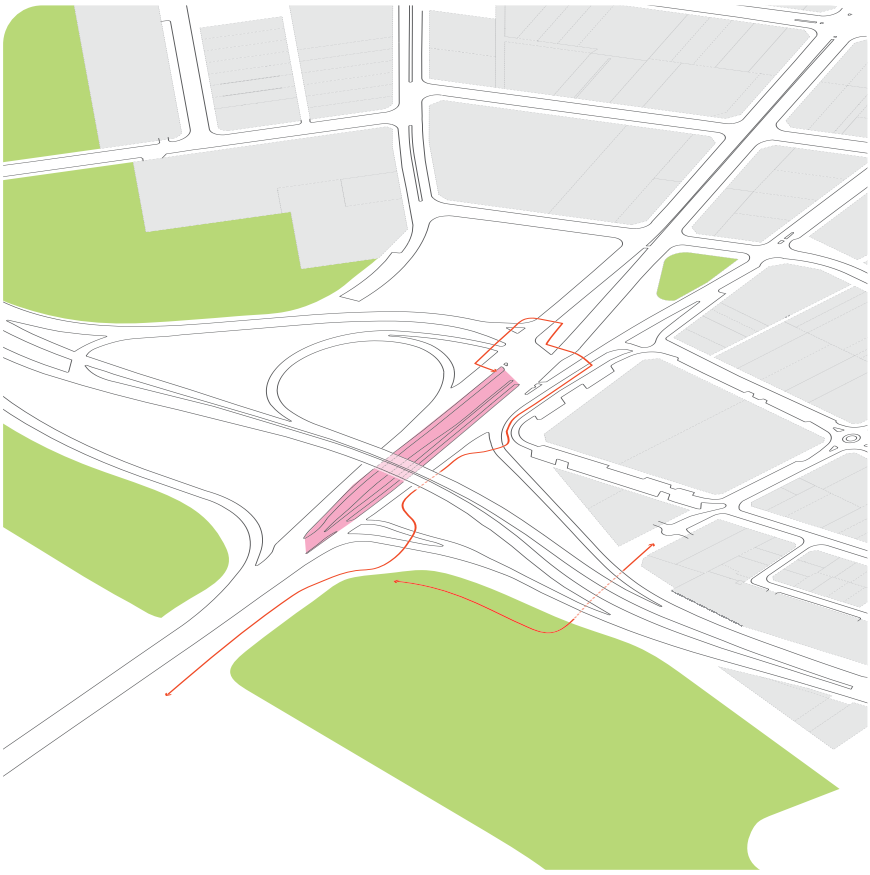


Create new roads, lanes and pedestrian connections and public open space which enhances pedestrian permeability and creates high quality public realm within and surrounding the site



Consolidate and conceal car parking and vehicle access points to maximise active frontages and provide sufficient public parking to support precinct visitation

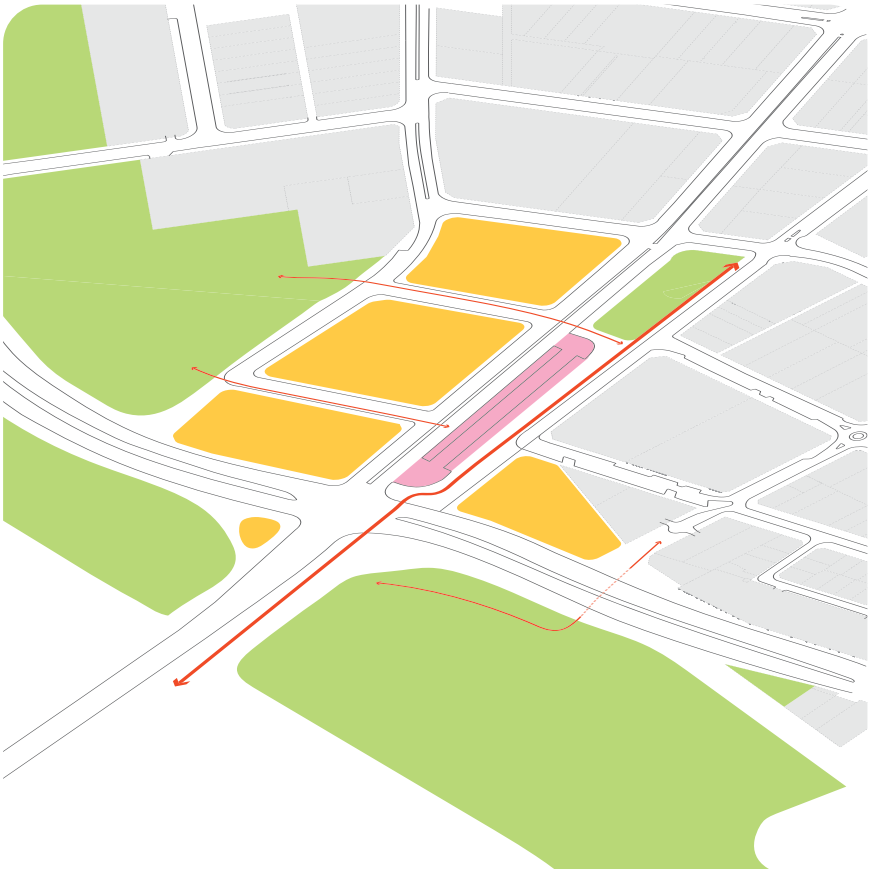
Figure 14: Example Major Site Opportunity (M1)



Current Configuration

Currently, the area around the Causeway Bus Station is inactive and dominated by slip roads which feed into the Canning Highway overpass. Built in the 1970s, this overpass provides free-flowing access Along Great Eastern Highway for regional traffic, but severely limits visual and physical connectivity to the foreshore from Albany Highway.

The inability to turn right onto Great Eastern Highway from Shepperton Road also contributes to significant rat-running and congestion along Burswood Road.



Redesign Opportunity

The potential to replace the existing overpass with an at-grade intersection between Canning Highway/Great Eastern Highway and Shepperton Road/The Causeway frees up considerable land for a new transit hub, potential development, additional green space, and improved connections between the Highway and the foreshore.

- Existing development
- Open Space
- Causeway Bus Station
- Opportunity Sites
- Key Connections

M1 Causeway Interchange

Intent

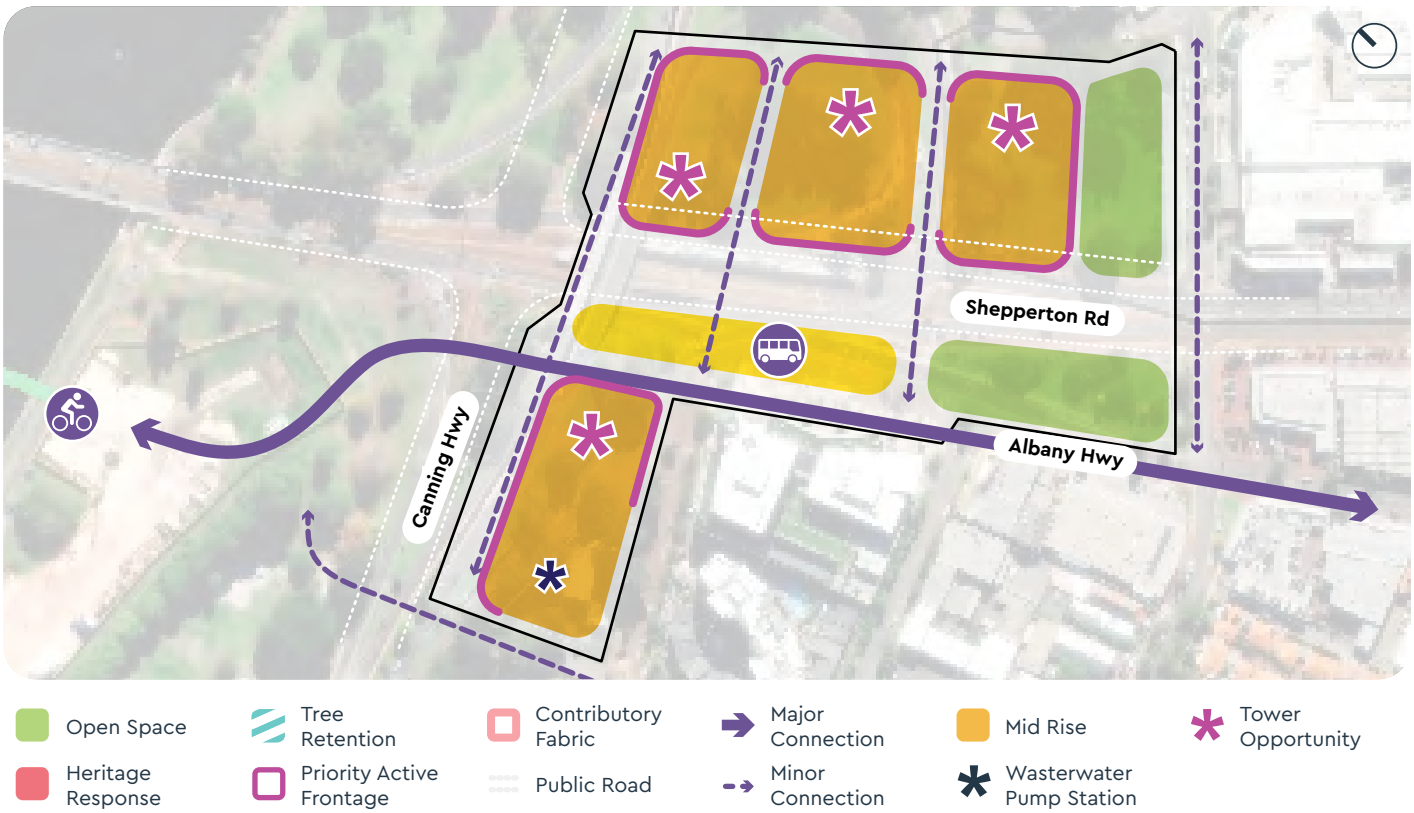
A long term transformational opportunity, future redevelopment of the Interchange Road Reserve lands to create an at-grade intersection will unlock over 2 hectares of developable land to support significant intensification of population and employment growth.

A relocated Causeway Bus interchange will enhance pedestrian movement, provide for significant new public realm and accommodate the future implementation of mid tier transport.

Desired Outcomes

- Replacement of existing overpass with an at-grade intersection between Canning Highway/ Great Eastern Highway and Shepperton Road/The Causeway facilitating enhanced traffic movement and releasing land for development
- Prioritise large floorplate office development within resulting development sites to maximise employment opportunities
- Create a new public realm network to improve connections to South Burswood across Shepperton Rd and to the Swan River foreshore
- Provide through connections between development sites facilitating access to GO Edwards Park
- Maximise opportunities for retention of established mature trees within new public open space
- Ensure ground level activation of Shepperton Road with commercial uses and a suitable built form response such as a colonnade or generous urban setbacks

Figure 15: M1 Design Principles



M2 Shepperton Block

Intent

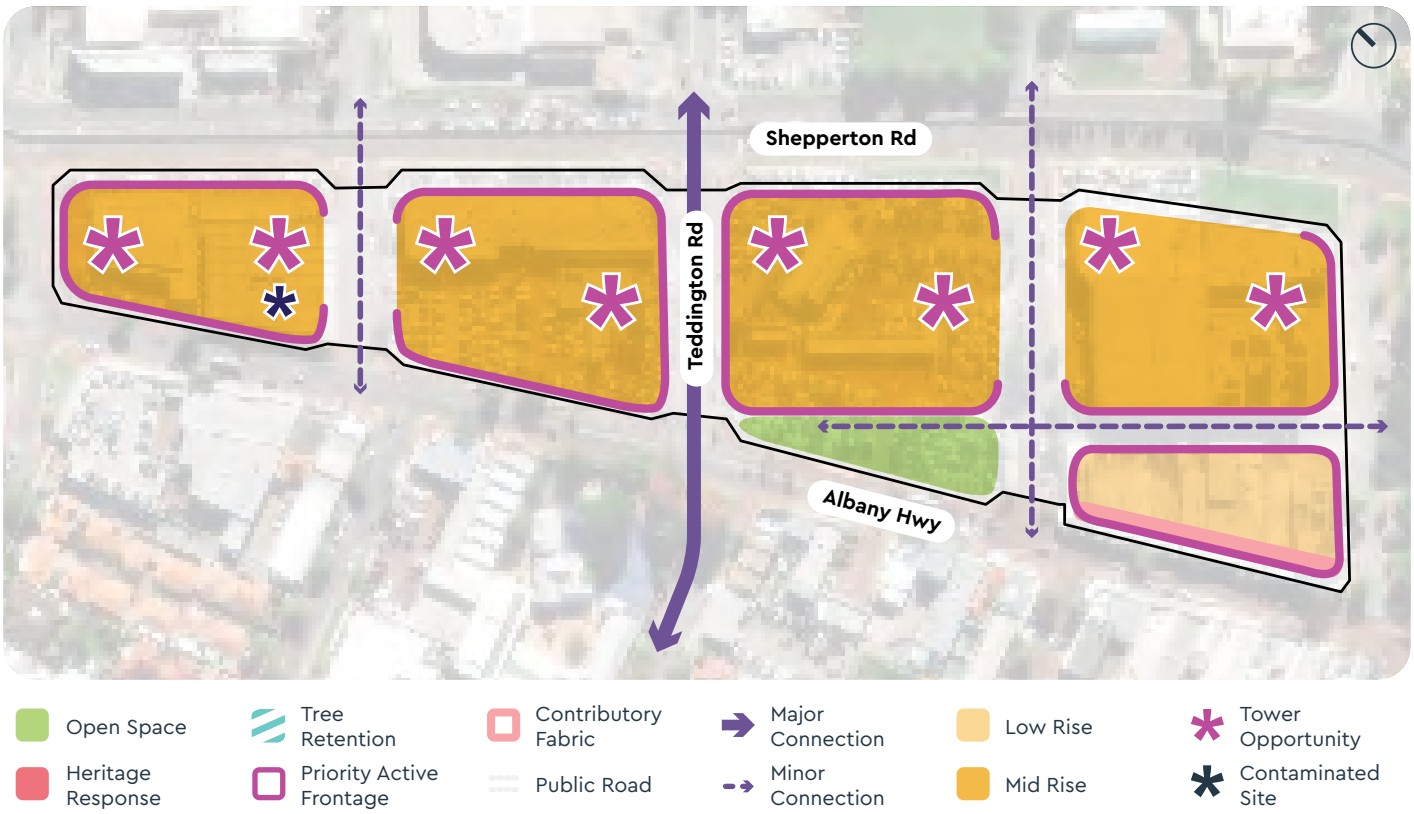
Recognising the prominent location of this significant landholding, the Plan supports transitioning this site into a mixed use quarter with significant residential housing and commercial floorspace, community amenities, and public gathering places which extends activity and public life towards the Swan River.

Site redevelopment will include active mid-rise building frontages to Albany Highway, with landmark tower locations towers situated along the Shepperton Road frontage. Transformation of minor side streets into public spaces and new pedestrian connections will create places to gather.

Desired Outcomes

- Street frontage and building design reflects the original scale and grain of development within the sites prior to their development as car yards
- Ensure ground level activation of Albany Highway frontage and laneways with retail, commercial or community uses
- Ensure ground level activation of Shepperton Road with commercial uses and a suitable built form response such as a colonnade or generous urban setbacks
- Ensure a significant provision of employment-generating uses including the potential retention of car sales within new development, upper level office space and ground floor commercial and light industrial uses
- Focus the highest buildings along the Shepparton Rd frontage within the identified opportunity locations (no more than two per block) transitioning to lower scale buildings along all street boundaries
- Provide a significant new public plaza preferably linked with community facilities such as a performance space or hall at the intersection of Albany Highway and Rushton St which recognises the original location of the 1899 Victoria Park Town Hall
- Widen and enhance the laneway between Rushton St and Harvey St as an activated pedestrian laneway connecting Rushton St with Memorial Gardens

Figure 16: M2 Design Principles



M3 Broken Hill Block

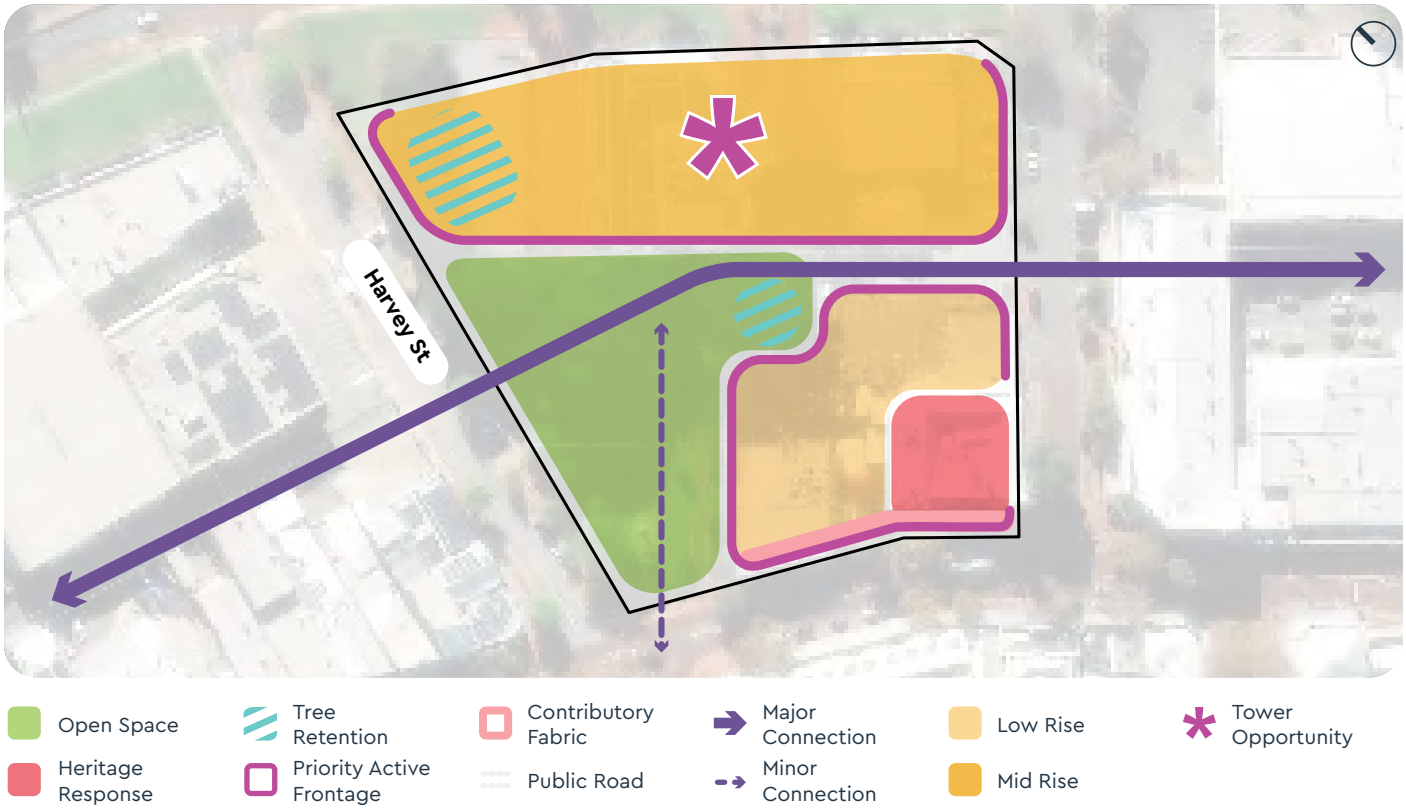
Intent

Future development of the site will be coordinated to broaden housing diversity and increase employment-generating floorspace, while protecting and enhancing Memorial Gardens and the Broken Hill Hotel is important assets. Site development will improve neighbourhood connections, strengthening mid block accessibility and include retention of significant trees.

Desired Outcomes

- Protection and enhancement of Broken Hill Hotel as a landmark heritage asset, with a setback between the heritage components of the site any new development
- Activate Albany Highway, all frontages to Memorial Gardens and internal pedestrian links with at-grade retail and mixed use space
- Creation of a publicly accessible link making use of existing easements which connects Harper Street to Harvey street though Memorial Gardens
- Preservation of significant trees within Memorial Gardens and on abutting private land
- Focus highest buildings on two key opportunity sites which reduce overshadowing impacts to Memorial Gardens and Albany Highway
- Coordinate future development to ensure a cohesive interior public realm and mid-block connectivity is achieved, with a pedestrian connection through the site between will serve as a key organizing element for new development

Figure 17: M3 Design Principles



M4 Victoria Park Central Block

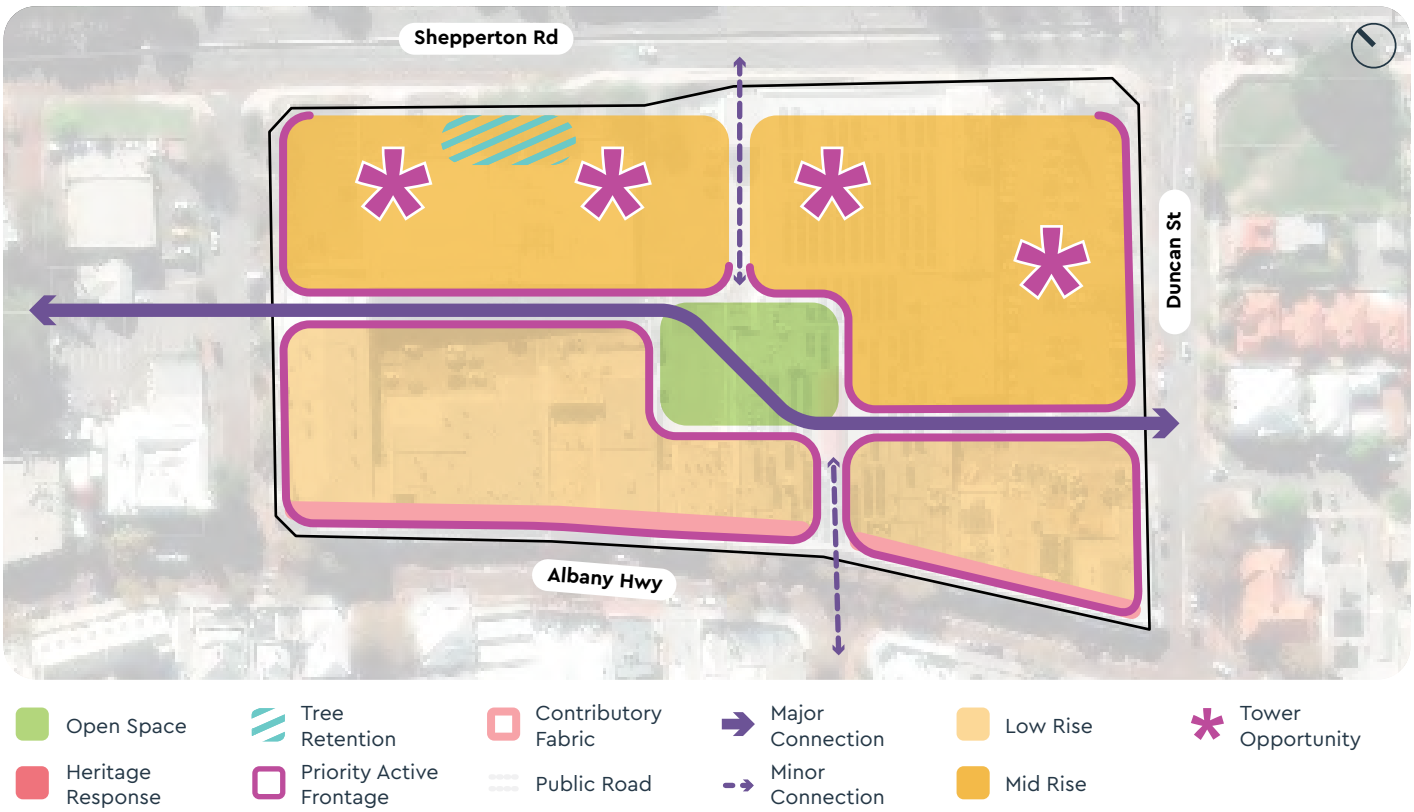
Intent

Recognising the existing role of this site as an important local shopping destination, the Plan supports transitioning this site into a vibrant urban quarter with significantly increased retail and commercial floorspace, new housing and employment options, community amenities, and public gathering places. Site redevelopment will include active low- and lower mid-rise building frontages to Albany Highway, with landmark tower locations situated along the Shepperton Road frontage. Pedestrian-friendly lanes and public spaces within the site will open up the site to public access and provide increased retail frontage.

Desired Outcomes

- Enhance this location as a regionally significant shopping node with new, services, and amenities
- Ensure ground level activation of the Albany Highway and Duncan St frontages and all primary internal pedestrian connections with retail, commercial or community uses
- Explore opportunities to integrate significant employment floorspace above ground level and fronting Shepperton Rd and Harper St locations, including office, commercial and institutional uses
- Focus the highest buildings to the north of the site in three identified opportunity locations, transitioning to lower scale buildings along all street boundaries
- Provide a continuous east-west pedestrian mews with active ground floor uses following the alignment of existing sewer easement, connecting Duncan St to Harper St
- Provide north south-access from Albany Highway to Shepperton Rd at grade or to the established pedestrian underpass, subject to future investigation of whether the underpass should be retained
- Integrate a significant public plaza at the centre of the site that will function as an active public space connected to commercial and community uses with good solar access

Figure 18: M4 Design Principles



M5 Read Block

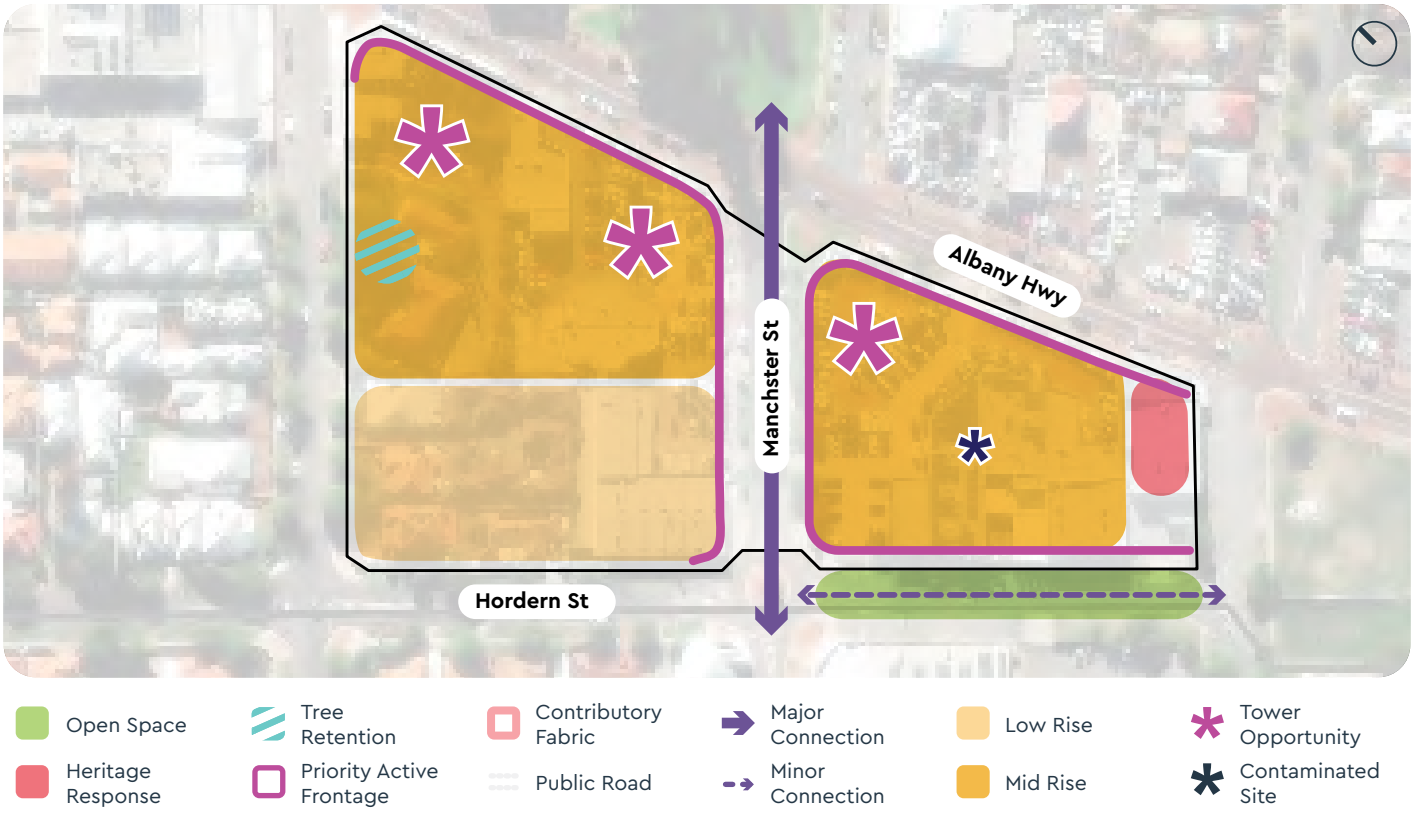
Intent

Recognizing the mixed commercial and residential character of the Central precinct, this Major Site is envisioned to become a mixed use development node through the addition of new housing options, significant service commercial or light industrial activity, and public realm enhancements to surrounding streets.

Desired Outcomes

- Sensitive integration of heritage listed built fabric into redevelopment
- Substantial public realm enhancement of Manchester, Hordern, Rathay and Temple streets with road space reallocated to public realm
- Albany Highway and Manchester Street frontage provides retail, commercial and light industrial unites which promote increased commercial and cultural activity and activates Read Park
- Ensure landscaped setbacks to side streets and generous back yards where abutting residential sties to create a sensitive transition to surrounding development
- Consolidate required deep soil zones to create a generous shared outdoor gathering/play space for site residents
- Predominantly mid-rise buildings with opportunities for three landmark taller buildings.
- Explore opportunities to incorporate affordable workspace including small artist studios and a community maker space.
- Where fronting Hordern and Temple Street, ground floor residences will connect to the neighbourhood with frequent front doors and landscaped setbacks and low fencing no greater than 1.2m.
- Incorporate transformation of public realm within Manchester Street, Hordern Street, Rathay Street and Temple street including significant tree canopy and reallocation of road space to public realm,

Figure 19: M5 Design Principles



M6 Macmillan Precinct

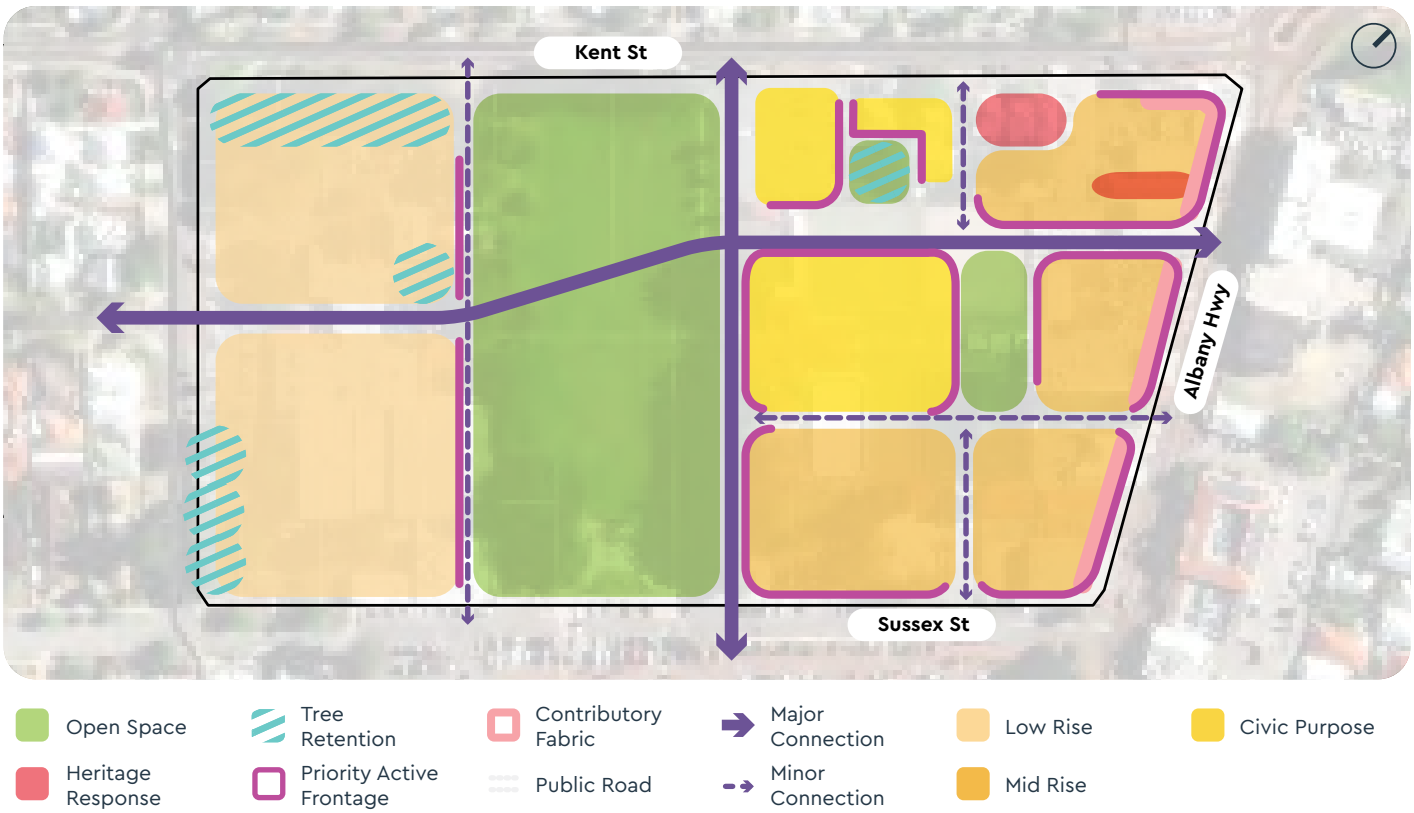
Intent

Recognising the existing role of this site as an important community services hub and public open space, the Plan supports transformation of the site into a mixed use community and residential precinct consistent with the endorsed Macmillan Precinct Masterplan.

Desired Outcomes

- Provision of a new community services hub integrating the functions of the Victoria Park Library and
- Significant enhancement of John Macmillan Park as a multifunctional recreation space and events ground
- Creation of a new public realm network comprising urban laneways and vehicle access between Albany Highway and John Macmillan increasing permeability and ground floor activation
- Mid-rise development of sites fronting Albany highway and Sussex Street for mixed residential and commercial uses
- Low-rise residential development fronting Gloucester Street with landscaped setbacks to create a sensitive transition to surrounding development

Figure 20: M6 Design Principles



M7 Park Centre Block

Intent

Recognising the existing role of this site as an important local shopping destination, the Plan supports transitioning this conventional shopping centre into a vibrant urban quarter with significantly increased retail and commercial floorspace, new housing and employment options, community amenities, and public gathering places. Site redevelopment will include active low- and lower mid-rise building frontages to Albany Highway, with landmark tower locations towers in the centre of the site. Pedestrian-friendly lanes and public spaces will open up the site to public access, with major roads facilitating vehicle access from Mint Street into consolidated public parking.

Desired Outcomes

- Enhance this location as a regionally significant shopping node with new, services, and amenities
- Ensure ground level activation of the entire Albany Highway and Sussex street frontages and all primary internal pedestrian connections with retail, commercial or community uses
- Explore opportunities to integrate significant employment floorspace above ground level including office, commercial and educational uses
- Focus the highest buildings near the centre of the site in the four identified opportunity locations, transitioning to lower scale buildings along all street boundaries
- Break up the site into four distinct quarters with clear north-south and east-west roads or pedestrian connections
- Integrate a significant public plaza at the centre of the site that will function as an active public space connected to commercial and community uses with good solar access
- Integrate a minor public plaza at the corner of Sussex Street which incorporates retention of significant trees
- Enhance the design of Sussex Street to accommodate shared users and provide pedestrian priority crossings to the Macmillan Precinct , including the potential signalisation of the Sussex Street and Albany Highway intersection to relieve pressure on Mint Street

Figure 21: M7 Design Principles



M8 Welshpool Block

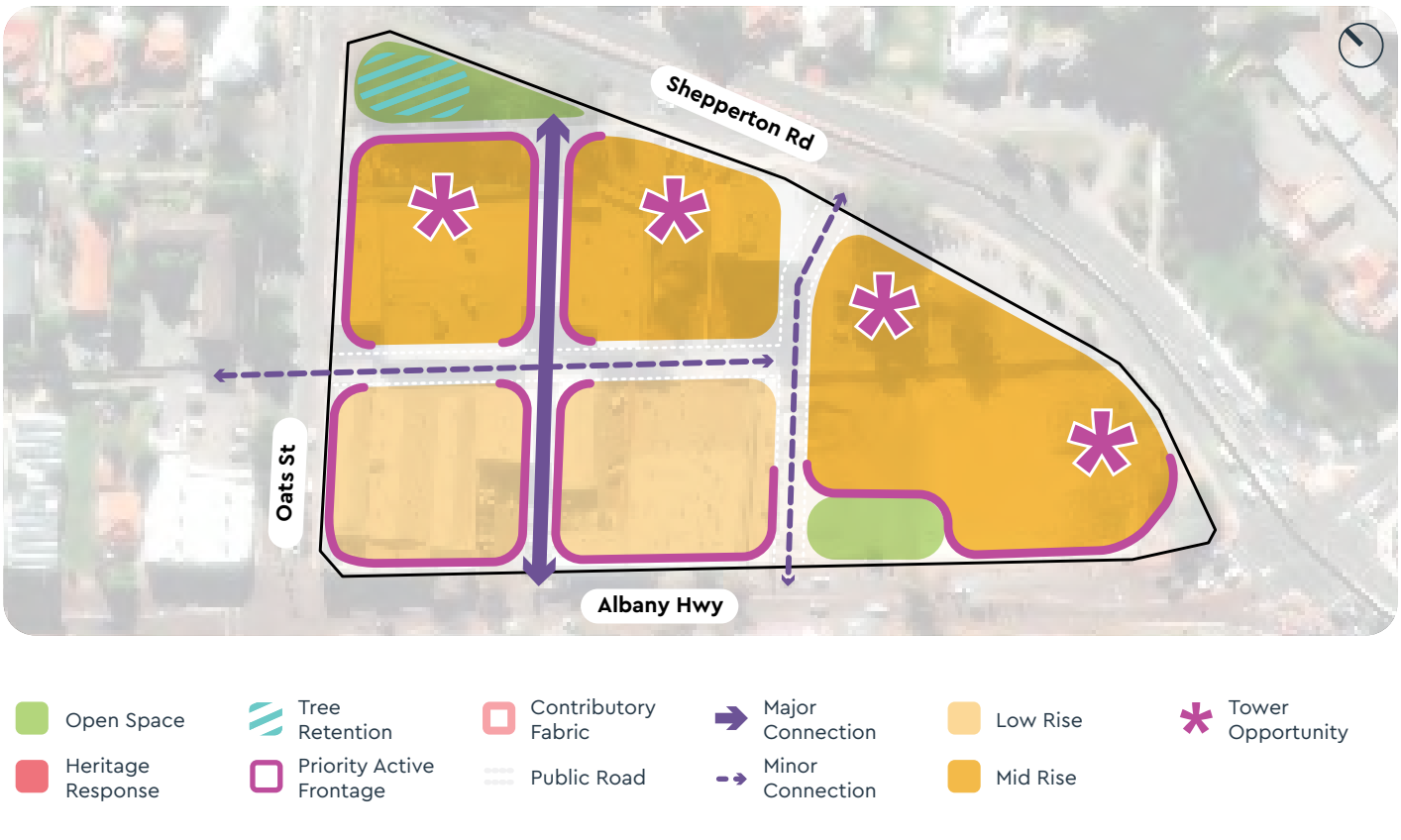
Intent

Acknowledging the site's current importance as a local hub for service-based commercial activities in the wider St James area, the Plan envisions its transformation into a vibrant, mixed-use precinct combining residential, retail, and commercial spaces. This development will provide increased retail and commercial floorspace, new housing and employment opportunities, community amenities, and public gathering spaces. The redevelopment will feature active low- and mid-rise building frontages along Albany Highway, with prominent towers located near Shepperton Road. Pedestrian-friendly lanes and public areas will enhance accessibility.

Desired Outcomes

- Elevate the site into a regionally significant shopping destination with new services and amenities.
- Activate the ground level along Albany Highway and Oats Street, as well as all key internal pedestrian routes, with retail, commercial, or community spaces.
- Concentrate the tallest buildings near Shepperton Road in four designated areas, transitioning to lower-rise structures along all street edges.
- Create distinct north-south and east-west roadways or pedestrian pathways lined with active uses.
- Include a small public plaza fronting Albany Highway and identify areas for tree preservation and biodiversity enhancement, especially along Shepperton Road.

Figure 22: M8 Design Principles



Objective 6

Integrate development along side streets and laneways as an integral part of the precinct

Why is this an objective?

As a linear activity corridor, Albany Highway borders sensitive lower-density residential areas, including unique areas of intact historic residential fabric.

The precinct's narrow and constrained nature is a key part of its place identity and the Town's urban structure, which is intended to be preserved. However, past efforts to define the precinct boundary have excluded much of its immediate context, including connecting streets and neighbouring properties.

It has been identified that including these areas within the precinct would better integrate it with its surroundings through cohesive public realm enhancements and transitional development.

Expanding the precinct would also introduce alternative sites away from the Highway, which are less constrained by commercial land values and small lot sizes, facilitating infill housing development in the short term.

How does the Plan Respond?

The precinct boundary has been moderately expanded compared to prior planning in order to incorporate key transitional areas. This expansion was guided by density testing, built form analysis, and commercial property advice.

As shown in **Figure 23**, the additional sites now included in the precinct are located between Albany Highway north of Hordern Street, Albany Highway and Shepperton Road west of Gresham Street, between Hubert Street and Albany Highway, and between Alday Street and Hill View Terrace. Minor adjustments were also made to the boundary to reflect land ownership and include key drainage sumps.

This boundary achieves the following desired urban structure outcomes:

- **Preservation of Linear Structure:** The constrained boundary preserves Albany Highway's unique role as an Activity Corridor. This ensures that development remains focused on the Highway to support activation while minimising impacts on surrounding lower-density residential areas.
- Incorporation of Mixed Density Areas: The expansion includes areas with existing apartments and grouped dwellings where the original heritage fabric is absent or fragmented. These areas are suitable for further residential infill.
- **Development Equity:** Sites behind highway-fronting lots that are outside sensitive areas are now included in the precinct, ensuring they can be developed. This promotes a gradual transition in building form across multiple lots and reduces the need for excessive setbacks and overshadowing constraints on prime development sites.
- **Clear Distinction from Other Planning Areas:** The precinct boundary maintains a clear separation from other planning areas, such as Oats Street Station Precinct, Carlisle Station Precinct, Victoria Park Station Precinct, and Burswood South Planning Area, which are subject to separate planning processes aligned with the Town's Local Planning Strategy.

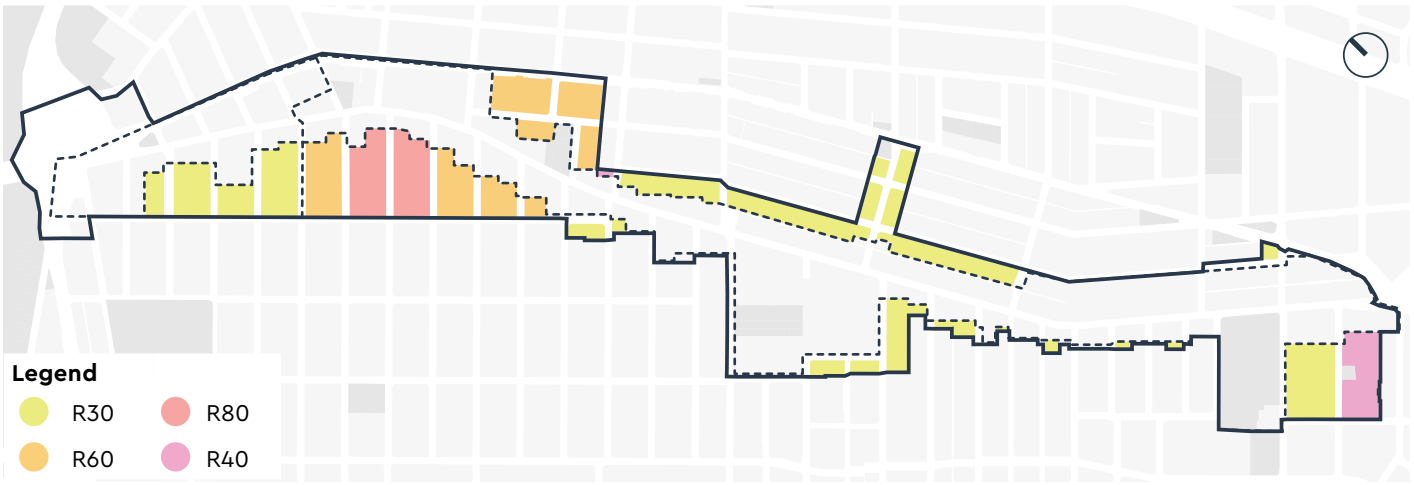


Figure 23: Precinct Boundary Expansion Areas (Previous R-Coding)

SPP 4.2 Minimum Density Compliance

State Planning Policy 4.2 identifies an 800m buffer distance from an Activity Centre as the standard basis for boundary definition for a Secondary Centre with a minimum residential density target of 40 dwellings per gross urban hectare. Densities within 800m of the historic precinct boundary have been assessed to ensure that the reduced precinct boundary satisfies the intent of the policy.

With an approximate gross urban zoned area of 481 hectares, roughly 19,230 dwellings would be required within 800m of Albany Highway to meet the 40 dwelling target. The area currently achieves a density of 20.9 dwellings per ha with around 10,050 dwellings as of 2016. This rises to 25.8 dw/ha accounting for existing zoned capacity based on current R-coding in surrounding areas (excluding Strategic Investigation Areas identified in the Town's Local Planning Policy). This leaves a balance of around 6,800 additional dwellings required to satisfy SPP 4.2 minimum density requirements.

Built form testing of the development heights and plot ratio provided for by the AHPSP demonstrate a maximum developable yield of approximately 9,968 dwellings (including approximately 1,857 existing dwellings within the precinct as at 2016).

This demonstrates that the height and density provisions within the preferred precinct boundary not only meet but exceed the minimum density requirements set by SPP 4.2.

It is important to recognise that actual developable capacity within 800m of Albany Highway is expected to be significantly higher once potential future increases in capacity are formalised within the strategic investigation areas at Burswood South and around Victoria Park, Carlisle, and Oats Street stations.

The increased capacity in these areas is expected to further support the achievement of density targets by providing additional surplus capacity, acknowledging that many sites within the AHPSP area are unlikely to develop in the short to medium term.

Table 20: Residential Density

	Dwellings per GUZ ha within 800m	Achieved Density per GUZ ha within 800m	Dwellings required to achieve 40 dw/GUZ ha	Precinct Structure Plan Capacity
Current Density (ABS 2016)	10,050	20.9	9,180	
Existing Zoned Capacity (excl. uplift within strategic investigation areas)	12,383	25.8	6,847	8,110 (1,263 surplus)

6.3 Public Realm



6.3.1 Response to Context

Albany Highway Today is perhaps Perth's longest continuous public space, though streetscape condition varies and space for pedestrians is limited. It is punctuated by a series of small public spaces along its length, although these are often underutilized and in need of enhancement. Large scale regional parkland is located close to the precinct, however pedestrian access is limited and connecting streetscapes are in poor condition.

Albany Highway Tomorrow will benefit from a transformed public realm that prioritises people, cycling and public transit above cars, shifting focus away from movement towards place. A leafy and richly detailed public realm along the length of Albany Highway, new open spaces created within Major Sites and enhancements to existing parkland will create an inclusive, aesthetically pleasing neighbourhood with a strong local identity and sense of place.

6.3.2 Community Priorities

Community engagement highlighted the following community priorities for Public Realm on Albany Highway:

Grey to Green: Consulted stakeholders wished to see existing paved areas converted to landscaped gardens with significant tree canopy to dramatically increase greenery and shade along the Highway

Pedestrian Priority: Interventions which transformed the function of Albany Highway to allow closures for events and to support slower traffic movement where pedestrians are prioritised were widely supported

Rethinking Existing Spaces: Many wish to see existing parks and green spaces upgraded and improved to accommodate a wider range of activities and appeal to more of the local community

Table 21: Summary of key issues and Structure Plan response

Key Issue	Current Conditions	Plan Response
Streetscape Condition	The streetscape along Albany Highway varies and is often not suitable for extended pedestrian use, with limited space, poor materials and limited street trees and furniture. On average, 62% of the Highway's profile is allocated to cars.	The plan seeks to transform Albany Highway's streetscape to prioritise pedestrians, cycling, and public transit, enhancing the quality through shared spaces, traffic calming, tree planting, and water-sensitive design. This includes significant improvements to materiality, landscaping, and the reallocation of road space from cars to people
Public Open Space Provision	As a growing neighbourhood, Victoria Park needs more public space to meet the needs of a larger population to play, shop, relax and exercise. Within the Precinct, existing open space accounts for around 6.5% of total precinct area, with many .spaces along the Highway are underutilised and in need of enhancement.	The Plan aims to increase the quality and quantity of public open space through improvements to existing parks, conversion of drainage sumps into functional spaces, and the creation of new open spaces within major development sites, informed and coordinated by the Public Realm Strategy.
Cultural Significance	The precinct's public realm contains significant public artworks, heritage features and Aboriginal significance which is not apparent to all users.	The Plan emphasises the need for a consistent and intentional approach to public realm design including materiality and planting palette to reinforce the precinct's cultural identity and sense of place, including encompassing cultural elements significant to Albany Highway and its community.

Objective 7

Increase the quality and quantity of public open space by repurposing roads, upgrading drainage sumps, and creating new public realm within Major Sites

Why is this an objective?

In response to a growing population, opportunities to create new public spaces and expand the Highway's public realm will ensure the needs of the area's residents are met.

Consistent with findings of precinct analysis, the existing condition of many existing open spaces within the precinct lack the amenities to support frequent use and support a growing population, there is a lack of smaller space for local community use alongside an overall open space shortfall which the plan addresses through sump conversion and the creation of new open space.

How does the Precinct Structure Plan Respond?

The AHPSP aims to increase open space within the precinct by enhancing existing parks, converting drainage sumps into functional public spaces, and delivering new open spaces through major site redevelopment.

Park Improvement

The Public Realm Strategy provides for significant enhancements to the Highway's established parks and public spaces to support improved access, enhanced and more inclusive amenities, increased events and activation, and strengthened biodiversity.

All existing parks will be improved over time consistent with the design principles and activation opportunities identified the Albany Highway Public Realm Strategy. Planning for enhancement of these spaces is underway including the Macmillan Precinct Masterplan and Edward Millen Park Masterplan. Planned foreshore enhancements within McCallum Reserve will also benefit the precinct.

Noting these plans, the Strategy identifies Asquith Street Reserve, Memorial Gardens and Read Park as priority green spaces to bring forward for enhancement.

Refer to the **Public Realm Strategy** for detailed Park Improvement guidance.

Table 22: Existing Precinct Public Spaces to be Enhanced

Existing Space	Size	Location
Asquith Reserve	1750 sqm	Causeway
Memorial Gardens	3360 sqm	Victoria Park
Read Park	7900 sqm	Central
John Macmillan Park	15600 sqm	East Victoria Park
Isaia Corner	1200 sqm	East Victoria Park
Edward Millen Park	47750 sqm	St James
Alday Street Reserve	1600 sqm	St James

Sump Conversion

To increase minor open space for local community use and amenity, several sumps within the precinct are proposed to be enhanced as functional public spaces.

These upgraded sumps will provide additional seating, tree canopy, and recreational amenities, while still retaining their drainage function. Sustainable infrastructure and filtration processes will be integrated to improve local water quality.

Subject to further investigation, some sumps may also be considered for public parking or residential development.

Table 23: Existing Sumps to be Enhanced

Existing Sump	Preferred Outcome
3 Merton St	Development
763 Albany Hwy	Development
Hubert St Car Park	Development
1–3 Westminster St	Open Space, Biodiversity
4 Westminster St	Development
4–6 Willis St	Open Space, Biodiversity
2 Camberwell St	Open Space, Biodiversity
1 Patricia St	Open Space, Biodiversity
1 Ballie Ave	Open Space, Biodiversity

New Open Space

To address the shortfall of open space within the precinct and provide more diverse and accessible spaces suited to community use, the Public Realm Strategy identifies locations for new open space to be provided through development of Major Sites. Consistent with the Strategy, the AHPSP identifies the provision of these open spaces as a key requirement for Major Site development within Part 1. It is anticipated that the provision of new open space across all sites will total approximately 13,000 sqm sufficient to raise Open Space provision from 6.5% to 8%. Refer to the Public Realm Strategy for detailed New Open Space guidance.

In addition to POS, new apartment and mixed use developments will be required to provide communal open space in accordance with SPP 7.3.

Table 24: Preferred Locations for New Public Spaces

Major Site	New Open Space	Size	Location
M1	**Between Shepperton Rd and Albany Hwy**	8,000 sqm	Causeway
M2	**Corner of Albany Hwy and Rushton St**	1,000 sqm	Causeway
M4	**Mid Block**	1,500 sqm	Victoria Park
M6	**Mid Block**	150 sqm	East Victoria Park
M7	**Mid Block**	2,000 sqm	East Victoria Park
	Corner of Albany Hwy and Sussex St	500 sqm	East Victoria Park

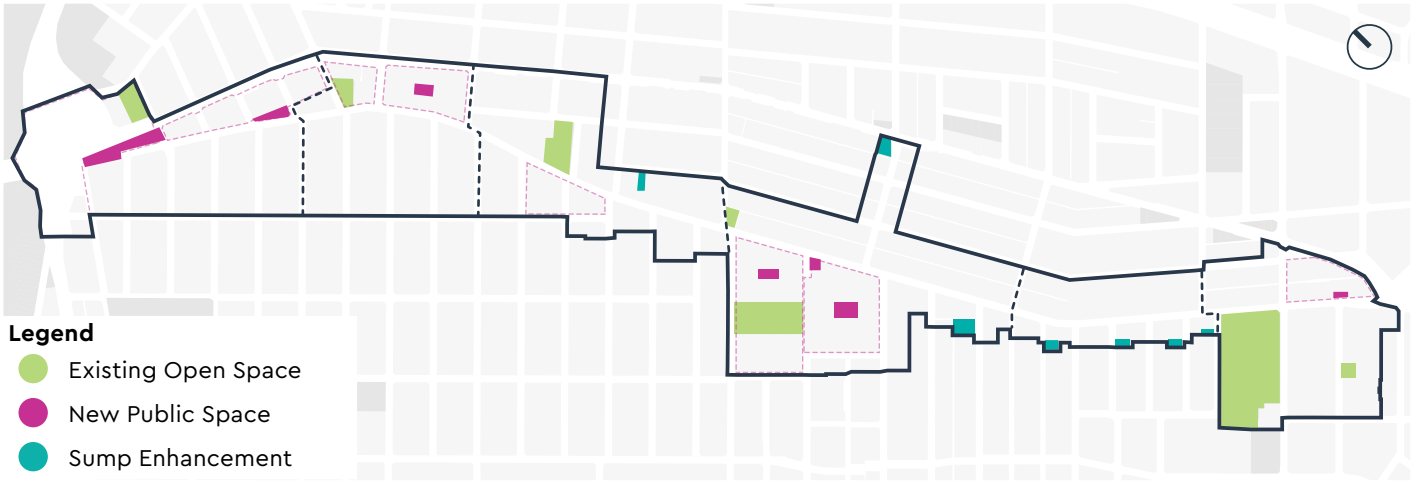


Figure 24: Park Improvement, Sump Conversion and New Open Space Plan

Objective 8

Enhance the quality of Albany Highway's streetscape through shared space and traffic calming interventions, tree planting and water sensitive design

Why is this an objective?

Albany Highway's Streetscape, and that of key connecting streets and lanes, is a vital component of the precinct's public realm as a platform for commercial trade, movement and public life. Analysis has shown that current conditions within the precinct are fragmented, poor and in need of significant enhancement to continue meeting the needs of the area's growing population and visitor base. Enhancing the quality of streets and lanes throughout the precinct is also needed to support development and improve biodiversity.

How does the Precinct Structure Plan Respond?

The AHPSP aims to significantly enhance Albany Highway and key streets and lanes within the precinct to support inclusive accessibility, improve pedestrian safety and amenity, and increase biodiversity and tree canopy.

Albany Highway

The Public Realm Strategy envisions substantial improvements to Albany Highway's materiality and landscaping, prioritising the reallocation of space from cars to people. This will be achieved through four intervention types applied across various sub-precincts.

Highway Lanes

The Strategy also focuses on enhancing the materiality, landscaping, and activation of laneways parallel to Albany Highway, extending the precinct's public realm.

These improvements will transform existing laneways into alternative walking and cycling routes, as well as retail destinations, supported by minor activations such as public art, lighting, and planters to stimulate ground-level retail, commercial, and residential use. New laneways and pedestrian mews will be introduced as part of Major Site redevelopment.

Recognising the variation in laneway width and tenure, Part 1 of the AHPSP sets requirements for widening laneways to minimum standards and formalising them as public Rights of Way or Easements in specified areas.

Other Streets

With the expanded precinct boundary incorporating additional streets adjoining Albany Highway, the Public Realm Strategy also targets these streets for enhancement to create a seamlessly integrated public realm. This will ensure that redevelopment in surrounding areas is supported by appropriate public realm improvements.

The streets are categorised into two groups:

- **Station Streets:** These streets will undergo significant upgrades to support micromobility and pedestrian movement, facilitating increased use of public transport by precinct residents and visitors.

  Duncan Street, Mint Street, Archer Street, and Oats Street are identified as priority enhancement areas to improve connectivity between the precinct and the Town's three train stations.

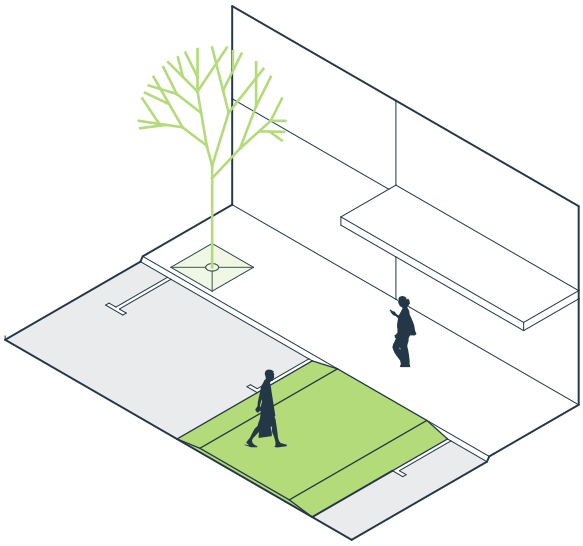
- **Secondary Streets:** These streets will receive enhanced landscaping, infill tree canopy, and pedestrian improvements to support infill development and boost local connectivity.

  Priority streets include Hordern Street, Gloucester Street, Cargill Street, Teddington Road, Hubert Street, and Merton Street, chosen for their role in micromobility and their position in the precinct's street hierarchy.

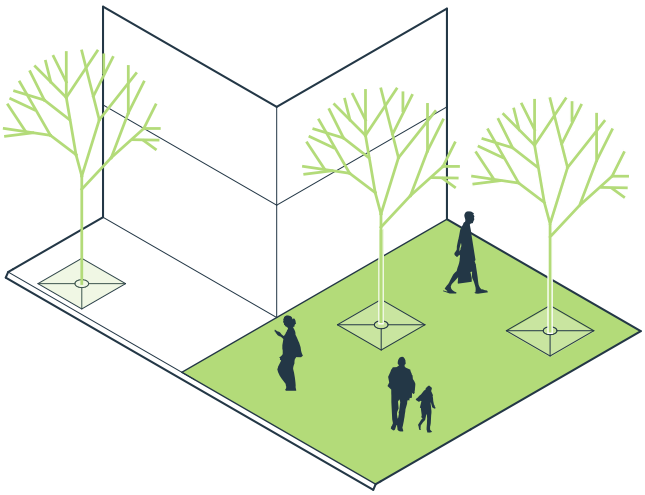
Figure 25: Public Realm Interventions

Space Reallocation Opportunities

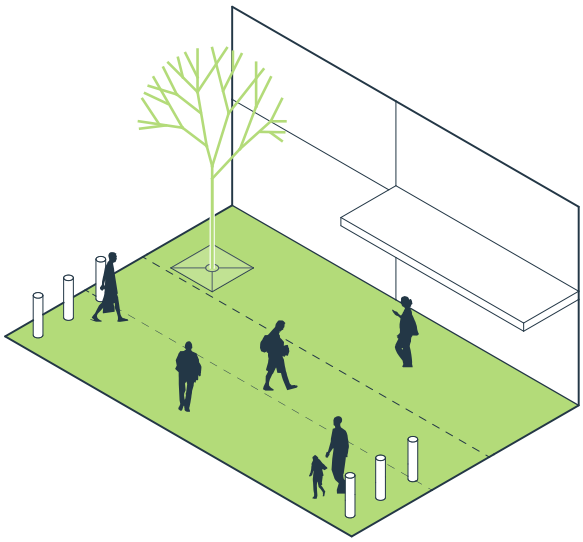
The following opportunities to convert road area into usable public space along the length of Albany Highway are detailed in the Public Realm Strategy, which will be developed into a set of Public Realm Guidelines for staged implementation.



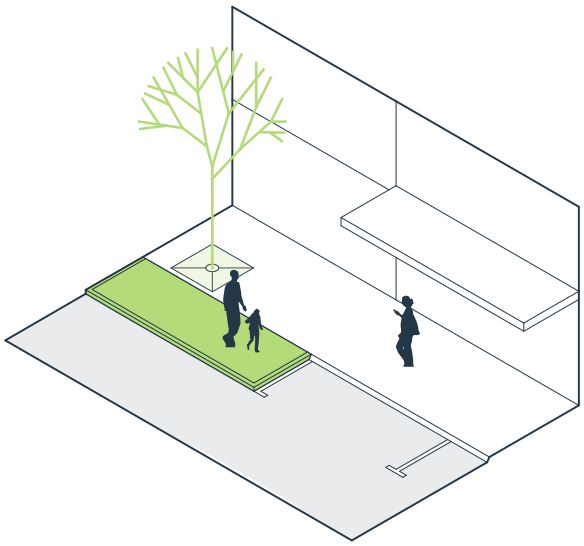
Traffic Calming
Speed bumps, traffic filters and raised pedestrian crossings at frequent points



Corner Conversion
Re-purposing side street intersections with Albany Highway for tree planting and usable public space

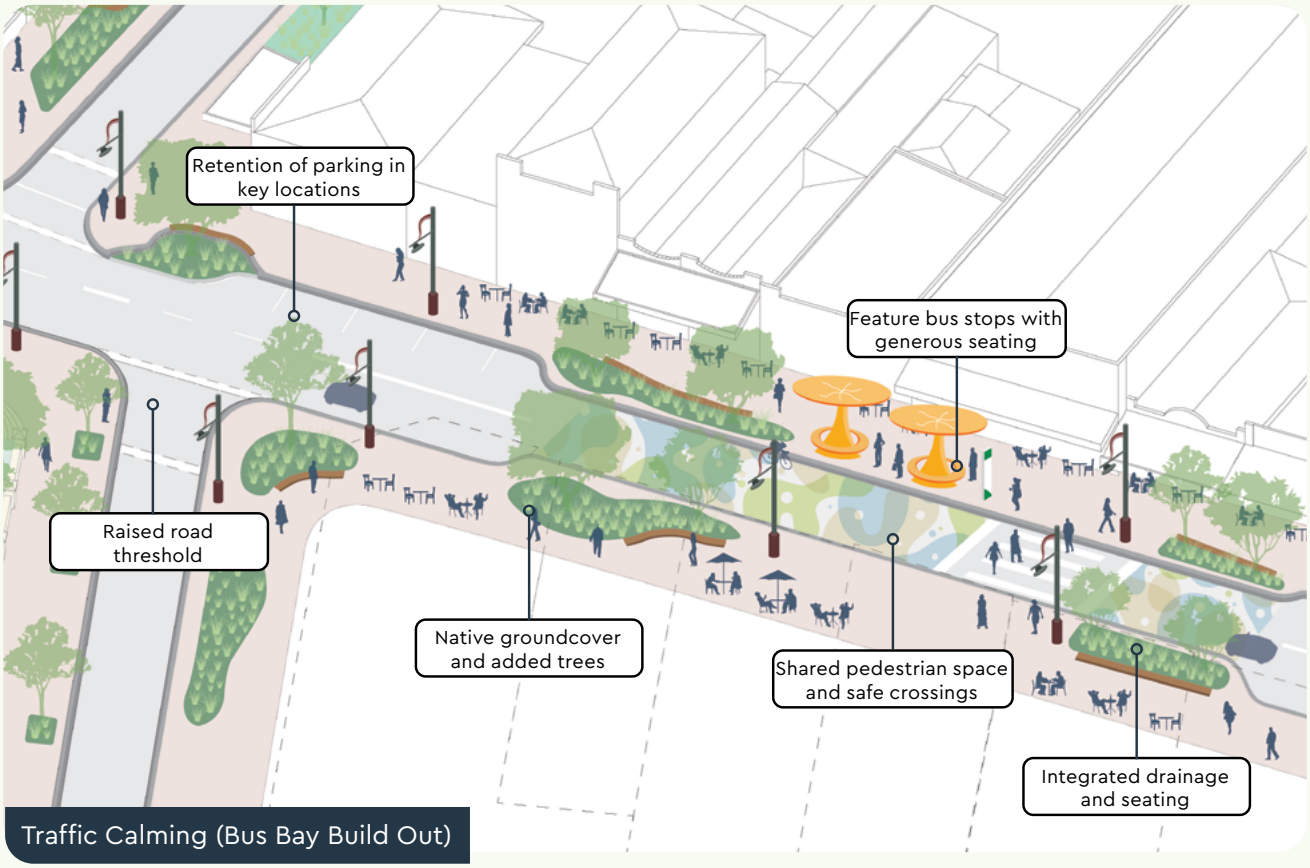


Shared Space
Seamless public realm across the Highway in key locations supporting event-based pedestrianisation

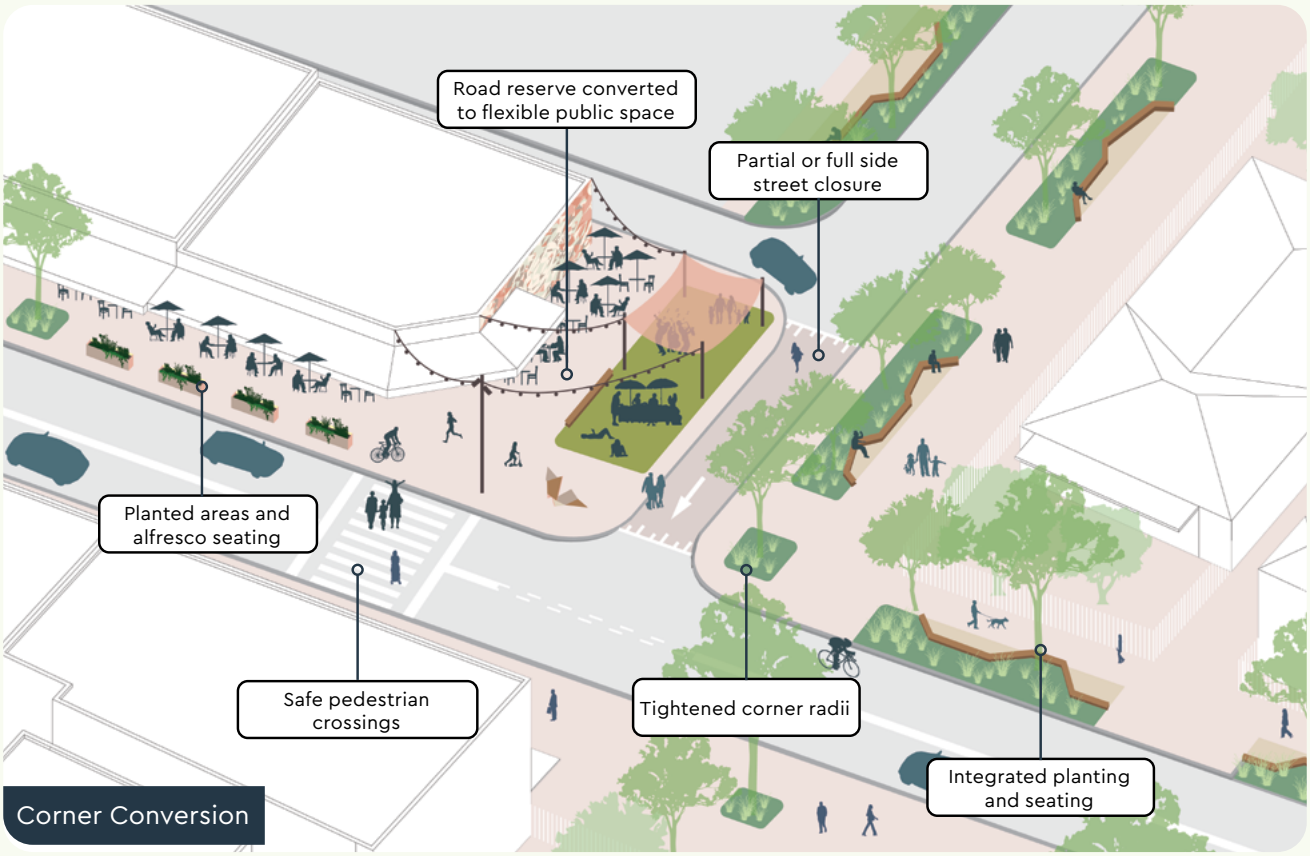


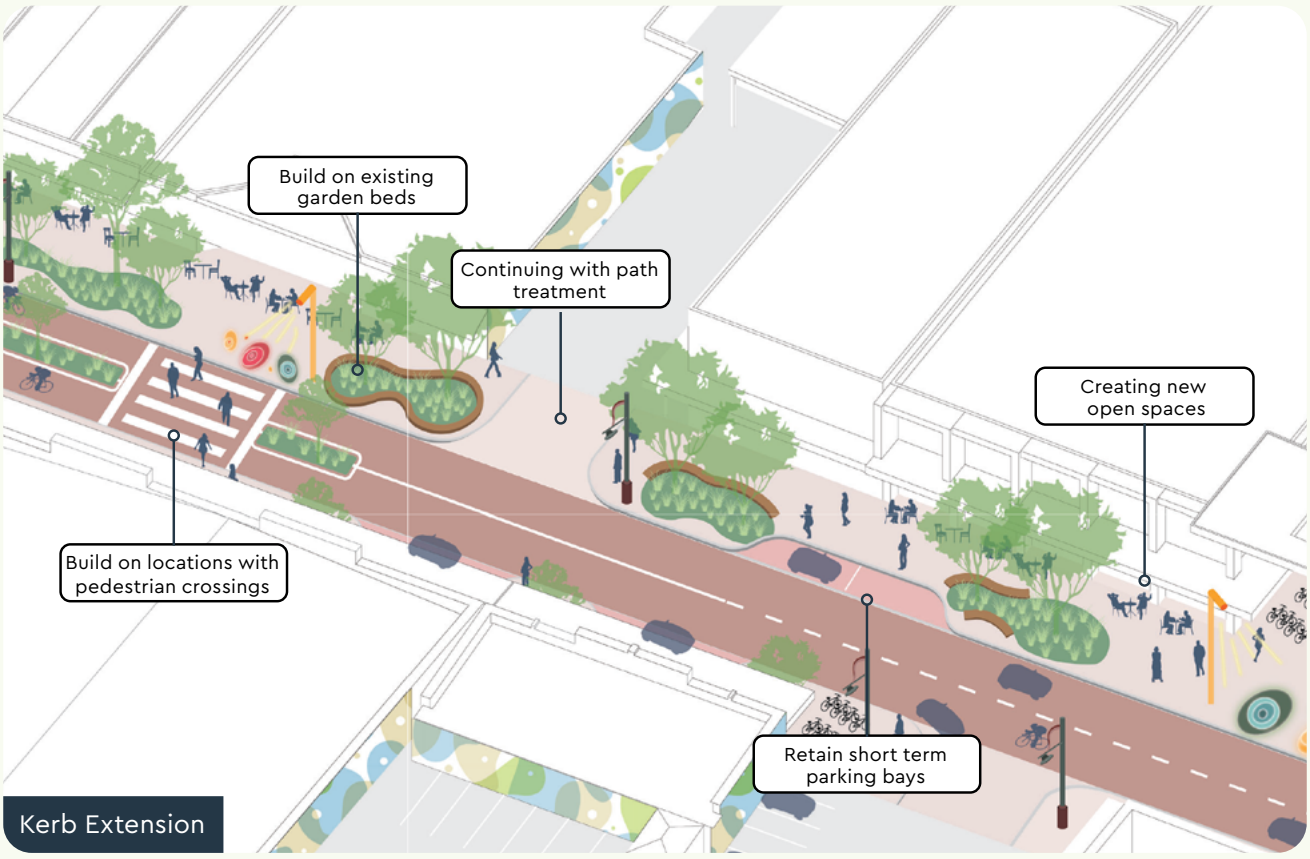
Kerb Extensions
Conversion of some parking spaces into alfresco area for businesses or landscaped rainwater gardens

Figure 26: Public Realm Strategy Example Outcomes






Road reserve converted to flexible public space
Partial or full side street closure
Planted areas and alfresco seating
Safe pedestrian crossings
Tightened corner radii
Integrated planting and seating
Corner Conversion


Build on existing garden beds
Continuing with path treatment
Creating new open spaces
Build on locations with pedestrian crossings
Retain short term parking bays
Kerb Extension

6.4 Movement



6.4.1 Response to Context

Albany Highway Today functions as a key movement corridor that transports large numbers of people by various modes, though this often conflicts with its place role as a visitor destination where people with to shop and spend time. Car traffic dominates whilst walking and cycling rates are low. The Highway benefits from excellent bus services and close proximity to three train stations, however public transport ridership is relatively limited.

Albany Highway Tomorrow will be transformed to prioritise people and public transport over private cars. This shift will free up space for business activities and community events, while maintaining good access for businesses and their customers. Local trips to shops along the Highway will take precedence over regional through-traffic, supported by new parking and traffic management strategies designed to create a more enjoyable and accessible environment.

Increasingly, residents, workers, students, and visitors will reach Albany Highway by walking, biking, and public transport, bolstered by new infrastructure such as the Causeway Bike Bridge, Armadale Line redevelopment, and potential light rail, enhancing connectivity across the area.

6.4.2 Community Priorities

Community engagement highlighted the following community priorities for Movement on Albany Highway:

More Space for People: Wider footpaths with more street trees and street furniture along the Highway to improve pedestrian amenity ranked as one of the most common community desires for the future.

Better Connections: Feedback included a desire to make connections to the Causeway bus station and the Town's train stations more convenient and visually obvious from the Highway.

Address Car Parking: Many were not satisfied with how car parking currently works in the precinct, with some of the view that not enough parking is available and others wishing to see a shift to public transit and active travel alternatives.

Table 25: Summary of key issues and Structure Plan response

Key Issue	Current Conditions	Plan Response
Walking and Cycling	Car traffic dominates Albany Highway, resulting in low walking and cycling rates despite the area's potential as a visitor destination.	The plan proposes significant traffic calming, footpath widening, and speed limit reductions to improve safety and encourage walking. The Transport Strategy introduces a new network of micro-mobility corridors on roads parallel to the Highway, linking to existing and planned AHPSP infrastructure, such as the Causeway Pedestrian Bridge and the Armadale Line AHPSP.
Public Transport Provision	Despite excellent bus services and proximity to train stations, public transport ridership is limited.	The Plan supports increased use of existing public transport services through improved public realm and active transport connectivity, and indirectly through reduced parking requirements which are intended to boost ridership. By optimising densities on adjacent Major Sites, the plan also supports longer-term delivery of mid-tier transport to enhance connectivity and capacity.
Traffic Management	Albany Highway is a key movement corridor with high car traffic that conflicts with its role as a destination, leading to congestion and limiting accessibility for non-car modes.	The Transport Strategy and Public Realm Strategy propose to redesign Albany Highway to discourage unnecessary car trips and through traffic, using traffic calming and speed reductions. This aims to encourage shifts to non-car modes and make better use of the existing parallel route of Shepperton Road.
Parking Management	Parking management is a challenge, with dissatisfaction regarding the availability and management of parking spaces, impacting the accessibility and economic vitality of the area.	Parking requirements established by the Plan seek to limit private parking in new developments particularly Major Sites, whilst allowing for the adaptable expansion of existing public parking facilities in strategic locations, to satisfy any additional demand.

Objective 9

Restructure the precinct movement network to discourage unnecessary car trips and promote modal shift to walking, cycling and public transport

Why is this an objective?

With a growing population and intensifying development around Albany Highway, there is a need to increase the share of people using non-car options to move about to help manage traffic and congestion.

Rates of walking, cycling and public transport usage are relatively low despite good access in the precinct.

Further investment is therefore required to encourage and enable people of all ages and abilities to safely and conveniently adopt these alternative transport options.

How does the Precinct Structure Plan Respond?

In line with the Albany Highway Transport Strategy, the AHPSP establishes a preferred movement network which substantially improves infrastructure quality and connectivity for walking and cycling, actively discourages car use for short local tips, and promotes use of alternative routes for regional through-traffic.

Movement and Place Hierarchy

The AHPSP and supporting Transport Strategy adopt a Movement and Place Classification for the precinct which supports a higher Place function for Albany Highway and other key streets in the precinct, consistent with the Town of Victoria Park Integrated Transport Strategy.

All streets within the precinct have been classified against the Movement and Place Hierarchy to support future planning. In accordance with the ITS, Albany Highway is identified as a Vibrant Street with an aspiration to transition core retail areas to 'Streets for People'. The Transport Strategy gives effect to this by identifying Victoria Park, East Victoria park and St James segments of Albany Highway as 'Streets for People' which will function as shared spaces as further detailed in the Public Realm strategy.

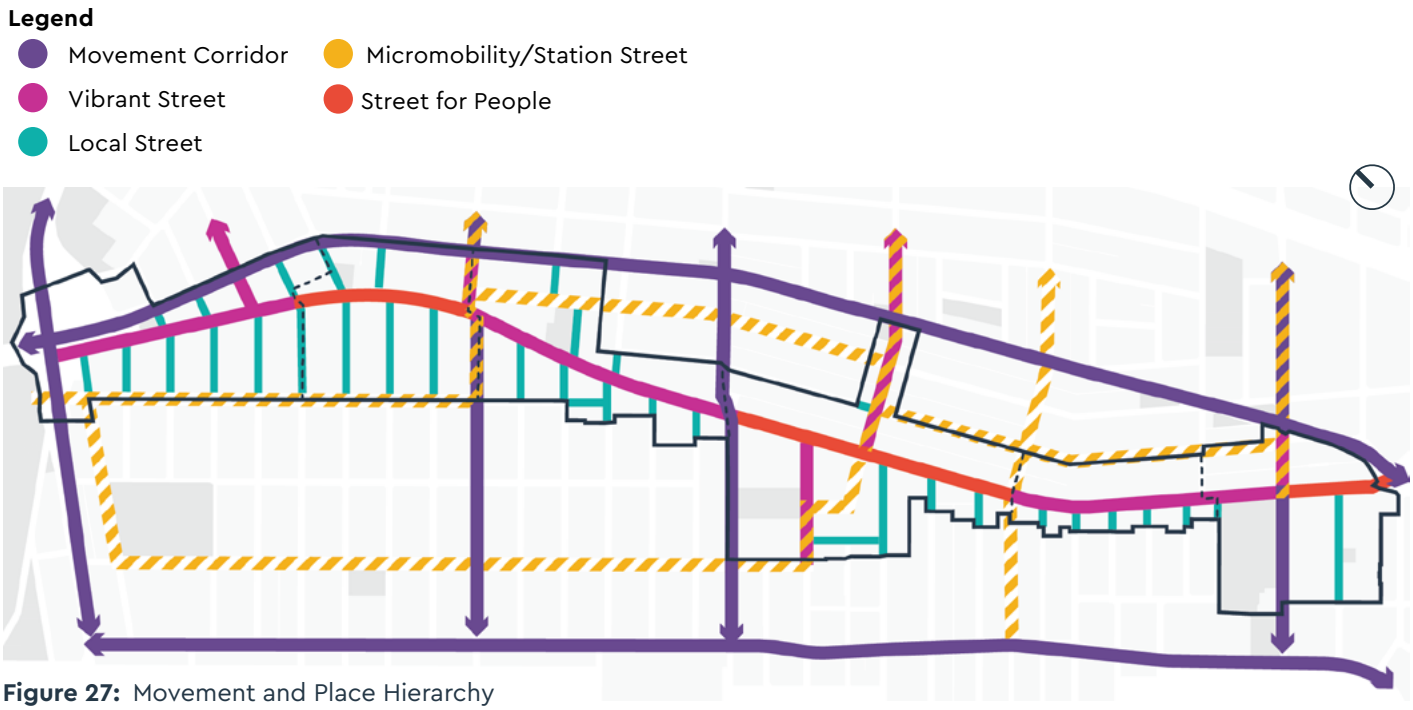


Figure 27: Movement and Place Hierarchy

Mode Share Target

The AHPSP adopts a progressive mode share target which seeks to facilitate a significant shift away from driving towards walking, cycling, micromobility and public transport usage.

A significant reduction in current high levels of car dependency within the precinct is required to address related economic, environmental social impacts and ensure that future population growth does not have a corresponding increase in vehicle traffic which is not environmentally sustainable and would present significant challenges for the movement network.

The AHPSP mode share target is informed by an adopted modal hierarchy for the precinct which prioritises sustainable modes of transport over private vehicles, whilst recognising the need to consider access requirements for vulnerable groups including those with impaired mobility.

Table 26: Existing and Proposed Mode Share

Mode	2016 Town Mode Share	2031 Town M Target	2031 Precinct Target
Car, as driver	**69%**	62%	40%
Car, as passenger	**5%**	6%	8%
Train	**5%**	6%	11%
Bus or Mid-tier	**12%**	12%	16%
Ferry	**0%**	1%	1%
Bicycle	**3%**	5%	11%
Walked Only	**4%**	6%	11%
Other	**2%**	2%	2%

Micromobility Network

To facilitate modal shift and achieve AHPSP mode share targets, the Transport Strategy identifies a range of infrastructure interventions to increase the safety and convenience of micromobility use (cycling, scooters and other modes) as a mode of transport within the precinct, to the town's station precincts as well as to regional destinations.

Improved micro mobility infrastructure will be provided within a number of streets including:

- Identified 'Station Access Streets' which will play an important role in providing multi-modal access to upgraded Victoria Park, Carlisle and Oats St Stations which will be equipped with Copenhagen dedicated cycling lanes as part of a comprehensive reconfiguration of each street
- Micromobility corridors which will facilitate movement between sub-precincts and integrate with the Town's wider cycling network and regional Pedestrian Shared Paths. These corridors will be designed as shared corridors consistent with Safe Active Street principles.

The AHPSP does not include dedicated micromobility infrastructure on Albany Highway itself due to the road's relatively constrained width and its anticipated future transition to mid-tier transit. Instead, micromobility corridors are designed as a parallel network on safer side streets, reducing the risk of conflicts. Albany Highway will function as a shared space for all users, in line with the proposed Movement and Place approach.

Key considerations shaping the precinct's micromobility network include ensuring access to the Perth-Armadale Principal Shared Path, providing connectivity to key Albany Highway destinations such as major retail centres and local schools, and linking to the Causeway Pedestrian & Cyclist Bridge.

Traffic Management

To further support modal shift and reposition the precinct as a place for people, the Transport Strategy seeks to leverage the precinct's unique advantage of having parallel regional traffic routes including Shepperton Road, Orrong Road and Berwick Street by encouraging a reduction in the amount of through traffic along Albany Highway.

Continual vehicular access will be retained along the Highway however re-routing will be encouraged through the following key changes:

- Reducing the speed limit to 20 km/h in key locations
- Introducing shared space/pedestrian priority environments in Victoria Park, East Victoria Park and St James
- Implementing localised traffic calming interventions such as pedestrian crossings and bus build-outs to periodically slow traffic and ensure speed limit compliance

These interventions are further detailed in the Public Realm section.

Figure 28: Proposed streetscape enhancement for Albany Highway (typical treatment outside urban cores)

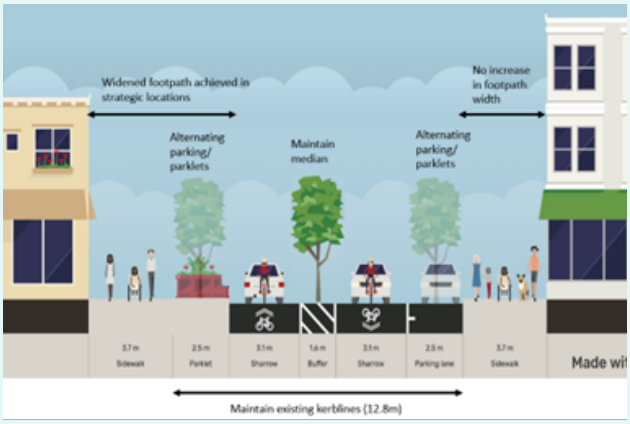


Figure 29: Proposed shared space zone cross section with Urban Cores (Vic Park, East Vic Park and St James)

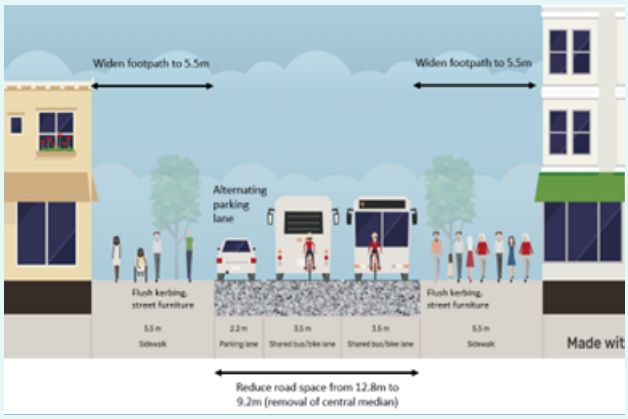
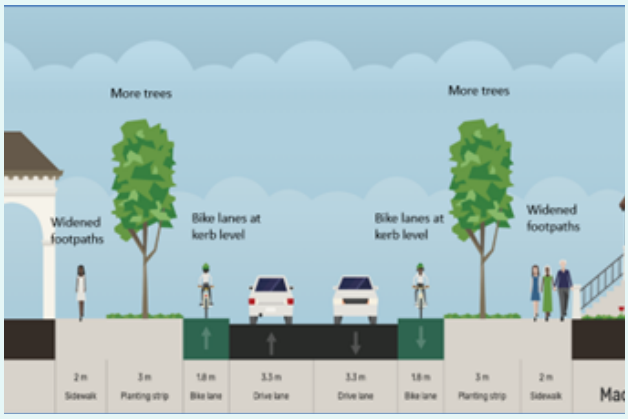


Figure 30: Proposed streetscape enhancement for Stations (Duncan, Mint and Archer and Oats Street)



Objective 10

Improve Public Transport services and encourage a future transition to mid tier transport along Albany Highway

Why is this an objective?

Albany Highway enjoys excellent access to both bus and train services, connecting it to CBD, Curtin and the eastern suburbs.However, ridership levels remain low with a high dependence on driving.

There is a need to improve the provision of public transport services, improve convenience and accessibility and enhance supporting infrastructure to support modal shift.

How does the Precinct Structure Plan Respond?

The Transport Strategy for the precinct provides for the improvement of transport services and supporting infrastructure to encouraged increased ridership, and identifies delivery of future Mid Tier public transport as a long term strategic priority to further increase the attractiveness and passenger capacity of the precinct's public transport services.

Causeway Bus Interchange

As articulated in the Transport Strategy, The AHPSP supports the reconfiguration of the Victoria Park Transfer Station to improve accessibility, service frequency and unlock land for development and public space. Desired outcomes include:

- Providing a central island platform enabling easier transfers between buses
- Increased platform size to accommodate additional routes and improved service frequency
- Relocation south from current location to avoid the need to cross Shepperton Rd and facilitate a more consolidated design with increased public open space and tree planting
- Future-proofed design to enable integration of future mid-tier transport services whilst maintaining bus access and transfer between modes

Transition to mid Tier Transport

The Transport Strategy identifies the delivery of mid-tier transit along Albany Highway as a strategic priority, as highlighted in the Infrastructure WA State Infrastructure Strategy. The AHPSP supports this future transit development and formally endorses the long-planned 'knowledge arc' alignment, which will connect the precinct and wider Town to Curtin University, Perth CBD, and the Western Suburbs.

The preferred alignment for mid-tier transit remains Albany Highway to Kent Street. A minimum 7-meter-wide operating space has been identified within this segment of Albany Highway to ensure that any design changes accommodate the eventual rollout of mid-tier transit.

Objective 11

Discourage private residential parking in new development to reduce car dependence while ensuring sufficient public parking

Why is this an objective?

Current levels of public parking occupancy are generally high, which needs to be managed alongside on-street parking to ensure precinct accessibility is maintained whilst reallocating some parking space to development and public realm.

More broadly, there is a need to ensure that future parking supplied in support of population growth does not worsen car dependency, congestion or pollution.

How does the Precinct Structure Plan Respond?

The AHPSP Transport Strategy seeks to better manage parking supply and demand in the precinct to support the local economy whilst also encouraging modal shift. The Albany Highway Transport Strategy adopts a range of approaches to manage different types of parking consistent with the Town's Parking Management Plan.

Public Parking

The AHPSP recognises the importance of public parking (on street and within public car parks) in meeting demand given the precinct attracts many short-stay visitors who contribute significantly to the local economy and require adequate parking located within close proximity of the precinct.

In order to maintain parking supply whilst enabling the proposed removal of on-street parking in some areas to facilitate public realm enhancements, the Transport Strategy adopts a number of actions to improve the efficiency of a reduced number of on-street bays:

- Tightening fee and time restrictions particularly in high-value bays in core retail areas
- Expanding the use of dynamic pricing during busy periods
- Investing in smart parking technology to assist with enforcement and monitoring
- Creation of additional pick up/drop off zones and ride sharing bays at key locations
- Increased parking supply on suitable side streets supported by expanded use of residential parking permits to ensure resident parking availability in high-demand areas
- Encouraging increased supply of public parking on private land as land use intensifies within the precinct
- Identifying existing off street public parking areas in strategic locations for further investigations into their suitability for expansion into adaptable decked parking structures

Private Parking

The precinct plan adopts a zero minimum parking requirement for all residential and non-residential developments within the precinct.

This bold and transformative change aims to reduce car-based travel among new residents and workers, encourage greater public transport use, and promote flexible and innovative building designs that repurpose areas previously reserved for parking into alternative land uses and landscaping. This approach is further designed to foster a local culture of cycling, public transport use, and car-sharing, creating a more sustainable and liveable urban environment.

While the minimum parking requirement is set at nil for all uses, no maximum parking rate is proposed. This allows for development flexibility, enabling Albany Highway to adapt to changing market demands for parking and advancements in transportation technology, while ensuring that development and investment in the precinct remain attractive in the short term.


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6.5 Land Use



6.5.1 Response to Context

Albany Highway today supports a mix of commercial, retail, and residential land uses, reinforcing its role as one of Perth's largest and most diverse activity centres.

Retail and hospitality are concentrated in three distinct, successful nodes, while connecting areas are dominated by large commercial uses, many with high vacancy rates.

Cultural and creative infrastructure is limited, and the local workforce is relatively small compared to other centres.

Albany Highway Tomorrow will see an evolution of land use to meet emerging needs, fostering major job growth and transforming the area into a vibrant, mixed-use inner-city neighbourhood with more residents, services, and cultural activities.

Economic resilience will be strengthened by attracting new employment opportunities, driven by the area's proximity to the CBD, strong transport links, and river access.

Existing jobs related to service commercial and car-based activities will be adapted and retained to maintain their contribution to the precinct.

6.5.2 Community Priorities

Community engagement highlighted the following community priorities for Land Use on Albany Highway:

Creativity and Culture: Engaged stakeholders were keen to see an increase in creative and artistic uses along the Highway, addressing key gaps such as a lack of performance spaces, theaters and artist studios.

More Things to Do: Feedback included a desire to see more diverse food, dining and entertainment offerings during the day and later at night, as well as more events and festivals, to create a more dynamic town centre

Filling the Gaps: Many want to see the relatively inactive commercial zones between the Highway's three centres transformed, enhancing the entire centre's flow and leveraging the untapped potential of vacant sites

Table 27: Summary of key issues and Structure Plan response

Key Issue	Current Conditions	Plan Response
Provision of Employment Generating Floorspace	Evidence suggests significant need for employment space to maintain existing job density, but no clear pathway for delivering this within current zoning.	The plan seeks to retain and increase the supply of employment-generating floorspace through performance incentives and establishing minimum floorspace targets within Major Sites.
Distribution of Retail and Hospitality	Retail and dining uses are concentrated within three distinct nodes, reflecting the segmented zoning of the precinct.	The AHPSP adopts an evidence based floorspace target which provides for a significant increase in retail floorspace over time, concentrated within the Causeway, Victoria park and East Victoria Park sub-precincts.
Car Yard Activity	Current zoning rules are written to discourage car-related uses, yet this sector accounts for a high proportion of current commercial floorspace and local employment.	The AHPSP provides clarifying guidance regarding the permissibility of car sales and light industrial activity within the precinct, encouraging retention of these uses within new development whilst not altering the established position that prolonging operation of these uses in their current configuration constitutes a non-confirming use.
Protection of Entertainment Uses	The Highway's valued status as a major hospitality destination currently does not benefit from any protections and may be impacted by residential infill development in the future.	The AHPSP designates the Causeway, Victoria Park and East Victoria Park sub-precincts as a Special Entertainment Zone in which higher noise volumes are permitted and enhanced sound mitigation is required within new development.
Cultural and Community Infrastructure	The Highway enjoys excellent access to schools, community facilities, and transit, but lacks office floorspace and creative uses compared to other inner city centres.	The plan seeks to retain and increase the supply of creative and cultural floorspace through performance incentives and requiring Major Sites to identify a contribution of such floorspace as part of a Local Development Plan.

Objective 12

Drive economic vitality by increasing office-based employment and expanding retail and hospitality floorspace in line with population growth

Why is this an objective?

Albany Highway lags behind other comparable centres in office-based employment, with relatively little office floorspace available within the precinct. This lack of employment impacts footfall and limits the capacity of the precinct to sustain strong daytime activity.

There is a need to ensure that new development provides a sufficient amount of employment floorspace to address these localised issues whilst more broadly ensuring that local job availability rises with population so that the Town's employment self-sufficiency is maintained.

How does the Precinct Structure Plan Respond?

An evidence-based approach to determining retail and other employment-generating floorspace within the precinct is articulated in the Precinct Economic Strategy. This analysis identifies an ultimate growth target of 491,400 sqm of retail and non-retail floorspace for the precinct, doubling the amount of floorspace that exists in the precinct today with a total increase of 251,900 sqm.

This growth is not equally distributed across classes of employment-generating floorspace, with relatively lower growth in Shop Retail and Other Retail (60% increase) and higher growth in Office (156%) and Other floorspace (95%) predominantly comprising Health and Community Services, and Entertainment and Tourist Accommodation.

This growth is forecast to ultimately support an additional 8,200 jobs within the precinct. Floorspace modelling undertaken as part of the Precinct Economic Strategy is summarised below. The provision of floorspace across the precinct was compared to benchmark centres to determine current gaps and recommend growth targets. The following section provides further explanation of the assumptions underlying retail and commercial floorspace targets and guidance on their implications for precinct planning.

Table 28: Retail and Non-Retail Floorspace Growth Forecasts (sqm)

	Retail Floorspace		Commercial Floorspace			Total
	Shop	Other Retail	Office	Other Commercial	Tourism	
Current (2023)	56,500	36,000	92,800	54,200	0	239,500
Ultimate Target	90,200	57,000	238,000	87,000	19,000	491,200
Increase	33,700 (60%)	21,000 (58%)	145,200 (156%)	32,800 (61%)	19,000 (N/A)	251,700 (105%)

Commercial Floorspace Target

The AHPSP adopts an evidence-based employment target aimed at significantly increasing employment-generating floorspace to maintain employment self-sufficiency within the Town. This target is based on the amount of floorspace required to support the jobs needed to sustain employment self-sufficiency in line with population growth.

The Town's Employment Self-Sufficiency (ESS) was estimated at 146% in 2016, which exceeds the Central Sub-region target of 139% set by the Perth and Peel @ 3.5 million Strategic Planning Framework. The AHPSP seeks to preserve this high ESS as the population grows, necessitating increases in employment floorspace within the precinct.

A comparison of Albany Highway to other centres in the Central Sub-region, using floorspace-to-population ratios based on Planning Land Use Codes (PLUC), reveals an over-provision in Storage, Other Retail, and Health and Community Services, but a relative under-provision in Office, Shop, Entertainment and Culture, and Service Industry uses.

To address these gaps, the following employment floorspace development opportunities have been identified:

- **Tourism Growth:** Encourage short-stay accommodation and tourist amenities, extending Perth's visitor economy to Victoria Park.
- **Office Growth:** Expand office floorspace by leveraging local expertise in professional services, including the emerging cluster of mining and construction businesses at Burswood South.
- **Car Sales:** Retain and optimise car retail as a ground-floor component in mixed-use developments.
- **Night-Time Economy:** Stimulate the night-time economy by expanding entertainment and cultural spaces, such as small bars, art galleries, and performance venues.
- **Essential Services:** Provide services like childcare and health facilities to prevent leakage to other commercial areas.
- **Aged Care:** Develop aged care facilities to serve the local ageing population, benefiting from proximity to established retail centres.

The AHPSP sets minimum commercial floorspace requirements for Major Sites along Albany Highway to ensure adequate office space is provided. Additionally, large floorplate office development is a priority for the M1 Major Site, subject to future planning.

Approach to Car Sales Uses

Albany Highway's core retail strips are currently separated by large areas of car yards and commercial uses.

While these uses may detract from the overall Highway experience, they provide significant employment opportunities and attract visitors. Additionally, these sites offer substantial redevelopment potential due to their large size and relatively low improvement value.

Although redevelopment of these sites is preferred, the removal of car sales activities without replacing them with equivalent employment-generating uses could diminish the precinct's economic vitality.

Historically, planning efforts sought to phase out car sales through non-conforming use designations. However, the AHPSP now encourages retaining these uses within new developments to support local employment and visitation.

Notwithstanding the above, the AHPSP does not endorse the retention or expansion of existing car dealerships in their current form, as this would constitute under-development and perpetuate negative impacts, such as inactive street frontages. Accordingly, the AHPSP propoosed to retain existing LPS provisions that limit the validity of approvals for current car yard activities.

Where redevelopment of car dealership sites includes the reincorporation of car sales functions within new development, the AHPSP supports discretionary approval of this use, provided it aligns with the AHPSP's broader objectives for the precinct.

Spatial Distribution of Retail and Employment Uses

It is recognised that the significant future growth in floorspace may consequently influence the structure and function of the centre, which is defined by three major activity nodes at Victoria Park, East Victoria Park and St James. It is important to ensure that development of individual sites over time support the overall precinct vision in two key ways:

- Ensuring retail floorspace is not under-provisioned within Major Sites such that the employment floorspace target is rendered unachievable
- Ensuring development of individual sites does not prejudice the redevelopment of other sites, for example by absorbing the entirety of supportable floorspace growth within a particular class within a single site, without adequate justification.

Built form testing of the AHPSP controls has identified a preferred distribution of employment-generating land, which serves as a basis for planning assessments and the monitoring of floorspace delivery and distribution over time. This distribution is not to be interpreted as a fixed target or maximum, as the built form testing reflects a hypothetical outcome.

Future needs assessments and net benefit testing, consistent with SPP 4.2, may demonstrate that variations in the quantity and distribution of floorspace within the precinct are acceptable.

Table 29: Indicative Sub-Precinct Distribution of Future Retail and Non-Retail Floorspace

	Retail Floorspace		Commercial Floorspace					
	Shop	Other Retail	Office	Other	Tourist Accom	Sub-Precinct Total	Current Share	Target Share
Causeway	8,700	18,000	138,000	22,000	8,000	194,700	24%	40%
Victoria Park	25,000	8,000	38,000	18,000	6,000	95,000	26%	19%
Central	8,000	8,000	18,000	16,000	0	50,000	11%	10%
East Victoria Park	37,500	12,000	30,000	20,000	5,000	104,500	29%	21%
East End	4,000	3,000	4,000	5,000	0	16,000	5%	3%
St James	7,000	8,000	10,000	6,000	0	31,000	6%	6%
Floorspace Total	**90,200**	**57,000**	**238,000**	**87,000**	**19,000**	**491,200**		

Objective 13

Accommodate significant population growth with mixed-use development offering diverse and affordable housing.

Why is this an objective?

The rate of new development within the precinct in recent years has been low, which may be attributable to market conditions, site availability and the extent to which development controls support and incentivise development. Most residential growth within the Town has occurred in residential areas as low-density infill development, with consequences for urban tree canopy, car dependency and access to services and amenities. There is a need to increase the rate of development to progress sustainability ambitions and create a more vibrant place.

How does the Precinct Structure Plan Respond?

Residential Yield Target

Modelling of land use and built form controls has been undertaken to estimate the likely quantum of achievable developable floorspace and dwelling yield within the precinct.

While the Plan significantly increases residential development capacity, this does not necessarily reflect the amount of development likely to occur in the short or medium term.

The pace of future development will be influenced by broader economic conditions, competition from other inner-city areas, and feasibility constraints due to relatively high commercial land values, fragmented ownership, and small lot sizes.

In recognition of these factors, the Plan has adopted two residential yield targets in line with the SPP 4.2 Implementation Guidelines:

- An **'interim' dwelling target** to be achieved within the 10-year lifespan of the AHPSP, assuming an aspirational doubling of the historical development rates observed in the precinct from 2009–2021.
- An **'ultimate' dwelling target** that assumes 85% achievement of the maximum developable capacity under the built form and development controls. This target aims to meet the minimum residential density requirements over the coming decades, supported by periodic reviews of the AHPSP.

A historical trend assumption has been adopted for the interim target, recognising the difficulty in making realistic predictions about the redevelopment of identified Major Sites within the plan's lifespan. Should market conditions be favourable, the development of these sites could exceed the interim target and contribute significantly toward achieving the ultimate dwelling target.

Residential growth targets have been allocated to sub-precincts based on a preferred distribution of growth, determined by the proposed development capacity and the extent of urban-zoned land within each area:

- **Causeway:** 25%
- **Victoria Park**: 15%
- **Central:** 20%
- **East Victoria Park:** 20%
- **East End:** 5%
- **St James:** 15%

A breakdown of these targets by sub-precinct is provided in **Table 31**, which demonstrates:

- An interim target of **800 new dwellings by 2034**, representing a 43% increase in precinct population over the plan period.
- An **overall target of 6,900 new dwellings** at 85% development capacity, sufficient to meet the required minimum density of 40 dwellings per gross urban zoned hectare within 800m of the precinct.

Achieving the dwelling growth target from 2021–2034 implies a compound annual growth rate (CAGR) of 2.8%, an elevated but achievable rate when compared to the Town's current CAGR of 1.35%, as projected by WA Tomorrow.

While growth impacts will likely be gradual, long-term population increases will drive demand for school placements. Based on current school attendance rates and the composition of apartment-dwelling households in the Town, an estimated 1,290 additional pupils are expected across the AHPSP area once the dwelling target is reached.

Table 30: Residential Yield Target by Sub-Precinct

Area	Existing Dwellings (2021)	Interim Target (2034)	Ultimate Target
Precinct Plan Area	**1,857**	**2,657 (+800)**	**8,345 (+6,900)**
Causeway		120	1,725
Victoria Park		120	1,035
Central		240	1,380
East Victoria Park		200	1,380
East End		40	345
St James		80	1,035

Housing Affordability and Diversity

The AHPSP aims to enhance the diversity and affordability of housing within the precinct to foster a diverse and inclusive community across age, ethnicity, and income levels.

To incentivise affordable housing, the Plan sets a minimum requirement of 10% affordable dwellings in Major Site developments, to be delivered in partnership with an approved housing provider or not-for-profit organisation recognised by the Housing Authority. This requirement will be addressed through the preparation of a Local Development Plan.

Affordable housing and universal design are also encouraged as key public benefits, which may justify additional height and plot ratio in developments. The AHPSP aligns with the Town's Local Planning Strategy, which highlights the need to investigate demand for affordable housing, address gaps in supply, and explore both planning and non-planning strategies for delivery. These efforts will be pursued separately from this Plan.

The AHPSP does not adopt a specific precinct-wide housing diversity target. Instead, developments are subject to R-Codes requirements, mandating that developments with more than 10 dwellings include at least 20% with different bedroom numbers.

The Town's Local Planning Strategy identifies a broad shortfall in studio and one-bedroom dwellings and a net decrease in their supply from 2006–2016, compared to a strong supply of larger dwellings.

Consequently, it is anticipated that market-driven apartment supply within the precinct will naturally improve housing diversity by increasing the availability of smaller dwellings, without the need for mandated targets.

Any future dwelling diversity targets applicable to the precinct may be separately established by the Town at a later date.

Objective 14

Support the creative industries and evening economy through delivery of affordable workspace and new cultural infrastructure

Why is this an objective?

Creative and cultural uses are vital to Perth's economy and the appeal of local centres as visitor destinations. Entertainment venues, performance spaces, and creative production hubs contribute to economic diversification, sustain evening activity, attract tourists, and provide opportunities to engage with local culture. However, creative industries depend on access to suitable, affordable spaces and the mitigation of conflicts with sensitive uses to operate successfully in the long term.

New developments often fail to accommodate specific creative needs, with spaces typically being let to commercial tenants who can out-compete creative tenants for space. To address this, there is a need for targeted planning that prioritises creative spaces, ensuring the Town's creative economy is supported and can thrive.

How does the Precinct Structure Plan Respond?

Cultural Floorspace

The AHPSP aims to intensify the creative economy within the precinct by promoting cultural infrastructure and workspaces suited to creative industries, thereby attracting new creative businesses, charities, and community organisations.

This includes incentivising the development of creative production spaces, performance venues, art galleries, cinemas, music and entertainment uses, and other supportive activities to cultivate a vibrant community and cultural presence.

Identified gaps in the current offering include cinemas, performing arts spaces, art galleries, and spaces for the production and sale of fashion, fine art, and furniture, as well as affordable workspaces for social enterprises, creative production, and artist studios.

Part 1 of the AHPSP establishes a definition for "creative uses" as a preferred ground floor activity, alongside conventional retail and hospitality. These uses are encouraged across all sub-precincts to facilitate the provision of affordable small-scale artist workshops, studios, co-working spaces, and commercial units supporting the production, display, and sale of creative goods and services. These include fashion and textiles, architecture and design, jewellery and ceramics, paintings and artwork, photography, dance, and music and video production.

The integration of these uses at street level is contingent on high-quality design that engages with the public realm and encourages public access where appropriate.

Service and light industrial activities are also permitted within the Central, Causeway, and St James Precincts to support less public-facing creative uses, such as printing and framing, furniture making, distilling, brewing, roasting, food production, urban horticulture, laboratory space, fabrication and installation, trade and creative supplies, glass and metalworking, wholesale, and storage.

To further support the provision of creative spaces, the Plan requires Major Sites to allocate space for creative uses through the preparation of a Local Development Plan.

Table 32 provides further explanatory context support Part 1 provisions relating to fit-out requirements and unit sizes needed to accommodate ground floor creative and light industrial activities within the precinct.

Table 31: Ground Floor Creative Uses

Creative Ground Floor Use	Definition	Operational Requirements	Typical Size
Creative Studio	Micro office and creative workspace suited for low impact creative activities with direct street access or communal entry as part of a group of studios	Independent studio access, bathroom access, communal office and kitchenette area where more than one studio is provided	15–40 sqm per individual studio, up to 300sqm for shared workspace
Workshop	Secure light industrial space suited to intensive creative production activities such as ceramics, printmaking, textiles or similar	Secure storage, space for specialist equipment such as kilns, printing press, mechanical ventilation and fire safety infrastructure, noise attenuation, toilet facilities, kitchenette	20–100sqm
Event or Community Space	A flexible venue with no fixed infrastructure or seating but equipped with flexible audio-visual equipment and storage space, suited for digital media exhibition, temporary retail or hospitality use and private events.	Backstage storage and access, back office space, public bathrooms	Small space 50sqm, Larger space 150-250sqm
	A purpose-built space used for theatre, live music or speaking events including a stage area, fixed seating, lighting and audio-visual equipment.	Dressing rooms, backstage storage and access, back office space, reception/box office, audience circulation space equal to seating area, public bathrooms	500sqm+
Rehearsal Space	Secure and sound attenuated space for dance, theatre and music rehearsal suited to use by individuals and groups on a booking or leasehold basis.	Changerooms, toilet facilities, equipment storage, kitchenette	100–300sqm
Art Gallery	Staffed space for exhibition and sale of artwork open to public	Rear loading access, collection storage and handling space, toilet facilities, back office space and kitchenette	80sqm+
Music or Film Studio	Sound attenuated space with suitable recording, editing and production space	Secure storage, space for specialist equipment such as recording booths and lighting, audio-visual infrastructure, toilet facilities, kitchenette	50sqm+

Objective 15

Protect entertainment and hospitality uses from potential noise-sensitive development conflicts

Why is this an objective?

As Perth moves to accommodate a growing population through infill development, entertainment venues located near residential areas are finding it increasingly difficult to comply with current noise regulations.

Given the significant role of the precinct in supporting Perth's evening economy through its diverse food and beverage offering, and an aspiration to intensify and diversify this function as a key driver of the precinct's economy, there is a need to ensure this activity is enabled and protected into the future.

How does the Precinct Structure Plan Respond?

The AHPSP seeks to encourage and support the provision of entertainment uses as a key objective of the Plan, including bars, restaurants, nightclubs, live music venues and similar venues.

The AHPSP seeks to ensure that increased residential development within the precinct does not compromise the character of Albany Highway as one of Perth's most vibrant hospitality and entertainment precincts, nor preclude an increase in such activity through a increase in the number of bars, live performance venues, nightclubs and similar evening economy uses.

In line with this objective, AHPSP recommends that key areas of the Causeway, Victoria Park and East Victoria Park sub-precincts be considered for Special Entertainment Precinct status through a future amendment to the LPS.

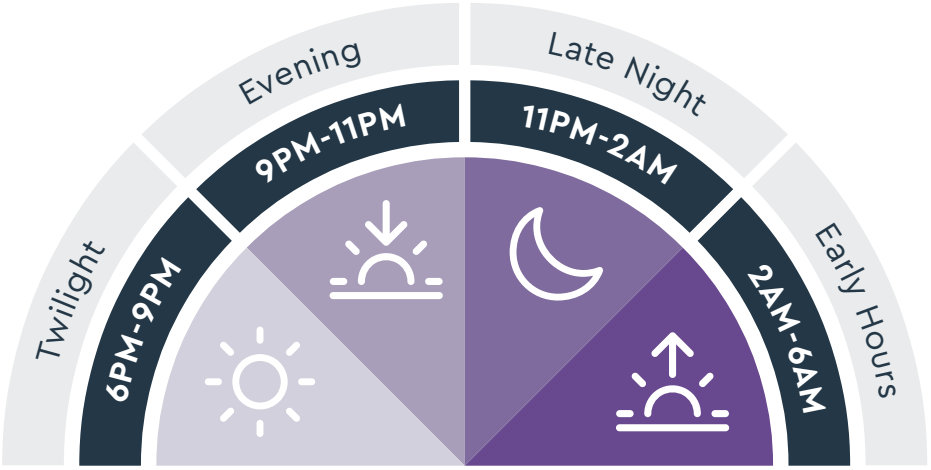
This would require that new noise-sensitive (including residential) developments are suitably insulated and designed to minimise the impact of entertainment noise on residents and provide flexibility for certain entertainment venues to exceed the assigned (prescribed) noise levels for day-to-day operations through a venue approval process.

This designation would be given effect through the Town of Victoria Park Local Planning Scheme as part of the enabling amendment to give effect to this Plan.

As an interim measure, Part 1 of the AHPSP provides for new developments to have a notification placed on the title to inform buyers of the potential for higher noise levels due to entertainent activity.

Nighttime Economy Opportunities

Nightlife businesses operating between 6pm and 6am are an essential part of Perth's culture and economy. Ways of supporting the Highway's existing nighttime economy and encouraging, planning for and delivering more nightlife activity will form and integral part of this AHPSP.



Culture & Entertainment

Live Music Venues

Art and Culture Facilities

Theatre & Cinema

Nightclubs

Exhibition & Event Space

Food & Drink

Dine-in Restaurants

Wine Bars & Stores

Pubs, Breweries & Distilleries

Street Markets & Food Trucks

Takeaway & Online Delivery

Infrastructure & Management

Feature Lighting

Event Road Closures

Speakers & Power Sockets

Extended Public Transport

Licensing & Safety


BALMORAL
HOTEL
BALMORAL
EAT
Drink
LIVE
Music
LITTLE CREATURES
BALMORAL
EAT
Drink
LIVE
Music
LITTLE CREATURES
TICKETS

6.6 Built Form



6.6.1 Response to Context

Albany Highway Today has a built character defined by historic shopfronts, pubs and workers cottages and modern multi storey development that has evolved over time. Its scale is predominantly mid-rise, with landmark buildings that break this convention adding diversity and variety. While design quality is variable, recent development have succeeded in reflecting the scale and character of the Highway.

Albany Highway Tomorrow will exhibit a balanced contrast of old and new, with a variety of distinctive buildings that maintain its attractiveness as a visitor destination and promote a strong sense of place. The scale and design of new development along the Highway will change and vary in response to the surrounding environment and land uses, creating a sequence of distinct places which connect the history of the Highway to a modern future.

6.6.2 Community Priorities

Community engagement highlighted the following community priorities for Built Form on Albany Highway:

Scale and Character: Ensuring development reflects the midrise scale of the Highway, preserves solar access and privacy to neighbouring houses was a common theme expressed by the community

Aesthetics and Performance: Community views on recent development was mixed, with questionable aesthetics and a lack of sustainability criticised. There are high expectations for future development to have high architectural merit and low environmental impact

Not Just Housing: Adding new housing to the Highway is one of the lowest priorities for stakeholders we engaged with, as higher priorities such as diverse retail, public realm enhancements and better connectivity came to the fore.

Table 32: Summary of key issues and Structure Plan response

	Current Conditions	Plan Response
Building Height and Scale	Recent development has been small-scale up to 7 storeys in height. Current planning controls allow development of generally 3–4 storeys along the length of the Highway, but permit increases up to 12 storeys in key locations.	The plan promotes a diverse range of building heights, typologies, and styles to enhance the character of Albany Highway, guided by a new urban design framework that supports increased development scale and density on Major Sites, with heights of up to 30 storeys. To ensure sensitivity to precinct character, the AHPSP specifies a maximum floorplate size above 12 storeys to moderate the bulk and width of taller developments.
Building Character and Typologies	Historical layers of development have contributed to a mixture of architectural styles and typologies, ranging from fine-grain shopfronts dating to the early 1900s, large garden-style apartment blocks from the 1970s and mixed use developments constructed over the last 20 years.	Built form controls are established to deliver innovative, high-quality, and sustainable development. These controls vary building heights and typologies based on the characteristics of each sub-precinct, ensuring that developments are contextually appropriate and contribute positively to the precinct's identity.
Heritage Buildings	Albany Highway has a rich history with heritage buildings and features that contribute to its sense of place but lack formal protection.	The plan includes provisions for the protection and restoration of heritage buildings, requiring the retention of Contributory Frontage fabric in new developments. It also mandates that new developments complement adjacent heritage places, striking a balance between conservation and development potential.
Original Residential Fabric	Victoria Park's original residential fabric surrounding Albany Highway, comprising weatherboard worker cottages contributes to its character, yet faces pressures from development.	While the AHPSP acknowledges the character of original residential fabric, it does not establish specific development provisions or controls for such sites. This approach allows for necessary growth and development within a defined precinct boundary, without imposing restrictions on sites identified as containing original residential fabric.

Objective 16

Promote innovative, high-quality, and sustainable development that achieves good design and complements the character of Albany Highway whilst delivering a variety of building heights, typologies and styles

Why is this an objective?

It is crucial that future development enriches the urban environment of Albany Highway through careful consideration of, and response to, the impacts and opportunities presented by the height and scale of new buildings.

A balanced response to maximising development potential and protecting valued characteristics not only makes Albany Highway more appealing to residents, businesses, and visitors but also ensures that growth contributes positively to the area's distinctiveness and community values.

How does the Precinct Structure Plan Respond?

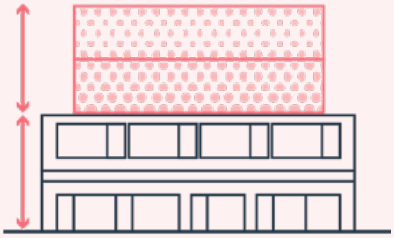
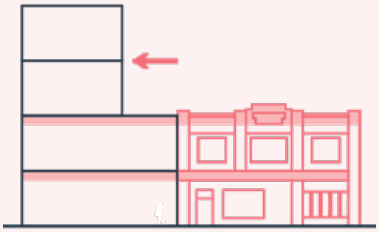
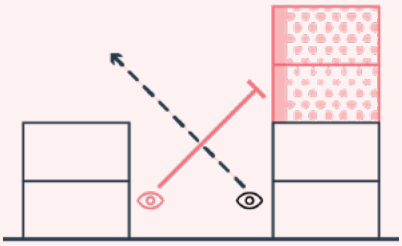
The AHPSP applies a new urban design framework to the precinct that proposes significant variations to long-standing building typologies and heights, based on a comprehensive built form optioneering exercise informed by stakeholder consultation. While building heights and plot ratio entitlements have generally been uplifted across all sites within the precinct, this degree of change is not uniform and has been carefully considered with respect to wider contextual influences with supporting Part 1 controls calibrated to ensure that increased development scale and density achieves good design outcomes and responds sensitively to precinct character and the immediate urban context.

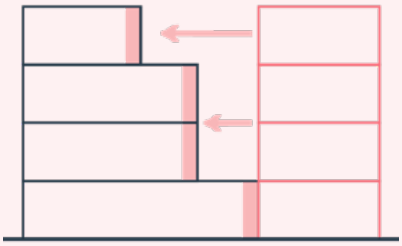
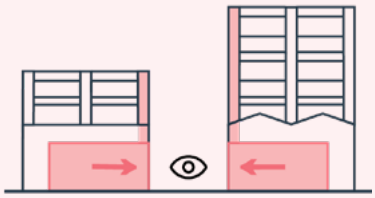
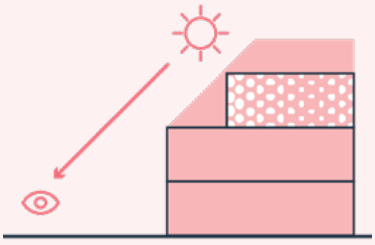
Part 1 development provisions are structured in three parts:

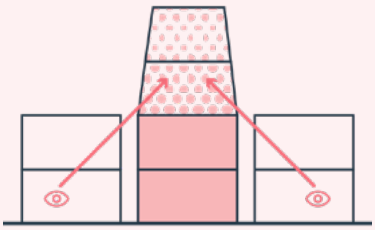
1. General Development Requirements: These are broad guidelines that apply to all development within the precinct. These requirements establish a set of standards aimed at ensuring high-quality outcomes and allow for discretionary decision-making based on clear objectives. Specific development metrics are detailed in the Sub-Precinct Primary Controls part.
2. Specific Development Requirements: These are particular requirements that apply only to certain sites or types of development within the precinct, including heritage conservation and interface with sensitive residential areas. Sites within the precinct that are subject to these requirements are identified within the Sub-Precinct Primary Controls part.
3. Sub-Precincts Development Requirements: Recognizing the precinct's diversity in size, complexity, and character, the AHPSP divides the precinct into 6 sub-precincts, each with tailored building controls related to height, setbacks, and land use. These requirements are summarised in this part in a Primary Controls table and supporting precinct plan.

Built Form Principles

The following built form principles have guided the preparation of built form provisions for the Plan and are reflected through all Part 1 primary building controls. The following table identifies each principle and outlines the informing rationale to support the specific controls and requirements in Part 1.

Principles	Rationale
 **Height and Plot Ratio** Height and plot ratio controls work together to manage building bulk and form. Height controls provide clarity on growth expectations for both the community and developers, while floorspace controls encourage design responses that are contextually appropriate	• Reflect community feedback relating to areas of desired transformational change and limited change, with greater heights in the Causeway, Central, and St James precincts • Emphasise prominent corners and distinguish highly visible sites to add variety, visual interest and a recognisable sense of place along the Highway • Concentrate height within identified Major Sites, with heights transitioning down to mid-rise highway-fronting areas and low-scale residential areas
 **Heritage Response** Preserving heritage buildings and features is essential to maintaining a sense of place. Heritage controls guide how new buildings relate to nearby heritage sites and safeguard contributory features such as historic shopfronts.	• Protect and reinforce the heritage value of the Highway's key heritage-listed buildings • Maximise retention and conservation of higher level Contributory Frontage unlisted fabric including historic shopfronts and parapets to maintain streetscape grain and character • Achieve spatial separation between original and new built fabric to maintain heritage integrity
 **Street Wall** Lower building heights at street level can help to create a comfortable and human-scale experience for pedestrians. Upper levels should be sufficiently set back to distinguish between the street wall and the building elements above	• Promote variety and interest through differing streetwall heights along the Highway, while ensuring consistency and coherence within precincts and at points of transition • Ensure differentiation between the streetwall and upper building elements by establishing consistent front setback requirements above streetwall height

Principles	Rationale
 **Upper Level Setbacks** Side boundary setbacks can increase solar access to the street and support cross-ventilation. Equally, allowing taller boundary walls can improve development outcomes on small sites and create an interesting urban character	• Where additional height is to be permitted above the street wall, encourage side setbacks to mitigate the perceived bulk of additional height • Maintain daylight penetration and ventilation to the street between upper building levels where lot width permits • Support good ventilation and outlook for residential dwellings by minimising internally oriented dwellings • Allow nil (attached) side setbacks in narrow frontage areas to protect and emphasise existing fine-grain character
 **Street Interface** Controlling the manner in which new development addresses and enlivens streets and laneways can support a lively and diverse environment. Buildings should make a positive contribution to the street and be responsive to existing character and land use	• Strategically identify key focus areas for ground floor retail and hospitality to manage oversupply • Promote alternative ground floor uses outside of core retail areas that support employment, such as office space, creative studios, light industrial units and community services • Ensure ground floor design is efficient, maximising the available floorspace for commercial tenancies; and high quality, through the use of high quality materials • Promote activation of laneways with commercial and residential uses alongside servicing
 **Solar Access** Building envelope controls can prevent excessive overshadowing of critical street areas and public space. This can be achieved by prioritising areas that require higher protection levels to achieve a fair and balanced outcome.	• Protect important open spaces and key sections of Albany Highway from overshadowing while permitting overshadowing elsewhere • Balance overshadowing with development viability and the achievement of critical • Adopt the September Solstice (22 June) as the measure used to determine overshadowing impacts, to gain an understanding of the potential impact when shadows are at their longest and most impactful • Adopt a reasonable approach to overshadowing impact focused on preserving a minimum of 5 hours of uninterrupted access

Principles	Rationale
 **Scale Transition** Transitional controls are used to mitigate amenity impacts between new higher-density development and adjacent low-scale residential properties. These controls use a combination of ground floor setbacks, built form envelope controls and solar controls to provide a sensitive interface to these neighbouring properties	• Share transitional arrangements fairly by allowing more development on adjacent lots where possible, to avoid overly constraining key Highway sites • Require ground level rear setbacks where no laneway exists to accommodate landscaped areas and deep soil zones • Manage sensitive direct interface areas where no laneway or ROW exists with greater setbacks
 **Major Sites** Large sites have the potential to unlock the potential of Albany Highway and enhance its distinctive character while accommodating significant development that delivers new amenities and community benefits	• Promote greater development height where this adds diversity, visual appeal, and a memorable sense of place to the Highway• • Ensure the delivery of significant community benefit and public amenity that is commensurate with the scale of development • Consolidate height within Major Sites where visual impact and overshadowing is most limited, with suitable transition in scale to adjoining areas

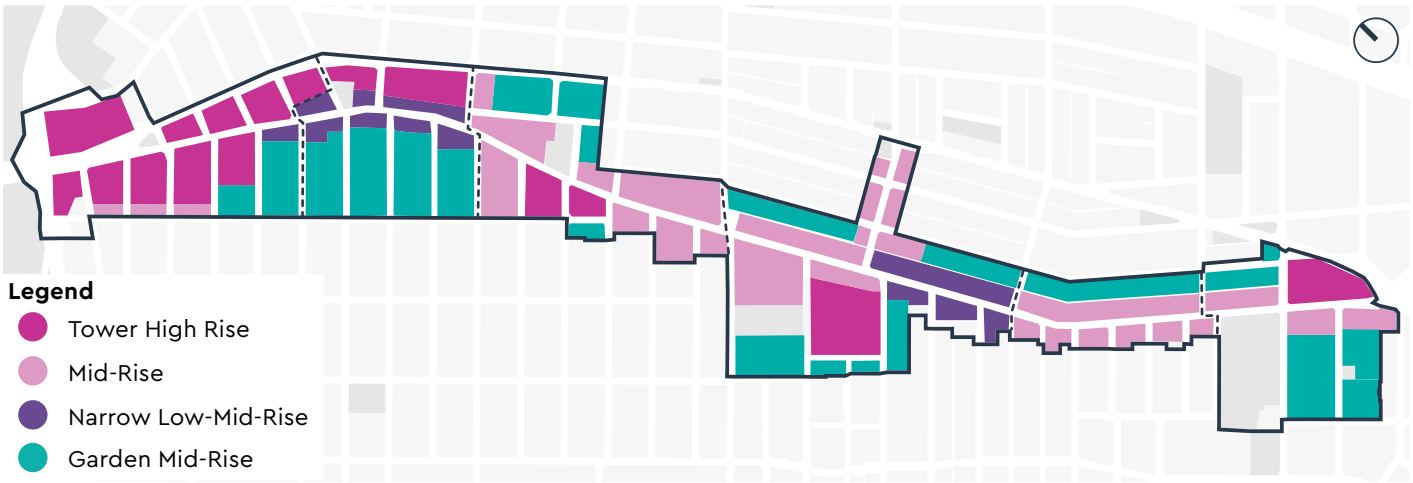
Building Typologies

The identified built form principles have led to the creation of four distinct building typologies, as summarised below. These typologies have been tested and refined to create a diverse and varied future urban character while maintaining the positive attributes of each Sub Precinct's existing character. The distribution of typologies is shown in Table 33.

Table 33: Building Typologies

Typology	Description	Part 1 Ref
	**Tower High-Rise** A mixed use building with one or more tall towers above multi-level podium structure, between 12–30 storeys.	
	**Mid-Rise** A mixed use building between 5–12 storeys with and active ground floor and generous setbacks above street wall height to lessen visual bulk and support internal apartment amenity.	
	**Narrow Low-Mid-Rise** A mixed use building typically located within Contributory Frontage Locations with a maximum 2–3 storey podium stepping back to a maximum height of 4 storeys, protecting heritage and supporting fine grain character.	
	**Garden Mid-Rise** A predominantly residential building between 4–12 storeys with generous landscaped setbacks to the street, sides and rear.	

Figure 31: Distribution of Building Typologies



Street Interface

Separate to Building Typologies, Part 1 establishes three key street interface conditions applicable to all development within the precinct. These typologies seek to direct and control the extent of retail and hospitality within the precinct with a view to concentrating activity within core areas of the Victoria Park and East Victoria Park Sub-Precinct. The rationale for the application of these frontages is detailed in Table 34 and illustrated on Figure 31.

Table 34: Street Interface Typologies

Typology	Rationale
Centre	Applies to areas in which core retail activity currently exists or is intended to be established
Commercial	Applies to areas in which active street frontage is desired but a wider array of commercial activity may be permitted
Residential	Applies to areas in which a predominantly residential and landscaped street character currently exists or is intended to be established

Commercial Feasibility Review

Cygnet West's development feasibility review endorses the proposed scale and approach to development established by the AHPSP, deeming it suitable for adapting to long-term market conditions.

Despite short-term challenges such as high land prices and competitive surrounding stock, the Precinct Structure Plan is advised to focus on long-term guidance, with flexibility for periodic adjustments based on economic, property market, and demographic shifts. This strategy allows for both small-scale developments in the short term and larger, transformative projects when conditions improve.

The use of wider geographic extent of the precinct boundary which includes residential properties that sit away from the Highway is identified by Cygnet West as a critical measure that will allow development to commence in the periphery of the precinct where land values and property sizes are more conducive to development in the short term.

Against these short term opportunities, Major Sites being identified for significant development are also supported as longer-term opportunities as market interest in Victoria Park matures. A site-specific planning approach for these Major Sites, where superior plot ratio and height is available subject to meeting agreed built form, heritage, environmental, streetscape, and landscape performance criteria, is also supported.

Figure 32: Distribution of Street Interface Typologies

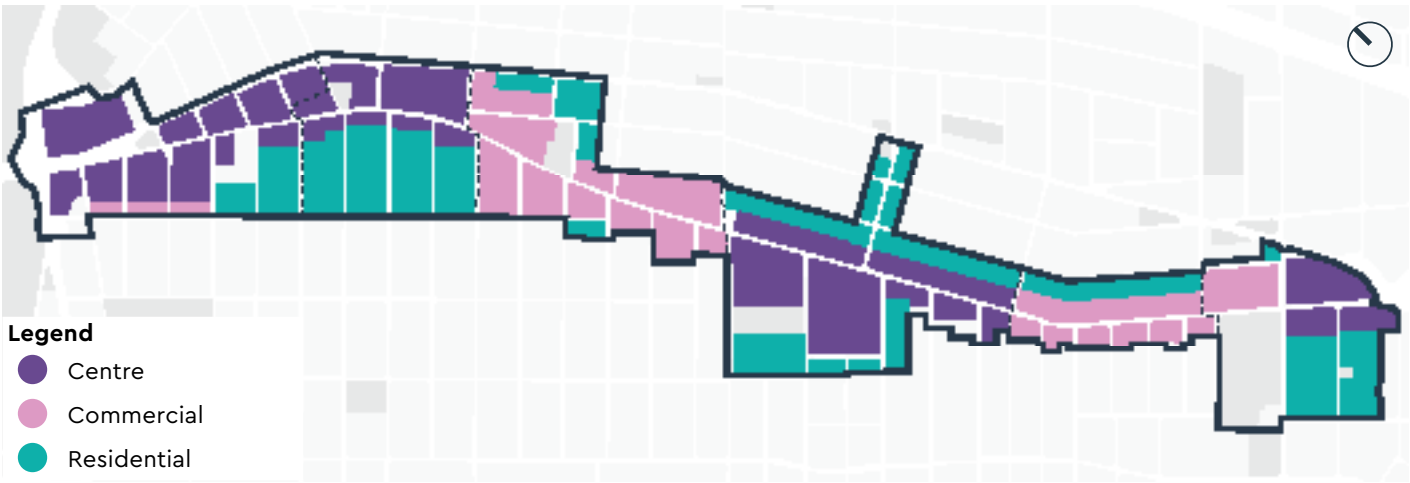
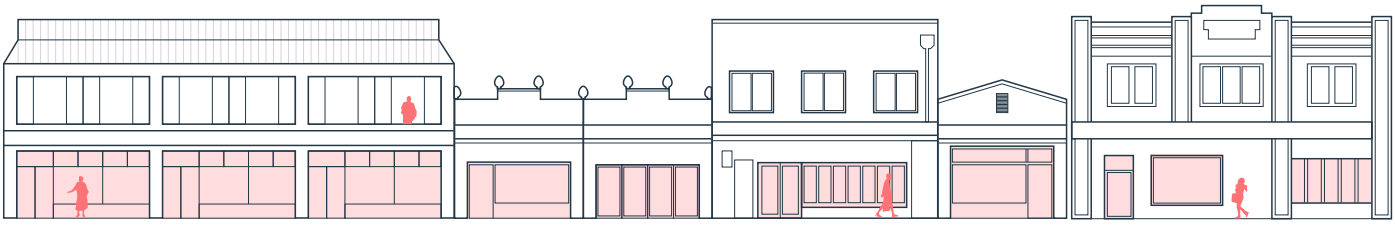


Figure 33: Street Interface Desired Outcomes

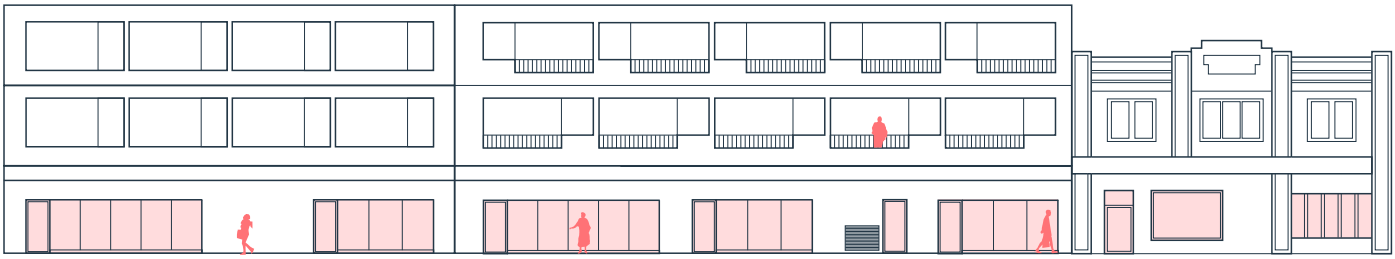
Existing Streetscape

Diverse and eclectic mix of buildings of varying quality and worthiness for retention, which collectively contribute to a fine grain streetfront rhythm with a range of architectural styles and shop frontage designs.



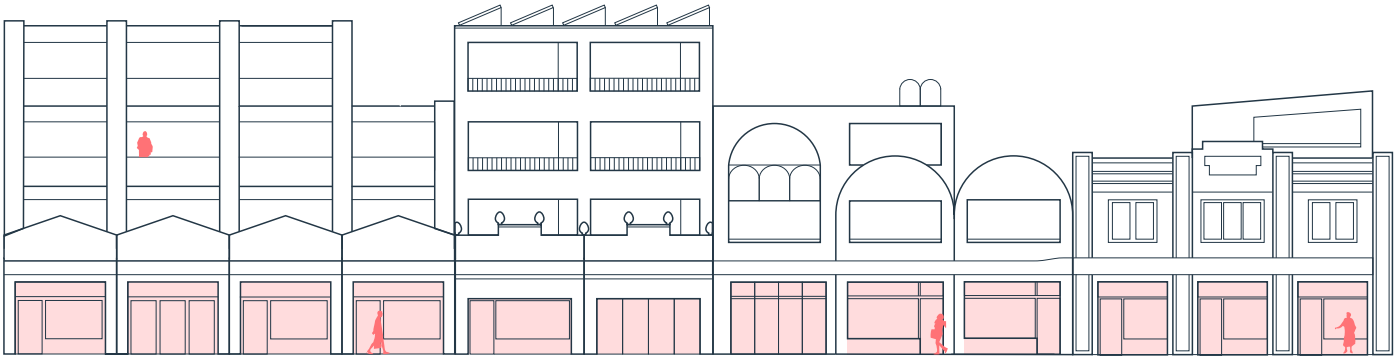
Undesirable Outcome

Replacement of fine-grain building stock including contributory frontages with poorly detailed development with a horizontal emphasis and less inviting shopfront design, lessening the Highway's fine-grain character.



Preferred Outcome

Valued qualities of the Highway interpreted through new development, including a range of architectural styles and building heights alongside retained and restored contributory frontages.



Objective 17

Protect and restore heritage buildings and contributory fabric, ensuring new development complements heritage places

Why is this an objective?

How does the Precinct Structure Plan Respond?

The Plan introduces a dual framework for heritage protection, catering to a broad spectrum of properties across the precinct.

Heritage Listed Sites

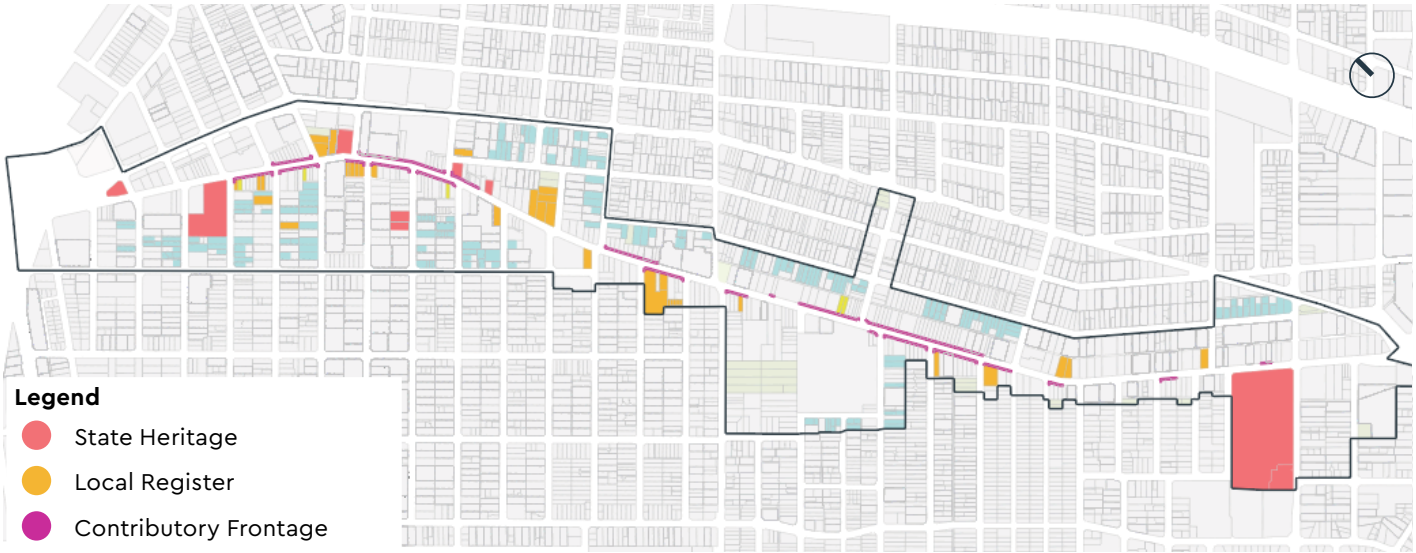
These include sites listed on the State Heritage Register and Local Heritage Survey. The AHPSP offers general guidance for these sites, complemented by separate legislative requirements that, in some cases, take precedence over AHPSPs provisions. This layered approach ensures that heritage conservation is integrated into the broader planning framework, providing a solid foundation for protecting and enhancing recognised heritage assets.

Contributory Frontages Areas

The Plan identifies specific sections of Albany Highway where shopfronts, despite lacking formal protection or recognition, are deemed to have significant heritage value. To preserve these elements, the AHPSP sets specific standards for the restoration and retention of these frontages, including the preservation of interior shopfront features within six metres of the building boundary when of exceptionally high quality. For properties subject to this designation, a heritage assessment is required as part of any development application to evaluate the significance of the identified frontage and determine its retention viability. The Plan allows for varying degrees of retention based on heritage value and development viability.

The AHPSP also acknowledges areas within its boundary previously identified as containing Original Residential Fabric, being areas containing historic weatherboard cottages. While the retention of this fabric is encouraged in any new development, specific development requirements for these sites are not provided by the Plan to allow for greater development flexibility within these areas. Town policies related to residential fabric conservation are to be given due regard in the development assessment process.

Figure 34: Extent of Applicable Heritage Requirements



Objective 18

Maintain appropriate levels of solar access and comfortable wind conditions to public open space, schools and public realm along Albany Highway

Why is this an objective?

Ensuring adequate solar access and comfortable wind conditions for public open spaces, schools, and the public realm along Albany Highway is fundamental to creating a healthy, sustainable, and liveable urban environment.

Best practice in urban planning emphasises the protection of sunlight access to vital public areas to enhance community well-being, encourage outdoor activity, and support ecological systems.

How does the Precinct Structure Plan Respond?

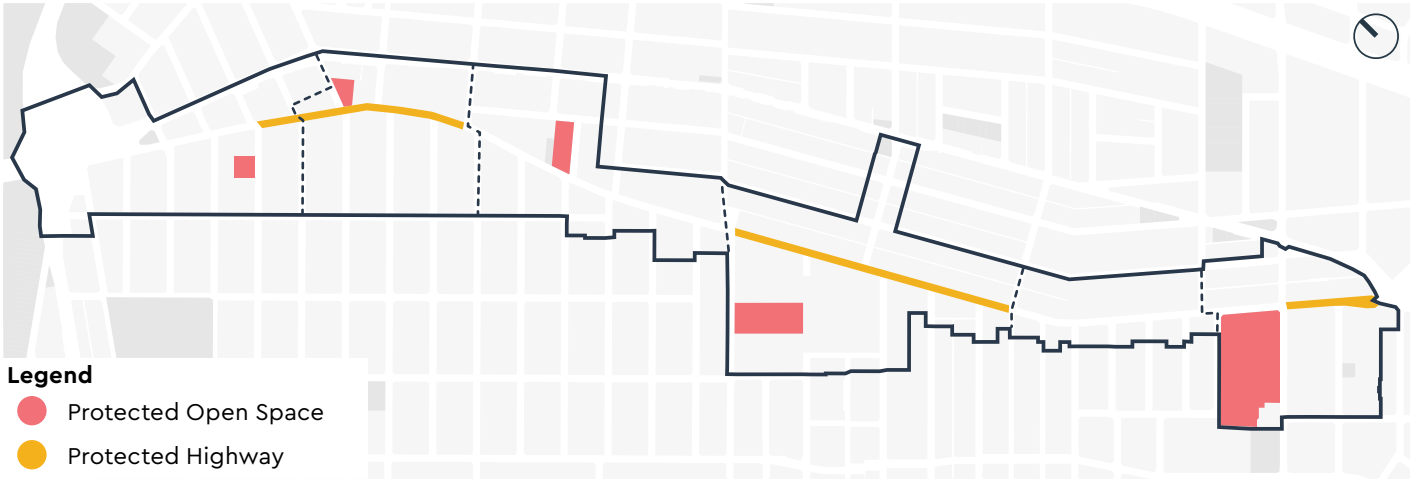
The Plan introduces solar access protections in a limited number of areas specifically tailored for significant public sites, including key sections along the southern side of Albany Highway within Victoria Park and East Victoria Park, areas of open space and school sites.

Protected parts of Albany Highway benefit from sunlight for aesthetic, functional, and environmental reasons and these requirements also ensure that building massing is positioned to preserve the scale, character, and heritage context of Albany Highway in areas where its character is best preserved.

For key public spaces and school sites, maintaining optimal sunlight access brings broader community benefits, including supporting plant health and creating more inviting outdoor spaces.

The AHPSP establishes clear measurement criteria for solar access, specifying times of day and seasons, and provides a general exclusion for shadows cast below podium height. This approach balances the need for development with the preservation of amenity, acknowledging that minor overshadowing during certain times of the year is acceptable to ensure that development potential and viability are not unduly restricted.

Figure 35: Extent of Solar Access Requirements



Objective 19

Ensure new development responds sensitively to adjacent lower-density residential areas

Why is this an objective?

It is important to mitigate potential adverse impacts of new development on adjacent lower-density residential areas where future intensification is not anticipated.

Implementing clear, consistent, and understandable transitional development controls protects these sensitive areas from the effects of nearby intensification while allowing for a significant increase in building height and plot ratio, ensuring that varied building typologies are cohesively integrated.

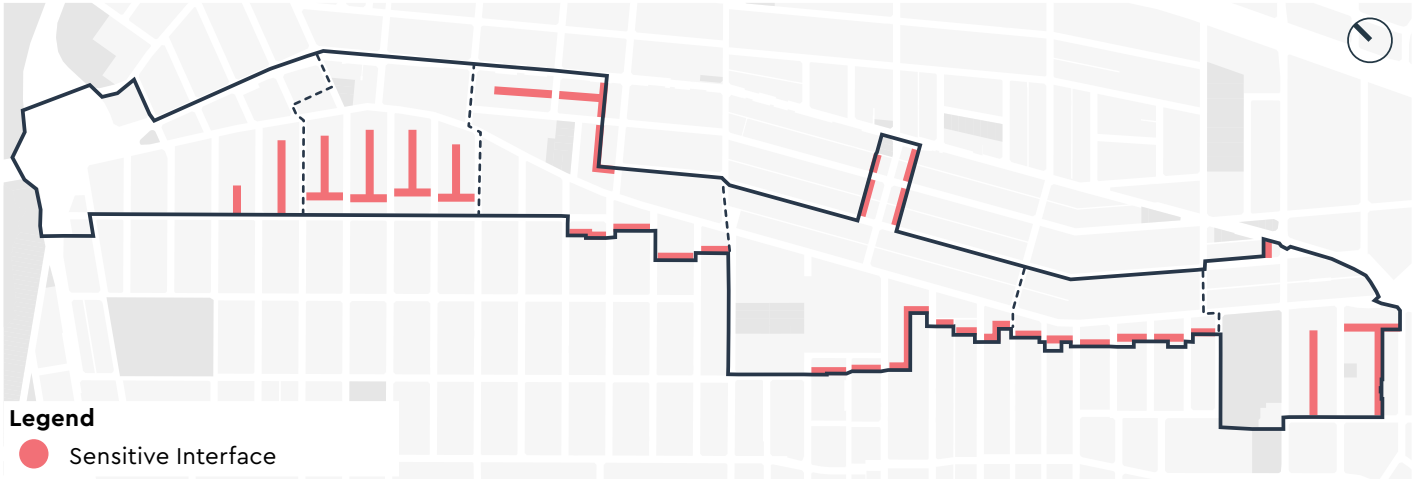
How does the Precinct Structure Plan Respond?

The Plan mandates a sensitive transition in building height for development adjoining lower-density residential areas or other sensitive sites, where defined in Part 1. The required transition varies depending on whether a rear laneway is present, with larger landscaped setbacks required for a direct interface.

Development is also required to be contained within a 45-degree angled plane within a specified distance from a sensitive interface boundary to minimise visual impact, overlooking, and overshadowing. This ensures that the form and massing of new development is such that impacts on surrounding low-density areas is no more significant than under previous height restrictions.

The AHPSP provides guidelines for discretionary decision-making, allowing for site-specific responses when the standard transitional requirements might not be the most appropriate solution.

Figure 36: Extent of Sensitive Interface Requirements





7.0 The Future of the Precinct

Current TPS1 Zoning Controls are holding the precinct back and contributing to a slow rate of development compared to the rest of Perth (Figure 36). Equally, funding for upgrades to the public realm and community infrastructure is limited for such a large precinct.

A bold and ambitious plan is required to achieve the Vision and specific community priorities for the precinct. The proposed Precinct Structure Plan (Figure 37) will take several decades to evolve and, based on examples from around the world, it will not be developed to its maximum capacity illustrated below.

Based on specialist feasibility advice, Low-Mid Rise typologies are more likely to developed in the short term, with Tower High Rise and the development of Major Sites more of a medium to long term proposition.

The Proposed Structure Plan 3D diagram below is based on the maximum permitted Bonus Heights.

With this will come significant community benefits, as prioritised by the community and decision makers and tailored to the specific needs of each sub precinct and the Town more broadly.

This will range from meeting district level needs by re-imagining existing community, recreation and arts facilities at Macmillan Precinct, though to staged streetscape upgrades, affordable housing, sustainable buildings, design excellence and everything in between.

This will take careful implementation, summarised as follows.



Figure 37: Current: TPS1 Zoning



Figure 38: Proposed: Precinct Structure Plan

7.1 Causeway



Sub-Precinct Intent

Causeway will undergo transformative change to become a significant employment centre with high-density office, residential, and tourist accommodation, supported by redevelopment of the Canning Highway road interchange and future establishment of mid-tier transit. Enhanced public spaces will improve pedestrian access and recognise Aboriginal heritage.

7.1.1 Detailed Design Concept



Figure 39: Causeway Sub-Precinct Axonometric Diagram (Not to Scale)



TPS1 Permitted Development



Precinct Structure Plan

Figure 40: Causeway Sub-Precinct Conceptual Rendering (Not to Scale) and Precedent Imagery







7.1.2 Implementation & Parallel Actions

Table 35: Causeway Sub-Precinct Implementation & Parallel Actions

Sub-Precinct Objective	Implementation Actions	Responsibility	Timeframe
1. Establish the Causeway as a significant office-based employment hub through transformative mixed-use development of sites bounded by Shepperton Rd, Armargh St and Mackie St.	• Support development which provides employment-generating floorspace consistent with Part 1 provisions and objectives • Undertake additional market research and advocacy to promote office development • Engage with State Government to seek relocation of a Departmental office to the sub-precinct	Town of Victoria Park Private Landowners	Medium Term
2. Transform the gateway to Victoria Park through redevelopment of the Canning Highway road interchange and bus station.	• Engage with State Government to progress development concept and traffic network model for interchange • Develop a Local Structure Plan or Local Development Plan to formalise development requirements • Explore the integration of district-scale sustainability infrastructure as part of a future development	Town of Victoria Park State Government	Long Term
3. Promote mixed-use development along Albany Highway, prioritising commercial, office, entertainment, and retail uses at street level including laneways, with office, accommodation, and residential uses on upper levels.	• Support development which is consistent with Part 1 provisions and objectives • Engage with landowners and promote development opportunities to attract investment	Town of Victoria Park Private Landowners	Short Term
4. Retain car sales and related activity only where located within the podium of mixed-use development fronting Shepperton Rd.	• Engage with landowners to develop appropriate development scenarios and concepts for mixed-use development incorporating car sales activity	Town of Victoria Park	Medium Term



Sub-Precinct Objective	Implementation Actions	Responsibility	Timeframe
5. Improve micromobility routes parallel to Albany Highway along Hordern St and improve connections to the Swan River Pedestrian Bridge whilst progressing planning for Mid-Tier transport.	• Undertake consultation and detailed design development for Micromobility routes parallel to the Highway consistent with the Transport Strategy • Identify a timeframe for funding and delivery within the Town budget • Engage with the Public Transport Authority to resolve the long-term design arrangements for the Causeway Bus Interchange with regard for future Mid-Tier Transport Connectivity • Engage with State Government to advocate for the extension of Mid-Tier Transit along Albany Highway to Curtin University and undertake preparatory work including identification of preferred stop locations and road reserve design requirements	Town of Victoria Park	Medium Term
6. Facilitate public realm and biodiversity improvements to all sub-precinct streetscapes and appropriately recognise and respond to the historic location of Mindeera Spring and Aboriginal Lands Trust land.	• Prepare Public Realm Design Guidelines based on the Public Realm Strategy • Undertake consultation and detailed design development for public realm enhancements to the Albany Highway Road Reserve consistent with the Public Realm Strategy, including identification of specified locations for road closures, corner conversions, kerb extensions and other interventions. • Engage with the Mindeera Advisory Group to identify a means of suitably recognising the location of Mindeera Spring within the built environment • Engage with the Mindeera Advisory Group and State Government to determine an appropriate future use and ownership of ALT land	Town of Victoria Park Private Landowners State Government	Short Term



7.2 Victoria Park



Sub-Precinct Intent

Victoria Park will sensitively integrate new residential, office, and creative spaces with its historic architecture and shopfronts, enriching its cultural offering and evening economy. Transformation of the Victoria Park Central Site and the enhancement of streets and public spaces will sustain a lively community atmosphere with year-round activities and events.

7.2.1 Detailed Design Concept



Figure 41: Victoria Park Sub-Precinct Axonometric Diagram (Not to Scale)



TPS1 Permitted Development



Precinct Structure Plan

Figure 42: Victoria Park Sub-Precinct Precedent Imagery









7.2.2 Implementation & Parallel Actions

Table 36: Victoria Park Sub-Precinct Implementation & Parallel Actions

Sub-Precinct Objective	Implementation Actions	Responsibility	Timeframe
a. Reinforce Albany Highway between Mackie St and Duncan St as a focal point of retail and evening hospitality activity, complemented by a shared space public realm treatment to the Highway road reserve.	• Deliver Old Spaces New Places Western Gateway as the stage 1 shared street, consistent with the Public Realm Guidelines • Encourage complementary night-time uses • Actively engage with Vicinity about future plans for the Victoria Park Central Shopping Centre site	Town of Victoria Park Town of Victoria Park Town of Victoria Park	Short Term Short Term Medium Term
b. Encourage transformative development of Major Sites between Harvey St and Duncan St to deliver retail, accommodation, office and residential floorspace, including creative and cultural space.	• Engage with landowners and promote development opportunities to attract investment • Engage with MRWA, PTA and Department of Transport about sustainable transport solutions • Advocate for the preparation of a business case for mid-tier transit, focusing on the development potential of these and other Major Sites	Town of Victoria Park State Government Town of Victoria Park/ State Government	Short Term Short Term Short Term
c. Limit significant retail floorspace and building height to Major Sites, ensuring other development aligns with established fine-grain character.	• Support development which is consistent with Part 1 provisions and objectives • Consider if there is a need for more detailed design guidance to support the AHPSP	Town of Victoria Park Town of Victoria Park	Short Term
d. Promote mixed-use redevelopment along Albany Highway, focusing on hospitality, entertainment, and retail at street level, with commercial and residential spaces above.	• Engage with landowners early to develop appropriate development scenarios, particularly on Major Sites	Town of Victoria Park/ Landowners	Medium Term



Sub-Precinct Objective	Implementation Actions	Responsibility	Timeframe
e. Support high-rise residential infill between McMaster St and MacMillan St, with an emphasis on generous landscaping and setbacks, to establish a diverse residential neighbourhood.	• Actively inform landowners of new development allowances under the AHPSP • Assist landowners and developers with property information that can assist with land assembly	Town of Victoria Park Town of Victoria Park/ Landowners	Medium Term
f. Improve precinct connectivity to Victoria Park Train Station along Duncan St and enhance micromobility routes along Hordern St.	• Undertake consultation and concept designs for these key micromobility routes consistent with the Transport Strategy • Investigate funding opportunities, such as State Government and other grants, without waiting for Community Benefits funding	Town of Victoria Park Town of Victoria Park	Medium Term
g. Facilitate public realm and biodiversity improvements to all sub-precinct streetscapes and Memorial Gardens.	• Undertake consultation and prepare a concept plan for Memorial Gardens • Determine the suitability of the adjacent civic centre being consolidated into the Macmillan Precinct, freeing up the existing site for bonus height development, the funds from which can go towards the new community hub in East Victoria Park and upgrades to Memorial Gardens	Town of Victoria Park Town of Victoria Park	Short Term



7.3 Central



Sub-Precinct Intent

Central will be reimagined as a dynamic place to live and work, blending light industry and creative workspace with preserved heritage and significant residential expansion. A transformed Read Park will anchor this growth, emerging a bustling, green community heart.

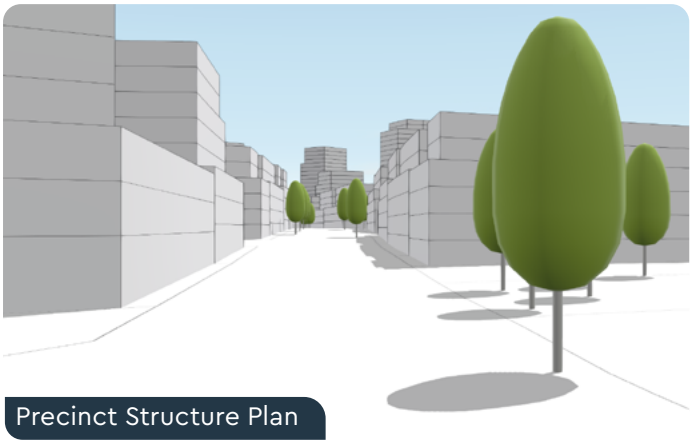
7.3.1 Detailed Design Concept



Figure 43: Central Sub-Precinct Axonometric Diagram (Not to Scale)



TPS1 Permitted Development



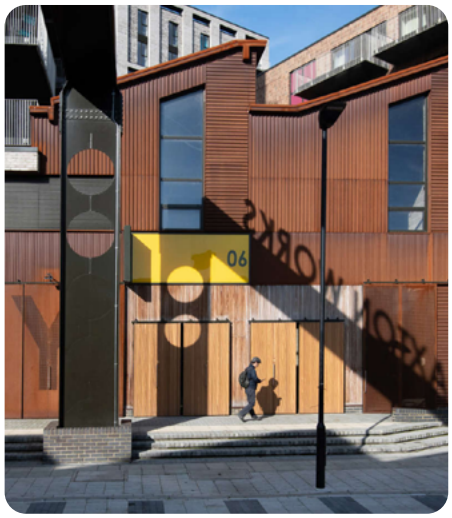
Precinct Structure Plan

Figure 44: Central Sub-Precinct Conceptual Rendering (Not to Scale) and Precedent Imagery









7.3.2 Implementation & Parallel Actions

Table 37: Central Sub-Precinct Implementation & Parallel Actions

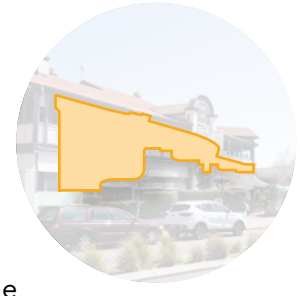
Sub-Precinct Objective	Implementation Actions	Responsibility	Timeframe
a. Promote transformative development of Major Sites between Temple and Rathay Streets, including a focus on local cultural and creative space as an activity anchor.	• Engage with landowners and promote development opportunities to attract investment • Support development which is consistent with Part 1 provisions and objectives • Engage with local community groups and creative industries	Town of Victoria Park Town of Victoria Park Private Landowners	Medium Term
b. Encourage mixed-use redevelopment fronting Albany Highway, prioritising office, service commercial, cultural, and minor retail uses at street level, with predominantly residential uses to upper levels and fronting laneways.	• Engage with landowners and promote development opportunities to attract investment • Support development which is consistent with Part 1 provisions and objectives	Town of Victoria Park	Medium Term
c. Support mid-rise residential infill fronting Salford St, Hordern St, Temple St, and Lichfield St, with an emphasis on generous landscaping and setbacks, to establish a diverse residential neighbourhood.	• Actively inform landowners of new development allowances under the AHPSP • Assist landowners and developers with property information that can assist with land assembly	Town of Victoria Park Town of Victoria Park/ Landowners	Medium Term
d. Improve micromobility routes parallel to Albany Highway along Lichfield Street.	• Undertake consultation and concept designs for these key micromobility routes consistent with the Transport Strategy • Investigate funding opportunities, such as State Government and other grants, without waiting for Community Benefits funding	Town of Victoria Park Town of Victoria Park	Medium Term



Sub-Precinct Objective	Implementation Actions	Responsibility	Timeframe
e. Facilitate public realm and biodiversity improvements to all sub-precinct streetscapes, Read Park and drainage sumps.	• Undertake consultation and prepare a concept plan for Reid Park and consider all funding options for delivering park upgrades early to stimulate private developmment • Promote Bonus Height development within the sub-precinct, to help generate community benefits funding towards all public realm upgades	Town of Victoria Park Town of Victoria Park	Short Term



7.4 East Victoria Park



Sub-Precinct Intent

East Victoria Park will build on its identity as Perth's culinary hub through sensitive development and public realm investment, maintaining its eclectic character and diverse independent businesses. Resilience and diversity will be added through transformation of the Park Centre and Macmillan Precinct into an exemplar of sustainable mixed-use development.

7.4.1 Detailed Design Concept



Figure 45: East Victoria Park Sub-Precinct Axonometric Diagram (Not to Scale)



TPS1 Permitted Development



Precinct Structure Plan

Figure 46: East Victoria Park Sub-Precinct Conceptual Rendering (Macmillan Precinct) and Precedent Imagery









7.4.2 Implementation & Parallel Actions

Table 38: East Victoria Park Sub-Precinct Implementation & Parallel Actions

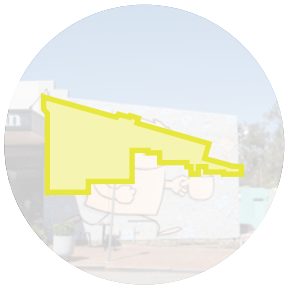
Sub-Precinct Objective	Implementation Actions	Responsibility	Timeframe
a. Reinforce Albany Highway between Mint and Dane St as a focal point for independent retail and evening hospitality activity, complemented by a shared space public realm treatment to the Highway road reserve.	• Deliver the Macmillan Precinct Master Plan, acting as a catalyst for the redevelopment of the Park Centre, including the adjacent Albany Highway shared street • Engage with major landowners and promote development opportunities to attract investment • Support development which is consistent with Part 1 provisions and objectives	Town of Victoria Park/Private Landowners Town of Victoria Town of Victoria	Medium Term
b. Promote transformative development of Major Sites between Kent St and Basinghall St to create a diverse retail and commercial hub with expanded retail, accommodation, office and other non-residential floorspace, in addition to creative and cultural space and significant new community facilities.	• As above	As above	As above
c. Limit significant additional floorspace and building height to Major Sites, ensuring other development aligns with established fine-grain character.	• Support development which is consistent with Part 1 provisions and objectives	Town of Victoria Park	Short Term
d. Promote mixed-use redevelopment along Albany Highway, prioritising hospitality, entertainment, and retail uses at street level including laneways, with commercial and residential uses above.	• Engage with major landowners and promote development opportunities to attract investment • Support development which is consistent with Part 1 provisions and objectives		Medium Term



Sub-Precinct Objective	Implementation Actions	Responsibility	Timeframe
e. Support mid-rise residential infill fronting Basinghall St, Moorgate St, and Hubert St with an emphasis on generous landscaping and setbacks, to moderate the transition from Albany Highway to surrounding lower-scale areas.	• Actively inform landowners of new development allowances under the AHPSP • Assist landowners and developers with property information that can assist with land assembly	Town of Victoria Park Town of Victoria Park/ Landowners	Medium Term
f. Improve precinct connectivity to Carlisle Train Station along Mint St and enhance micromobility routes parallel to Albany Highway along Hordern St and Swansea St.	• Undertake consultation and concept designs for these key micromobility routes consistent with the Transport Strategy • Investigate funding opportunities, such as State Government and other grants, without waiting for Community Benefits funding	Town of Victoria Park Town of Victoria Park	Short-Medium Term
g. Facilitate public realm and biodiversity improvements to all sub-precinct streetscapes, John Macmillan Park, Isaia Corner, and drainage sumps.	• Prepare stage by stage concept plans for streetscape upgrades and sump improvements in accordance with the Public Realm Strategy and its Staging Plan • Investigate funding opportunities, such as State Government and other grants, in addition to Community Benefits funding	Town of Victoria Park	Short-Long Term



7.5 East End



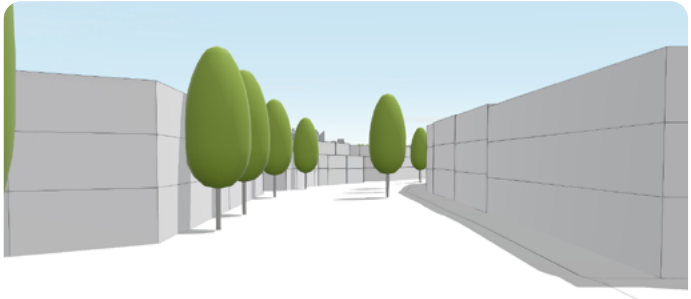
Sub-Precinct Intent

The East End will bridge the divide between East Victoria Park and St James with lower scale and carefully considered residential growth set within greener streets, complemented by new workspace and retail offerings at ground level that cater to local needs.

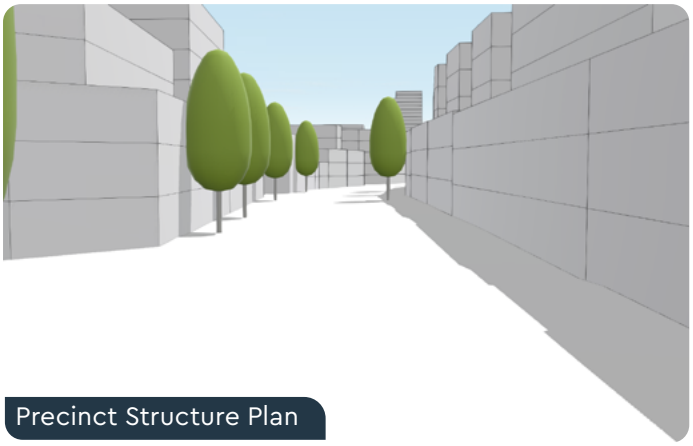
7.5.1 Detailed Design Concept



Figure 47: East End Sub-Precinct Axonometric Diagram (Not to Scale)



TPS1 Permitted Development

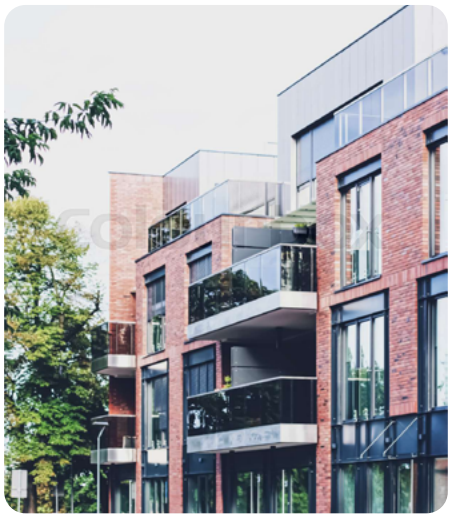


Precinct Structure Plan

Figure 48: East End Sub-Precinct Conceptual Rendering (Not to Scale) and Precedent Imagery









7.5.2 Implementation & Parallel Actions

Table 39: East End Sub-Precinct Implementation & Parallel Actions

Sub-Precinct Objective	Implementation Actions	Responsibility	Timeframe
a. Ensure new development aligns with existing character and does not adversely impact surrounding lower-scale residential areas.	• Support development which is consistent with Part 1 provisions and objectives	Town of Victoria Park	Medium Term
b. Encourage mixed use redevelopment along Albany Highway, allowing for small-scale commercial, cultural and creative, and retail uses at ground level with residential uses to upper levels and fronting laneways.	• Engage with major landowners and promote development opportunities to attract investment • Support development which is consistent with Part 1 provisions and objectives	Town of Victoria Park/ Landowners Town of Victoria Park	Medium Term
c. Support mid-rise residential infill fronting Hubert St, with an emphasis on generous landscaping and setbacks, to moderate the transition from Albany Highway to surrounding lower-scale areas.	• Engage with major landowners and promote development opportunities to attract investment • Support development which is consistent with Part 1 provisions and objectives	Town of Victoria Park/ Landowners Town of Victoria Park	Medium Term



Sub-Precinct Objective	Implementation Actions	Responsibility	Timeframe
d. Enhance micromobility routes parallel to Albany Highway along Hubert Street.	• Undertake consultation and concept designs for these key micromobility routes consistent with the Transport Strategy • Investigate funding opportunities, such as State Government and other grants, without waiting for Community Benefits funding	Town of Victoria Park Town of Victoria Park	Medium Term
e. Facilitate public realm and biodiversity improvements to all sub-precinct streetscapes and drainage sumps.	• Prepare stage by stage concept plans for streetscape upgrades and sump improvements in accordance with the Public Realm Strategy and its Staging Plan • Investigate funding opportunities, such as State Government and other grants, in addition to Community Benefits funding	Town of Victoria Park	Medium Term



7.6 St James



Sub-Precinct Intent

St. James will emerge as Perth's eastern gateway, a commercial and service hub of regional significance that also offers everyday essentials for local residents. New development will frame and enliven Edward Millen Park, while Edward Millen House will emerge as a key attraction and community hub within this growing precinct.

7.6.1 Detailed Design Concept



Figure 49: St James Sub-Precinct Axonometric Diagram (Not to Scale)



TPS1 Permitted Development



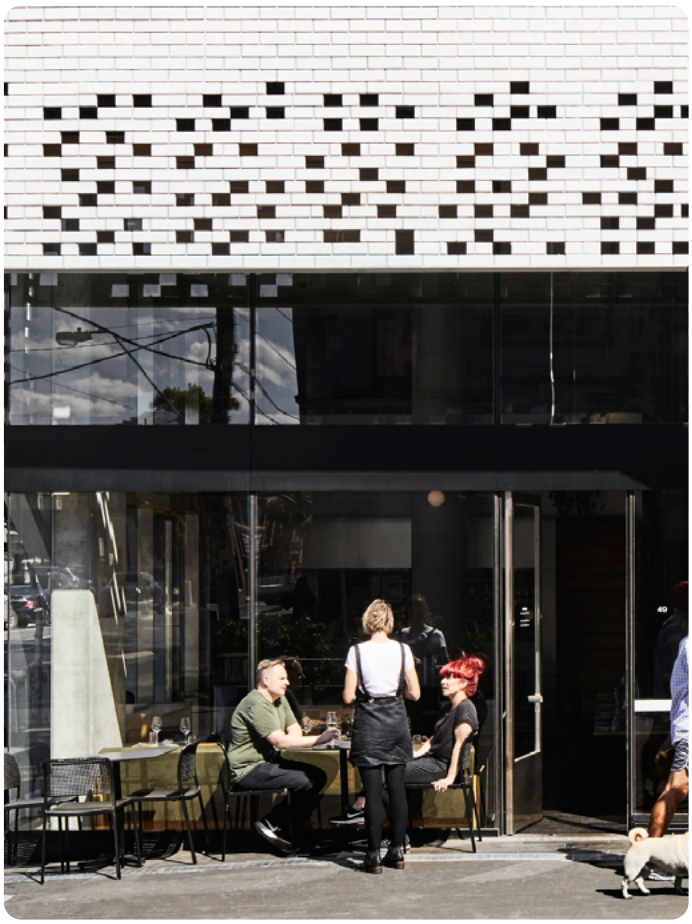
Precinct Structure Plan

Figure 50: St James Sub-Precinct Precedent Imagery









7.6.2 Implementation & Parallel Actions

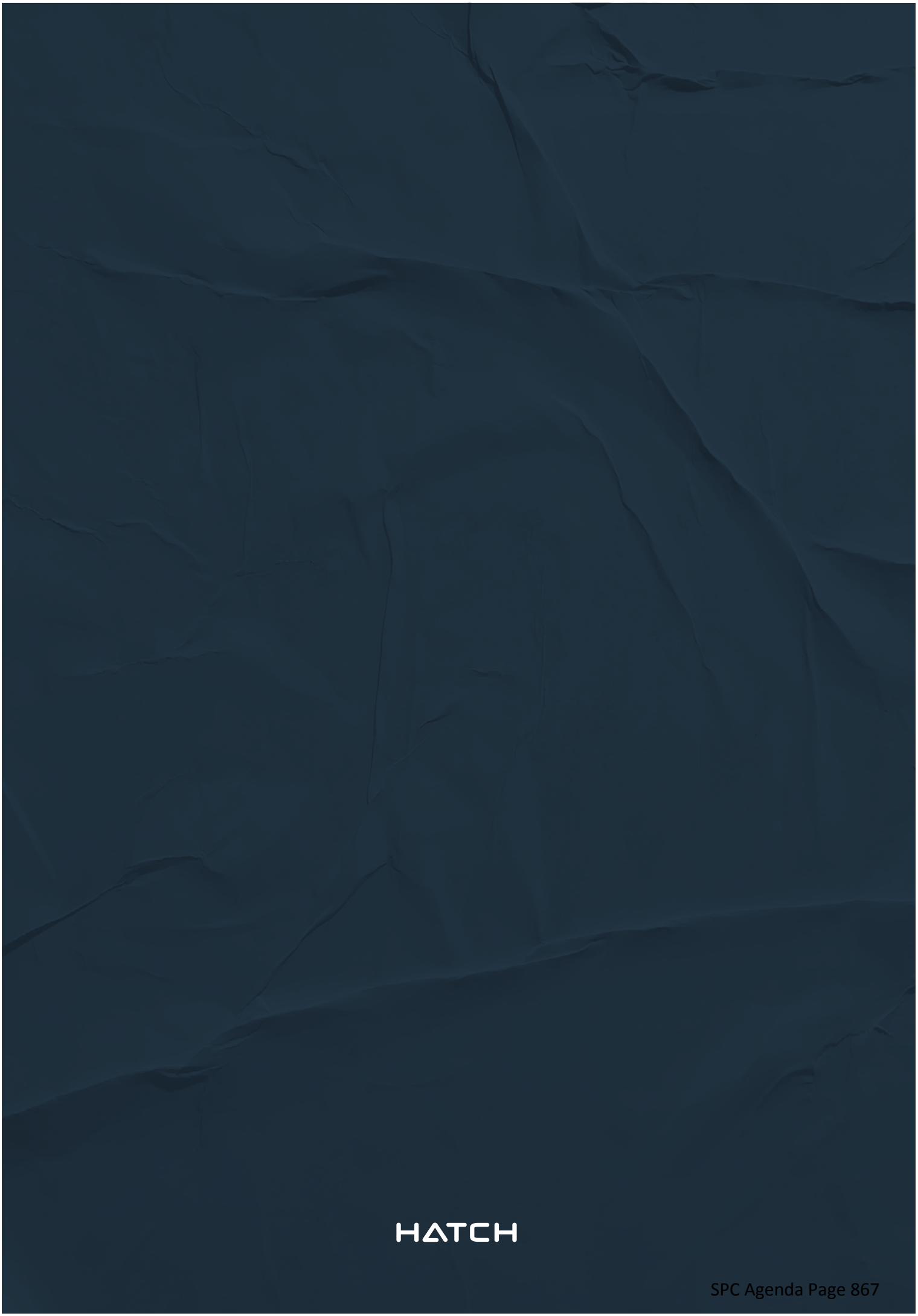
Table 40: St James Sub-Precinct Implementation & Parallel Actions

Sub-Precinct Objective	Implementation Actions	Responsibility	Timeframe
a. Reinforce Albany Highway between Oats St and Welshpool Rd as a focal point of retail and hospitality activity, complemented by a shared space public realm treatment.	• Support development which is consistent with Part 1 provisions and objectives	Town of Victoria Park	Medium Term
b. Encourage transformative development of Major Sites between Shepperton Rd and Albany Highway to create a diverse retail and commercial hub with expanded large-format retail, service commercial, light industrial and office floorspace, in addition to creative and cultural space.	• Engage with major landowners and promote development opportunities to attract investment • Support development which is consistent with Part 1 provisions and objectives	Town of Victoria Park/Private Landowners Town of Victoria Park	Medium Term
c. Encourage mixed-use redevelopment fronting Albany Highway, with service commercial and retail on the ground floor and to laneways, with residential and commercial uses above.	• Engage with major landowners and promote development opportunities to attract investment • Support development which is consistent with Part 1 provisions and objectives	Town of Victoria Park Town of Victoria Park	Medium Term
d. Support mid-rise residential infill fronting Alday St, Hill View Tce and Hubert St, with an emphasis on generous landscaping and setbacks, to create a diverse residential neighbourhood.	• Actively inform landowners of new development allowances under the AHPSP • Assist landowners and developers with property information that can assist with land assembly	Town of Victoria Park Town of Victoria Park/ Landowners	Medium Term



Sub-Precinct Objective	Implementation Actions	Responsibility	Timeframe
e. Strengthen connectivity to Oats Street Train Station and improve micromobility routes parallel to Albany Highway along Hubert Street.	• Undertake consultation and concept designs for these key micromobility routes consistent with the Transport Strategy • Investigate funding opportunities, such as State Government and other grants, without waiting for Community Benefits funding	Town of Victoria Park Town of Victoria Park	Medium Term
f. Facilitate public realm and biodiversity improvements to all sub-precinct streetscapes, Edward Millen Park and Alday Street Reserve.	• Deliver Elisabeth Ballie Park upgrade • Promote the delivery of the shared street stage 1 adjacent to the Woolworths site, as part of that development • Deliver the balance of public realm upgrades in a staged manner in accordance with the Public Realm Guidelines	Town of Victoria park/Private Landowners	Short-Long Term




HATCH

Department of Planning, Lands and Heritage

GOVERNMENT OF WESTERN AUSTRALIA

Attachment 3 – Technical Appendices

Table of Contents

3.1 - Draft Community Benefits Framework (2025) – pg. 2

- 3.1.1 – Bonus Development Rationale – pg. 4
- 3.1.2 – Outline of Place and Community Needs – pg. 16
- 3.1.3 - Methodology Calculation of Community Benefit Liability – pg. 57
- 3.1.4 – Technical Note on Impact-testing and Feasibility Analysis – pg. 62
- 3.1.5 - CBF Procedural Guide – pg. 66

3.2 - Draft Public Realm Strategy (2023) – pg. 74

3.3 - Draft Built Form Strategy (2023) – pg.135

3.4 - Preliminary Heritage Control Recommendations (2022) – pg. 184

3.5 - Market Feasibility Assessment (2022) – pg. 232

3.6 - Economic Retail Employment Strategy (2023) – pg. 256

3.7 - Mobility Access Report (2023) – pg. 350

3.8 - High Level Traffic Analysis (2024) – pg. 379

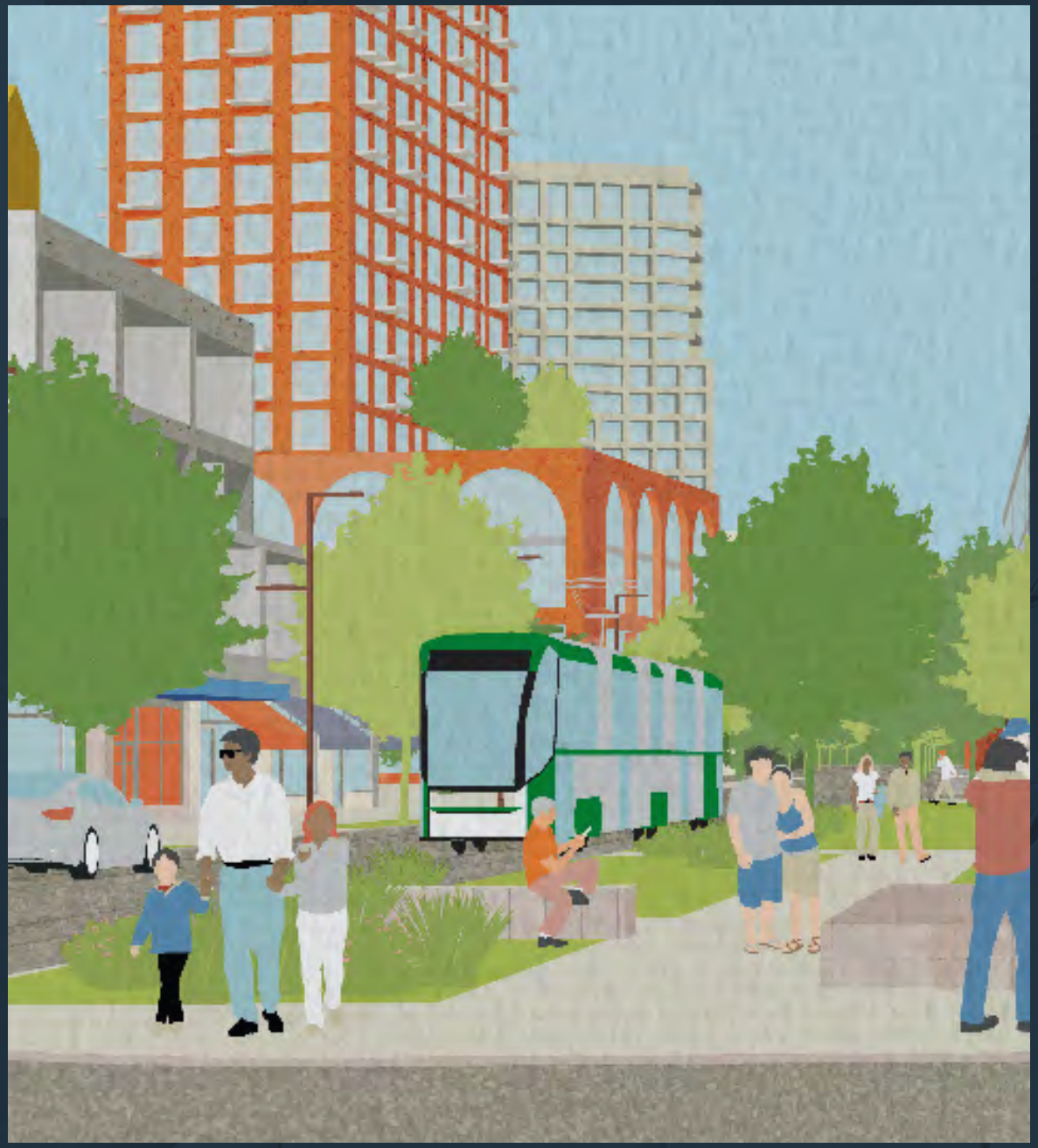
3.9 - Water Management Strategy (2024) – pg. 451

3.10 - Sustainability Strategy (2024) – pg. 526

Town of Victoria Park

Albany Highway Precinct Structure Plan

Draft Community Benefits Framework



Draft Community Benefits Framework

Structure

Bonus Development Rationale

Place & Needs Analysis

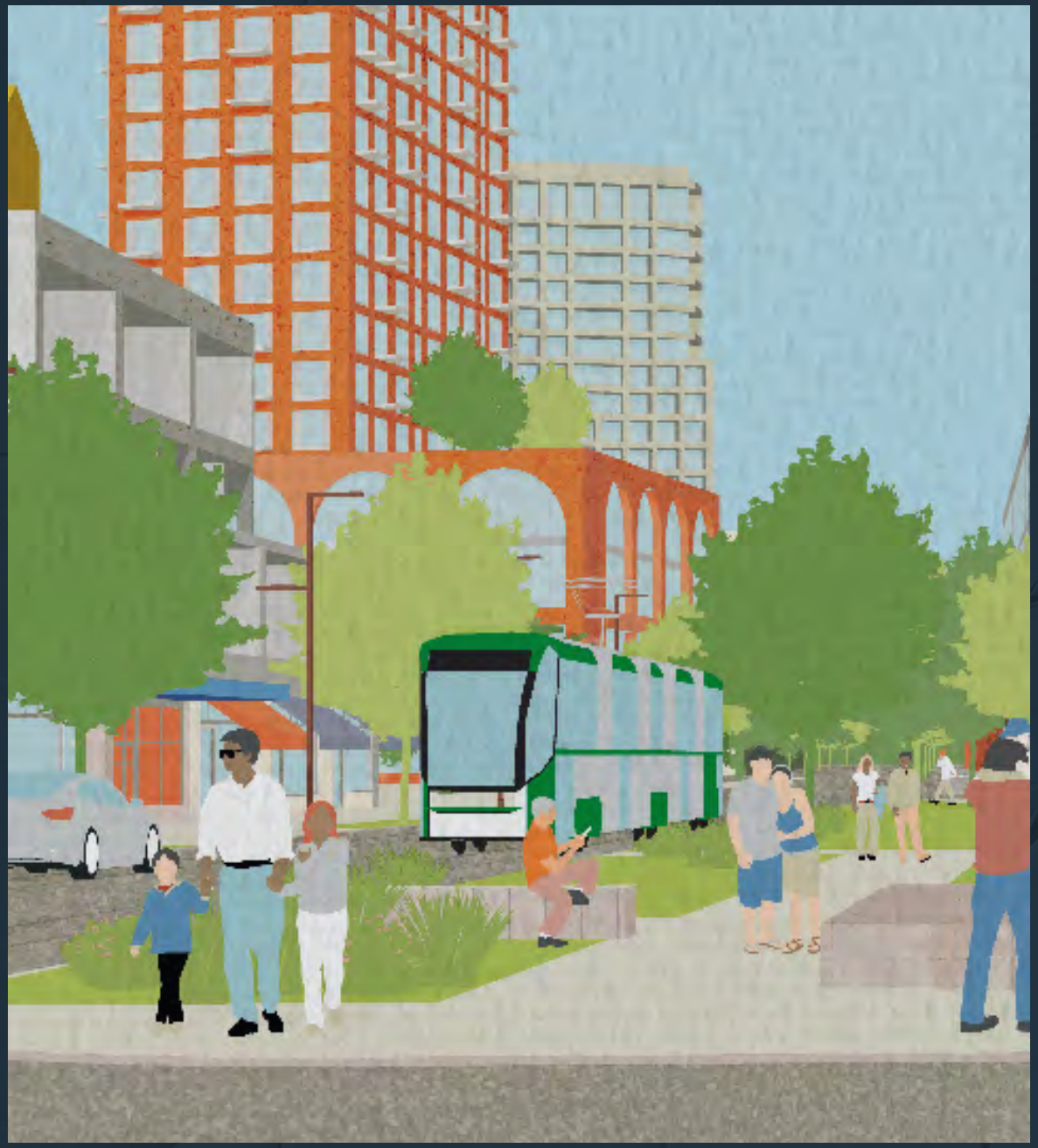
Technical Notes:

i. Methodology Calculation of Community Benefit Liability
ii. Impact Testing & Feasibility
iii. Draft Procedural Guide

Town of Victoria Park

Albany Highway Precinct Structure Plan

Bonus Development Rationale



Contents

1.0 Introduction 3
2.0 Summary of Built Form Strategy 4
3.0 Framework Response 5
4.0 Calibration of AHPSP Controls 9
5.0 Process and outcomes in establishing the CBF..10
6.0 Conclusion and Direction..... 12



1.0 Introduction

This document provides the rationale for the Community Benefits Framework (CBF) for the Albany Highway Precinct Structure Plan (AHPSP).

In summary the development concessions (or bonuses) available are additional height and plot ratio, which are available subject to:

- Enhanced Design Quality
- Improved Sustainability Outcomes
- Provision of a Community Benefit

The document outlines relevant details from the Built Form Strategy and modelling process that has informed the draft AHPSP, including the calibration of bonuses and sub-precinct considerations.

Additionally, this document reviews how the framework responds to Part 2.8 of the Residential Planning Codes – Volume 2 (R Codes Volume 2) and links to State Planning Policy 3.6 'Developer Contributions' (SPP3.6).

Finally, guidance received from DPLH is addressed, including documentary guidance and follow up liaison, including a meeting, to delve into further detail.

Ultimately the objective is to ensure the framework proposed is robust and transparent, to ensure ease of use by proponents and ease of understanding by the community.



2.0 Summary of Built Form Strategy

The Albany Highway Built Form Strategy outlines specific proposals for how development should occur in the precinct. It lays the groundwork for the creation of a sustainable and productive place that meets the needs of the community now and into the future, and is focused on providing direction for broad built form control considerations.

The strategy provides some background and context on how development controls were calibrated for the precinct, including heights and plot ratios, and the "shape" of controls, for example the extent to which height limits are increased along Albany Highway itself and how they transition into the surrounding, more residential and suburban areas. Similarly the balance in intensification between major sites and other areas is considered.

Major character elements within the precinct, such as heritage and contributory frontages, are also articulated in the strategy, providing justification for controls proposed in the AHPSP itself.

The outcome of scenario modelling and stakeholder engagement was a combined approach proposed that included some modest growth away from the Albany Highway spine of the precinct, with a degree of focus of intensity along Albany Highway.

This approach is likely to have the additional benefit of a subtly staging development, with some lower scale development expected initially and higher scale development more likely in the medium term. This will ease the transition from the current character and amenity to the aspirations established with the community and stakeholders in developing the AHPSP.

Notably, all sites within the AHPSP were subject to primary (base) controls and bonus controls, for height and plot ratio. Connected to this, the Built Form Strategy also noted the importance of a range of community benefits, and the importance of a transparent system to administer benefits and development concessions.

3.0 Framework Response

3.1 AHPSP Vision and Supporting Statements

Relevantly, the Vision for the AHPSP was developed through extensive engagement with a wide variety of stakeholders. This served to improve alignment for the precinct and to articulate aspirations for the future.

The Vision, supported by additional statements, provides insight into the shared aspirations for the future and therefore the key elements that are considered valuable to realise these aspirations.

Albany Highway Vision

Set against Perth's shimmering skyline, Albany Highway will emerge as Perth's premier high street, proudly showcasing Victoria Park's rich diversity and valued heritage throughout its vibrant shopfronts and green public spaces. Not only a bustling cultural and culinary destination, it will become a major employment precinct and residential neighborhood, attracting visitors from near and far while also supporting a growing local population. Parks and streetscapes will be transformed to increase greenery and biodiversity and reallocate space from cars to create inviting, social, and enjoyable civic spaces. Improved walking, cycling, and public transit infrastructure will strengthen regional connectivity, community health and sustainability. Transformative development of Major Sites will deliver new attractions and amenities while integrating seamlessly with the Highway's historic fine-grain fabric and eclectic character. The Albany Highway Vision is supported by 6 sub precinct ambitions and 18 goals for the future of the precinct as outlined on the following pages.



Causeway

Thriving hub for business and community life

Development of underutilised sites

Sustainability and walkability will be core features

Victoria Park

Integration of new residential, office, and creative spaces with its historic shopfronts.

Create thriving community environment

Central

Dynamic place to live and work, blending light industry and creative workspace with preserved heritage significance

East Vic Park

Culinary hub of Perth

Sensitive development, public realm investment

Resilience and character achieved through the transformation of the Park Centre and Macmillan Precinct.

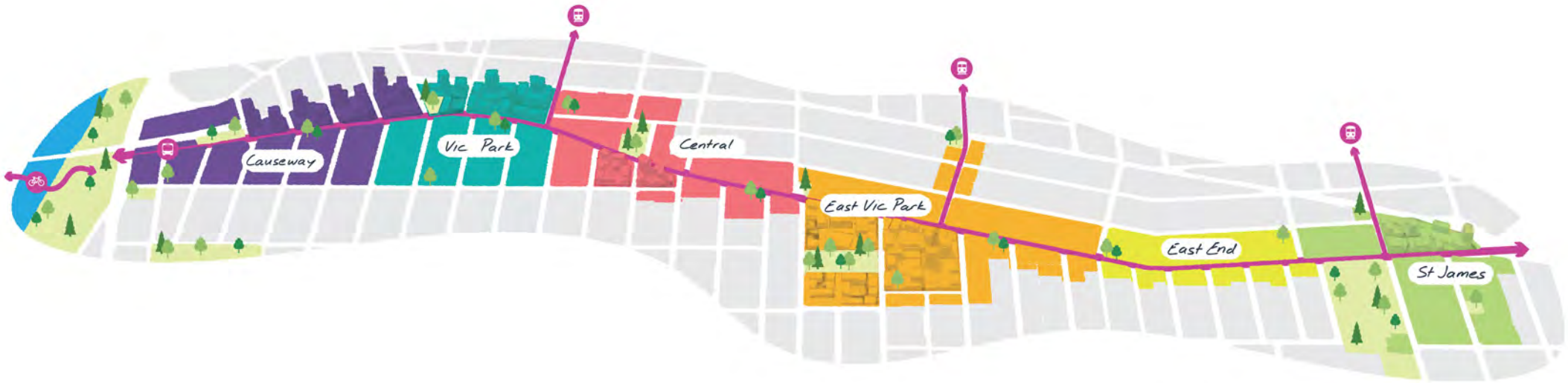
East End

Bridge between east Victoria Park and St James

Lower scale and carefully considered residential growth

St James

Commercial and service hub of regional significance for everyday essentials for local residents



6.1.1 Objectives PSP

Urban Ecology

- Protect and enhance ecological features, honoring Aboriginal custodianship and knowledge.
- Demonstrate sustainable development leadership through building design and precinct management
- Retain significant trees and substantially increase tree canopy on public and private land

Urban Structure

- Achieve a cohesive precinct character by retaining the Highway's fine-grain urban fabric and narrow lot pattern
- Transform major sites through mixed use development with new internal connections and public spaces.
- Integrate development along side streets and laneways as an integral part of the precinct

Public Realm

- Expand public open space by repurposing roads, upgrading drainage areas, and creating new public areas within Major Sites.
- Improve existing public realm through streetscape and park upgrades, tree planting, and water sensitive urban design.

Movement

- Redesign the precinct movement network to discourage unnecessary car trips and deliver safe and attractive transport infrastructure to drive modal shift to walking, cycling and public transport.
- Improve Public Transport and micromobility infrastructure with a view to a future transition to mid tier transport along Albany Highway
- Discourage private residential parking in new development to reduce car dependence while ensuring sufficient public parking.

Land Use

- Drive economic vitality by increasing office-based employment and expanding retail and hospitality floorspace in line with population growth
- Support creative industries and the evening economy through the delivery of affordable workspace and cultural infrastructure
- Accommodate population growth with mixed use development offering diverse and affordable housing
- Protect entertainment and hospitality uses from noise sensitive development conflicts

Built Form

- Encourage innovative and sustainable development that aligns with Albany Highway's character. Allowing for diverse building heights and styles
- Protect and restore heritage buildings and contributory fabric, ensuring new development complements heritage places.
- Maintain adequate solar access and comfortable wind conditions in key public areas
- Ensure new development responds sensitively to adjacent lower density residential areas.

3.2 Residential Design Codes Vol 2

Section 2.8 of WAPC's Residential Design Codes Volume 2, provides guidance on development incentives that may be in exchange for areas that deliver community benefits. The overarching objectives for this section includes:

- Development incentives should be compatible with relevant planning policy and objectives.
- Incentives should be weighed up and chosen to reflect local priorities.
- Incentives should be clearly defined and measurable to ensure community benefit criteria is met.
- Incentives should be weighted to ensure there is a balance between benefit developers achieve and community outcomes.
- Incentives should not have adverse impacts on adjoining properties or the existing/desired streetscape character.

A suite of documents have been prepared to ensure the above objectives are met, including the Outline of Place and Community Needs, Impact Testing and Feasibility Analysis, Design Quality Benchmarks, a Procedural Guide, and detail on the methodology and mechanism for achieving community benefit contributions.

3.3 State Planning Policy 3.6 'Infrastructure Contributions'

SPP 3.6 aims to ensure the delivery of infrastructure through the development process. This is to allow for the community to have access to fundamental services that are essential to lead a healthy life. The policy outlines the need for all infrastructure contributions to be levied within a set of principles. One of the principles specified is the need and nexus, where the need for infrastructure in addition to the connection between the development and demand are clearly demonstrated. As the community benefit methodology proposed within this framework is based on bonuses, the nexus objective is not applicable.

However, the framework addresses the remaining objectives of SPP 3.6 which requires calculations and distribution of community infrastructure to be delivered with equity, certainty, efficiency, consistency and accountability.

3.4 Draft DPLH Guidance on Community Benefits

Community benefits have taken a variety of forms in considering development concessions for infill areas. Recently, the Department of Planning, Lands and Heritage has provided draft guidance to ensure the frameworks for community benefits are suitably comprehensive, and legible to proponents, stakeholders and the community.

The recommended framework includes

- Bonus development potential modelling process
- Community needs assessment (included with the AHPSP)
- Development standards (base and extent of bonus, in the AHPSP, and to be included as a scheme amendment)
- Calculation of community benefit liability (to be included as a scheme amendment)
- Mechanism to compel payment of liability (to be included as a scheme amendment)
- Procedural guidance (to be included in AHPSP)
- Design quality benchmarks (to be included as a scheme amendment and AHPSP)
- List of preferred benefits (included in this AHPSP)

Provision of the above information provides clarity on the process for developing a community benefits framework, and clear documentation provides transparency, a key requirement of any community benefits framework.

4.0 Calibration of AHPSP Controls

Within the AHPSP, there are six sub-precincts and 18 "zones". Additionally eight sites have been identified for Major Development with controls allocated accordingly, therefore 26 total sets of development controls. Development concessions (or bonuses) are available in every "zone" in the AHPSP, including modest concessions for lower scale development. The concessions allow additional height and plot ratio.

Between height and plot ratio, plot ratio confers additional saleable floorspace for proposed developments, and is most directly calibrated with feasibility.

Across all controls, the average uplift in plot ratio from base to bonus is 68%. This demonstrates that the proportion between base and bonus controls is reasonable, calibrated well with each other. Further information is provided in the Development Standards Technical Note demonstrating that the base controls achieve infill targets set for the precinct (without the need for bonuses).

Inherently, with 26 sets of controls, each set of controls has been tested to ensure the building envelope proposed and quantum of development possible achieves the key objectives of the AHPSP and sub-precinct guidance, protecting amenity and character and providing for an orderly transition as the precinct evolves.

The availability of development concessions (or bonuses) is articulated within the AHPSP, and aligns with the guidance structure provided by DPLH. More broadly, the approach adopted is consistent with the framework being developed, to ensure it aligns with state government policy. The Table below, highlights the recommended structure for the framework.



5.0 Process and Outcomes in Establishing the Community Benefits Framework

Noting that a community benefit framework linked to development concessions was identified as preferrable by WAPC policy, the Town incorporated this element into the overall stakeholder engagement process for the AHPSP.

5.1 Precinct Planning and Stakeholder Engagement

Community and stakeholder engagement was a crucial component to the development of the Albany Highway PSP and was undertaken using a range of methods. The three stage approach included the following engagement outcomes

Stage 1

Community Survey
gained
212 **responses**

Idea board
received
320 **ideas**

Project Website
visitied
1,000 **visitors**

Interviewed
26
key stakeholders

Stage 2

Community Reference Group
that consisted of
local residents & business representatives

Three different sessions were conducted to gain insights into the built form and scenarios that had been developed.

Stage 3

Involved the public advertisement of the draft which was developed in stage 2 of the process.

The feedback obtained informed detailed drafting of the Albany Highway PSPAHPSP.

From the engagement undertaken there was mixed views on additional development, and recognition that there will be some transition as the precinct evolves. Respondents were also asked to identify priorities for the AHPSP. High priorities included canopy enhancement, streetscape improvements, public open space upgrades, and sustainability requirements. These formed part of the considerations for preparing the Community Benefit Framework. The full considerations are provided in the Community Needs Assessment document accompanying the AHPSP.



5.2 DPLH Engagement on CBF

As the CBF was being developed, the Town was furnished with draft guidance of the key elements of a Community Benefits Framework, which has informed the suite of documents prepared to support the AHPSP.

Additionally, representatives from the Town met with officers from DPLH to further discuss the proposed approach, alignment with policy and practice, and technical details.

Outcomes from the discussion focused on the need to define "good" and "excellent" design quality (or an alternative definition) and what that entails, to provide sufficient guidance for the Design Review Panel. Additionally, comments were provided in regards to the approach for site testing and feasibility considerations. The importance of including a variety of built form outcomes is important to get a broad understanding on the methodology and the outputs it will produce.

DPLH officers were generally in agreeance with the proposed framework and approach due to its alignment with its informal Community Benefits Framework guidance, subject to detailed review.

6.0 Conclusion and Direction

This document has reviewed key inputs and influences on the approach and rationale for the Community Benefits Framework for the AHPSP. This has included an accounting of the built form strategy approach, reviewing the approach against the R Codes Volume 2, consideration of SPP3.6, community and stakeholder engagement, and liaison with DPLH during preparation.

The built form strategy, and resultant provisions in the AHPSP comply with WAPC guidance by offering bonuses for development, and also offers some direction on stakeholder sentiment for the future shape of the precinct.

When assessed against the R Codes Volume 2, the principles outlined in section 2.8 as articulated in this report are all adhered to.

SPP3.6 provides guidance for a slightly different document, being Development Contributions. Many of the principles remain valid, however the notable difference is the treatment of the test of a nexus between the development and community benefit in this context.

Community and stakeholder engagement, which is further outlined in related documents such as the Community Needs Assessment, was extensive and provided some direction on the approach to built form, and some community benefits to consider for the CBF.

Finally, liaison with the DPLH provided some guidance on the approach proposed, which proved fruitful and provided direction for ongoing preparation, with further detailed review to be undertaken as part of conventional assessment.

6.1 Direction for CBF and Bonuses

This document outlines the approach and relationship between the proposed CBF for the AHPSP and key informing documents and processes.

The approach proposed, which generally aligns with advice and guidance provided, allows for robust discretionary decision-making, as will be clearly set out in the framework.

Armed with this foundation, the CBF offers a substantial contribution to realizing the vision for the AHPSP, and the aspirations of the community.

Town of Victoria Park

Albany Highway Precinct Structure Plan

Outline of Place & Community Needs



Contents

1.0 INTRODUCTION.....3
2.0 APPROACH 5
3.0 AHPSP REVIEW: COMMUNITY ENGAGEMENT 8
4.0 AHPSP VISION AND OBJECTIVES 10
5.0 REVIEW OF DRAFT AHPSP STRATEGIES 14
6.0 REVIEW OF OTHER KEY DOCUMENTS..... 19
7.0 DEMOGRAPHIC ANALYSIS 24
8.0 CONCLUSION AND RECOMMENDATIONS.....35

APPENDIX 1: DEFINITIONS.....39

1.0 INTRODUCTION

1.1 Purpose and Approach

This document has been prepared for the Town of Victoria Park (the Town). Its purpose is to understand which prospective community benefits are most valuable to the Albany Highway Precinct Structure Plan (AHPSP) and identify benefits worthy of granting development concessions accordingly.

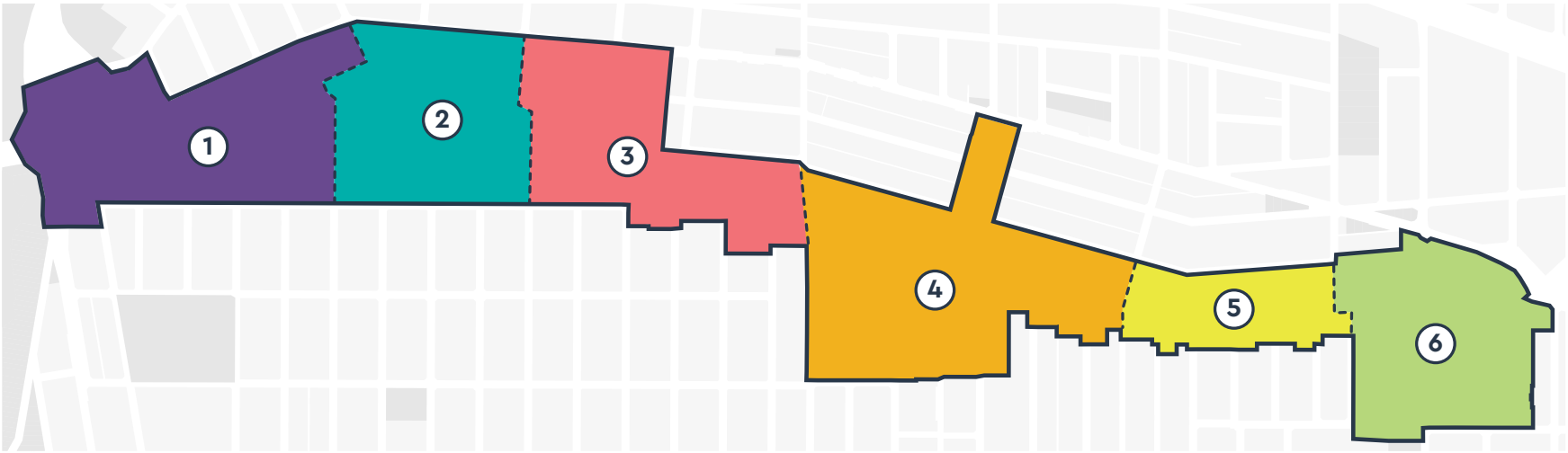
To achieve this, the analysis investigates stakeholder feedback in relation to the Albany Highway Precinct (the precinct), the vision and aspirations for the precinct, and the demographic trends and expectations for the precinct. This investigation is complemented by an extensive review of relevant documentation, including strategies directly related to the AHPSP, and important previous work undertaken by the Town more generally on community infrastructure and related matters.

This study also considers the future demands of the population within the precinct and considers appropriate facilities to ensure these needs are met. The analysis reviews existing policy to identify gaps and examine whether the planned infrastructure will be adequate to service future needs, with a specific focus on the use of a Community Benefits Framework (CBF) linked to development concessions is an appropriate mechanism.

Importantly, in considering potential community benefits to be included in this Community Benefits Framework to be linked to development concessions, items with the following characteristics were generally ruled out:

- Items that would be required as a condition of approval, i.e. satisfying the traditional tests for validity of a condition, including nexus
- Items that serve a larger area substantially beyond the precinct (for example the entire Town, or south-east corridor)

It will be noted that there may be capacity to provide additional funding to items with these characteristics; additional funding could be considered as a community benefit in the CBF subject to an appropriate funding and capital investment approach being established.



1.2 Key Elements of the AHPSP

Within the AHPSP, there are six sub-precincts and 18 "zones". Additionally eight sites have been identified for Major Development with controls allocated accordingly, therefore 26 total sets of development controls. Development concessions (or bonuses) are available in every "zone" in the AHPSP, including modest concessions for lower scale development. The concessions allow additional height and plot ratio.

A summary of base and bonus development for all 26 development controls is as follows. Heights depicted are storeys.

AHPSP "Zone"	Base Height	Bonus (Total) Height	Base Plot Ratio	Bonus (Total) Plot Ratio
CW1	3	6	1.5	3.5
CW2	4	6	1.5	2.5
CW3	6	8	2.0	3.0
CW4	8	18	3.0	3.5
M1	12	22	3.0	4.0
M2	12	32	3.0	5.5
VP1	3	6	1.5	2.5
VP2	3	6	1.0	2.5
VP3	5	8	2.0	3.0
M3	8	22	2.0	5.0
M4	8	24	2.0	5.0
CE1	3	5	1.0	2.0
CE2	5	8	2.0	2.5
CE3	6	10	2.5	3.0
M5	8	16	2.5	4.0
EV1	3	4	1.5	1.5
EV2	3	5	1.0	2.0
EV3	4	6	1.5	2.5
M6	8	10	3.0	4.0
M7	8	22	2.0	5.0
EE1	3	5	1.0	2.0
EE2	3	6	1.5	2.0
SJ1	3	5	1.5	2.0
SJ2	5	8	2.0	3.0
SJ3	8	12	3.0	3.5
M8	8	16	3.0	4.0

1.3 Context for Potential Community Benefits

The development of a community needs assessment was established within the Albany Highway Precinct Structure Plan in order to target benefits of specific value to the precinct and social value to the community. Any benefits would serve the future population within the precinct. Although the AHPSP identifies the areas already existing community infrastructure, it is important these are tailored to a growing and evolving population.

The following incentives have been identified within the AHPSP to deliver community benefits which includes but not limited to:

- Increase the quality and quantity of public space
- Limitation of private parking in new development areas, particularly major sites.
- Increase the supply of creative and cultural floor space
- Adoption of evidence based floor space targets which provides for a significant increase in retail floor space over time.



2.0 APPROACH

Community benefits have taken a variety of forms in considering development concessions for infill areas across Western Australia. Recently, the Department of Planning, Lands and Heritage has provided draft guidance to ensure the frameworks for community benefits are suitably comprehensive, and legible to proponents, stakeholders and the community.

The recommended framework includes

- Bonus development potential modelling process
- Community needs assessment (this document)
- Development standards (base and extent of bonus, in the AHPSP, and to be included as a scheme amendment)
- Calculation of community benefit liability (to be included as a scheme amendment)
- Mechanism to compel payment of liability (to be included as a scheme amendment)
- Procedural guidance (to be included in AHPSP)
- Design quality benchmarks (to be included as a scheme amendment and AHPSP)
- List of preferred benefits (included in this document)

Provision of the above information provides clarity on the process for developing a community benefits framework, and clear documentation provides transparency, a key requirement of any community benefits framework.



2.1 Proposed Model for Community Benefits

Community benefits would be sought where development concessions are proposed beyond the base controls articulated in the AHPSP. In effect the model would be opt-in, not a requirement for every development.

The methodology requires that the contribution be made on the basis of construction contract sum, levied pro-rata. Any funds received would be held in a dedicated trust, subject to reporting and audit requirements, and can only be spent on agreed community benefit item (much like collecting development contributions or public open space contributions).

The AHPSP proposes that 3% of the pro-rata construction cost of additional development (plot ratio or height above "base" maxima, whichever is greater) would be required as a costed benefit. Delivery of the benefit would be required early in the process, such as prior to occupancy of the first stage of development.

Monetary contributions are expected to broaden the types of community benefits that can be sought through this process, as funds can be pooled to provide larger benefits, and benefits need not be provided on a development site.

Notwithstanding this, the Town has expressed a preference to accept in-kind benefits rather than cash-in-lieu.

Monetary and in-kind contributions would be subject to the same tests and stipulations, to ensure proposed benefits meet an identified need.

Through this, a monetary contribution or costed in-kind benefit can be more transparently proportional to the development benefit gained, and the contributions required for other proposals seeking bonus development.

Noting the requirements to demonstrate compliance to qualify for development concessions, care should be taken to ensure this does not represent an insurmountable barrier for smaller scale development to secure modest bonuses available. Some consideration should be given to the scale of proposed benefit and ensuring the effort required to substantiate a development concession is proportional (in addition to the proportionality of the community benefit itself).



2.2 Rationale for Community Benefits Framework

Providing community benefits only on the site of development seeking bonus height has recognised shortcomings, with the need to consider other mechanisms.

Proponents having the option to contribute funds for pooled community benefits has a variety of advantages, including the following:

- An equitable approach to benefits, derived from using a clear formula.
- Transparency in the consideration of benefits and development concessions, by providing a clear formula to balance community benefits with development concessions.
- More benefits able to be contemplated when they need not be provided on-site or within a building.
- Benefits can be better tailored to need of the area rather than limited by site constraints.
- Benefits are not limited by location; if there is a better location for a proposed benefit within the ACP area, it can be located accordingly.
- Greater benefits can be derived from pooled resources, including more substantial facilities than could be provided by individual facilities alone.
- More diversity in facilities, providing more services for more sectors of the local community, and avoiding the common issue of similar benefits being proposed to every diminishing community benefit.
- Less concern over maintenance, tenure and other considerations for Council which can impede the effectiveness and benefit of the facility, often becoming administratively costly and burdensome.
- Certainty for future residents, who will not have questions about access and security when purchasing an apartment. It enables developers to design buildings without being encumbered by this requirement, improving the potential for higher quality development.
- Certainty for the local community, who will be more certain of the benefits to be provided in the precinct, and also be more certain that benefits will be delivered in a manner that ensures they are accessible and useable – and therefore more valued.

The Town does not have the expectation that all proponents will elect to contribute funding in lieu of in-kind provision of community benefits, however the flexibility afforded through this mechanism provides benefits to the Town, proponents and the community.

3.0 AHPSP REVIEW: COMMUNITY ENGAGEMENT

3.1 Community Engagement Process

Community and stakeholder engagement was a crucial component to the development of the AHPSP using a range of methods and included review of previous engagement on other significant Town-wide strategies

From the AHPSP engagement undertaken there was strong demand for boutique retail, community and creative spaces, cultural and entertainment venues, pedestrian space, and greenery. Notably, there was support for change of use away from car yards and showrooms.

Respondents were also asked to identify priorities for the AHPSP. High priorities relevant for the Community Benefit Framework included the following:

- A focus on urban greening
- Streetscapes that improve the pedestrian envrionment and stimulate modal shift away from private vehicles
- Upgrades to public spaces including new open space and laneway enhancement
- Strong sustainability requirements

It will be noted that other valuable insights gained from community engagement for the AHPSP are featured in different sections of this report, including those discussing Albany Highway Tomorrow and the Concept Engagement Summary Report.

In addition to engagement related to the AHPSP, most documents reviewed in this community needs assessment have also benefited from community and stakeholder engagement as they were developed, with submissions and comments considered by the Town prior to their finalisation and endorsement.

Stage 1

Community Survey *gained*
212 **responses**

Project Website *visitted*
1,000 **visitors**

Idea board *received*
320 **ideas**

Interviewed
26
key stakeholders

Stage 2

Community Reference Group *that consisted of* **local residents & business representatives**

Three different sessions were conducted to gain insights into the built form and scenarios that had been developed.

Stage 3

Involved the public advertisement of the draft which was developed in stage 2 of the process.

The feedback obtained informed detailed drafting of the Albany Highway PSP.



3.2 Identified Opportunities for Community Benefit Framework

There is no formal framework within the precinct at present. As a consequence any community benefits and development concessions sought would effectively be assessed against the Residential Design Codes Volume 2.

Given the comprehensive community and stakeholder engagement undertaken, a clear image of aspirations for the precinct has emerged. This provides the opportunity to develop tailored benefits known to be of value to the community, stakeholders and the precinct that reflects these aspirations.

The proposed community benefits framework effectively improves:

- Capability for a pooled benefits system, allowing for monetary contributions rather than provision of the benefits only on-site (noting sufficient controls would be required to ensure accountable and transparent management of funds).
- A transparent system to ensure proportionality in the provision of community benefits. It is recognised that a cash-in-lieu system unambiguously quantifies community benefit, making confirmation of proportionality straightforward
- Recognition that some benefits can be oversupplied, and that demand (and benefit) diminishes with the oversupply of facilities and services.
- Administrative mechanisms to ensure provision of benefits as part of the first stage of development.

4.0 AHPSP VISION AND OBJECTIVES

The vision and objectives are articulated in the AHPSP, and represent the culmination of community and stakeholder engagement, and consideration of the context and aspirations for the precinct.

The vision and objectives are outlined as follows, with key elements relevant to the community benefits framework in bold.

Vision

Set against Perth's shimmering skyline, Albany Highway will emerge as Perth's premier high street, proudly showcasing Victoria Park's rich diversity and **valued heritage** throughout its vibrant shopfronts and **green public spaces**. Not only a bustling **cultural and culinary destination**, it will become a major employment precinct and residential neighborhood, attracting visitors from near and far while also supporting a growing local population. Parks and streetscapes will be transformed to **increase greenery and biodiversity** and reallocate space from cars to create inviting, social, and **enjoyable civic spaces**. **Improved walking**, cycling, and public transit infrastructure will strengthen regional connectivity, community health and sustainability. Transformative development of Major Sites will **deliver new** attractions and **amenities** while integrating seamlessly with the Highway's historic fine-grain fabric and eclectic character.



The Albany Highway Vision is supported by 6 sub precinct ambitions and 18 goals for the future of the precinct outlined as follows.



Causeway

Thriving hub for business and community life

Development of underutilised sites

Sustainability and walkability will be core features

Victoria Park

Integration of new residential, office, and creative spaces with its historic shopfronts.

Create thriving community environment

Central

Dynamic place to live and work, blending light industry and creative workspace with preserved heritage significance

East Vic Park

Culinary hub of Perth

Sensitive development, public realm investment

Resilience and character achieved through the transformation of the Park Centre and Macmillan Precinct.

East End

Bridge between east Victoria Park and St James

Lower scale and carefully considered residential growth

St James

Commercial and service hub of regional significance for everyday essentials for local residents

4.1 Objectives

Urban Ecology

- Protect and enhance ecological features, honoring Aboriginal custodianship and knowledge.
- Demonstrate sustainable development leadership through building design and precinct management
- Retain significant trees and **substantially increase tree canopy on public and private land**

Urban Structure

- Achieve a cohesive precinct character by retaining the Highway's fine-grain urban fabric and narrow lot pattern
- Transform major sites through mixed use development with **new internal connections and public spaces.**
- Integrate development along side streets and laneways as an integral part of the precinct

Public Realm

- **Expand public open space** by repurposing roads, upgrading drainage areas, and creating new public areas within Major Sites.
- Improve existing public realm through streetscape and park upgrades, tree planting, and water sensitive urban design.

Movement

- Redesign the precinct movement network to discourage unnecessary car trips and deliver safe and attractive transport infrastructure to **drive modal shift** to walking, cycling and public transport.
- Improve Public Transport and micromobility infrastructure with a view to a future transition to mid tier transport along Albany Highway
- Discourage private residential parking in new development to reduce car dependence while ensuring sufficient public parking.

Land Use

- Drive economic vitality by increasing office-based employment and expanding retail and hospitality floorspace in line with population growth
- Support creative industries and the evening economy through the delivery of **affordable workspace and cultural infrastructure**
- Accommodate population growth with mixed use development offering **diverse and affordable housing**
- Protect entertainment and hospitality uses from noise sensitive development conflicts

Built Form

- Encourage innovative and sustainable development that aligns with Albany Highway's character. Allowing for diverse building heights and styles
- **Protect and restore heritage buildings and contributory fabric**, ensuring new development complements heritage places.
- Maintain adequate solar access and comfortable wind conditions in key public areas
- Ensure new development responds sensitively to adjacent lower density residential areas.



Not all elements translate directly into potential community benefits that would contribute to the vision for the precinct. However, based on the Vision, sub-precinct statement, and objectives by element, the following themes could be translated into community benefits worthy of development concessions:

- Creation of a culinary destination, offering supporting infrastructure that promotes this
- Greenery and biodiversity, and increasing tree canopy on private and public land
- Improve the precinct's Total Water Management
- Creation of civic and open spaces
- Promoting sustainability and walkability
- Developing creative workspaces and cultural infrastructure aligned to the night-time economy
- Providing new internal publicly accessible connections and public spaces on major sites
- Repurposing roads and drainage assets and spaces for people
- Providing public cycling facilities to promote modal shift (for example, public end of trip facilities)
- Including diverse and affordable housing in proposals

5.0 REVIEW OF DRAFT AHPSP STRATEGIES

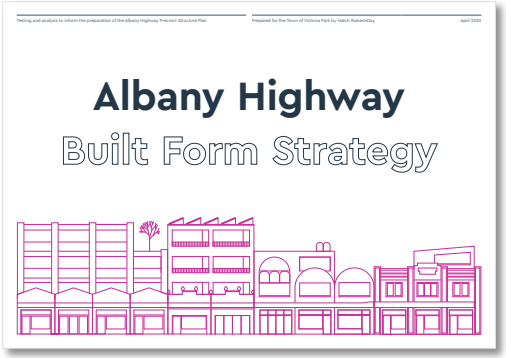


The AHPSP is one part of realising the vision and future for the precinct. A range of informing documents assist in providing context and complementary actions for bringing the AHPSP aspirations to life. The informing documents have been considered in relation to the Town's overarching Strategic Direction and are articulated as follows.

5.1 Draft Built Form Strategy

The Albany Highway Built Form Strategy outlines specific proposals for how development should occur on Albany Highway in the years to come. It lays the groundwork for the creation of a sustainable and productive place that meets the needs of the community now and into the future.

The strategy provides some background and context on how development controls were calibrated for the precinct, including heights and plot ratios, and the "shape" of controls, for example the extent to which height limits are increased along Albany Highway itself and how they transition into the surrounding, more residential and suburban areas. Similarly the balance in intensification between major sites and other areas is considered. Major character elements within the precinct, such as heritage and contributory frontages, are also articulated in the strategy, providing justification for controls proposed in the AHPSP itself.



Within the context of a community benefit framework the following elements of the built form strategy are considered notable:

- Scenario modelling, with a combined approach proposed that included some modest growth away from the Albany Highway spine of the precinct
- Noted lack of housing for younger and ageing people
- The importance of economic drivers and local employment
- The need for transparency in a community benefits framework and meaningful benefits
- The importance of greenery, art and culture, indigenous heritage and the public realm

It is noted that heritage was also discussed and considered a valued element of the precinct. Notably controls for heritage are addressed for "base" development as a standard stipulation, rather than being sought in exchange for development concessions.



5.2 Draft Public Realm Strategy

The Public Realm Strategy, prepared by ASPECT, provides guidance on the future arrangement of public spaces, landscaping and materiality for the precinct. While specific interventions are proposed along the Precinct, the proposed interventions can be categorised into two themes: pedestrianising streets and creating spaces within and around development sites.

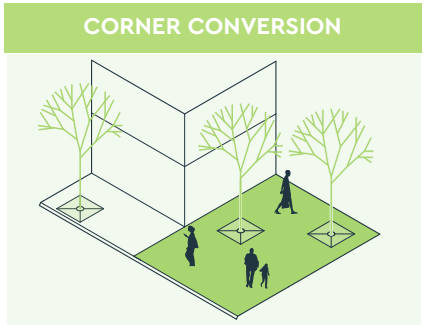
A key aspiration arising from the community engagement underpinning the AHPSP is a desire to reallocate highway space away from cars and towards people through traffic calming measures, creation of shared spaces, and extension of pedestrian environments into road reserves.

Furthermore, the Strategy identifies a series of open space typologies that can be delivered within specific sub-precinct locations and within major development sites

Four general open space typologies have been developed as part of the Strategy, being a plaza, green, laneway and micro-park.

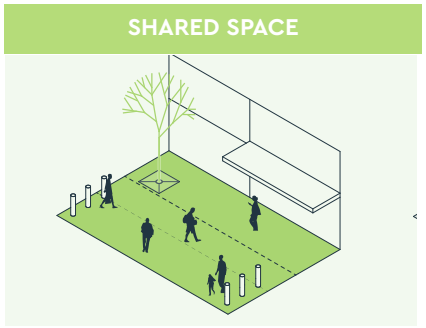
The strategy will be accompanied by Public Realm Design Guidelines which will provide more detailed articulation of the intended public realm, to set expectations in meeting the needs identified and reinforcing the desired character. The guidelines will also provide a benchmark of investment and design standards expected to be matched by proposed private development.

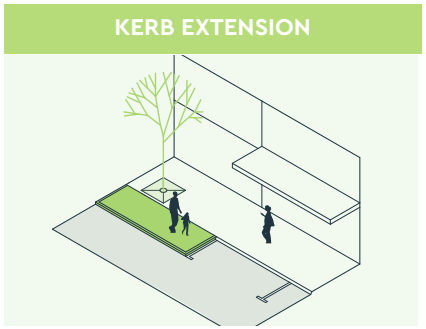
















5.3 Draft Economic, Retail and Employment Strategy

The Economic, Retail and Employment strategy, prepared by Pracsys, identifies strengths, constraints, and opportunities for the future planning of the precinct to inform the preparation of the AHPSP.

The Strategy notes that increased density in the precinct will create demand for additional shop/ retail and other population driven floorspace in the centre, and that residents within a 400m catchment of the centre are more likely to be working age, have higher income and be employed than the Greater Perth average; all of which are indicators of higher disposable income.

The Strategy further notes that the precinct has an existing high concentration of floorspace in:

- Other Retail (predominantly car retailing)
- Shop/Retail
- Health, Community and Social Services
- Office Business

And a low provision of both Residential and Entertainment, Recreation and Cultural Floorspace.

The aspiration to grow the entertainment element as part of a vibrant place with a strong night-ime economy is notable given this observation.

5.4 Draft Sustainability Strategy

This strategy was prepared by Cundall as part of the AHPSP suite of documentation to realise the sustainability aspirations of the precinct. It analyses comparable mechanisms and policies to secure sustainability in development across other local governments, and outlines key sustainability measures to be incorporated into the AHPSP and implemented.

Relevantly for the CBF, it advises that "6 star Green Star rating could be considered a benefit", and otherwise provides guidance on compliance with baseline development (rather than achieving bonus provisions). Baseline provisions include water management, deep soil zones, canopy coverage, combatting the heat island effect, and gas free development provisions.



5.5 Draft Transport Strategy

The Transport Strategy provides evidence and context for the various recommendations pertaining to transport, connecting higher order documents and guidance to site- and place-specific considerations in the AHPSP. It includes an overview of the existing vehicular traffic, public transport and active transport context; and how planned infrastructure upgrades are likely to influence how people move to, from and through the Albany Highway Activity Corridor.

The strategy provides specific guiding principles and recommendations for the AHPSP. The following is relevant in considering the community benefit framework:

Investing in smart parking technology to ensure on-street parking is being used for maximum benefit

Investigation of multi-deck off-street parking structures, ideally able to be adaptively re-used

Incorporate movement and circulation on major sites when redeveloped, to boost permeability

Streetscape upgrades aligned with "Movement and Place" principles and classifications

5.6 Draft Albany Highway Public Realm Design Guidelines

The design guidelines are yet to be prepared for the precinct but as discussed above, will provide more specific site- and place-based guidance for streets and open spaces in the precinct.

It is expected that the guidelines will establish the intent for development proposals to complement and respond to and provide further opportunity to provide community benefit for those proposals seeing development concessions.

Specifically, it is expected that the design guidelines will contribute towards the objectives related to enhancing the tree canopy coverage, designing to stimulate modal shift in transport, improving greenery within streets, and rectifying shortfalls in open space.

5.7 Concept Engagement Summary Report

Following collation of key issues, goals and objectives for the precinct, a variety of scenarios for the future if the precinct were tested, and considered by the Community Reference Group (CRG). This and other development of precinct design was documented in the summary report. Relevant to this scenario testing, the CRG identified the following priority areas relevant to community benefits for the precinct:

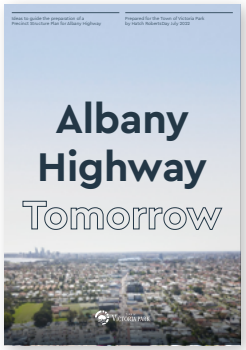
- Need for more housing for younger people
- Fairness and equity for the community and developers, including transparency
- More green space among the benefits from development concessions
- Importance of culture, art and indigenous heritage to the precinct

Additionally, following on from extensive engagement carried out with the community, key priority areas were identified. These included streetscape upgrades, new connections, open space, design excellence and community infrastructure.

For major sites, key considerations included housing diversity, and ensuring public amenity and benefit is proportional to scale of development. More generally, the CRG identified five priority features for new development: design excellence, streetscape upgrades, open space, new connections and community infrastructure.

Within sub-precincts, individual community priorities were identified, summarised as follows. This provides some guidance for focus on community benefits.





5.8 Albany Highway Tomorrow

This report documented key outcomes and direction for the precinct, to inform the AHPSP itself and the supporting documents prepared and planned to realise the aspirations and vision for the precinct. In summary the report documented community and stakeholder feedback, helped define the six sub-precincts and their specific identities, and outlined major ideas for the precinct contributed by stakeholders.

Key elements for the future included greenery, pedestrian space, cultural and entertainment opportunities, community and creative spaces, and retail. Quality public space, retention of character, and sustainability were important elements to be incorporated into the AHPSP.

The "big ideas" documented included boosting biodiversity and low carbon development, focus growth appropriately and improve connectivity; create and enhance open spaces; improve transport choice and traffic management; preserve popularity of visitation and recognise indigenous connection to country; and create areas of unique character and vibrant street life.



6.0 REVIEW OF OTHER KEY DOCUMENTS

6.1 Economic Development Strategy

The Town's Economic Development Strategy (EDS) provides a vision for economic growth for the town. The most recent iteration covers a five year period 2018–23, and therefore predates the COVID pandemic. Notwithstanding this, it conveys an intent to position the town as a place for business and growth.

For the Albany Highway precinct and the CBF, contributions to the Town that boost investment and exposure will strengthen the economy. Key elements and assets to be maximised are identified, including Optus Stadium, Crown, Curtin University and Technology Park.

Creative spaces and low barriers to establishment are identified as important elements to nurture small businesses which will be an important component of the local economy.

There is opportunity to leverage of these elements and their proximity by boosting the place appeal of the Albany Highway precinct. Much of this is facilitatory: creating opportunities – and spaces – for contact and collaboration. These can include "third spaces", cafes, business incubators, and shared spaces.

Other opportunities include a focus on shopfront improvement, seasonal trading opportunities and digital infrastructure (such as high quality public wifi).

In addition to this the vibrancy of the precinct is identified as an asset. A key element of this is activity and presence on the street and a fine grain built form, providing an alternative to larger institutional uses mentioned above.

Given its location as a gateway to the CBD with strong transport connections, with sufficient amenity and appeal the Albany Highway precinct can attract additional investment associated with (and close enough to) larger uses, increasing the capacity of the Town overall to attract and retain economically potent uses boasting high quality employment opportunities.





6.2 Draft Affordable Housing Study

The Town's Affordable Housing Study has not been formally endorsed by the Town but includes important research and background material considered pertinent to the Community Benefits Framework. The study assesses the current provision of affordable housing in the Town, identified expected future need for affordable housing, and identifies the roles the Town can play in helping to meet these demands.

The study includes affordable rental and ownership options, and notes that renting and apartment living is more common in the Town than the metropolitan Perth averages. The study calls for 31% of new dwellings to be affordable.

This is recognised as a significant proportion of new dwellings in the precinct. For context, affordable housing could take a range of forms to provide diversity and cater for a range of social needs. These may include traditional affordable housing (rental or ownership, linked to income or a set discount on median rent/ house price), key worker accommodation (if appropriate mechanisms can be established) and student accommodation.

Of the actions available to the Town to facilitate affordable housing, the most relevant to the Community Benefits Framework is to incentivise its provision by linking it as a community benefit to bonuses.
The benefit should not be the entire dwelling; rather it should be reflective of the opportunity cost in sale price or rental income compared to market rate housing. Given the high proportion of affordable housing identified as necessary (which predates the growth contemplated in the AHPSP), arguably the benefit from affordable housing could be considered significant and weighted accordingly.

6.3 Social Infrastructure Strategy

The Social Infrastructure Strategy was prepared by the Town to plan for population change and evolving needs in keeping with the growth envisaged in the Local Planning Strategy. It adopts a flexible approach identifying programmes and projects that can meet these emerging needs.

Programmes identified in the strategy include Town-wide and locally focused actions. Relevantly to AHPSP initiatives have been identified including maintaining a regular review system and stakeholder engagement.

Most specific identified needs in the strategy do not fall within the precinct, however a few actions are identified that can contribute to stronger community infrastructure, including

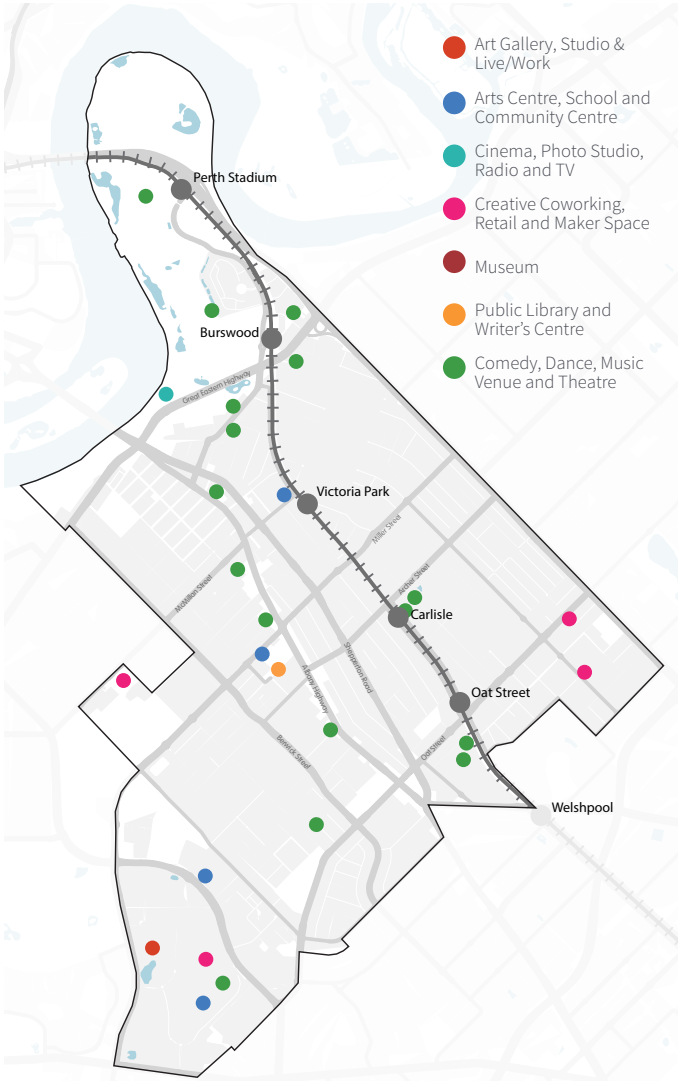
- Catering for expanded use of community halls for seniors' activities and early childhood play groups
- Identification of the Macmillan precinct as a major (district) community infrastructure facility, flexible for multipurpose use, including a centre for the arts and potentially performance spaces, library and meeting spaces
- Investigation of a local hub around Burswood South or near the Causeway sub-precinct of the AHPSP, providing learning, arts and culture services and facilities, and complementing existing sports fields to cater for potential population growth in the vicinit

6.4 Making Space for Culture

This study consists of two documents, of which Part B is focused on the Town of Victoria Park specifically. The study audited current cultural infrastructure within the town, engaged with the creative community and allied stakeholders, and analysed potential demand and opportunities to strengthen the cultural fabric of the Town.

Within the precinct some key findings and recommendations are notable for the Community Benefit Framework:

- Much of the existing infrastructure is private, and while evenly distributed across the Town, a substantial presence exists in the precinct
- Spaces with good natural light, ventilation and high speed internet are of most value to the creative community, and ideally they would be located near café and restaurant areas, public transport and prospective audiences
- There is opportunity to build on existing infrastructure, such as the Alexandra Theatre, to include space in redeveloped assets such as the Macmillan precinct, and for adaptive re-use such as the Ed Millen Heritage Precinct
- Investigate which landowners (or prospective developers) may have interest in providing creative space within the precinct, particularly beyond temporary pop-up spaces when considering applicability of the CBF



Existing cultural infrastructure

6.5 Community Infrastructure Plan Review

This document provides a framework and supporting analysis to understand and deliver community infrastructure for the current and future needs of the Town. Its intent is to provide goals and guidance rather than prescriptive direction and to enable a flexible approach should conditions shift.

The plan identifies immediate- to long-term goals for community infrastructure, establishes standards for infrastructure to be provided, reconciles infrastructure needs with fiscal and land use planning imperatives, and establishes mechanisms for monitoring and review.

Key elements of the document relevant to the CBF include the following:

- The importance of tourism, sport, leisure and events to the Town's economic development
- Need for well-located smaller local public open spaces, and consideration of the function of all open spaces
- Opportunities to increase tree canopy cover across the Town, particularly along Albany Highway
- Strategic asset management for Council facilities to maximise social benefit and return on investment
- Identifying a range of trends in social infrastructure provision including centrality and prominence of facilities, contributing to a sense of place, flexibility of use, and future proofing
- Of existing facilities, the Edward Millen Complex lends itself to a variety of potential uses, Vic Park Centre for the Arts includes small and disjointed exhibition and working space, and Victoria Park Library is too small for its catchment and evolving purpose – both the latter two are identified to be part of the major Macmillan Precinct redevelopment
- In consultation, stakeholders considered facilities well located but in need of improvement, noting the benefits and efficiencies of co-location of facilities
- Public open space accessibility is generally good across the Town, but total amount provided per capita will fall as the population grows. More pocket parks and local open spaces are needed, and those existing need to serve additional functions including boosting canopy coverage.
- Opportunity for adaptation of facilities to meet emerging needs, for example Victoria Park Bowling Club being adapted to also function as a neighbourhood community centre.
- Specific facility requirements identified including the following relevant to the AHPSP
    - Potential future need to expand library
    - Need for performing arts space "not proven" given additional spaces in City of Perth
    - Culture and arts facilities could be expanded (this is not a consistent position in the document)
    - Need for more local public open space
    - Outdoor meeting spaces "currently provided for"



6.6 Recurring Themes

Across the above documents, a number of recurring themes can be identified, representing higher priority opportunities for community benefits. These include the following

- Opportunity to improve tree canopy cover across the precinct, both on public and private land, noting the loss that has occurred progressively in recent decades. This provides an injection of amenity and character, adds social value, and reduces the heat island effect, providing considerable benefits at modest cost.
- The importance of cultural infrastructure and activities, such as exhibition and performance spaces, and noting their potential to strengthen and complement night time activity, and the night time economy. Some studies queried whether additional infrastructure investment was necessary, however considering the economic potential and alignment with aspirations (as outlined in the vision), the case for enhancement (if not expansion) is considered strong
- Need to increase local open space provision, particularly towards the Causeway end of the precinct. These spaces would preferably be small and well distributed rather than larger and centralised. Their design and function would ideally vary to provide a diversity of recreation opportunities, and should be strategically co-located with complementary uses where possible.
- Opportunity to redevelop or repurpose existing community facilities as flexible spaces with increased social value, and reflective or contemporary and emerging demands and expectations on community facilities, such as redevelopment of the library and providing for flexibility in community sporting facilities like bowling clubs
- Considerable evidence that provision of affordable housing would represent a significant community benefit in this location, given the mix of uses and local labour/employment needs, location close to the Perth CBD, and the desirability of housing diversity in the precinct.

In relation to the preceding analysis, an additional matter should be noted. Predating the AHPSP process, the Town has commenced planning for the MacMillan Precinct as a district-level community hub, consolidating a range of services and infrastructure. Some of its elements are noted as potential community benefit items. Notwithstanding its district catchment, some elements could be considered for the CBF if considered over and above the current requirements or commitments from the Town for the MacMillan Precinct.

Finally, for smaller scale development seeking concessions in particular, is to provide opportunities for community benefit that does not require significant documentation or cost to implement. Any undue barriers to considering development concessions should be minimised, particularly where only modest concessions are available.



7.0 Demographic Analysis

7.1 Summary

Research into current and future trends of high density areas within the Town of Victoria Park was conducted, and aimed to understand the specific needs of these areas for current and future residents. By understanding these areas, the community benefit framework can be tailored to ensure place-specific needs are considered.

The analysis below acknowledges similar work undertaken for the Oats Street Station Precinct by the Town, and, noting the similar locational, market and demographic context, recognises parallels for the AHPSP.

7.2 Analysis of Demographic Studies

Trends across the Town

NOTED AND ARE PROJECTED INTO THE FUTURE, INFORMING DEMAND FOR COMMUNITY FACILITIES

Proportionally
SLIGHTLY LESS HOUSEHOLDS
WITH CHILDREN
replaced by a mild increase in households with no children & lone person households.
In absolute terms the latter two categories will add over 6200 households across the Town from 2016–2046

HIGHER PROPORTION OF
PEOPLE BORN OVERSEAS
largely attributable to the student population in the Town

Slightly
MORE LOWER INCOME HOUSEHOLDS
THAN THE METROPOLITAN AVERAGE
which aligns with the more prominent student population, and potentially retirees

LESS DISPOSABLE INCOME
MAY IMPACT ON RESIDENTS
ability to pay for some services
& may have implications should rents increase

Suburb-specific analysis

East Victoria Park

An Ageing Population
(largely ageing in place)
benefiting from relatively good access to services

St James

Slight decline in population expected
with the existing population also ageing in place

Victoria Park

Modest growth in population is expected
and continued ageing in place

Built Form Strategy

It will be noted that the calibration of development controls provides for additional dwellings beyond infill targets and the ability to accommodate more demand should it materialise.

Demographic Consideration

The importance of being nimble to be able to accommodate additional services should demand increase substantially

Recognition that demographic makeup may be more diverse
(as development appeals to a larger range of demographics, for example is apartment living in Victora Park is considered more appealing beyond traditional apartment markets)

This is an additional layer of consideration when considering the demographic direction and subsequent demands to be planned for in the future of the precinct.

WITHIN THE TOWN
& MORE SPECIFIC TO THE PRECINCT

MEDIAN TO HIGHER DENSITY AREAS	TOWN OF VICTORIA PARK
Average **1.8** PEOPLE per household	Average **2.1** PEOPLE per household

(ABS 2021)

MEDIAN AGE

MCMASTER & LEONARD ST.	TOWN OF VIC PARK	BURSWOOD PENINSULA
32 years old	**36** years old	**51** years old

(ABS 2021)

In other medium & high density areas

43% LONE PERSON HOUSEHOLDS
which is significantly higher than
33% TOWN OF VIC PARK | 24% PERTH METRO

YOUNGER PEOPLE
tended to live in
lone person households
24% 15–44 YEARS VS 6% 65+ YEARS

25% COUPLES WITHOUT CHILDREN VS 6% TOWN OF VIC PARK

12% COUPLES WITHCHILDREN VS 21% TOWN OF VIC PARK

19% LOW INCOME
(less than $800pw)
VS
21% TOWN OF VIC PARK

67% of households lived elsewhere in the last 5 years VS 57% TOWN OF VIC PARK | 45% PERTH METRO

59% of people renting within medium & high density areas VS 43% TOWN OF VIC PARK | 26% PERTH METRO

50% BORN OVERSEAS
COMPARED TO 38% TOWN WIDE

Significant increase of residents **WORKING** FROM HOME

2016	2021
4.5%	8%

the latter figure coincides with COVID restrictions but some residual effect is expected to remain for more working from home

Characteristics that influence the level of demand & type of activities

DUE TO AN INCREASED AMOUNT OF LONE PERSON HOUSEHOLDS & MORE WORKING FROM HOME
there may be more of a demand for social & informal activities provided locally.

AS THERE IS AN INCREASED AMOUNT OF YOUNGER PEOPLE
there may be a need for active & organised recreational/sporting activities.

AS THERE IS A REDUCED AMOUNT OF HOUSEHOLDS THAT HAVE CHILDREN
there is not a high need for youth (i.e. older children) related activities

FOR YOUNGER COUPLES PROVISION OF HIGH QUALITY PLAY AREAS FOR YOUNGER CHILDREN **&** OTHER SUPPORT SERVICES
may encourage occupants to remain in higher density housing & within the precinct before needing more space

7.3 Capacity and Demand Implications

The following table provides a summary of capacity and demand. The table is adapted from Appendix G of the Town's Community Infrastructure Plan Review, and also includes an assessment against Parks and Leisure Australia (PLA) guidance.

In addition to the Town-wide analysis, additional comments have been provided in relation to the AHPSP. It will be noted that not all of these relate strictly to demand and PLA guidance, noting that in some circumstances there may be a tangible economic benefit to strategic investment in some infrastructure.

In other cases, closer monitoring is called for, particularly where demographics may indicate a growth in need from, for example, an expected ageing population.

Generally the commentary added in relation to the AHPSP targets themes or individual items captured in stakeholder feedback, or the vision and supporting aspirations developed for the precinct, and therefore would be worthy of consideration as items in a Community Benefit Framework.

Descriptor: Community Infrastructure	PLA Guideline	Indicative requirement by year and population			Commentary (Town-Wide and AHPSP where relevant)
		2020; 40,063	2026; 45,344	2036; 54,713	
Multi-functional branch library	1:50,000 – 150,000 Regional (R); 1:20,000 District – 50,000 (D)	0 (R) 1–2 (D)	0 (R) 1–2 (D)	0–1 (R) 1–3 (D)	Current provision of Victoria Park Library is meeting current need but unlikely to meet the long term needs of the community due to constrained space. Part of planned redevelopment of Macmillan Precinct
Neighbourhood Community Centre	1:7,500	5	6	7	The Town has a range of community facilities which have the potential to perform this function including Carlisle Memorial Hall, Vic Park Bowling Club and a variety of sporting club buildings / pavilions with large function spaces (i.e. Harold Rossiter pavilion, and Raphael Park Pavilion).
District Community Centre	1:15,000–25,000	2–3	2–3	2–4	The Town currently provides East Victoria Park Family and Community Centre and Lathlain Community Centre which is likely to meet existing a future needs

Descriptor: Community Infrastructure	PLA Guideline	Indicative requirement by year and population			Commentary (Town-Wide and AHPSP where relevant)
		2020; 40,063	2026; 45,344	2036; 54,713	
Youth Centre/ Youth Space	1:20,000–30,000 – District	1–2	1–2	2–3	The Kensington PCYC fulfils the current need together with additional youth infrastructure acting as a focal point for activities. McCallum Park current use and proposed expanded provision will address longer term requirements for youth space.
Seniors Centre	1:20,000–30,000 for District level facility (dependent on ageing demographic)	1–2	1–2	2–3	Current seniors provision at Harold Hawthorne Community Centre meets current need together with Connect Victoria Park. In the longer term the redevelopment of the centre into a more efficient and comprehensive multi-functional community facility to provide for other users should be explored. **Noting likely ageing population of redeveloped AHPSP, local demand for Connect Victoria Park should be monitored (low priority for action at present)**
Skate Park	1:25,000–50,000 – Regional facility 1:10,000 – 25,000 – District facility 1:5,000–10,000 – Neighbourhood facility	1–2 (R) 2–4 (D) 4–8 (N)	1–2 (R) 2–5(D) 5–9 (N)	1–2 (R) 2–5 (D) 5–11 (N)	McCallum Park proposed expanded provision will address skate park requirements with expanded infrastructure aligned to the general youth space. There will be a need to consider additional skate park infrastructure in newly developing areas to offset likely community needs. The provision of neighbourhood level skate parks appears to be a deficiency which will be required to be addressed.
BMX dirt track facility	1:5,000–10,000 – Neighbourhood level facility	4–8	5–9	5–11	This provision should be considered in line with potential investment in skate park infrastructure.
BMX facility (formal bitumen track)	1:50,000- 200,000 – Regional	0	0	0	There are sufficient BMX Club based facilities within Metropolitan Perth to service all future growth needs without resource to developing a new facility within the Town. Opportunities exist at Southside BMX Club at Bull Creek.
Regional Public Open Space/Park	1:250,000	0	0	0	A regional level facility exists at Burswood which is in excess of the provision requirement.

Descriptor: Community Infrastructure	PLA Guideline	Indicative requirement by year and population			Commentary (Town-Wide and AHPSP where relevant)
		2020; 40,063	2026; 45,344	2036; 54,713	
Community and Performing Arts	1:150,000 – 250,000 – Regional level facility 1:50,000–150,000 – District level facility	0 (R) 0–1 (D)	0 (R) 0–1 (D)	0 (R) 0–1 (D)	Regional level infrastructure exists within the City of Perth to meet this requirement. The need for additional infrastructure within the Town is not proven. **Notwithstanding PLA standards, there is benefit in improving or expanding this provision in the AHPSP area given the economic benefit supporting the night time economy. Consider how capacity could be expanded for performing spaces and working spaces.**
Amphitheatres	Integrated within a District Park	Local Need	Local Need	Local Need	The foreshore reserves have been utilised for event space through event overlay and without the need for further investment.
Outdoor Meeting Place	Integrated within a District Centre	Local Need	Local Need	Local Need	These are currently provided within the Towns POS centrally located. **Local economic benefit in providing more spaces for informal interaction, even embedded within streetscape design**
Trails (walking, cycling, and bridlepaths)	No established Australian standard	Local Need	Local Need	Local Need	There is an extensive network of bike paths on the foreshore and throughout the Town.
Arts and Cultural Centre	50,000 to 150,000 Integrated within a District Centre	0–1	0–1	0–1	The current facility is limited due to site and heritage constraints. The potential opportunity to expand the provision should be considered. **Redevelopment required independent of demand. Part of redeveloped Macmillan Precinct, opportunity to support this with working spaces and additional exhibition spaces for artists; this can complement and benefit the night time economy.**
District Park	1:15,000 – 25,000	2–3	2–3	2–4	The Town benefits from 8 district parks of which three are sporting reserves

Descriptor: Community Infrastructure	PLA Guideline	Indicative requirement by year and population			Commentary (Town-Wide and AHPSP where relevant)
		2020; 40,063	2026; 45,344	2036; 54,713	
Neighbourhood Park	1:5,000 1–5ha for population within 800m or 10 mins walk away	8	9	11	The Town benefits from the provision of 14 neighbourhood POS of which five are sporting reserves and nine recreational spaces. There will be a need to ensure they are protected and retained for future generations
Local Open Space	1:1,000	40	45	55	There are 15 local open spaces within the Town and nineteen pocket parks which cumulatively is well below standard and contributes to the deficit in POS provision. The development of new POS at a local level and above in new development areas is essential to offset this deficit **Within AHPSP this shortfall is also noted, particularly at the north-west end of the precinct (Causeway, Victoria Park sub-precincts). Canopy cover and diverse functionality desirable across local open spaces.**
Sports Space (to potentially incorporate sports identified below)	1:4,000 5,000	8–10	9–11	11–14	The Town currently provides eight sporting spaces which is at or near the requirement. There will be a need to develop additional sporting space where growth is projected to occur (Burswood)
AFL ovals	1:6,000 to 1:8,000 for senior size ovals	5–7	6–8	7–9	There are plans to develop Higgins Park to provide an additional oval space. The Town currently provides three AFL ovals and is therefore below standard
Rugby Union/ League	1:20,000 – 1:50,000 Area/ location specific	Local Need	Local Need	Local Need	There is currently provision for rugby league in the city of South Perth at George Burnett Reserve which would satisfy local demand
Diamond Sports	1:10,000 – 1:14,000	3–4	3–4	4–5	There is an absence of diamond sport provision within the Town.
Soccer pitches	1:4,800 to 6,600 depending on demographics	6–8	7–9	8–11	There is currently an over-provision of soccer pitches within the Town based on this benchmark which is reflective of local demand.

Descriptor: Community Infrastructure	PLA Guideline	Indicative requirement by year and population			Commentary (Town-Wide and AHPSP where relevant)
		2020; 40,063	2026; 45,344	2036; 54,713	
Cricket ovals	1:8,000 – 10,000	4–5	5–6	6–7	The Town currently provides in excess of the current need with 10 ovals provided within the Town, including, Raphael Park, Fletcher Reserve.
Athletics (grass and synthetic)	1:250,000 (Regional synthetic) 1:40,000 – 1:50,000 (grass)	0 (R) 1 (D)	0 (R) 1 (D)	0 (R) 1 (D)	There is no proven need for additional infrastructure within the Town.
Hockey pitches (grass and synthetic – water, sand based and alternatives)	1:75,000 for synthetic surface (WA Hockey Strategy) Grass provision to be area/ location specific.	Local Need	Local Need	Local Need	This is one of the key development considerations for the town. Currently there are five grass hockey pitches provided within the Town but no synthetic turf. Measures have been taken to identify potential land for the future development of a turf for Victoria Park Xavier Hockey Club.
Multi-use synthetic surfaces	Area/location specific	Local Need	Local Need	Local Need	No local need has been expressed for multi-use turf infrastructure which should be highlighted as a potential option when hard court surfaces are being replaced.
Netball Courts	1:5,000 – 8,000 (outdoor) for training purposes. Association Competition provision of 20 courts (combined indoor and outdoor)	5–8	6–9	7–11	Current provision for basketball / netball is focussed on Leisurelife where the Redbacks SBL team is based (both court and offices). Leisurelife provides a three court basketball facility with an additional court available at PCYC and on school sites locally. There is an ongoing demand for additional infrastructure which could potentially be met in partnership with school sites
Basketball Courts (indoor and outdoor)	1:3,000 – 4,000 (outdoor) Association Provision: 4–8 indoor courts (inclusive of a show court providing regional level infrastructure)	10–13	11–15	14–18	

Descriptor: Community Infrastructure	PLA Guideline	Indicative requirement by year and population			Commentary (Town-Wide and AHPSP where relevant)
		2020; 40,063	2026; 45,344	2036; 54,713	
Outdoor, Beach and Indoor Volleyball	To be integrated with compatible indoor / outdoor court recreation centres.	Local Need	Local Need	Local Need	This is determined on a local needs basis and has not been proven as being required in the Town.
Indoor Volleyball	To be integrated with Basketball / Netball centres.	Local Need	Local Need	Local Need	
Lawn Bowls	1:35,000 to 50,000 – District	1	1	1	Current proposals for Victoria Park Carlisle Bowls Club will see this requirement continue to be met. **Part of MacMillan Precinct Redevelopment, could be augmented with additional space to be a more flexible community facility.**
Squash	Area Specific	Area Specific	Area Specific	Area Specific	Located within Leisurelife infrastructure
Tennis (multi surface courts and grass)	1:15,000 – 30,000 (District) 1:30,000 to 60,000 (Regional)	2 × 8 court facility (D) or 1 × 16 court (R)	2 × 8 court facility (D) or 1 × 16 court (R)	2 × 8 court facility (D) or 1 × 16 court (R)	Current provision within the Town is in excess of this provision and will be consolidated further with the development investment proposed at Higgins Park
Cycling facility	Integrated with tracks and trails	Local Need	Local Need	Local Need	The need to ensure cycling is provided for to connect spaces is critical and referenced in the Towns strategic documentation. Integration with the broader cycle network currently take place and needs to be re-enforced.
Trails (walking, cycling and bridle paths)	To be incorporated within Trails Strategies	Local Need	Local Need	Local Need	

Descriptor: Community Infrastructure	PLA Guideline	Indicative requirement by year and population			Commentary (Town-Wide and AHPSP where relevant)
		2020; 40,063	2026; 45,344	2036; 54,713	
Local Government Aquatic Facilities indoor/ Outdoor (various configurations)	1:150:000 (50m pool – FINA competition standard) – Regional 1:75,000 (25m or 50m pool for recreational, club, water polo, diving, and competitive swimming) – District 1:30,000 (25m and leisure pool) – Neighbourhood	0 (R) 0–1 (D) 1 (N)	0 (R) 0–1 (D) 1–2 (N)	0 (R) 0–1 (D) 1–2 (N)	Aqualife fulfils the current need at a district level and is likely to continue to fulfil that role not the future. No other aquatic provision is needed.
Regional Sports Facility (including aquatics)	1:250,000	0	0	0	There is no demand to develop a regional level sports facility in addition to Aqualife and Leisurelife
Indoor Sport and Recreation Centre (dry)	1:50:000 – 1:100:000 30,000 – 50,000 (District if combined with a multi-use community centre)	0 (R) 1 (D)	0 (R) 1–2 (D)	0 (R) 1–2 (D)	Leisurelife fulfils the need of the town both now and to 2036.
Aerobics/Fitness/ Gym (Local Government)	To be developed as an integral part of a district or regional leisure facility.	Local Need	Local Need	Local Need	Gym and group fitness opportunities exist at both Aqualife and Leisurelife. There will be a need to review current provision on an ongoing basis to explore opportunities to expand and diversify the service offered.

Descriptor: Community Infrastructure	PLA Guideline	Indicative requirement by year and population			Commentary (Town-Wide and AHPSP where relevant)
		2020; 40,063	2026; 45,344	2036; 54,713	
Men's Shed / Women's Shed	No defined standard (size of between 200m2 and 1,000m2)	Local Need	Local Need	Local Need	There is one men's Shed at the PCYC in Kensington which meets the needs of the community although assistance will be required to improve site servicing. **Noting likely ageing population of redeveloped AHPSP, local demand or desire for an additional Men's or Women's Shed should be monitored (low priority action at present)**
Community Garden		Local Need	Local Need	Local Need	There is one community garden within Victoria Park which meets local needs



8.0 CONCLUSION AND RECOMMENDATIONS

8.1 Review of Community Benefits System and Processes

This assessment has examined a wide variety of inputs influencing the Albany Highway Precinct Structure Plan. In addition to mechanical considerations such as policy context, the proposed approach, key principles and rationale, this has included

- Extensive engagement undertaken for the precinct including specific elements considered desirable by stakeholders
- The vision, sub-precinct objectives and goals for the precinct, themselves subject of considerable stakeholder engagement and considered the most important articulation of shared aspirations for the precinct
- The supporting framework of strategies and guidance for the AHPSP to contextualise and guide all development and improvements within the precinct, whether on private or public land
- Important strategies and supporting documents from the Town providing previous research and direction on community facilities, stakeholder engagement and intended direction
- Demographic analysis, considering the additional housing typologies being considered in the AHPSP and broad implications for future demographics within the area, and the implications for community infrastructure demand

Based on the preceding analysis, recommendations for specific community benefits are tabluated in the next section. In considering these benefits, the application of the community benefits framework should have regard for:

- The cost of the community benefits assessment process, particularly for smaller scale development where the additional development concessions available are modest. To this end, unless the site is in a location of particular importance, simplified process is considered beneficial
- The identified importance of affordable housing, which is expected to become a greater need in the foreseeable future, as a pre-eminent community benefit and need worthy of development concessions
- Community benefits aligned to and strengthening identity, linked to future needs from expected demographic profile, and reflective of stakeholder aspirations
- The need to achieve design excellence (including sustainability requirements) in any proposal seeking development concessions, in addition to community benefit requirements (note: design excellence including sustainability is examined in other guiding documents).

8.2 Recommendations on Community Benefits

This table is to be included in Part 1 of the AHPSP and is ordered by (draft) priority. Specific sub-precincts where community benefits may be of particular value have been identified where appropriate in the right hand column, noting that other locations within the precinct may be considered.

In addition to the list below, the Town may consider other unlisted items with demonstrated alignment to the Strategic Community Plan, the articulated Vision and Objectives of the AHPSP, or another strategic programme of the Town.

Benefit Contemplated	Source Document (s)	Commentary (from paper, project demography, place vision)	Best Mechanisms for Provision	Priority as a Community Benefit (Draft)	Preferred or Applicable Sub-Precincts, Limits of Provision and Notes
Affordable Housing	AHPSP Objectives, Concept Engagement Summary Report, Affordable Housing Study	"Affordable" housing could include a variety of types, but should reduce mortgage/ rental stress and ensure local housing for a variety of demographic groups	Community benefit mechanism (note that "cost" of provision should relate to opportunity cost of provision compared to market housing	Very High	All
Local Public Open Space	AHPSP Objectives, Albany Highway Tomorrow, Concept Engagement Summary Report, Community Infrastructure Plan Review, Public Realm Strategy	Well documented shortfall, should establish a minimum POS size, plan for diversity of open spaces and look to incorporate other community benefits in/near POS	Land and/or funding/ provided through community benefits framework. Could be supplemented by other funds given existing shortfall. NOTE: This would be above the 5% requirement in the AHPSP	High	Causeway, Victoria Park
Contribute to cultural infrastructure (theatre, artists or rehearsal spaces)	AHPSP Vision, AHPSP Objectives, Economic Retail and Employment Strategy, Albany Highway Tomorrow, Concept Engagement Summary Report, Economic Development Strategy, Making Space for Culture	Adds vibrancy and economic development opportunities. Creates a destination. Suggested location recognises its importance to the night time economy. Should be appropriately scaled. Refer to definitions in table 32 of AHPSP.	Funded by in-lieu contributions for community benefits framework, can be supplemented by other funding sources	High	Victoria Park, East Victoria Park

Benefit Contemplated	Source Document (s)	Commentary (from paper, project demography, place vision)	Best Mechanisms for Provision	Priority as a Community Benefit (Draft)	Preferred or Applicable Sub-Precincts, Limits of Provision and Notes
Rights of way, pedestrian links and open space as depicted within major sites	AHPSP Part 1, Draft Public Realm Strategy, Albany Highway Tomorrow	Connectivity and pedestrian friendliness in keeping with vision. Locations of additional connectivity and these open spaces are as depicted on the plan, to maximise their social value and impact	In-kind provision on-site, linked to bonuses, considered appropriate	High	Major Sites
Planting of mature trees agreed by Council	Community Infrastructure Plan Review, AHPSP Objectives, Public Realm Strategy, Urban Forest Strategy	Improves canopy cover and greenery aspirations in vision. This is considered a quick win to provide instant amenity to the street and manage building bulk for smaller developments seeking concessions.	Recommend a standard deemed-to-qualify requirement, for example one mature street tree (min 3m high) for every 5m of street frontage, maintenance provided for two years, species as specified by the Town	High**	All ** ** Generally lower scale development, where base height is 3 or 4 storeys (generally away from Albany Highway itself)
Public realm improvements as per Public Realm Guidelines	AHPSP Vision, AHPSP Objectives, Built Form Strategy, Social Infrastructure Strategy, Public Realm Strategy, Concept Engagement Summary Report,	Strengthens implementation of vision. Improvements provided beyond those required by condition of approval anyway, and in accordance with Public Realm Guidelines	Likely to be provided in-lieu as a partial payment for total works, through community benefit framework	Medium-High	All
Outdoor meeting spaces	Economic Development Strategy, Public Realm Strategy	Provides vitality and economic development opportunities. Opportunity for connection and chance meetings, where well-located, for example a permanent parklet reclaiming an on-street parking bay	Could be provided in-kind rather than cash in lieu if well located.	Medium	Generally on or near Albany Highway

Benefit Contemplated	Source Document (s)	Commentary (from paper, project demography, place vision)	Best Mechanisms for Provision	Priority as a Community Benefit (Draft)	Preferred or Applicable Sub-Precincts, Limits of Provision and Notes
High quality early children's playground (under 5)	Demographic Analysis, Social Infrastructure Strategy,	Potential to extend appeal for apartments to parents with younger children with high quality local play areas. Could be located with other services (play groups, child health centres)	In-lieu or in-kind provision through community benefit	Low-Medium	All
Seniors Centre Upgrade	Social Infrastructure Strategy, Community Infrastructure Plan Review, Demographic Analysis	Supports a diverse community. Reflects expected demographic of ageing population is hastened by more higher density development, stimulating additional demand	In-lieu funding as a community benefit should supplement Council funding given scheduled replacement, noting that Connect Victoria Park in the AHPSP is not first priority for an upgrade	Low	All
Men's or Women's Shed	Community Infrastructure Plan Review	Supports a diverse community and activation. Reflects expected demographic of ageing population is hastened by more higher density development, stimulating additional demand, could co-locate with local open space	In-lieu funding as a community benefit	Low	All

APPENDIX 1: DEFINITIONS

Item	Definition	Source
Affordable Housing	Considering affordable rental accommodation and affordable home ownership: Affordable rental as rental housing for low-to-moderate income (i.e. earning 50–80% of the median Greater Perth income) households so they pay no more than 30% of household income on rent and is usually managed by a Community Housing provider or other non-profit organisation so the housing is affordable in perpetuity. Affordable home ownership is owner-occupier housing for low-to-moderate households (i.e. earning 80-120% of the Greater Perth median income) who are eligible under a subsidised loan or shared equity scheme which imposes a legal affordability requirement.	Town of Victoria Park Affordable Housing Study
Local Public Open Space	Public open space means land used or intended for use for recreational purposes by the public and includes parks, public gardens, foreshore reserves, playgrounds, and sports fields but does not include regional open space and foreshore reserves. Within this definition, local public open space ("local parks") are defined as spaces of up to 3000 m2 provided for local children's play and as resting places, designed as small intimate spaces, where appropriate, and to allow pedestrian connectivity, and create a sense of place.	Liveable Neighbourhoods (2009
Cultural Infrastructure	Means infrastructure dedicated to a creative and cultural use. Creative and Cultural Use means non-residential floorspace provided exclusively for creative and cultural activities in line with Section 3.1.2, and table 31 of the AHPSP.	Albany Highway Precinct Structure Plan
Early Childhood Playground	Considering manufactured or nature playgrounds: Manufactured playgrounds were defined as; playgrounds which use manmade materials and predominantly supports structured play. Nature playgrounds were defined as; playgrounds which use natural materials and predominantly encourage unstructured play. For both of these, early childhood playgrounds are to be defined as playgrounds meeting the above definitions, designed for use by children under five years of age.	Kidsafe WA

Item	Definition	Source
Seniors Centre Upgrade	Means refurbishment or improvement of the seniors centre within the AHPSP (Connect Victoria Park).	Town of Victoria Park Community Infrastructure Plan Review
Community Shed, Men's Shed, Women's Shed (as applicable)	A Community, Men's or Women's Shed is the physical building for a Community, Men's or Women's Shed organisation which meets the following criteria a) A not-for-profit organisation b) A group that is accessible to all men in the local community Membership may only be restricted in relation to gender or indigenous heritage (e.g., restricted to Aboriginal or Torres Strait Islander members for cultural purposes) or both. c) A facility with the primary objectives (as shown in the organisation's rules or constitution) of advancing the wellbeing and health and reducing social isolation of men in the community through providing opportunities for: – community connection & participation – learning and passing on skills – learning about their own and other's wellbeing and health – working on meaningful projects for the community. Community Sheds are an alternative model of shed, designed to engage a broader cross-section of the community.	Men's Sheds WA

Technical Notes

Methodology Calculation of Community Benefit Liability

1.0 Introduction

Transparency is an important principle for community benefits and development concessions. Stakeholders and the community will expect to understand the benefits gained when development concessions or bonuses are granted.

An important component of this transparency is easily understood calculation of community benefit liability. The approach proposed for the Albany Highway Precinct Structure Plan (AHPSP) draws on precedents including the South Perth Peninsula Activity Centre Plan for its methodology of calculation.

It will be noted that a community benefit contribution is not the only criteria for development concessions to be considered. Additionally proposed developments are required to:

- Achieve a design quality demonstrably in excess of good design
- Achieve articulated sustainability outcomes

Further detail on these criteria can be found in the Design Quality Benchmarks prepared to support the Community Benefits Framework (CBF).

2.0 Public Benefit Contribution Categories

A prioritized list of community benefits for which contributions can be accepted is provided in section 8.2 of the AHPSP Community Needs Analysis. It should be noted that alternative benefits may be considered by the Town of Victoria Park (the Town) where alignment with identified strategic goals can be demonstrated.

To minimise administration costs, the Town has a preference for physical benefits provided in-kind but will accept an in-lieu payment to contribute towards community benefits.

Within the prioritized list the highest priority item identified is affordable housing, which is identified as a large and growing need in the precinct it grows and matures.

Additionally, mindful of the burden of administrative costs for smaller scale development seeking concessions, a “quick win” pathway has been established to add social value through an efficient process (for proposals with a three or four storey base height).

3.0 Relationship to State Planning Policy 3.6 ‘Infrastructure Contributions’

State Planning Policy 3.6 ‘Infrastructure Contributions’ (SPP 3.6) is noted as providing guidance for Development Contribution Plans (DCPs), and is used to coordinate the delivery of community infrastructure in areas experiencing growth. Generally requirements under SPP3.6 are directly linked to the quantum of demand created by a given proposed development (for example the number of dwellings proposed).

For the Community Benefit Framework, many of the principles inherent in DCPs apply. However the proportionality is linked only to the additional development proposed (height and/or plot ratio area) above the permitted "base" controls.

Accordingly, the nexus between total development scale and community benefit is not straightforward. Therefore, as the community benefit methodology proposed within this framework is based on bonuses, the nexus objective is not applicable.

However, the framework addresses the remaining objectives of SPP 3.6 which requires calculations and distribution of community infrastructure to be delivered with equity, certainty, efficiency, consistency and accountability.

4.0 Draft Percentage Methodology

Contribution payable is the greater of the following calculations:

Plot Ratio:

> ((Total Plot Ratio – Permitted "Base" Plot Ratio) / Permitted "Base" Plot Ratio) x Total Construction Cost Contract Sum x 3%

Height:

> ((Total Height in Storeys – Permitted "Base" Height in Storeys) / Permitted "Base" Height in Storeys) * Total Construction Cost Contract Sum x 3%

Total Construction Cost Contract Sum (contract sum) is to include all contractors' preliminaries, fees, overhead and profit, trade contract values, provisional sums and contingency/risk amounts. The contact sum shall include contracts inclusive of third-party works and/or subsequent contracts required to complete the development.

The contract sum must not include the monetary value of any community benefit contribution provided onsite as part of a development. Valuation of any onsite community benefit contribution does not include the valuation of land.

5.0 Requirements

5.1 Threshold Minimums

Calculation of community benefit liability is based on exceeding the base or primary controls for the site. Accordingly the threshold for incurring a requirement for a community benefit contribution is when a proposed development exceeds either base height or base plot ratio in accordance with the following table:

AHPSP "Zone"	Base Height	Bonus (Total) Height	Base Plot Ratio	Bonus (Total) Plot Ratio
CW1	3	6	1.5	3.5
CW2	4	6	1.5	2.5
CW3	6	8	2.0	3.0
CW4	8	18	3.0	3.5

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M1	12	22	3.0	4.0
M2	12	32	3.0	5.5
VP1	3	6	1.5	2.5
VP2	3	6	1.0	2.5
VP3	5	8	2.0	3.0
M3	8	22	2.0	5.0
M4	8	24	2.0	5.0
CE1	3	5	1.0	2.0
CE2	5	8	2.0	2.5
CE3	6	10	2.5	3.0
M5	8	16	2.5	4.0
EV1	3	4	1.5	1.5
EV2	3	5	1.0	2.0
EV3	4	6	1.5	2.5
M6	8	10	3.0	4.0
M7	8	22	2.0	5.0
EE1	3	5	1.0	2.0
EE2	3	6	1.5	2.0
SJ1	3	5	1.5	2.0
SJ2	5	8	2.0	3.0
SJ3	8	12	3.0	3.5
M8	8	16	3.0	4.0

5.2 Pre-Requisites

This paper covers the methodology for calculation of the community benefit contribution payable. However there are in total three prerequisites prior to development concessions being considered by the Town. Specifically the development concessions (or bonuses) are available subject to:

- **Enhanced Design Quality**: where the Town, having regard to advice provided by the Design Review Panel, is satisfied that the proposed development will *demonstrably exceed good design*.
- **Improved Sustainability Outcomes**: exceeding by one star (Green Building Council of Australia) the sustainability provisions included in the Albany Highway Precinct Structure Plan
- **Provision of a Community Benefit**: as per the methodology outlined in this document.

5.3 Treatment of Major Sites

Within the AHPSP, a number of the nominated major sites have been identified, including specific community benefits identified for inclusion on-site. These benefits are accounted for in the CBF, and are to be credited towards the community benefit requirements should development concessions be pursued.

5.4 Treatment of Medium Density

For sites with a base height of three or four storeys (medium density), it is acknowledged that the financial benefits available for development concession is of a smaller scale, and that the administrative requirements to secure a community benefit should not impede delivery of the benefits themselves.

Accordingly the framework has been designed to deliver quick win benefits that are deemed to meet community benefit liabilities, without requiring excessive reporting and paperwork.

This is proposed in the form of a requirement to plant medium sized mature street trees regularly spaced along the frontage(s) of the proposed development. It is noted that much of the development with these development controls is away from Albany Highway itself.

The intent is to achieve multiple outcomes, including:

- Mitigate the heat island effect
- Break up the visual bulk of additional development
- Contribute to the intended character of the precinct by injecting greenery
- Support walking and cycling as appealing modes of transport

Exact detail on species selection and (therefore) spacing will be determined by the Town. Achievement of this requirement will fulfil the community benefit requirements for medium density development.

Proponents for medium density sites seeking development concessions may still employ the conventional approach outlined in section 4.0 if preferred.

6.0 Summary and Conclusion

Both the public benefits and development controls are of key importance to stakeholders and the community. Accordingly it is appropriate that the development concession and community benefits methodology is transparent and able to be understood.

To this end, a clear formula and approach to community benefits has been developed for the AHPSP.

The methodology proposed in this document addresses the relevant objectives of SPP 3.6 which requires calculations and distribution of community infrastructure to be delivered with equity, certainty, efficiency, consistency and accountability.

Some major sites in the AHPSP have specific community benefits ascribed to them, but are nonetheless aligned with the same formula for calculation of community benefit obligations.

For smaller scale, medium density development, the Town has developed a “deemed to satisfy” pathway, providing a quick win intervention that provides demonstrated community benefit aligned with the vision for the precinct, without substantial procedural costs and processes.

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Collectively, this approach provides opportunity for all proposed developments to realise community benefit through development concessions, and add social value to the precinct.

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Technical Note on Impact-testing and Feasibility Analysis

1. Introduction

Opportunities for development concessions are expected in contemporary infill development scenarios as evidenced by Residential Design Codes Volume 2, which sets out protocols for establishing Community Benefit Frameworks (CBFs).

In preparing a CBF for a growing infill precinct, it is important that controls are calibrated so that there is sufficient incentive to pursue development concessions, but also that the community is receiving valued benefits in exchange for development concessions.

The key objective is to ensure project feasibility is not unduly impacted. This technical note summarises impact testing of benefits to summarise the impact of the proposed CBF for the Albany Highway Precinct Structure Plan (AHPSP).

Importantly, this summary provides context, both through precedent controls used, and more broadly economic drivers and property market context as a means to appreciate the methodology proposed.

2. Community Benefit Contribution Requirements

For the AHPSP, community benefits may be made in kind or by a monetary (in lieu) contribution as agreed by the Town. The contribution payable is calculated as the **greater** of the following calculations of additional height or plot ratio area sought:

Plot Ratio:

> ((Total Plot Ratio – Permitted "Base" Plot Ratio) / Permitted "Base" Plot Ratio) x Total Construction Cost x 3%

Height:

> ((Total Height in Storeys – Permitted "Base" Height in Storeys) / Permitted "Base" Height in Storeys) * Total Construction Cost x 3%

3. Relevant precedents (Mos Park, South Perth, Leederville, Canning Bridge)

The introduction of a CBF is relatively recent in planning controls, however several precincts and individual developments have adopted a similar approach to that outlined in section 2. A key opportunity from this approach is the ability to pool can in lieu contributions and thereby provide more substantive benefits, including benefits that are provided off-site from a proposed development.

Specific examples include the South Perth Activity Centre Plan, which proposed a similar approach which was endorsed by WAPC and implemented through the activity centre plan and accompanying provisions of the local planning scheme.

In contrast, the City of Melville proposed a list of community benefits to be provided within the Canning Bridge Activity Centre Plan. After several years of operation, this approach was critiqued by community

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stakeholders for its opacity and limitations in only providing on-site benefits (which were of limited perceived social value). This approach is now under review and an alternative employing a percent-of-construction bonus has been advertised for adoption.

Additionally, in lieu of overall precinct guidance, individual developments have successfully implemented similar approaches to justify the community benefits proposed in exchange for development concessions within the Town of Mosman Park and City of Vincent.

This approach is becoming well established through precedent and endorsement by WAPC as a preferred means of achieving community benefits in an infill context.

4. Feasibility Testing Summary

For the AHPSP, six sites were analysed with hypothetical development achieving primary (base) controls and bonus controls. In each case, hypothetical scenarios reflective of a pragmatic development outcome took account of construction costs, holding costs, financing, and expected sales prices.

Each scenario was for a different site, and within a different sub-precinct. Scenarios covered a variety of heights and scales, including one “major” site.

For each scenario, the feasibility testing compared base development with bonus development (the latter required to contribute 3% of construction costs as community benefit). In each scenario, the bonus development was more financially viable than he base scenario.

This is considered a balanced outcome as, for larger developments, developers accept additional risk, including additional time committed to a development and a greater financial commitment. It follows that viability should be more robust for larger developments than smaller developments.

There may be circumstances where proponents’ appetite for risk is more limited and development concessions are not pursued, however this analysis shows that there is no impediment to pursuit of bonuses and community benefits from the CBF system proposed.

Although the exact feasibility of individual sites and proposals may also vary, the uniformity of these findings indicates that the calibration of the CBF mechanism is well balanced.

5. Community Benefits Costing

Paired with the feasibility reporting is the costing of identified community benefits. Most draft community benefits, as identified in the Outline of Place and Community Needs, are provided below. These costings have been provided by a certified Quantity Surveyor, as a basis for costing the CBF.

The notable exception from the list is affordable housing. A broad definition of affordable housing is adopted in the CBF. Accordingly it is difficult to provide a universal costing applicable to all varieties of affordable housing.

However, costing of affordable housing as a community benefit should be provided on a case-by-case basis, reflective of the opportunity cost presented by providing affordable housing in lieu of market-rate

housing, based on relevant precedents. It will be incumbent on the proponent to demonstrate the opportunity cost foregone in providing affordable housing.

Infrastructure Asset	Context and Definition	Unit	CONSTRUCTION COSTS (Direct Cost only)
Local Public Open Space	- Cost assumed based on 1,000m2 POS. - Hard landscaped finish to 10% of total area. - No allowance for drainage systems and / or lighting or security. - Nominal allowance for play equipment and street furniture. - Reticulated lawn. - Trees to provide 30 - 40% canopy cover.	Per m2	$ 400
Cultural Infrastructure	- Assumed small to medium rehearsal space complete with amenities (150m^2). - Assumed small to medium sized theatre (200m^2).	Item	$ 1,900,500
Artists Spaces	- Assumed to be a Creative Studio or similar. - Includes amenities, communal office and kitchenette or similar.	Per m2	$ 3,645
Pedestrianised Rights of Way	- Assumed 6m wide pedestrianised length. - No allowance for drainage systems and / or lighting. - Supply and install new brick pavers.	Per linear m	$ 900
Planting	- Assumed supply and install 200L tree. - Assumed deep soil zone already provided. - No allowance for landscape maintenance.	Per tree	$ 500
Outdoor Meeting Spaces	- Assumed 20m^2 GFA, providing light shelter. - Includes bench and / so seating area. - Minor landscaping.	Per Item	$ 50,000
Children's Playground	- Medium to large playground. - Located within local open space or near other community facilities. - Medium to high quality specification.	Per Item	$ 410,000
Seniors Centre Upgrade	- Assumed refurbishment to existing facility. - No allowance for construction of new, or expansion of existing.	Per m2	$ 1,500
Shed (Community Shed)	- Assumed steel framed structure clad in Colorbond or similar. - Allowance for minor services.	Per m2	$ 1,850

In reviewing the figures provided above, it should be noted that:

- The above prices are 2024 prices, and should be indexed accordingly for any future calculations of community benefit
- Direct costs only will be considered in the assessment of a contribution for the CBF. Additional costs and contingencies are not credited

6. Market Context

Feasibility analysis is a snapshot in time, based on the costs, pricing and economic dynamics at that point. This has impacted on the headline figures for the feasibility analysis, reflective of the observation that apartments in Perth are generally unviable unless they can command a significant price, usually reserved for the western suburbs.

This pricing is reflective of substantial increases in building materials and labour, and market reaction pricing in the risk of additional increases. In addition, although apartment prices have risen significantly in recent years, there are practical limits to affordability and ability to pay that impede prices matching construction costs and risks.

As a consequence, new apartment construction across the Perth metropolitan area is at its nadir at present, and current observed difficulties in securing commencement of apartment projects in the south east corridor are more reflective of issues across the city rather than localized.

Current circumstances are considered exceptional, and construction will correct itself and return to historically regular levels as part of shifting economic conditions and cyclical considerations.

7. Conclusion

A community benefit framework is generally expected as part of comprehensive infill precinct planning in Western Australia. A range of models have been tested and a contribution at a pro-rate rate for 3% of construction cost for the bonus element of proposed development has been proposed or employed across the metropolitan area.

This technical note provides a summary of feasibility research undertaken for the AHPSP based on this model. Importantly, in reviewing a variety of development scenarios, the research found that there was no negative impact from the inclusion of a community benefit contribution for bonus development.

Additionally, costings for community benefits have been provided, which gives some context to the likely cost of community benefits, and what might be expected from community benefit contributions over time.

It is noted that there are unique economic considerations at present across Perth which impedes commencement of apartment development except in premium locations like the western suburbs. Notwithstanding this, the research undertaken provided favourable results from comparing base and bonus development, uniformly across all scenarios.

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CBF Procedural Guide

1. INTRODUCTION

The purpose of the Community Benefit Contribution Procedural Guide (Procedural Guide) is to outline the process of the proposition and delivery of community benefit contributions in accordance with the Albany Highway PSP Outline of Place and Community Needs and the Albany Highway Precinct Structure Plan (AHPSP).

The Procedural Guide addresses:

a) Information to be lodged with a development application seeking building height and/or plot ratio above the primary ("base") limits;
b) Calculation and provision (or payment in lieu) of community benefits contributions
c) Conditions and advice notes to be applied to development approvals that enables building height and/or plot ratio above primary limits.
d) Management of the Community Benefits Contributions Fund by the Town of Victoria Park (the Town)
e) Delivery of the benefit items by a proponent or the city; and
f) Review and reporting requirements for the Community Benefits Contribution Fund.

2. COMMUNITY BENEFIT CONTRIBUTION REQUIREMENTS

Community benefits may be made in kind or by a monetary (in lieu) contribution as agreed by the Town. The contribution payable is calculated as the **greater** of the following calculations of additional height or plot ratio area sought:

Plot Ratio:

((Total Plot Ratio – Permitted "Base" Plot Ratio) / Permitted "Base" Plot Ratio) x Total Construction Cost x 3%

Height:

((Total Height in Storeys – Permitted "Base" Height in Storeys) / Permitted "Base" Height in Storeys) * Total Construction Cost x 3%

3. CONTRACT SUM

Contract sum is to include all contractors' preliminaries, fees, overhead and profit, trade contract values, provisional sums and contingency/risk amounts. The contact sum shall include contracts inclusive of third-party works and/or subsequent contracts required to complete the development.

The contract sum must not include the monetary value of any community benefit contribution provided onsite as part of a development. Valuation of any onsite community benefit contribution does not include the valuation of land.

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4. COMMUNITY BENEFIT CONTRIBUTION OFFER

In the instance a development application proposes a building height and/or plot ratio above the primary ("base") limit, a written offer of a community benefit contribution shall be made to the Town of Victoria Park.

The offer shall be made consistent with the following procedure:

4.1 Included within the development application, a document shall be submitted to verify whether a community benefit contribution is to be:

i. A monetary offer in accordance with Clause XX of Schedule X of the Scheme and calculated as per Clause XX of Schedule X of the Scheme and Section 2 of this procedural guide.
ii. Delivered onsite in accordance with Clause XX of Schedule X of the Scheme.
iii. Delivered in-part as an onsite contribution and in-part as a monetary offer.

4.2 Should the development application comprise or include a monetary offer, the document shall include a statement committing to a monetary payment prior to the submission of an occupancy permit application.

4.3 Should the development application comprise or include community benefit contribution proposed to be delivered onsite, the following details associated supporting documents must demonstrate the following:

i. Description of what the onsite contribution proposed comprise of, including drawings, artist's impression and any other information that the Town may require to enable an understanding of the contribution proposed.
ii. Description of how the proposed onsite contribution(s) aligns with the Albany Highway PSP Outline of Place and Community Needs contained within Appendix 1 of Part 2 of the AHPSP.
iii. The applicant's forecast of the development's contract sum, in accordance with Part 3 of this Procedural Guide, reconciled against a valuation of the proposed onsite contribution(s) by an appropriately qualified Quantity Surveyor.
iv. A statement acknowledging that should the final value of the proposed onsite contribution(s) is assessed as less than the required contribution amount, following a final valuation, the balance must be paid to the applicant as a monetary contribution prior to submission of an occupancy permit application. The final valuation is determined prior to submission of an occupancy permit application.

4.4 Acceptance of the offer for community benefit contributions is at the discretion of the Local Government and will form part of its broader consideration of the development application.

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4.5 The Town is generally supportive of on-site provision of benefits consistent with the AHPSP. The Town may reject any offer to deliver a community benefit contribution onsite that is deemed to be inconsistent with the AHPSP. In the instance a proposal is deemed to be inconsistent with the AHPSP the application will be recommended for refusal.

5. PROCESS FOR A MONETARY COMMUNITY BENEFIT CONTRIBUTION

Following a development approval and prior to submission of a building permit application, the applicant shall provide information to the Town to confirm the contract sum in accordance with Part 4 of this procedural guide. The contract sum should be evidenced by submitting the executed contract inclusive of the contract sum breakdown.

The Town as part of the review of the valuation of the contract sum, may seek the service of an independent third party to verify its value. In such cases, all costs and expenses will be borne by the applicant and are not included in the credited contribution amount.

Following the review, the Town will issue the applicant with a letter stating a provisional community benefit contribution amount.

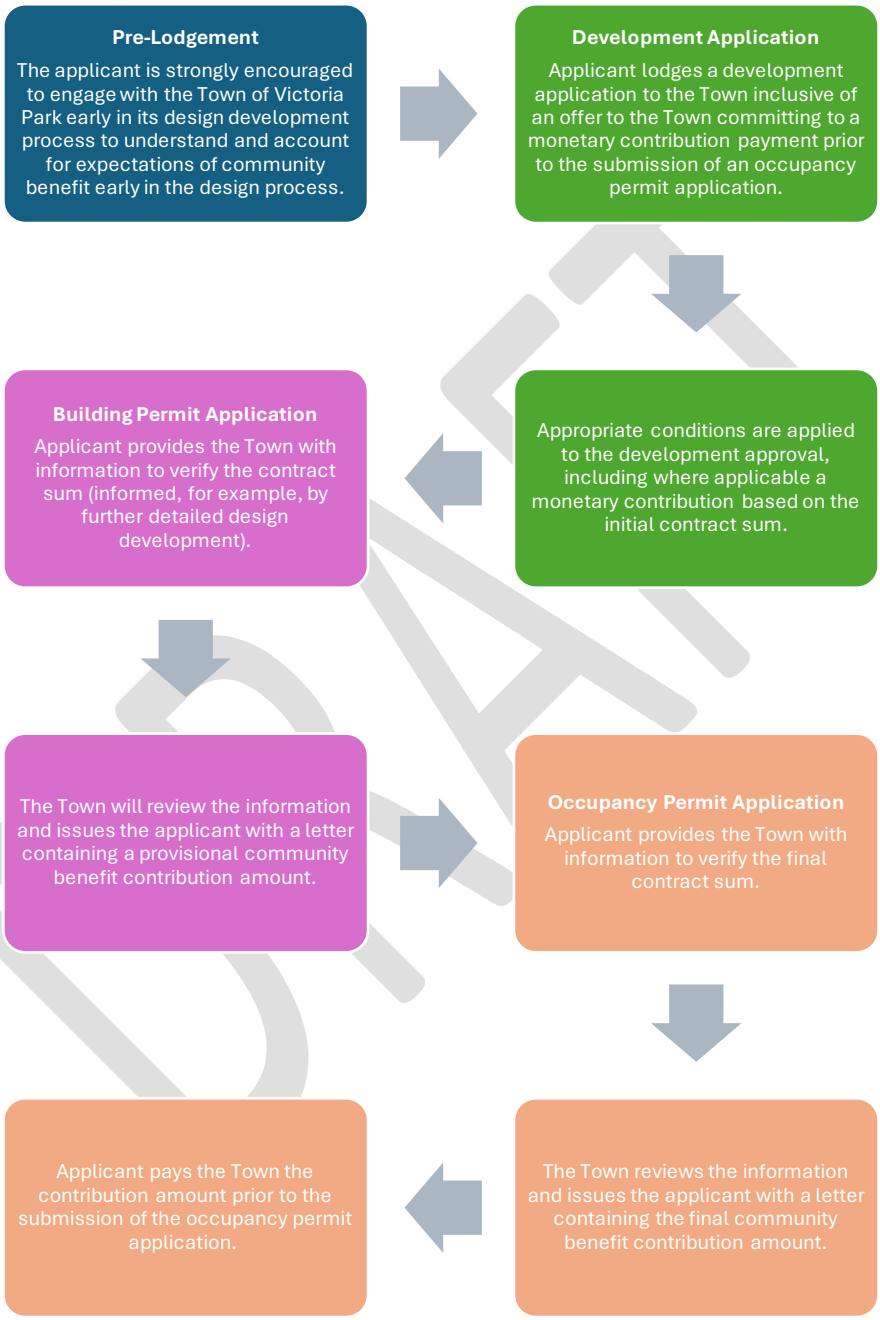
Prior to submission of an occupancy permit application the applicant shall submit information to the Town to verify the final contract sum. Such information will consider the information provided by the applicant, and the Town then issues the applicant with the final community benefit contribution amount.

The contract sum may exclude non-residential tenancy fit out costs and variations to the contract associated with purchaser/owner upgrades/changes.

Payment of the contribution shall also be made to the Town prior to submission of an occupancy permit application.

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Figure 1: Process for Monetary Community Benefit Contribution



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6. FORECAST CONTRACT SUM AND VALUATION OF ONSITE COMMUNITY BENEFIT(S)

Where a community benefit contribution is proposed to be delivered onsite, a forecast contract sum is required to be lodged as part of the development application to determine the monetary contribution which would otherwise be required under the Community Benefits Framework and contribution requirements outlined in Part 2 of this procedural guide

Where the proposed onsite item(s) is of a lesser value than the total required community benefit contribution calculated in accordance with the Part 2, the balance must be provided as a monetary contribution, paid prior to the submission of an occupancy permit.

A forecast contract sum is an estimate of the amount that the contract sum will ultimately be, having regard to Part 2 of this procedural guide.

The forecast contract sum and onsite community benefit item(s) proposed are required to be accurately valued, to the satisfaction of the Town by an appropriately qualified Quantity Surveyor, registered with the Australian Institute of Quantity Surveyors with demonstrated equivalent qualifications.

The Town, as part of the review of valuation of the forecast contract sum, may seek the services of an independent third party to verify its value. Should this occur, all costs and expenses borne by the Town in determining the value of the contract sum will be paid by the applicant.

Prior to submission of an occupancy permit application, the final contract sum is to be submitted to the Town with a final valuation of the onsite benefits delivered. The contract sum may exclude non-residential tenancy fit out costs and variation to the contract associated with purchaser/owner upgrades/ changes.

The Town, as part of the review of the valuation of the final contract sum and valuation of delivered onsite benefits, may seek the services of an independent third party to verify its value. Should this occur, all costs and expenses are to be borne by the applicant.

In the instance that the proposed onsite item(s) is of a lesser value than the total required community benefit contribution the Town will issue a letter stating the final community benefit contribution amount to be paid to the Town prior to submission of an occupancy permit application.

7. DEVELOPMENT APPROVAL CONDITIONS AND ADVICE NOTES

In the instance of the approval of building height and/ or plot ratio above the primary limits is recommended, the following conditions are to be placed on the approval. The wording of these conditions and advice notes may be modified as required, at the discretion of the Town.

7.1 Where a Monetary Contribution is Imposed

The following condition and advice note shall be applied to the approval:

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Condition:

A community benefit contribution, calculated in accordance with Clause 6 of Schedule C of the Scheme, shall be made by way of monetary payment to the local government prior to the submission of an occupancy permit application.

Advice note:

For the purpose of Schedule C Clause 6 of the Scheme, guidance is given as to the calculation of the 'contract sum' within Appendix 8 – Community Benefit Contribution Procedural Guide of the AHPSP.

7.2 Where Requirement of Onsite Community Benefit Contributions is Imposed

Conditions of development approval will be prepared as needed where onsite items are proposed. To meet the requirements of the AHPSP and Albany Highway PSP Outline of Place and Community Needs, conditions are required to ensure all community benefits delivered onsite are done so in perpetuity and are appropriately open and accessible to the public. This is to be achieved through a management plan and an easement in gross on the title.

Conditions will be specific to the community benefit item(s) to be provided, generally as per the following:

Prior to the submission of an occupancy permit application, a Community Benefits Management Plans shall be developed, at the applicant's cost, for the community benefit item(s), addressing the following matters:

i. The hours of public accessibility;

ii. The manner that these benefits are made available to the public in perpetuity for the life of the development; and

iii. Identifying the precise portions of cubic space:

(a) Within which the community benefit item(s) will be located;

(b) Which the public are to have access to in order to enjoy the community benefit items; and

(c) Which are to comprise the means of access within the development to areas (a) and (b).

iv. Any other matter deemed relevant by the Town.

The Plan shall be submitted to the Town for approval. No strata plan shall be prepared or lodged, and the landowner acknowledges that no strata plan will be supported by the local government, which proposes any part of the Public-Benefit-Related Cubic Space to be located otherwise than on common property of the strata plan. The strata company for the subject site shall be responsible in ensuring that the approved community benefits management plan is always implemented and adhered to the satisfaction of the Town. In

the instance that the development does not form part of a start subdivision, the owner(s) of Pubic-Benefit-Related Cubic Space, shall be liable (and in the case of more than one such owner, jointly and severally liable) to ensure that the approved community benefits management plan is always implemented and adhered to the satisfaction of the Town.

Occupancy permit shall not be granted unless the Community Benefits Management Plan has been approved by the Town.

8. MANAGEMENT OF FUNDS

8.1 Community Benefits Contribution Fund

The Town will establish and maintain a dedicated Albany Highway Community Benefits Contribution Fund and all community benefit contributions shall be deposited into this fund.

The Albany Highway Community Benefits Contribution Fund is a reserve account in accordance with the Local Government Act 1995. All community benefit contributions within the AHPSP area shall be paid from this account. The purpose of this reserve account and the use of money in it is limited to the delivery of community benefits within the AHPSP area in accordance with the provisions of the AHPSP.

Interest earned on contributions credited to the Albany Highway Community Benefits Contribution Fund reserve account may only be applied in the AHPSP area.

8.2 Projects Funded from the Albany Highway Community Benefits Contribution Fund

All projects funded from the Albany Highway Community Benefits Contribution Fund must be identified in Appendix 1 of the Community Needs Analysis Paper or justified in accordance with the relevant sections of the AHPSP.

Projects will be selected to be funded and approved by the Town as part of the Town's Capital Works Program and annual budgeting process.

8.3 Projects Funded from Multiple Sources

Projects may be funded entirely from the Albany Highway Community Benefits Contribution Fund or by co-funding from multiple sources.

Sources of funding for individual projects will be decided on a case-by-case basis depending on the availability of funds and the needs or a project. The Town may identify complementary funding sources to leverage the Albany Highway Community Benefits Contribution Fund to deliver the maximum possible community benefit.

Should projects have an established funding source, the Albany Highway Community Benefits Contribution Fund is not to replace the established funding source(s).

8.4 Criteria for Investment

The timing and amount of community benefit contributions is dependent on the development and is therefore uncertain. The AHPSP is designed to manage the Albany Highway Community Benefits Contribution Fund in a flexible manner with regular reviews and updates.

Prioritisation criteria has been established within Part 4.0 – Community Benefit of the AHPSP to guide decision making around items to be delivered as Community Benefits. The prioritisation criteria within the AHPSP is to be considered by the Town when determining the allocation of funds.

9. PERIOD OF OPERATION

Funds received as community benefit contributions should be expended to realise community benefit as soon as practically possible and within 8 years of payment.

10. REVIEW AND REPORTING REQUIREMENTS

10.1 Review of the Community Benefit Contributions Formula

Following approval of the AHPSP, the Town shall review the community benefits framework as part of its mandated review of the AHPSP, having regard for uptake of development and the receipt of community benefit contributions.

10.2 Community Benefit Contributions Register

The Town shall maintain an accurate and up to date register of all community benefit contributions, The register shall detail the following:

i. Development approvals containing a condition requiring a community benefit contribution
ii. Where the development is located
iii. The amount of the monetary contribution received and details of onsite community benefit contribution approved.
iv. Date of any payments received and date of investment/expenditure.
v. Tracking take-up of community benefits within developments, having regard for constructed development, substantially commenced development, and valid approvals.

The register will be made available and for public viewing on the Town's website.

10.3 Community Benefit Contributions Reporting

The Town of Victoria Park shall publish an annual statement providing information about the expenditure of the community benefit contribution.

The Albany Highway Community Benefits Contribution Fund will also be reported as part of the Annual Financial Report.

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ALBANY HIGHWAY PRECINCT STRUCTURE PLAN

DRAFT PUBLIC REALM STRATEGY (LANDSCAPE PRECINCT STRUCTURE PLAN)

Client | HATCH ROBERTSDAY & TOWN OF VICTORIA PARK
APRIL 2023
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TOWN OF VICTORIA PARK

HATCH | RobertsDay

STATUS	FINAL
ISSUE	Rev 6
DATE	14.04.2023
PREPARED BY	MT
APPROVED BY	MR

ASPECT Studios

Contents

Site Context
Structure Plan Area
Precincts
Streetscape Typologies
- Traffic Calming
- Corner Conversion
- Shared Space
- Kerb Extension
- Bus Bay Build Out

Major Space Typologies
- Plaza
- Green
- Laneway
- Micro-park

Surrounding Landscape
- Asquith Reserve
- Memorial Gardens
- Read Park

Sump Typologies
- Micro-park
- Large Park
- Blue / Green Ecology Park

Look & Feel
- Materiality
- Planting

Landscape Strategies
- WSUD, Ecology, Street Trees
- Urban Forest Strategy
- Waarkarl Woonya Bidi

Appendix

Site Context

Herdsman Lake
Lake Monger
PUTUP
GALUP
MANDOON
BOOJAMOOLING
MOORO YELLAGONGA'S TERRITORY
Hyde Park
BOOJAMELUP
WARNDULIER
Ascot Racecourse
DFO Perth
Perry Lakes / Bold Park
Subiaco
Northbridge Cultural Precinct
GOONGOONGUP
Burswood Peninsula
Perth Airport
Perth Arena
Claisebrook Cove
Optus Stadium
Maylands Peninsula
HBF Stadium
GOOLOOGOOLUP
BYERERUP
WEITCH RUTTA
YOONDOORUP
Belmont Industrial Precinct
Perth CBD
GOODINUP
GABBEE KALGA
Elizabeth Quay
MARDALUP
Glouster Park & WACA
Kings Park / Mt Eliza
KATA MOOR
GUMAP
KURAREE
BEEABBOOLUP
Burswood Resort & Casino
KAKAROOMUP
MATTA GERUP
GOONINUP
KAREENUP
BUNEENBORO
GOONAR
JOOROLUP
Belmont Forum
KOOYAMULYUP
McCallum Park
Mideerup Plaza
GABOODJOOLUP
MINDEER
Lathlain Park
Lake Claremont
BOORYULUP
South Perth Foreshore
Tomato Lake
Claremont Showgrounds
UWA
Perth Zoo
Matlida Bay
Kensington Bushland
Kewdale Industrial Precinct
DERBAL YARAGAN
Welshpool Industrial Precinct
BEELOO MUNDAY'S TERRITORY
Collier Golf Course
WAARKARL WOONYA BIDI
Curtin University and Technology Park
Canning Bridge Precinct
Karawarra Centre
Point Walter
Attadale / Alfred Cove Foreshore
DYARLGARRO
Track to Kalgan Beelier (Kalgan River) in Kalingiri (Albany)
Applecross Foreshore
N
NTS
DATE
14.04.2023
BEELIAR MIDGOOROO'S TERRITORY
Wireless Hill Park
Mt Henry Peninsula
Canning River Regional Park

The Structure Plan Area

The Albany Highway Precinct Structure Plan (AHPSP) Area stretches from the Causeway Bus Station to the north-west, to Welshpool Road in the south-east. It also includes the Station Streets - which connect the corridor to the nearby train stations. The study area composition varies along this corridor depending on development and land use patterns.

There is a variety of public realm experiences along the corridor and adjoining station streets.

As designers and urbanists, we recognise that there are man great elements to Albany Highway (AH). It's a vibrant and active street with a diverse offering and experience, however only fragmented hubs. For various reasons it is not possible in the short and medium term to transform AH into a continuous strip of ultra active uses. Although it is possible in the longer term. As part of this process, the aim is to identify opportunities to broaden and strengthen AH's highlights to make it more lively, safer, enjoyable and more connected.



Legend

- Albany Highway PSP Study Area - The Corridor
- Albany Highway PSP Study Area - Station Streets
- Train Station
- Bus Station

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Precincts

The AHPSP area is broken up into the following sub-precincts, which relate to the individual neighbourhood Place Plans.

The Highway is car dominated for the majority, and doesn't support the greatest pedestrian and cyclist environment. It is the goal of the Town of Victoria Park (ToVP) to make it more pedestrian and cycle friendly, giving more space to people, planting and biodiversity.

This will enable longer and more frequent visits to AH, by locals and visitors alike, benefiting and supporting local businesses. Providing a public realm that is conducive to walking and enticing travel by foot and bike includes a focus on interesting and engaging elements, such as art, gardens, trees, wildlife, events, public space, lighting.

The typologies contained within this report have been extracted from worlds best practice examples of giving space back to people and the environment.

This multi-faceted approach for AH's public realm provides opportunities for a range of interventions of varying scale, ensuring diversity in the approach and delivery of public realm typologie

Legend

- Causeway Precinct (Canning Highway to Harvey Street)
- Victoria Park Precinct - VP (Cargill Street to Reid Road)
- Central Precinct (Temple Street to Kent Street)
- East Victoria Park - EVP (Kent Street to Balmoral Street)
- East End Precinct (Dane Street to Ballie Avenue)
- St James Gateway Precinct (Somerset Street to Welshpool Road)
- Train Station
- Bus Station

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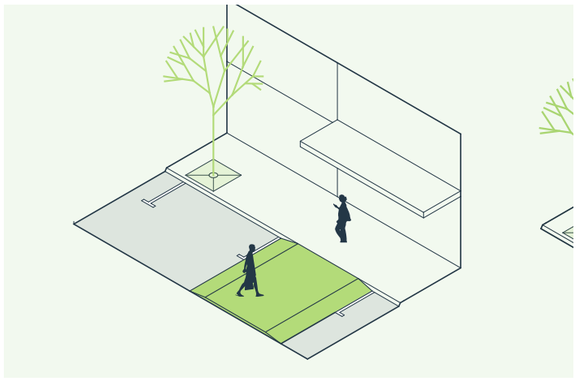
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Streetscape Typologies Summary

Idea 7 of the Albany Highway Tomorrow Report is focused on reallocating highway space from cars to people. In considering this, four typical typologies have been developed which address certain interventions along the Highway and adjacent streets to create a pedestrianised Albany Highway. These typicals are designed to be applied to numerous locations within different sub-precincts.

TRAFFIC CALMING

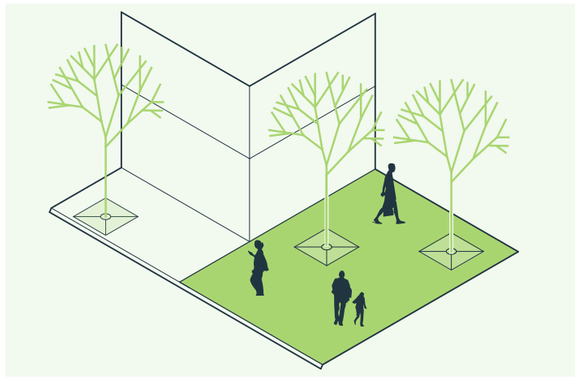


Multiple interventions including corner extensions, speed deterrents, traffic filters, chicanes and raised crossings/intersections at targeted locations

Location criteria

- Locations prone to speeding
- Sub-precinct / town centre gateways
- Concentration within VP and EVP fine grain and pedestrian activity focused cores
- Key pedestrian desire lines
- Downhill sections - VP ridge
- Station Streets which are focused on comfortable connections for cyclists and pedestrians from Albany Highway to train stations
- Side streets which connect to Albany Highway and rat-run streets which run parallel to AH

CORNER CONVERSION

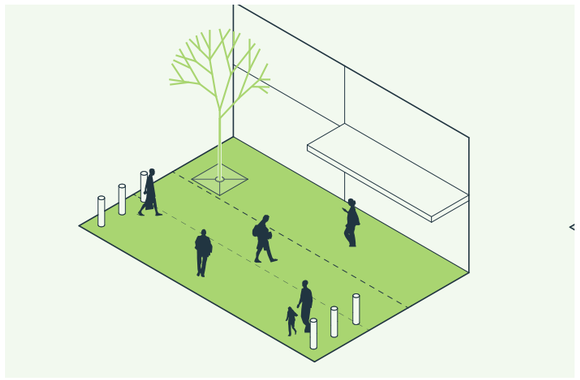


Re-purposing side street intersections from Albany Highway for planting, seating and usable public space at varied scale

Location criteria

- Active corner frontages, supporting use and visitation
- Locations which support surrounding businesses
- Areas that people want to spend time in but cannot or choose not to
- Areas with existing gaps in amenity or lack of connection to public space
- Not station streets - focus on low key streets which can afford conversion
- Lower traffic volume side streets
- As areas transition and develop the above qualities

SHARED SPACE

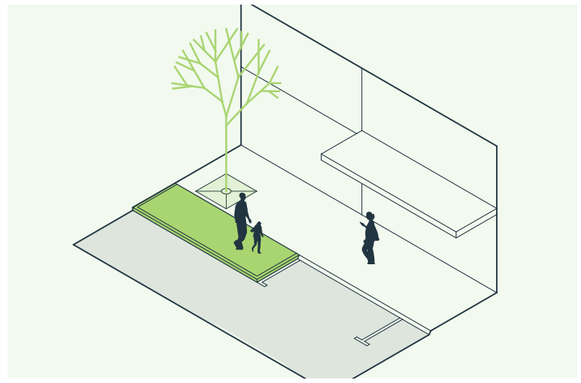


Seamless shared road environments across the Highway in key locations at varied scale (permanent/ temp), supporting event-based pedestrianisation

LOCATION CRITERIA

- High pedestrian volume and crossing areas
- Areas to unite intersections or opposite sides of the street
- Areas of fine grain mixed use built form
- Opportunities to support and strengthen place identity - town centre core areas
- Active edges where temporary street closure would have the maximum impact
- East Victoria Park, St James and Victoria Park village centres
- Consider a long term typology for staging

KERB EXTENSION



Conversion of road space into alfresco, gardens and planting areas. Kerb extension typologies also include bus-bay build outs - refer to page 18 for location criteria and recommendations.

LOCATION CRITERIA

- Where space is required for:
  - Alfresco; micro-parks; parklets; rain gardens (WSUD) and/or biodiversity
  - Linear green connections to open spaces
- Locations which support local businesses with existing active frontages
- Areas with existing gaps in amenity or lack of connection to public space
- Areas that people want to spend time in but cannot or choose not to
- As areas transition and develop the above qualities

Streetscape Typologies General Principles

GENERAL PRINCIPLES

The following principles apply to all the adjacent Streetscape Typologies listed within this report.

1. Consider temporary solutions (lighter, quicker, cheaper) to test areas to prototype future success
2. Scaling back intervention is critical in the short term. The priority is to get the fundamental elements right (footpaths, cycle paths, seating, lighting, existing open spaces, shade and biodiversity)
3. The finer details and more bespoke design and open space additions to AH are more appropriate in the longer term, once temporary / tactile interventions are successfully tested for permanent solution
4. Each of the locations shown in this report are subject to further investigation, however they provide an opportunity for a varied and scaled approach, based on the context, adjacent land uses and site conditions
5. Ensure universal access is maintained and enhanced through typology design and materiality
6. Create more verge space for people, slow forms of micro-mobility, planting, shade and biodiversity
7. Slow traffic down by increasing warnings and visual cues to make drivers more aware of their surroundings, enabling a safer and more comfortable public realm for all user types
8. Contribute to the ToVP's Urban Forest Strategy
9. Enhance connections to existing open spaces
10. Engaging and interactive public realm with playable and educational infrastructure
11. Support temporary events - i.e Park(ing) Day*, car free days and street closures at certain times of the year
12. Provide additional amenity to support longer stays, bike parking/repair, lighting, shade, alfresco, end of trip facilities, charging stations for e-rideables.
13. Address public open space shortfalls and lack of access, by making streetscapes feel like public spaces
14. Consider the level of intervention based on the proximity to public parking areas, so parking can be relocated close by
15. Reduced urban heat island (UHI) impacts by converting unnecessary paved areas into softscape
16. Enhanced connections to the river and foreshore through the improved streetscapes
17. Consider a precinct approach for all interventions - and refer to the Tomorrow Report for reference.
18. Some locations feature more than one typology (i.e. St James), this usually means that one typology might be more feasible / achievable in the short term (kerb extension) and another in the long term (shared street scenario). This provides an indication as to how the ToVP should approach staging.

* Park(ing) Day refers to a global and public paticipatory event where parking space is temporarily converted into parks and social spaces to advocate for safer, greener and more equitable streets for people (myparkingday.org, accessed 2023).



Makati Urban Patio by PGAA Creative Design (Manila, Philippines)

Streetscape Typologies Suggested Location Examples

The locations shown adjacent are suggestive examples and are subject to further investigation by the design team and ToVP.

They are proposed based on their suitability and relevance to the location criteria for each typology.

Each typology location would have an applicable scale of intervention based on the context to ensure a diverse range of applications and public realm experiences within the AHPSP.

Guiding principles include:

— Safer, greener and higher amenity

— Enhancing connection to river

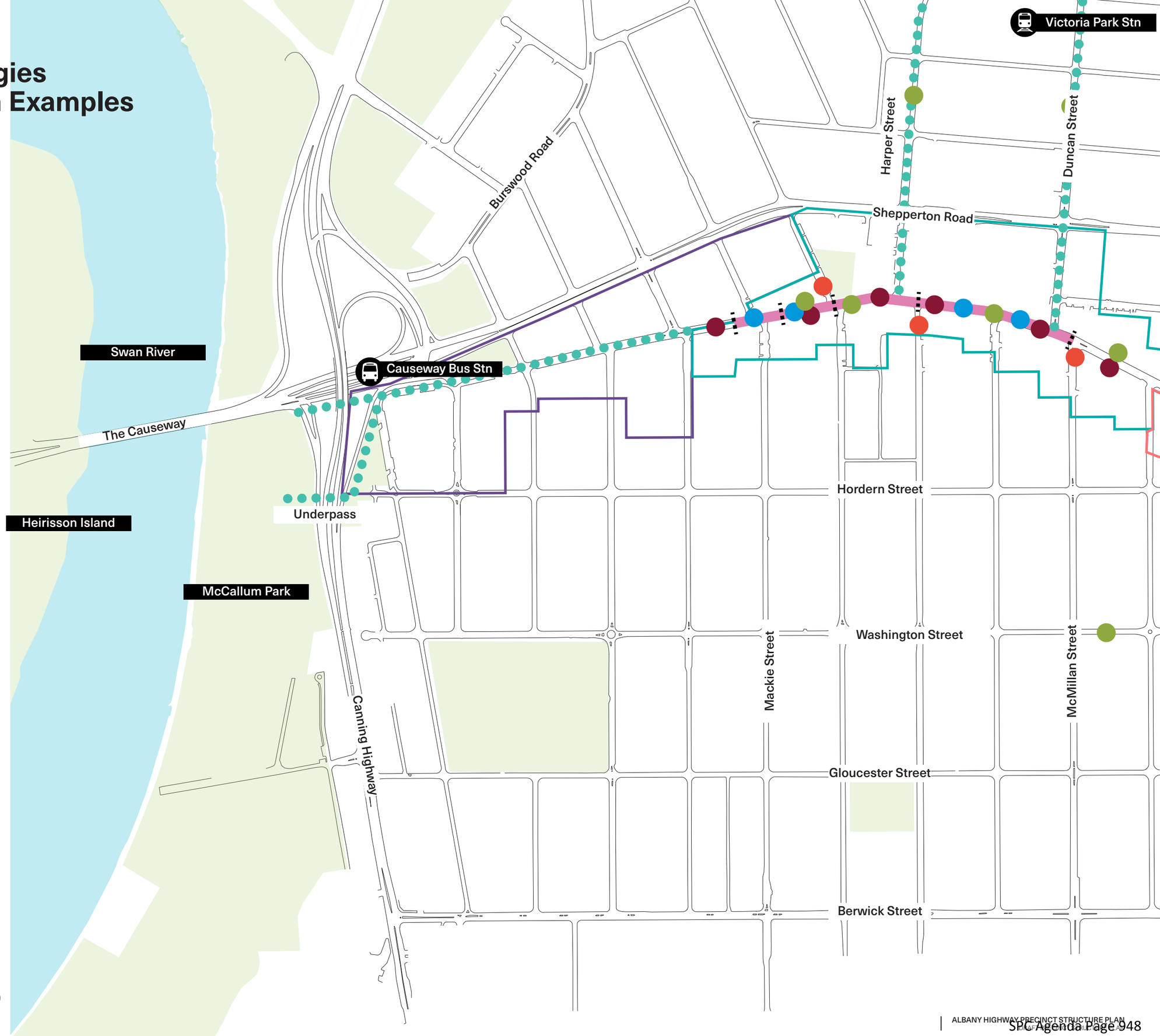
— Enhancing connection to parks and open spaces

Legend

- Traffic Calming
- Corner Conversion/Extension
- Shared Space
- Kerb Extension
- Bus Bay Build Out
- Future Space Reallocation (undefined)
- Shared Space Staging Marker
- Enhanced Green Connections
- Train Station
- Bus Station

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Carlisle Stn

Thornlie Line

Oats Street Stn

Beatty Avenue

Carnarvon Street

Mint Street

Bank Street

Miller Street

Shepperton Road

Somerset Street

Oats Street

Swansea Street

Dane Street

Hubert Street

Welshpool Road

Manchester Street

Kent Street

Gloucester Street

Basinghall Street

Hampshire Street

Hill View Terrace

Berwick Street

DATE
14.04.2023

Streetscape Typologies
Traffic Calming

SUGGESTED LOCATION EXAMPLES



RECOMMENDATIONS

1. Multiple interventions are associated with traffic calming, such as speed bumps/tables, pinch points, raised intersections, formalised pedestrian crossings and chicanes. Intervention is based on location and site conditions.
2. Vary the approach to traffic calming based on the above list. Not all traffic calming locations are speed deterrents
3. Reduce speeding around corners into side streets (residential and commercial areas) as well as along station streets (Duncan, Harper, Mint and Oats) and rat run streets (Bank, Hubert, Swansea E, Gloucester, Hordern, Washington, Beatty and Sunbury) which run parallel to AH.
4. Change drivers perception to slow down at targeted locations and consider their surroundings
5. Whilst the road is not a shared carriageway in this typology, promoting a sense of shared space is key to enable drivers to slow down
6. Obstacles on the road (planted or non planted medians) or framing the road (planters, furniture etc.) can reduce and slow traffic

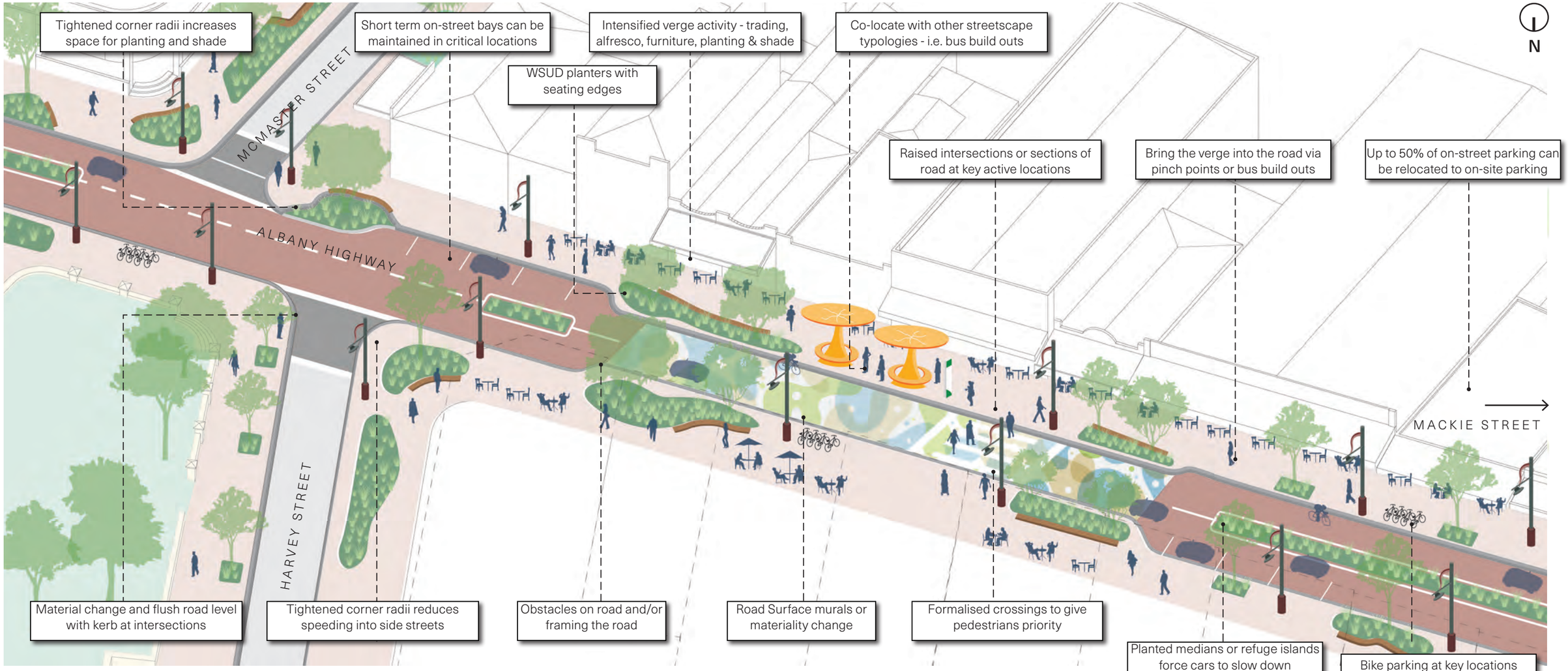
TRAFFIC CALMING EXAMPLE: Albany Highway / Mackie to McMaster



For details on the numbered locations refer to the relevant table in the Appendix.

The diagram and images below are for illustrative and communicative purposes only, to visualise the typology and how they can be applied to multiple sites and locations. They do not serve as design solutions or proposals for the particular location shown. The flexibility of these interventions is key, so they can be applied site wide.

TRAFFIC CALMING EXAMPLE FUTURE INTERVENTIONS: Albany Highway / Mackie to McMaster



DESIGN OPPORTUNITIES


Materiality and level change at intersections or crossings


Reduced corner radii to side streets


Road surface murals


Mid block pinch points, designated crossing and cycle path

Streetscape Typologies:
Corner Conversion

SUGGESTED LOCATION EXAMPLES



RECOMMENDATIONS

1. Scale of intervention is to match the location and context, supporting active land uses etc.
2. In less active areas, corner conversions can be as simple as increased verge areas and reduced corner radii.
3. In more active hubs, corner conversions can be more elaborate and include partial or full street closure.
4. Creation of new shared space or new open spaces through corner conversions should match the context
5. New shared / open space need sense of enclosure or protection from the road
6. Road diets for large side streets and intersections reduce unnecessary space that could otherwise be used and occupied by pedestrians
7. Appropriateness is based on need for delivery vehicles access and bus turning circles

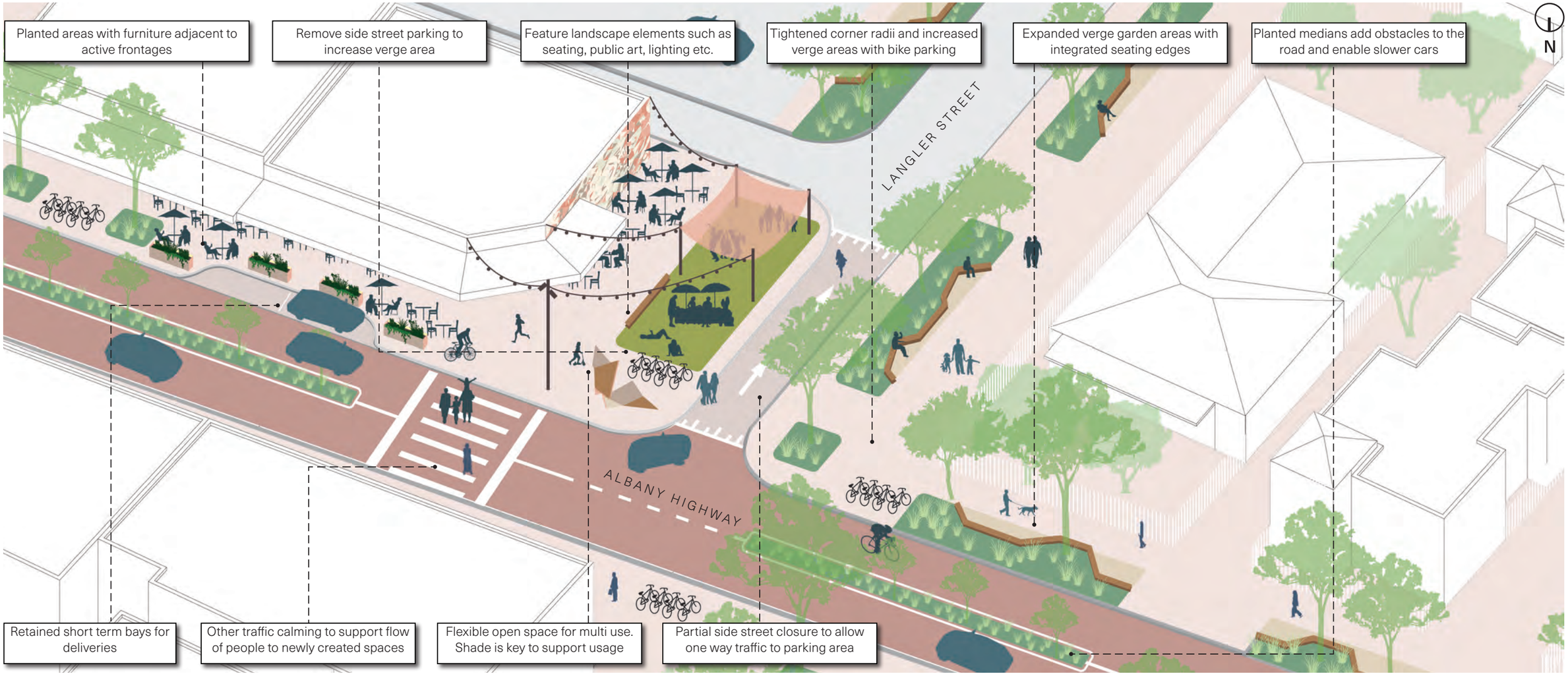
CORNER CONVERSION EXAMPLE: Albany Highway / Langler Street



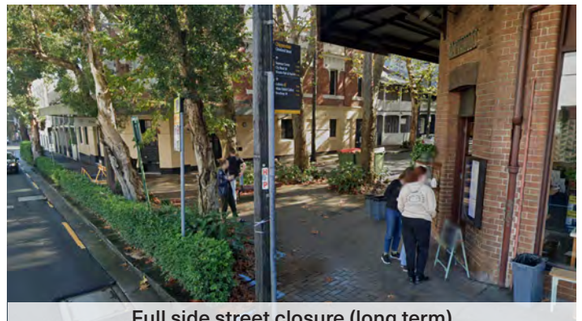
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CORNER CONVERSION EXAMPLE FUTURE INTERVENTIONS: Albany Highway / Langler Street

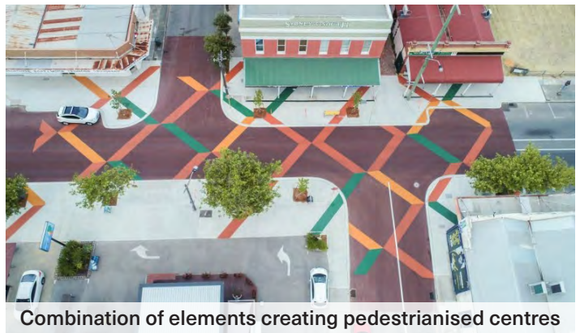


DESIGN OPPORTUNITIES


Full side street closure (long term)


Seating and open space adjacent active edges


Partial street closure (one way) and flexible public space


Combination of elements creating pedestrianised centres

Streetscape Typologies: Shared Space

SUGGESTED LOCATION EXAMPLES



RECOMMENDATIONS

1. Focused and discrete locations where appropriate is preferable to large continuous stretches.
2. Start with the temporary closure of smaller parts of AH to prototype future success through a staged approach
3. Remove physical distinctions between pedestrian and cars to increase awareness and safer shared road environment
4. Prioritise shared zones over formalised pedestrian crossings to create longer lasting and more meaningful urban design and streetscape outcomes
5. Phase out formal pedestrian crossings when shared spaces become permanent. For temporary or seasonal shared spaces, pedestrian crossings should remain.
6. Some shared space (i.e) St James, are based on the success of other typologies becoming successful in the short term (kerb extensions - refer to the following pages). In the long term, active hubs like St James, which have been exposed to other more appropriate short term solutions, could be converted to a shared street scenario.
7. Short term shared street adajcent to Woolworths site in St James - funding as part of the DA. May enable a more pedestrianised gateway to AH.
8. Combine shared streets with reductions in speed limits, so that vehicles seek alternative routes.

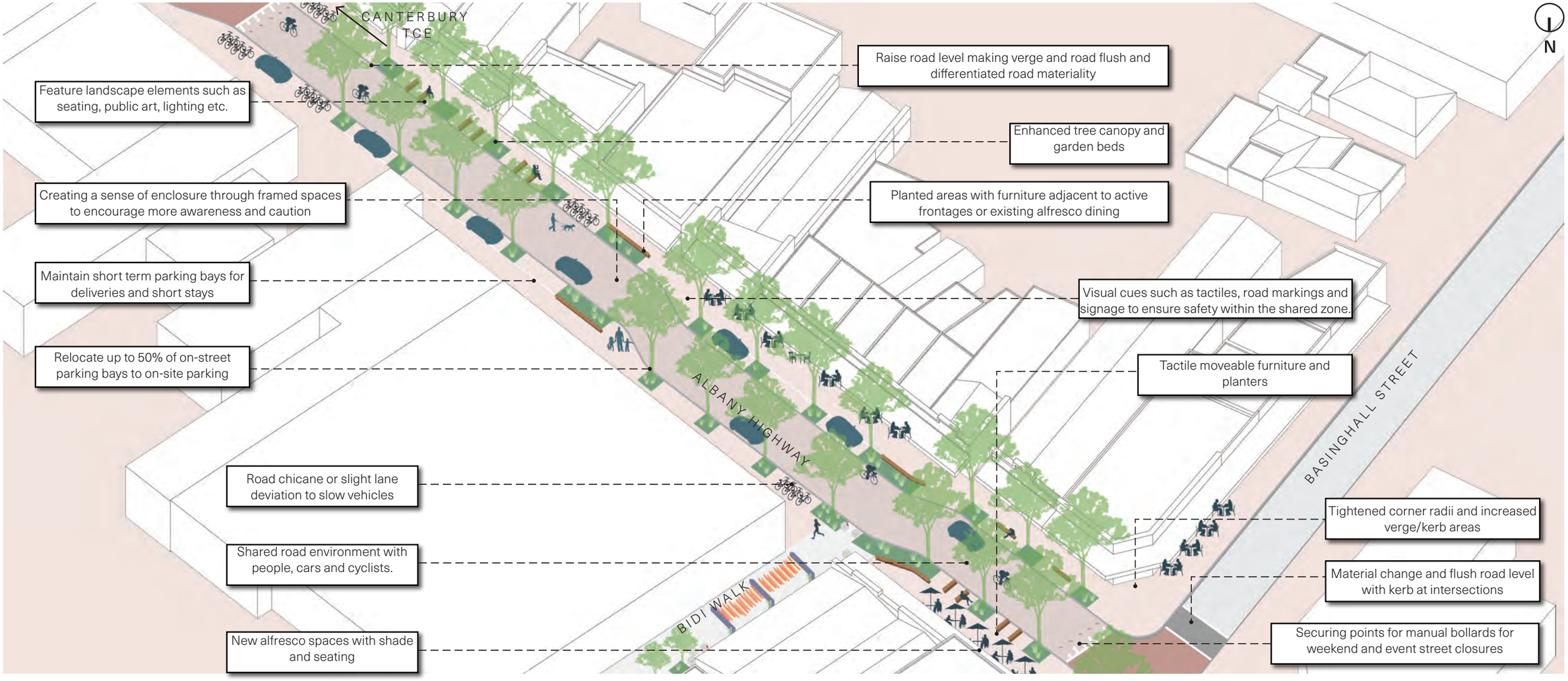
SHARED SPACE EXAMPLE: Albany Highway / Basinghall to Canterbury



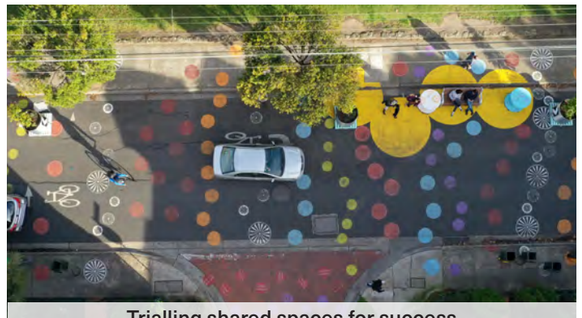
For details on the numbered locations refer to the relevant table in the Appendix.

The diagram and images below are for illustrative and communicative purposes only, to visualise the typology and how they can be applied to multiple sites and locations. They do not serve as design solutions or proposals for the particular location shown. The flexibility of these interventions is key, so they can be applied site wide.

SHARED SPACE EXAMPLE FUTURE INTERVENTIONS: Albany Highway / Basinghall to Canterbury



DESIGN OPPORTUNITIES


Trialling shared spaces for success


Cohesive and bespoke materiality (long term)


20km/h pedestrian and cycle friendly street, framed seating


Break out spaces with furniture, lighting and play

Streetscape Typologies: Kerb Extension

SUGGESTED LOCATION EXAMPLES



RECOMMENDATIONS

1. Combine verge extensions with traffic calming measures (pinch points)
2. Create new verge space through the relocation on street parking bays to create
   - parklets
   - verge rain gardens
   - verge space for additional street tree canopy
   - alfresco and street trading
3. Kerb extensions can evolve over time and form part of future shared street sections
4. Provide protection between pedestrians and vehicles if newly created open space adjoins the road
5. Kerb extensions can enhance existing verge spaces which are underutilised
6. Enhanced Green Connections for all station streets - to provide more amenity and safer connections along the key connections to train stations (response to LPS and ITS)
7. The kerb extensions for locations like St James are quick wins, converting on street car spaces to gardens, alfresco, parklet space is an effective short term solution. This paves the way for other interventions.

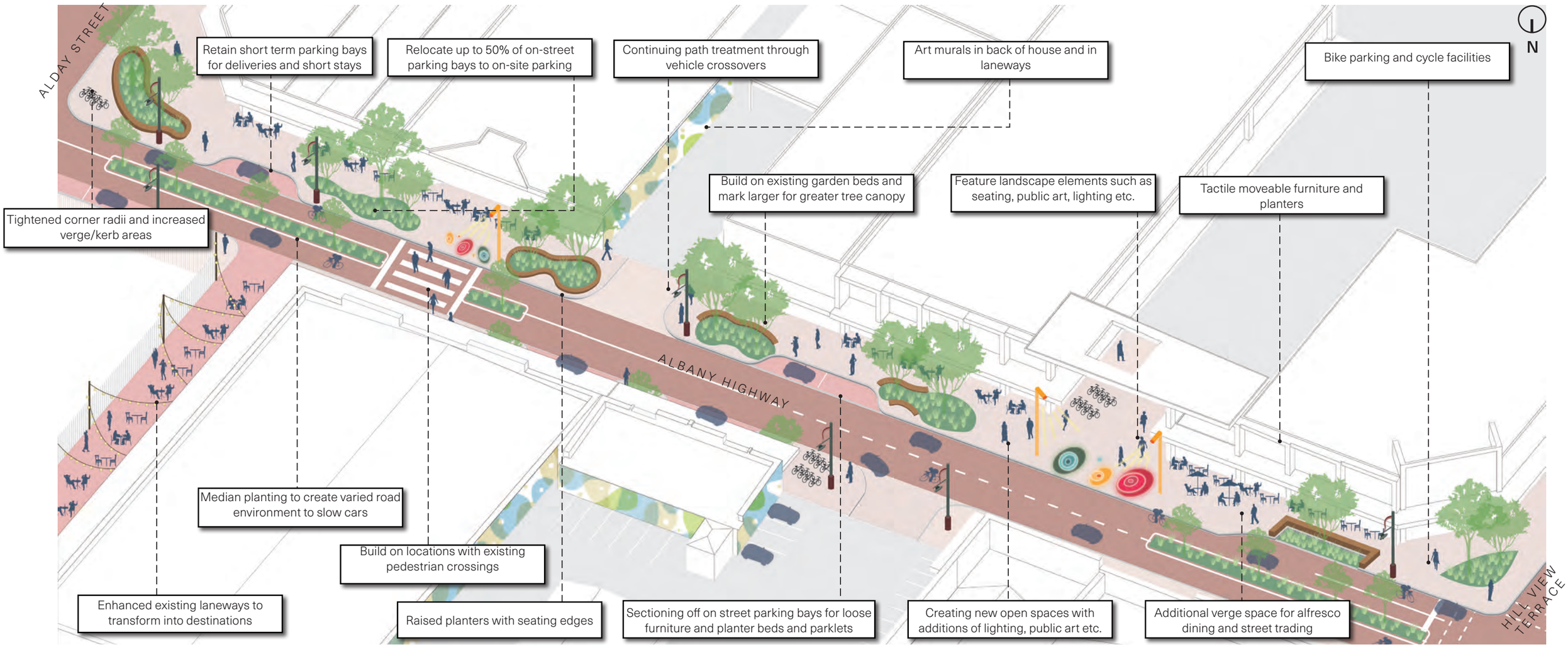
KERB EXTENSION EXAMPLE: Albany Highway, St James Town Centre



For details on the numbered locations refer to the relevant table in the Appendix.

The diagram and images below are for illustrative and communicative purposes only, to visualise the typology and how they can be applied to multiple sites and locations. They do not serve as design solutions or proposals for the particular location shown. The flexibility of these interventions is key, so they can be applied site wide.

KERB EXTENSION EXAMPLE FUTURE INTERVENTIONS: Albany Highway, St James Town Centre



DESIGN OPPORTUNITIES


More space for planting and seating


Materiality changes and cohesive palettes (long term)


Temporary solutions to kerb extensions (short term)


Tactile verge extensions creating more space for people

Streetscape Typologies:
Bus Bay Build Out

SUGGESTED LOCATION EXAMPLES



LOCATION CRITERIA

- Existing bus stopping lanes along Albany Highway, excluding timed bus stop locations
- Active frontages where additional space is required for alfresco, micro-parks, parklets, rain gardens (WSUD) and linear biodiversity.
- Locations that would benefit from slower / interrupted vehicle speeds and movement (down hill sections etc.)

RECOMMENDATIONS

1. Consider combined approaches by transforming bus stopping lanes into extra kerb space so buses stop within the main carriageway on Albany Highway (traffic calming, verge extension)
2. Trial the intervention with tactile treatments such as temporary platforms, which can be converted to permanent design solutions (paved areas and softscape areas) at a later stage
3. Integrate lighting, seating and shade at all stops
4. Incorporate feature elements at key (well utilised) bus stops such as art and signage
5. At bus build out locations, provide obstacles in the median, so cars cannot overtake buses into oncoming traffic

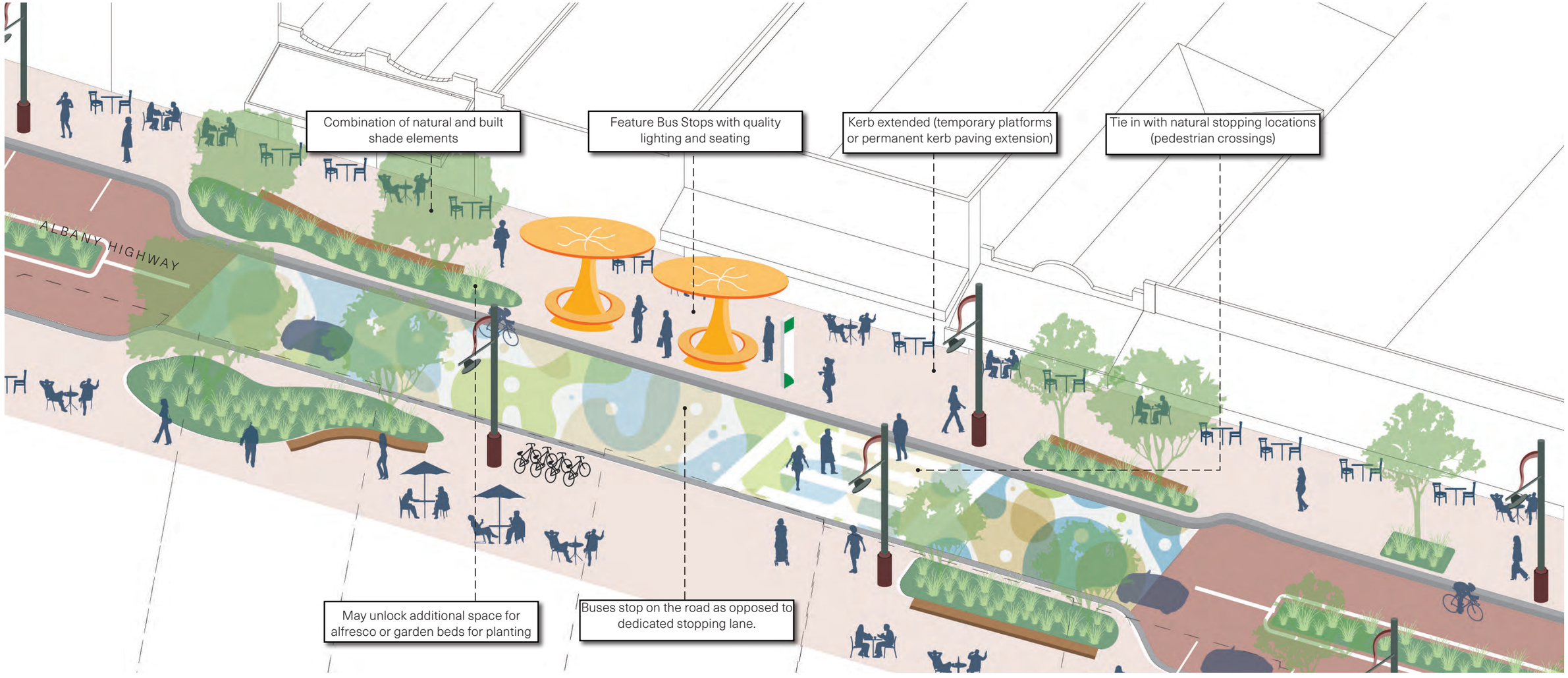
BUS BAY BUILD OUT EXAMPLE: Albany Highway after McMaster (Stop ID: 11732)



For details on the numbered locations refer to the relevant table in the Appendix.

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BUS BUILD OUT EXAMPLE FUTURE INTERVENTIONS: Albany Highway after McMaster (Stop ID: 11732)



DESIGN OPPORTUNITIES


Feature stops with integrated seating, art, lighting & paving


Temporary platforms to test success


Unlocking additional walking and cycling spaces


Seating, planting and lighting with short term parking

Major Spaces Typologies Summary

Idea 8 of the Albany Highway Tomorrow Report is focused on creating and delivering new open spaces within major sites. In considering this, four general open space typologies have been developed which will be the focus of future open space provision along and surrounding Albany Highway. These typologies have been designed to be applied to numerous locations within different sub-precincts.

PLAZA



A curated mix of hard and softscape spaces framed by active ground floor uses and civic buildings.

LOCATION CRITERIA

- Locations with an existing or future civic role within the ToVP
- Opportunities where people would be drawn to congregate and socialise
- Existing or future community nodes
- Places that lend itself to activation opportunities
- Existing sites which are underutilised and need future directions
- Integrate as part of new major site redevelopment
- Where active uses can support and provide activation / surveillance to
- Part of corner conversion provision in locations which lend itself to larger public spaces

GREEN



Green and leafy spaces which cater for a wide range of uses and enhancing the connection to nature..

LOCATION CRITERIA

- Where green relief is needed along AH
- Areas which lack access to green space and gaps in POS provision
- Large sites (underutilised land, sumps etc.)
- Sumps adjacent to existing open spaces
- Future high density areas
- Where green links and corridors can be created
- Water Corporation basins and larger sump areas
- Integrate as part of new major development
- Large expansive areas of paved areas on AH which can be converted to softscape and green space

LANEWAY



Narrow, vibrant and active spaces which are framed by built form and ground floor consisting of pedestrian supporting uses.

LOCATION CRITERIA

- Existing laneways to unlock desirable pedestrian and cycle connections parallel to AH
- Where built form and active frontages facilitate laneway spaces
- Along key pedestrian desire lines which link destinations
- Where improved pedestrian permeability is required (mid-block links and thru-site)
- To support fine grain activation
- Where improved safety outcomes are needed for existing laneways
- Integrate as part of new major development - creation of new laneways

MICRO-PARK



Small, intimate areas of open or green space that can be enjoyed by local residents.

LOCATION CRITERIA

- Areas with integrated green systems
- Temporary micro-parks - undeveloped lots - interim space
- Areas of high UHI - large paved areas
- Areas that require softening greening and improved human comfort
- Smaller existing drainage sumps that can be converted
- Integrate as part of new major development - creation of public realm hierarchy

Major Space Typologies General Principles

GENERAL PRINCIPLES

The following principles apply to all the adjacent Major Space Typologies listed within this report.

1. Incorporate Power of 10 Principles (more than 10 things to do in the space - including at night)
2. Each of the locations shown in this report are subject to further investigation, however they provide an opportunity for a varied and scaled approach, based on the context, adjacent land uses and site conditions
3. Ensure universal access is maintained and enhanced through typology design and materiality
4. Contribute to the ToVP's Urban Forest Strategy
5. Engaging and interactive public realm with playable and educational infrastructure
6. Incorporating playable infrastructure for all ages play
7. Providing a ratio of hardscape and softscape to ensure the flexibility of spaces for events and programming
8. Be designed to incorporate Crime Prevention Through Environmental Design (CPTED) principles
9. Integrate into the existing fabric or new fabric (site development) as much as possible to create welcoming spaces
10. Provide feature elements (lighting, furniture, paving, planting, bike parking etc.) in key locations
11. Experiment with levels to enhance interest and spatial variation
12. Promote activation day and night, so that night life of AH is extended into public space
13. Reduced UHI impacts by converting unnecessary paved areas into softscape
14. Enhanced connections to the river and foreshore through the provision of major space types
15. Bird nesting boxes and hollows to support endemic bird life and black cockatoo habitat known to ToVP
16. Consider a precinct approach for all interventions - and refer to the Tomorrow Report for reference.



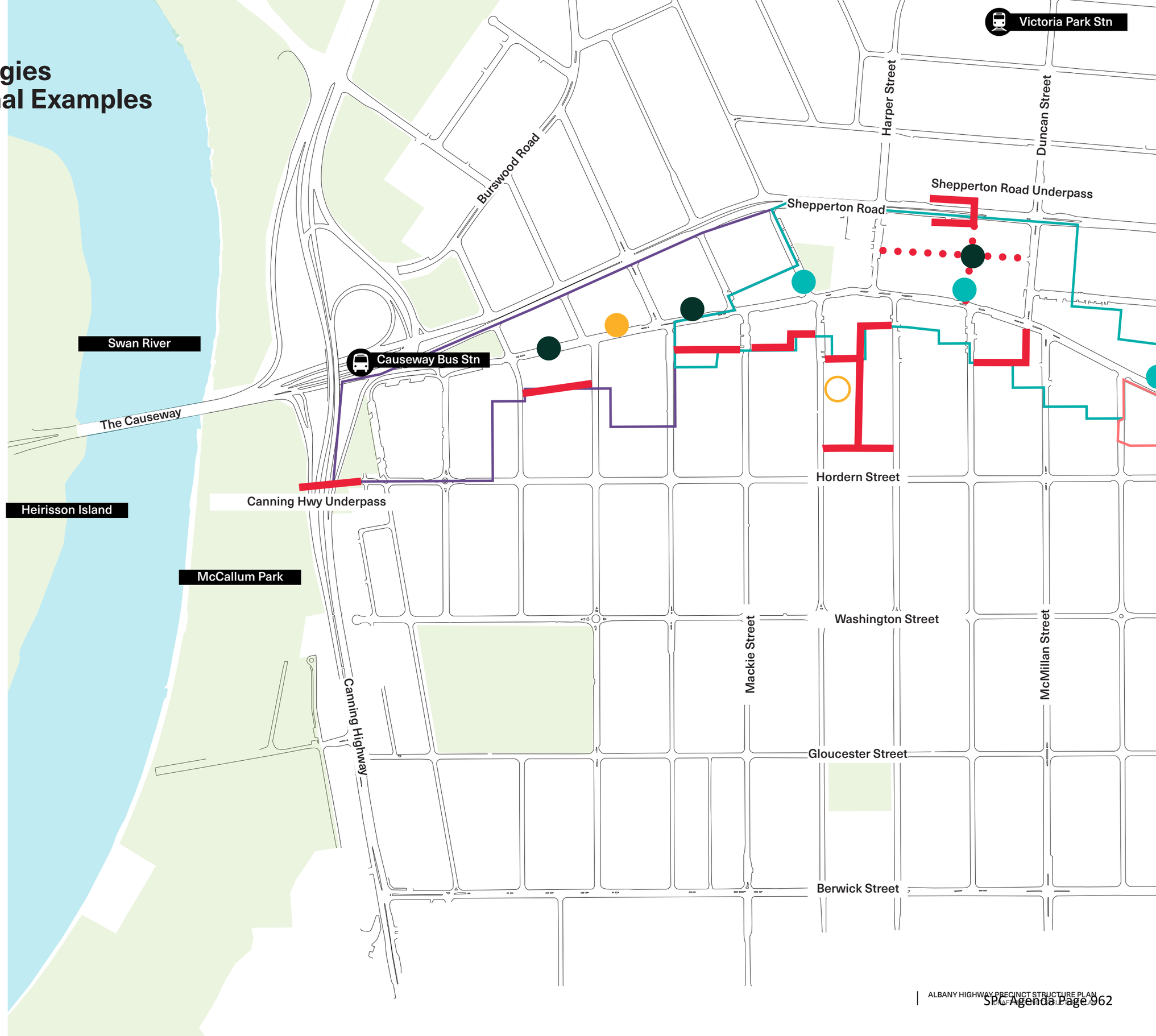
Yagan Square Water Play by ASPECT Studios (Perth,WA)

Major Space Typologies Suggested Locational Examples

The locations shown adjacent are suggestive examples and are subject to further investigation by the design team and ToVP.

They are proposed based on their suitability and relevance to the location criteria for each typology.

Each typology location would have an applicable scale of intervention based on the context to ensure a diverse range of applications and public realm experiences within the AHPSP.



Legend

- Future Plaza Space
- Future Green Space
- Future Laneway (Major site redevelopment)
- Existing Laneway Network
- Future Micro-park
- Temporary Micro-park
- Train Station
- Bus Station

Carlisle Stn

Thornlie Line

Oats Street Stn

Beatty Avenue

Carnarvon Street

Mint Street

Bank Street

Miller Street

Shepperton Road

Somerset Street

Oats Street

Swansea Street

Dane Street

Hubert Street

Welshpool Road

Manchester Street

Kent Street

Gloucester Street

Basinghall Street

Hampshire Street

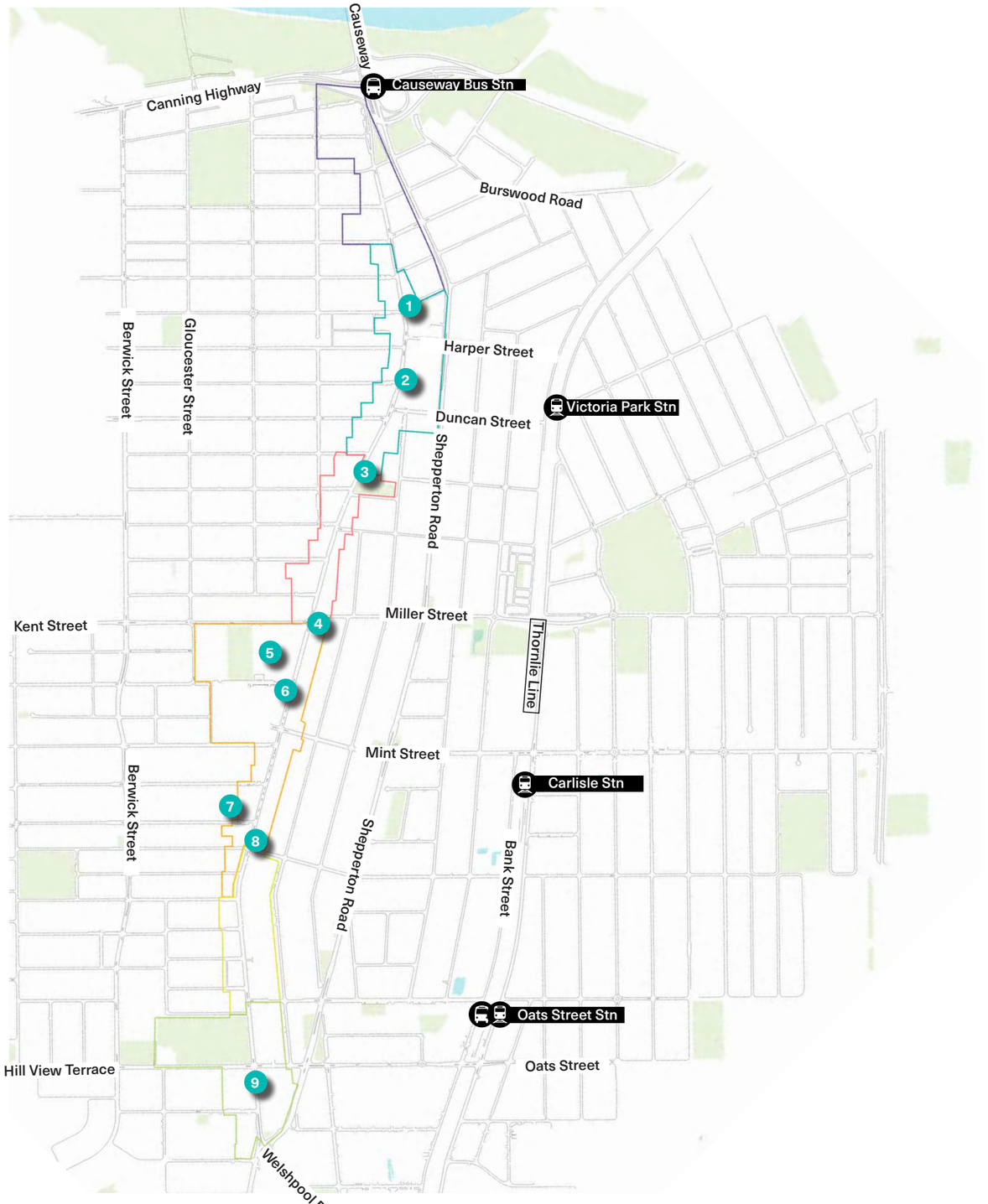
Hill View Terrace

Berwick Street

DATE
14.04.2023

Major Space Typologies: Plaza

SUGGESTED LOCATION EXAMPLES



RECOMMENDATIONS

1. Provide a range of seating options and alternatives, both in shade and in sunlit areas, permanent and moveable
2. Ensure plazas are used throughout the year through shade canopy (natural and built) through quality lighting at night
3. Ensure plaza spaces are not too cluttered with good sightlines through the space
4. Limit size of plazas, if they are too large they can deter people, intimate plazas are often preferred over large plazas
5. Plazas will have formal planting areas such as planter beds (species depend on shading). Also moveable planters should be considered
6. Plazas are ideal locations for feature public artworks, particularly interactive and engaging public
7. Not all plazas are hardscape, softscape (and deep soil) should be prioritised where possible.
8. Use of turf needs to used carefully, to consider solar access and overshadowing
9. This section mainly considers new plazas, however existing opportunities for plaza spaces should also be considered, such as transform underutilised spaces and key sites (i.e. Isaia Corner).
10. In relation to Isaia Corner - a plaza space is recommended, however this needs to align with the Public Open Space Strategy, and requiredments for:
    - 40% Tree Canopy Coverage
    - Reduction of Turf area and increase of native garden beds and softscape
    - Support Albany Highway as an Active Street

For details on the numbered locations refer to the relevant table in the Appendix.

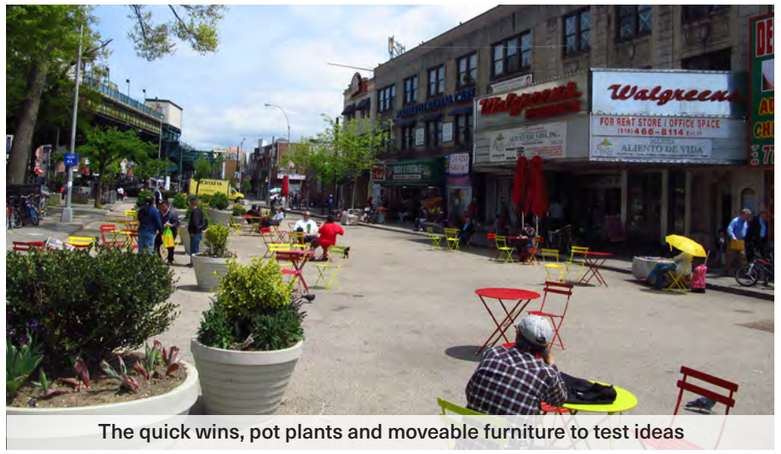
DESIGN OPPORTUNITIES



Interactive, engaging and fun playable infrastructure and artwork



Raised turf areas with seating edges for multi-use



The quick wins, pot plants and moveable furniture to test ideas



Mix of hard and soft ground covers, promoting comfortable spaces



Feature lighting (Gobo projection) in special places



Playful elements for all ages, especially at night



Level change for flexible spaces



Active edges where private and public realms blur for added experience



Planters with integrated seating and lighting

Major Space Typologies: Green

SUGGESTED LOCATION EXAMPLES



RECOMMENDATIONS

The Green Spaces typology, considers new green spaces as well as existing large sumps that can be converted into green spaces. Refer to Sump Typologies for more details on locations and suggested outcomes. Existing green spaces are covered in the Surrounding Landscapes Section.

1. Deep soil planting should be prioritised to contribute to a high softscape ratio
2. Seating in shade and in sunlit areas
3. Ensure quality lighting at night for all future green spaces, with considerations for controlled lighting based on impacts to ecology and biodiversity
4. Prioritise WSUD in open spaces where possible
5. Integrate community gardens for strong stewardship and connection to place
6. Integrating nature play elements and active sport stations - fitness loops and stations
7. Consider design elements for dogs, where appropriate
8. Green spaces do not always have to be flat - integrate varied surfaces and landscape forms and spaces for multi use
9. Green spaces do not always have to be turfed spaces, experiment with varied ground covers for soft fall and comfort
10. Picnic and BBQ areas for community gathering and to attract families

For details on the numbered locations refer to the relevant table in the Appendix.

DESIGN OPPORTUNITIES



Dedicated spaces for gathering, meeting, with sufficient shelter



Multi-courts for active play and health/wellbeing



Lighting in green spaces is key to allow for visitation



Good shade and soft ground cover, not all parks need to be turfed



Flexible space to trial ideas, tactile furniture, street libraries and performance



Fixed, bespoke furniture and seating in shade and sun



Nature and themed play creates destinations



Community gardens are important for all ages to get involved



Playing with levels, terracing which offers a variety of opportunities

Major Space Typologies: Laneway

SUGGESTED LOCATION EXAMPLES



RECOMMENDATIONS

Unlike the other major space typologies, the Laneway typology considers new laneways (major site redevelopment) as well as existing laneways, due to the significant opportunities for the extensive network.

1. A varied scale of intervention based on the context and location (residential vs mixed use areas)
2. Consider existing laneways as alternative walking and cycling routes and for minor activation (public art, lighting, community events, moveable furniture and planters etc.)
3. Laneways to be provided as part of major site redevelopment with major activation opportunities (alfresco dining, trading etc.)
4. Opportunities to utilise existing back of house (BOH) space for commercial tenancies to directly front onto the laneway
5. Wayfinding is critical to promote movement and entice people to use them
6. Based on the location consider and incorporate servicing access and deliveries to BOH to de-clutter AH
7. Quality lighting at night - low height lighting preferred in residential areas, feature catenary lighting in mixed use areas
8. Foster community stewardship through pot plants and moveable planters
9. Integrate public art, murals and story telling for visual interest and exploration - celebrating the character, history and culture of ToVP
10. Integrating play along the way - through interventions like impromptu basketball hoops or hopscotch markings

Legend

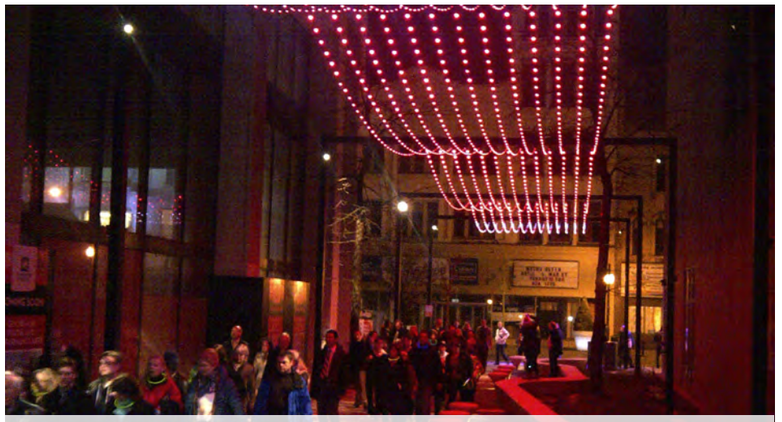
- Future Laneway - Indicative only (Subject to Major Site Redevelopment)
- Existing Laneway

For details on the numbered locations refer to the relevant table in the Appendix.

DESIGN OPPORTUNITIES



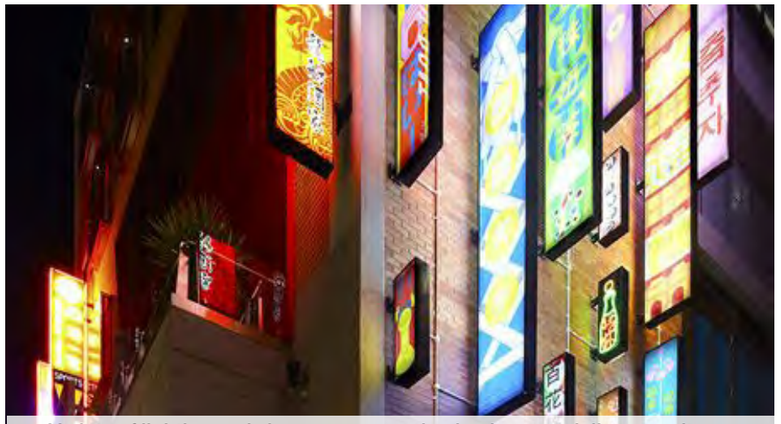
Laneways for calendar events or impromptu gigs



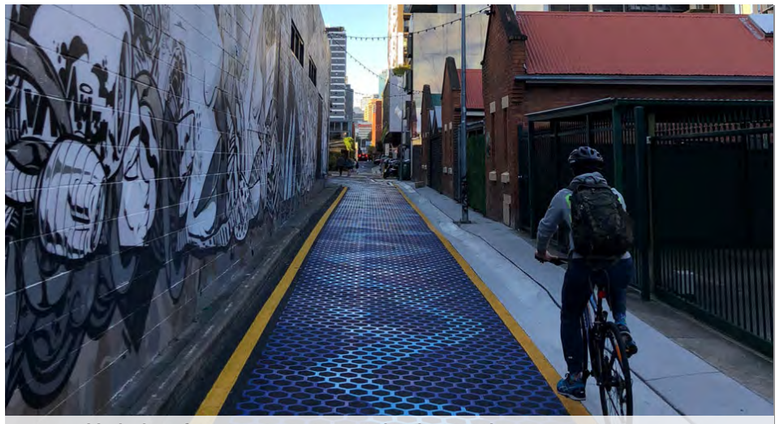
Feature lighting like catenary in active laneways



Interventions that allowing for play and activation for locals and workers



Variety of lighting and signgage, promoting business and diverse cultures



Varied surface treatments creating interesting commuter spaces



Hyper active food / hawker markets as part of new development



Art mural walks in low key laneways, for visual interest and exploration



Community planting and greening in rear lanes, beautifying and cooling the street



An address to civic and community uses, and complementary aesthetic

Major Space Typologies: Micro-park

SUGGESTED LOCATION EXAMPLES



RECOMMENDATIONS

The Micro-parks typology, considers new spaces micro-parks as part of major site redevelopment and smaller sumps which can be converted into micro-parks. Refer to Sump Typologies for more details on locations and suggested outcomes.

1. Utilise vacant land as opportunities for temporary micro-parks (i.e. small sump in the McMillan Precinct) to activate AH
2. Provide incentives for private land owners to provide/allow for temporary pocket park uses within vacant land lots
3. Ensure quality lighting at night for all future green spaces, with considerations for controlled lighting based on impacts to ecology and biodiversity
4. Integrate community gardens for stewardship if located within residential areas
5. Small play elements will encourage use by local residents
6. Feature elements in key locations - lighting, furniture, paving, planting
7. Maintain mature existing trees where possible
8. Consider the function of the pocket park, whether to incorporate play, amenities for dogs, or seating under shade/shelter based on the context
9. For sump conversions (subject to hydrology advice), it may be appropriate to retain the drainage function within the micro-park through WSUD gardens

Legend

- Future Micro-park
- Temporary Micro-park

For details on the numbered locations refer to the relevant table in the Appendix.

DESIGN OPPORTUNITIES



Prioritisied softscape, wetland species promoting WSUD



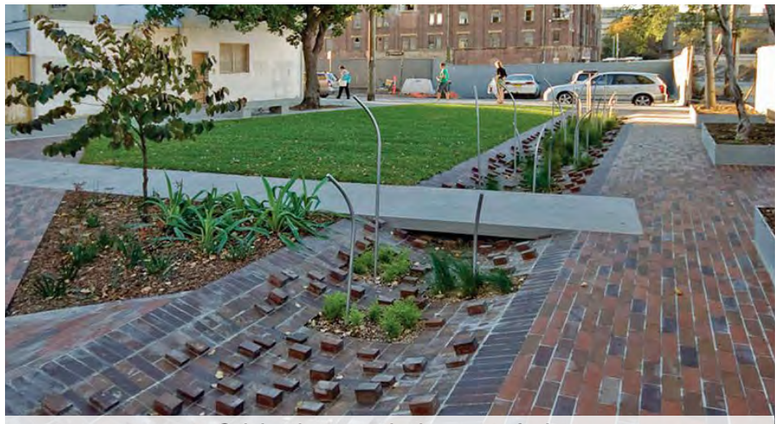
Small play elements to incentivise use



Shelter, seating and micro-commmunity gardens



Retained drainage function, with paths for movement when dry



Celebrating water in the event of rain



Lighting for use at night, to activate space and promote CPTED



Local parks for nearby residents with flexible spaces and lots of seating



Majority of softscape, where paving is used only for paths. All ages play



Recycled neighbourhood materials to create themed play

Surrounding Landscape

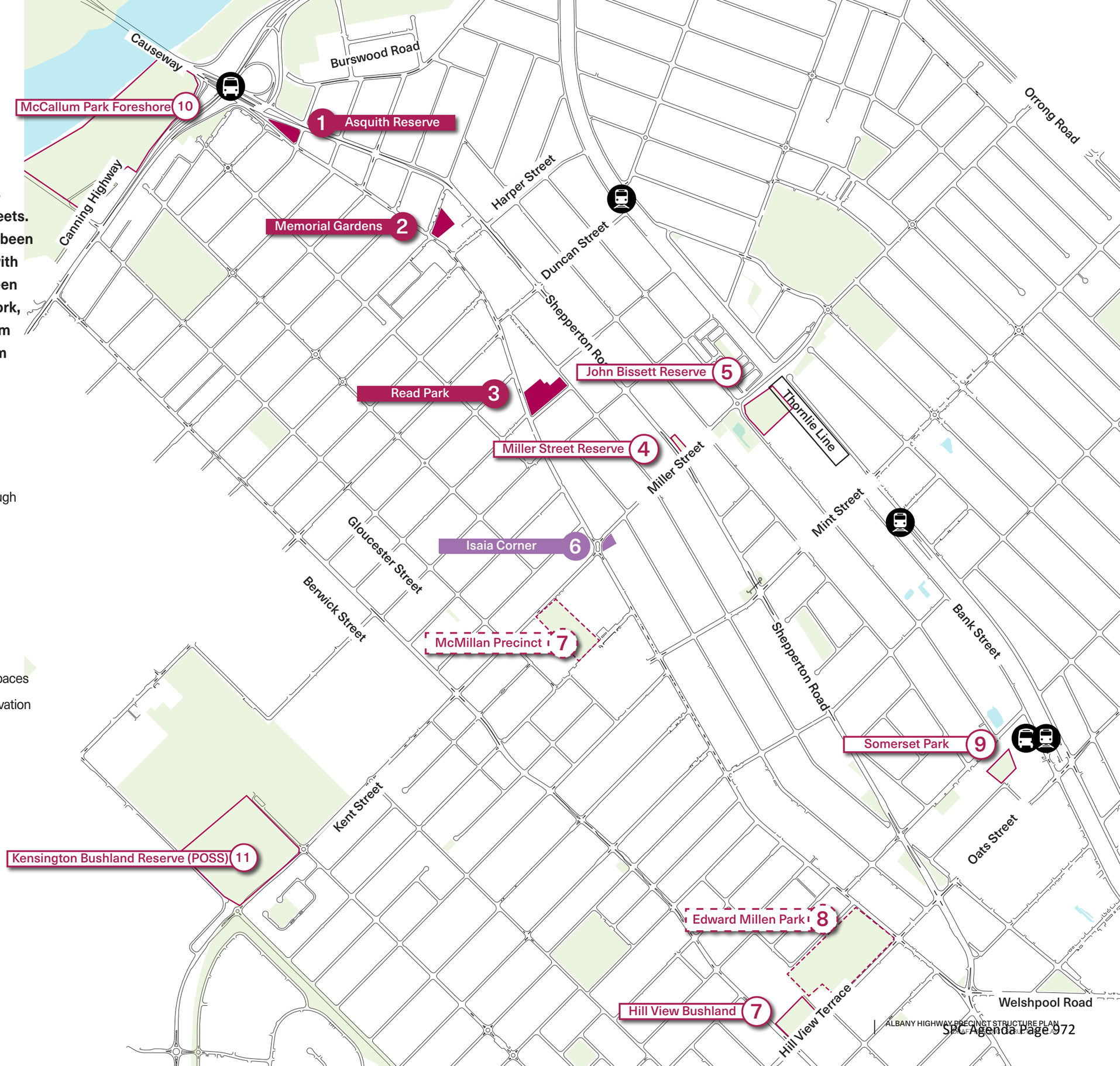
Idea 9 of the Albany Highway Tomorrow Report is focused on enhancing surrounding parks and streets. In considering this, three key existing parks have been identified and developed further in more detail, with regards to future design opportunities. These green spaces are key to creating the public realm network, particularly in areas with shortfalls on public realm and with low usage (identified by the Public Realm Strategy).

KEY PRINCIPLES:

- Revitalise & upgrade existing green spaces;
- Turn them into high performance spaces;
- Establish ecological function and value particularly through WSUD and WA native and endemic planting
- Enhance social benefit / amenity;
- Consider drainage functions.
- Maximise tree canopy, shade and shelter
- Slow vehicle movements around these spaces
- Improve pedestrian and cyclist crossing points
- Provide cycling infrastructure within and around open spaces
- Enhance lighting for night time space utilisation and activation
- Bird nesting boxes to support endemic bird life

Legend

- Priority Green Spaces in need of upgrades (considered as part of this study)
- Priority Green Spaces in need of upgrades (to be considered as part of future studies)
- Green Spaces in need of future upgrades
- Approved or current Masterplan for Upgrade
- Train Station
- Bus Station



Surrounding Landscape: Asquith Reserve

EXISTING CONDITION







DESIGN OPPORTUNITIES



WSUD and natives creating cool urban parks



Gateway artwork



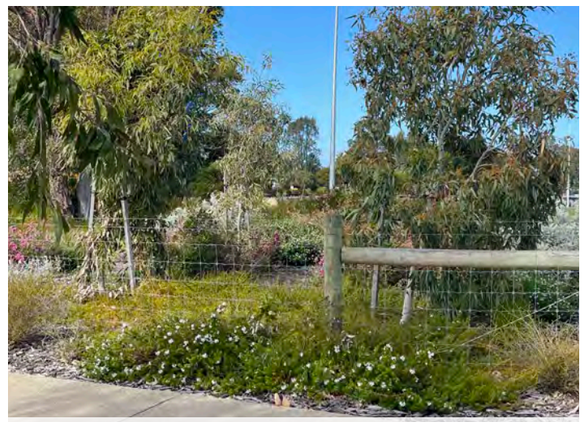
Gateway lighting at night



Worker meeting places with plug and play

RECOMMENDATIONS

- Improve access to Asquith Reserve from surrounding streets and businesses
- Improve safety from busy roads through the use of barriers, level change, planting and embankments
- Support the local worker population - good shade, robust seating, tactile play elements, Wi-Fi, outdoor meeting spaces / benches with plug and play
- The addition of cycle supporting infrastructure for commuters / cyclists (bike fix, water fountains)
- Gateway public art & lighting - symbolising the entry to the ToVP and Albany Highway
- Integrate artistic approaches and interpretations of heritage into future design
- Reduce turfed area and increase/prioritise WSUD - to enhance ecological function and the linear green connection to the foreshore
- Enhance tree canopy to achieve 40% canopy - prioritise WA natives and endemics
- Consider the function of this space at night given proximity and adjacent uses (lighting installations etc.)



Soft but protective edges to roads



Tactile play elements for worker crowds at lunchtime

*The above images are indicative only and are subject to further investigation.

Surrounding Landscape: Memorial Gardens

EXISTING CONDITION







DESIGN OPPORTUNITIES



Small play elements that build on whats there



Lighting up feature trees as key landmarks at night



Wayfinding with story telling



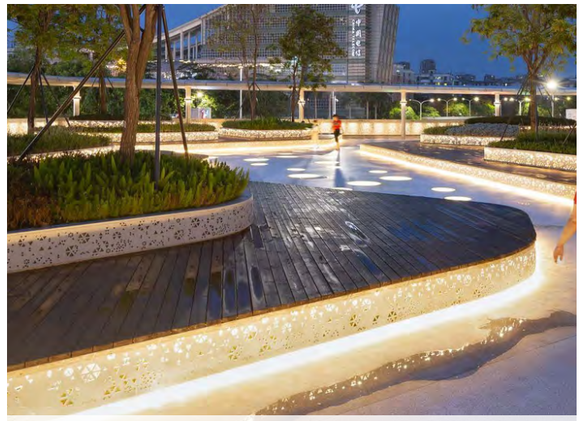
Civic spaces with no barriers

RECOMMENDATIONS

- Opening up the park to the street - increase sightlines, accessibility to AH, Harvey Street and ToVP Admin Building
- Breakdown edges to enable terraced seating and gathering on the perimeter of the park facing the street
- Increase WA native and endemic tree planting, maintain existing mature tree canopy - 40% tree canopy coverage
- Partial or full closure of Harvey Street at the intersection (corner conversion) - creating a plaza forecourt to the park creating flexible spaces for events and programming
- Nature play elements for family friendly usage of the park possibly referencing ANZAC significance
- Feature lighting in trees to highlight heritage elements of the park and invite usage at night
- Build on existing place value (heritage memorial and civic space) through bespoke detailing and references to heritage elements (seating, bike racks, signage)
- Multiple seating options, raised planter edges (integrated lighting), grassed areas, steps, lounges
- Acknowledge and enhance the heritage functions of the space through various design interventions
- Integrated wayfinding and signage to be engaging and interactive (Augmented Reality & QR)



Terraced edges to the street, welcoming and inviting



Low lighting, integrated into levels, activating space at night

*The above images are indicative only and are subject to further investigation.

Surrounding Landscape: Read Park

EXISTING CONDITION



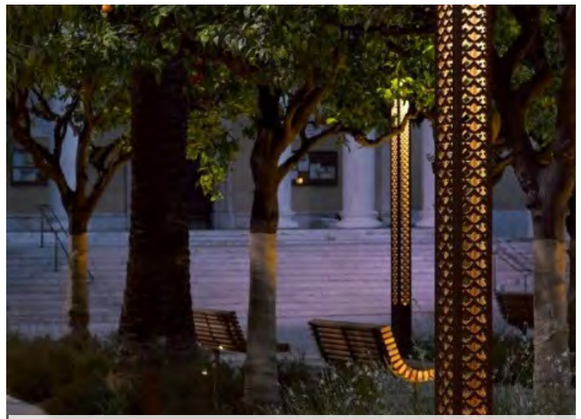




DESIGN OPPORTUNITIES



Multi-courts provide multiple opportunities for play



Lighting that is soft touch and integrates into the landscape



Fixed seating elements



Destination play, themed to history and culture

RECOMMENDATIONS

- WA native and endemic tree and WSUD planting particularly to enhance the interface to AH and shade to footpath (40% canopy coverage) - retain all mature trees
- Formalised hardscape and softscape for events, with reduced turfed areas to be replaced with groundcover
- Robust and quality lighting for night activation and space utilisation by adjacent businesses and residents
- Sump area as a potential park expansion area with exercise path meandering through, retain the drainage function of the sump area if required
- Integrate health and wellness as part of the parks amenity, potential fitness station loop
- Enhance and grow the community garden as a key destination within Read Park (Urban Farming) with potential farm to table and pop up dining
- Enhance edges to adjacent businesses through active play / multi-court set up, youth plaza, youth hub, playable infrastructure and Wi-Fi
- Interpretitive wayfinding and signage to tie into AH as a Active Park Street



Community gardens as a major destination and draw card



Design that maintains function

*The above images are indicative only and are subject to further investigation.

Sump Typologies

Idea 02 of the Albany Highway Tomorrow Report is focused on increasing Albany Highway's biodiversity. In considering this, existing drainage sumps have been identified, to determine potential open space and biodiversity opportunities. Unlocking these inaccessible sites has the potential to contribute to the wider public realm network. The identified sumps have been categorised into three typologies, however as part of this strategy Typology 1 will be explored in further detail.

OBSERVATIONS:

- Sumps with multiple frontages are typically suited to multi-use redevelopment
- Concealed sumps not suited to recreational use, until new development occurs and passive surveillance improves
- Impact on Stormwater Management Plan(s)

KEY PRINCIPLES:

The following principles apply to all Sump Typologies listed within this report:

- To be addressed in a staged approach, prioritising the transformation of sumps along AH and within the PSP site area
- Sumps outside the PSP site area sumps are lower priority (long term solutions)
- Re-wild and increase biodiversity and tree canopy through WA endemic species and evergreens
- Prioritise WSUD and water wise plants over turf areas
- Retain drainage functions where required
- Retain existing mature trees whether native or exotic
- Celebrate water in larger sump typologies where possible
- Make sumps suitable for use (contaminants, barbed wire / fencing etc.)
- Minimal hardstand or hardscape area
- Universal access through formalised paths



Sump Typologies:
Typology 1A: Micro-park

EXISTING CONDITION: EAST VIC PARK SUMPS (X3)



2 Camberwell Street, East Vic Park



1 Patricia Street, East Vic Park



1 Baillie Avenue, East Vic Park

DESIGN OPPORTUNITIES



Playscapes



Nooks of seating amongst dense planting areas



Integrating play and movement



Level change



Spaces that change with seasonality but are still usable



Through site link and break out space

RECOMMENDATIONS

- Micro-parks are important considerations where there is a shortfall of open space, adjacent laneways or adjacent larger parks
- Consider temporary interventions to provide short term activation to underutilised spaces part of future development (McMillan Precinct Sump on Albany Highway)
- Minimise cut and fill where possible and utilise the grade of the sump to create interesting spaces
- Provide basic amenity such as seating and shade
- Provide small play elements or playable infrastructure for local residents
- Lighting for the use of spaces at night
- Retain and enhance tree canopy
- Consider movement and embellishment of adjacent existing laneways as well as retained drainage functions
- For sumps not conducive to open space (adjacent to major roads) consider vegetated buffers

*The above images are indicative only and are subject to further investigation.

Sump Typologies:
Typology 1B: Large Park

Existing Condition

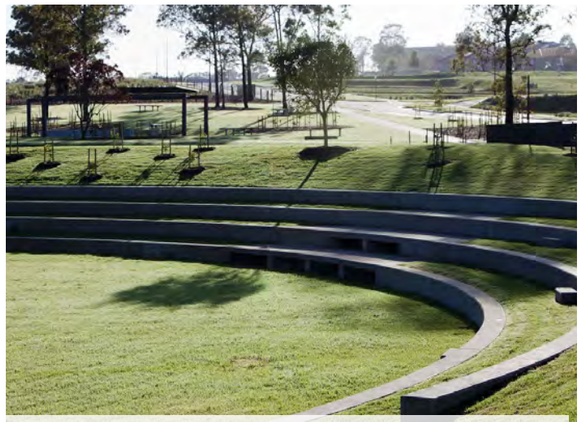


9 Salford Street Victoria Park (Read Park Sump)

9 Salford Street Victoria Park (Read Park Sump)

9 Salford Street Victoria Park (Read Park Sump)

Design Opportunities



Amphitheatre formalising natural levels



Layers of planting and movement connections

Celebrating water and drainage function

Flexible space for events

Elevated boardwalks and paths for circulation

Native planting and natural landscape

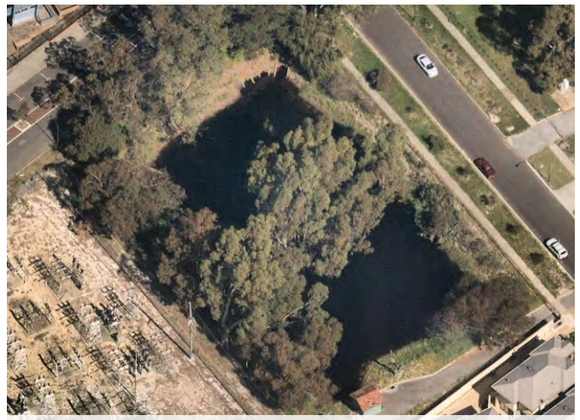
Design Moves

- Larger sumps or sumps adjacent to existing parks and open spaces lend themselves to becoming a larger destination open space
- Celebrate water by maintaining the drainage function where possible so that water reveals itself after rain events
- Incorporate larger play elements
- Minimise cut and fill where possible and utilise levels to create interest and enhanced experiences
- Consider utilising the terrain of the sump to create interesting spaces, terracing can provide seating or levels of play
- Lighting for the use of spaces at night
- Retain and enhance tree canopy
- Consider movement through and around the park with elevated walkways for universal access

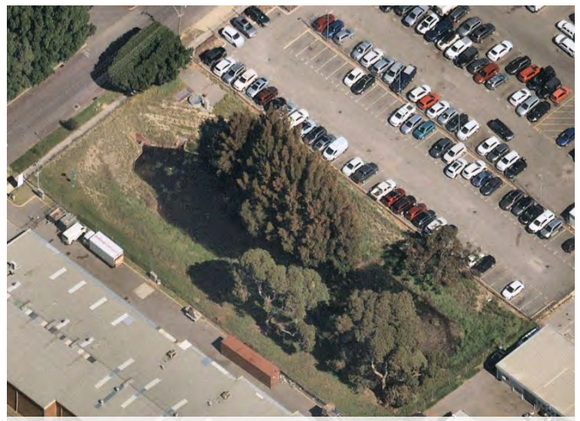
*The above images are indicative only and are subject to further investigation.

Sump Typologies:
Typology 1C: Blue / Green Ecology Park

Existing Condition


Somerset Street Sump


Beatty Avenue Sump


Forward Street Sump


Bank Street Sump

Design Opportunities


Nature play and discover


Play and environmental function


Scenic paths and walkways over water


Movement networks for health and wellbeing

Design Moves

- Celebrate water particularly for locations with existing surface water
- Retain drainage function and integrate sustainability techniques to filter water
- Incorporate larger nature play elements for safe touch points and discovery with water
- Enhance biodiversity and habitat with wetland appropriate species
- Retain existing mature trees
- Plant endemic and WA local species to attract native bird life
- Living Stream - create as part of adjacent development sites
- Integrate movement and health and wellness trails and universal access
- Not all big parks require big interventions, simple components make a park blue green park great (Tomato Lake)
- Age and ability friendly design is key
- Design for families - BBQ's, picnic areas, play, gym stations, running trails, good lighting


Community destinations and new local gathering space


Escape from the urban environment

*The above images are indicative only and are subject to further investigation.

Look & Feel: Materiality - Paving

Idea 18 of the Tomorrow Report focuses on promoting vibrant street fronts and public life. Materiality plays a significant part in complementing street life. Developing a tailored yet cohesive materiality guide which contributes to AH's history, character and future is critical.

GENERAL PRINCIPLES

- Apply a unified consistent hard and soft landscape palette to AH, through paving, furniture, ground covers, lighting, art and planting
- Celebrate sub-precinct identity through bespoke landscape variations at key sites, so that each sub-precinct has its own unique public realm language, whilst still being part of the AH corridor
- Palette variations should reflect the unique sub-precinct identity, history and culture through highlight materials, bespoke furniture, themed colours, artwork and feature lighting. This can be delivered through major site redevelopment and Major Space/Streetscape Typologies
- Tell stories, engage and educate through materiality
- Reflect a high street through streetscape design

RECOMMENDATIONS

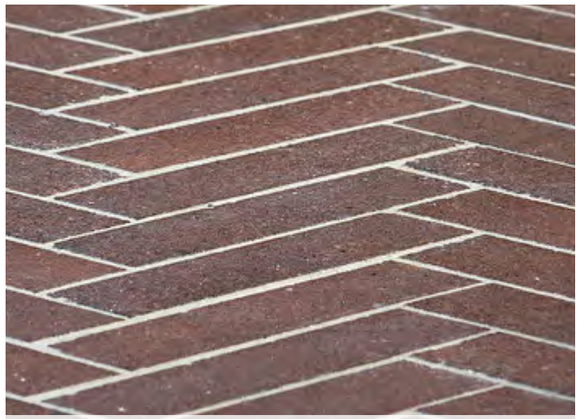
- Prioritise light coloured, permeable ground covers / paving, to contribute to WSUD and reduced UHI
- Leverage existing heritage colour palettes of greys, creams/beige, greens and browns
- Replace red brick paving, faux brick and concrete paving over time given the low attachment & preference with the community for alternatives
- Create artistic approaches to paving and surfaces, where new meets old to create visual interest
- Enhance mobility experience through laneways with art and surface graphics
- Barrier free and seamless paving, tactiles, gradients, and integrated technology for the impaired & elderly
- Brick, limestone, timber, rammed earth, stone / granite and exposed aggregate concrete (coloured)
- Integrate technology - illuminated or kinetic (energy producing) paving in special locations
- Brick road surfaces in slow vehicle locations. Maintain coloured asphalt elsewhere to support slower speeds



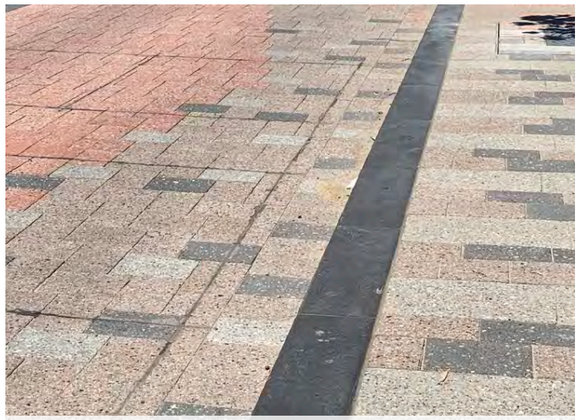
Patterns and colours in paving



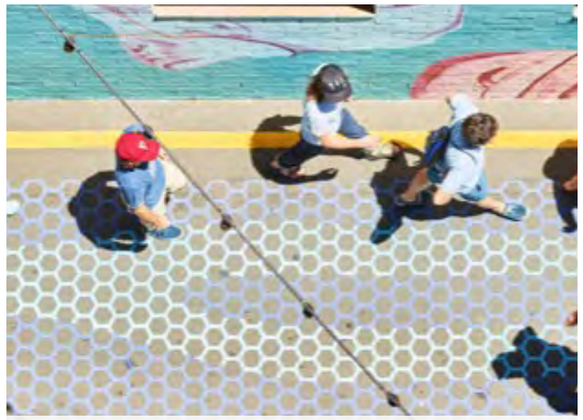
Bold contrast of surface material and colour



Varied shapes and paving styles



Merging old witht the new, with varieties of paving



Painted asphalt is a quick win



Permeable paving styles for parking areas



Tactiles in shared / flush environments



Permeable paving styles in open spaces



Bluring hard and soft edges to create interest

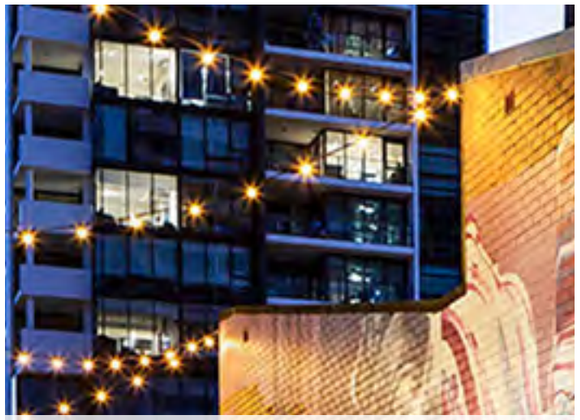
Look & Feel:
Materiality - Lighting

RECOMMENDATIONS

- Prioritise low lighting or lighting which is directed towards the ground place
- Minimise up-lighting to restrict light pollution
- Integrated lighting into custom made furniture elements such as raised planter edges.
- Feature lighting can contribute to story telling,
- Lighting / art events will attract visitors to ToVP
- Catenary (over head / hanging) lighting in laneways and key open spaces (plazas, shared streets etc.)
- Illuminate feature trees with lighting in key locations along AH
- Retain and refurbish heritage lamp posts and re-purpose old tram stop poles
- Consider controlled lighting and the impacts of lighting on ecology and habitats
- Smart/multi-poles can be used and integrate CCTV, Wi-Fi and projections



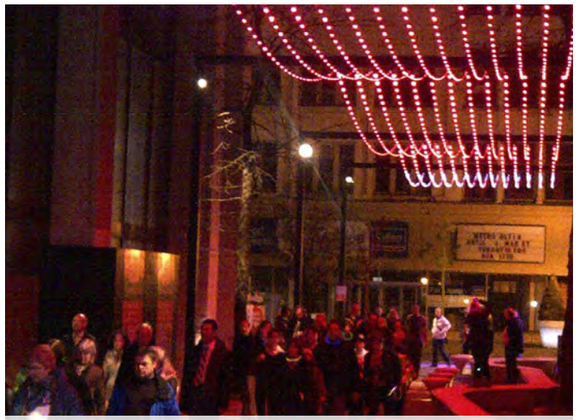
Illuminated furniture - low lighting



Typical festoon lighting producing quick win outcomes



Feature light poles in active spaces



Variations to catenary lighting in active spaces



Illuminated trees



Custome furniture with integrated lighting



Lighting in unexpected locations, creating diverse spaces



Dual use lighting, Gobo projections for story telling



Lighting to pedestrian desire lines, directed to the ground

Look & Feel:
Materiality - Furniture

RECOMMENDATIONS

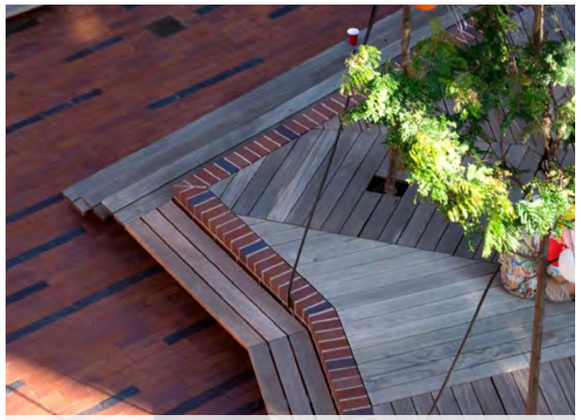
- Prioritise robust tactile furniture and planters which can be secured to a particular location or moved to different locations in the future
- Splashes of colour within furniture can added highlights of colour to the public realm
- Re-use and refurbish heritage elements along AH, such as bollards, seating and bike racks
- Bike parking is important and should be prioritise to encourage cycling and alternative locations
- Feature bike parking in major space typologies and shared streets
- Consistent approach to bins and other elements to add coherence and consistency along the highway.
- Phase out and replace aged, worn or damaged furniture
- Metal seating should be provided with shade. If exposed to the sun, it may not be useable during summer months
- Prioritise materials with lower heat gain for seating (in-situ concrete, timber, brick, etc).
- Combine built and natural shade
- Parklets that can be moved are ideal for AH, adding dynamism as the corridor evolves and changes



Light and robust furniture elements



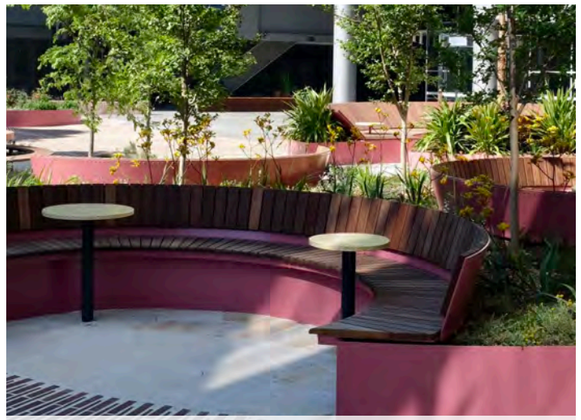
Movemable planter / seating



Seating edges and platforms with varied materials



Parklets that can be moved and relocated



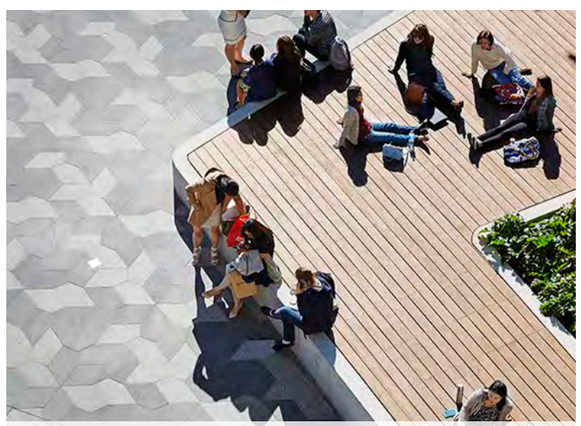
Custom bespoke furniture with material variation



Insitu concrete with timber insert seating in shade



Timber and brick reflecting character



Dual use furniture creating opportunties for seating



Integrate precicnt character through furniture colours

Look & Feel:
Materiality - Art / Wayfinding

RECOMMENDATIONS

- Creating surprising and playful moments with playable infrastructure integrated into the public realm for all ages and abilities
- Art and wayfinding, should be welcoming and inviting and not create barriers for the impaired
- A site-wide and consistent wayfinding and signage look and feel is needed for AH, which incorporates universal design, accessibility and connection to place
- Public art is an important part of passive wayfinding and story telling - it should be dual use
- Retain and incorporate existing public art on-site given the attachment to the community and association with place and location
- Laneways are a canvas for public art such as murals, and can provide interest as alternative movement networks, promoting exploration and intrigue



Art as play elements



Feature art canopies with lighting



Directional signage



Multi-use spaces complemented by art



Art installations in laneways



Surface graphics for cyclists and pedestrians



Play along the way - encouraging and engaging public realm





Signage and wayfinding markers integrating colours



Maps, destinations and approximate commuting times

Look & Feel: Planting

Idea 02 of the Albany Highway Tomorrow Report is focused on enhancing Albany Highway's biodiversity and urban ecosystems by increasing tree canopy, plant/tree diversity, urban farming, softscape and water sensitive urban design.

RECOMMENDATIONS

- Contribute to the greening of Albany Highway and its surrounding streets by promoting WA native and endemic planting in the public realm
- Complement the goals of the Urban Forest Strategy with shrubs and ground covers layers of planting under tree canopy
- Promote WA native and endemic plant species in all new and existing garden beds, side streets, medians, open spaces etc.
- Avoid and restrict the use of exotic plant species
- Provide native wetland appropriate species for integration into sumps, blue/green parks and rain gardens/bio-swales
- Planting as sub-precinct and corridor unifying elements, with opportunities in each sub-precinct for varied approaches to reflect character and history
- Feature / ornamental WA native and endemic planting to be included in key areas and new open spaces as part of major site redevelopment
- Prioritise verge planting over median planting
- Planting in median is acceptable however it needs to carefully consider future road layouts and transport infrastructure, garden bed size and appropriate species
- Integrate edible planting such as community gardens, sensory gardens and bush tucker gardens into the public realm
- Linear garden beds can provide and enable more comfortable green connections to the foreshore
- Create pockets of dense planting on side streets if planting areas on AH is limited, they can provide relief from the busy high street and act as micro break out spaces/gardens when seating and shade is provided

Endemic Species - Bassendean Complex



Dampiera linearis - Common Dampiera



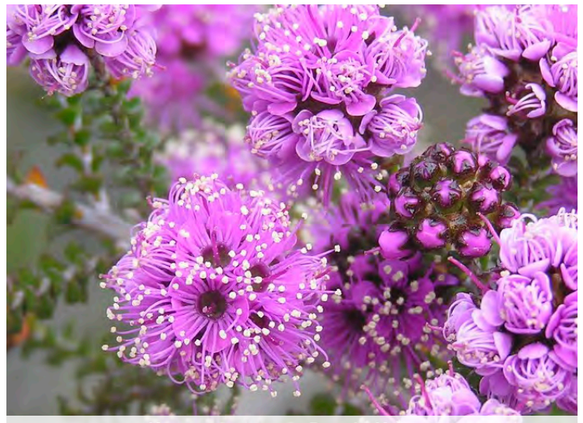
Banksia grandis - Bull Banksia



Patersonia occidentalis - Native Iris



Conostylis aceluata



Kunzea recurva - Purple Kunzea



Calytrix angulata - Yellow Starflower



Calytrix angulata - Yellow Starflower



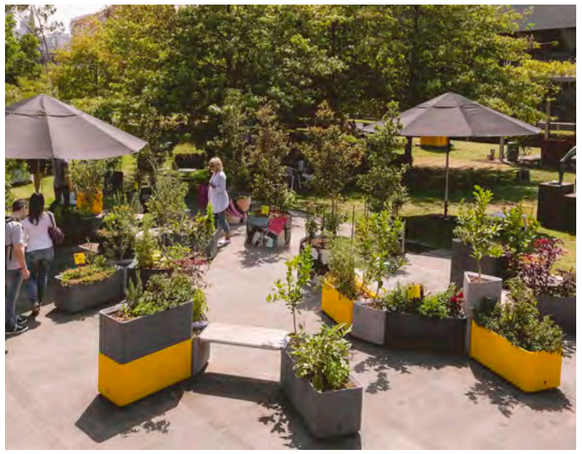
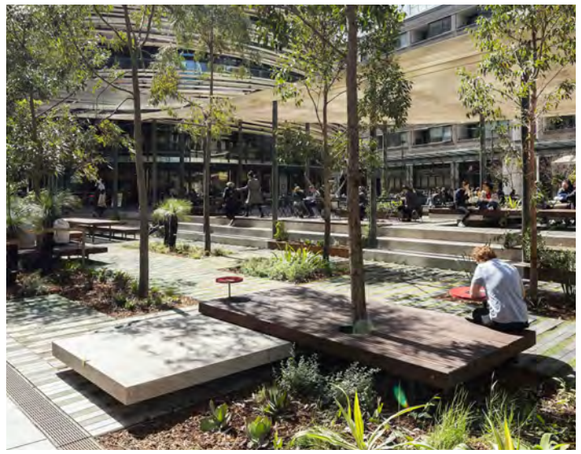
Acacia stenoptera - Narrow Winged Wattle



Hypocalymma angustifolia 'Coconut Ice'

Look & Feel:
Planting











Landscape Strategies
WSUD, Biodiversity and Street Trees

*** - Denotes species endemic to Victoria Park (Bassendean Complex)*
** - Denotes species that are native to Western Australia*

The Albany Highway Today Report highlights that only 12% of street trees are WA native / endemic, whilst 25% are eastern states natives.

RECOMMENDATIONS

- Protect significant trees, regardless of species
- Contribute to the biodiversity of AH and its surrounding streets and open spaces
- Contribute to the delivery of the ToVP Urban Forest Strategy goals of 20% tree coverage
- Avoid eastern states native species, given low attachment with the community
- Avoid exotic species, except the use of London Plane and Cut Leaf Plane Trees along the AH corridor
- Provide a consistent street tree palette to unite the AH corridor with a mix of London Planes, Swamp Paperbarks and WA Peppermints
- Whilst endemics are considered not appropriate for street trees (compaction stress), there is opportunity for the ToVP to innovate and lead research on endemics in urban environments - trialling (with expert arborist / horticulturalist advice) edemics as street trees in structural cells in small sections
- Prioritise WA endemic tree species as habitat creation tree species in all new and existing garden beds, side streets and open spaces
- Coastal, wetland and mallee (eucalypts) species are better suited to thrive as street trees in urban environments, as they are climate change resilient
- Provide WA endemic wetland species for integration into sumps, blue/green parks, rain gardens and bio-swales
- Prioritise verge street trees over median street trees
- For median trees consider future road layouts, transport infrastructure and deep soil area, so trees are not compromised or stunted in the future
- Large natives with known disruptive root systems should be avoided in medians
- Avoid mature tree relocations or removal, only if compromised - to be determined by arborists (London Plane median tree adjacent to Bidi Walk)
- Explore root corridors under roads and infrastructure to allow for endemics and natives to exist in urban areas

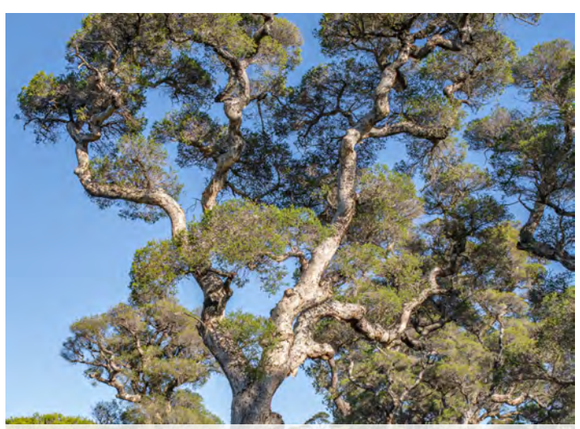
Habitat Trees



*Corymbia callophylla - Marri** - (dieback resistant)*



*Eucalyptus todtiana - Coastal Blackbutt***



*Melaleuca preissiana - Modong** (dieback resistant)*

Street Trees



*Paraserianthes lopantha - Cape Wattle***



*Corymbia ficifolia - Red Flowering Gum**



*Melaleuca rhaphiophylla - Swamp Paperbark***



*Eucalyptus torquata - Coral Gum**



*Eucalyptus forrestiana - Fuschia Mallee**



*Allocasuarina fraseriana - Western Sheoak***

Landscape Strategies
WSUD, Biodiversity and Street Trees
















Landscape Strategies
Urban Forest Strategy

KEY TAKEOUTS

- The Urban Forest Strategy (UFS) commits to providing **20%** tree canopy to the total land area within the ToVP
- According to the Town's estimate at least **256,000** additional trees are required
- Tree diversity to be improved, with a focus on providing local endemic species and Western Australian native species that support local wildlife
- Provide conditions that encourage a healthy and resilient urban ecology through community engagement, stewardship and species selection, so that it can adapt to the stresses of urban environments
- Improving permeability in surfaces to allow water penetration and reduce drought, UHI and compaction stress
- Community consultation has indicated a preference for increasing tree canopy coverage, diversity in planting species (native / endemic) and strategic selection of species beyond feature/ornamental planting

KEY STATS

- Approximately 377 on-street parking bays along AH
- 188 bays (50%) to be relocated nearby and converted into Streetscape Typologies
- Of 188 bays, 90% for gardens and 10% for extended kerb space and parklets
- **169 on-street car bays converted into garden beds**
- Assume 2 trees per bay, may be more if consolidated bays are converted
- **338* new street trees for Albany Highway**
- Including new and existing open spaces, potential for up to 5,000* new trees within the PSP site area (requires future studies by ToVP)
- Up to 2% contribution to targeted UFS tree planting

RECOMMENDATIONS

- Increasing planting areas and vegetation density along footpaths and verges offer opportunities to provide stronger green corridor connections
- Increasing the size of existing garden beds and introducing endemic plants at the base of trees to improve biodiversity and surface permeability
- Conversion of on street parking bays to increase planted areas and surface permeability. **Each car bay can contribute at least 2 additional trees** planted, although planting density can be increased if bays are consolidated
- Provide a diverse carpet of ground covers and shrub plantings instead of hedge and mass plantings to avoid mono-cultures and to create/improve wildlife habitat zones
- Replace existing lawn verges with endemic plants to provide a robust urban ecology and reduce the need of irrigation
- Provide incentives for residents to plant out verges to foster community stewardship and cohesion
- Community feedback is to provide a diverse planting palette of trees, shrubs and ground cover along AH celebrate local sense of place and WA landscape
- Diverse endemic palette will also have multiple environmental benefits including resilience against pests and diseases
- Medium sized trees are recommended for built up areas to avoid damage to property, infrastructure and services. They provide benefits of shade coverage and wildlife habitation.
- Small ornamental trees are discouraged as they offer little ecological value and minimal mitigation against UHI
- Provide incentives to the uptake of green roofs and/or green walls as part of redevelopment to enhance urban ecology and additional planting. Green roofs are preferred over green walls as they are more successful in the Perth climate.








*An indicative estimate only, requires further studies and investigation by the ToVP to confirm numbers

Landscape Strategies
Urban Forest Strategy















Landscape Strategies
Waarkarl Woonya Bidi - The track that honours the Rainbow Serpent

Idea 03 of the Albany Highway Tomorrow Report is focused on Recognising Aboriginal Connection to Country. The following pages contains a range of precedent projects. These precedents provide design ideas only, as they are place and country specific. Interventions for Albany Highway also known as Waarka Woonya Bidi* require consultation with local elders and communities for specific relevance to the ToVP area and it's surroundings.

RECOMMENDATIONS

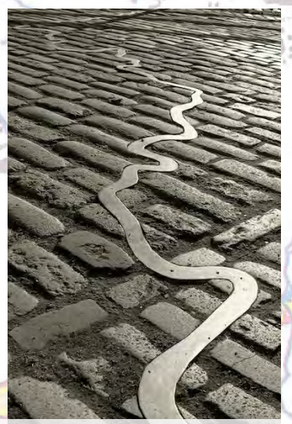
- Material interventions which reflect the sites history and stories through artistic and delicate detailing
- Paving can be intensified at certain locations by being informative, insightful and playful, highlighting connection to country
- Applying WA native and endemic planting and edible vegetation to sensory and bush tucker gardens
- Bush tucker planting to be sub-precinct unifying, tying into the overall native / endemic planting network
- Bespoke furniture that integrates local First Nation artist designs through patterns, imagery and materiality
- Feature lighting and projections that complement the landscape and highlights history, culture and stories
- Play elements integrated into the landscape and also dedicated spaces which incorporate narratives of First Nations peoples, culture and connection to country
- Artwork as passive wayfinding cues, designed by local artists with opportunities for digital and lighting overlays. Importance of learning, education and communication through art and signage design
- Spaces which allow for events which educate and celebrate the First Nations history and culture of the area

*The Waarkarl Woonya Bidi is the route between Derbarl Yerrigan (Swan River) in Boorlo (Perth) and Kalgan Beelier (River) in Kalingiri (Albany). Named in honour of the Waarkarl serpent, who created the rivers, hills and valleys in the Dreamtime. It begins in Whadjuk country, passes through Balardong , Wiilman and Kaneag country and ends in Minang country.

(Source: Aboriginal Journey Ways - by WALGA, Main Roads & ECU, 28 May 2020)

Paving & Surface





Bold paving detailing

Delicate and subtle interpretive detailing

Artistic approaches to paving in key areas

Vegetation



Bush tucker / edible community gardens



Native and endemic gardens

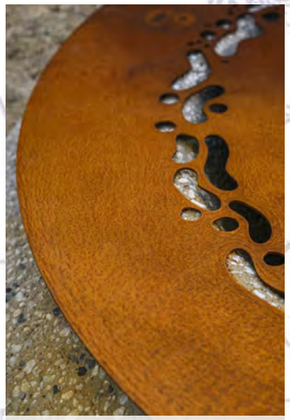


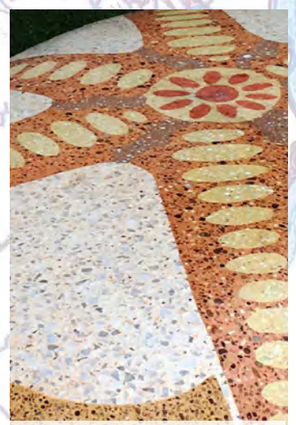
Connection to Country through materials and detailing

Furniture & Material



Feature elements designed by local artists





Varied and complementary materials





Educating and storey telling in all aspects of the public realm

Landscape Strategies
Waarkarl Woonya Bidi - The track that honours the Rainbow Serpent

Lighting



Lighting in public art

Lighting projections

Lighting events and programming

Play



Play that celebrates landscape and Country

Themed play

Themed play with water and local materials

Art & Signage



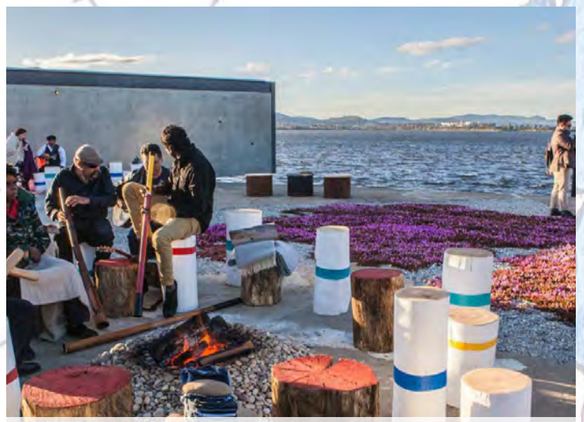


Sculptural and monumental

Varied approaches to public art

Dual name signage and wayfinding with story overlays

Events



Spaces for cultural events

Performances and story telling

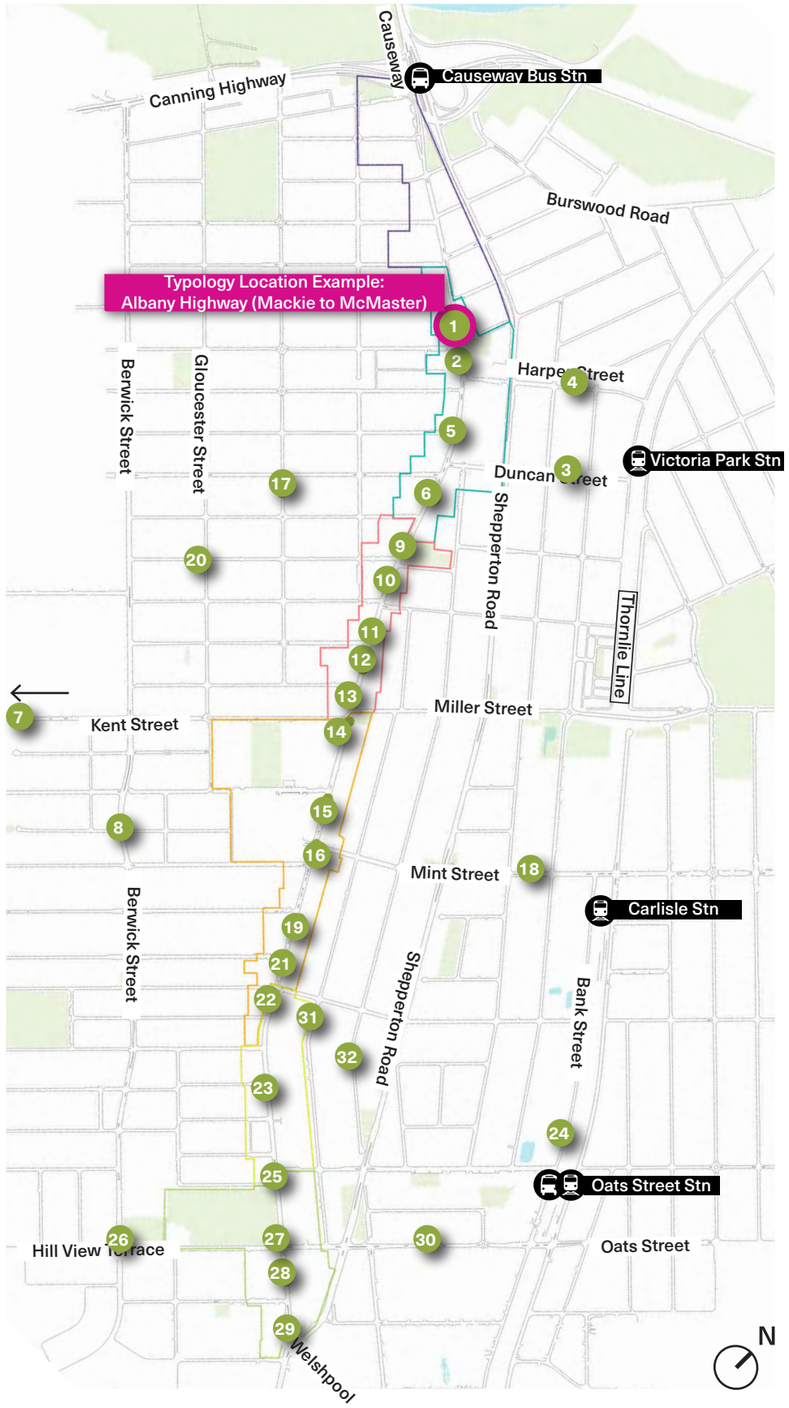
Guided educational tours

Appendix - Precinct Wide Streetscape Typologies - 01. Traffic Calming

	NUMBER	LOCATION	DESIRED OUTCOME
	1	Albany Highway (between Mackie and McMaster) - mid block	Slow traffic down hill on approach to OSNP 3 (Rushton & Mackie)
	2	Albany Highway (Memorial Gardens) - adjacent to McMaster Street and entry to park	Safer connection to station / wide street
	3	Duncan Street - station street connects to Vic Park Station	Provide a safer connection to station / wide street
	4	Harper Street - station street connects to Vic Park Station	Provide a safer connection to station / wide street
	5	Albany Highway & Leonard Street intersection	Wide lanes and turning radii - slow traffic outside destination
	6	Albany Highway (between McMillan and Temple) - mid block	Enabler safer crossing to either side of the street
	7	Kent Street (south from Etwell to Jarrah)	Slow cars down in area prone to speeding at roundabouts - interrupted sightlines
	8	Berwick Street - entire street running parallel to AH	Slow cars down, prone to speeding, school kids crossing Berwick, down hill sections, reduce conflict with marked cycle lane
	9	Albany Highway (between Temple and Manchester) - opposite yoga studio	Slow traffic adjacent to park and downhill
	10	Albany Highway (between Manchester and Rathay) - mid block	Slow traffic adjacent to park and downhill
	11	Albany Highway (between Rathay and State) - north of State Street intersection	Enable safer connection to foreshore for pedestrians and cyclists (existing crossing - needs development of adjacent sites)
	12	Albany Highway (between State and Tuam) - opposite Vic Park Hotel	Enable safer connection to foreshore for pedestrians and cyclists
	13	Albany Highway (between Tuam and Kent) - opposite Boston Brewery and peanut roundabout	Slow cars down before roundabout - prone to speeding through - poor sightlines and conflict between cars, cyclists and people.
	14	Albany Highway (between Kent and Sussex) - opposite Sinamon	Slow cars down before roundabout - prone to speeding through, and future McMillan Precinct, potential sump to be converted to Micro-park temporarily (See Micro-park locations)
	15	Albany Highway (between Sussex and Basinghall) - opposite Price Line	Enable safer crossing to either side of the street
	16	Albany Highway & Mint Street intersection - opposite Gusto Gelato	Enable safer crossing to either side of the street
	17	Washington & Hordern Streets - entire street	Popular local cycle street to foreshore and underpass - reduce speeding and rat run
	18	Mint Street - station street connects to Carlisle Station	Provide a safer connection to station / wide street
	19	Albany Highway (between Canterbury and Westminster) - opposite Tammy's	Enable safer crossing to either side of the street in active part of the town centre (existing pedestrian crossing)
	20	Gloucester Street - entire street	Popular local cycle street - reduce speeding and rat run
	21	Albany Highway (between Westminster and Hampshire) - opposite The Balmoral Hotel	Enable safer crossing to either side of the street in active part of the town centre
	22	Albany Highway (between Hampshire & Willis) - opposite petrol station	Slow traffic entering the EVP Town Centre
	23	Albany Highway (between Camberwell and Langler)	Enabler safer crossing to either side of the street
	24	Bank Street - entire street runs parallel to rail line	Slow cars down adjacent to railway - Bank Street is prone to speeding and a popular rat run street
	25	Albany Highway (between Somerset and Baillie)	Enabler safer crossing to either side of the street - to Edward Millen
	26	Hill View Terrace - entire street	Wide street often mistaken for dual lane two way street - slow cars down hill to St James Town Centre / Oats St
	27	Albany Highway before Oats Street	Slow cars down - section of Albany Highway prone to speeding through the lights
	28	Albany Highway (between Oats and Alday)	Leverage existing crosswalk and create additional traffic calming through St James Town Centre
	29	Albany Highway (between Alday and Shepperton)	Slow traffic upon entry to St James Town Centre
	30	Oats Street - station street connects to Oats Street Station	Slow cars downhill to train station, create more comfortable cycling environment
	31	Hubert Street - entire street runs parallel to AH	Some speed deterrents currently, areas of downhill approaching stop and give way signs.
	32	Swansea Street - entire street runs parallel to AH	Some speed deterrents currently, areas of downhill approaching stop and give way signs.

TABLE COLOUR CODE REFERENCE TO SUB-PRECINCT INTERVENTIONS:

Causeway | Central | East End | Victoria Park | East Vic Park | St James

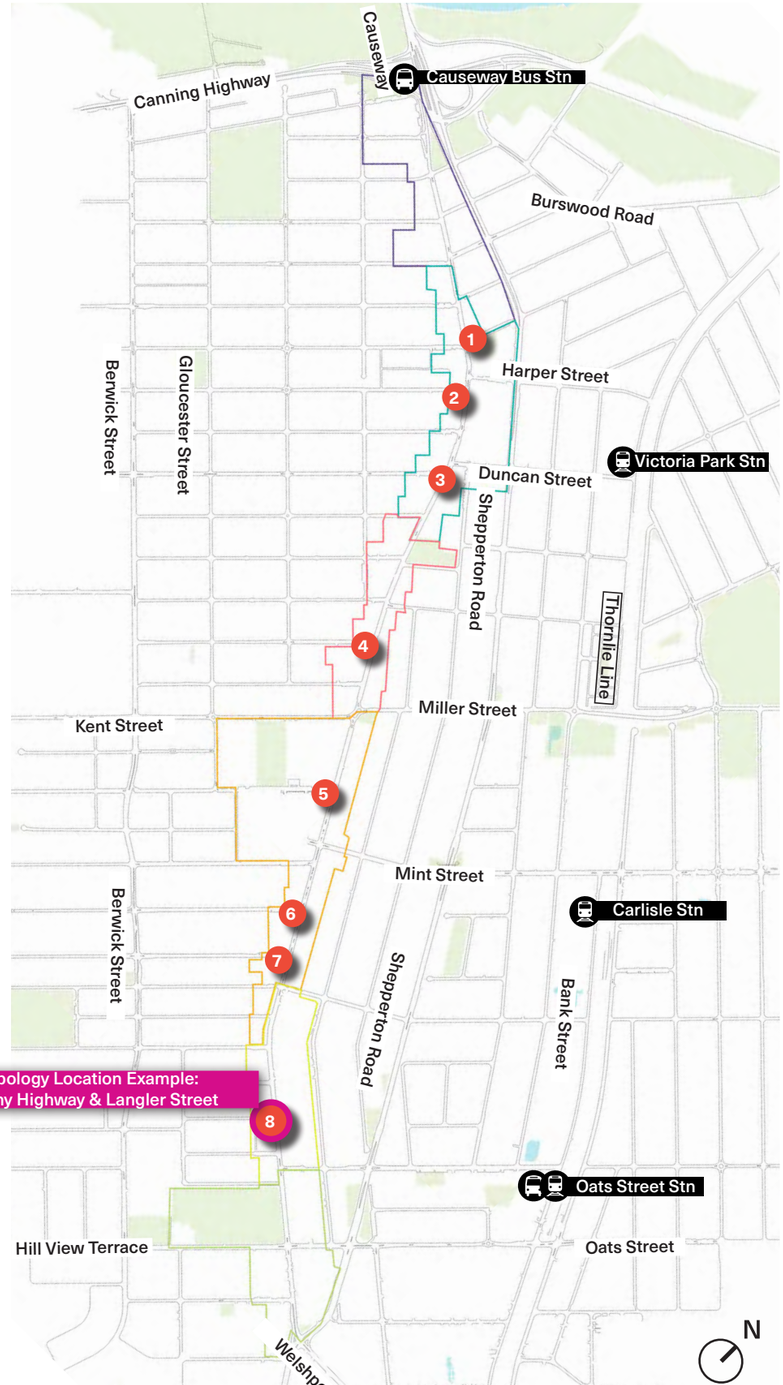


Appendix - Precinct Wide Streetscape Typologies - 02. Corner Conversion

	NUMBER	LOCATION	DESIRED OUTCOME
	1	Albany Highway and Harvey intersection - opposite Memorial Gardens	Build off Memorial Gardens future upgrade - plaza forecourt and open park to Harvey Street
	2	Albany Highway and King George intersection	Active edges on corner sites - potentially to convert car parking on King George to open space, good shade. Large turning radii
	3	Albany Highway and Duncan intersection - opposite Victoria Park Post Shop	Good bones and structure for future space on the Post Shop side of Duncan Street. Leave as two way, given the role Duncan Street plays, however embellish existing verge areas and extend kerb on Domino's side of Duncan by removing bays.
	4	Albany Highway and State intersection - opposite Victoria Park Hotel	Dependent on future developments of car parks, and activation on northern side of State Street intersection. On street parking areas can contribute more public realm to active hub for planting and shade (very large paved areas with high UHI)
	5	Albany Highway and Sussex intersection - adjoining Hawaiians Park Centre	Leverage plaza area on southern corner of Sussex and Albany Highway as well as future site redevelopments (Hawaiian's and McMillan Precinct). Potentially make one way from Albany Highway to allow access to rear parking
	6	Albany Highway and Canterbury intersection	Active edges on corner sites - convert car parking on Canterbury to open space with seating and good shade. Some nice large trees there at the moment. Reduce turning radii, adjacent pedestrian crossing to create a pedestrianised precinct
	7	Albany Highway and Westminster intersection - opposite Balmoral Hotel	Leverage Balmoral Hotel and Dome active edges and side street parking area - area dominated by hardscape, need for shade and planting around public art to foramlise seating area
	8	Albany Highway and Langler intersection	Langler Street intersection at Albany Highway has a very wide asphalt area with large turning radii. Potential to make Langler Street one way entry from Albany Highway to provide access to rear parking area. Reduce traffic and support active hub of the East End Precinct

TABLE COLOUR CODE REFERENCE TO SUB-PRECINCT INTERVENTIONS:

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St James

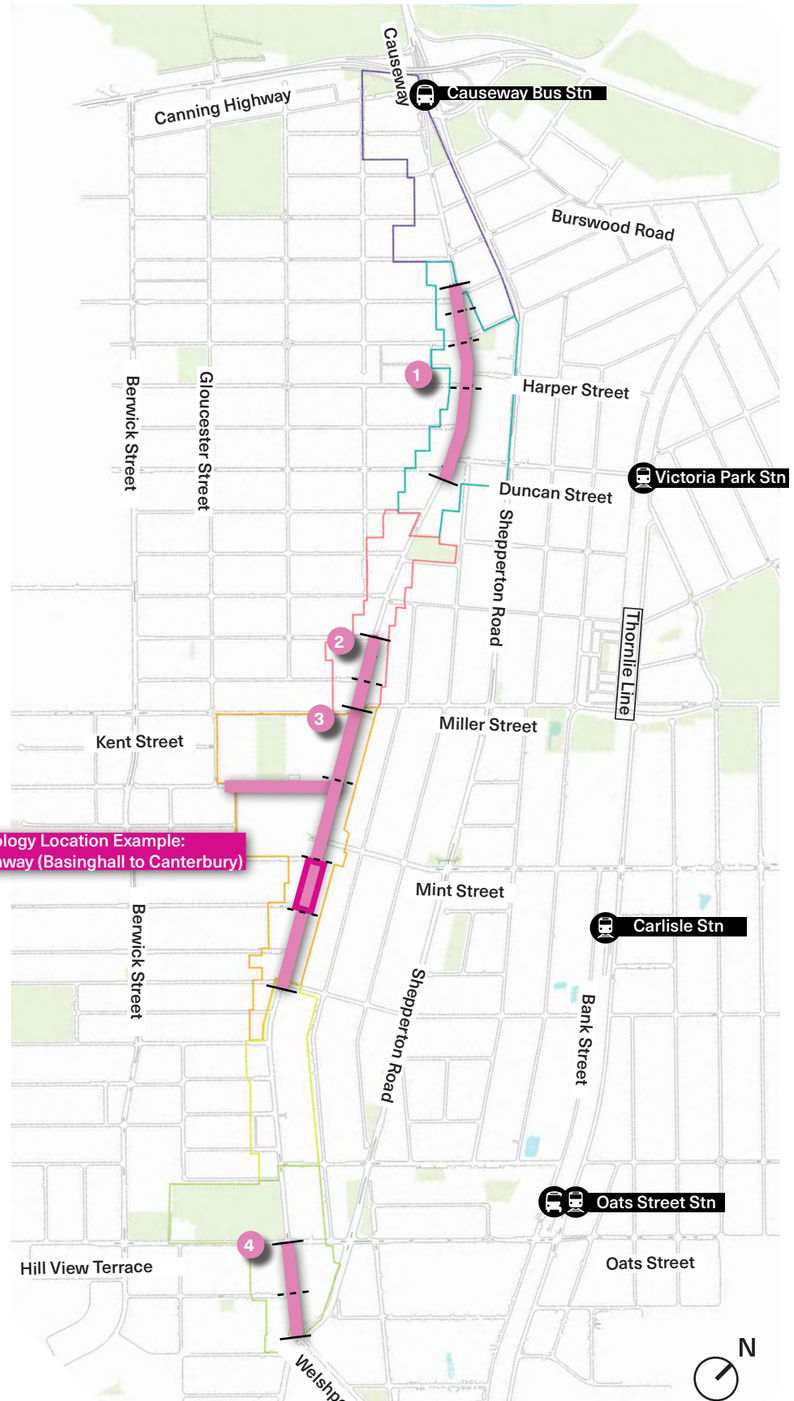


Appendix - Precinct Wide Streetscape Typologies - 03. Shared Space

	NUMBER	LOCATION	DESIRED OUTCOME
	1	Albany Highway (north to south) Stage 1a: Mackie / Rushton (OSNP 3) Stage 1b: between Mackie / Rushton and McMaster / Harvey Stage 1c: between McMaster / Harvey and Harper Stage 1d: between Harper and Duncan	Victoria Park Town Centre, includes Old Spaces New Places 3. Potential to better the connection to foreshore by provided a consistent shared space
	2	Albany Highway (north to south) Stage 2a: between State and Tuam Stage 2b: between Tuam and Kent / Miller	Central Precinct - small portion of the Central Precinct features some active nodes. Pedestrian crosswalk not supporting adjacent uses, need for better crossing between Victoria Park Hotel and adjacent active edges / eateries. Requires future transformation of the precinct (car yards)
	3	Albany Highway (north to south) Stage 3a: between Kent / Miller and Sussex Stage 3b: between Sussex and Basinghall, incl. Sussex Street between Albany Highway and Gloucester Street Stage 3c: between Basinghall and Canterbury Stage 3d: between Canterbury and Hampshire/Dane	East Victoria Park Town Centre - leverage adjacent major site redevelopments and high concentration of active uses. Includes future potential changes tot he peanut/bean roundabout. Establish formal pedestrian zone between both sides of the street. Build on the strengths of East Victoria Park especially future transformation of the Park Centre and McMillan Precinct.
	4	Albany Highway (north to south) Stage 4a: between Hill View and Alday Stage 4b: between Alday and Shepperton (adjacent to Woolworths Site)	St James Town Centre - long term upgrade . Unique village character and nice fine grain, currently dominated by cars. St James is also part of the kerb extension typology (short term). Potential for all cars to deviate through rear lanes and car parks. Create a unique pedestrian precinct. Short term opportunity for a shared space treatment adjacent to the Woolworths site in St James, possible scope for developer funding as part of Development Application. Combined with a 20 or 30km/hr speed limit at the Eastern Gateway of Albany Highway (St James) may reduce traffic volumes in this highly congested area of AH, this may force some through traffic to seek alternative routes.

TABLE COLOUR CODE REFERENCE TO SUB-PRECINCT INTERVENTIONS:

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St James

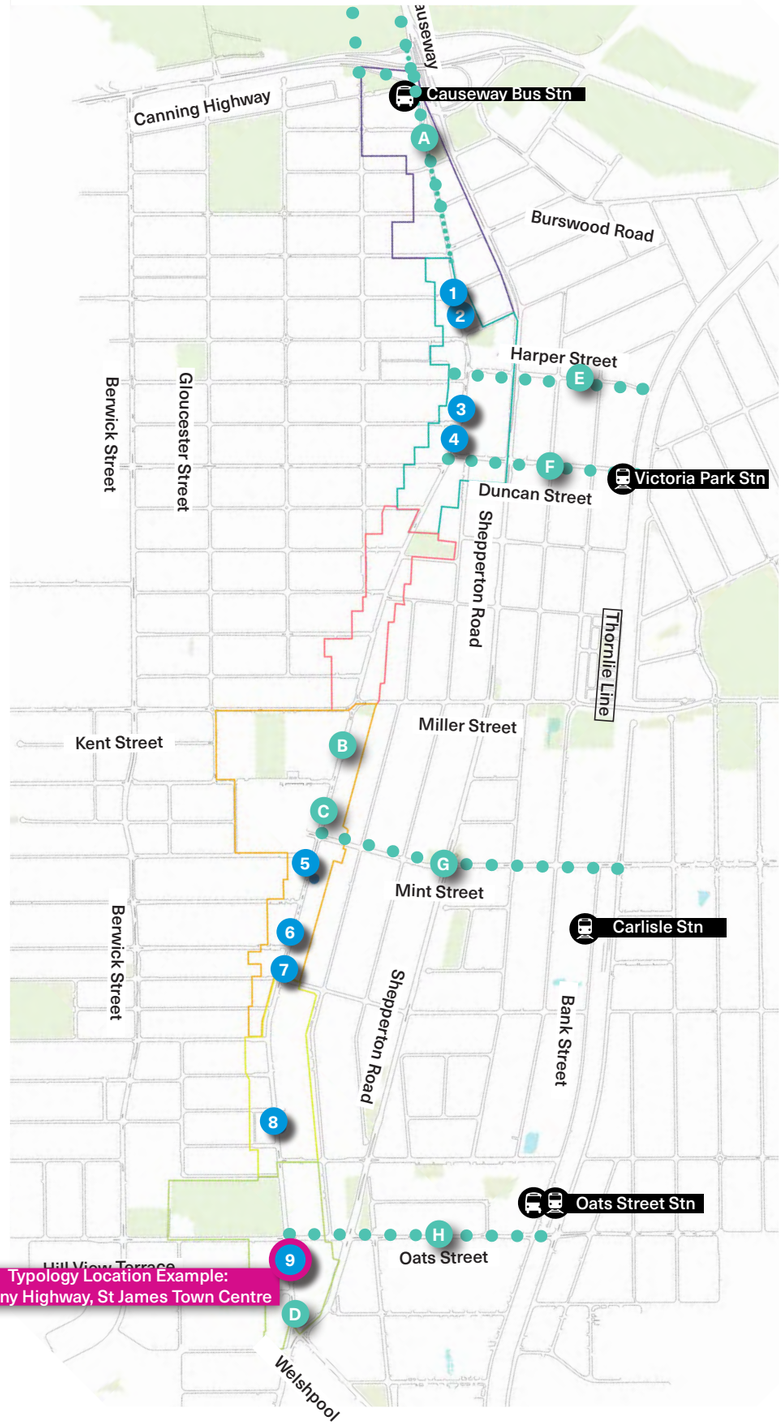


Appendix - Precinct Wide Streetscape Typologies - 04. Kerb Extension

	NUMBER	LOCATION	DESIRED OUTCOME
	1	Albany Highway (Rushton and Mackie Street intersection) - Part of Old Spaces New Places 3	Slow traffic and active corners
	2	Albany Highway (Rushton and Mackie Street intersection) - Part of Old Spaces New Places 3	Slow traffic and active corners
	3	Albany Highway (north and south of Leonard Street intersection)	Adjacent to Victoria Park Central site redevelopment, enable a more pedestrianised forecourt
	4	Albany Highway (north and south of Leonard Street intersection)	Adjacent to Victoria Park Central site redevelopment, enable a more pedestrianised forecourt
	5	Albany Highway (between Basinghall and Canterbury) - adjacent to ROW 52 and IGA	Enable more pedestrianised area and stronger connections to either side of the street and opportunity for additional alfresco
	6	Albany Highway (between Canterbury and Westminster)	Create more verge space adjacent to active edges for more alfresco
	7	Albany Highway (between Westminster and Hampshire)	Create more verge space adjacent to active edges for more alfresco
	8	Albany Highway (between Langler and Patricia)	Create more verge space adjacent to active edges for more alfresco to improve pedestrian activity in the East End
	9	Albany Highway (St James Town Centre)	Remove on street parking and create more pedestrianised precinct in the short term. Prioritise sleeved parking behind tenancies and utilise rear lanes for cars. Slow transition over time to shared street, and development of big box retailers (Bunnings, Officeworks, etc.)
	A	Albany Highway (between Rushton & Causeway) - opposite to John Hughes car yards and inactive edges and Pedestrian connection to Canning Hwy Underpass (Existing Laneway upgrade)	Enable a stronger, greener and safer connection to the foreshore and connect with laneway upgrade (Canning Highway Underpass).
	B	Albany Highway (between Kent and Sussex) - opposite McMillan Precinct	Future space allocation for adjacent major site redevelopment - currently significant UHI along Albany Highway. Convert paving area into softscape (WSUD gardens), additional tree canopy
	C	Albany Highway (between Sussex and Basinghall) - opposite to Park Centre	
	D	Albany Highway (between Alday and Leichardt)	Green edge adjacent to McDonalds to be converted into future open space
	E	Harper Street	Enable a stronger, greener and safer connection to Victoria Park Station
	F	Duncan Street	Enable a stronger, greener and safer connection to Victoria Park Station
	G	Mint Street	Enable a stronger, greener and safer connection to Carlisle Station
	H	Oats Street	Enable a stronger, greener and safer connection to Oats Street Station

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East Vic Park
St James

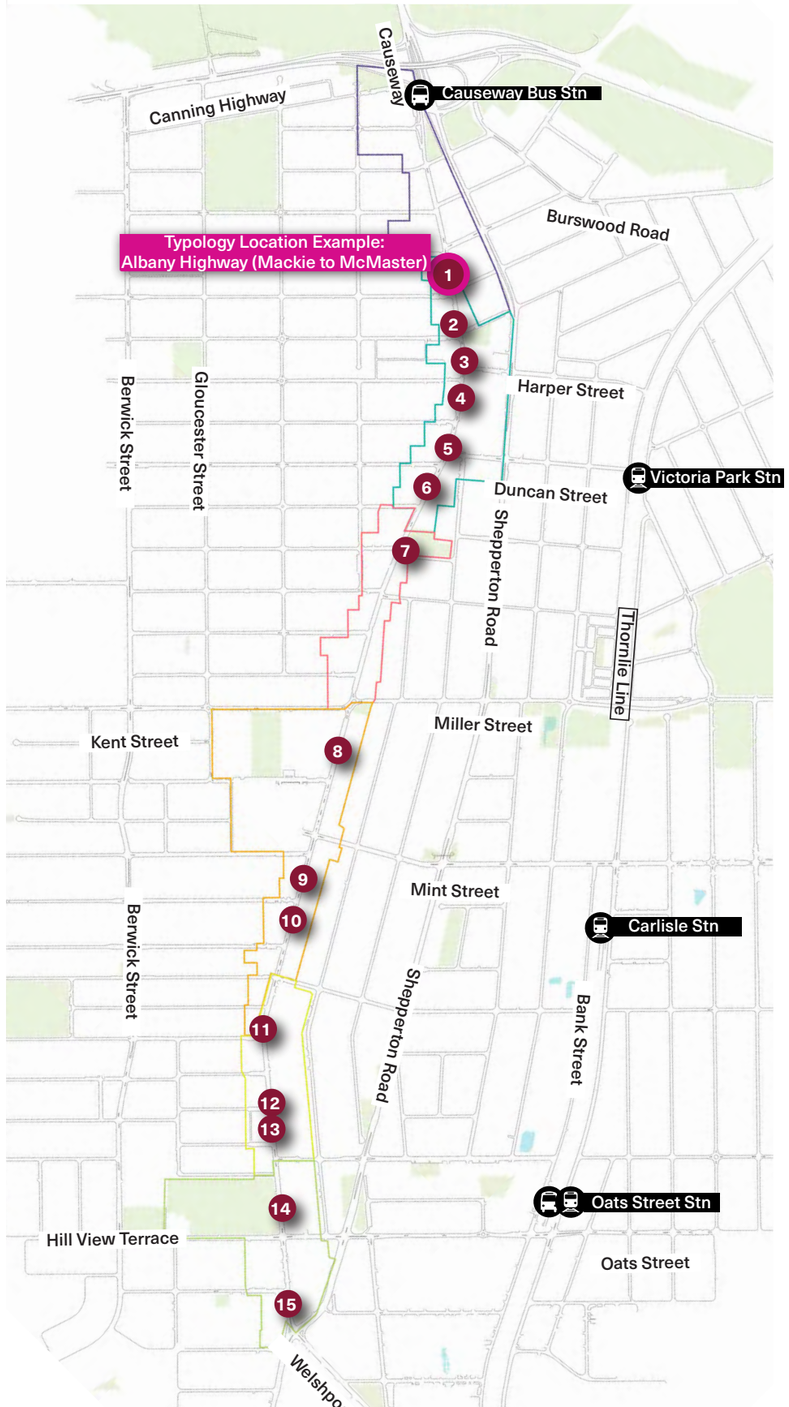


Appendix - Precinct Wide Streetscape Typologies - 05. Bus Build Outs

	NUMBER	LOCATION	DESIRED OUTCOME
	1	Albany Highway (Teddington and Rushton)	Extend kerb and create pinch points where the bus stops on the road rather than a separate bus stopping lane, slowing traffic and creating more verge space for pedestrians.
	2	Albany Highway (Mackie and McMaster)	
	3	Albany Highway (between Harvey and Harper) Near Memorial Gardens	
	4	Albany Highway (between King George and Leonard)	
	5	Albany Highway (between Leonard and Duncan)	
	6	Albany Highway (between McMillan and Duncan)	
	7	Albany Highway (between Temple and Manchester) Adjacent to Read Park	
	8	Albany Highway (between Kent and Sussex)	
	9	Albany Highway (between Basinghall and Canterbury)	
	10	Albany Highway (between Canterbury and Westminster)	
	11	Albany Highway (between Hampshire and Balmoral)	
	12	Albany Highway (between Camberwell and Langler)	
	13	Albany Highway (between Langler and Patricia)	
	14	Albany Highway (between Bailie and Hill View)	
	15	Albany Highway (between Alday and Shepperton)	

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East Vic Park
St James

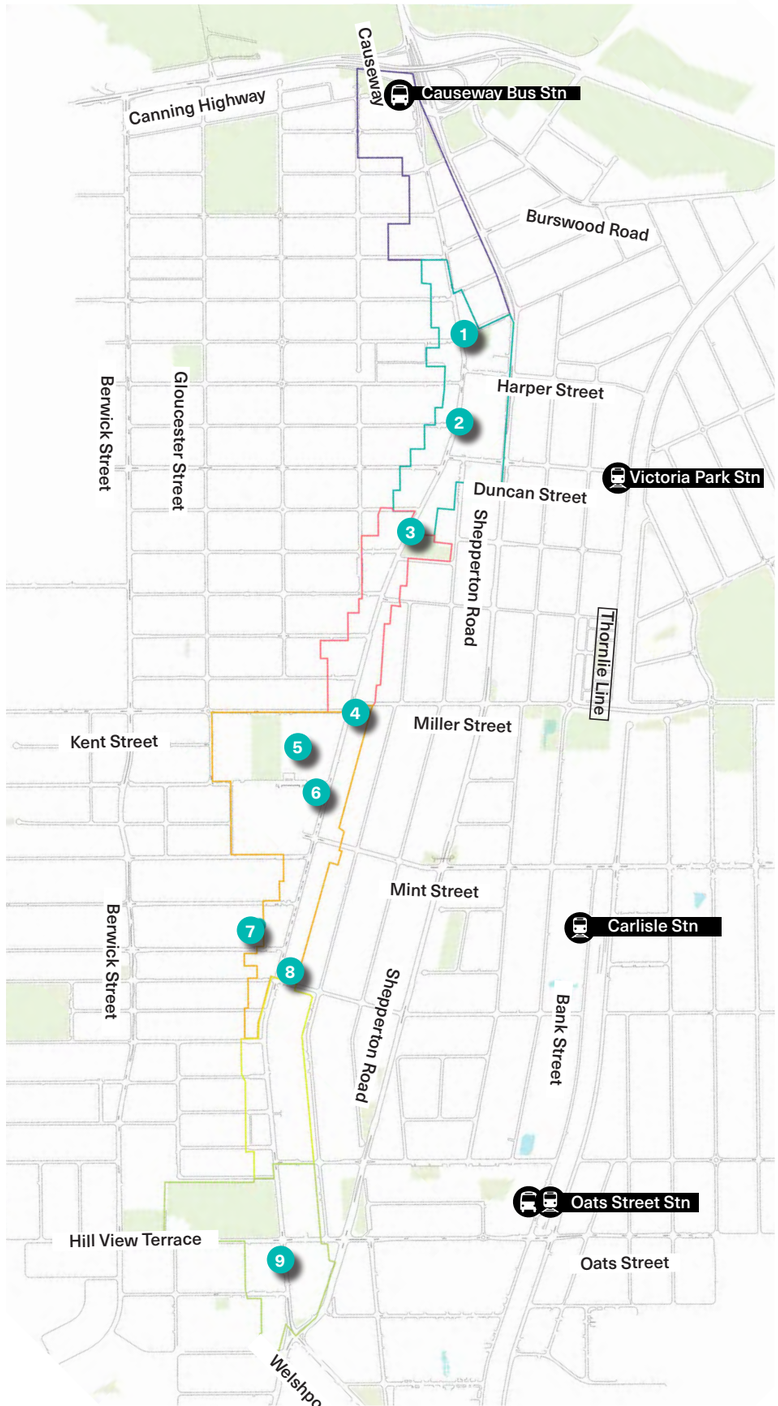


Appendix - Precinct Wide
Major Space Typologies - 01. Plaza

	NUMBER	LOCATION	DESIRED OUTCOME
	1	Harvey Street and Albany Highway intersection - adjacent to Memorial Gardens	As part of corner conversion of Harvey Street, so that the civic function of Memorial gardens can expand and open up to a plaza space on Harvey Street
	2	Albany Highway - Victoria Park Central major site redevelopment	Major site redevelopment to possibly contribute a plaza forecourt to Albany Highway as an entry feature to the site
	3	Albany Highway - Read Park Plaza forecourt adjacent to Yoga Studio and cafe	Potential plaza space at the forecourt of Read Park to improve the edge to Albany Highway
	4	Albany Highway - Isaia Corner upgrade	Future vision for the site to be confirmed. Very strategic site with future civic role. A gateway to AH, could be transformed into a large plaza area with mix of hard and softscape areas.
	5	Albany Highway - McMillan Precinct major site redevelopment	Major site redevelopment and opportunity for future plaza
	6	Albany Highway - Hawaiians Park Centre site - corner of Sussex Street (south)	Convert existing paved area into formalised plaza space as a separate project or as part of the major site redevelopment. Potential for plaza to extend further east along Sussex Street to suppor the Shared Street intervention.
	7	3 Westminster Street - major sump behind Dome Cafe	Major site redevelopment to incorporate future major open space typologies (plaza, green space, laneways) as part of upgrade
	8	Albany Highway - Corner of Duncan Street (north)	Future Plaza space to front Duncan and Albany Highway intersection as part of major site redevelopment
	9	Albany Highway - St James Town Centre and adjacent to Aldi forecourt	Create a formalised plaza space at the forecourt area to Aldi, with integrated kerb extension (short term) and shared space / street (long term)

TABLE COLOUR CODE REFERENCE TO SUB-PRECINCT INTERVENTIONS:

Causeway
Central
East End
Victoria Park
East Vic Park
St James

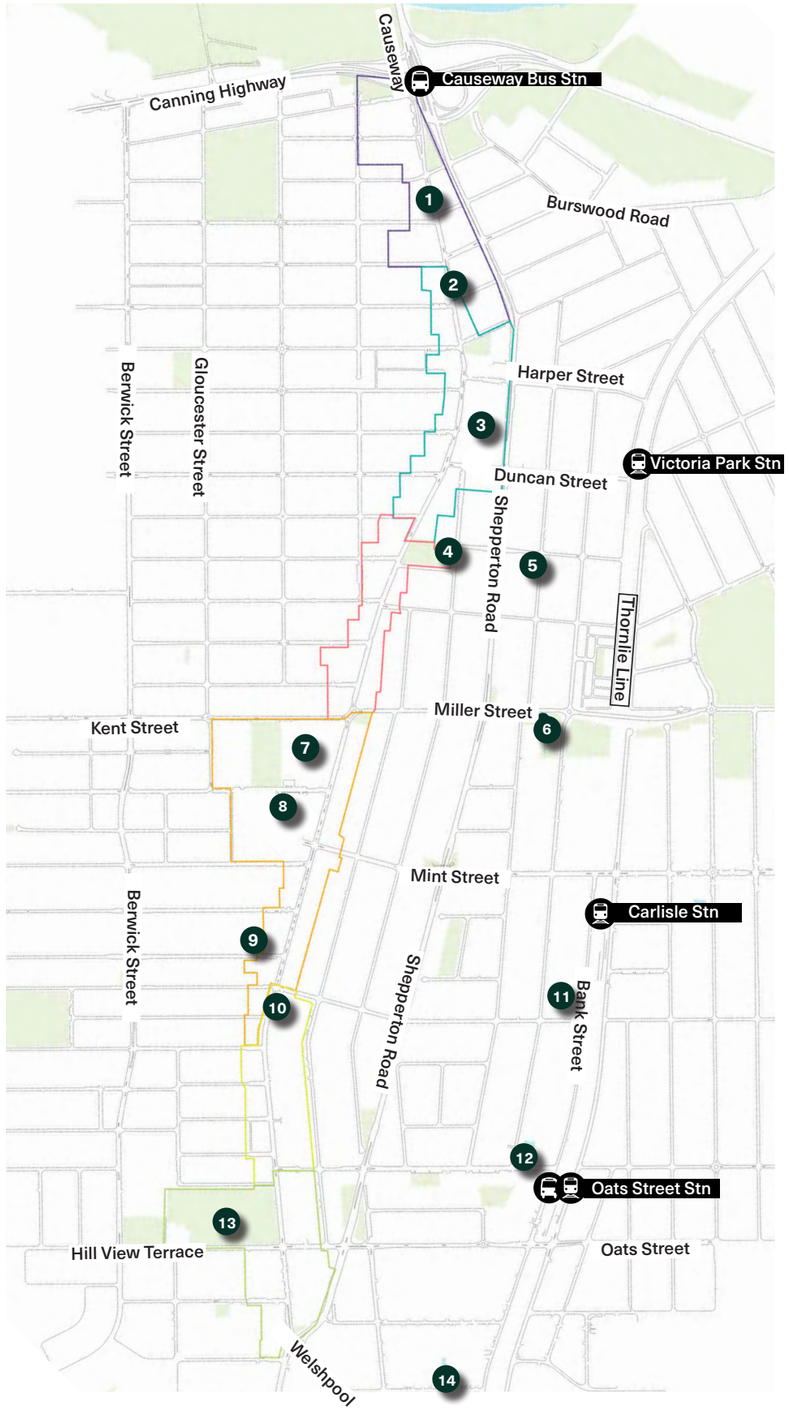


Appendix - Precinct Wide
Major Space Typologies - 02. Green

	NUMBER	LOCATION	DESIRED OUTCOME
	1	Albany Highway (between Twickenham and Teddington) adjoining Victoria Park Primary School and John Hughes Site	Future open space to enable green connection to foreshore, linear green spaces and WSUD gardens
	2	Albany Highway (between Teddington and Rushton)	Future open space to enable green connection to foreshore, linear green spaces and WSUD gardens
	3	Albany Highway (between Harper and Duncan) Victoria Park Central site	Create a new green space as part of future major site redevelopment (potential mixed use) of this key site
	4	Litchfield Street (between Axon and Salford) Read Park sump	Extend Read Park through upgrade
	5	10 Axon Avenue - existing sump	Convert existing sump into future green space / WSUD park. Retain drainage function and create biodiversity
	6	Miller Street (between Beatty and Carnarvon) sump adjacent to John Bissett Reserve	Extension of existing adjacent green space (John Bissett Reserve), expand park edge and function along Miller Street. Convert sump area into green space and create a WSUD park to enhance biodiversity (plant natives and endemics)
	7	Albany Highway (between Kent and Sussex) McMillan Precinct site	Create a new green space as part of future major site redevelopment (potential mixed use) of this key site
	8	Albany Highway (between Sussex and Basinghall) Hawaiian's Park Centre site	Create a new green space as part of future major site redevelopment (potential mixed use) of this key site. Could potentially interface with future Shared Street along Sussex Street. Key space location, potential for amphitheatre and relationship to plaza on the corner of AH and Sussex.
	9	3 Westminster Street - large sump adjoining Nurse Lane	Create a new green space as part of future major site redevelopment (potential mixed use) of this key site. Multiple major space typologies should be provided as part of this redevelopment
	10	United Petrol Station Redevelopment Site	Future Green Space as part of future development
	11	Beatty Avenue and Bank Street sump	Large WaterCorp Sump space conversion into blue green park to improve biodiversity, retaining drainage function is key. Celebrate water, plant wetland species and enhance biodiversity
	12	Beatty and Somerset sump	
	13	Edward Millen Park	Current Master Plan for Park Revitalisation
	14	Forward Street sump	Large WaterCorp Sump space conversion into blue green park to improve biodiversity, retaining drainage function is key. Celebrate water, plant wetland species and enhance biodiversity

TABLE COLOUR CODE REFERENCE TO SUB-PRECINCT INTERVENTIONS:

Causeway
Central
East End
Victoria Park
East Vic Park
St James

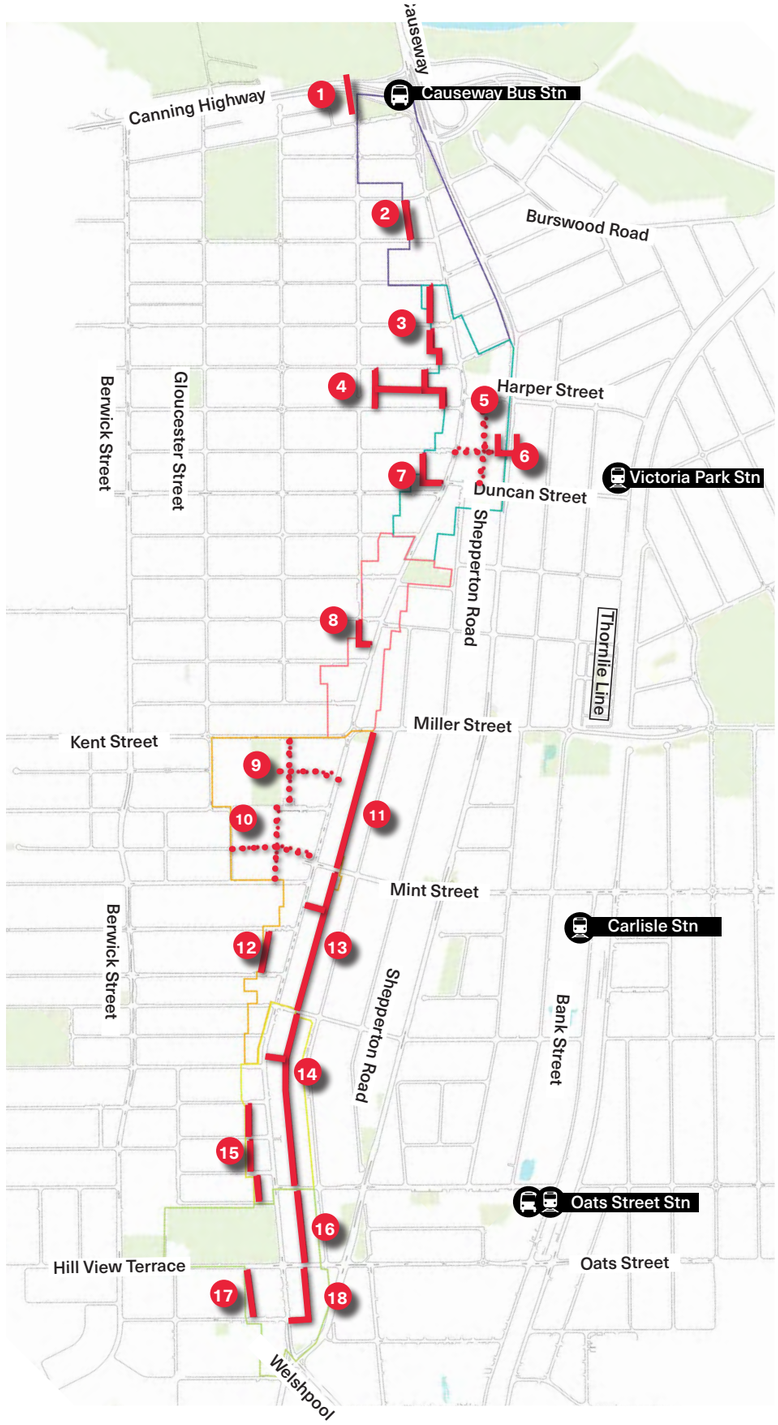


Appendix - Precinct Wide
Major Space Typologies - 03. Laneway

	NUMBER	LOCATION	DESIRED OUTCOME
	1	Canning Hwy Underpass (connecting Hordern Street and McCallum Park)	Enhance existing underpass, with lighting, better CPTED principles, reduce dark spots, public art, sensory experiences and storytelling. Potential to tie into Hordern Street / cycle path upgrade - Enhanced Green Connection
	2	Existing rear lane - connecting Oswald, Colombo and Geddes	Enable stronger connection to foreshore - create alternative cycle and pedestrian network through strong green connections. Possible to embed First Nations narratives, given lost wetlands and springs in the area (to be confirmed by cultural engagement).
	3	Existing rear lane - connecting Cargill, Mackie and McMaster	
	4	Existing Lane 51, 51a and 60	Enhance existing laneway network for residents and commuters, create alternative cycle and pedestrian network with art murals and greenery. Lighting in key places.
	5	Future laneways - Victoria Park Central - within major site redevelopment	Opportunity for hyper active laneway networks to create enhanced permeability and experiences. To feature bespoke furniture, feature lighting, paving, active edges etc.
	6	Shepperton Road Underpass (connecting Victoria Park Central and Ursula Frayne)	Enhance existing underpass, with lighting, better CPTED principles, reduce dark spots, public art, sensory experiences and storytelling. Potential to tie into future laneway network with Victoria Park Central redevelopment.
	7	Lane 42a - connecting Leonard and McMillan	Enhance existing laneway network for residents and commuters, create alternative cycle and pedestrian network with art murals and greenery. Lighting in key places.
	8	Future laneway - 555-559 Albany Highway - possible laneway connection to Hordern Street (north)	Consider and investigate a potential alternative through site link - linking State Street north to Hordern Street. Could use vacant site to advantage.
	9	Future Laneways - McMillan Precinct - within major site redevelopment	Opportunity for hyper active laneway networks to create enhanced permeability and experiences. To feature bespoke furniture, feature lighting, paving, active edges etc.
	10	Future Laneways - Hawaiian's Park Centre site - within major site redevelopment	
	11	Isaia Lane - connecting Miller to Mint	Enhance existing laneway network for residents and commuters, create alternative cycle and pedestrian network with art murals and greenery. Lighting in key places.
	12	Nurse Lane - connecting Canterbury to Westminster	
	13	Iceworks Lane - connecting Dane to Mint	
	14	Terminus Lane - connecting Dane to Somerset	
	15	Existing rear lane network - connecting Balmoral, Camberwell, Langler, Patricia and Ballie	
	16	Existing rear lane - connecting Somerset and Oats	
	17	Existing rear lane - connecting Hill View and Alday	
	18	Existing rear lane - connecting Oats and Shepperton	

TABLE COLOUR CODE REFERENCE TO SUB-PRECINCT INTERVENTIONS:

Causeway
Central
East End
Victoria Park
East Vic Park
St James

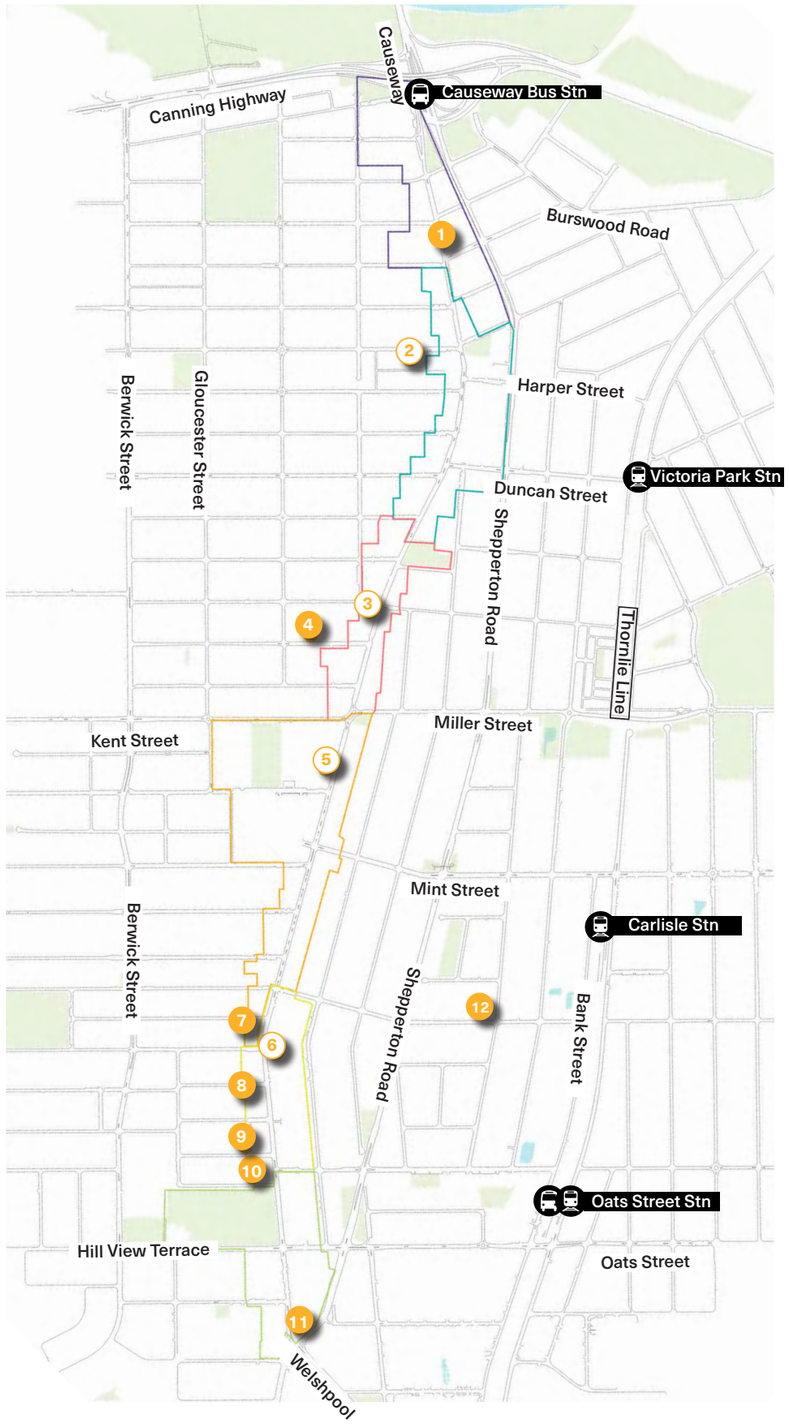


Appendix - Precinct Wide
Major Space Typologies - 04. Micro-park

NUMBER	LOCATION	DESIRED OUTCOME
1	Albany Highway (between Twickenham and Teddington) - adjacent to primary school	Micro-park - neighbourhood scale as part of short term in anticipation of future major site redevelopment
2	10 McMaster Street - vacant lot	Short term conversion of vacant lot to micro-park to unlock underutilised space whilst site is waiting to be developed. Private Lot.
3	555-559 Albany Highway - vacant lot	Short term conversion of vacant lot to micro-park to unlock underutilised space whilst site is waiting to be developed. Private Lot.
4	19 State Street sump	Sump to micro-park open space to provide additional open space for neighbourhood
5	Albany Highway sump (between Kent and Sussex) - within McMillan Precinct	Remove fencing and convert sump into micro-park in short term to unlock an underutilised space whilst McMillan Precinct is developed
6	930 to 938 Albany Highway - vacant lot	Short term conversion of vacant lot to micro-park to unlock underutilised space whilst site is waiting to be developed. Private Lot.
7	6 Willis Street sump	Conversion of sump to micro-park open space to provide additional open space for local community
8	Camberwell Street sump	
9	1 Patricia Street sump	
10	1 Ballie Street sump	
11	Albany Highway / Shepperton Road open space - existing space with palm trees - adjacent to McDonalds	Embellish existing space as a town centre pocket park - the gateway to AH and St James Town Centre
12	79 Dane Street sump	Conversion of sump to micro-park open space to provide additional open space for local community

TABLE COLOUR CODE REFERENCE TO SUB-PRECINCT INTERVENTIONS:

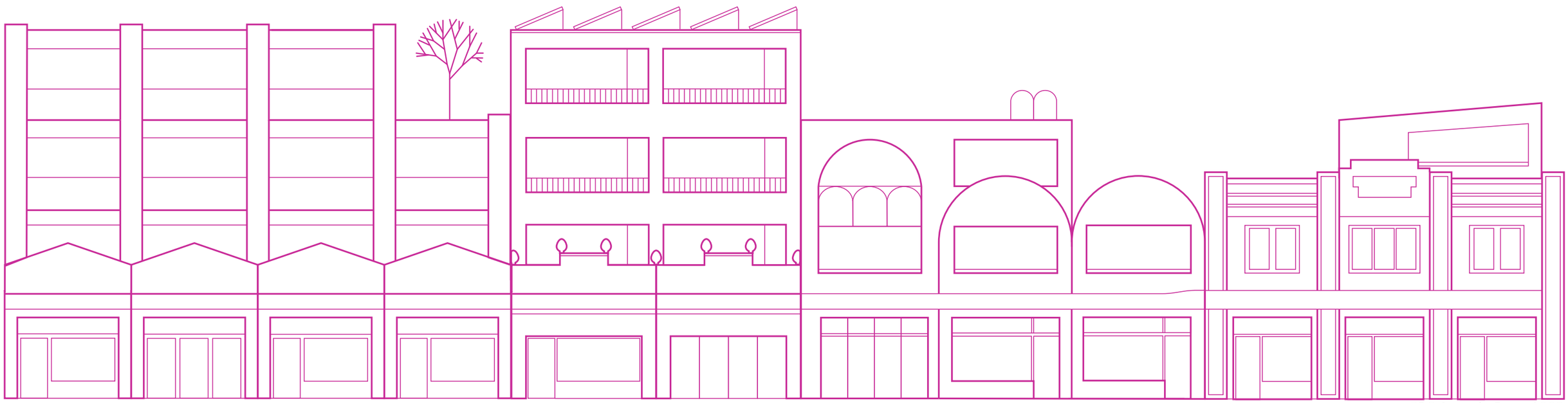
Causeway
Central
East End
Victoria Park
East Vic Park
St James



ASPECT Studios

Albany Highway

Built Form Strategy



Introduction

This Built Form Strategy outlines specific proposals for how development should occur on Albany Highway in the years to come. It lays the groundwork for the creation of a sustainable and productive place that meets the needs of the community now and into the future. It reflects the outcomes of scenario testing through engagement with a Community Reference Group (CRG) supported by technical analysis.

The strategy has been prepared as a key input into the Albany Highway Precinct Structure Plan (PSP), which will ultimately include specific planning controls that regulate building design, size, location and community benefit requirements.

The strategy provides a framework to guide the preparation of these controls, taking into account the community's preferences and aspirations. It includes formalised built form principles and illustrates expectations and ambitions for development outcomes within each of the Highway's six precincts.

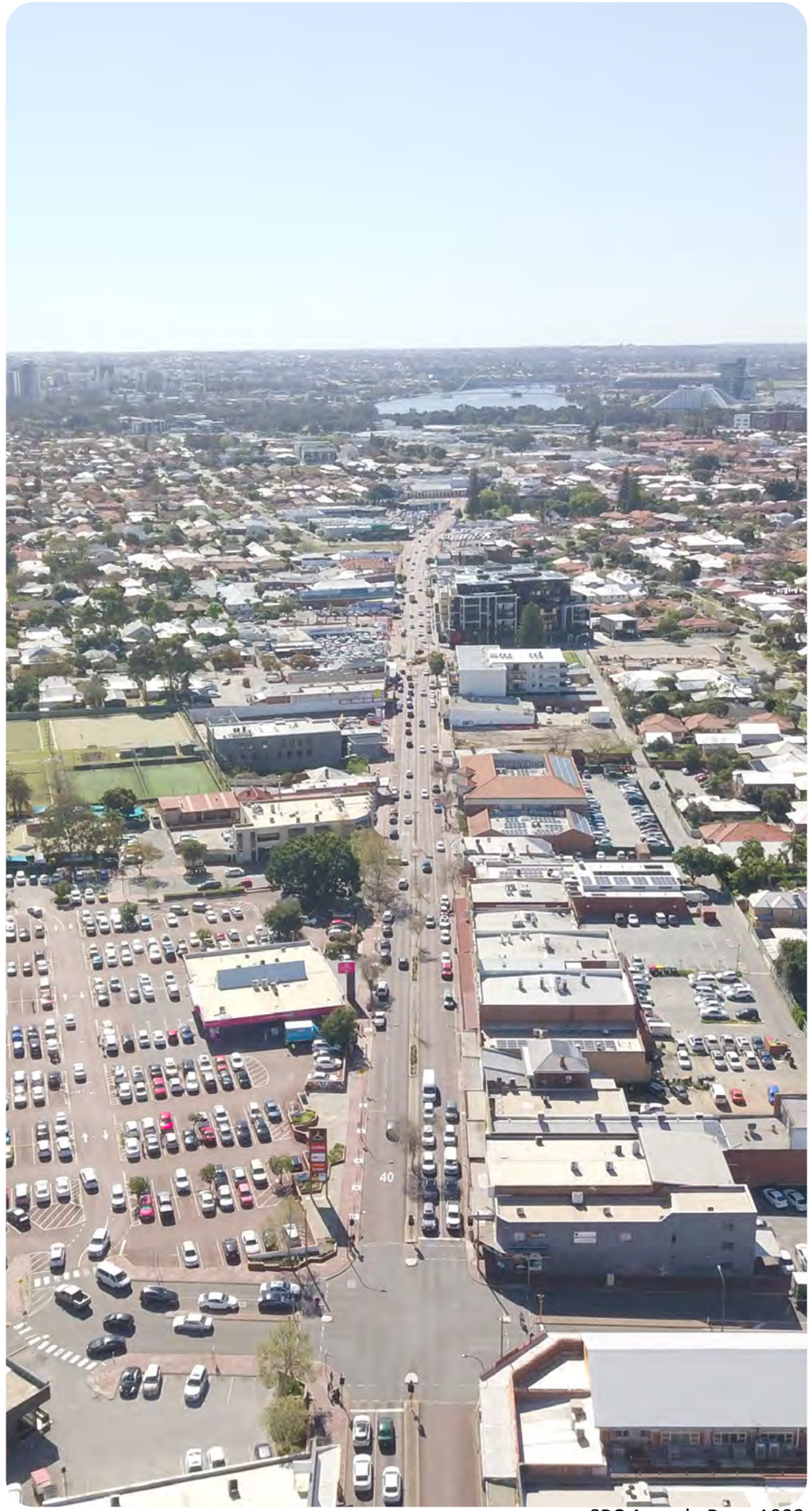
Drafting of the PSP will be informed by feedback received on this document, along with other ongoing initiatives aimed at improving the Highway's land use, public realm, urban ecology and movement network. The resulting PSP will be subject to further public advertising and review prior to finalisation.

Why Change?

The current planning controls for Albany Highway have failed to achieve the desired outcomes, as evidenced by the low rates of dwelling growth, inconsistent architectural quality, limited retail diversity, and low levels of local employment.

Testing and evaluation of the current TPS1 Planning Framework identified the following issues:

- No specific sustainability standards or community benefit requirements for new development
- Current building heights allow tallest development in constrained areas, overshadowing key public spaces
- Restrictions on major sites limit opportunities for renewal and 'critical mass' of population
- Uniform built form requirements along the Highway do not respond to diverse urban context
- Lack of protections for contributory heritage shopfront fabric risks loss of character over time
- Limited guidance of neighbourhood transition from Highway-fronting development to surrounding residential areas
- No guidance regarding preferred land use outcomes to ensure economic resilience and grow local employment
- Constrained capacity to achieve WA government infill targets and Town economic and social policy objectives



Implications for Growth

The draft Built Form Strategy proposes an increase in Albany Highway's maximum development capacity through greater building height and plot ratio. This change is expected to increase the number of dwellings and amount of employment-generating floorspace within the activity centre, and by extension the number of residents and workers in the local area.

This increase in development capacity does not necessarily reflect the amount of development that is likely to occur in the short or medium term. Recent development activity in the centre has been limited, with analysis by Colliers (2021) of new unit supply between 2009–21 identifying an average completion rate of just 40 units per year.

Future development will occur in an uncertain economic environment with significant competition from other inner-city areas that are implementing similar policy and planning frameworks. Significant competing supply is also expected to be delivered locally at Burswood Peninsula and within Station Precincts associated with Metronet.

The potential for development in the precinct is further constrained by the Highway's success as a food and beverage destination and its fragmented land ownership, factors which sustain relatively high underlying site values compared to similar activity centres.

While strong economic fundamentals are forecasted for Western Australia over the coming decades and Albany Highway has positive locational attributes, commercial analysis prepared by Cygnet West (2022) suggests it will take decades for market conditions in the area to reach optimal built form delivery as contemplated by this strategy.

A significant increase in the rate of development and supply of new dwellings within the centre is therefore considered unlikely over the short term, irrespective of changes made to the planning framework.

To provide insight into the potential development outcomes of the Built Form Strategy, two growth scenarios for Albany Highway have been developed:

- A current growth scenario which assumes a continuation of the historical trend of 40 new units per year within the centre; and
- An increased growth scenario which assumes that a doubled growth rate of 80 new units per year will occur due to unforeseen improvements in market conditions.

Growth has been projected over a time period of 2023 to 2033, which aligns with the 10-year operational life of the Precinct Structure Plan.

As presented opposite, these growth scenarios suggest that the Built Form Strategy will likely result in a gradual development within the Precinct, with an anticipated increase in precinct population of between 18% and 36% by 2033 with 400–800 new units completed in this period.

Note these are indicative estimates and should not be considered a comprehensive forecast of expected development activity.

Albany Highway Today (2023)

1,860 Dwellings

4,630 People

Current Growth Rate (2023–33)

2,260 Dwellings (+400)

5,470 People (+840)

Increased Growth Rate (2023–33)

2,660 Dwellings (+800)

6,310 People (+1,680)

Approach

Below is a summary of the key steps taken to prepare the Built Form Strategy.

Heritage Character and Major Sites
The precinct benefits from several large, consolidated land holdings, which are well placed to accommodate the majority of future growth. This allows for a highly context sensitive approach within heritage listed and contributory locations.

Technical Assumptions
To ensure a clear and feasible approach to testing, key built form assumptions were established. This process involved reviewing State policy and existing precincts in the Central Sub-region to determine key metrics and benchmarks, such as plot ratios and floor-to-ceiling heights. Additionally, the team documented assumptions related to gross floor area and unit sizes and conducted a suitability analysis of the site as a baseline for development scenarios.

Existing Controls Review
Current TPS1 provisions were modelled and assessed to identify positives and weaknesses within the established planning framework. This testing process included urban design analysis and yield testing and was informed by technical heritage and feasibility inputs.

Approved Development and Exemplar Review
A technical review of recent developments within the precinct and exemplar projects elsewhere identified priority reforms and documented broader performance issues with current planning provisions.

Principles Development
Based on the agreed direction of the Albany Highway Tomorrow report, a series of built form strategies were further refined and developed. This process translated qualitative design objectives into measurable metrics and standards to guide the testing process.

3D Scenario Modelling
Testing was based on a digital model of the site assembled by Hatch RobertsDay which accurately records existing development, landform, tree height and location and solar orientation. This platform allows accurate analysis of visual impact, overshadowing effects and growth implications from each testing scenario.

Scenario Testing and Refinement
Through engagement with a Community Reference Group (CRG) consisting of local residents and business owners, three built form scenarios were created and assessed to establish the draft directions in this strategy.

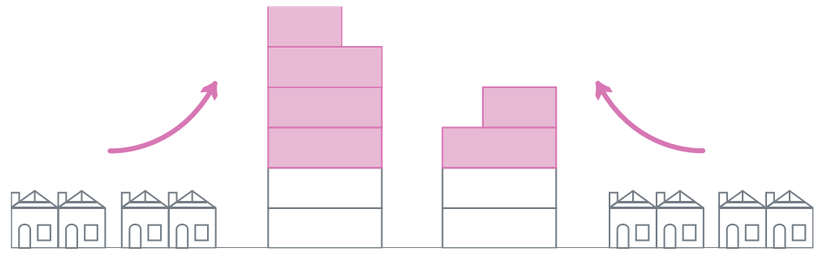
Initially, a Concentrated Scenario, focusing on future growth in select locations, and a Distributed Scenario, promoting lower intensity growth across a broader area, were tested. This led to the Combined Scenario, which was the CRG's preferred outcome and set the draft directions in the strategy. The scenarios are illustrated in the diagram shown opposite.

Commercial Property Review
Cygnet West's expert advice was that elements of the Distributed and Concentrated scenarios needed to be combined, providing the flexibility to respond to changing market conditions and demographics over time. Specifically, more likely lower density development inherent in the Distributed Scenario in the short to medium term and higher density on major sites inherent in the Concentrated Scenario longer term.

Public Consultation
Following public advertising, the Built Form Strategy will be amended and used to inform the preparation of a draft Precinct Structure Plan. This plan will be released for further comment in due course.

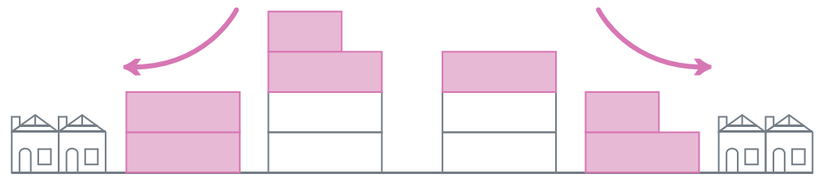
Scenario 1
Concentrate Growth

Contain the extent of growth to the Highway only, with demand met through increased development on major sites



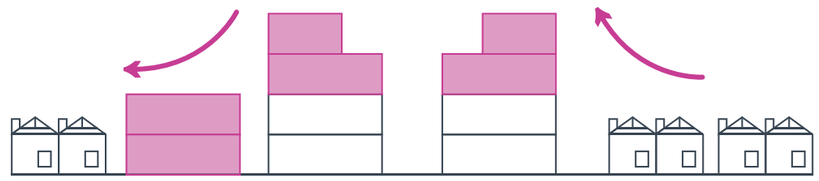
Scenario 2
Distribute Growth

Limit maximum building height, with future growth accommodated both along the Highway and in some surrounding areas



Built Form Strategy
Combined Scenario

Varied approach in response to precinct character, with a combination of concentrated and distributed approaches proposed along the Highway



Community Reference Group Feedback

The Distributed and Concentrated growth scenarios were reviewed by the Albany Highway Community Reference Group (CRG) as part of the urban design and technical planning process. CRG feedback was provided through three convened sessions, based on which the development of a third Combined Scenario was undertaken which sought to capture the balance of views across the CRG whilst having regard for technical and commercial property advice and policy requirements.

Feedback provided by the CRG was extensive, with key themes and questions falling into three broad areas as summarised below.

Establishing the need for development

- Addressing local priorities such as a lack of suitable housing for young people and the aging
- Prioritising economic drivers by diversifying retail and employment opportunities
- Maintaining a humble and comfortable character

Addressing distribution and impact

- Ensuring fairness and equity for both communities and developers
- Determining whether benefits and impacts of growth should be distributed widely or limited in scope
- Understanding how development transitions to surrounding neighborhoods

Maximising Community Benefit

- Essential need for practical and transparent mechanisms
- Ensuring additional height delivers meaningful benefits such as additional greenspace
- Prioritizing culture, art, indigenous heritage and public realm improvements

Built Form Attributes

The process of developing the concept scenarios entailed a thorough examination of urban design opportunities and constraints along the Highway through iterative design testing. This process highlighted the following eight essential built form attributes that hold significant importance in ensuring the success of future development on Albany Highway.

Clear parameters and objectives for each attribute were developed to guide the concept scenarios and inform future urban development along Albany Highway as part of the overall Built Form Strategy. These attributes are summarised on the following page.

a Height and Plot Ratio

b Heritage Response

c Street Wall

d Upper Level Setbacks

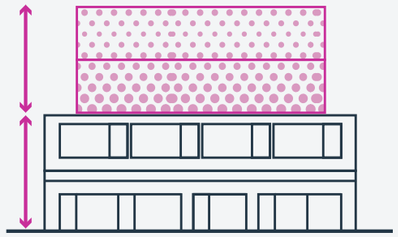
e Street Interface

f Solar Access

g Scale Transition

h Major Sites

a Height and Plot Ratio



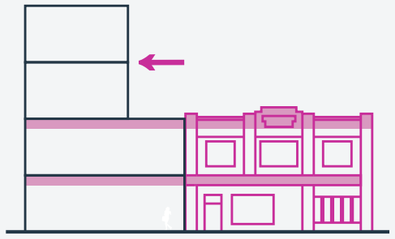
Height and plot ratio controls work together to manage building bulk and form. Height controls provide clarity on growth expectations for both the community and developers, while floorspace controls encourage design responses that are contextually appropriate.

Key Principles

Height and plot ratio provisions will achieve the following outcomes:

- Reflect community feedback relating to areas of desired transformational change and limited change, with lower heights in the Victoria Park, East Victoria Park and East End precincts and potential for greater heights in the Causeway, Central, and St James precincts
- Emphasise prominent corners and distinguish highly visible sites to add variety, visual interest and a recognisable sense of place along the Highway
- Concentrate height within identified major sites, with heights transitioning down to mid-rise highway-fronting areas and low-scale residential areas

b Heritage Response



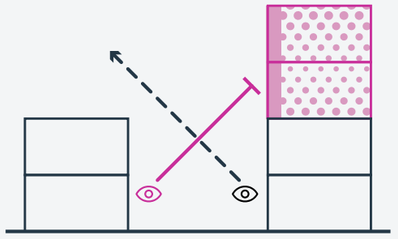
Preserving heritage buildings and features is essential to maintaining a sense of place. Heritage controls guide how new buildings relate to nearby heritage sites and safeguard contributory features such as historic shopfronts.

Key Principles

Heritage provisions will achieve the following outcomes:

- Protect and reinforce the heritage value of the Highway's key heritage-listed buildings while encouraging restoration and adaptive reuse
- Maximise retention and conservation of unlisted contributory fabric including historic shopfronts and parapets within new development to maintain streetscape grain and character
- Ensure height and architectural style of development adjoining heritage sites is sympathetic in form, scale and materiality
- Achieve spatial separation between original and new built fabric to maintain heritage integrity

c Street Wall



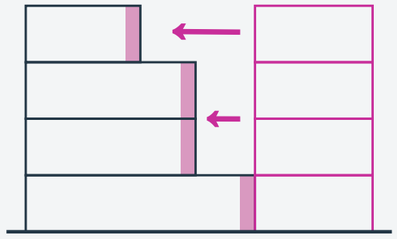
Lower building heights at street level can help to create a comfortable and human-scale experience for pedestrians. Upper levels should be sufficiently set back to distinguish between the street wall and the building elements above.

Key Principles

Street wall provisions will achieve the following outcomes:

- Contextualise streetwall height to the surrounding built environment, taking into account the scale and character of existing buildings and spaces.
- Promote variety and interest through differing streetwall heights along the Highway, while ensuring consistency and coherence within precincts and at points of transition
- Ensure differentiation between the streetwall and upper building elements by establishing consistent front setback requirements above streetwall height

d Upper Level Setbacks



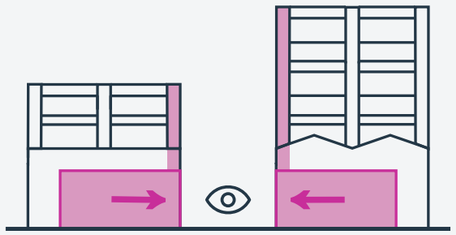
Side boundary setbacks can increase solar access to the street and support cross-ventilation. Equally, allowing taller boundary walls can improve development outcomes on small sites and create an interesting urban character.

Key Principles

Upper level setback provisions will achieve the following outcomes:

- Where additional height is to be permitted above the street wall, encourage side setbacks to mitigate the perceived bulk of additional height
- Maintain daylight penetration and ventilation to the street between upper building levels where lot width permits
- Support good ventilation and outlook for residential dwellings by minimising internally oriented dwellings
- Allow nil (attached) side setbacks in narrow-frontage areas to protect and emphasise existing fine-grain character

e Street Interface



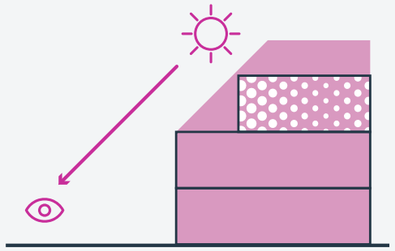
Controlling the manner in which new development addresses and enlivens streets and laneways can support a lively and diverse environment. Buildings should make a positive contribution to the street and be responsive to existing character and land use.

Key Principles

Street interface provisions will achieve the following outcomes:

- Strategically identify key focus areas for ground floor retail and hospitality to avoid dispersal and oversupply of suitable tenancies
- Promote alternative ground floor uses outside of core retail areas that support employment, such as office space, creative studios, light industrial units and community services
- Ensure ground floor design is efficient, maximising the available floorspace for commercial tenancies; and high quality, through the use of high quality materials
- Promote activation of laneways with commercial and residential uses alongside servicing

f Solar Access



Building envelope controls can prevent excessive overshadowing of critical street areas and public space. This can be achieved by prioritizing areas that require higher protection levels to achieve a fair and balanced outcome.

Key Principles

Solar Access provisions will achieve the following outcomes:

- Protect important open spaces and key sections of Albany Highway from overshadowing while permitting overshadowing elsewhere
- Balance overshadowing with development viability and the achievement of critical mass
- Adopt the September Solstice (22 June) as the measure used to determine overshadowing impacts, to gain an understanding of the potential impact when shadows are at their longest and most impactful.
- Adopt a reasonable approach to overshadowing impact focused on preserving a minimum of 5 hours of uninterrupted access

g Scale Transition



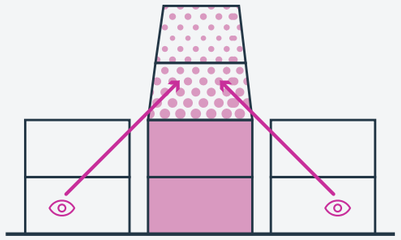
Transitional controls are used to mitigate amenity impacts between new higher-density development and adjacent low-scale residential properties. These controls use a combination of ground floor setbacks, built form envelope controls and solar controls to provide a sensitive interface to these neighbouring properties.

Key Principles

Neighbourhood interface provisions will achieve the following outcomes:

- Share transitional arrangements fairly by allowing more development on adjacent lots where possible, to avoid overly constraining key Highway sites
- Require ground level rear setbacks where no laneway exists to accommodate landscaped areas and deep soil zones
- Manage sensitive direct interface areas where no laneway or ROW exists with greater setbacks

h Major Sites



Specific controls are required to ensure that large sites add value to the Highway and enhance its distinctive character while accommodating significant development that delivers new amenities and community benefits.

Key Principles

Major site provisions will achieve the following outcomes:

- Promote greater development height where this adds diversity, visual appeal, and a memorable sense of place to the Highway
- Ensure the delivery of significant community benefit and public amenity that is commensurate with the scale of development
- Consolidate height within Major Sites where visual impact and overshadowing is most limited, with suitable transition in scale to adjoining areas
- Require the preparation of Local Development Plans to establish detailed and separate controls to 'typical' sites on account of their complexity and importance to realising the vision for Albany Highway.

Built Form Strategy
Technical Inputs

Informing development of the Built Form Strategy is technical advice received in built and cultural heritage, development feasibility, and retail and commercial development. The following technical reports and strategies have been prepared and are summarised on the following pages:

Heritage

Griffiths Architects

- Albany Highway Precinct Structure Plan Preliminary Heritage Analysis (July 2021)
- Albany Highway Precinct Structure Plan Preliminary Heritage Control Recommendations (September 2022)

Development Feasibility

Cygnet West

- Albany Highway Precinct Structure Plan Land Use Feasibility (14 November 2022)

Economic, Retail and Employment

Pracsys

- Draft Albany Highway Secondary Centre Economic, Retail and Employment Strategy (November 2022)

Heritage



Victoria Park Town Centre



East Victoria Park Town Centre

Griffiths Architects (2022) prepared a Preliminary Heritage Control Recommendations report to provide guidance on heritage management and change within the Albany Highway precinct, including the recommendation of additional places for inclusion in the Local Government Inventory and development controls for future development in registered and contributory places. Albany Highway is generally characterised by single and two-storey retail and commercial buildings of varying eras and architectural styles. The character of the built form and prevailing development pattern positively contributes to the character of the precinct through form, scale, materiality and land use.

The report finds that there are 8 places listed on the State Heritage Register, a further 14 places listed on the Town's Heritage List, and the report recommends an additional 6 places for inclusion in this. The State Registered places comprise hotels, public open spaces and institutional/government buildings such as schools, police stations and post offices. The Local Heritage places are primarily historic shopfronts, with some government/institutional, POS and landscape elements. The vast majority of registered places are located in the Victoria Park town centre which, along with the East Victoria Park centre comprises the bulk of contributory streetscape.

Not all buildings in the study are of heritage significance, however they may still contribute heritage value to the character of the street. These places have been assessed as contributory frontages, and an approach consistent with individual heritage items for future development is recommended.

The report proposes specific setback and building height controls for development on heritage and contributory places:

- Nil street setback
- Upper levels setback min. 3m from existing parapet
- Max height 3–4 storeys (4–5 storeys for corner sites). Generally aligned/sympathetic to existing heritage/contributory development.

The report further recommends detailed built form controls including shopfront detailing/proportions, awnings, and for development abutting State Registered places. Elsewhere there is less concern for building height, particularly in major sites, but it is important to establish a human scale street wall height podium with tower elements set back.

Review of Commercial Feasibility

Cygnet West (2022) conducted a development feasibility review of both the Distributed and Concentrated growth scenarios that were evaluated in consultation with the Community Reference Group, to inform the Built Form Strategy.

This review considered the commercial feasibility and merit of the framework, finding that the overall approach and contemplated scale of development is appropriate and likely to be responsive to longer term market conditions.

Despite significant development feasibility challenges in the short term due to high land prices and an abundance of competing stock in the surrounding area, it is recognised that the Precinct Structure Plan (PSP) should not be solely governed by short-term market conditions. Rather, it should seek to guide development over the long term with periodic review as the economy, property market, and demographics change.

Analysis recommends that the PSP should offer sufficient flexibility to support both the Distributed and Concentrated growth scenarios in order to encourage smaller scale development activity in the short term while maintaining the capacity to attract transformational development if and when economic conditions permit. The proposed combined approach outlined by the Built Form Strategy, which incorporates elements from each scenario, is supported on the basis that this would establish a time continuum over which the market can engage and deliver aspects of each scenario.

Cygnet West identifies the use of wider geographic precincts and the inclusion of properties that sit away from the Highway, as contemplated in the Distributed Scenario, as critical measures that will allow development to commence in the periphery of the precinct where land values and property sizes are more conducive to development.

Against these short term opportunities, Cygnet West also supports major sites being identified for significant development as contemplated under the Concentrated Scenario. These sites are supported as longer-term opportunities as market interest in Victoria Park matures. A site-specific planning approach for these major sites, where superior plot ratio and height is available subject to meeting agreed built form, heritage, environmental, streetscape, and landscape performance criteria, is also supported.

Cygnet West's commercial testing has contributed to the formulation of broad building typologies applicable to the Built Form Strategy. While variations related to key built form attributes such as setbacks and streetwall height exist, the strategy primarily adopts the four typologies shown below based on urban design testing and CRG feedback.

Garden Apartment



A residential building between 3 and 8 storeys with landscaped front, side and rear setbacks designed to sensitively interface with neighboring lots. Residential units at ground level face both the street and rear laneway. Suitable for select sites that do not have frontage to Albany Highway.

Low Rise



A low rise mixed-use building between 4 to 6 storeys with flexible commercial or retail spaces facing the street and residential or commercial laneway interface. Suitable for small sites and areas requiring a sensitive built form response along Albany Highway.

Mid Rise



A mid rise mixed-use building between 6 to 10 storeys with flexible commercial or retail spaces facing the street and residential or commercial laneway interface. Suitable for larger sites in less constrained areas along Albany Highway.

High Rise



A high rise building above 10 storeys limited to identified major sites on Albany highway, with flexible commercial or retail spaces facing the street and on podium levels. Subject to approval of a Local Development Plan demonstrating that development is commensurate with public benefit.

Retail and Commercial Floorspace Strategy

Pracsys (2022) conducted a comprehensive gap analysis and forecast modelling to determine future retail and commercial floorspace needs within the Albany Highway precinct based on the growth scenarios. This analysis has provided key estimates for future floorspace provision which will be used to ensure development provisions provide for land use diversity and a net increase in precinct commercial floorspace and employment.

Present Gaps and Opportunities

A Comparison of Albany Highway against other centres in the Central Sub-region through the use of floorspace to population ratios indicates that the precinct currently has an over-provision in Storage, Other Retail, and Health and Community Services, while there is a relative under-provision in Office, Shop, Entertainment and Culture, and Service Industry uses. To address these gaps, key growth opportunities have been identified, including:

- Encouraging short-stay accommodation and amenities aimed at tourists, thereby extending Perth's visitor economy to Victoria Park.
- Facilitating growth in office floorspace by capitalising on local expertise in professional services, including emerging cluster in mining and construction businesses at Burswood South.
- Retaining and optimising car retail as a ground floor component in mixed-use developments.
- Stimulating the night-time economy by expanding entertainment and cultural floorspace, such as small bars, art galleries, and performance venues.
- Providing essential population services, such as childcare and health services, to prevent leakage to other commercial areas.
- Delivering aged care facilities to cater to the local ageing population, benefiting from close connections to established retail centres.

Forecast Floorspace Need

Pracsys employed a retail gravity model to forecast the supply and demand for retail floorspace within the precinct's catchment. Results suggest that under the Combined Scenario, the precinct could support an increase in Shop/Retail floorspace of up to 33,700 sqm with an additional 21,600 sqm in Other Retail floorspace at full build-out (assumed to be at 2042).

Supportable non-retail floorspace was estimated by addressing the identified floorspace gaps by 2027 and projecting growth to 2042 using Shop/Retail growth. This identified capacity to significantly increase non-retail floorspace by 88,000 sqm over the same period. The composition of this projected non-retail floorspace is predominantly Office (58%), Health and Community Services (15%) and Entertainment (9%) space.

Employment Implications

The precinct's Employment Self-Sufficiency (ESS) was estimated as 146% using ABS Census 2016 data. The Town of Victoria Park is currently above the average ESS for the Central Sub-region which reflects its proximity to the CBD.

Under the Combined scenario, population-driven growth in retail and non-retail floorspace are estimated to supply an additional 4,500 jobs to the precinct. However, this results in a gap needing approximately 3,700 more strategic jobs to maintain ESS. Pracsys identifies a need for an additional 91,000 sqm of strategic office floorspace as well as an estimated 19,000 sqm of hotel or serviced residential floorspace to address this gap.

Total Floorspace Needs Summary

The analysis suggests a maximum supportable increase of 34,000 sqm in shop retail floorspace and 22,000 sqm in Other Retail floorspace. An additional 88,000 sqm of non-retail floorspace is deemed viable based on population growth, with a further 110,000 sqm of strategic non-retail floorspace required to maintain ESS. This results in a total maximum increase of approximately 250,000 sqm, doubling the existing retail and commercial floorspace within the precinct.

Retail Floorspace (sqm)			Commercial Floorspace (sqm)		
	Shop Retail	Other Retail (e.g. Car Sales)	Office	Other Commercial (e.g. Health)	Hotel Accommodation
Current (2022)	56,500	36,000	92,800	54,200	0
Maximum Supportable (2042)	90,200	57,600	237,900	86,600	19,100
Increase (%)	33,700 (60%)	21,600 (60%)	145,100 (156%)	32,400 (60%)	19,100

Total Floorspace (sqm)	
Current (2022)	239,500
Maximum Supportable (2042)	491,400
Increase (%)	251,900 (105%)

Built Form Strategy

Precinct Framework

Far from being a single uniform precinct, Albany Highway is a complex and layered place made up of many distinct neighbourhoods. The Built Form Strategy responds to the six previously identified precinct areas along the Highway, which are based on analysis of established character.

Proposed development outcomes for each precinct have been tested and refined to create a diverse and varied future urban character while maintaining the positive attributes of each precinct's existing character.

These areas, as shown in the diagram opposite, will form the basis of the Precinct Plan's structure and implementation, helping to create a diverse place with varying character and differing degrees of change along the Highway's length.

1. St James: Between Welshpool Road and Ballie Avenue
2. East End: Between Ballie Avenue and Hampshire Street
3. East Victoria Park: Between Hampshire Street and Miller Street
4. Central: Between Miller Street and McMillan Street
5. Victoria Park: Between McMillan Street and Harvey Street
6. Causeway: Between Harvey Street and Canning Highway

Precinct Boundary Definition

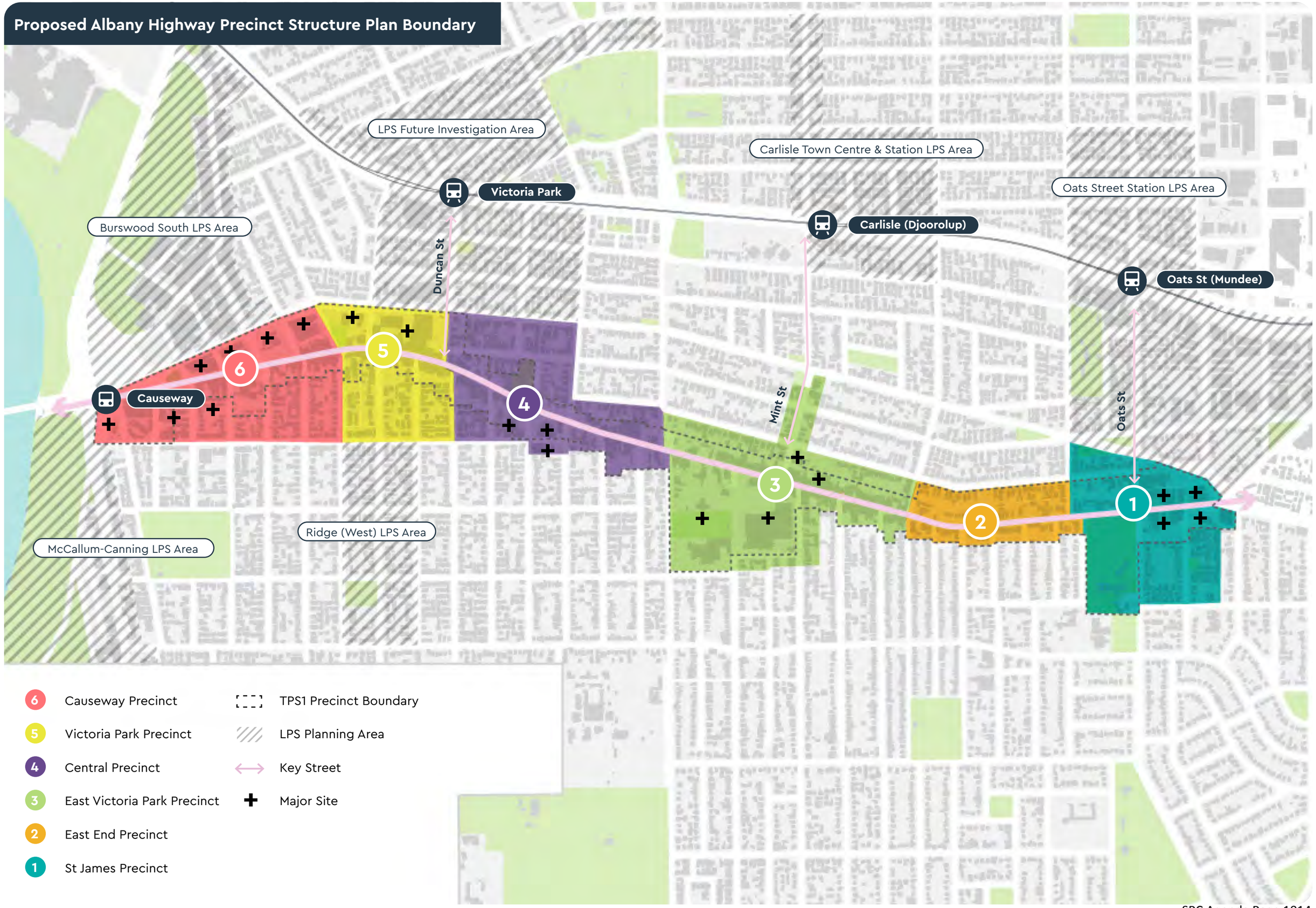
Following consultations with stakeholders, a series of adjustments to the precinct boundary are proposed. The original precinct boundary is shown on the plan opposite. These modifications are based on the following key principles:

1. Including areas with established higher density and mixed-use development
2. Aligning the precinct boundary with adjacent strategic planning and investigation areas considering higher density development as outlined in the Local Planning Strategy
3. Incorporating sites that interface with those adjoining the Highway to allow a smoother and more consistent transition in scale and height for surrounding areas
4. Recognizing and respecting unique residential neighborhood character

The following boundary adjustments are proposed:

- St James Precinct: The boundary has been expanded northward to Shepperton Road to align with the Oats Street LPS Precinct, and southward to include mixed-density sites along Hill View Terrace and Alday Street.
- East End Precinct: No boundary adjustments have been made, as the existing boundary already extends to Hubert Street, and sensitive residential areas lie to the south.
- East Victoria Park Precinct: The boundary has been expanded northward to Hubert Street and along Mint Street to Shepperton Road to facilitate transitional development. Additionally, lots fronting Bassinghall Street and Moorgate Street opposite the Park Centre have been included.
- Central Precinct: The boundary has been extended southward to encompass key sites along Hordern Street and northward to Hubert Street, further west to Shepperton Road beyond Gresham Street to create continuity with the future investigation area surrounding Victoria Park Station, as designated in the LPS.
- Victoria Park and Causeway Precincts: The boundary has been expanded southward to Hordern Street.

Proposed Albany Highway Precinct Structure Plan Boundary



1.1

St James

Precinct Vision

St. James will undergo significant transformation, emerging as Perth's eastern gateway and a lively community services centre with everyday essentials like fresh food, home improvement and healthcare close to hand.

Pedestrian-friendly public spaces will accompany new mixed-use development, boosting housing supply while maintaining large-format retail and showroom spaces. The transformed Elisabeth Baillie House will take centre stage, becoming a bustling hub of activity and a must-visit destination.

Land Use Focus

Residential growth is proposed to be the primary focus in this area, with retail development given low priority though not precluded. Promotion of small-scale office, near-home workspace and creative studios is encouraged to activate street level where retail is not considered viable. Given the lesser connectivity to transport and services in this location, a lower intensity of residential development is proposed.

Built Form Approach

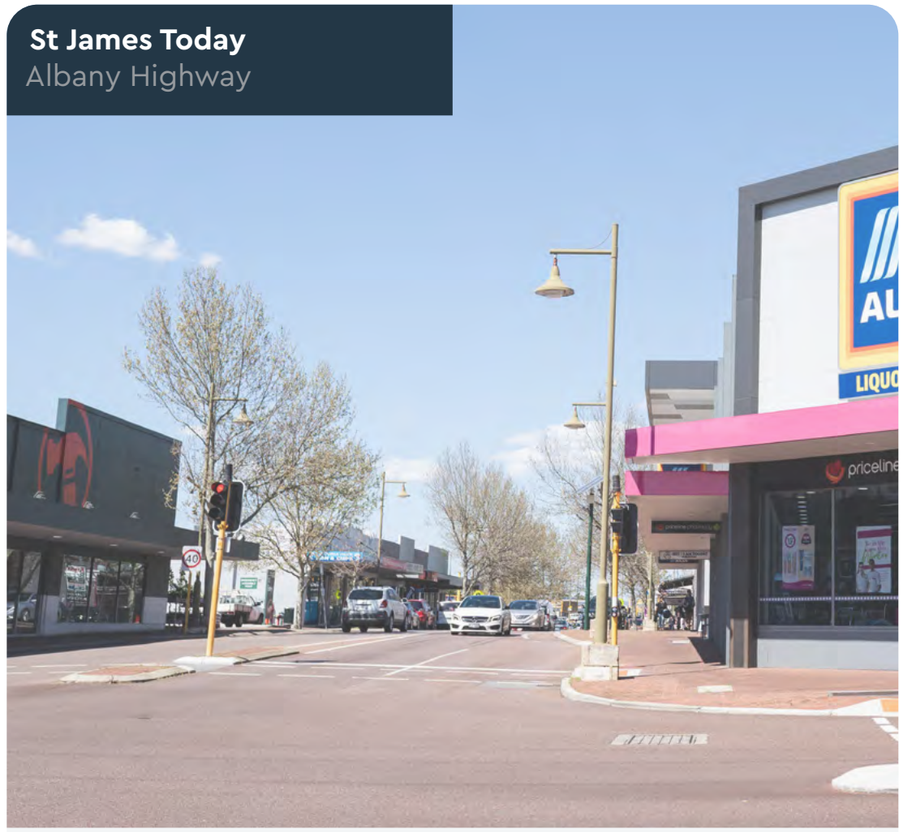
Built form in this precinct is contemplated to be predominantly low rise along the Highway, limited to 4–6 storeys with new development setback from contributory character shopfronts and heritage sites to preserve their integrity into the future. Lower scale development of up to 5 storeys is contemplated in identified garden apartment zones, which generous front, side and rear setbacks would help to moderate the transition to surrounding lower-scale areas.

Community Priorities

In recognition of the limited development capacity in this area, community benefits contemplated include enhancements to surrounding streets and public realm, additional deep soil zones and setback areas and the provision of affordable and creative ground floor workspace including live-work arrangements. Affordable housing is another identified benefit for this area.

The Albany Highway Community Reference Group identified new connections, streetscape upgrades and design excellence as top priorities for St James.

St James Today
Albany Highway



Attracting shoppers from near and far with its large-format retail offering, this area is one of the Highway's most important commercial nodes. However, congested roads detract from the pedestrian experience while large retail chains lack local flavour.

Overall community sentiment towards the current St James area is mixed, with qualities other than variety of things to do rated below average. An even split of respondents wish to see transformative change in this area or sensitive to limited change.

Common stakeholder ideas and suggestions for the future of the St James area included:

- Mixed Use development and more commercial opportunities
- Improved use and connectivity to Ed Millen Park
- Increase safety of major intersections
- Greater diversity of retail offerings consistent with other parts of the Highway

The Albany Highway Community Reference group supported the Concentrated growth scenario in this precinct.

St James Tomorrow
Precedent images only









1.2

St James
Built Form Strategy

Proposed Building Types

	SJ1	SJ2	SJ3	M9
Description	Mid-rise, mixed-use building with flexible commercial or retail spaces facing the street. Upper floors set back to create a three-story street wall. Residential interface to the rear laneway.	Mid-rise, mixed-use building with flexible commercial or retail spaces facing the street. Upper floors set back to create a three-story street wall. Residential interface to the rear laneway.	Mid-rise, residential building with landscaped front and rear setbacks that are designed to sensitively interface with neighboring lots. Residential units at ground level face both the street and rear laneway.	A major development site with multiple buildings, subject to approval of a Local Development Plan demonstrating that the scale of development is commensurate with its public benefit.
Proposed Height	8 Storeys	6 Storeys	5 Storeys	Up to 14 Storeys
TPS 1 Current Height	3 Storeys	2 Storeys	2 Storeys	3–5 Storeys

Please note that proposed building types form part of a draft built form strategy to inform the development of a Precinct Structure Plan (PSP). They are preliminary and subject to change based on stakeholder consultation. They have not been endorsed by the Victoria Park Council and do not constitute a seriously entertained proposal. The final PSP will include additional development requirements, including but not limited to plot ratio, street interface, streetwall height, side and rear setbacks, and environmental sustainability.

Street Level Comparison

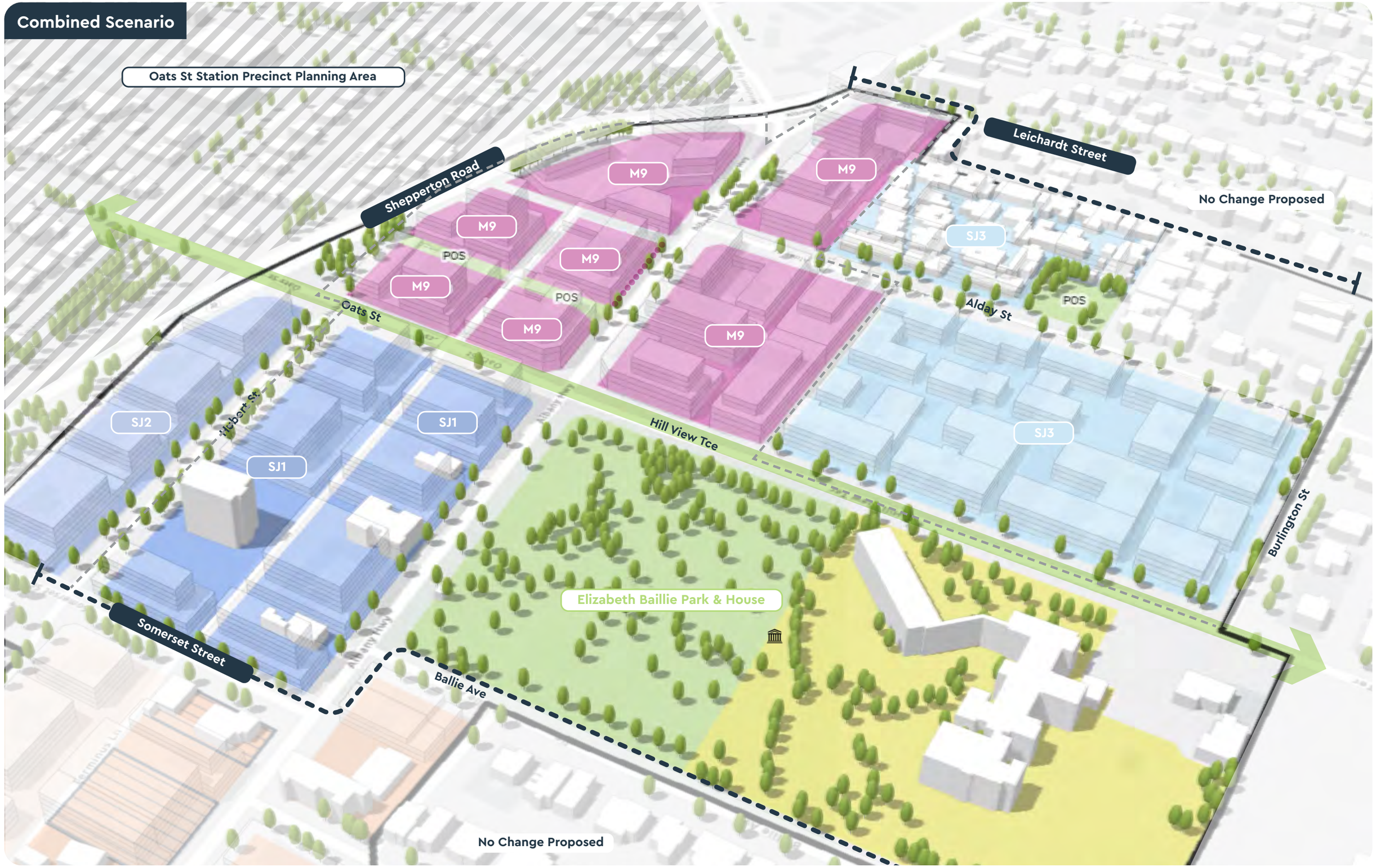


Current TPS1 Permitted Development
Before Oats St



Combined Scenario
Before Oats St

Combined Scenario



	SJ1	SJ2	SJ3	M9
Proposed Height	8 Storeys	6 Storeys	5 Storeys	Up to 14 Storeys

Precinct Extent

Open Space/Street Enhancement Priority

Contributory Frontage

Major Site

Separate Planning Area

Heritage Item (Listed or Recommended)

TPS1 Precinct Boundary

2.1

East End
Precinct Vision

The East End will bridge the divide between East Victoria Park and St James with considered residential growth, complemented by affordable workspace and additional retail and dining offerings where demand exists.

The unique residential character and scale of the area will be preserved and enhanced through lush landscaped setbacks, upgraded streetscapes and laneways, and contextual garden apartments, which offer a seamless transition in scale while increasing the diversity of local housing options.

Land Use Focus

The primary land use focus for this precinct is to prioritise residential growth, while still allowing for the possibility of commercial and retail development. Small-scale office, service commercial, community and creative space will be promoted to activate the street level where retail is not feasible. Due to the limited connectivity to transportation and services in this location, a lower intensity of residential development is proposed.

Built Form Approach

The built form in this precinct is intended to be predominantly low-rise along the Highway, limited to 4–6 stories with new development set back from contributory character shopfronts and heritage sites to preserve their integrity into the future. In identified garden apartment zones, lower scale development of up to 5 stories is envisaged, with generous front, side, and rear setbacks to moderate the transition to surrounding lower-scale areas.

Community Priorities

Recognising the limited development capacity in this area, contemplated community benefits include enhancements to surrounding streets and public realm, additional deep soil zones and setback areas, and the provision of affordable and creative ground floor workspace, including live-work arrangements. Affordable housing is another benefit identified for this area.

The Albany Highway Community Reference Group identified open space, community infrastructure and streetscape upgrades as top priorities for East End.

The East End Today
Terminus Lane



With a diverse mix of new apartments and old shopfronts, activity in this area is beginning to sprout as new restaurants and offices open.

Overall community sentiment towards the current East End is mixed, with all qualities except for ease of access rated below average. Around two thirds of respondents wish to see transformative change in this area, encompassing bold reinvention of built form and land uses, while a third would prefer to see a more sensitive evolution.

Common stakeholder ideas and suggestions for the future of the East End area included:

- Redevelopment of vacant/dilapidated sites for predominantly residential purposes
- Strengthening connectivity to East Victoria Park
- Improve connectivity to Somerset Pool and TAFE
- Improving parking and pedestrian access
- Protecting weatherboard character precinct through transitional controls for new buildings

The Albany Highway Community Reference group supported the Distributed growth scenario in this precinct.

The East End Tomorrow
Conceptual rendering only











2.2

East End
Built Form Strategy

Proposed Building Types

	EE1	EE2	EE3	EE4
Description	Mid-rise, mixed-use building with flexible commercial or retail spaces facing the street. Upper floors set back to create a three-story street wall. Landscaped rear setbacks address sensitive direct interface to neighbouring lots.	Mid-rise, mixed-use building with flexible commercial or retail spaces facing the street. Upper floors set back to create a three-story street wall, with a residential interface to the rear laneway.	Mid-rise, mixed-use building with flexible commercial or retail spaces facing the street. Upper floors are set back to create a three-story street wall, with a residential interface to the rear laneway.	Low-rise, residential building with landscaped front and side setbacks that are designed to sensitively interface with neighboring lots. Residential units at ground level face both the street and rear laneway.
Proposed Height	5 Storeys	5 storeys	6 Storeys	4 Storeys
TPS 1 Current Height	3 Storeys	3 Storeys	3 Storeys	2 Storeys

Please note that proposed building types form part of a draft built form strategy to inform the development of a Precinct Structure Plan (PSP). They are preliminary and subject to change based on stakeholder consultation. They have not been endorsed by the Victoria Park Council and do not constitute a seriously entertained proposal. The final PSP will include additional development requirements, including but not limited to plot ratio, street interface, streetwall height, side and rear setbacks, and environmental sustainability.

Street Level Comparison



Current TPS1 Permitted Development
Before Camberwell Street



Combined Scenario
Before Camberwell Street

Combined Scenario



	EE1	EE2	EE3	EE4
Proposed Height	5 Storeys	5 storeys	6 Storeys	4 Storeys

Precinct Extent

Open Space/Street Enhancement Priority

Contributory Frontage

Major Site

Separate Planning Area

Heritage Item (Listed or Recommended)

TPS1 Precinct Boundary

3.1

East Victoria Park
Precinct Vision

East Victoria Park will sensitively evolve through fine-grain development and public realm investment, solidifying its status as Perth's top culinary hotspot. It will maintain its authentic and unassuming vibe with flourishing independent businesses and a diverse community.

Comprehensive revitalisation of the Park Centre and Macmillan Precinct will set a new benchmark for quality and sustainability, seamlessly integrating retail, residential, employment, cultural, and entertainment space set within a generous public realm that connects with and complements the Highway.

Land Use Focus

The primary focus of this area is retail floorspace expansion and diversification, leveraging the Park Centre as a major shopping destination for the surrounding area while maintaining affordable space for hospitality operators. Provision of additional non-retail employment floor space, such as accommodation, service commercial, and small-floorplate office space will also be prioritised. Residential development on major sites will be encouraged.

Built Form Approach

The built form in this precinct is intended to be predominantly low-rise along the Highway, limited to 4–6 stories. New development will be set back from contributory character shopfronts and heritage sites to preserve their integrity into the future. More significant development up to 20 stories is contemplated within the Park Centre site, gradually reducing in scale towards its edges to mitigate overshadowing of the Highway and key public spaces.

Community Priorities

The introduction of affordable and creative workspace opportunities, delivery of major community, cultural, and/or event facilities such as a cultural centre, events theatre, or cinema, and the introduction of enhanced and expanded public realm connections within large sites are key community benefit opportunities identified for major sites in this area.

The Albany Highway Community Reference Group identified streetscape upgrades, public parking and community infrastructure as top priorities for East Victoria Park.



East Victoria Park Today
Albany Hwy at Mint St

Full of exciting sights, smells and sounds, this area's quirky stores and multicultural restaurants represent the very best of Albany Highway.

Overall community sentiment towards East Vic Park area is very positive, with all qualities rated the highest out of the entire Highway. 4 in 5 respondents wish to see sensitive or limited change in this area, being evolutionary and in keeping with existing buildings and activities.

Common stakeholder ideas and suggestions for the future of the East Victoria Park area included:

- Encouraging renewal and redevelopment of Park Centre and Macmillan Precinct, with a focus on activating the Highway edge
- Improving access from Berwick Street
- Improvements to amenity, safety and activity along laneway areas
- Managing traffic in peak hours, closing the Highway to traffic in evenings and during events
- Increasing the diversity of evening uses

The Albany Highway Community Reference group supported a combination of Distributed and Concentrated growth scenarios in this precinct.

East Victoria Park Tomorrow
Precedent images only









3.2

East Victoria Park
Precinct Overview

Proposed Building Types

	EVP1	EVP2	EVP3	EVP4	EVP5	M7	M8	M9
Description	Low-rise, mixed-use with ground floor retail within a two-storey street wall. Landscaped setback to adjoining residential lots.	Low-rise, mixed-use with ground floor retail within a two-storey street wall. Residential laneway frontage with landscaped setback.	Low-rise, mixed-use with ground floor retail within a two-storey street wall. Residential laneway frontage.	Mid-rise, mixed-use with ground floor retail within a three-storey street wall. Residential laneway frontage.	Mid-rise residential building with landscaped front, side and rear setbacks that sensitively interface with neighboring lots.	A major development site with multiple buildings, subject to approval of a Local Development Plan demonstrating that the scale of development is commensurate with its public benefit.		
Proposed Height	4 Storeys	4 Storeys	5 Storeys	6 Storeys	4 Storeys	4–10 Storeys	6–18 Storeys	4–8 Storeys
TPS 1 Current Height	2–3 Storeys	3 Storeys	3 Storeys	3 Storeys	2 Storeys	3 Storeys	3 Storeys	3 Storeys

Please note that proposed building types form part of a draft built form strategy to inform the development of a Precinct Structure Plan (PSP). They are preliminary and subject to change based on stakeholder consultation. They have not been endorsed by the Victoria Park Council and do not constitute a seriously entertained proposal. The final PSP will include additional development requirements, including but not limited to plot ratio, street interface, streetwall height, side and rear setbacks, and environmental sustainability.

Street Level Comparison



Current TPS1 Permitted Development
Before Canterbury Terrace



Combined Scenario
Before Canterbury Terrace

Combined Scenario



	EVP1	EVP2	EVP3	EVP4	EVP5	M7	M8	M9
Proposed Height	4 Storeys	4 Storeys	5 Storeys	6 Storeys	4 Storeys	4–10 Storeys	6–18 Storeys	4–8 Storeys

Precinct Extent

Open Space/Street Enhancement Priority

Contributory Frontage

Major Site

Separate Planning Area

Heritage Item (Listed or Recommended)

TPS1 Precinct Boundary

4.1

Central
Precinct Vision

Central will undergo significant transformation to become a dynamic residential quarter that connects east to west. Disused sites will undergo major redevelopment, with light industrial and service commercial uses woven into the fabric of the community to create non-retail economic activity. Remaining heritage sites will be carefully preserved as a cherished hallmark of the area's past.

Read Park will emerge as a bustling green heart, surrounded by significant residential growth with streets greened and made more pedestrian-friendly, connecting the precinct with the wider neighborhood.

Land Use Focus

The primary focus in this area is proposed to be residential growth, with retail development given low priority but not precluded. To protect and enhance economic activity, the reintroduction of Service Commercial and Light Industrial uses as a ground floor retail alternative will be prioritised, alongside the promotion of affordable workspace and artist studios. A principle of no net loss of employment land is contemplated to ensure this outcome. Given its central position between amenities at Victoria Park and East Victoria Park, significant residential growth is proposed.

Built Form Approach

Built form in this precinct is contemplated to be higher along the Highway than in other areas, with mid-rise buildings between 6–8 stories. High-rise development up to 16 stories is also contemplated for major sites that can achieve separation from established residential areas. Heritage sites, while not as intact as Victoria Park, will be protected and restored within new development.

Community Priorities

Enhancement of streetscapes with tree planting and public realm renewal are key priorities for this area, alongside the delivery of non-retail employment floorspace and the introduction of affordable creative and cultural space. Affordable housing is another contemplated public benefit priority for this area.

The Albany Highway Community Reference Group identified streetscape upgrades, new connections and design excellence as top priorities for Central.



Central Today
Albany Hwy at State St

Characterised by car yards and a harsh street environment, this area currently offers few reasons to stop and spend time. Read Park stands out as a hidden gem, while the recent development of Vic Quarter highlights potential for significant change in the future.

Overall community sentiment towards the current Central area is poor, with all qualities rated the lowest on the Highway. More than 4 in 5 respondents wish to see transformative change in this area, encompassing bold reinvention of built form and land uses.

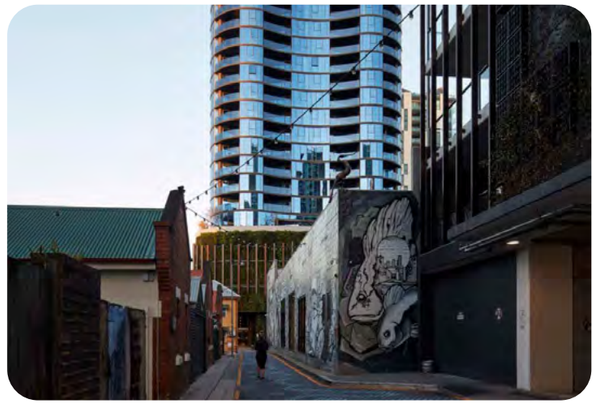
Common stakeholder ideas and suggestions for the future of the Central area included:

- More street trees and traffic calming, improved pedestrian crossing points along Highway
- Street lighting and safety in evenings
- Encouraging amalgamation of vacant land for new development
- Expanded options for entertainment and dining

The Albany Highway Community Reference group supported the Concentrated growth scenario in this precinct.

Central Tomorrow
Conceptual rendering only











4.2

Central
Built Form Strategy

Proposed Building Types

	C1	C2	C3	C4	M6
Description	A mid-rise, mixed-use building with flexible commercial or community spaces facing the street and lane. Upper floors are set back to create a four-story street wall.	A mid-rise, mixed-use building with flexible commercial or community spaces facing the street and lane. Upper floors are set back to create a four-story street wall. A landscaped rear setback mitigates impact to neighbouring lots.	A mid-rise, residential building with landscaped front, side and rear setbacks that are designed to sensitively interface with neighboring lots.	A mid-rise, mixed-use building with landscaped side, rear and front setbacks to Shepperton Rd. Side and rear ground level setbacks mitigate impacts to neighbouring lots.	A major development site with multiple buildings, subject to approval of a Local Development Plan demonstrating that the scale of development is commensurate with its public benefit.
Proposed Height	8 Storeys	6 storeys	6 Storeys	6 Storeys	6–16 Storeys
TPS 1 Current Height	3 Storeys	3 Storeys	2 Storeys	2 Storeys	3 Storeys

Please note that proposed building types form part of a draft built form strategy to inform the development of a Precinct Structure Plan (PSP). They are preliminary and subject to change based on stakeholder consultation. They have not been endorsed by the Victoria Park Council and do not constitute a seriously entertained proposal. The final PSP will include additional development requirements, including but not limited to plot ratio, street interface, streetwall height, side and rear setbacks, and environmental sustainability.

Street Level Comparison

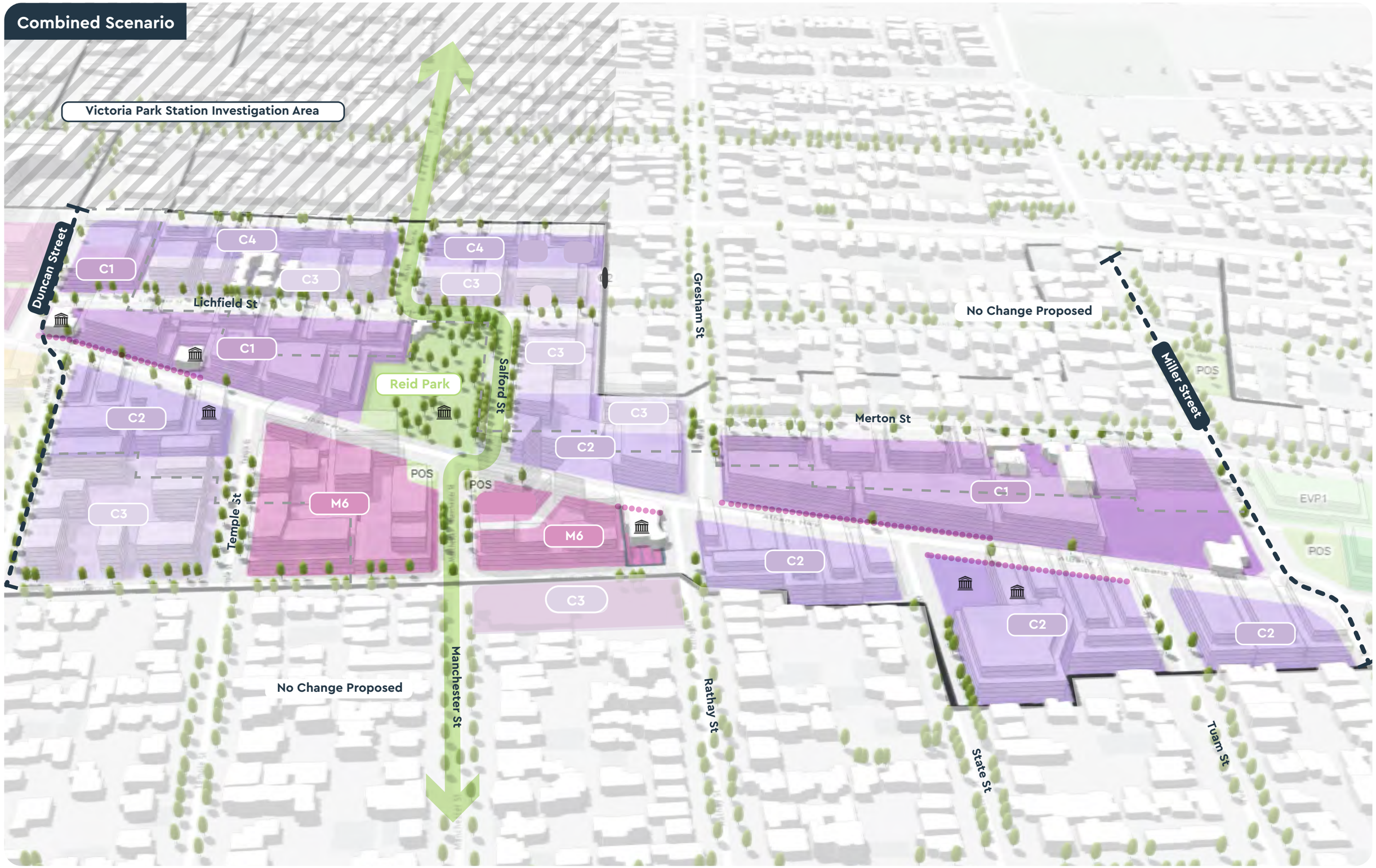


Current TPS1 Permitted Development
After Salford Street



Combined Scenario
After Salford Street

Combined Scenario



	C1	C2	C3	C4	M6
Proposed Height	8 Storeys	6 storeys	6 Storeys	6 Storeys	6–16 Storeys

Precinct Extent

Open Space/Street Enhancement Priority

Contributory Frontage

Major Site

Separate Planning Area

Heritage Item (Listed or Recommended)

TPS1 Precinct Boundary

5.1

Victoria Park
Precinct Vision

Victoria Park will evolve sensitively, with development blending seamlessly with the area's unique heritage landmarks and charming shopfronts while introducing new residences, small-scale offices and creative spaces. Redevelopment of the Victoria Park Central site will diversify the area's retail, entertainment, and employment offering, fuelling a lively cultural scene and dynamic evening economy.

Streets and green spaces will become inviting public spaces with ample trees, seating, and alfresco dining, encouraging lingering and live events year-round.

Land Use Focus

The primary focus of this area is to expand retail and employment floor space, leveraging its regionally strategic location to attract visitors while also improving the availability of basic services for local residents. Intensification of commercial activity through the delivery of upper-floor commercial floorspace is a key opportunity. Greater retail diversity and daytime activation will be prioritised through residential development, small business accommodation and creative and cultural infrastructure.

Built Form Approach

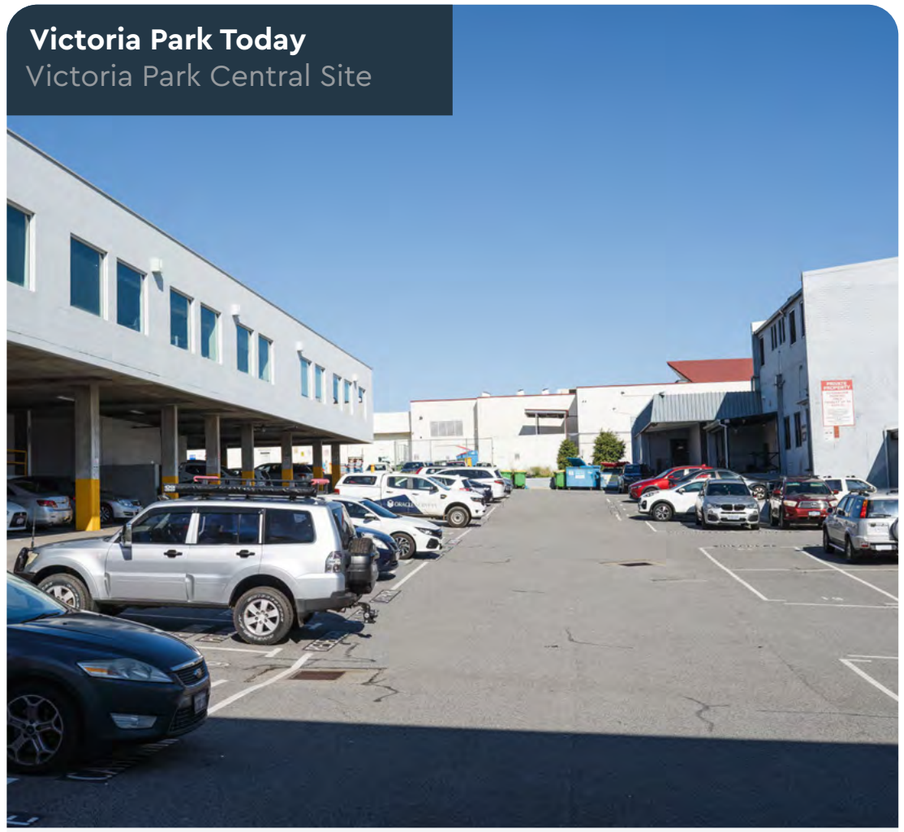
Built form in this precinct is intended to be predominantly low-rise along the Highway, limited to 4–6 stories, with new development setback from contributory character shopfronts and heritage sites to preserve their integrity into the future. More significant development up to 20 stories is planned along Shepperton Road and within the Victoria Park Central site, subject to managing of overshadowing of the Highway and key public spaces.

Community Priorities

The introduction of affordable and creative workspace opportunities, delivery of major community, cultural, and/or event facilities such as cultural centre, events theatre or cinema, and the introduction of enhanced and expanded public realm connections within large sites are key community benefit opportunities identified for major sites in this area.

The Albany Highway Community Reference Group identified streetscape upgrades, design excellence and public parking as top priorities for Victoria Park.

Victoria Park Today
Victoria Park Central Site



With its rich heritage including the iconic Broken Hill Hotel, this area forms the commercial backbone of Victoria Park. Its public realm is pedestrian friendly with ample trees and seating, but is starting to show its age.

Overall community sentiment towards the current Victoria Park is positive, with all qualities rated at or above average. Over two thirds of respondents wish to see sensitive change in this area, being evolutionary and in keeping with existing buildings and activities.

Common stakeholder ideas and suggestions for the future of the Victoria Park area included:

- Improving safety and wayfinding for pedestrians crossing Shepperton Rd
- Slowing traffic down to allow pedestrian use
- More diverse uses such as small bars and a cinema
- Refreshing public realm and adding nighttime feature lighting
- Facilitate redevelopment and intensification of vacant/underused sites while protecting and restoring heritage facades

The Albany Highway Community Reference group supported a combination of Distributed and Concentrated growth scenarios in this precinct.

Victoria Park Tomorrow
Precedent images only









5.2

Victoria Park
Built Form Strategy

Proposed Building Types

	VP1	VP2	VP3	M4	M5
Description	A mid-rise, mixed-use building with retail spaces facing the street and lane. Upper floors are set back to create a two-story street wall.	A mid-rise, residential building with landscaped front, side and rear setbacks that are designed to sensitively interface with neighbouring lots.	A low to mid-rise, residential building with landscaped front, side and rear setbacks that are designed to sensitively interface with neighbouring lots.	A major development site with multiple buildings, subject to approval of a Local Development Plan demonstrating that the scale of development is commensurate with its public benefit.	
Proposed Height	5 Storeys	8 Storeys	6 Storeys	6–22 Storeys	6–22 Storeys
TPS 1 Current Height	3–5 Storeys	3 Storeys	3 Storeys	12 Storeys	8 Storeys

Please note that proposed building types form part of a draft built form strategy to inform the development of a Precinct Structure Plan (PSP). They are preliminary and subject to change based on stakeholder consultation. They have not been endorsed by the Victoria Park Council and do not constitute a seriously entertained proposal. The final PSP will include additional development requirements, including but not limited to plot ratio, street interface, streetwall height, side and rear setbacks, and environmental sustainability.

Street Level Comparison

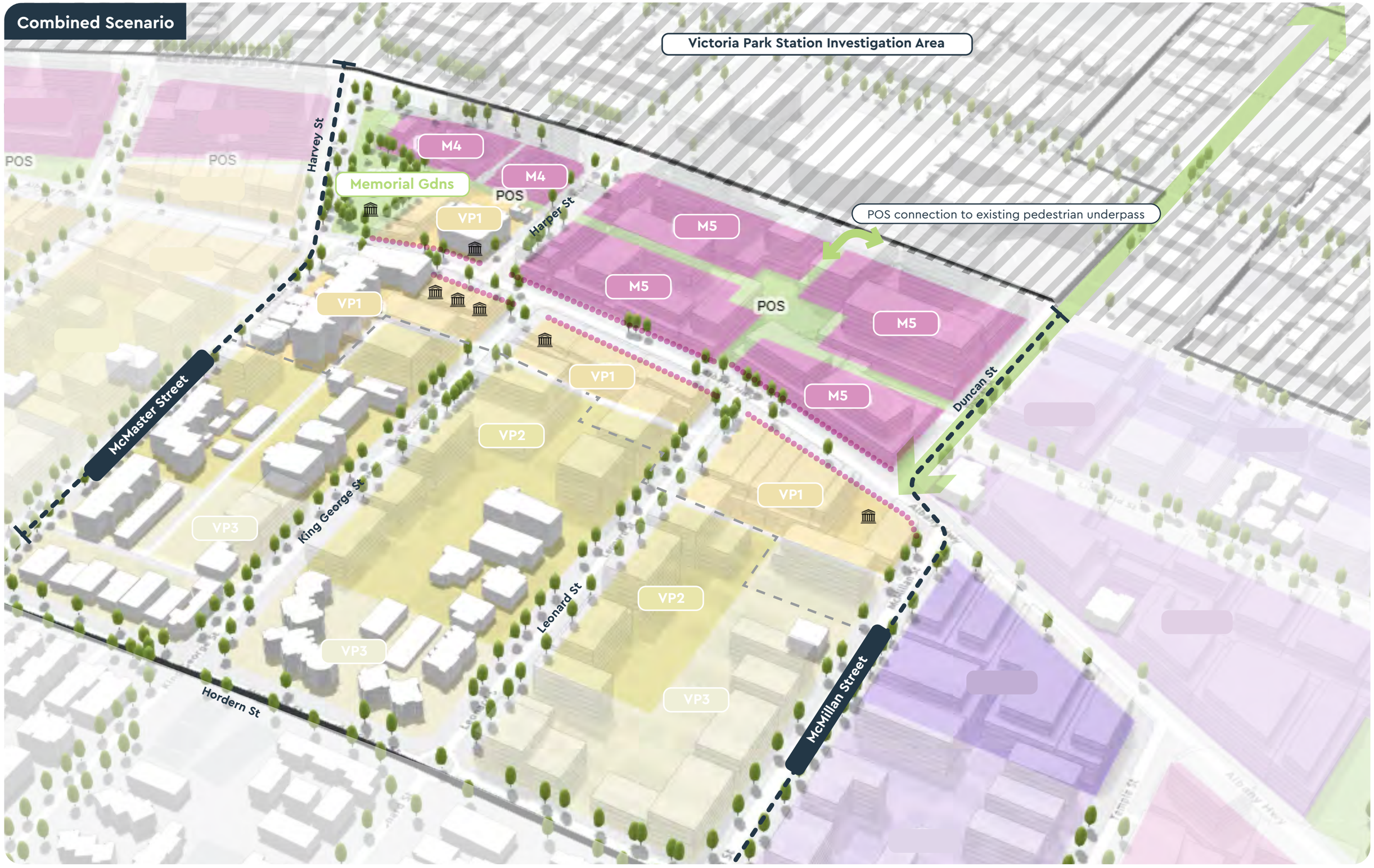


Current TPS1 Zoning
After Duncan Street



Combined Scenario
After Duncan Street

Combined Scenario



	VP1	VP2	VP3	M4	M5
Proposed Height	5 Storeys	8 Storeys	6 Storeys	6–22 Storeys	6–22 Storeys

Precinct Extent

Open Space/Street Enhancement Priority

Contributory Frontage

Major Site

Separate Planning Area

Heritage Item (Listed or Recommended)

TPS1 Precinct Boundary

6.1

Causeway Precinct

Precinct Overview

The Causeway will be transformed into a thriving hub of commerce and community, with significant office-based employment, high density residential living and tourist accommodation capitalising on sweeping city views.

With a focus on sustainability and walkability, this new urban district will offer lively public spaces, seamless foreshore access through a redeveloped interchange and potential future light rail connectivity. The area's strong connection to country including Mindeera spring will be celebrated, infusing the area with a distinct sense of place.

Land Use Focus

The focus of land use in this precinct is to maximize high-value local employment through the delivery of large-floorplate office development for major tenants, encouraging the retention of car retailing in new development, and accommodating other employment-generating uses such as hotels, healthcare, retail, and regionally-significant evening economy and entertainment attractions. High density residential opportunities are also identified, where complementary to these employment-generating land uses.

Built Form Approach

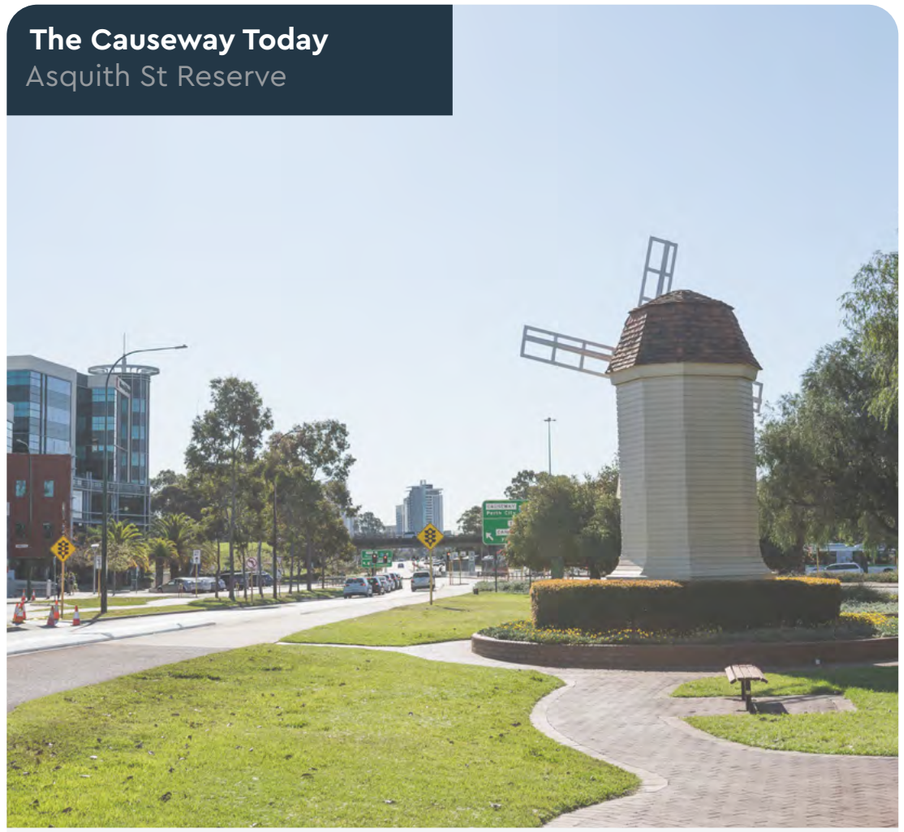
Built form in this precinct is intended to include small floorplate, high-rise tower development of 22–32 stories with 2–5 storey podiums. Building height and density in this precinct is planned to be the most significant in Victoria Park, reflecting its proximity to the city, connectivity to public transit, separation from existing residential areas, and adjacency to the Burswood South area where similarly significant development is currently permitted.

Community Priorities

Major community benefit initiatives requiring long-term planning and state support are identified in this precinct, including transforming the Canning Highway interchange, revitalising streets and public spaces, and delivering light rail. Other developer-funded benefits like student housing, aged care and healthcare, affordable and creative workspace, and cultural and entertainment venues are also suitable for this area.

The Albany Highway Community Reference Group identified new connections, community infrastrucutre and open space as top priorities for the Causeway.

The Causeway Today
Asquith St Reserve



The Causeway area is an important economic hub with significant office space and car yards, but lacks pedestrian amenity and street life. While close to the river and home to an important bus interchange, pedestrian connectivity across busy streets is limited.

Overall stakeholder sentiment towards the current Causeway area is negative, with 70% of survey respondents wishing to see transformative change in this area, encompassing bold reinvention of built form and land uses.

Common stakeholder ideas and suggestions for the future of the Causeway area included:

- Improving pedestrian connectivity to the Causeway Bus Interchange and Swan River
- Growing the area as an extension of the CBD with offices, apartments and retail
- Reimagining car yards to accommodate higher intensity uses while retaining their employment function
- Improved streetscapes and street trees, including play-focused amenities near Primary School

The Albany Highway Community Reference group supported a combination of Distributed and Concentrated growth scenarios in this precinct.

The Causeway Tomorrow
Conceptual rendering only











6.2

Causeway Precinct
Built Form Strategy

Proposed Building Types

	C1	C2	C3	M1	M2	M3
Description	A mid-rise, mixed-use building with flexible commercial or retail spaces facing the street and lane. Upper floors are set back to create a two-story street wall with heritage frontages.	A high-rise, residential building with landscaped front, side and rear setbacks that are designed to sensitively interface with neighboring lots.	A low to mid-rise, residential building with landscaped front, side and rear setbacks that are designed to sensitively interface with neighboring lots.	A major development site with a multiple high-rise buildings, subject to approval of a Local Development Plan demonstrating that the scale of development is commensurate with its public benefit.		
Proposed Height	5 Storeys	10 Storeys	6 Storeys	6–12 Storeys	6–22 Storeys	6–32 Storeys
TPS 1 Current Height	3 Storeys	3 Storeys	3 Storeys	–	2 Storeys	6 Storeys

Please note that proposed building types form part of a draft built form strategy to inform the development of a Precinct Structure Plan (PSP). They are preliminary and subject to change based on stakeholder consultation. They have not been endorsed by the Victoria Park Council and do not constitute a seriously entertained proposal. The final PSP will include additional development requirements, including but not limited to plot ratio, street interface, streetwall height, side and rear setbacks, and environmental sustainability.

Street Level Comparison



Current TPS1 Permitted Development
After McMaster Street



Combined Scenario
After McMaster Street

Combined Scenario



	C1	C2	C3	M1	M2	M3
Proposed Height	5 Storeys	10 Storeys	6 Storeys	6–12 Storeys	6–22 Storeys	6–32 Storeys

Precinct Extent

Open Space/Street Enhancement Priority

Contributory Frontage

Major Site

Separate Planning Area

Heritage Item (Listed or Recommended)

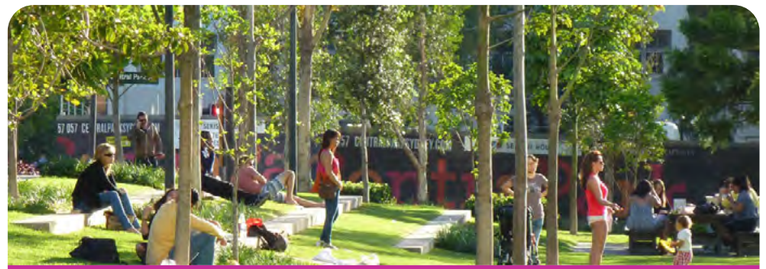
TPS1 Precinct Boundary

Overall Scenario Comparison

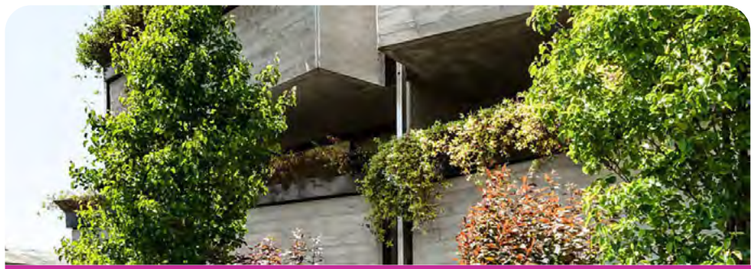


Community Priorities

Below are the top 5 priorities (highlighted in pink) that the Community Reference Group identified they would like to see across the precinct as new development occurs over time.



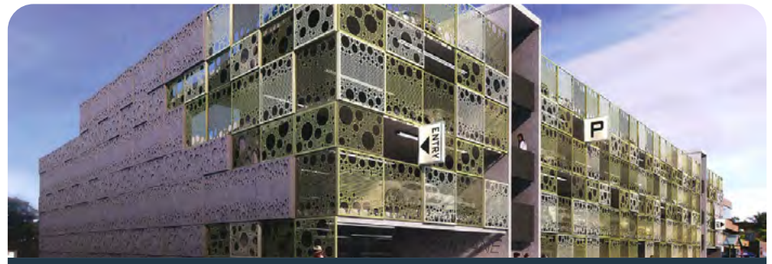
3. Open Space



4. Design Excellence



2. New Connections



Public Parking



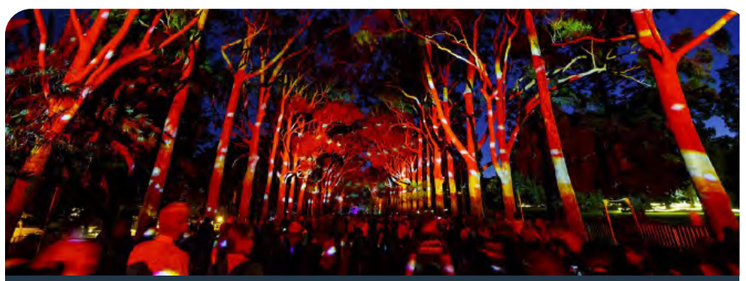
Affordable Housing



5. Community Infrastructure



1. Streetscape Upgrades



Activation + Events



Arts + Culture

Precedent Studies

To inform the development of built form controls for Albany Highway, detailed case studies of four exemplary projects were prepared.

The projects were selected based on specific criteria, including delivery within Australia with similar construction practices and purchaser expectations, an inner-city location with a 'main street' urban context similar to Victoria Park, site dimensions and area similar to those found on Albany Highway, and recognition for innovation or design excellence.

Key findings of this analysis which have informed this strategy include:

- Successful integration of 6–10 storey buildings with minimal impact at street level
- Achievement of significant ground-floor commercial floorspace with a plot ratios of 0.4 to 0.9, delivering larger and/or additional units than Albany Highway
- Effective design response and activation of rear laneways through landscaping, walk-up residential unit access and micro commercial spaces
- High sustainability standards up to 8.1 NatHERS while maintaining commercial viability
- Reduced site coverage of around 85% for larger sites, with ample space given over to deep soil planting and publicly accessible open spaces including internal plazas and mid-block links
- Use of high quality materials at street level including brick, glazed tile and high quality metal and timber shopfronts with inset and profiled fenestration



Terrace House, Brunswick VIC

Country	Wurundjeri
Architect	Austin Maynard Architects
Yield	20 dwellings
Site Area	597 sqm



9 Smith Street, Fitzroy VIC

Country	Wurundjeri
Architect	MA Architects
Yield	41 dwellings
Site Area	1,092 sqm



Mezzo, Glebe NSW

Country	Gadigal
Architect	CHROFI
Yield	228 dwellings
Site Area	5,427 sqm



East End, Newcastle NSW

Country	Awabakal and Worimi
Architect	SJB, TZG, DBJ
Yield	212 dwellings
Site Area	6,556 sqm

S

Precedent Example
Terrace House, Brunswick VIC

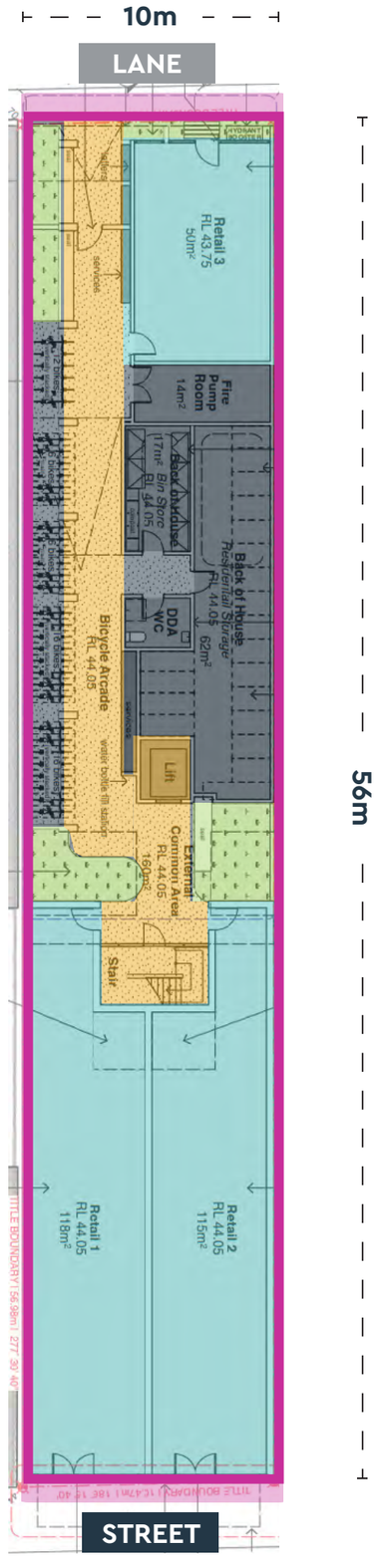
Terrace House, designed by Austin Maynard Architects, is a highly sustainable and 100% fossil fuel-free building in Melbourne consisting of 20 2 & 3 bedroom residences across 6 storeys.

The building includes zero car parking bays, but accommodates 55 bike parks. Residential access is provided from the rear laneway alongside a small office unit, with two retail tenancies taking up the full width of the street frontage. A three-storey brick podium responds to the scale and materiality of the building's heritage context.

Key Figures

Site Area	597 sqm
Height	6 storeys
Plot Ratio	5.4:1
Non-Residential Plot	0.46:1 (3 units)
Residential Yield	20 units
Parking	Nil
Ground Floor Activation	277 sqm (47%)
Site Cover	95%
Sustainability	8.1 NatHERS rating, 100% Fossil Fuel Free, 90% construction recycled
Heritage	Retention and adaptive reuse of the heritage buildings on site
Community Benefit	900 sqm publicly-accessible (privately owned) mid-block plaza; Developer-funded upgrade to surrounding streets

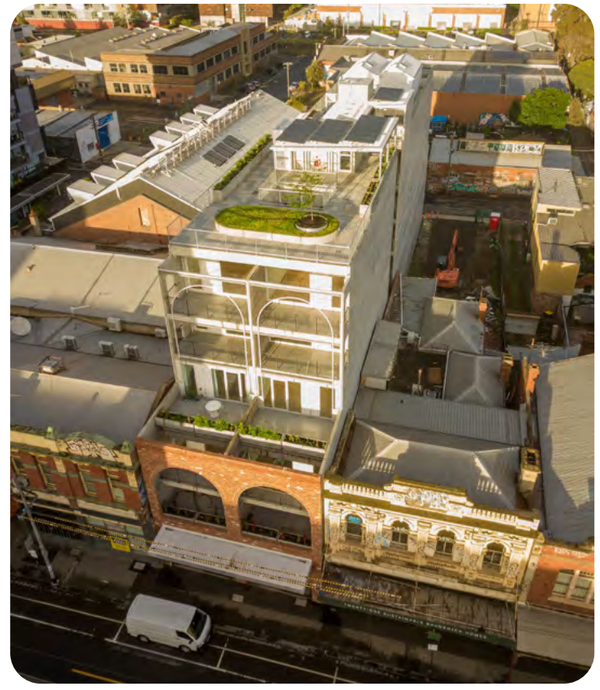
- Site Boundary
- Public Frontage
- Retail/F&B
- Deep Soil
- Lobby/Core
- Service



Project Details

Status	Completed 2021
Location	209 Sydney Road, Brunswick, Melbourne VIC
Country	Wurundjeri
Developer	N/A (Nightingale Model)
Architect	Austin Maynard Architects











Precedent

9 Smith Street, Fitzroy VIC

This 7-storey mixed-use development incorporates 45 residences, 3 live/work offices, and 3 ground-level retail spaces, creating a dynamic, integrated community of residents and businesses. An open-air atrium courtyard serves as the heart of the building, promoting social interaction and connection among occupants.

A three-storey podium at street level pays homage to the area's heritage scale and provides a buffer for the apartments above, shielding them from the activity of the street below.

In response to the site's depth, the building is divided into two distinct volumes, separated by the courtyard. The dual frontages are designed to reflect the contextual conditions of a bustling high street with active retail tenancies, while the landscaped rear laneway frontage provides a tranquil setback for direct residential unit access and discreet parking entry.

Key Figures

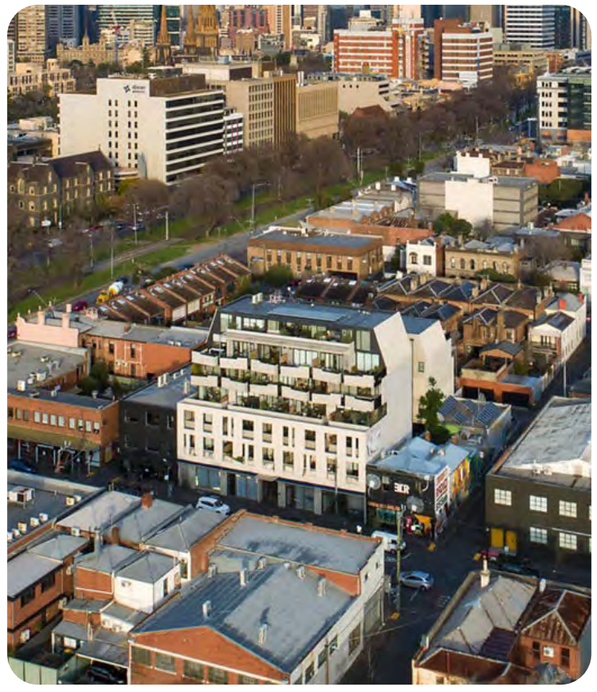
Site Area	1,092 sqm
Height	7 storeys
Plot Ratio	0.98:1
Non-Residential Plot	0.43:1 (7 units)
Residential Yield	41 units
Parking	42 bays
Ground Floor Activation	475 sqm (43%)
Site Cover	83%
Sustainability	6.5 Star NatHERs ratings to dwellings; 200,000 litres of rainwater storage tank capacity; 6kw PV array
Heritage	N/A
Community Benefit	N/A



Project Details

Status	Completed 2016
Value	$17 million
Location	9 Smith Street, Fitzroy VIC
Country	Wurundjeri
Developer	Neometro
Architect	MA Architects











L

Precedent
Mezzo, Glebe NSW

Mezzo, a winning design competition scheme by CHROFI Architects, comprises four individual building forms that reach up to ten storeys in height, providing a total of 213 apartments. The buildings are connected by a large podium that contains retail and office floorspace across three storeys. A non-profit organization is the primary occupant of the commercial space, while a small corner café adds to the liveliness of the surrounding area.

A landscaped mid-block pedestrian link breaks up the large site and promotes local neighbourhood access while a generous street setback softens the building's impact while maintaining an urban and activated edge. The site has street or lane frontage on all four sides, and each frontage has been thoughtfully designed to provide active commercial entries or walk-up apartment access, encouraging activity and surveillance.

Key Figures

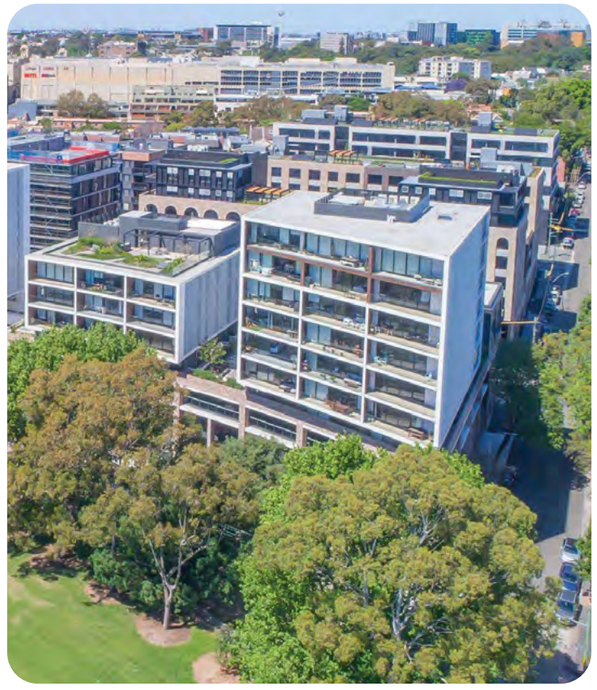
Site Area	5,427 sqm
Height	10 storeys
Plot Ratio	3.85:1
Non-Residential Plot	0.87:1 (5 units and 3 floors of office)
Ground Level Activation	2,200sqm (40%)
Residential Yield	228 units
Parking	123 bays
Site Cover	83.5%
Sustainability	25% above BASIX compliance
Heritage	N/A
Community Benefit	7.5% affordable housing, public realm including street setback and through site link dedicated to Council

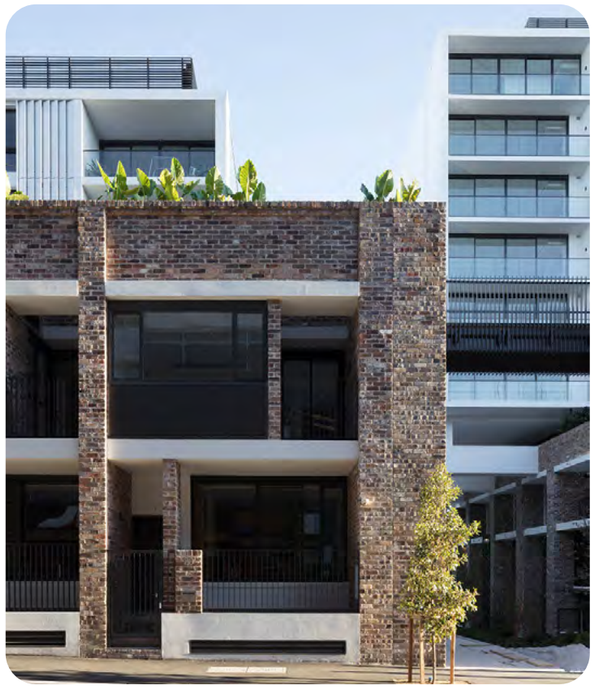


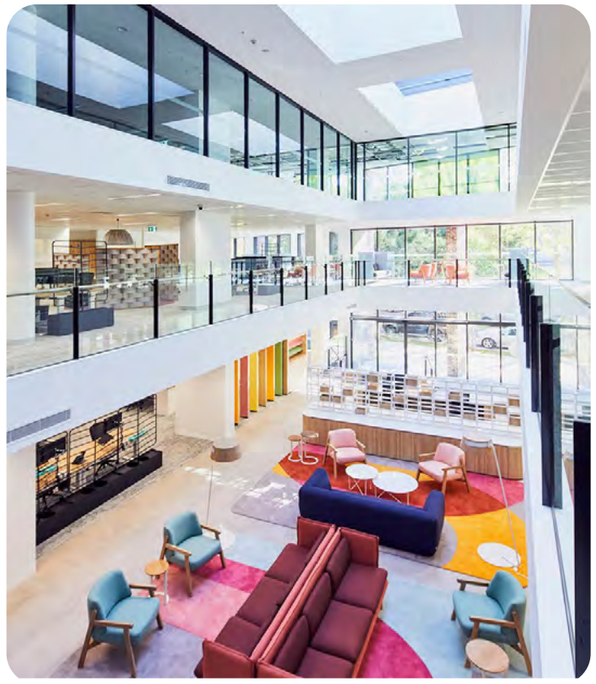
Project Details

Status	Completed 2019
Value	$95 million
Location	163 and 169–185 Hunter St, Newcastle NSW
Country	Gadigal
Developer	Denwol, Oakstand
Architect	Chrofi











XL

Case Study
East End, Newcastle NSW

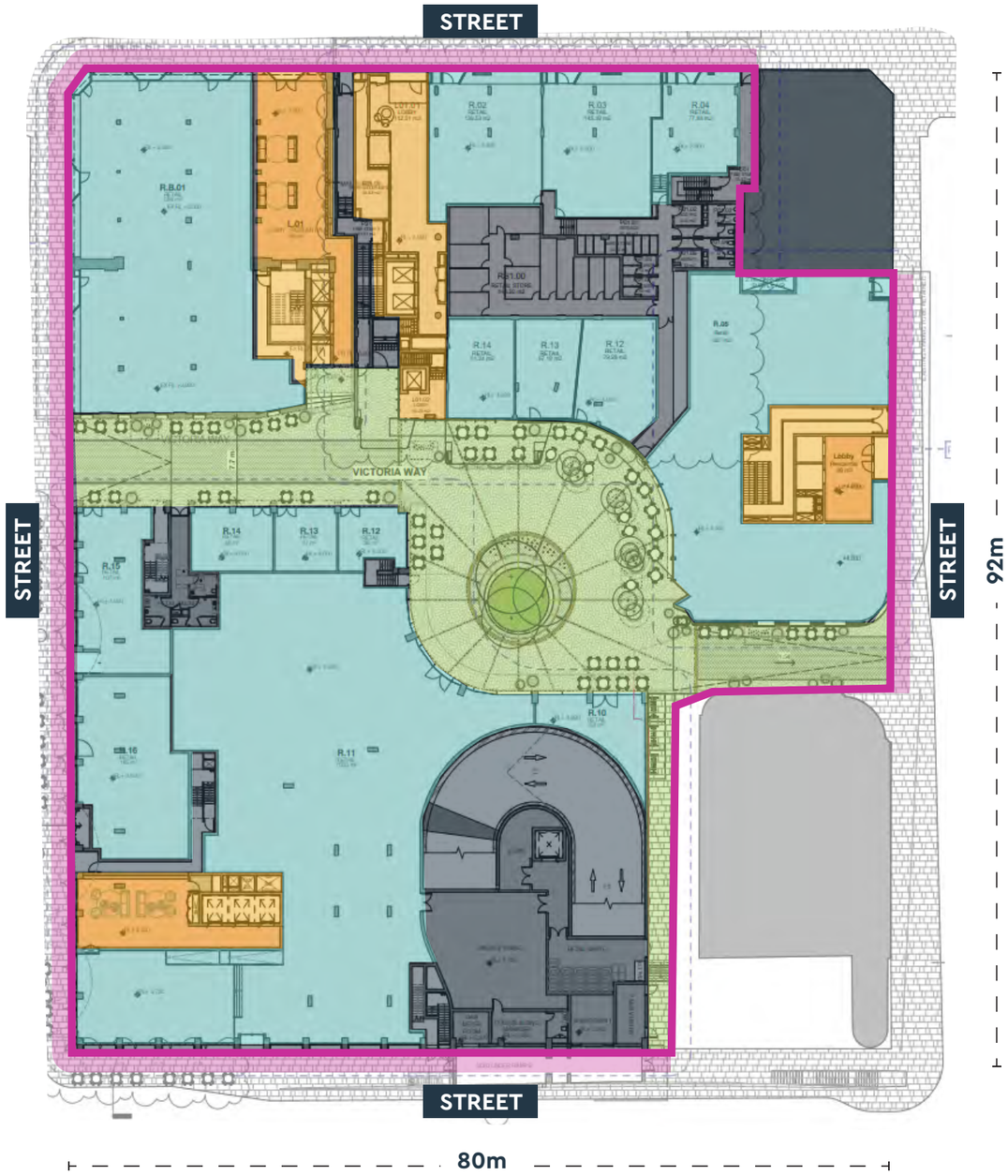
This significant urban regeneration project that encompasses an entire city block. Comprised of three mixed-use towers up to 12 storeys in height, the project includes of a combination of residential, office, and hotel space. The towers were designed by three different architects, working collaboratively to create a cohesive and visually striking design.

The development features a new public space that runs through the centre of the site, connecting each building and providing a hub for community interaction. All buildings share services and a basement, freeing up space at ground level for more active uses.

The site offers a diverse mix of retail tenants, including a large Woolworths supermarket, which is situated within the interior of the site. Access and servicing for the supermarket are concealed, with no blank frontages or visible loading bays at street level, creating a more attractive and inviting streetscape.

Key Figures

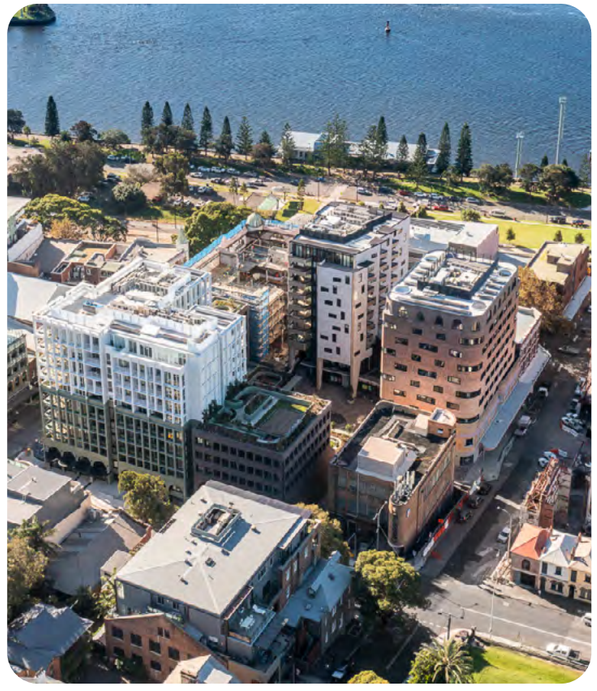
Site Area	6,556 sqm
Height	12 storeys
Plot Ratio	3.67:1
Non-Residential Plot	0.56:1 (16 units)
Residential Yield	228 units
Parking	273 bays
Ground Floor Activation	3,146sqm (48%)
Site Cover	86%
Sustainability	BASIX compliance, rooftop PV array, ESD strategy
Heritage	Retention and adaptive reuse of the heritage buildings on site
Community Benefit	900 sqm publicly-accessible (privately owned) mid-block plaza; Developer-funded upgrade to surrounding streets



Project Details

Status	Completed 2021
Location	163 and 169–185 Hunter St, Newcastle NSW
Country	Awabakal and Worimi
Developer	Iris Capital
Architect	SJB, Durbach Block Jaggers, Tonkin Zulaikha Greer, ASPECT Studios

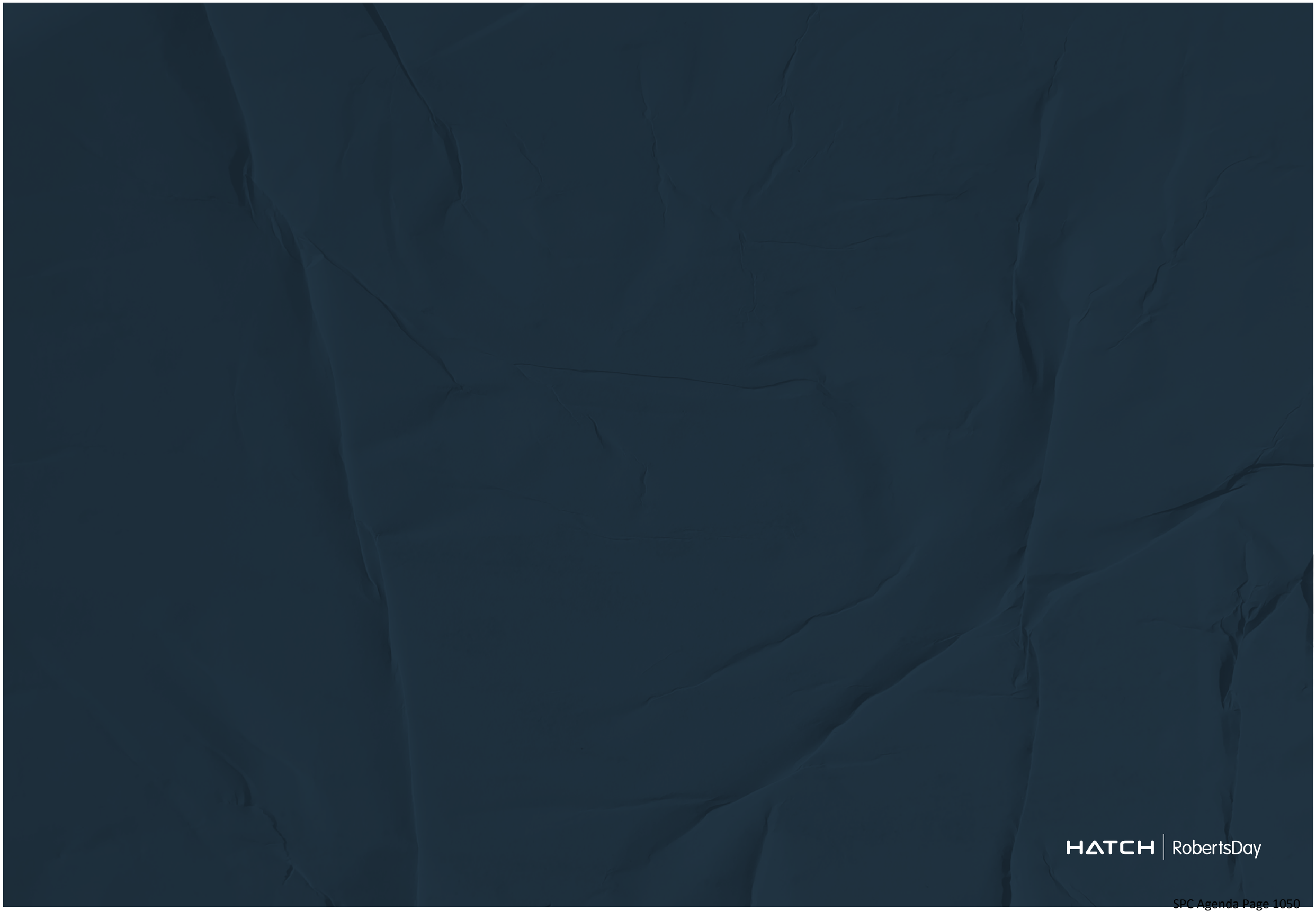












Job No. 21168



Albany Highway Precinct Structure Plan

Preliminary Heritage Control Recommendations

Prepared for the Hatch Pty Ltd

September 2022

Griffiths Architects

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Cover: Barkers, Albany Highway Victoria Park ,1974 *SLWA 360271 PD*

Revision History

Date of this revision: 15/09/2022

Document	Version	Author	Status	Date	Distribution
Albany Hwy Controls	1	Griffiths Architects	Draft	10/08/2022	Hatch Pty Ltd
Albany Hwy Controls	2	Griffiths Architects	Draft	15/09/2022	Hatch Pty Ltd

Contents

1. Introduction 2
2. Summary 3
3. Methodology 3
4. Analysis of Places Recommended for Inclusion 4
5. Contributory Fabric 14
6. Policy Analysis 22
7. Preliminary Heritage Controls 26
8. Preliminary Precinct Recommendations 33
9. Example Projects 41
10. Conclusion 45
11. References 46

1. Introduction

Following the publishing of the *Albany Highway Tomorrow* document by the Town of Victoria Park and Hatch Roberts Day, this report expands the information gathered in the *Albany Highway Precinct Structure Plan – Preliminary Heritage Analysis*, completed in 2021 by Griffiths Architects and provides guidance on heritage management and change.

Places classified in the Preliminary Heritage Analysis recommended for inclusion in the local government inventory and potentially scheme list will be examined further in this report to provide evidence in support of inclusion.

Fabric contributing to the character of the street and precinct including shopfronts, awnings and parapet walls are discussed in the report to provide an understanding of what makes them contributory and how their success can be drawn through in future development. This is not suggesting that replication of heritage is desirable, rather it suggests there are lessons to be learnt from the existing contributory fabric.

The existing Town of Victoria Park Local Planning Policies (LPP's) are assessed along with planning policies and design guidelines from similar precincts to identify items relevant to contributory fabric in the Albany Highway Precinct. This analysis assists to establish a preliminary set of heritage controls for the precinct to guide the best way forward for its development.

Study Area Characteristics

The two mile strip of Albany Highway is characterised by single and two-storey retail and commercial buildings with awnings, with a number of hospitality, office, civic, and multi-storey residential complexes scattered throughout.

Buildings in the study area are of varying eras and architectural styles, all of which highlight and provide an understanding of the incremental growth and development of the two mile strip and Victoria Park.

The general arrangement and set out of buildings within the study area is reflective of the cadastre, with more recent developments less dictated by the traditional grain, arising from lot amalgamation.

The continuous awning lines and shopfronts are strong contributors to the character of the area, and frame vistas along the streetscape, while civic buildings and pubs provide minor historic landmarks.

Not all buildings in the study area are of heritage significance. However, many of those that are not significant contribute value to the character of the street, while others detract.

There are a number of places that detract from the character of the study area, typically these are carparking areas and hardstands, which disrupt the continuity of the streetscape.

Landmark buildings are typically located on street corners and have multiple frontages. Their locations allow them to better connect and contribute to the streetscape.

Vegetation and natural canopies are not generally a characteristic of the strip. However, a number of parks and gardens are located within the study area and contribute to the streetscape character, more than its heritage value.

2. Summary

In this report, an analysis of existing built fabric and various local planning polices, guidelines and strategies guided the preparation of of preliminary heritage controls for the treatment of contributory fabric and the future development of the Albany Highway Precinct.

3. Methodology

The following tasks were carried out in preparation of this report:

1. Review and analysis of places recommended for inclusion within the *Town of Victoria Park – Local Heritage Survey, 2021.*
2. Examination of fabric contributing to the character and presentation of the street and subsequent discussion on the reasons for their success.
3. Summary of various local planning policies, guidelines and strategies including the Town of Victoria Park LPP and precincts similar to the Albany Highway Strip.
4. The identification of policies relevant to the Albany Highway Precinct.
5. Preparation of Preliminary Heritage Controls for the future development of contributory fabric along Albany Highway and the Two mile strip. With example projects using similar controls.
6. Preliminary analysis of the individual precincts which for the Albany Highway Strip and the preparation of preliminary development recommendations.
7. Summary.

4. Analysis of Places Recommended for Inclusion

The *Albany Highway Precinct Structure Plan – Preliminary Heritage Analysis* completed by Griffiths Architects in 2021 contained a brief review of the *2021 Town of Victoria Park Local Heritage Survey (LHS)*.

Aside from places and sites already included within the survey, a number of additional places were recommended for assessment and future inclusion in the list. Griffiths Architects also identified extra places worthy of assessment and inclusion. Typically, these places are retail in use, and are representative examples of early shopfronts and the commercial growth of the Albany Highway two mile strip, contributing to the character of the area.

This section of the report will individually examine the places recommended for inclusion and offer some explanation as to why they should be included with future iterations of the Local Heritage Survey and offered the special considerations and protections of heritage places. This section also contains text which has been drawn from the *2021 Town of Victoria Park Local Heritage Survey*, by Stephen Carrick Architects.

211 – 213 Albany Highway: (Currently) AMC Motorcycles



Photograph 1: Shop 211-213 Albany Highway (AMC) recommended for inclusion. Griffiths Architects, 2021.

This place was recommended for survey inclusion by Stephen Carrick Architects within the LHS.

211-213 Albany Highway, Victoria Park is a single storey painted brick and rendered brick commercial building. The building is on the corner of Albany Highway and Cargill Street, with a shopfront to Albany Highway and a warehouse building form to Cargill Street.

The pronounced sawtooth roof form is evident to the west elevation with roof glazing facing south. A corrugated steel roof sits behind the parapet. A steel cladding has been applied to the main elevation and a small section to the return to the west elevation. The cladding is to the parapet. The shopfront is comprised large sections of fixed glazing within an aluminium frame.

The building (as seen in 2021) is a showroom and sales for AMC (American Motorcycles). The building is painted black with a yellow band above window height.

Post office directories first show a building on the site at the corner of Cargill Street and Albany Road in 1903. As no business functions are noted at, it appears the building was probably originally a residence. However, from 1908 it was listed as a commercial premises and was later occupied by a multitude of various practices including a pastrycook, bootmaker, and general store.

At the street corner, 211 has no setback from both street fronts, but the southern portion of the Albany Highway frontage is set back considerably. A verandah along the set-back elevation suggests this was the entrance at the time. Between 1963 and 1965, the two saw-tooth portions were added to the rear, bringing the buildings to their most current (2021) footprint.

A preliminary Statement of Significance has been prepared by Stephen Carrick Architects for 211-213 Albany Highway and is as follows;

211-213 Albany Highway has cultural heritage significance for the following reasons.

The place has historical and social value for its ongoing commercial presence and warehouse building form on Albany Highway.

The place is also a representative example of the commercial development of the Albany Highway two mile strip over time due its multitude of uses and expansion. It also possesses landmark qualities due to its corner location and sawtooth form.



Photograph 2: Shop 211-213 Albany Highway (AMC) sawtooth roof visible from Cargill Street. Griffiths Architects, 2021.

237 – 239 Albany Highway: Ryan Brothers (fmr)



Photograph 3: Shop 237-239 Albany Highway recommended for inclusion. Griffiths Architects, 2021.

This place was recommended for survey inclusion by Stephen Carrick Architects within the LHS.

No. 237-239 Albany Highway is a two storey building comprised two shop fronts to the ground level, timber framed sash windows to the first storey and a decorative parapet to the facade.

The facade is constructed of rendered painted brick to the lower section and painted brick to the upper and side sections. The building has undergone some alterations.

The two shop fronts, one double fronted and the other single fronted, have retained their original arrangements. No 237 is the double fronted shop front, the recessed entrance is centrally placed between the two shop windows. The doorway consists of two narrow doors, each panelled to the lower section with a longer glazed panel to the top. The walls below the window sill show the tiled decoration. The tiles have been painted over to match the upper section of the building.

The smaller shop at no. 239 Albany Highway also retains the original arrangement of recessed shop entry and shop front. The door in this instance is a wide timber panelled and glass door, original in style but the door hardware has been replaced, with the windows also having replacement glass. Both doorways have pressed metal ceilings, concrete steps and timber thresholds.

The 'Ryan Bros', name can be seen painted on the parapet. The rendered parapet is in three sections: two decorative sections to the outer edges containing the traditional balustrade formation and the plain central section which had the company name painted on it. The parapet sits upon a moulded projecting cornice. Below the rendered parapet is a moulded string course, the two elements being the only decoration on the building's facade. A further simple brick parapet extends around the top of the building concealing the skillion roof from view.

There are three openings to the first floor level. There would have been a balcony/verandah to the Albany Highway elevation, with the central opening serving as a doorway to the balcony, with windows to either side. One window is a double hung timber window and the other window has been modified with an air conditioning unit installed to the base. The shop use is maintained to the ground floor.

This place first appears in the post office directories in 1905, when the combined building is listed as 'Ryan Brothers, storekeepers'. Faded lettering 'Ryan Bros' was still evident on the parapet in 2021.

The Ryan Brothers ran the whole building as one store until 1909, after which the place appears to have traded as two separate businesses. Ryan Brothers continued to retain an interest until at least 1920, with Edward D. Ryan in residence above.

The building was occupied by a number of businesses including a green grocer, tailor, confectioner, bootmaker and piano tuner before becoming a hairdresser during WWII, with shop 237 servicing men and 239 servicing the women.

In 2012, Hocking Heritage Studio completed a heritage impact statement for the Town of Victoria Park for various buildings between 225 and 239 Albany Highway, to assist with determining an application to clear the properties and erect a two-storey car showroom and office structure. The report recommended the retention of 237-239 and asked for the building to be included in the LHS.

A preliminary Statement of Significance has been prepared by Stephen Carrick Architects for 237-239 Albany Highway and is as follows;

237-239 Albany Highway has cultural heritage significance for the following reasons.

The place has aesthetic value as an example of a two storey commercial building built in the Federation architectural style.

The place is a representative example of the commercial development of the Albany Highway Two mile strip. It presents well to Albany Highway and retains its original shopfront arrangements, contributing to the commercial heritage character of the precinct. Though faded, its original signage/name is still visible to the central panel of its decorative rendered parapet.

241 – 243 Albany Highway: Dutch Trading Company



Photograph 4: Shop 241-243 Albany Highway recommended for inclusion. Griffiths Architects, 2021.

This place was recommended for survey inclusion by Stephen Carrick Architects within the LHS.

241-243 Albany Highway is a single storey rendered masonry building that retains architectural detail to the upper façade and parapet. The ground floor shop front details have been modified with infill timber cladding and bifold windows.

There are three pilasters with a decorative moulding to the parapet and a rendered string cornice to the façade. The façade is divided into two unequal bays, by the three the pilasters. There are rectangular recesses that feature square openings above what would have been the verandah roof line. While the ground floor detail has been altered, the upper façade architectural detail has been retained.

A building first appears on this site in post office directories in 1908, at which time it was occupied by Holmes Bros & Co Ltd, butchers. Holmes Bros & Co was a chain of butcher shops. A 1913 photograph appears to show the building as it remained in 2021.

The photograph from 1913 shows 241-243 Albany Highway with three bays of verandah over the footpath. Decorative wrought iron trim is evident at the top of each verandah post. Above the north bay the canopy reads 'Meat Supply' and above the south 'Victoria Wine Saloon'. The central bay reads 'Victoria Park – G. Trowbridge' with George Trowbridge listed as the manager at the time. A number of butchers' delivery carts and men in striped butcher aprons are posed in front of the store, indicating the business ran an extensive meat delivery service at the time.

In the more recent decades, the building has been used as a variety of restaurants, cafes and shops. The building currently houses the Dutch Trading Company with a bar, kitchen and bottle shop.

A preliminary Statement of Significance has been prepared by Stephen Carrick Architects for 241-243 Albany Highway and is as follows;

237-239 Albany Highway has cultural heritage significance for the following reasons.

The place has aesthetic value as an example of a single storey commercial building built in the Federation architectural style.

The place has value for its ongoing commercial presence on Albany Highway.

The place is a representative example of the commercial development of the Albany Highway Two mile strip. It presents well to Albany Highway and retains its original shopfront arrangement and decorative rendered parapet.

974 Albany Highway: Victoria Park Veterinary Clinic



Photograph 5: Victoria Park Veterinary Clinic / House recommended for inclusion. Griffiths Architects, 2021.

This place was recommended for survey inclusion by Stephen Carrick Architects within the LHS.

Located on the corner of Albany Highway and Somerset Street this site comprises a former residence and structure to the rear of the lot that addresses Somerset Street. Between the two buildings is a car park for the current occupants. The site is bounded to the north by Terminus Lane.

The building currently used as a Veterinary Clinic is a former single storey residential building with a tiled hip roof. The walls are constructed of rendered masonry which has been painted multiple times over its life. Timber windows are casement and double hung. The windows to Somerset Street have timber framed awnings. There are exposed timber rafter ends to the eaves. A rendered chimney has terracotta chimney pots.

The building has a painted rendered masonry high wall to the boundary. The site has a number of mature plantings and there are two mature street trees to Somerset Street. The building to the rear of the site is a single storey painted brick structure with a parapet and skillion roof. The building has a face brick stretcher bond wall to Terminus Lane. This building is built on the lot boundary to Somerset Street and to Terminus Lane.

Post Office directories first list a residence at this site in 1928, when 'new house' is listed. The original occupants lived there until 1938, and place served as a residence for several owners before its use as a veterinary clinic.

A plan drawn in 1935 shows 974 Albany Highway as an L-shape brick residence with a large verandah/ porch at the south corner. Steps access the front porch from the east, but the pedestrian entrances to the property are at the corner and a rear lane gateway. A driveway accesses a garage within the rear yard, approximately in the location that the customer carpark driveway is now located.

The building at the rear of the lot, along the lane, was added between 1935 and 1953. Post office directories suggest it was likely erected in 1938 and used by a cabinetmaker who resided in the house.

The practicing vet at 974 Albany Highway in 2021 recalled early clinic records, since destroyed, that suggested the rear building was used as stables for treating horses, but it does not appear to have been purpose-built as stables. In the earlier years of the practice, the district was much closer to surrounding farmland and it is likely the vet clinic catered for large animal medicine such as horses and other livestock.

It is believed the first vet at 974 Albany Highway was Dr Lindsay William Spiers, who registered as a veterinarian in 1954, at which time he lived in Riverview Road, East Victoria Park.

The clinic was sold in 1982, and subsequently underwent minor renovations to formalise a waiting room and car park. The building is still used as a veterinary clinic at the time of writing.

A preliminary Statement of Significance has been prepared by Stephen Carrick Architects for 974 Albany Highway and is as follows;

974 Albany Highway has cultural heritage significance for the following reasons.

The place has aesthetic value as an inter-war bungalow; and

The place has social value for its continuing presence as a veterinary clinic servicing Victoria Park since the 1950s.

The place is situated in an area within the Albany Highway Precinct with a more residential composition. Though changes have been made, the place is an intact example of an inter-war bungalow and also has social value for its use as a veterinary clinic for almost 70 years.

281 – 283 Albany Highway: Decanter



Photograph 6: Shop 281-283 Albany Highway recommended for inclusion. Griffiths Architects, 2021.

This place was recommended for survey inclusion by Griffiths Architects within the *Albany Highway Precinct Structure Plan – Preliminary Heritage Analysis*, completed in 2021.

The place at 281 Albany Highway is a single storey painted brick and rendered brick commercial building with frontage to the street. The building has a decorative parapet comprised three evenly spaced piers connected by a shallow curved run moulding.

Photographic evidence indicates that this building was the former J. D. Brown Estate Office, which is shown on Metropolitan Sewer Maps as being extant prior to 1934. The bullnosed awning to the street elevation is likely a replacement of the original awning as the current awning spans the entire length of the elevation.

The original shopfront shown in this historic photograph has also been heavily altered and is now a more contemporary design. The place is currently used as a tapas restaurant and lounge bar.

Though changes have occurred over time, the place should be considered for inclusion within the survey due to its prominence on the street and contribution to precinct character. Aerial photography indicates that the place has not undergone major change to its general arrangement and its current appearance is mostly the same as its original presentation, aside from the replaced shopfront and internal fit out.



Photograph 7: Shop 281-283 J. D. Brown Real Estate Albany Highway to the right of the photograph. Note the decorative parapet and original shopfront c.1952. SLWA 240414PD

810 – 812 Albany Highway: Double Storey House



Photograph 8: Looking south towards rear Double Story House addressed 810-812 Albany Highway recommended for inclusion. Griffiths Architects, 2021.

This place was recommended for survey inclusion by Griffiths Architects within the *Albany Highway Precinct Structure Plan – Preliminary Heritage Analysis*, completed in 2021.

Though not visible from the street, the place at 810-812 Albany Highway is an interesting building in the Albany Highway Precinct.

Based on external observations, the building is a double storey former residence. The soft brick English garden wall bond construction suggests that this is an early building, most likely dating from the pre-World War I period. Earlier aerial photography indicates that the house had terracotta roof tiles which was replaced with corrugated steel some time in the early 1980's. There are a number of smaller structures which have been attached to the rear of the house, including a bullnosed tin balcony area to the upper storey which has crudely been enclosed.

The metropolitan sewer map shown below indicates that a brick structure with two attached shopfronts was constructed prior to 1936 when the map was drawn.

Despite not being visible from the street, the building is a rare find in a precinct that has undergone many changes as it has developed over time. It appears to be a relatively intact representation of early residential/commercial practice within the area.

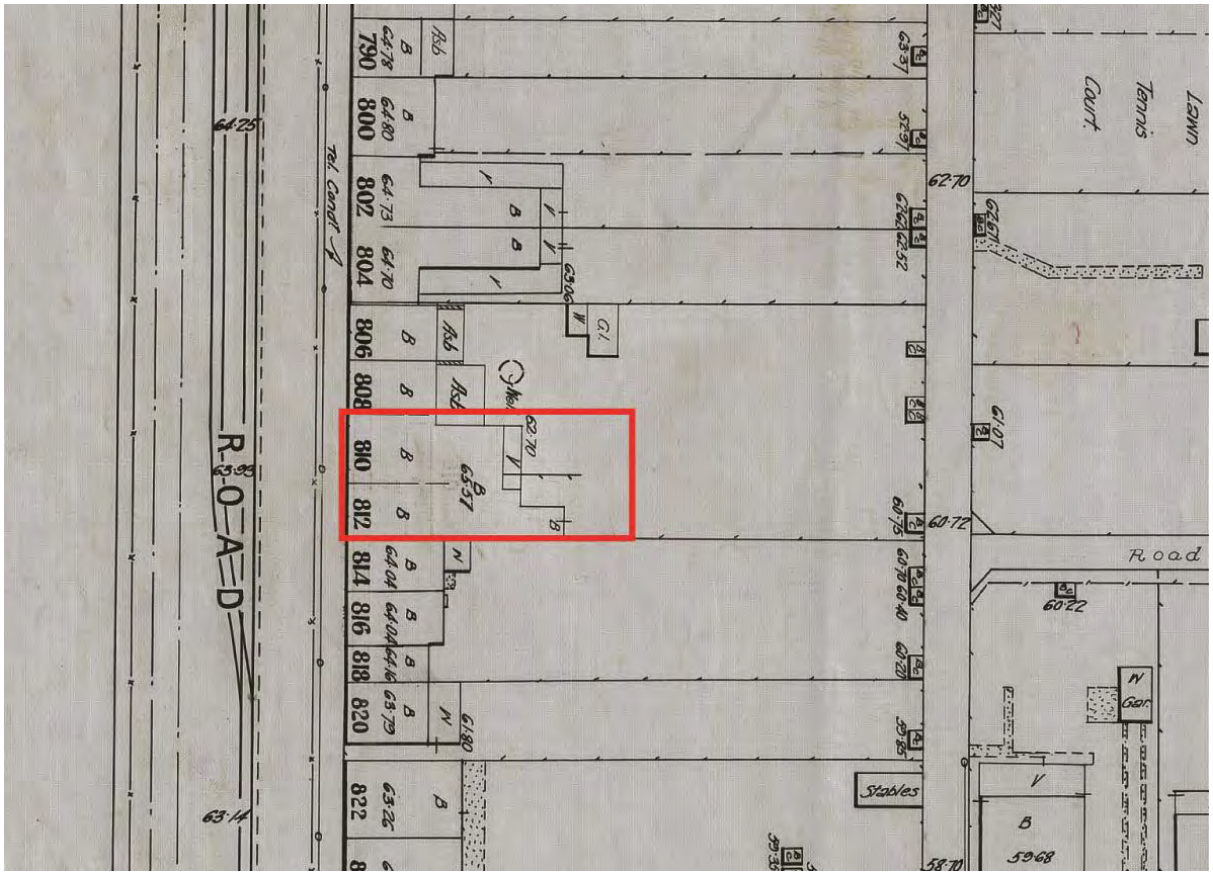


Figure 1: Metropolitan Sewer Map c.1936 Sheet 574. 810 – 812 Albany Highway shown red. SROWA series634 cons4156, accessed 2022.

5. Contributory Fabric

The *Albany Highway Precinct Structure Plan – Preliminary Heritage Analysis* completed by Griffiths Architects in 2021 identified fabric in the Albany Highway Precinct that was contributory to the character and identity of the strip. This section of the report discusses this fabric and how it can successfully influence the tenor of future development, especially at the street level.

Fabric within the precinct that has been identified as contributing to the character and identity of the site typically includes single/double storey shops, corner stores, as well as freestanding civic buildings, and their substantial architectural massing, design and materials

The two mile strip of Albany was a main thoroughfare to the rapidly developing residential area of Victoria Park. Commercial development within the area led to a vast amount of single and double storey businesses constructed over a short period of time. A large number of original buildings have been removed or extensively altered, and those that are left typically contribute strongly to the precinct and give the strip its identity.

Single storey shops are generally consistent in their basic form, being modest buildings with simple detail to parapet walls, and awnings over the footpath. Individual styling varies, but sits within a range of design types from the pre-World War I and inter-war period.

Double storey shops the precinct are typically mixed-use in nature and historically had a commercial space at ground level with a residence or residences above. These are usually more prominent and whilst representing a variety of architectural styles, these sites are generally consistent in being key minor landmarks for the area located along the two mile strip, generally with more distinctive and richer detailing than their modest single storey counter-parts.

Common features of these shops include:

- Single story shops mainly in small groups of two to four shops built together.
- Recessed entry doors which a generally but not always located central to the elevation.
- Large windows to the shopfronts over hobs.
- A flat awning projecting over the footpath, replacing verandahs.
- Rendered decorative brick parapet wall to street facades generally with vertical pilasters separating each individual shop and simple articulation.
- Corrugated metal roof hidden by parapet wall.



Figure 2: Typical shopfront found in study area. Griffiths Architects, 2021.

Much like single and double storey shops, the corner store was an important and widely used building type in the development of the Albany Highway Precinct.

Corner stores have traditionally catered for the necessities of life as well as being an important meeting place for the local community. They form an important part of the built heritage of the two mile strip and contribute to the distinctive feel of the precinct by providing familiar landmarks and a sense character. The physical features, and particularly the external appearance, of many have corner stores have remained relatively unchanged over time.

Corner stores in the precinct are generally consistent in their design, typically single storey buildings with corner truncations and simple detail to parapet walls. There are a number of double storey corner stores within the two mile strip that have landmark qualities and contribute greatly to the character of the precinct.

Common features of corner stores include;

- Chamfered corners containing entry doors.
- Large windows to the shopfronts over brick or brick and tiled hobs.
- Rendered brick facades.
- A flat awning projecting over the footpath which is typically chamfered to match the wall.
- Rendered brick parapet wall to street facades generally with vertical piers and simple articulation.
- Corrugated metal roof hidden by parapet wall.



Figure 3: Typical corner store shopfront in study area. Griffiths Architects, 2021.

The Broken Hill Hotel and the Business Building (former theatre) to either side of the Albany Highway and Harper Street are examples of the prominent corner landmarks with the overall precinct. Though the design resolution may not meet current criteria, their general design and scale strongly contribute to the street in their immediate context. This kind of site is an opportunity for creating fabric that is contributory to the character of the overall precinct.



Photograph 9: Former theatre and contributory landmark frontage. Griffiths Architects, 2021.

Large windows assist in creating active frontages to Albany Highway. Aside from displaying and showcasing, large windows create visual connections between indoor and outdoor spaces. Active frontages in the two mile strip are aided by the design of building facades, including main entrances, facing and opening toward the street. Typically, active frontages are to retail or hospitality use buildings and activation can be further stressed by outdoor seating or tables. Large windows and active frontages also promote surveillance leading to the increased safety.

Older shopfronts typically have recessed entry doors which change the depth and appearance of the area. More recent contemporary shopfronts using horizontal lines provide a less rich and varied ground plane experience. Newer shopfronts can be less inviting due to their horizontal emphasis, lack of a legible entry, and contribute less to the Highway's fine-grain character. Large buildings with predominantly horizontal lines can result in visual monotony, while vertical facade rhythms/patterns and interesting details make the walking experience richer.

As the Albany Highway strip was developed sequentially over a long period of time, there are a number of different architectural styles throughout the precinct. There are art deco shopfronts to the Alexandra Theatre and 907 Albany Highway, the inter-war art deco shopfront to Hardware Hood (fmr) and the light classically derived shopfronts like the Ryan Brothers (fmr) building.

The varied architectural styles along with their decorative parapets are not only representative of the growth and development of the strip over time, but the collage of styles and profiles above awning level creates a visually appealing perspective. Part visual appeal of the strip is the 'fine-grain built form' of the street.



Photograph 10: Contributory 'art deco' shopfront to 907 Albany Highway. Griffiths Architects, 2021.



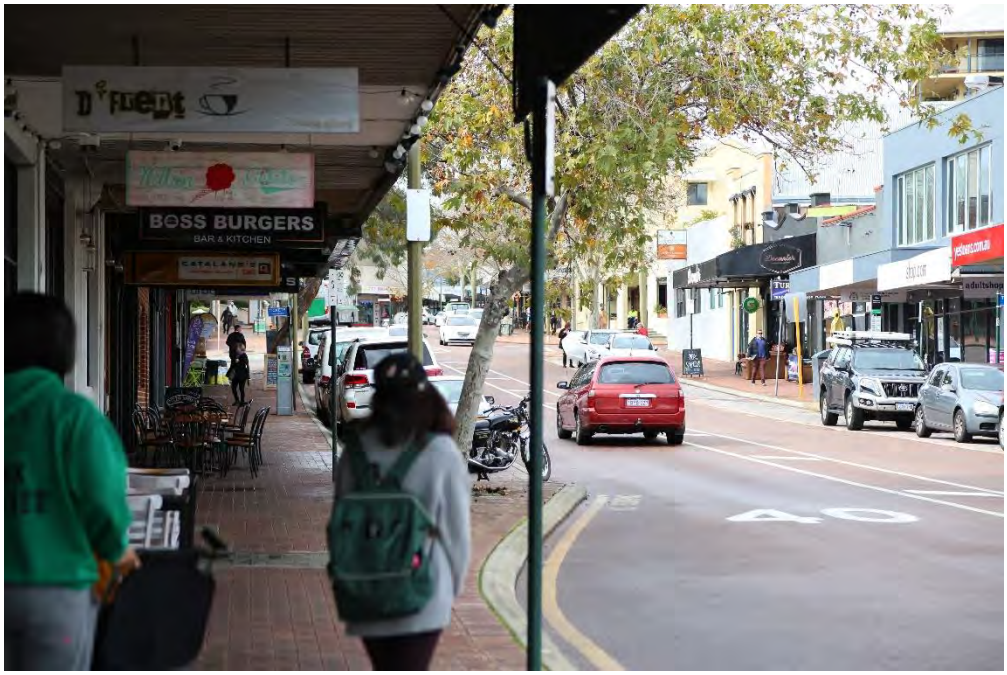
Photograph 11: Hardware Hood (fmr) Albany Highway elevation. Griffiths Architects, 2021.

The composition of the Albany Highway two mile strip is largely fine-grain urban fabric. It consists of small lot frontages along street blocks and larger frontages that reflect the earlier small lot frontage theme. In most blocks there are typically multiple smaller buildings, mostly with narrow frontages, store fronts, and minor or no setbacks.

Fine-grain urban fabric provides a multitude of opportunities, as it is typically more adaptable than larger and overly simple buildings and frontages. Fine grain urban fabric is characteristic of the area, reflects its evolution and contributes to the street movement experience.

Part of the visual appeal of the Albany Highway Precinct is its collage of architectural styles and its incremental development over time. Further development should build on some of this complexity and reflect the evolution of the Two mile strip. This notion should not lead to imitating existing styles, but rather responding to them.

Shopfront awnings are characteristic of the strip and contribute to pedestrian amenity, as well as contributing to the visual character. Awnings are particularly important in areas of high pedestrian activity and ground floor active uses. Using the precincts identified within the *Albany Highway Tomorrow* document, the Vic Park and East Vic Park precincts currently contain the largest quantity of awnings, creating an almost continuous awning to parts of these precincts. The continuous awning lines and shopfronts are strong contributors to the character of the area, and frame vistas along the streetscape. Aside from weather protection, view framing and identity contribution, awnings also create a sense of enclosure within the street.



Photograph 12: Streetscape and continuous awning line within Victoria Park Precinct looking south-east. Griffiths Architects, 2021.

Awnings create the feeling of a contained space beneath them and informally encourage interaction with shopfronts, contributing to activation.

Fabric identified as contributory is typically human scaled, and characterised in part by the continuous awnings within the Vic Park and East Vic Park precincts. Notwithstanding areas of kerbside parking throughout the two mile strip, the strip primarily serves pedestrian traffic in both precincts, with shopfronts designed to appeal to passers by and invite them to view in.

Human scale and interaction in these precincts contribute strongly to their character and social values, and the design of older shopfronts is reflective of historic interaction and engagement.

The fabric that was identified as contributory in the previous report was identified by the fact that it reflected and strongly represented the character and heritage value of the study area. Factors such as those mentioned in this section contribute to their individual presentation but also to the overall presentation and appearance of the streetscape making them an asset to and identity of the area.

Not all buildings in the study area are of heritage significance, but many still contribute value to the character of the street, while others detract. Identifying a place as being contributory does not imply that all fabric should be retained. Conservation will depend on what is significant about each place and may in some instance, be not much more that the shopfront. The degree of retention depends on the significance of each place and what it contributes to the precinct.

When analysing the significance of places to determine the degree of retention required, places can be classified based on their contribution to the precinct. These classifications reflect the degree of precinct contribution, and are representative of the degree of intactness of each place.

In this context, the degree of intactness relates to the amount of original or significant fabric that is present in the individual place.

Significant fabric and elements used to measure intactness of contributory places is comprised;

- Shopfronts
- Awnings
- Parapets
- Other original fabric located behind the parapet line.

High – These places, in addition to being mostly intact externally, generally contain intact original fabric behind the parapet line/internally.

Medium – These places are moderately intact externally to their shopfronts, awnings and parapets.

Low – These places are likely to be limited in their intactness, meaning there is not much left of their original significant fabric, or that the place has changed significantly over time.

An example of a place classified as being of low contribution is the business building shown in Photograph 9. The landmark site to the corner of Albany Highway and Harper Street formerly housed a theatre and picture garden prior to the year 1970, where historic aerial photography indicates the business building was constructed. It is unclear however if any original fabric from the theatre was retained. Despite the prominent landmark nature of the building and the significance of the corner site, the business building itself has little to no intact heritage fabric and is of low contribution to the streetscape.

An example of a place classified as being of medium contribution is the place at 281 Albany Highway: Decanter, shown in Photographs 6 and 7. The parapet of this place remains intact, and the though the awning is a replacement, it retains the same bullnosed shape and appearance albeit across a slightly larger span. The shopfront has been heavily modified over time and is now a more contemporary arrangement. It is also likely that the interior layout and fabric behind the parapet line of the place are no longer intact as the former real estate office is now a hospitality venue.

The Victoria Jewellers & Watchmakers building located at 415 Albany Highway, is an example of a place classified as being of high contribution to the streetscape and precinct. The place is included within the municipal heritage inventory as a category 2 place. The Victoria Jewellers building was built during the inter-war period and serves as a reminder of the rich commercial and retail history of the two mile strip and has contributory value presently. Its shopfront arrangement, awning and parapet are mostly intact, and it is also likely that some significant heritage fabric exists behind the parapet line.



Photograph 13: Victoria Jewellers and Watchmakers. Griffiths Architects, 2021.

Another place within the study area classified as high contribution is Hardware Hood (fmr) **(Photograph 11)** located at 697 Albany Highway. Outside of its current painting which detracts from its presentation, the shopfront arrangement, awning, and parapet are all intact, along with the terrazzo flooring containing the name 'Hoods' after its original owner. Though the interior layout likely differs from its use as a hardware store, the roof structure and appearance of the place is unchanged.

It is important to note all contributory places, even those places which are classified as low contribution still contribute to the streetscape and to the precinct. Further assessment will be required on a case by case basis to ascertain and confirm the classification of individual places, for the purposes of planning future development.

Future development should not aim to mimic the existing designs, but respond to them and capture the existing feel of the precincts and enhance their values.

6. Policy Analysis

This section of the report provides an overview of various policies either directly impacting the study area or relating to a study area similar to the Two mile strip of Albany Highway. This section contains information which has been drawn from the mentioned policies.

There are a number of existing planning policies relating to the Albany Highway study area including the Town of Victoria Park Local Planning Policies 16 & 17 (LPP).

Town of Victoria Park – Local Planning Policy 16

Town of Victoria Park LPP 16 titled *Albany Highway Residential/Commercial Design Guidelines* primarily focuses on the section of Albany Highway between Dane Street and Oats Street, which corresponds to the East End and St James Precincts. These precincts in comparison to other precincts are typically more residential in their composition, with very few contributory places.

The area accommodates commercial uses including caryards, shops, offices, repair workshops, a tavern and a service station. Contributory frontages and fabric within the area are few.

The LPP encourages an increase in the residential growth to add variety and vitality to the area and provide accommodation close to existing services and commercial buildings along the Highway. The residential component of this area is therefore intended to be the predominant land use.

The objectives of LPP 16 are;

- Encourage mixed use commercial/residential development.
- Protect the amenity of existing and future residential uses.
- Encourage development consistent with the style and character of adjacent commercial areas along Albany Highway, and complementary to adjacent residential development.

The primary building frontage to Albany Highway should be setback 3 metres and may be landscaped and/or used as a pedestrian space. The commercial (non-residential) sections of new development should face Albany High to maintain the traditional orientation of commercial shopfronts and minimise the impact on the amenity of surrounding residential uses.

The ground floor of buildings fronting Albany Highway should be used for display activities and buildings should maximise their street frontage. Facades should be articulated to create interest and variety and minimise the visual impact of the building scale.

Heights of buildings within the area shall be a maximum of 11.5 metres (3 storeys).

Town of Victoria Park – Local Planning Policy 17

Town of Victoria Park LPP 17 titled *Street Frontage Design Guidelines for District Centres and Commercial Areas Along Albany Highway* primarily focuses on the sections of Albany Highway such as the Vic Park and East Vic Park precincts which are primarily commercial/retail based.

Within the LPP it is acknowledged that one of the main objectives for the LPP is to design in such a manner as to attract more people to these areas, while focusing on the contribution made by buildings to the character and comfort of the immediate pedestrian environment of the shopping and commercial areas along Albany Highway and adjoining side streets.

The LPP addresses various items including the location of frontages, facade design, heritage buildings, awnings and Verandahs discusses how development can occur to contributory fabric, which is referred to as 'Notable Buildings' within the LPP.

The LPP defines notable buildings as;

> those buildings which have special architectural or historic interest within the context of the streetscape and/or the surrounding Precinct's historic development. They are buildings that have heritage value whether formally listed or not.

The objectives of LPP 17 are;

- To recognise the needs of business operators to function effectively and to balance these needs with those of the community and users of the public domain.
- To create a comfortable pedestrian environment within visually attractive, interesting and welcoming streetscapes that are representative of the locality and community, as befits these important suburban centres.
- To ensure that all buildings will contribute in a positive manner to the area as a safe, secure and pleasant place to be at all times.
- To conserve the variety of styles, ages and types of buildings, including shopfronts, that contribute to cultural interest, historical depth and value to the area and the streetscape.
- To foster window shopping as a major activity, at least until midnight.
- To ensure that new buildings complement and enhance the locality.
- To ensure that all signs are in keeping with a pedestrian environment and the amenity of the immediate vicinity.

Any development to frontages or new frontages should be built to the footpath and cover the full width of the site. All street level frontages should provide displays or visible activity and a high degree of architectural design detail at a pedestrian scale.

As mentioned in Section 5 of this report, the use of long, straight horizontal lines at awning or parapet level should be broken by interesting design devices to suit a pedestrian environment and the building. Any slopes in the land should be reflected in stepped awnings and parapets. The scale of any new developments should be in keeping with the traditional scale of the area and a pedestrian environment.

New development doesn't necessarily have to be the same height as the old buildings, however new development adjacent to a heritage or notable building should be in sympathy with the existing predominant height and fit into the landscape, not dominate it. Where there are heritage or notable

buildings that are important landmarks within the precinct, any adjacent new building should not overwhelm it.

Street corners and their landmark qualities should be reinforced, with the potential for buildings to be built slightly higher and/or possibly incorporate features such as a tower or turret to enhance their importance, an existing example would be the Broken Hill Hotel.

Large windows to shopfronts within the study area the key to creating active frontages to Albany Highway. Window shopping along the strip is a major attraction for visiting the Highway in the evening and often supports the adjacent restaurants. In addition it is important that glazing itself, by tinting or reflection does not obscure views into buildings from street level, thus contributing to an environment that is indifferent even hostile to the pedestrian. Works to shopfronts or any new shopfronts should be transparent for at least 60% of their facade along the footpath. The continuity of glazing should be broken to provide interest by solid (opaque) vertical panels, framework and/or strong visual displays. A high level of detailing or decoration in design, structure, colour and materials, should be provided to enhance the interest from the street.

Windows, including shop windows, should be designed in the style of the building and detailed to provide interest for the pedestrian. Interesting stall risers, facia and shopfront frame work should be provided.

The prime function of awnings/verandahs is the protection of the pedestrian from the weather. With their use heavily encouraged, continuous weather protection through the use of a solid light impenetrable material along footpath is to be provided.

All recognised and listed heritage buildings should retain any original shopfronts, entries or foyers. Front entries and stairs to floors above or to basements below a shopfront should be retained to encourage an appropriate mixing of activities, particularly residential on the upper floors. In the case that a shopfront or section of a face to a heritage or notable building, that shopfront/part should be designed to be in sympathy with the style, proportions, scale (both vertical and horizontal), materials, detailing and use of materials in and of that building.

Notable building facades should be treated with the same respect accorded a heritage building, including treatment of shopfronts.

City of Stirling – 3.1A Character Retention Guidelines – Inglewood (Beaufort Street)

Beaufort Street is very similar to the Two mile strip of Albany Highway in terms of its age, composition and arrangement. Beaufort Street, much like Albany highway has its own character retention guidelines which offers advice for the conservation of existing fabric and new developments. The guidelines are quite narrow and limit the range of 'styles' that might apply.

The retention of the heritage buildings and streetscapes along Beaufort Street is important, as these are the features that give the area its heritage character. Some buildings in the area are included on

the State Register of Heritage Places, the City of Stirling's Heritage List and Local Heritage Survey, but many more contribute to the character of the area. New buildings including additions, where they occur, should be designed to fit into the existing streetscape, and be designed in a similar style, scale and proportions as the existing heritage buildings.

The goal of the retention guidelines is to ensure any new commercial and mixed-use development is consistent with the heritage character of the Locality;

Additions to traditional buildings, and new commercial and mixed-use buildings should have no front setbacks to any street frontage. Where a site has frontage to a primary and secondary street, a minor setback will be considered for alfresco dining on the secondary street. Such setback areas shall be designed to match the existing footpath in terms of levels and paving treatment.

Upper floor additions to traditional buildings shall be setback a minimum of 3 metres from the Predominant Building Line of the original building's street facade. Continuous awnings or verandahs of traditional scale, form and design shall be provided over the street, and be functional to provide appropriate weather protection.

Any new developments shall address the street with all main entrances to buildings facing the street. In the case of corner sites shall face the corner, and shall be maintained in operation.

New commercial and mixed-use buildings should have similar facade treatments and architectural detailing / articulation as traditional buildings and reflect the design, colours, and materials of traditional buildings within the streetscape, with similar sill and awning heights to traditional buildings.

Summary

Guidelines must understand the existing character and strength of a place and steer future developments towards respect and enhancing the existing values. Despite focussing on other subject sites at varying scales, the Beaufort Street and King Street guidelines (under review) indicate a strong desire for retention and enhancement of their existing heritage character, while still being open to new developments and change. Most guidelines for heritage and character places clearly indicate the importance of good sympathetic contemporary design and discourage pastiche.

A large part of its character of the two mile strip comes from its fine-grain urban form, relatively low scale, contributory shopfronts and continuous awning. The Town of Victoria Park within LPP 16 and 17 convey an understanding of the importance of contributory fabric in the Precinct and acknowledge that fabric doesn't need to have heritage significance in order to contribute value to the character of the street.

As a result of this, the Town of Victoria Park aims to treat all contributory shopfronts/facades with the same respect accorded a heritage building. In doing so, this ensures the character of the area is

retained at its human/street level, while allowing for development behind or above subject to other guidelines and approvals.

7. Preliminary Heritage Controls

The Town of Victoria Park LPP 17, will serve as the base for establishing preliminary heritage controls for contributory fabric within the Albany Highway Two mile strip study area. As all non-heritage contributory fabric within the study area is to be afforded the same or similar protections as listed heritage fabric, it is important to understand the restraints and requirements surrounding potential new development across items such as building heights, setbacks and shopfronts.

The policies outlined within this section are recommended to be used as built form controls to guide any future developments proposed for the study area, where heritage or character strips are important. The majority of these controls are existing policies from LPP 16 & 17, while other controls from policy/guidelines reviewed in Section 6 have been recommended for implementation.

Building Heights

The Town of Victoria Park LPP 17 does not provide any height restrictions for new developments in a numerical sense. The LPP explains that new development need not be exactly the same height as heritage of character places. However, new development should be in sympathy with the existing predominant height. New development should fit into the landscape, not dominate it.
Street corners should be reinforced, buildings could be built slightly higher and/or could incorporate features such as a tower or turret to enhance their importance, an existing example would be the Broken Hill Hotel.

The LPP 17 height policy is as follows;

- Any new development that is adjacent to a heritage or notable building should provide scale, proportions, parapet height, colour and amount of detailing similar to that building and so provide a harmonious context to that building.
- Where a heritage or notable building is a landmark building, such as the Broken Hill Hotel, any adjacent new building should not overwhelm it.

The Town of Victoria Park LPP 16 does provide a height restriction for new developments, however as mentioned prior, the LPP 16 is primarily focused on the section of Albany Highway between Dane Street and Oats Street, which corresponds to the East End and St James Precincts. Typically, more residential in its nature.

LPP 16 states that;

> Buildings should maximise the street frontage of a site by minimising side setbacks. Facades should be articulated to create interest and variety and minimise the visual impact of the building scale. Heights of buildings shall be a maximum of 11.5 metres (3 storeys).

Outside of the LPP 16 study area, it can be interpreted that the height of any new developments are acceptable so long as they do no overwhelm or dominate the streetscape. There is a preference to reinforce the street corners as landmarks, and as stated above, buildings may be able to be built higher or have defining features to further express this value.

There are existing examples of new mixed use multi-storey developments within the study area, one of which is located on the corner of Albany Highway and Miller Street. The building at the corner looks to be 5 to 6 storeys high, and is comprised commercial/hospitality tenancies at ground level with setback residential apartments to its upper levels.
The buildings immediately to its west are also recent developments and are 3 to 4 storeys high, and the three individual buildings appear to taper in height to reach apex at the street corner.

It seems fair and reasonable that this type of development be acceptable in the study area, capping any new developments at 3-4 storeys within the streetscape and 5 storeys at corners. New developments adjacent to existing corner landmarks such as the Broken Hill Hotel are to be capped at a max of 3 storeys high as to not overwhelm existing heritage fabric.



Photograph 14: New developments rising east towards apex at street corner. Griffiths Architects, 2021.



Photograph 15: New mixed used development to corner of Albany Highway and Miller Street. Griffiths Architects, 2021.

Setbacks

In LPP 16 and LPP 17, setbacks typically only apply to ground floor distances from the street. In LPP17, appropriate setbacks at ground level are said to be important in creating areas that are more friendly, sheltered and secure. While streets where buildings are setback are less connected to the street, and the buildings tend to dominate at the expense of pedestrian comfort.

As stated within LPP 16;

> The front setback from Albany Highway should be 3 metres and may be landscaped and/or used as a pedestrian space.

Though LPP 16 refers to a specific section of Albany Highway which is typically more residential in nature, the 3m setback at ground level is not typical in the two mile strip. The consistent nil setback along with the texture and variation of heritage/contributory shopfronts creates an environment at the human scale that is engaging and active.

As the prospect of new development to existing blocks in the study area is inevitable, it is important to understand how setbacks can be implemented to upper levels to achieve separation from original and new built fabric to maintain character and the nature of the pedestrian zone.

The *City of Stirling – 3.1A Character Retention Guidelines – Inglewood (Beaufort Street)* contains policies for the addition of upper floors to existing heritage buildings, and are as follows;

- Upper floor additions to traditional buildings shall be setback a minimum of 3 metres from the Predominant Building Line (parapet) of the original building's street facade;
- Nil setbacks for upper floors of new commercial and mixed-use buildings may be considered subject to compliance with the objectives of this section provided these floors are no higher than three storeys.

This guidance should be considered for use within the Albany Highway area as the use of setbacks at upper levels can assist in retaining the appearance and texture of decorative parapets and contributory fabric when viewed from the street and avoid facadism.

Shopfronts

As outlined within Section 6 of this report, the Town of Victoria Park LPP 17 recognises the importance shopfronts have on the quality and vitality of the street within the study area. As a result, the LPP contains a series of policies relating to shopfronts across multiple topics including windows and heritage fabric retention.

Policies relating to shopfront windows include the following;

- At least 60% of the total length of the facade along the footpath should be transparent. The continuity of glazing should be broken to provide interest by solid (opaque) vertical panels, framework and/or strong visual displays.
- A high level of detailing or decoration in design, structure, colour and materials, should be provided to enhance the interest from the street.
- Windows, including shop windows, should be designed in the style of the building and detailed to provide interest for the pedestrian. Interesting stall risers, facia and shopfront frame work should be provided.
- Roller doors of solid material, including see through acrylic are not acceptable.
- Reflective or heavily tinted glazing is not encouraged on any building.

Policies relating to heritage and contributory fabric include;

- All recognised heritage buildings should retain any original shopfronts, entries or foyers. Front entries and stairs to floors above or to basements below a shopfront should be retained to encourage an appropriate mixing of activities, particularly residential on the upper floors.
- Notable building facades should be treated with the same respect accorded a heritage building, including treatment of shopfronts.
- Should it be necessary to replace or insert a shopfront, or other part of the facade, to a heritage or notable building then that shopfront/part should be designed to be in sympathy with the style, proportions, scale (both vertical and horizontal), materials, detailing and use of materials in and of that building.

Awnings

Awnings are particularly important in areas of high pedestrian activity and ground floor active uses. The continuous awning lines and shopfronts are strong contributors to the character of the area, and frame vistas along the streetscape. Aside from weather protection, view framing and identity contribution, awnings also create a sense of enclosure within the street. The Town of Victoria Park LPP 17 encourages the use of awnings, supported by the following policies;

- continuous weather protection along footpath is to be provided.
- verandah roofs should be of solid light impenetrable material and should provide full shade and shelter from sun, wind and rain.
- if verandahs are provided they, and their supports, if any, should be designed to complement the building's architecture and scale.
- the retention of well established shade trees should have priority over new awnings/verandahs, which should be set back to accommodate existing mature street trees.
- support posts for verandahs should be set 600mm in from the kerb line.
- verandahs and awnings must comply with the relevant By- laws.

Specific Heritage Controls

Sites Abutting Heritage Listed Places or Places Recommended for Inclusion

Development which abuts heritage listed places or places that are recommended for inclusion within a heritage list are to be sympathetic to the abutting contributory fabric through the alignment of wall heights, awning heights and parapet heights at the building frontage. New developments shall be respectful of the form and manner of the places of which they abut, and follow the aforementioned building heights and setback controls.

Sites Abutting Places With Contributory Frontages

Development which abuts places with contributory frontages follow the same controls as development abutting heritage listed places or places that are recommended for inclusion within a heritage list. Development shall be sympathetic to the abutting contributory fabric through the alignment of wall heights, awning heights and parapet heights at the street frontage. New developments shall be respectful of the form and manner of the places of which they abut, and follow the aforementioned building heights and setback controls.

Sites Opposite (Side of Street) to Heritage Listed Places or Places Recommended for Inclusion

There are no recommended heritage controls required in this situation.

Sites Opposite (Side of Street) to Places With Contributory Frontages

There are no recommended heritage controls required in this situation.

Development to Places Classified as Having Medium or High Contributory Frontage

Development to places classified as having medium or high contributory frontage is dependent on the degree of intactness. From a heritage perspective, the retention and conservation of original significant fabric with sympathetic new development to the rear is the preferred outcome, but this is subject to a structural condition assessment.

Where fabric has been altered in the past, it can be freely altered again, in line with all relevant controls. This applies to all non-original or altered shopfronts, which can be enhanced to suit controls relating to shopfronts.

Existing fabric including walls and parapets that have never been painted should remain unpainted. Conversely, where walls and parapets have been painted, they can be painted again.

The practise of facadism or the sole retention of the frontage is not recommended, and can only be considered if a structural assessment has determined that no other options for retention exist.

Development to Places Classified as Having Low Contributory Frontage

Any development to low contributory frontage places is based on a consideration of their contribution and condition. Despite being classified as having a low contribution, the frontage is still an important piece of the fine-grain urban fabric which forms the Albany Highway two mile strip. The structural condition of these places should be assessed prior to any planning.

If structurally sound, it is recommended that the existing frontage should be considered for retention and adaptation. However, if a structural assessment were to reveal serious structural issues, demolition will be acceptable with a sympathetic rebuild/new development to be undertaken in line with all relevant controls.

Development to Heritage Listed Places or Places Recommended for Inclusion

The development of heritage listed places or places recommended for inclusion on a heritage list will be a case-by-case basis dependent on the Management Category and Statement of Significance for each individual place.

The individual place listing and Statement of Significance will indicate and outline the significant fabric, reasons for its significance and provide insight as to how any new developments can be approached. Any proposed developments should not impact on the identified heritage values and Statements of Significance.

It should be noted that the internal areas of places included within the State Register of Heritage Places are protected and cannot be altered without the statutory advice of the Heritage Council

Location Specific Controls (Corner Sites)

Corner sites with contributory frontages or heritage significance will be treated in the same manner as all non-corner places. As explained prior, any developments to these places is dependent on the degree of intactness.

Generally, Street corners should be visually reinforced, buildings could be built slightly higher than surrounding buildings, so long as they comply with all relevant heritage controls.

General Heritage Development Controls	
Setbacks	
Street	- Generally nil - Align with adjacent contributory/heritage places.
Upper Levels & Additional Floors	- Upper levels to be setback a minimum of 3m from the rear of the parapet.
Building Heights	
Parapet	- Align with adjacent buildings. - Avoid use of long horizontal lines.
Awning	- Generally be continuous, horizontal and respond to site levels. - Align with existing adjacent awnings. - Provide continuous protection to pedestrian areas/paths below.
Overall Building Heights	- Max heights generally capped at 3-4 storeys. (11.5 – 15 metres). - Max heights capped at 4-5 storeys to corner sites. (15 – 19 metres). - Heights sympathetic where adjacent to State Registered Places.

8. Preliminary Precinct Recommendations

This section of the report will briefly discuss the individual precincts that form the Albany Highway Two Mile Strip and outline preliminary development recommendations that may be used to guide future planning and development. This section also contains text which has been drawn from the *Albany Highway Precinct Structure Plan – Preliminary Heritage Analysis,* completed in 2021 by Griffiths Architects.

8.1 Northern Gateway Precinct

Location

The Northern Gateway Precinct is located at the start of the study area at the corner of Shepperton Road and Albany Highway and continuing south-east to Rushton Street and Mackie Street respectively. The curtilage of the Northern Gateway Precinct is outlined in **Figure 4**. The Northern Gateway Precinct corresponds to the Causeway Precinct of the *Albany Highway Tomorrow* document by the Town of Victoria Park and Hatch Roberts Day.

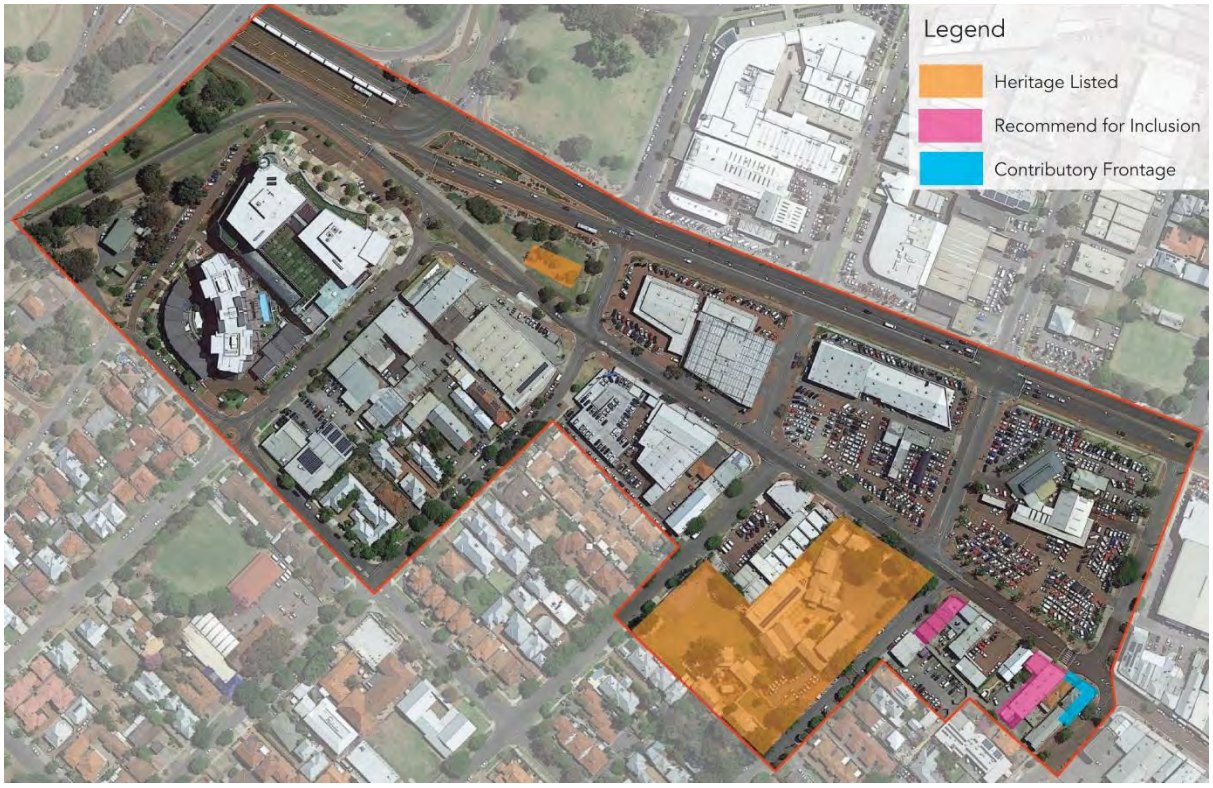


Figure 4: Northern Gateway Precinct curtilage and heritage items. Google Maps/Griffiths Architects, 2021.

Heritage Listed Places Within Precinct

- Brisbane & Wunderlich Windmill and Wishing Well -- State Register of Heritage Places
- Victoria Park Primary School -- State Register of Heritage Places
- 211-213 Albany Highway -- Recommended for Survey Inclusion
- 237-239 Albany Highway -- Recommended for Survey Inclusion
- 241-243 Albany Highway -- Recommended for Survey Inclusion

Precinct Description & Preliminary Recommendations

This precinct is primarily comprised large scale commercial sites and offices which contribute very little to the character of the 'Two Mile Strip'. Aside from heritage listed places, few contributory frontages and a handful of places recommended for inclusion on the heritage list, there is very little heritage value in this precinct. The eastern side of the highway has no places of cultural heritage value or places that contribute positively to character.

The recommendation for future development would be to encourage and increase the engagement to the highway, and take advantage of the proximity to the Swan River and Perth CBD through the use of viewing corridors and vistas. The State Registered Victoria Park Primary School should be a focal point of the precinct, forming an area for families, community engagement, with the capacity for commercial, retail and office usage.

8.2 Victoria Park Town Centre Precinct

Location

The Victoria Park Town Centre Precinct commences from the east side of Rushton Street and Mackie Street, and continues south-east along Albany Highway terminating at Manchester Street and Salford Street. The curtilage of the Victoria Park Town Centre Precinct is outlined in **Figure 5**. The Victoria Park Town Centre Precinct corresponds to the Victoria Park Precinct of the *Albany Highway Tomorrow* document by the Town of Victoria Park and Hatch Roberts Day.



Figure 5: Victoria Park Town Centre Precinct curtilage and heritage items. Google Maps/Griffiths Architects, 2021.

Heritage Listed Places Within Precinct

- Tram Stop, Corner of Mackie Street and Albany Highway -- Municipal Heritage Survey
- 281-283 Albany Highway -- Recommended for Survey Inclusion
- Memorial Garden -- Municipal Heritage Survey
- Lemon Scented Gum -- Municipal Heritage Survey
- Victoria Park Library (fmr) -- Municipal Heritage Survey
- Manchester Trading (fmr) -- Municipal Heritage Survey
- Broken Hill Hotel -- State Register of Heritage Places
- Harrold's Chambers -- Municipal Heritage Survey
- Coolgardie Chambers -- Municipal Heritage Survey
- Victoria Jewellers and Watchmakers -- Municipal Heritage Survey
- Victoria Park Post Office -- State Register of Heritage Places
- Victoria Park Police Station (fmr) -- State Register of Heritage Places
- Masonic Hall -- Municipal Heritage Survey
- Read Park -- Municipal Heritage Survey

Precinct Description & Preliminary Recommendations

This precinct contains a moderate number of listed heritage places which contribute strongly to the character of the precinct. Contributory shopfronts belonging to listed and non-heritage places and the continuous awning canopy significantly add to the character of this precinct in its most dense areas. The strong character of this precinct tapers off towards the south-eastern end of the precinct, as the density of shopfronts reduce. This is one of the strongest heritage precincts and has many places that contribute to its heritage value and character.

The recommendation for future development within this precinct would be to encourage development which reinforces the strong fine-grain urban fabric of this precinct in line with the controls outlined in Section 7 of this report.
Development of mixed-use structures comprised ground floor commercial/retail and residential levels above would likely increase the population and activity levels within the precinct and further enhance the value of the precinct as a town centre.

8.3 East Victoria Park Town Centre Precinct

Location

The East Victoria Park Town Centre Precinct commences from the east side of Manchester Street and Salford Street, and continues south-east along Albany Highway terminating at Hampshire Street and Dane Street. The curtilage of the East Victoria Park Town Centre Precinct is outlined in **Figure 6**. The East Victoria Park Town Centre Precinct corresponds to the Central and East Vic Park Precincts of the *Albany Highway Tomorrow* document by the Town of Victoria Park and Hatch Roberts Day.



Figure 6: East Victoria Park Town Centre Precinct curtilage and heritage items. Google Maps/Griffiths Architects, 2021.

Heritage Listed Places Within Precinct

- United Friendlies Society Chemist (fmr) -- Municipal Heritage Survey
- Victoria Park Hotel -- State Register of Heritage Places
- Alexandra Theatre (fmr) -- Municipal Heritage Survey
- Hardware Hood (fmr) -- Municipal Heritage Survey
- 810-812 Albany Highway (Rear Two Storey) -- A possible Survey Inclusion. This place would appear to be a two-storey house to which shops have been added
- East Victoria Park Post Office (fmr) -- Municipal Heritage Survey
- Balmoral Hotel -- State Register of Heritage Places

Precinct Description & Preliminary Recommendations

Similarly, to the Victoria Park Town Centre Precinct, the strongest character areas within the precinct coincide with the more densely arranged shopfronts and continuous awning canopies. This precinct contains a greater mix of uses than its predecessor, with multi-storey office, civic and residential apartment complexes as some examples. The car parking areas to the Park Centre shopping complex and the Vic Park Village disrupt the rhythm of the continuous awning line and detracts from the strong character of the site as well as visually.

Like the Victoria Park Town Centre Precinct, the recommendation for future development within this precinct would be to encourage development which reinforces the strong fine-grain urban fabric of this precinct in line with the controls outlined in Section 7 of this report.
Development of mixed-use structures comprised ground floor commercial/retail and residential levels above would likely increase the population and activity levels within the precinct and further enhance the value of the precinct as a town centre.
Where the continuous awnings and connections to the highway are disrupted, development should seek to re-establish connections and engagement to the highway. This can be achieved through the activation and enhancement of altered shopfronts and outdoor dining/seating.

6.4 Southern Gateway Precinct

Location

The Southern Gateway Precinct commences from the east side of Hampshire Street and Dane Street, and continues south-east along Albany Highway terminating at end of the Study Area (intersection of Shepperton Road and Albany Highway. The curtilage of the Southern Gateway Precinct is outlined in **Figure 7**. The Southern Gateway Precinct corresponds to the East End and St James Precincts of the *Albany Highway Tomorrow* document by the Town of Victoria Park and Hatch Roberts Day.



Figure 7: Southern Gateway Precinct curtilage and heritage items. Google Maps/Griffiths Architects, 2021.

Heritage Listed Places Within Precinct

- Edward Millen Home -- State Register of Heritage Places
- House / Vet Clinic -- Recommended for Survey Inclusion

Precinct Description & Preliminary Recommendations

This precinct contains very little in terms of places that contribute to character. Items that contribute to the strong character in other precincts are much harder to come by in this precinct, with the reduced concentration of shopfronts and awning lines along with the larger amount of vacant and demolished lots.

The recommendation for future development within this precinct would be to encourage development which introduces more mixed-use residential structures to the precinct. Development does not necessarily need to be as concentrated or fine-grain as the busier commercial precincts, creating an opportunity for less intense, residential and office buildings which serve as somewhat of a buffer between East Victoria Park and St James. The lack of heritage or contributory fabric outside of Edward Millen Home/Park and the Vet Clinic will allow for development to readily occur in accordance with the above controls and the guidelines found with the Town of Victoria Park LPP 16.

LPP 16 encourages an increase in the residential growth to add variety and vitality to the area and provide accommodation close to existing services and commercial buildings along the Highway. The residential component of this area is therefore intended to be the predominant land use.

9. Example Projects

Two Eleven Sydney Road & Nightingale 3.0 by Six Degrees Architects

This project currently under construction retains the existing heritage facade that presents to Sydney Road and introduces a mixed use multistorey building behind it. The upper stories are comprised residential apartments, and are setback from the heritage fabric/parapet as to retain it's current presentation to street. The ground floor is of retail/commercial use, which is consistent with the typical ground floor use of the street.

One thing to note regarding this project is that only the facade of the original heritage building remains. The practice of facadism isn't recommended within the Albany Highway study. However, this project has been used to provide an example of undertaking new development and retaining existing contributory frontage.

The arched building beside Two Eleven Sydney Road is a new development known as Nightingale 3.0 and was also designed by Six Degrees Architects. This development replaces a single story retail building which was demolished in 2020. This project provides an example of a new mixed use building within an area typically containing heritage/contributory shopfronts.

Nightingale 3.0 uses the same facade/parapet heights as the existing heritage facades adjacent to it, and matches their facade setbacks from the street. Much like Two Eleven Sydney Road, the upper stories are comprised residential apartments, setback from the street facade as to not dominate the immediate streetscape. The ground floor is also of retail/commercial use, consistent with the street.



Photograph 16: Two Eleven Sydney Road & Nightingale 3.0 by Six Degrees Architects. Six Degrees Architects, 2021.

664-666 Beaufort Street by CAPA

This project currently seeking approval proposes the construction of additional storeys to an existing contributory building/shopfront on Beaufort Street, Mt Lawley. As mentioned in Section 6 of this report, Beaufort Street is very similar to the Two mile strip of Albany Highway in terms of its age, composition and arrangement, meaning that similar principles will apply.

The proposal retains and enhances the existing heritage shop and facade that presents to Beaufort Street and introduces two storeys for residential use above/behind it. The existing shopfront will be altered in a manner that improves its existing presentation and provides depth and removes horizontal lines.

The existing decorative parapet is retained and is used as a balustrade by the setback upper storey. Much like the examples mentioned prior, the existing heights of the adjacent buildings are used as guides.

The proposed development doesn't seek to imitate the existing heritage fabric, the existing geometries inspire the form of the new additions as to blend into the existing fine grain fabric of the street.



Photograph 17: 664 – 666 Beaufort Street c. April 2022. Google Maps, 2022.



Photograph 18: 664 – 666 Beaufort Street proposal. Courtesy CAPA, 2022.

The Alex Hotel by SpaceAgency

This project constructed in 2015 provides another example of development to the rear of a contributory shopfront, albeit at a larger scale. The project involved the demolition of the majority of existing fabric, with the existing contributory frontage to William Street retained to make way for a seven storey hotel. The ground floor spaces were adapted into a wine bar and hotel reception area, with the frontage to William Street providing access to the wine bar.

The use of setbacks ensures that the human scale of the existing shopfront is unchanged, along with its immediate presentation to the street. The hotel building is only visible from across the street and is set back far enough from the shopfront that it doesn't overwhelm or dominate the streetscape.



Photograph 19: National Bank shopfront to William Street c. 1955. SLWA, 237930PD



Photograph 20: The Alex Hotel by SpaceAgency. Courtesy SpaceAgency, 2016.

10. Conclusion

In this report, an analysis of existing built fabric and various local planning polices, guidelines and strategies has allowed for the preparation of a list of preliminary heritage controls for the treatment of contributory fabric and the future development of the Albany Highway Precinct.

As outlined in Sections 6 and 7 of this report, the Town of Victoria Park recognises and understands the importance of contributory fabric within the Precinct and acknowledges that fabric doesn't need to have heritage significance in order to contribute value to the character of the precinct.

As a result of this, the Town of Victoria Park aim to treat all contributory shopfronts/facades with the same respect accorded a heritage building. The Local Planning Policies 16 and 17 contain various policies and guidelines that new developments should follow in order to achieve an outcome which has a positive impact on the character of the precinct.

In doing so, this ensures the character of the area is retained at its human/street level, while allowing for development behind or above subject to other guidelines and approvals.

An important component of the precincts existing character and identity is that it is a representative example of the commercial growth and development of the Victoria Park area over a long period of time, and if executed correctly, any new developments can further contribute to this value and continue to showcase the commercial growth of Victoria Park into the future.

11. References

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14 November 2022

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Re: "Albany Highway Tomorrow" – Precinct Structure Plan

Dear Andrew,

1 Preface

This report is prepared by Cygnet West (CW) in response to Hatch | RobertsDay's ("HRD") request for market advice in respect to the feasibility of proposed height and massing considerations for the Albany Highway Precinct Structure Plan (APSP).

2 Reference Documents

Reference documents provided by HRD as the basis for the feasibility analysis are:

- Hatch | RobertsDay, February 2022, Albany Highway Today,
- Hatch | RobertsDay, April 2022, Albany Highway Tomorrow, and
- Hatch | RobertsDay, October 2022, Community Reference Group Workshop #2.

3 Research Approach

3.1 Research Ambit

CW has taken a market and evidence-based approach to the feasibility question.

The approach considers:

1. the long term vision to be enshrined in the Albany Highway Precinct Structure Plan,
2. actual developer activity along Albany Highway and within each precinct,
3. wider developer activity in the medium to high density apartment market across Perth's inner band of similar suburbs,
4. market expectations as to site value,
5. pricing of alternative competing new and existing residential stock within the local environs,
6. pricing of new and existing residential apartment stock along Albany Highway and within the local environs,
7. past and changing market conditions, and
8. current feasibility observations.

3.1.1 Imputed Vision

The indicated vision as to land use, scale and massing is read and pictured in Hatch | RobertsDay, October 2022, Community Reference Group Workshop #2.

CW has interpreted this document as a collation of stakeholder input establishing a possible framework for guidance of land use concept and scale for the long term (arguably 30 years plus).

The land use scale and massing concepts are provided in a "Distributed Growth" (Scenario 1) and "Concentrate Growth" (Scenario 2) framework.

A fundamental observation drawn from both Scenario 1 and 2, is a requirement for land assembly in order to achieve the desired scale and allow for architectural articulation of built form expectations.

Land along Albany Highway, from the St James Precinct to the Causeway Precinct, is principally held in fragmented ownership of mainly small allotments, which are not conducive to feasible mid and high rise development. There are observed 'super lots', and analysis of transaction activity from 2015 signals several parties have clearly begun to aggregate land into more functional and feasible parcels.

The process of aggregating land can be expensive and drawn out.

Consequently, height and plot ratio bonuses should be considered for aggregated land, in order to encourage land assembly so as to enable feasible delivery of built form in alignment with the vision for the various precincts, which will reasonably also aid in heritage retention; taller thinner buildings integrated and behind.

In broad terms, Scenario 1 provides for generally three to ten levels of development with further height added to identified activity zones and extending precincts wider in parts with lower rise three and five level buildings.

Scenario 2 retains a narrower development band than for Scenario 1 and then doubles and triples heights in part of Albany Highway and to core existing super lots and obvious locations for land assembly. This scenario also retains a significant portion of the low rise modules, three to five levels, throughout the precincts.

This raises the question as to duration of the APSP.

In terms of duration, by way of example and as a local guide, CW commenced engagement with the State on The Springs Rivervale in 2003. Land assembly, statutory planning and servicing of land saw first lots to market circa 2011. Of the super lots created, as of November 2022, there remain seven undeveloped. This project was delivered through one of the strongest economic and property market growth periods experienced in West Australia.

The APSP extends over a significant portion of Victoria Park and East Victoria Park. The APSP will be enduring, and it will guide development over a long period of time. Moreover, it will reasonably be subject to further review and multiple iterations over time as the economy, markets and demographics change.

A deduction then drawn from Scenario 1 and Scenario 2 in the context of "The Springs" observation, is that it would not be unreasonable to adopt both Scenario 1 and Scenario 2 in acknowledgment the APSP will evolve over a continuum of time.

This project will unfold in an environment over the next five to ten years, where every inner urban local government authority is contemplating similar policy and planning frameworks and hence, creating competitive supply. Then add the significant supply forecast for the Burswood Peninsular and the Metronet enabled supply of similar product. Despite WA's fundamentals forecast to 2036 and beyond, and the locational attributes of Victoria Park and East Victoria Park, it will reasonably take decades for the APSP precincts to reach optimal built form delivery.

Therefore, from a market perspective, to encourage more timely activity, the APSP should deliver sufficient flexibility to underpin both the Distributed Growth and Concentrated Growth ideals alongside changing economic and market cycles.

Moreover, a core factor influencing development activity and duration of the APSP, is the existing successful enterprises that are well entrenched along Albany Highway. What is the incentive or motivation for a landlord or owner occupier to shut down an income stream or close a successful business to give effect to land assembly and subsequent redevelopment?

3.1.2 Developer Activity – Feasible Height

Financial feasibilities are site specific and reflect planning frameworks and market fundamentals at single a point in time. What is physically delivered into the market is a reflection of developer interpretation of need and desire within a planning framework at a price and cost that enables a normal business profit.

The question of feasible height can be observed by market activity.

A stroll down Albany Highway will observe new development ranging from single level showrooms and various retail shops and markets, to principally two to three level mixed use commercial/retail/residential blocks, the occasional four level building, with the largest to date being Vic Quarter at three to eight levels.

CW considers one of the biggest influences on height of new builds to date, has been the defined 30% commercial and 70% residential planning constraint. Understandably, this is to generate employment however it has the opposite affect on delivery and produces underwhelming buildings.

CW track various developer activity across suburban Perth. This activity data features institutional and corporate developers and captures 98 projects, spanning from 2012 to current and those mooted for construction to 2025. It does not capture many of the smaller non main stream developers. A summary of actual and proposed heights is set out overleaf.

Height Range - Levels		Count	Percentage	Cumulative %
1	3	6	6.1%	6.1%
4	10	67	68.4%	74.5%
11	20	13	13.3%	87.8%
21	30	10	10.2%	98.0%
31	plus	2	2.0%	100.0%
		98		

Table 1: CW

As a cross check, similar data was sourced from Urbis. The data source references differing locations and it's understood the Urbis data captures a wider range of the smaller developer market.

Height Range - Levels		Count	Percentage	Cumulative %
1	3	19	18.1%	18.1%
4	10	72	68.6%	86.7%
11	20	7	6.7%	93.3%
21	30	4	3.8%	97.1%
31	plus	3	2.9%	100.0%
		105		

Table 2: Urbis

Quite clearly, over the two data sets the predominant building height delivered to market is within four to 10 levels.

In the 21 – 30 level range, CW identify 23.5% of their data set and Urbis 10.5%.

The clear distinction between the two data sets is the one to three levels. This is an obvious function of the data monitoring and purpose for which it is held.

Collectively it does observe a common and significant proportion of delivery across a variety of inner suburban areas of four to 10 levels.

Locally, the Town of Victoria Park (TOVP), has provided a summary of development approvals from 2016 to current.

CW has summarised this data set together with reviewing development approval concepts to establish the height and mix profile contemplated by developers. This is set out in the table below.

Height Range - Levels		Count	Percentage	Cumulative %
1	3	7	43.8%	43.8%
4	10	8	50.0%	93.8%
11	20	0	0.0%	93.8%
21	30	1	6.3%	100.0%
31	plus	0	0.0%	100.0%
		16		

Table 3: Town of Victoria Park

The verifiable data provided indicates a near even proportion of one to three level approvals and four to 10 level approvals, with one tower in Burswood at 22 levels.

This is both a reflection of existing planning controls and feasible delivery in a market context. The experience with developers suggests that where land is aggregated, is well located and supports a higher and better use than contemplated under a town planning scheme, market led development processes will often see consultation with the state and local government; with subsequent development applications, then often challenging the boundaries set by a scheme, typically by virtue of application of design and performance-based measures as, opposed to strict adherence to a scheme.

Consequently, the conclusion in respect to sophisticated developers, is that the larger scale proposals are in fact a measure of feasible delivery at a point in time.

3.1.3 Site Values and Relativity of Residential Stock

Site value is a key input to feasibility.

Transaction activity for freehold land in Victoria Park and East Victoria Park has been investigated from 1 January 2015 to current.

Quite broadly, what is observed is a consistency in analysed general site values along Albany Highway from say McMillan Street south east though to the St James Precinct in a range of $1,800/m² to $2,200/m².

As you step away from Albany Highway to Shepperton Road, pricing tends to fall away to a lower range generally $1,000/m² to $1,500/m², but in the apex of Albany Highway and Shepperton Road this rises again to the upper range, a function of the Fabcot land assembly.

In the opposite direction off Albany Highway, west south west, pricing in the residential fabric generally shows a range of $1,000/m² to $1,500/m².

A number of the dated accommodation sites with strong performing retail functions displayed improved site rates, mainly for smaller sites, often with a heritage frame, of in excess of $3,000/m². This pricing frame tends to make land assembly expensive for developers and not supportive of feasibility.

West of McMillan Street through to the Causeway Precinct there were few true indicators of site value found. Many of the transactions reflected dated accommodation sites with strong performing retail function, which displayed improved site rates, mainly for smaller sites, often with a heritage frame, of in excess of $3,000/m² and some exceeding $4,000/m².

Within the Causeway Precinct, several transactions for dated but active premises, together with transactions of car yard sites suggest land values as high as $3,500/m² to $4,000/m².

The throat of land between Albany Highway and Shepperton Road is quite narrow in this north western leg and the conclusion is no material change in pricing. Where the land may be disadvantaged by exposure to Shepperton Road, the advantage is returned by elevation and outlook.

In the south west off Albany Highway, the ridge north north west off McMillan Street, maintains relatively high residential land pricing and this tapers off towards Canning Highway.

This level of land pricing in comparison to the high volume of available dated unit stock in low to mid rise units and apartments, together with the relatively inexpensive group, villa and terrace housing broadly available and accessible, north and east of Albany Highway, makes feasibility challenging for new mid to high rise apartments.

West and south west of Albany Highway, the residential fabric, demography of buyer and pricing changes, and thus provides an uplift opportunity for the low rise development contemplated under Scenario 1 Distributed Growth.

The pricing of available development land is high, and by way of example, exceeding in parts, the values observed for apartment sites in Claremont, Shenton Park, West Leederville and Subiaco, where the local residential pricing is significantly superior.

Albany Highway has evolved to be a very successful food and beverage anchored main street. A key driver to this has been the proximity to Curtin University and the relatively cheap rents featured for the retail and commercial spaces in a backdrop of very dated but well-located premises. The low rents, in relative terms, do not support redevelopment of retail and commercial spaces. Instead, it is more cost effective to fund landlord capex and refurbishment costs to maintain and or draw tenants and chase rents upward where possible.

The success of Albany Highway has transformed it to primary use to destinational retail with a metropolitan wide catchment for its food and beverage businesses. This provides confidence, security of tenure and income for landlords who will and do command high prices to trade out of core property on this strip.

The same can be said for the car yards, but there is now evidence of many transacting and being held by patient developers and investors, yet there is very little evidence of medium to high density development.

3.1.4 Market Conditions

The past decade or so has seen turbulent times in the West Australian property market. The last cyclic low occurred in 2007 and 2008. This came after supply constraints in the residential, commercial, retail and industrial market saw unprecedented value growth in all sectors that was soon followed by lagged supply, which reached market at a point where construction costs had become exorbitant in relative terms, and inflation and interest rates were rising, and which shortly afterwards, was further impacted by the subsequent effects of the global financial crisis.

In terms of the residential markets, and to some extent the commercial and retail markets, it wasn't until 2011 onwards that there was clear evidence of a return of confidence, activity and price recovery. This cycle reached its peak in 2014, and from late 2014 to 2018, the property market was generally softening across all sectors in line with the WA economy. 2019 saw signals the WA begin economy was set to improve and with this, activity in property sectors saw an observed improvement over the year.

Covid-19 impacted the property markets from early 2020. Human behaviour and Government responses affected the property markets in different ways.

The residential land market was primed, and this flowed through to significant new housing supply. This fuelled significant construction demand and essentially underpinned the subsequent cost cycle.

The residential apartment market came to a standstill, accommodation preferences shifted materially in favour of single detached dwellings, or villas, town houses and group houses with an outdoor area. The apartment market has not yet recovered and is now being further hampered by high construction costs.

Suburban activity centres thrived as Covid-19 restrictions unwound and the work from home culture set in.

The current state of play as it pertains to Albany Highway and feasible development is summarised as follow:

- General demand, labour shortage and supply chain disruptions have fuelled significant construction cost inflation. Slightly different drivers to 2007, but consequence is the same.
- With the high volume of planned state infrastructure delivery, strong infrastructure investment in resource sector, strong commercial construction sector and the remaining tail of residential construction delivery, there does not appear to be a short-term unwinding of this cost inflation on the horizon.
- The Covid-19 supply chain disruptions are not fully resolved and will continue inflation pressure in this market even after significant absorption of industrial warehousing and supply of distribution centres has occurred in offset. The core issue remains with China's Covid-19 policies and consequent affect on production capacity.
- Despite a forecast strong short to medium term economy, labour shortages across most sectors, positive wage and household income growth, inflation and interest rates are beginning to concern and impact household expenditure patterns and housing affordability,
- Despite accommodation shortages, as for 2006 – 2008, the broader residential markets are now showing signs of weakening following a rising interest rate cycle and inflationary pressures,
- Rental markets are tight and rents holding strong, but as supply is delivered, a factor fuelled by Covid-19 stimuli, the pull forward effect of stimuli induced demand; supply is now being delivered in a weakening market, and this is evidence by rising residential vacancy in past months.

The residential and development markets remain in a state of flux.

General demand for apartments, although improving marginally across late 2021 into 2022, remains modest. The exception being 'western suburbs' and coastal locations.

Residential price points for residential accommodation in Victoria Park and East Victoria Park and surrounding suburbs suggest there is no immediate shortage in availability.

Residential apartment price points and competing stock have not shown any sustained upward price movement in response to cost inflation.

To this end, delivery of medium to high density development it is not anticipated to emerge in the short term.

This conclusion reflects a point in time.

The other observation drawn is that during the period 2012 – 2018, when the residential market grew and stabilised, very little mid to high rise development occurred in the general locale. Reasonably, the inference is the planning framework did not support this form of development and developer preference sourced alternative competing locations.

A point already flagged, is that land is broadly fragmented with relative land values high making land aggregation expensive. The high underlying land values are a function of Albany Highways success as a metropolitan food based destination. Legacy land uses tend to dominate many large sites and the financial imperative (incentive) to relocate an or redevelop is not there.

3.1.5 Feasibility Testing

Prelude

Feasibility testing can only be made at a point in time.

At this juncture of the market cycle, new mid to high rise-built form is proving challenging.

Market demand is trailing as confidence is dented and inflation and interest rates begin to bite into household income.

Interest rate settings are also impacting borrowing capacity and contributing to a weakening of demand, particularly in the first home buyer sector.

The Covid-19 stimuli and subsequent pull forward of demand would reasonably have seen a short term lull in about this period, no different to the effect of first home owner grants offered post GFC (2008) which then saw a market lull in demand in 2010 and 2011.

Construction costs are at an all time high with delay becoming a norm in delivery. Indicators are that price re-adjustment may not occur in the short term.

Advice from selling agents active in the project space, indicate a number of projects under construction or about to start are in duress and developers have gone back to market to seek price increases on presold stock. This has been met with some success however a number of projects have been put on hold or deferred.

To further complicate the market locally, the market of landowners, developers and investors active in Victoria Park and East Victoria Park are aware of the TOVP investigating superior land uses for the Albany Highway precincts. Past experience suggests this may flow through to speculation and therein unreasonable pricing expectations for land. As noted above, the land value analysis has confirmed pricing of land for mixed use redevelopment purposes along Albany Highway as high relative to other competing locations with superior product pricing.

Feasibility Modelling Method

The feasibility modelling herein is generic and high level. The purpose simply to benchmark differences in height.

As a further request, HRD has sought inclusion of a levy for “Community Benefits” similar in form to South Perth.

The feasibility modelling has applied a static hypothetical development model to various sites where there was sufficient transactional evidence to understand current market value of land. It is the effect on residual land value that benchmarks whether the concept proposal is feasible.

This method of feasibility analysis consists of firstly, calculating the gross realisation for the proposed product of development on an ‘as if complete’ basis, and then deducting from this figure an allowance for selling commission, legal expenses, advertising, Goods and Services Tax, profit and risk (developer margin on cost), loss of interest over the development and selling period, development costs, rates and taxes and the initial land acquisition expenses, to provide a residual value for the land.

The residual value figure is then adopted as being a realistic guide as to what a prudent developer can pay for the land for development purposes and make a reasonable profit from the venture, while at the same time being sufficiently rewarded for the risk undertaken.

Simply expressed:

	Simplified Traditional Residual Value Method
	Gross Realisation from Sales
Less	The Goods and Service Tax
Less	Marketing and Selling Costs
Less	Profit (Developer Margin on Cost)
Less	Planning and Construction Costs
Less	Holding Costs; Rates and Taxes, Insurance, Interest etc
Less	Purchase Costs of Land
=	Residual Value or 'bid price' for the Land

The Developer Margin on Cost is a percentage factor over total cost that is the sum of land and acquisition costs, all holding costs and construction costs.

Since the GFC, market conditions and competition for development land, has seen a tightening of these margins to a 12.5% - 20.0% range dependent on location, scale, buyer demography, product mix, uncertainty, and risk to name a few, but not limited, considerations.

To participate in the market and survive as a business, developers must find the balance between profit, optimum development potential and cost.

Basic economics sees capital flow to where reasonable profits can be earned.

No Profits = No Projects = No Activity.

Site Selection

Transaction analysis for vacant land or land improved with redundant or low value improvements, confirmed reasonable price consistency from the St James Precinct to and including the Central Precinct.

Having had regard to transaction analysis for the product of development, principally residential apartments and commercial spaces, there was a modest distinction. Analysed rates for retail strata did improve.

The cost profile is the same despite which precinct the land is situated in.

Accordingly, three locations were tested where available vacant land or similar was found with sufficient nearby sales to deliver high level confidence to the land value input.

The sites selected and base scenarios applied are tabled below.

Precinct	Address	Land Area m²	Applied Base Plot Ratio	Height – Test	Height - Distributed Growth - Levels	Height - Concentrate Growth - Levels
				Scenario A	Scenario B	Scenario C
St James	998 – 1000 Albany Highway	1,372	5.0:1.0	Podium[1]: 3 Tower[2]: NA	Podium[1]: 3 Tower[2]: 3	Podium[1]: 3 Tower[2]: 6
Central	555 - 559 Albany Highway and 2 Rathay Street	2,513	5.0:1.0	NA	Podium[1]: 3 Tower[2]: 1.0[3]	Podium[1]: 5 Tower[2]: 5
Causeway	141 - 165 Albany Highway	3,756	7.5:1.0	Podium[1]: 5 Tower[2]: 5 High Commercial	Podium[1]: 5 Tower[2]: 5 Low Commercial	Podium[1]: 5 Tower[2]: 15 Low Commercial

[1]Podium is 95% of Land Surface Area

[2]Tower is 60% of Podium Surface Area

[3]Tower level is 35% of Podium Surface Area

Input Assumptions

The detailed set of input assumptions is set out in the schedules attached.

In preparing the high-level analysis no specific town planning input other than the high-level concepts set out in Hatch I RobertsDay, October 2022, Community Reference Group Workshop #2 concepts is provided or consulted.

Moreover, no architectural, engineering or quantity surveyor (QS) input was provided or obtained from relevant experts. Provision of expert input is outside the agreed scope of service.

Construction Costs have been drawn from Cordell Commercial & Housing Building Cost Guide Western Australia August 2021, "guide costings only" being broad rates per m². The August 2021 cost guide was selected so as to soften the negative influence on feasibility, with the aim of, as best as possible without design and QS input, to normalise the cost input and remove some of the cost inflation from recent times.

There has been no consultation with landowners.

The analysis has had regard to recent transaction activity for residential units and apartments, and strata commercial and retail premises. There is a paucity of transaction evidence reflective of current conditions. In view of agent advice that developers are returning to market with off plan buyers of residential apartments and seeking 5% - 10% increases to close out current projects, and that anecdotally this is approach has been receptive, we have inflated transaction evidence for local apartment residential sales by 7.5% as inputs to gross realisation.

Further, to support measured results to differentiate impact of height t feasibility, developer margins adopted are to the low side of a probable range.

Therefore, the analysis herein cannot be relied on other than to broadly gauge the mathematical influence of height and massing change on the adopted assumptions as adopted and presented, at this point in time.

Cygnet West Pty Ltd will not be liable for any loss or damage resulting from any statement, figure, calculation, or any other information contained in this report that is relied upon. The comments made by Cygnet West Pty Ltd are general in nature and not related to any specific asset or investment. The comments are not and should in no way be construed as financial, development or investment advice.

Feasibility Outputs

St James Precinct: 998 – 1000 Albany Highway

In undertaking this feasibility, no regard has been given to the lands' location opposite Edward Millen Park. The reasoning is to apply typical product mix pricing to effect a precinct based guide. The purpose of analysis is not specific to this site but general in nature.

998 Albany Highway sold June 2021 for $1,300,000. This shows $1,895/m² for the 686m² parcel. The property sold with a dated residence, which has since been demolished. The parcel is too small to support any substantial development as contemplated by Scenario 1 and Scenario 2. Scenario 1 and Scenario 2 concepts reasonably show its aggregation with the adjoining 1000 Albany Highway, a similar sized parcel with dated residential improvements.

On the basis the two parcels are aggregated in line with Scenario 1 and 2, the inferred and adopted base value for the aggregated land is $1,800/m² showing $2,469,000.

The residual value analyses drawn from the feasibility show:

	Height – Test	**Height: Distributed Growth - Levels**	**Height: Concentrate Growth - Levels**
	Scenario A	**Scenario B**	**Scenario C**
	Podium[1]: 3 Tower[2]: NA	Podium[1]: 3 Tower[2]: 3	Podium[1]: 3 Tower[2]: 6
Inferred Site Value	Residual Value	Residual Value	Residual Value
$2,469,000	$2,290,000	Negative – Not Feasible	Negative – Not Feasible
Developer Margin	10% (Low)	12.50%	13.50%

It would seem that "business as usual", a reflection of what has been delivered to date in the St James and East End precincts remains plausible in feasibility terms. There is no present benefit to feasibility with added height.

Therefore, the decision on height is one of a contemplated and desirable land use future and not one that turns on feasibility. As previously noted, the precinct plan will evolve over decades. Market cycles change as do preferences, demography and need. Hence, height and massing together with realistic and practical built form considerations will encourage market and developer engagement sooner.

If the principal objective is landform outcomes in alignment with Scenario 1 and Scenario 2, then the opposite requires consideration, minimum heights and target heights, where plot ratio bonuses are deliver up to a target height to effect delivery as contemplated by Scenario 1 and Scenario 2.

In terms of the ground plane and podium levels, the opinion is not to mandate percentage use profiles. Only the ground floor should be mandated to commercial/retail use and even then, only a proportion, say 35%, so as to give effect to better flexibility of use and utility of upper levels. Adaptable floor to soffit heights should be mandated in the podiums such that upper-level parking podiums can be converted to commercial or residential, and similarly, residential to commercial or commercial to residential.

Central Precinct: 555 - 559 Albany Highway and 2 Rathay Street

555 - 559 Albany Highway and 2 Rathay Street is presently a vacant land corner allotment.

A number of nearby transactions suggest a probable land value range of $1,800 - $2,200/m².

The inferred and adopted base value for the land and feasibility is $2,000/m² showing $5,030,000.

Apartment pricing is marginally improved due to elevation and outlook, and potentially some city skyline views from level three. Scenarios 1 and 2 suggest the outlook and views may be at risk longer term

The residual value analyses drawn from the feasibility show:

	Height – Test	Height: Distributed Growth - Levels	Height:Concentrate Growth - Levels
	Scenario A	Scenario B	Scenario C
	NA	Podium[1]: 3 Tower[2]: 1.0[3]	Podium[1]: 5 Tower[2]: 5
Inferred Site Value	Residual Value	Residual Value	Residual Value
$5,030,000	NA	$5,210,000	Negative – Not Feasible
Developer Margin:	NA	12.50% (Low)	13.50%
Community Contribution:		No	Yes If removed, no change

It would seem that delivery to four levels remains plausible and there is no present benefit to feasibility with added height.

The same comments stated above for 998 – 1000 Albany Highway apply equally in this analysis.

The vision for Albany Highway and its precincts is one that must be contemplated over time and should not be a reflection of a feasibility at a single point in time.

Causeway Precinct: 141 - 165 Albany Highway

141 - 165 Albany Highway is presently a corner allotment occupied by Subaru, a sale and service yard.

A number of nearby transactions suggest a probable land value range of $3,500 - $3,750/m².

The inferred and adopted base value for the land and feasibility is $3,750/m² showing $14,090,000.

Apartment pricing is improved due to locational attributes such as proximity to Swan River, accessibility to CBD east, accessibility to Burswood precinct, outlook above ground level, including Swan River and city views from level two or three. The Scenario 1 and 2 outlook in a midrise scenario may be at risk but in Scenario 2, the high rise will reasonably maintain the outlook.

The residual value analyses drawn from the feasibility show:

	Height – Test	Height: Distributed Growth - Levels	Height:Concentrate Growth - Levels
	Scenario A	**Scenario B**	**Scenario C**
	Podium[1]: 5 Tower[2]: 5 High Commercial	Podium[1]: 5 Tower[2]: 5 Low Commercial	Podium[1]: 5 Tower[2]: 15 Low Commercial
Inferred Site Value	Residual Value	Residual Value	Residual Value
$14,090,000	$2,800,000	$1,750,000	Negative – Not Feasible
Developer Margin:	13.50% (Low)	13.50%	13.50%
Community Contribution:	No	No	Yes If removed, residual value is $680,000

It would seem that delivery to ten and 20 levels is presently not plausible and there is no present benefit to feasibility with added height.

The same comments stated above for 998 – 1000 Albany Highway and 555 - 559 Albany Highway apply equally in this analysis.

There have been multiple towers mooted for Burswood and the Burswood Peninsular in the past decade with few reaching development feasibility and delivery.

The Springs proved height and massing opportunity but unfolded and was delivered to market with site values materially lower in price than those observed in the Causeway and Victoria Park Precincts.

The successful and continuing businesses in these precincts is unlikely to see a moderation of site values in the short to medium term to enable conversion of land use as contemplated in Scenario 1 and 2.

Accordingly, it is reinforced the approach may be one of establishing minimum height and then bonus height to a theoretical cap, say 32 levels, not too dissimilar to heights observed in East Perth, so as to, at some point in the future encourage redevelopment of these sites.

4 Close

The detailed feasibility analyses are attached.

The high-level feasibility analyses reflect assumption sets drawn from current observations at market and Scenario 1 and 2.

At present, it is not contemplated that additional height will materially encourage developer activity. It seems that to date, developer activity may have been stifled by the successes of Albany Highway as a food and beverage destination, together with entrenched legacy uses and fragmented land ownership, all of which have contributed to high (relative) underlying site values in comparison to similar activity centres.

There is evidence of land assembly by several groups, some at historically lower pricing, but as yet no material conversion to mixed use development of any scale.

The conclusion by observation is that in a property context, the massing and height contemplated by Scenarios 1 and 2 are reasonable, and that if this is a desirable outcome for the precinct as a whole, the consideration should be to setting minimum heights and compelling adaptable floor to soffit heights. This may, in the short-term stifle further development but reasonably, when development becomes feasible it will move towards meeting the vision for Albany Highway and the various precincts.

Therefore, it seems reasonable to consider both Scenario 1 and 2 over a time continuum where the market can engage and deliver either or Scenario 1 and 2 over an extended duration.

At this juncture of high land values, high costs and in comparison, lower priced accommodation stock, the addition of a levy for a community contribution is not supported by feasibility.

Should you have any queries in respect to this study, please do not hesitate to contact the undersigned.

Cygnet West Pty Ltd



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Certified Practising Valuer
Licensed Valuer No. 40276
For the State of Western Australia

Dated: 16 November 2022

Attachment 1 – Feasibility Analyses

St James Precinct

998 - 100 Albany Highway East Victoria Park

Land	1,372	m²		
Plot Ratio Standard	5.00			
Plot Ratio Area	6,860	m²		
Plot Ratio Bonus	0%			
Plot Ratio Working	5.00			
Plot Ratio Area	6,860	m²		
Basement Parking	90%			
Basement Levels	0.60		741	
Basement Parking	30.00		25	
Permitted Site/Podium	90%	Cover	1,235	
Permitted Ground +Podium	3.00	Levels	3,704	
Ground	1.00		1,235	
Podium	2.00		2,470	
Ground Floor Commercial/Retail	0.30		**370**	Balance to building lobbies, services, entry ramps, various parking and storerooms etc
Ground Floor Parking	0.30			
Podium Parking Levels	-			
Podium Commercial Levels	-			
Podium Residential levels	2.00			
Ground Floor Parking Bays	30.00		12	
Total Commercial/Retail Lettable Area	90%		333	
Commercial/Retail Parking	45.00	m² / bay	8	
Podium Parking levels	-		0	
Podium Parking Level Efficiency	90%		0	
Podium Parking m²/bay	30.00		0	
Available Podium GFA			2,470	
Residential GFA			2,470	
Podium Residential Efficiency	85%		2,099	
Podium Dwellings	80.00		26	
Permitted Tower	0%	Podium	0	
Permitted Tower	-	Levels	0	
Tower Efficiency	85%		0	
Tower Dwellings	80.00		0	
Total Dwellings			**26**	
Required Parking Including Visitor/Bikes I	1.12		29	
Total Parking Required			**37**	
Total GFA			3,704.4	
Variance from Available GFA			(3,155.6)	
Available Car Bays			37.0	
Variance from required Car bays			0.0	
Total Levels	3.00			
Actual Plot Ratio			2.70	
Community Benefit	3%	Construction Cost	$0	
Construction Cost	$10,613,726			
Surplus Plot Ratio	-			

GFA Summary

Basement GFA		740.9
Ground Floor Parking GFA		370.4
Podium Parking GFA		0.0
Ground Floor GFA	Back of House/Services	493.9
Ground/Podium Commercial Retail GFA		370.4
Podium Residential GFA		2,469.6
Tower Residential GFA		0.0
Above Ground GFA		3,704.4
Check		3,704.4

$1,000 Rounding Factor

Residential	# Apt	Bed	Net Area	Total area	Carbays/apt	Total Carbays	$/m² net	Average price	Gross Realisation		
1 Bed Studio	0	1	45.0	-	-	0	$8,000	$360,000	$0	0%	
1 Bed	8	1	52.0	416	0.80	6	$8,100	$421,000	$3,368,000	31%	31% total 1 bed
2 Bed 1 Bath	4	2	78.0	312	1.00	4	$7,600	$593,000	$2,372,000	15%	
2 Bed 2 Bath	6	2	85.0	510	1.00	6	$7,550	$642,000	$3,852,000	23%	38% total 2 bed
3 bed 1.5 Bath	4	3	100.0	400	1.50	6	$7,450	$745,000	$2,980,000	15%	
3 bed 2 Bath	4	3	110.0	440	2.00	8	$7,450	$820,000	$3,280,000	15%	31% total 3 bed
Sub Penthouse	0	4	180.0	-	2.00	0	$7,350	$1,323,000	$0	0%	
Penthouse	0	4	250.0	-	3.00	0	$7,150	$1,788,000	$0	0%	
	26			2,078		30		$609,692	$15,852,000	100%	100%
						1.15					
			Average floor area	79.92				Average price	$610,000		
			Balcony Average	15					$7,628		

Commercial	Average Unit Size	70	m²					
		No.	NLA	Ave NLA	$/m² GST Inc	Average price	Gross Realisation	GST Net
		5	333	67	$6,600	$439,560	$2,197,800	$6,000
							Total Realisation	$18,049,800

Timings

Statutory Planning	9	months
Pre - sales commitment	9	months
Construction Design and Tender	3	months
Development	15	months
Selling	6	months
Total Duration	**42**	months
PR Guide	3.5	5.0% 17.5%

Development Calculations

Gross Realisation								$18,049,800
LESS	GST	Land	$0					$1,640,891
		Res GR	$15,852,000	Com GR	$2,197,800			$16,408,909
		GST	$1,441,091		$199,800			
LESS								
	Agency Selling Fee			2.00%			$360,996	
	Development Management Fee			1.00%			$180,498	
	Settlement Fee Vendor			0.15%			$27,075	$1,041
	Marketing			1.00%			$180,498	$6,942
	Ancillary Costs			0.25%			$45,125	$1,736
							$794,191	
								$15,614,718
LESS	Profit and Risk			10.00%			$1,419,520	$54,597
								$14,195,198
LESS	Impact of Affordable dwellings						$0	
								$14,195,198

LESS	**Development Costs**			**Gross Area m²**	$/m²		
	Basement Car Park			741	$1,250	$926,100	
	Ground/Podium Car Park			864	$1,100	$950,796	
	Commercial/Retail			370	$2,200	$814,968	Cordells Augu
	Residential			2,470	$2,200	$5,433,120	
	Balcony			390	$800	$312,000	
	External Works	1.5%				$126,555	
	External Services	1.5%				$126,555	
	Public Art	1.0%				$84,370	
	Adaptable & Sustainable Building Design	2.0%				$168,740	
	Headworks/Statutory Fees	2.0%				$175,489	
	Professional Fees	8.0%				$701,957	
	Contingency	10.0%				$877,446	
			Cost per GFA	3,704	$2,888	$10,698,096	
			Check	3,704			$3,497,102
LESS	Community Benefit Contribution					$0	
							$3,497,102
LESS	Rates and Taxes		Completed Product				
		$2,000	pa per unit for half selling period			$15,500	
							$3,481,602
LESS	Interest on Development Costs		5.50%				
	Interest on half the development and selling period					$515,592	
							$2,966,011
LESS	Interest on Land Purchase						
	For Planning, Development and half selling Period			39	months		
		5.50%	p.a.	17.88%		$449,777	
							$2,516,234
LESS	Rates and Taxes						
	Land	4.00%	for land during planning and development			$96,778	
							$2,419,456
LESS	Purchase Costs		5.50%			$126,133	
							$2,293,323
						Adopt	$2,290,000
						$/m² land	$1,669
						$/m² Plot Ratio Actual	$618

998 Albany Highway	Sold	01 Jun 2021	$1,300,000	Old House	Demolished	686.0		$1,895	
1000 Albany Highway				Old House		686.0			
						1,372.0	say	$1,800	$2,469,600

$10,000

St James Precinct

998 - 100 Albany Highway East Victoria Park

Land	1,372	m²		
Plot Ratio Standard	5.00			
Plot Ratio Area	6,860	m²		
Plot Ratio Bonus	0%			
Plot Ratio Working	5.00			
Plot Ratio Area	6,860	m²		
Basement Parking	90%			
Basement Levels	1.00		1,235	
Basement Parking	30.00		41	
Permitted Site/Podium	90%	Cover	1,235	
Permitted Ground +Podium	3.00	Levels	3,704	
Ground	1.00		1,235	
Podium	2.00		2,470	
Ground Floor Commercial/Retail	0.30		**370**	Balance to building lobbies, services, entry ramps, various parking and storerooms etc
Ground Floor Parking	0.30			
Podium Parking Levels	-			
Podium Commercial Levels	-			
Podium Residential levels	2.00			
Ground Floor Parking Bays	30.00		12	
Total Commercial/Retail Lettable Area	90%		333	
Commercial/Retail Parking	45.00	m² / bay	8	
Podium Parking levels	0.30		370	
Podium Parking Level Efficiency	90%		333	
Podium Parking m²/bay	30.00		11	
Available Podium GFA			2,099	
Residential GFA			2,470	
Podium Residential Efficiency	85%		2,099	
Podium Dwellings	80.00		26	
Permitted Tower	60%	Podium	741	
Permitted Tower	3.00	Levels	2,223	
Tower Efficiency	85%		1,889	
Tower Dwellings	80.00		24	
Total Dwellings			**50**	
Required Parking Including Visitor/Bikes I	1.12		56	
Total Parking Required			**64**	
Total GFA			5,927.0	
Variance from Available GFA			(933.0)	
Available Car Bays			64.0	
Variance from required Car bays			0.0	
Total Levels	6.00			
Actual Plot Ratio			4.32	
Community Benefit	3%	Construction Cost	$0	
Construction Cost	$23,919,352			
Surplus Plot Ratio	-			

GFA Summary

Basement GFA		1,234.8
Ground Floor Parking GFA		370.4
Podium Parking GFA		0.0
Ground Floor GFA	Back of House/Services	493.9
Ground/Podium Commercial Retail GFA		370.4
Podium Residential GFA		2,469.6
Tower Residential GFA		2,222.6
Above Ground GFA		5,927.0
Check		5,927.0

$1,000 Rounding Factor

Residential	# Apt	Bed	Net Area	Total area	Carbays/apt	Total Carbays	$/m² net	Average price	Gross Realisation		
1 Bed Studio	5	1	45.0	225	-	0	$8,000	$360,000	$1,800,000	10%	
1 Bed	10	1	52.0	520	0.80	8	$8,100	$421,000	$4,210,000	20%	30% total 1 bed
2 Bed 1 Bath	8	2	78.0	624	1.00	8	$7,600	$593,000	$4,744,000	16%	
2 Bed 2 Bath	11	2	85.0	935	1.00	11	$7,550	$642,000	$7,062,000	22%	38% total 2 bed
3 bed 1.5 Bath	8	3	100.0	800	1.50	12	$7,450	$745,000	$5,960,000	16%	
3 bed 2 Bath	8	3	110.0	880	2.00	16	$7,450	$820,000	$6,560,000	16%	32% total 3 bed
Sub Penthouse	0	4	180.0	-	2.00	0	$7,350	$1,323,000	$0	0%	
Penthouse	0	4	250.0	-	3.00	0	$7,150	$1,788,000	$0	0%	
	50			3,984		55		$606,720	$30,336,000	100%	100%
						1.10					
			Average floor area	79.68				Average price	$607,000		
			Balcony Average	15					$7,614		

Commercial	Average Unit Size	70 m²	No.	NLA	Ave NLA	$/m² GST Inc	Average price	Gross Realisation	GST Net
			5	333	67	$6,600	$439,560	$2,197,800	$6,000
								Total Realisation	**$32,533,800**

Timings

Statutory Planning	9	months
Pre - sales commitment	12	months
Construction Design and Tender	3	months
Development	24	months
Selling	6	months
Total Duration	**54**	months
PR Guide	4.5	5.0% 22.5%

Development Calculations

Gross Realisation						$32,533,800	
LESS	GST	Land	$0			**$2,957,618**	
		Res GR	$30,336,000	Com GR	$2,197,800	$29,576,182	
		GST	**$2,757,818**		**$199,800**		
LESS							
	Agency Selling Fee		2.00%		$650,676		
	Development Management Fee		1.00%		$325,338		
	Settlement Fee Vendor		0.15%		$48,801		$976
	Marketing		1.00%		$325,338		$6,507
	Ancillary Costs		0.25%		$81,335		$1,627
					$1,431,487		
						$28,144,695	
LESS	Profit and Risk		12.50%		$3,127,188		$62,544
						$25,017,506	
LESS	Impact of Affordable dwellings				$0		
						$25,017,506	

LESS	Development Costs			Gross Area m²	$/m²		
	Basement Car Park			1,235	$1,250	$1,543,500	
	Ground/Podium Car Park			864	$2,840	$2,454,782	
	Commercial/Retail			370	$2,840	$1,052,050	
	Residential			4,692	$2,840	$13,325,962	
	Balcony			750	$850	$637,500	
	External Works	1.5%				$285,207	
	External Services	1.5%				$285,207	
	Public Art	1.0%				$190,138	
	Adaptable & Sustainable Building Design	2.0%				$380,276	
	Headworks/Statutory Fees	2.0%				$395,487	
	Professional Fees	8.0%				$1,581,948	
	Contingency	10.0%				$1,977,435	
			Cost per GFA	5,927	$4,068	$24,109,490	
			Check	5,927			$908,016
LESS	Community Benefit Contribution					$0	
							$908,016
LESS	Rates and Taxes		Completed Product				
		$2,000	pa per unit for half selling period			$27,500	
							$880,516
LESS	Interest on Development Costs		**5.50%**				
	Interest on half the development and selling period					$1,659,418	
							($778,902)
LESS	Interest on Land Purchase						
	For Planning, Development and half selling Period			51	months		
	5.50% p.a.			23.38%		($147,573)	
							($926,475)
LESS	Rates and Taxes						
	Land	**4.00%**	for land during planning and development			($35,634)	
							($962,109)
LESS	Purchase Costs		**5.50%**			($50,157)	
							($1,012,266)

	Adopt	**Not Feasible**	$10,000
	$/m² land	**NA**	
	$/m² Plot Ratio Actual	**NA**	
	Market Value of Land	**$2,469,600**	

St James Precinct

998 - 100 Albany Highway East Victoria Park

Land	1,372	m²			
Plot Ratio Standard	5.00				
Plot Ratio Area	6,860	m²			
Plot Ratio Bonus	20%				
Plot Ratio Working	6.00				
Plot Ratio Area	8,232	m²			
Basement Parking	90%				
Basement Levels	2.00		2,470		
Basement Parking	30.00		82		
Permitted Site/Podium	90%	Cover	1,235		
Permitted Ground +Podium	3.00	Levels	3,704		
Ground	1.00		1,235		
Podium	2.00		2,470		
Ground Floor Commercial/Retail	0.30		**370**	Balance to building lobbies, services, entry ramps, various parking and storerooms etc	
Ground Floor Parking	0.30				
Podium Parking Levels	-				
Podium Commercial Levels	-				
Podium Residential levels	2.00				
Ground Floor Parking Bays	30.00		12		
Total Commercial/Retail Lettable Area	90%		333		
Commercial/Retail Parking	45.00	m² / bay	8		
Podium Parking levels	-		0		
Podium Parking Level Efficiency	90%		0		
Podium Parking m²/bay	30.00		0		
Available Podium GFA			2,470		
Residential GFA			2,470		
Podium Residential Efficiency	85%		2,099		
Podium Dwellings	80.00		26		
Permitted Tower	60%	Podium	741		
Permitted Tower	6.00	Levels	4,445		
Tower Efficiency	85%		3,778		
Tower Dwellings	80.00		47		
Total Dwellings			**73**		
Required Parking Including Visitor/Bikes I	1.12		82		
Total Parking Required			**90**		
Total GFA			8,149.7		
Variance from Available GFA			1,289.7		
Available Car Bays			94.0		
Variance from required Car bays			4.0		
Total Levels	9.00				
Actual Plot Ratio			5.94		
Community Benefit	3%	Construction Cost	$171,635		
Construction Cost	$36,518,036				
Surplus Plot Ratio	1,290				

GFA Summary		
Basement GFA		2,469.6
Ground Floor Parking GFA		370.4
Podium Parking GFA		0.0
Ground Floor GFA	Back of House/Services	493.9
Ground/Podium Commercial Retail GFA		370.4
Podium Residential GFA		2,469.6
Tower Residential GFA		4,445.3
Above Ground GFA		8,149.7
Check		8,149.7

$1,000 Rounding Factor

Residential	# Apt	Bed	Net Area	Total area	Carbays/apt	Total Carbays	$/m² net	Average price	Gross Realisation		
1 Bed Studio	6	1	45.0	270	-	0	$7,800	$351,000	$2,106,000	8%	
1 Bed	15	1	52.0	780	0.80	12	$7,900	$411,000	$6,165,000	21%	29% total 1 bed
2 Bed 1 Bath	12	2	78.0	936	1.00	12	$7,410	$578,000	$6,936,000	16%	
2 Bed 2 Bath	18	2	85.0	1,530	1.00	18	$7,360	$626,000	$11,268,000	25%	41% total 2 bed
3 bed 1.5 Bath	12	3	100.0	1,200	1.50	18	$7,260	$726,000	$8,712,000	16%	
3 bed 2 Bath	10	3	110.0	1,100	2.00	20	$7,260	$799,000	$7,990,000	14%	30% total 3 bed
Sub Penthouse	0	4	180.0	-	2.00	0	$7,170	$1,291,000	$0	0%	
Penthouse	0	4	250.0	-	3.00	0	$6,970	$1,743,000	$0	0%	
	73			5,816		80		$591,466	$43,177,000	100%	100%
						1.10					
			Average floor area	79.67				Average price	$591,000		
			Balcony Average	15					$7,424		

Commercial	Average Unit Size	70 m²	No.	NLA	Ave NLA	$/m² GST Inc	Average price	Gross Realisation	GST Net
			5	333	67	$6,600	$439,560	$2,197,800	$6,000
								Total Realisation	**$45,374,800**

Timings

Statutory Planning	9	months
Pre - sales commitment	12	months
Construction Design and Tender	3	months
Development	24	months
Selling	6	months
Total Duration	**54**	months
PR Guide	4.5	5.0% 22.5%

Development Calculations

Gross Realisation							$45,374,800
LESS	GST	Land	$0				**$4,124,982**
		Res GR	$43,177,000	Com GR	$2,197,800		$41,249,818
		GST	**$3,925,182**		**$199,800**		
LESS							
	Agency Selling Fee		2.00%			$907,496	
	Development Management Fee		1.00%			$453,748	
	Settlement Fee Vendor		0.15%			$68,062	$932
	Marketing		1.00%			$453,748	$6,216
	Ancillary Costs		0.25%			$113,437	$1,554
						$1,996,491	
							$39,253,327
LESS	Profit and Risk		13.50%			$4,668,898	$63,958
							$34,584,429
LESS	Impact of Affordable dwellings					$0	
							$34,584,429

LESS	**Development Costs**			**Gross Area m²**	$/m²		
	Basement Car Park			2,470	$1,250	$3,087,000	
	Ground/Podium Car Park			864	$1,100	$950,796	
	Commercial/Retail			370	$3,280	$1,215,043	
	Residential			6,915	$3,280	$22,680,806	Cordells August 2021
	Balcony			1,095	$1,000	$1,095,000	
	External Works	1.5%				$435,430	
	External Services	1.5%				$435,430	
	Public Art	1.0%				$290,286	
	Adaptable & Sustainable Building Design	2.0%				$580,573	
	Headworks/Statutory Fees	2.0%				$603,796	
	Professional Fees	8.0%				$2,415,183	
	Contingency	10.0%				$3,018,979	
			Cost per GFA	8,150	$4,517	$36,808,323	
			Check	8,150			($2,223,894)
LESS	Community Benefit Contribution					$171,635	
							($2,395,528)
LESS	Rates and Taxes		Completed Product				
		$2,000	pa per unit for half selling period			$39,000	
							($2,434,528)
LESS	Interest on Development Costs		**5.50%**				
	Interest on half the development and selling period					$2,545,053	
							($4,979,582)
LESS	Interest on Land Purchase						
	For Planning, Development and half selling Period			51	months		
		5.50%	p.a.	23.38%		($943,447)	
							($5,923,028)
LESS	Rates and Taxes						
	Land	**4.00%**	for land during planning and development			($227,809)	
							($6,150,837)
LESS	Purchase Costs		**5.50%**			($320,660)	
							($6,471,497)
						Adopt	**Not Feasible**
						$/m² land	**NA**
						$/m² Plot Ratio Actual	**NA**
						Market Value of Land	**$2,469,600**

$10,000

Central Precinct

555 - 559 Albany Highway and 2 Rathay Street

Land	2,513	m²			
Plot Ratio Standard	5.00				
Plot Ratio Area	12,565	m²			
Plot Ratio Bonus	0%				
Plot Ratio Working	5.00				
Plot Ratio Area	12,565	m²			
Basement Parking	90%				
Basement Levels	0.73		1,651		
Basement Parking	30.00		55		
Permitted Site/Podium	90%	Cover	2,262		
Permitted Ground +Podium	3.00	Levels	6,785		
Ground	1.00		2,262		
Podium	2.00		4,523		
Ground Floor Commercial/Retail	0.30		**679**	Balance to building lobbies, services, entry ramps, various parking and storerooms etc	
Ground Floor Parking	0.30				
Podium Parking Levels	-				
Podium Commercial Levels	-				
Podium Residential levels	2.00				
Ground Floor Parking Bays	30.00		23		
Total Commercial/Retail Lettable Area	90%		611		
Commercial/Retail Parking	45.00	m² / bay	15		
Podium Parking levels	-		0		
Podium Parking Level Efficiency	90%		0		
Podium Parking m²/bay	30.00		0		
Available Podium GFA			4,523		
Residential GFA			4,523		
Podium Residential Efficiency	85%		3,845		
Podium Dwellings	80.00		48		
Permitted Tower	35%	Podium	792		
Permitted Tower	1.00	Levels	792		
Tower Efficiency	85%		673		
Tower Dwellings	80.00		8		
Total Dwellings			**56**		
Required Parking Including Visitor/Bikes I	1.12		63		
Total Parking Required			**78**		
Total GFA			7,576.7		
Variance from Available GFA			(4,988.3)		
Available Car Bays			78.0		
Variance from required Car bays			0.0		
Total Levels	4.00				
Actual Plot Ratio			3.02		
Community Benefit	3%	Construction Cost	$0		
Construction Cost	$22,220,081				
Surplus Plot Ratio	-				

GFA Summary

Basement GFA		1,651.0
Ground Floor Parking GFA		678.5
Podium Parking GFA		0.0
Ground Floor GFA	Back of House/Services	904.7
Ground/Podium Commercial Retail GFA		678.5
Podium Residential GFA		4,523.4
Tower Residential GFA		791.6
Above Ground GFA		7,576.7
Check		7,576.7

$1,000 Rounding Factor

Residential	# Apt	Bed	Net Area	Total area	Carbays/apt	Total Carbays	$/m² net	Average price	Gross Realisation		
1 Bed Studio	8	1	45.0	360	-	0	$8,160	$367,000	$2,936,000	14%	
1 Bed	8	1	52.0	416	0.80	6	$8,260	$430,000	$3,440,000	14%	29% total 1 bed
2 Bed 1 Bath	6	2	78.0	468	1.00	6	$7,750	$605,000	$3,630,000	11%	
2 Bed 2 Bath	16	2	85.0	1,360	1.00	16	$7,700	$655,000	$10,480,000	29%	39% total 2 bed
3 bed 1.5 Bath	8	3	100.0	800	1.50	12	$7,600	$760,000	$6,080,000	14%	
3 bed 2 Bath	10	3	110.0	1,100	2.00	20	$7,600	$836,000	$8,360,000	18%	32% total 3 bed
Sub Penthouse	0	4	180.0	-	2.00	0	$7,500	$1,350,000	$0	0%	
Penthouse	0	4	250.0	-	3.00	0	$7,290	$1,823,000	$0	0%	
	56			4,504		60		$623,679	$34,926,000	100%	100%
						1.07					
			Average floor area	80.43				Average price	$624,000		
			Balcony Average	15					$7,754		

Commercial	Average Unit Size	100 m²	No.	NLA	Ave NLA	$/m² GST Inc	Average price	Gross Realisation	GST Net
			6	611	102	$7,700	$784,117	$4,704,700	$7,000
								Total Realisation	**$39,630,700**

Timings

Statutory Planning	9	months
Pre - sales commitment	9	months
Construction Design and Tender	3	months
Development	18	months
Selling	6	months
Total Duration	**45**	months
PR Guide	3.8	5.0% 18.8%

Development Calculations

Gross Realisation							$39,630,700	
LESS	GST	Land	$0				**$3,602,791**	
		Res GR	$34,926,000	Com GR	$4,704,700		$36,027,909	
		GST	**$3,175,091**		**$427,700**			
LESS								
	Agency Selling Fee		2.00%			$792,614		
	Development Management Fee		1.00%			$396,307		
	Settlement Fee Vendor		0.15%			$59,446		$1,062
	Marketing		1.00%			$396,307		$7,077
	Ancillary Costs		0.25%			$99,077		$1,769
						$1,743,751		
							$34,284,158	
LESS	Profit and Risk		12.50%			$3,809,351		$68,024
							$30,474,807	
LESS	Impact of Affordable dwellings					$0		
							$30,474,807	

LESS	**Development Costs**			**Gross Area m²**	$/m²		
	Basement Car Park			1,651	$1,250	$2,063,801	
	Ground/Podium Car Park			1,583	$1,100	$1,741,509	
	Commercial/Retail			679	$2,200	$1,492,722	Cordells Augu
	Residential			5,315	$2,200	$11,692,989	
	Balcony			840	$800	$672,000	
	External Works	1.5%				$264,945	
	External Services	1.5%				$264,945	
	Public Art	1.0%				$176,630	
	Adaptable & Sustainable Building Design	2.0%				$353,260	
	Headworks/Statutory Fees	2.0%				$367,391	
	Professional Fees	8.0%				$1,469,563	
	Contingency	10.0%				$1,836,954	
			Cost per GFA	7,577	$2,956	$22,396,711	
			Check	7,577			$8,078,096
LESS	Community Benefit Contribution					$0	
							$8,078,096
LESS	Rates and Taxes		Completed Product				
		$2,000	pa per unit for half selling period			$31,000	
							$8,047,096
LESS	Interest on Development Costs		**5.50%**				
	Interest on half the development and selling period					$1,233,524	
							$6,813,572
LESS	Interest on Land Purchase						
	For Planning, Development and half selling Period			42	months		
		5.50%	p.a.	19.25%		$1,099,885	
							$5,713,687
LESS	Rates and Taxes						
	Land	**4.00%**	for land during planning and development			$219,757	
							$5,493,930
LESS	Purchase Costs		**5.50%**			$286,413	
							$5,207,517
						Adopt	**$5,210,000**
						$/m² land	**$2,073**
						$/m² Plot Ratio Actual	**$688**

$10,000

Probable Land Value range		
	$1,800	$4,520,000
	$2,000	$5,030,000
	$2,200	$5,530,000

Central Precinct

555 - 559 Albany Highway and 2 Rathay Street

Land	2,513	m²		
Plot Ratio Standard	5.00			
Plot Ratio Area	12,565	m²		
Plot Ratio Bonus	0%			
Plot Ratio Working	5.00			
Plot Ratio Area	12,565	m²		
Basement Parking	90%			
Basement Levels	2.00		4,523	
Basement Parking	30.00		151	
Permitted Site/Podium	90%	Cover	2,262	
Permitted Ground +Podium	5.00	Levels	11,309	
Ground	1.00		2,262	
Podium	4.00		9,047	
Ground Floor Commercial/Retail	0.30		**679**	Balance to building lobbies, services, entry ramps, various parking and storerooms etc
Ground Floor Parking	0.30			
Podium Parking Levels	0.50			
Podium Commercial Levels	-			
Podium Residential levels	3.50			
Ground Floor Parking Bays	30.00		23	
Total Commercial/Retail Lettable Area	90%		611	
Commercial/Retail Parking	45.00	m² / bay	15	
Podium Parking levels	0.50		1,131	
Podium Parking Level Efficiency	90%		1,018	
Podium Parking m²/bay	30.00		34	
Available Podium GFA			7,916	
Residential GFA			7,916	
Podium Residential Efficiency	85%		6,729	
Podium Dwellings	80.00		84	
Permitted Tower	60%	Podium	1,357	
Permitted Tower	5.00	Levels	6,785	
Tower Efficiency	85%		5,767	
Tower Dwellings	80.00		72	
Total Dwellings			**156**	
Required Parking Including Visitor/Bikes I	1.12		175	
Total Parking Required			**190**	
Total GFA			18,093.6	
Variance from Available GFA			5,528.6	
Available Car Bays			208.0	
Variance from required Car bays			18.0	
Total Levels	10.00			
Actual Plot Ratio			7.20	
Community Benefit	3%	Construction Cost	$1,019,993	
Construction Cost	$77,272,211			
Surplus Plot Ratio	5,529			

GFA Summary

Basement GFA		4,523.4
Ground Floor Parking GFA		678.5
Podium Parking GFA		1,130.9
Ground Floor GFA	Back of House/Services	904.7
Ground/Podium Commercial Retail GFA		678.5
Podium Residentail GFA		7,916.0
Tower Residential GFA		6,785.1
Above Ground GFA		18,093.6
Check		18,093.6

$1,000 Rounding Factor

Residential	# Apt	Bed	Net Area	Total area	Carbays/apt	Total Carbays	$/m² net	Average price	Gross Realisation		
1 Bed Studio	16	1	45.0	720	-	0	$8,160	$367,000	$5,872,000	10%	
1 Bed	30	1	52.0	1,560	0.80	24	$8,260	$430,000	$12,900,000	19%	29% total 1 bed
2 Bed 1 Bath	26	2	78.0	2,028	1.00	26	$7,750	$605,000	$15,730,000	17%	
2 Bed 2 Bath	36	2	85.0	3,060	1.00	36	$7,780	$661,000	$23,796,000	23%	40% total 2 bed
3 bed 1.5 Bath	26	3	100.0	2,600	1.50	39	$7,820	$782,000	$20,332,000	17%	
3 bed 2 Bath	22	3	110.0	2,420	2.00	44	$8,010	$881,000	$19,382,000	14%	31% total 3 bed
Sub Penthouse	0	4	180.0	-	2.00	0	$7,350	$1,323,000	$0	0%	
Penthouse	0	4	250.0	-	3.00	0	$7,150	$1,788,000	$0	0%	
	156			12,388		169		$628,282	$98,012,000	100%	100%
						1.08					
			Average floor area	79.41				Average price	$628,000		
			Balcony Average	15					$7,912		

Commercial	Average Unit Size	70 m²	No.	NLA	Ave NLA	$/m² GST Inc	Average price	Gross Realisation	GST Net
			9	611	68	$7,700	$522,744	$4,704,700	$7,000
								Total Realisation	**$102,716,700**

Timings

Statutory Planning	9	months
Pre - sales commitment	12	months
Construction Design and Tender	3	months
Development	24	months
Selling	6	months
Total Duration	**54**	months
PR Guide	4.5	5.0% 22.5%

Development Calculations

Gross Realisation								$102,716,700
LESS	GST	Land	$0					**$9,337,882**
		Res GR	$98,012,000	Com GR	$4,704,700			$93,378,818
		GST	**$8,910,182**		**$427,700**			
LESS								
	Agency Selling Fee			2.00%			$2,054,334	
	Development Management Fee			1.00%			$1,027,167	
	Settlement Fee Vendor			0.15%			$154,075	$988
	Marketing			1.00%			$1,027,167	$6,584
	Ancillary Costs			0.25%			$256,792	$1,646
							$4,519,535	
								$88,859,283
LESS	Profit and Risk			13.50%			$10,569,166	$67,751
								$78,290,118
LESS	Impact of Affordable dwellings						$0	
								$78,290,118

LESS	**Development Costs**			**Gross Area m²**	$/m²		
	Basement Car Park			4,523	$1,250	$5,654,250	
	Ground/Podium Car Park			2,714	$1,100	$2,985,444	
	Commercial/Retail			679	$3,280	$2,225,513	
	Residential			14,701	$3,280	$48,219,444	Cordells August 2021
	Balcony			2,340	$1,000	$2,340,000	
	External Works	1.5%				$921,370	
	External Services	1.5%				$921,370	
	Public Art	1.0%				$614,247	
	Adaptable & Sustainable Building Design	2.0%				$1,228,493	
	Headworks/Statutory Fees	2.0%				$1,277,633	
	Professional Fees	8.0%				$5,110,531	
	Contingency	10.0%				$6,388,164	
			Cost per GFA	18,094	$4,305	$77,886,457	
			Check	18,094			$403,660
LESS	Community Benefit Contribution					$1,019,993	
							($616,333)
LESS	Rates and Taxes		Completed Product				
		$2,000	pa per unit for half selling period			$82,500	
							($698,833)
LESS	Interest on Development Costs		**5.50%**				
	Interest on half the development and selling period					$5,430,490	
							($6,129,323)
LESS	Interest on Land Purchase						
	For Planning, Development and half selling Period			51	months		
	5.50% p.a.			23.38%		($1,161,280)	
							($7,290,603)
LESS	Rates and Taxes						
	Land	**4.00%**	for land during planning and development			($280,408)	
							($7,571,011)
LESS	Purchase Costs		**5.50%**			($394,697)	
							($7,965,708)
						Adopt	**Not Feasible**
						$/m² land	**NA**
						$/m² Plot Ratio Actual	**NA**

$10,000

Probable Land Value range		
	$1,800	$4,520,000
	$2,200	$5,530,000
	$2,000	**$5,025,000**

Causeway Precinct

141 - 165 Albany Highway

Land	3,756	m²		
Plot Ratio Standard	7.50			
Plot Ratio Area	28,170	m²		
Plot Ratio Bonus	0%			
Plot Ratio Working	7.50			
Plot Ratio Area	28,170	m²		
Basement Parking	90%			
Basement Levels	1.00		3,380	
Basement Parking	30.00		113	
Permitted Site/Podium	90%	Cover	3,380	
Permitted Ground +Podium	5.00	Levels	16,902	
Ground	1.00		3,380	
Podium	4.00		13,522	
Ground Floor Commercial/Retail	0.30		**1,014**	Balance to building lobbies, services, entry ramps, various parking and storerooms etc
Ground Floor Parking	0.30			
Podium Parking Levels	0.80			
Podium Commercial Levels	2.00			
Podium Residential levels	1.20			
Ground Floor Parking Bays	30.00		34	
Total Commercial/Retail Lettable Area	90%		6,997	
Commercial/Retail Parking/Requirement	150.00	m² / bay	52	
Podium Parking levels	0.70		2,366	
Podium Parking Level Efficiency	90%		2,130	
Podium Parking m²/bay	30.00		71	
Available Podium GFA			11,155	
Residential GFA			4,056	
Podium Residential Efficiency	85%		3,448	
Podium Dwellings	80.00		43	
Permitted Tower	60%	Podium	2,028	
Permitted Tower	5.00	Levels	10,141	
Residential Tower Efficiency	85%		8,620	
Tower Dwellings	80.00		108	
Total Dwellings			**151**	
Required Parking Including Visitor/Bikes Etc	1.12		169	
Total Parking Required			**221**	
Total GFA			27,043.2	
Variance from Available GFA			(1,126.8)	
Available Car Bays			218.0	
Variance from required Car bays			(3.0)	
Total Levels	10.00			
Actual Plot Ratio			7.20	
Community Benefit	3%	Construction Cost	$0	
Construction Cost	$105,978,056			
Surplus Plot Ratio	-			

GFA Summary		
Basement GFA		3,380.4
Ground Floor Parking GFA		1,014.1
Podium Parking GFA		2,704.3
Ground Floor GFA	Back of House/Services	1,352.2
Ground/Podium Commercial Retail GFA		7,774.9
Podium Residentail GFA		4,056.5
Tower Residential GFA		10,141.2
Above Ground GFA		27,043.2
Check		27,043.2

$1,000 Rounding Factor

Residential	# Apt	Bed	Net Area	Total area	Carbays/apt	Total Carbays	$/m² net	Average price	Gross Realisation		
1 Bed Studio	12	1	45.0	540	-	0	$8,400	$378,000	$4,536,000	8%	
1 Bed	32	1	52.0	1,664	0.80	25	$8,670	$451,000	$14,432,000	20%	28% total 1 bed
2 Bed 1 Bath	28	2	78.0	2,184	1.00	28	$8,130	$634,000	$17,752,000	18%	
2 Bed 2 Bath	40	2	85.0	3,400	1.00	40	$8,310	$706,000	$28,240,000	25%	43% total 2 bed
3 bed 1.5 Bath	26	3	100.0	2,600	1.50	39	$8,380	$838,000	$21,788,000	16%	
3 bed 2 Bath	20	3	110.0	2,200	2.00	40	$8,570	$943,000	$18,860,000	13%	29% total 3 bed
Sub Penthouse	0	4	180.0	-	2.00	0	$8,270	$1,489,000	$0	0%	
Penthouse	0	4	250.0	-	3.00	0	$7,870	$1,968,000	$0	0%	
	158			12,588		172		$668,405	$105,608,000	100%	100%
						1.09					
			Average floor area	79.67				Average price	$668,000		
			Balcony Average	15					$8,390		

Commercial	Average Unit Size	1,500 m²	No.	NLA	Ave NLA	$/m² GST Inc	Average price	Gross Realisation	GST Net		
			5	6,997	1,399	$7,040	$9,851,776	$49,258,880	$6,400	$450	7.00%
								Total Realisation	$154,866,880		

Timings

Statutory Planning	9	months
Pre - sales commitment	12	months
Construction Design and Tender	3	months
Development	24	months
Selling	6	months
Total Duration	**54**	months
PR Guide	4.5	5.0% 22.5%

Development Calculations

Gross Realisation						$154,866,880	
LESS	GST	Land	$0			**$14,078,807**	
		Res GR	$105,608,000	Com GR	$49,258,880	$140,788,073	
		GST	**$9,600,727**		**$4,478,080**		
LESS							
	Agency Selling Fee		2.00%		$3,097,338		
	Development Management Fee		1.00%		$1,548,669		
	Settlement Fee Vendor		0.15%		$232,300		$1,538
	Marketing		1.00%		$1,548,669		$10,256
	Ancillary Costs		0.25%		$387,167		$2,564
					$6,814,143		
						$133,973,930	
LESS	Profit and Risk		13.50%		$15,935,225		$105,531
						$118,038,705	
LESS	Impact of Affordable dwellings				$0		
						$118,038,705	

LESS	**Development Costs**			Gross Area m²	$/m²			
	Basement Car Park			3,380	$1,250	$4,225,500		
	Ground/Podium Car Park			5,071	$1,100	$5,577,660		
	Commercial/Retail			7,775	$3,280	$25,501,738		
	Residential			14,198	$3,280	$46,568,390		Cordells August 2021
	Balcony			2,370	$1,000	$2,370,000		
	External Works	1.5%				$1,263,649		
	External Services	1.5%				$1,263,649		
	Public Art	1.0%				$842,433		
	Adaptable & Sustainable Building Design	2.0%				$1,684,866		
	Headworks/Statutory Fees	2.0%				$1,752,260		
	Professional Fees	8.0%				$7,009,042		
	Contingency	10.0%				$8,761,302		
			Cost per GFA	27,043	$3,950	$106,820,489		
			Check	27,043			$11,218,216	
LESS	Community Benefit Contribution					$0		
							$11,218,216	
LESS	Rates and Taxes	Completed Product						
	$2,000	pa per unit for half selling period				$81,500		
							$11,136,716	
LESS	Interest on Development Costs		**5.50%**					
	Interest on half the development and selling period					$7,349,512		
							$3,787,204	
LESS	Interest on Land Purchase							
	For Planning, Development and half selling Period			51	months			
	5.50% p.a.			23.38%		$717,535		
							$3,069,669	
LESS	Rates and Taxes							
	Land	**4.00%**	for land during planning and development			$118,064		
							$2,951,605	
LESS	Purchase Costs		**5.50%**			$153,875		
							$2,797,730	
						Adopt	**$2,800,000**	$10,000
						$/m² land	**$745**	
						$/m² Plot Ratio Actual	**$104**	

Probable Land Value range		
	$3,500	$13,150,000
	$3,750	$14,090,000
	$4,000	$15,020,000

Causeway Precinct

141 - 165 Albany Highway

Land	3,756	m²		
Plot Ratio Standard	7.50			
Plot Ratio Area	28,170	m²		
Plot Ratio Bonus	0%			
Plot Ratio Working	7.50			
Plot Ratio Area	28,170	m²		
Basement Parking	90%			
Basement Levels	1.00		3,380	
Basement Parking	30.00		113	
Permitted Site/Podium	90%	Cover	3,380	
Permitted Ground +Podium	5.00	Levels	16,902	
Ground	1.00		3,380	
Podium	4.00		13,522	
Ground Floor Commercial/Retail	0.30		**1,014**	Balance to building lobbies, services, entry ramps, various parking and storerooms etc
Ground Floor Parking	0.30			
Podium Parking Levels	1.00			
Podium Commercial Levels	-			
Podium Residential levels	3.00			
Ground Floor Parking Bays	30.00		34	
Total Commercial/Retail Lettable Area	90%		913	
Commercial/Retail Parking/Requirement	150.00	m² / bay	7	
Podium Parking levels	1.00		3,380	
Podium Parking Level Efficiency	90%		3,042	
Podium Parking m²/bay	30.00		101	
Available Podium GFA			10,141	
Residential GFA			10,141	
Podium Residential Efficiency	85%		8,620	
Podium Dwellings	86.60		100	
Permitted Tower	60%	Podium	2,028	
Permitted Tower	5.00	Levels	10,141	
Residential Tower Efficiency	85%		8,620	
Tower Dwellings	86.60		100	
Total Dwellings			**200**	
Required Parking Including Visitor/Bikes Etc	1.12		224	
Total Parking Required			**231**	
Total GFA			27,043.2	
Variance from Available GFA			(1,126.8)	
Available Car Bays			248.0	
Variance from required Car bays			17.0	
Total Levels	10.00			
Actual Plot Ratio			7.20	
Community Benefit	3%	Construction Cost	$0	
Construction Cost	$104,916,487			
Surplus Plot Ratio	-			

GFA Summary

Basement GFA	3,380.4
Ground Floor Parking GFA	1,014.1
Podium Parking GFA	3,380.4
Ground Floor GFA Back of House/Services	1,352.2
Ground/Podium Commercial Retail GFA	1,014.1
Podium Residentail GFA	10,141.2
Tower Residential GFA	10,141.2
Above Ground GFA	27,043.2
Check	27,043.2

$1,000 Rounding Factor

Residential	# Apt	Bed	Net Area	Total area	Carbays/apt	Total Carbays	$/m² net	Average price	Gross Realisation		
1 Bed Studio	16	1	45.0	720	-	0	$8,400	$378,000	$6,048,000	8%	
1 Bed	40	1	52.0	2,080	0.80	32	$8,670	$451,000	$18,040,000	20%	28% total 1 bed
2 Bed 1 Bath	30	2	78.0	2,340	1.00	30	$8,130	$634,000	$19,020,000	15%	
2 Bed 2 Bath	55	2	85.0	4,675	1.00	55	$8,310	$706,000	$38,830,000	28%	43% total 2 bed
3 bed 1.5 Bath	25	3	100.0	2,500	1.50	37	$8,380	$838,000	$20,950,000	13%	
3 bed 2 Bath	20	3	110.0	2,200	2.00	40	$8,570	$943,000	$18,860,000	10%	23% total 3 bed
Sub Penthouse	10	4	180.0	1,800	2.00	20	$8,270	$1,489,000	$14,890,000	5%	
Penthouse	4	4	250.0	1,000	3.00	12	$7,870	$1,968,000	$7,872,000	2%	7% total PH
	200			17,315		226		$722,550	$144,510,000	100%	100%
1.37						1.13					
			Average floor area	86.58				Average price	$723,000		
			Balcony Average	15					$8,346		

Commercial	Average Unit Size	1,500 m²	No.	NLA	Ave NLA	$/m² GST Inc	Average price	Gross Realisation	GST Net		
			1	913	913	$7,700	$7,030,100	$7,030,100	$7,000	$450	7.00%
								Total Realisation	**$151,540,100**		

Timings

Statutory Planning	9	months
Pre - sales commitment	12	months
Construction Design and Tender	3	months
Development	24	months
Selling	6	months
Total Duration	**54**	months
PR Guide	4.5	5.0% 22.5%

Development Calculations

Gross Realisation								$151,540,100
LESS	GST	Land	$0					**$13,776,373**
		Res GR	$144,510,000	Com GR	$7,030,100			$137,763,727
		GST	**$13,137,273**		**$639,100**			
LESS								
	Agency Selling Fee			2.00%		$3,030,802		
	Development Management Fee			1.00%		$1,515,401		
	Settlement Fee Vendor			0.15%		$227,310		$1,137
	Marketing			1.00%		$1,515,401		$7,577
	Ancillary Costs			0.25%		$378,850		$1,894
						$6,667,764		
							$131,095,963	
LESS	Profit and Risk			13.50%		$15,592,912		$77,965
							$115,503,051	
LESS	Impact of Affordable dwellings					$0		
							$115,503,051	

LESS	**Development Costs**			Gross Area m²	$/m²		
	Basement Car Park			3,380	$1,250	$4,225,500	
	Ground/Podium Car Park			5,747	$1,100	$6,321,348	
	Commercial/Retail			1,014	$3,280	$3,326,314	
	Residential			20,282	$3,280	$66,526,272	Cordells August 2021
	Balcony			3,000	$1,000	$3,000,000	
	External Works	1.5%				$1,250,992	
	External Services	1.5%				$1,250,992	
	Public Art	1.0%				$833,994	
	Adaptable & Sustainable Building Design	2.0%				$1,667,989	
	Headworks/Statutory Fees	2.0%				$1,734,708	
	Professional Fees	8.0%				$6,938,833	
	Contingency	10.0%				$8,673,541	
			Cost per GFA	27,043	$3,910	$105,750,482	
			Check	27,043			$9,752,569
LESS	Community Benefit Contribution					$0	
							$9,752,569
LESS	Rates and Taxes	Completed Product					
		$2,000	pa per unit for half selling period			$100,500	
							$9,652,069
LESS	Interest on Development Costs		**5.50%**				
	Interest on half the development and selling period					$7,277,255	
							$2,374,814
LESS	Interest on Land Purchase						
	For Planning, Development and half selling Period			51	months		
	5.50% p.a.			23.38%		$449,939	
							$1,924,875
LESS	Rates and Taxes						
	Land	**4.00%**	for land during planning and development			$74,034	
							$1,850,841
LESS	Purchase Costs		**5.50%**			$96,489	
							$1,754,352

	Adopt	**$1,750,000**	$10,000
	$/m² land	**$466**	
	$/m² Plot Ratio Actual	**$65**	

Probable Land Value range		
	$3,500	$13,150,000
	$3,750	$14,090,000
	$4,000	$15,020,000

Causeway Precinct

141 - 165 Albany Highway

Land	3,756	m²		
Plot Ratio Standard	7.50			
Plot Ratio Area	28,170	m²		
Plot Ratio Bonus	0%			
Plot Ratio Working	7.50			
Plot Ratio Area	28,170	m²		
Basement Parking	90%			
Basement Levels	2.00		6,761	
Basement Parking	30.00		225	
Permitted Site/Podium	90%	Cover	3,380	
Permitted Ground +Podium	5.00	Levels	16,902	
Ground	1.00		3,380	
Podium	4.00		13,522	
Ground Floor Commercial/Retail	0.30		**1,014**	Balance to building lobbies, services, entry ramps, various parking and storerooms etc
Ground Floor Parking	0.30			
Podium Parking Levels	3.00			
Podium Commercial Levels	-			
Podium Residential levels	1.00			
Ground Floor Parking Bays	30.00		34	
Total Commercial/Retail Lettable Area	90%		913	
Commercial/Retail Parking/Requirement	150.00	m² / bay	7	
Podium Parking levels	1.00		3,380	
Podium Parking Level Efficiency	90%		3,042	
Podium Parking m²/bay	30.00		101	
Available Podium GFA			10,141	
Residential GFA			3,380	
Podium Residential Efficiency	85%		2,873	
Podium Dwellings	87.00		33	
Permitted Tower	60%	Podium	2,028	
Permitted Tower	15.00	Levels	30,424	
Residential Tower Efficiency	85%		25,860	
Tower Dwellings	87.00		297	
Total Dwellings			**330**	
Required Parking Including Visitor/Bikes Etc	1.12		370	
Total Parking Required			**377**	
Total GFA			47,325.6	
Variance from Available GFA			19,155.6	
Available Car Bays			360.0	
Variance from required Car bays			(17.0)	
Total Levels	20.00			
Actual Plot Ratio			12.60	
Community Benefit	3%	Construction Cost	$3,627,818	
Construction Cost	$177,834,228			
Surplus Plot Ratio	19,156			

GFA Summary

Basement GFA		6,760.8
Ground Floor Parking GFA		1,014.1
Podium Parking GFA		10,141.2
Ground Floor GFA	Back of House/Services	1,352.2
Ground/Podium Commercial Retail GFA		1,014.1
Podium Residentail GFA		3,380.4
Tower Residential GFA		30,423.6
Above Ground GFA		47,325.6
Check		47,325.6

$1,000 Rounding Factor

Residential	# Apt	Bed	Net Area	Total area	Carbays/apt	Total Carbays	$/m² net	Average price	Gross Realisation		
1 Bed Studio	24	1	45.0	1,080	-	0	$8,400	$378,000	$9,072,000	7%	
1 Bed	66	1	52.0	3,432	0.80	52	$8,670	$451,000	$29,766,000	20%	27% total 1 bed
2 Bed 1 Bath	50	2	78.0	3,900	1.00	50	$8,210	$640,000	$32,000,000	15%	
2 Bed 2 Bath	80	2	85.0	6,800	1.00	80	$8,460	$719,000	$57,520,000	24%	39% total 2 bed
3 bed 1.5 Bath	40	3	100.0	4,000	1.50	60	$8,570	$857,000	$34,280,000	12%	
3 bed 2 Bath	52	3	110.0	5,720	2.00	104	$8,940	$983,000	$51,116,000	16%	28% total 3 bed
Sub Penthouse	10	4	180.0	1,800	2.00	20	$8,640	$1,555,000	$15,550,000	3%	
Penthouse	8	4	250.0	2,000	3.00	24	$8,220	$2,055,000	$16,440,000	2%	
	330			28,732		390		$744,679	$245,744,000	100%	95%
1.51						1.18					
			Average floor area	87.07				Average price	$745,000		
			Balcony Average	15					$8,553		

Commercial	Average Unit Size	1,500 m²	No.	NLA	Ave NLA	$/m² GST Inc	Average price	Gross Realisation	GST Net		
			1	913	913	$7,700	$7,030,100	$7,030,100	$7,000	$450	7.00%
								Total Realisation	**$252,774,100**		

Timings

Statutory Planning	9	months
Pre - sales commitment	12	months
Construction Design and Tender	3	months
Development	24	months
Selling	6	months
Total Duration	**54**	months
PR Guide	4.5	5.0% 22.5%

Development Calculations

Gross Realisation							$252,774,100	
LESS	GST	Land	$0				**$22,979,464**	
		Res GR	$245,744,000	Com GR	$7,030,100		$229,794,636	
		GST	**$22,340,364**		**$639,100**			
LESS								
	Agency Selling Fee		2.00%			$5,055,482		
	Development Management Fee		1.00%			$2,527,741		
	Settlement Fee Vendor		0.15%			$379,161		$1,149
	Marketing		1.00%			$2,527,741		$7,660
	Ancillary Costs		0.25%			$631,935		$1,915
						$11,122,060		
							$218,672,576	
LESS	Profit and Risk		13.50%			$26,009,513		$78,817
							$192,663,063	
LESS	Impact of Affordable dwellings					$0		
							$192,663,063	

				Gross Area m²	$/m²			
LESS	**Development Costs**							
	Basement Car Park			6,761	$1,250	$8,451,000		
	Ground/Podium Car Park			12,507	$1,100	$13,758,228		
	Commercial/Retail			1,014	$3,280	$3,326,314		
	Residential			33,804	$3,280	$110,877,120		Cordells August 2021
	Balcony			4,950	$1,000	$4,950,000		
	External Works	1.5%				$2,120,440		
	External Services	1.5%				$2,120,440		
	Public Art	1.0%				$1,413,627		
	Adaptable & Sustainable Building Design	2.0%				$2,827,253		
	Headworks/Statutory Fees	2.0%				$2,940,343		
	Professional Fees	8.0%				$11,761,373		
	Contingency	10.0%				$14,701,717		
			Cost per GFA	47,326	$3,788	$179,247,855		
			Check	47,326			$13,415,208	
LESS	Community Benefit Contribution					$3,627,818		
							$9,787,389	
LESS	Rates and Taxes	Completed Product						
	$2,000	pa per unit for half selling period				$165,500		
							$9,621,889	
LESS	Interest on Development Costs		**5.50%**					
	Interest on half the development and selling period					$12,584,081		
							($2,962,191)	
LESS	Interest on Land Purchase							
	For Planning, Development and half selling Period			51	months			
	5.50% p.a.			23.38%		($561,226)		
							($3,523,417)	
LESS	Rates and Taxes							
	Land	**4.00%**	for land during planning and development			($135,516)		
							($3,658,933)	
LESS	Purchase Costs		**5.50%**			($190,750)		
							($3,849,683)	
						Adopt	**Not Feasible**	$10,000
						$/m² land	**NA**	
						$/m² Plot Ratio Actual	**NA**	

Probable Land Value range		
	$3,500	$13,150,000
	$3,750	$14,090,000
	$4,000	$15,020,000

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Town of Victoria Park

Draft Albany Highway Secondary Centre Economic, Retail and Employment Strategy

September 2023

Document Control				
Document Version	**Description**	**Prepared By**	**Approved By**	**Date Approved**
v 1.0	Draft ERE Strategy	M Timoney	D Demassiet-Huning	08/10/2021
v 2.0	Draft ERE Strategy	S Weerakoon	D Demassiet-Huning	04/11/2022
v 3.0	Draft ERE Strategy	S Weerakoon	D Demassiet-Huning	26/09/2023

Disclaimer

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CONTENTS

1 Executive Summary 5

2 Strategic Context 8

2.1 Town of Victoria Park 8

2.2 Study Area 11

2.3 Planning Overview 13

3 Socio-economic Analysis 16

3.1 Demographic Analysis 16

3.2 AHSC Economic Analysis 19

4 Floorspace Analysis 23

4.1 Current Supply 23

4.2 Main Street Benchmark Analysis 25

4.3 Floorspace Gaps 26

4.4 Sub-Precinct Floorspace Opportunities 29

5 Centre Performance 37

5.1 Albany Highway Victoria Park and Northern Sub-Precinct 39

5.2 Albany Highway Victoria Park Town Centre Sub-Precinct 43

5.3 Albany Highway Residential and Gateway Sub Precinct 47

6 Needs Assessment 51

6.1 Gravity Model Methodology 51

6.2 Trends 53

6.3 Retail Supply 55

6.4 Demand Projections 56

6.5 Non-Retail Floorspace Modelling 61

6.6 Employment Implications 63

6.7 Total Floorspace Needs Summary 67

7 Implementation 68

7.1 The Town's Role 70

8 Appendices 77

8.1 Appendix 1: Shift Share Analysis and ECF 77

8.2 Appendix 2: PLUC Glossary 78

8.3 Appendix 3: Employment Quality Categories 80

8.4 Appendix 4: Employment Summary by Sub-precinct 81

8.5 Appendix 5: Gravity Modelling Methodology 82

8.6 Appendix 6: Precinct Assessment 85

1 EXECUTIVE SUMMARY

This Economic, Retail and Employment Strategy (ERE Strategy) combines a Needs Assessment as per draft State Planning Policy 4.2 (draft SPP4.2) and the economic analysis required to support a Precinct Structure Plan under State Planning Policy 7.2. The ERE Strategy was developed through a combination of document review, demographic analysis, floorspace and employment modelling and spatial economic assessment. Document review and desktop research was used to identify strengths of the Albany Highway Secondary Centre (AHSC), constraints and opportunities. These are summarised below:

Strengths

- Significant concentration of car retailing and ancillary industries
- Significant concentration of food and restaurant offering, even compared to other inner metropolitan main street centres
- Supermarket floospace provision is equal to Greater Perth average and should expand to meet the needs of increased density around the AHSC and some of the population growth in other areas of the Study Area, given the importance of its role as a secondary centre
- Advantage as an office location given proximity to CBD, will grow as employment continues to concentrate in the CBD. Is susceptible to mining boom/bust cycle

Constraints

- COVID-19 has led to a significant decrease in arts and recreation employment in the Town (Economy.id). There is currently an underprovision of these activities in the AHSC compared to other inner metropolitan main street centres
- The Victoria Park train station is approximately 500m from the AHSC with a residential street separating it. Opportunities to facilitate pedestrian movement from the station could facilitate additional visitation from Burswood and Optus Stadium
- Optus Stadium and Burswood have a better pedestrian connection to the CBD. This will be strengthened when development occurs at Waterbank and around Gloucester Park in future. Opportunities to improve pedestrian movement between this area and the AHSC should be prioritised to create desired behaviours (i.e. football fans going to AHSC before/after games) in the short term that may reduce the impact of future developments in the CBD
- Long distances between activated areas of the AHSC (i.e. the Victoria Park Sub-precinct and the Town Centre Sub-Precinct are separated by car yards). Future development should include ground floor activation to support movement particularly between the two main centres
- New Forrestfield Airport Link will divert some visitor traffic that might have otherwise come to the Town

Opportunities

- Significant population growth planned for the Perth CBD will generate additional visitation to the AHSC
- Significant growth for Burswood area should be supported to a certain extent by the higher order secondary centre
- Short stay accommodation could be planned for future developments to support tourism in the AHSC
- Additional entertainment and nighttime economy activities can be targeted to increase the diversity of offering in the AHSC to increase duration of stay and activation opportunities
- Increased density in the AHSC will create demand for additional Shop/retail and other population driven floorspace in the centre
- Residents within a 400m catchment of the centre are more likely to be working age, have higher income and be employed than the Greater Perth average; all of which are indicators of higher disposable income
- Residents within a 400m catchment of the AHSC who live north of Kent St are more likely to have been born overseas; as residential density increases, this trend would be expected to continue and opportunities to cater to this demographic should be explored

Floorspace Gaps

Current floorspace gaps were developed based on service ratios (population compared to floorspace m^2) using benchmark Main St Centres (Figure 1).

Figure 1. Floorspace Gaps

PLUC	GAP (m^2)
OFF	6,269
MAN	950
ENT	2,134
SER	320
RET	4,809
HEL	1,735
Total	**40,408**

Source: DPLH 2015

Modelling Results Overview

The analysis estimates an increase in shop retail floorspace of 21,000m^2 in the base scenario and up to 34,000m^2 in the distributed scenario. Other Retail Floorspace increases by approximately 14,000m^2 in the base scenario and up to 22,000m^2 the distributed scenarios. Non-retail floorspace grows by approximately 56,000m^2 in the base scenario and up to 88,000m^2 in the distributed scenario.

The required level of strategic floorspace considered the OFF[1] and RES floorspace[2] needed to reach an ESS target of 146% within the AHSC. Total additional floorspace is estimated to be 40,000m^2 in the base case and up to 110,000m^2 in the distributed scenario (Figure 2). It should be noted that the current proportion of strategic floorspace to population driven floorspace was held constant, with the strategic floorspace projection being estimated using the population growth rate.

Figure 2. Shop Retail, Other Retail and Non-Retail Floorspace Projections Scenarios 2042

Scenario	Shop Retail	Other Retail	Non-Retail	Strategic Office	Strategic Accommodation	Additional Floorspace
Current 2022	56,490	36,007	147,039	NA	NA	NA
Base Case	77,929	49,672	202,842	32,880	6,996	130,783
High Scenario	80,537	51,334	209,631	43,599	9,268	154,833
Distributed	90,452	57,654	235,438	91,198	19,404	254,610
Concentrated	90,168	57,473	234,700	89,732	19,092	251,629

Source: DPLH 2015, Pracsys 2022

[1] Includes Professional Service type uses
[2] Includes Hotel and Short Stay Accommodation uses

2 STRATEGIC CONTEXT

This section provides an overview of the key issues and opportunities associated with the Albany Highway Secondary Precinct (AHSC). The findings are informed by the following tasks:

- Literature review
- Socio-economic analysis
- Floorspace analysis
- Employment analysis
- Population projections

This first section provides a brief overview of the relevant areas being investigated, their purpose, and socio-economic factors.

2.1 Town of Victoria Park

The Town of Victoria Park (the Town) is home to approximately 38,000 people with almost 35% of the population living within 400m of the AHSC.

Whole of Town of Victoria Park Key Statistics

- Population (2021) 38,300
- Employment (2020) 34,800[3]
- Labour force (2020) 19,500[4]
- International Visitor Nights (average 2016/17 – 2018/19) 600,000
- Gross Regional Product (2020) $4.8 billion

The Town's Economic Development Strategy has identified the following High Value Sectors:

- Tourism, Sports, Leisure and Events
- Knowledge industries and biopharmaceuticals
- Retail and hospitality

The Albany Highway Secondary Centre (AHSC) is the primary Retail and Hospitality centre for the Town and surrounding areas, particularly South Perth and East Perth. Additionally, the Town has identified the need to create a stronger link between the Burswood entertainment precinct, which supports significant tourism and event visitation, and the AHSC, to provide both a higher quality experience for visitors and to support businesses in the AHSC.

[3] This figure is seen to be slightly inflated as it draws from the ABS Labour Force Survey, which can lead to high levels of variation for smaller areas due to survey sample size.
[4] The local labour force represents residents of the Town who are employed or unemployed. Employment represents jobs in the Town.

The AHSC spans three of the Town's identified Activity Nodes, namely:

- Victoria Park Sub-Precinct
- East Victoria Park Sub-Precinct
- St James Sub-Precinct

Figure 3. Sub-Precinct Overview

Neighbourhood	Purpose	Key Statistics
Victoria Park	Victoria Park is the heritage heart of the Town. It is home to numerous character cottages from the early 20th century, many of which have been lovingly restored, as well as leafy streetscapes and several state-registered heritage buildings. McCallum Park and Taylor Reserve provide opportunities for recreation and events with stunning views of the Perth skyline. Albany Highway offers an eclectic range of local businesses and is home to the Town of Victoria Park's administration offices. Victoria Park is the gateway to the Town from the CBD, and a much-loved place to live and visit.	**Residents**: 9,261 **Top Occupation**: Professionals **Commercial Floorspace**: 164,200m^2 **Industry Opportunities**: • Retail and Hospitality • Professional Services
East Victoria Park	East Victoria Park is a vibrant and diverse place where residential suburbs, key community assets and urban commercial streets combine. The Albany Highway strip forms a central active spine for the area drawing in surrounding residents to shop, socialise and enjoy the lively street environment. Important community assets are based in East Victoria Park including Leisurelife, Aqualife, Victoria Park Library, Edward Millen House and Reserve, Higgins Park sporting precinct and John Macmillan Park. These community assets and the Albany Highway strip attract people from across the town and beyond and provide an abundance of amenity to enrich the lives of the vibrant local community.	**Residents**: 10,603 **Top Occupation**: Professionals **Commercial Floorspace**: 164,500m^2 **Industry Opportunities**: • Retail and Hospitality • Professional Services
St James	St James is the commercial and residential gateway to the Town from the south. Predominately a low-density residential area, it is one of the few places where you can still purchase property on a large block, whilst being so close to key activity centres. It is also provides a concentration of bulky goods uses that attract visitors from a broader catchment.	**Residents**: 2,148 **Top Occupation**: Professionals **Commercial Floorspace**: 5,700m^2 **Industry Opportunities**: • Retail and Hospitality • Professional Services

Source: Town of Victoria Park - Place Plans and Investment Prospectus

Figure 4. Map of Town Precincts



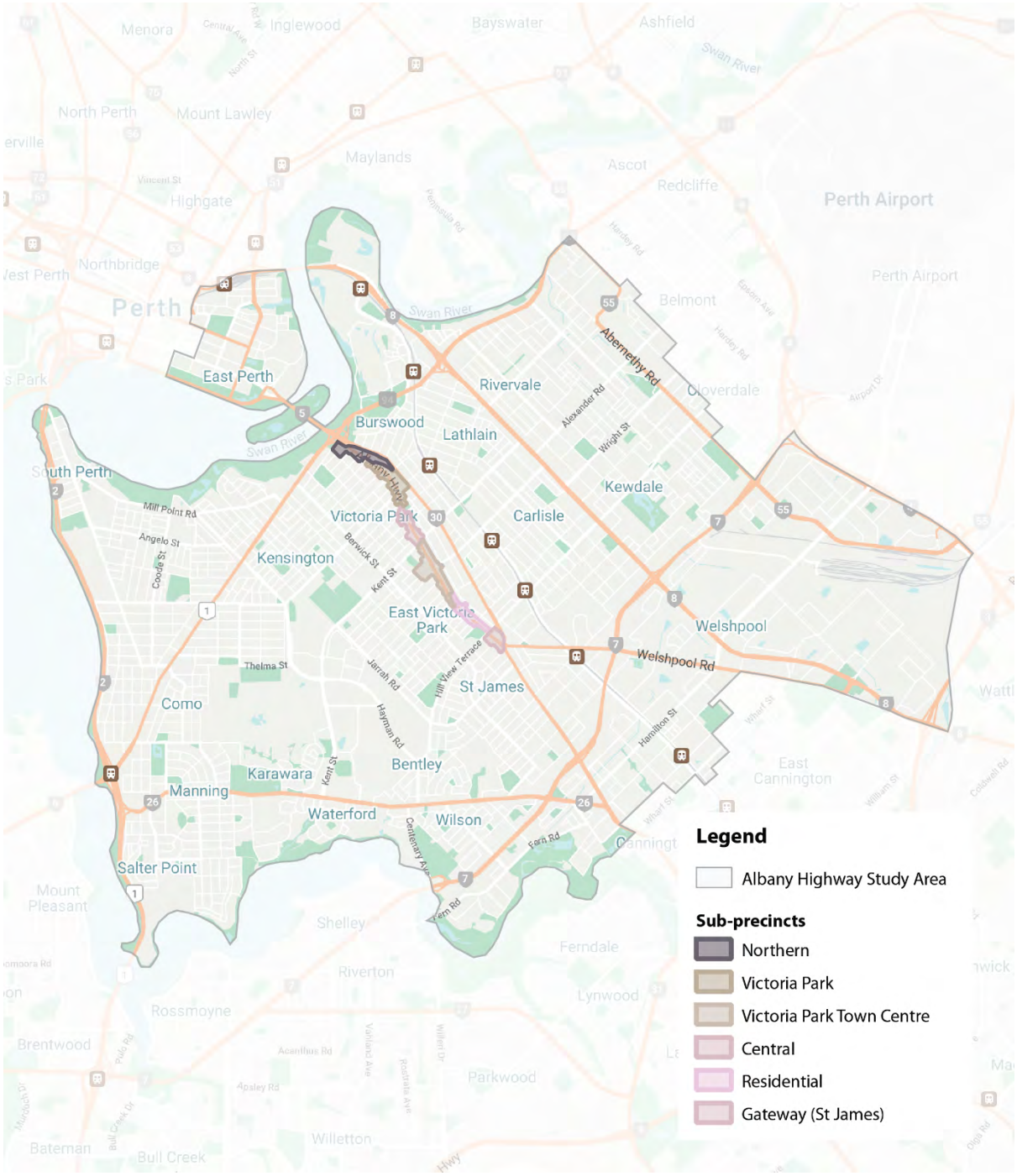
Source: Town of Victoria Park EDS 2018

2.2 Study Area

A Study Area has been developed to understand the demand for floorspace within the AHSC. The area has been defined based on natural barriers and represents a radius of approximately 5km. While there would be expenditure coming from outside of this area, there would also be leakage of local resident expenditure outside the Study Area, essentially cancelling each other out. The river represents a boundary to the north, west and south. Belmont forum is approximately the boundary to the east. We have included sections of East Perth in the analysis as previous work we have undertaken indicates that many City of Perth Residents shop in Victoria Park.[5] This Study Area will be used to support analysis regarding floorspace gaps that can be addressed by the AHSC and to estimate future floorspace demand.

[5] 2020 Neighbourhood Activity Centre Analysis undertaken for City of Perth, not published.

Figure 5. Study Area Map



Source: QGIS 2020, DPLH 2015

2.3 Planning Overview

The following table summarises the key relevant planning documents that inform the development of the ERE Strategy.

DOCUMENT	SUMMARY	RELEVANCE TO AHSC
Perth and Peel @ 3.5million **Department of Planning, Lands and Heritage, 2018** 	Perth and Peel is a land use planning and infrastructure framework for Western Australia at a population of 3.5 million. A core aim is in promoting local employment opportunities to increase the number of people who live and work within the same region. This includes a focus on attracting strategic economic and employment land uses within the strategic metropolitan centres and key industrial centres, while maximising use of existing and proposed infrastructure.	• Future development must maximise existing infrastructure • Regional employment targets mean a balance must be struck between residential growth and employment growth
State Planning Policy 4.2 Activity Centres (Draft), Department of Planning, Lands and Heritage, 2020 	Activity centres are multi-functional community focal points that vary in size and function. SPP 4.2 aims to develop activity centres which meet different levels of community need and enables employment goods and services to be accessed equitably and efficiently by the community. The density and diversity of housing in and around activity centres is maximised to improve land efficiency and housing variety. Development within activity centres aims to be well-designed, cohesive and functional and capitalises on the use of existing and planned infrastructure. Walking, cycling and public transport, to and between activity centres, should be maximised while private vehicle trips and dependence on parking is reduced.	• Accessibility for pedestrians and cycling should be promoted along Albany Highway, whilst dependence on parking should be reduced. • Activity centre planning should maximise the use of existing and planned infrastructure through effective design. Adaptive reuse or improvements to accessibility should be investigated to improve utilisation • The hierarchy of activity centres should not be undermined through non-viable development. This is addressed through development of a Needs Assessment to guide the precinct structure plan

DOCUMENT	SUMMARY	RELEVANCE TO AHSC
Local Planning Strategy, Town of Victoria Park, 2021 	Approximately 15,000 new dwellings of the Town's 18,000 infill dwellings target will be developed in Burswood Peninsula, Burswood South and the Bentley-Curtin Specialised Activity Centre. Additional infill dwellings will occur in Albany Highway, Carlisle Town Centre and Station and Oats Street Station precincts. No major expansion of retail floor space is envisaged for existing activity centres. However, there are substantial opportunities for development of mixed commercial/residential use along Albany Highway and the northern end of Shepperton Road. Retail along Albany Highway are facing many pressures from the shift to on-line shopping and competition from an expanded Cannington regional centre as well as future planned retail floor space at Curtin-Bentley and Belmont Park. Oats Street Station Neighbourhood may transition to commercial and/or residential uses subject to an investigation of demand for industrial land and progress on the METRONET level crossing removal project	• Residential growth near existing centres will support business viability. This will increase local trade and add to centre vitality • There are many opportunities for Albany Highway given its current and planned assets and proximity to growth areas. Albany Highway's diversity of experiences, attractions in hospitality and tourism, community activity, proximity to education, technology and research will attract from a larger catchment • Upgrades to the public realm will enhance both the vibrancy and connectedness between growing and established neighbourhoods • Development investment (residential and commercial) greater than the LPS may be achieved due to the attractiveness of the location • Burswood Peninsula may compete with the AHSC; however, there will also be a significant residential component that could mitigate any impact
Strategic Community Plan **Town of Victoria Park, 2017** 	The Town's residents have a bold vision for the future. This consists of increased density, innovative architectural design, maintaining heritage, providing appropriate community and civic infrastructure, and increasing liveability through increasing the tree canopy and creating vibrant centres. Areas of preferred density included along Albany Highway in the Victoria Park and Gateway Precincts, as well as transit-oriented developments at train stations	• Vibrant and liveable centres are driven through effective economic activation • Walkable catchments to existing retail and supermarkets must be considered for future transit oriented developments

DOCUMENT	SUMMARY	RELEVANCE TO AHSC
Town of Victoria Park Economic Development Strategy **Town of Victoria Park, 2018** 	The Town is a vibrant and diverse urban community with a thriving café culture and growing investment in mixed-use developments. Maintaining and growing the competitiveness of the Albany Highway precincts is an important element of this Economic Development Strategy. The precincts will see higher density mixed-use and residential development in coming years which will support the diversity of the local economy and street life.	• Retail and hospitality are high value sectors to Victoria Park and is a key factor in the attracting visitors • Planning must account for increased density and a growing population. This will also occur in less established areas within the Town
Invest Vic Park **Town of Victoria Park** 	Victoria Park is a visitor and tourist location, with a vibrant night time and day time economy, the Albany Highway precincts (in both Victoria Park and East Victoria Park) will see higher density mixed-use and residential development in coming years which will support the diversity of the local economy and street life. East Victoria Park is a vibrant inner city suburb consisting primarily of residential housing with significant character and heritage charm, as well as a unique commercial and entertainment strip. St James is the commercial and residential gateway to the Town from the south. Predominately a low-density residential area, it is one of the few places where you can still purchase property on a large block, whilst being so close to key activity centres.	• Effective planning must balance a daytime and night time economy • Future residents must be accounted for as density increases. This includes areas outside of the Albany Highway • Visitors must be considered in planning due to the high number of tourists and visitors who frequent the precinct. This will also allow for greater diversity of land uses when compared to resident driven precincts

3 SOCIO-ECONOMIC ANALYSIS

This section analyses the demographic make-up of the Study Area and AHSC walkable catchment and the current economic and employment context.

3.1 Demographic Analysis

Study Area

Study Area Demographics were analysed to understand the broader influences on expenditure at the AHSC.

Figure 6. Study Area Socio-Economic Factors

	**Population Growth** The population within the Study Area is projected to increase substantially over the next 20 years with an estimated population growth of 40% compared to the 2021 population.[6] The majority of this growth is expected within the Burswood and East Perth areas, providing increased opportunities for the Northern sub-precincts of the AHSC.
	**Age Groups** Approximately 22% of residents of the Study Area are 20 – 30 years old compared to 15% for Greater Perth. A similarly high representation of 20 - 30 year old's is observed in similar CBD fringe suburbs; Potts Point, NSW and South Yara, Vic have 33% and 39% residents within this age bracket respectively. This representation would be expected to grow as more high-density development is introduced.[7]
	**Education** The Study Area is more educated than Greater Perth with nearly 49% of residents having attained a university education when compared to 26% in Greater Perth. Higher educated persons are more likely to have disposable income. [8]
	**Occupation** 42% of workers in the Study Area are managers or professionals, compared to 33% for Greater Perth. This reflects the areas proximity to the CBD and high liveability. This too is a reflection of higher disposable income. [9]
	**Income and Expenditure** The Study Area has a higher proportion of households in both the highest and lowest quintiles, likely reflecting a mix of highly educated professionals and low income retirees and students. There is a total of over $320 million in Shop/retail expenditure available from the Study Area population. There is the opportunity to attract expenditure from both segments with a mix of high-quality and value offerings.[10]
	**Diversity** Approximately 32% of residents speak a language other than English at home compared to 20% in Greater Perth. This highlights significant cultural diversity that needs to be catered for in the AHSC.

Source: ABS Census 2016, ABS Household Expenditure Survey 2016

[6] Forecast.id 2021, Population Forecasts Multiple LGAs
[7] ABS Census 2016 – Place of Usual Residence
[8] Ibid
[9] Ibid
[10] ABS Household Expenditure Survey 2016, ABS Census 2016 – Place of Enumeration

The Study Area will be used in Gravity Modelling and non-retail floorspace modelling to quantify the potential gaps in floorspace and estimate future demand.

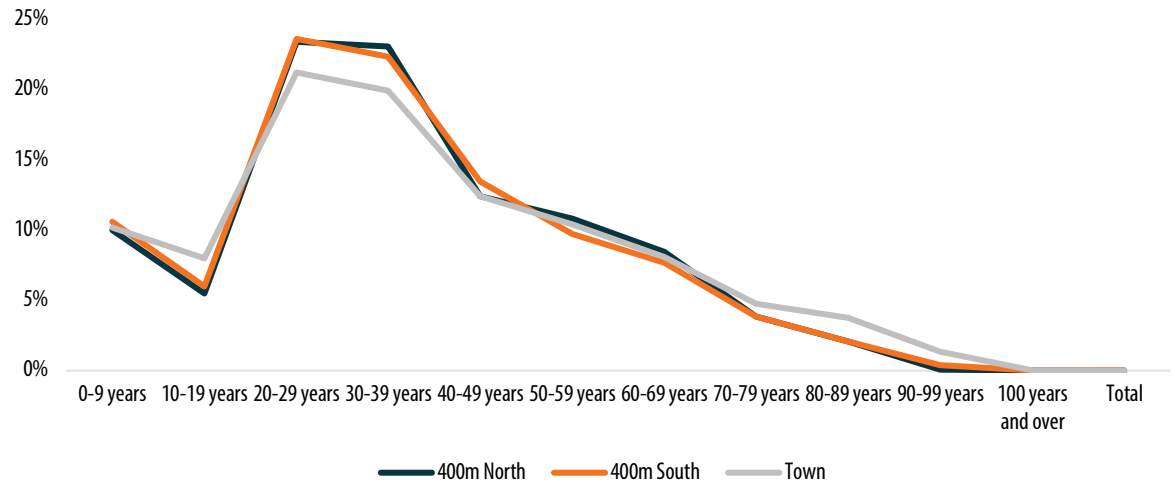
AHSC Walkable Catchment

The socio-economic and employment context of the AHSC was investigated within an approximated 400m walkable catchment from the AHSC[11]. The AHSC was split into two sections along Kent and Miller Streets to enable a comparison of population in the northern and southern sections as they transition from higher to lower density respectively. This analysis provides insights that will support initial opportunity development, further insights from demographics will be developed as retail trends are researched.

Age Groups

There is a high representation of working age persons (46%, 20 – 40 years old) in the 400m catchment compared to the Town. The age distribution is similar from North to South. There are less households with adolescent children in the 400m catchment, indicating higher levels of discretionary spend. To support retention of young couples with children in the Town, further secondary education facilities may be required.

Figure 7. AHSC 400m Catchment Age Groups



Source: ABS Census 2016

[11] ABS Mesh Block spatial areas were used to define the 400m catchment. This is the smallest spatial area available, however, there were some areas where boundaries were just outside or inside a 400m catchment.

Income

Personal Income in the 400m North catchment was 5% higher than the Town average while the income in the 400m catchment was 2% higher. This is an indication of greater disposable income that can be captured by the AHSC. Higher income individuals generally spend a higher proportion of expenditure on comparison retail items.

Labour Force

The 400m catchment has a higher number of employed persons with the highest concentration in the 400m North Catchment. This aligns with the age profile of the area and supports the finding that higher levels of discretionary spend are available to the AHSC. It also means there is likely a larger cohort of people that will be looking to undertake shopping and entertainment activities outside of work hours. The Town has a slightly lower proportion of persons not in the labour force compared to the Greater Perth Region (23% vs 24%), reflecting more working aged persons residing locally and availability of jobs.

Figure 8. AHSC 400m Catchment Labour force

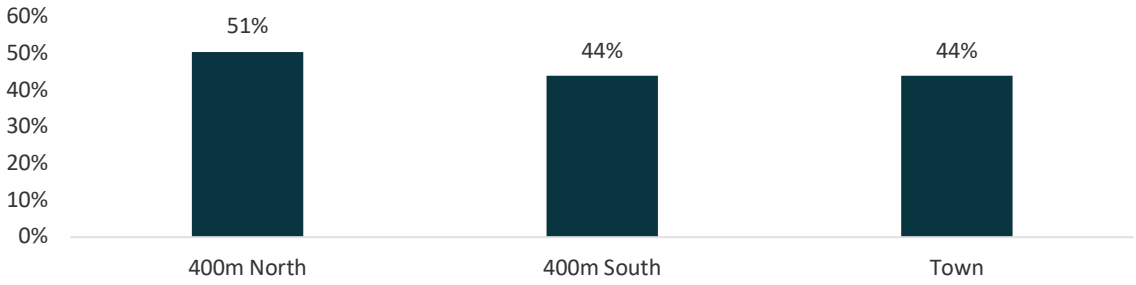


Source: ABS Census 2016

Diversity

Diversity was first assessed by language spoken at home. The Town and the 400m South catchment had slightly lower levels of language other than English being spoken at home compared to the 400m North Catchment. Country of Birth was then assessed and approximately 51% of residents in the 400m North catchment were born outside of Australia, the largest cohort being from Asian countries.

Figure 9. AHSC 400m Catchment Place of Birth Overseas



Source: ABS Census 2016

As migration occurs and more high-density residential development is provided in the AHSC, the diversity of residents would be expected to increase.[12]

3.2 AHSC Economic Analysis

ABS 2016 data by ANZSIC 2 and 4 Industry Categories was used to undertake employment analysis for the AHSC.[13] Key Statistics Include:

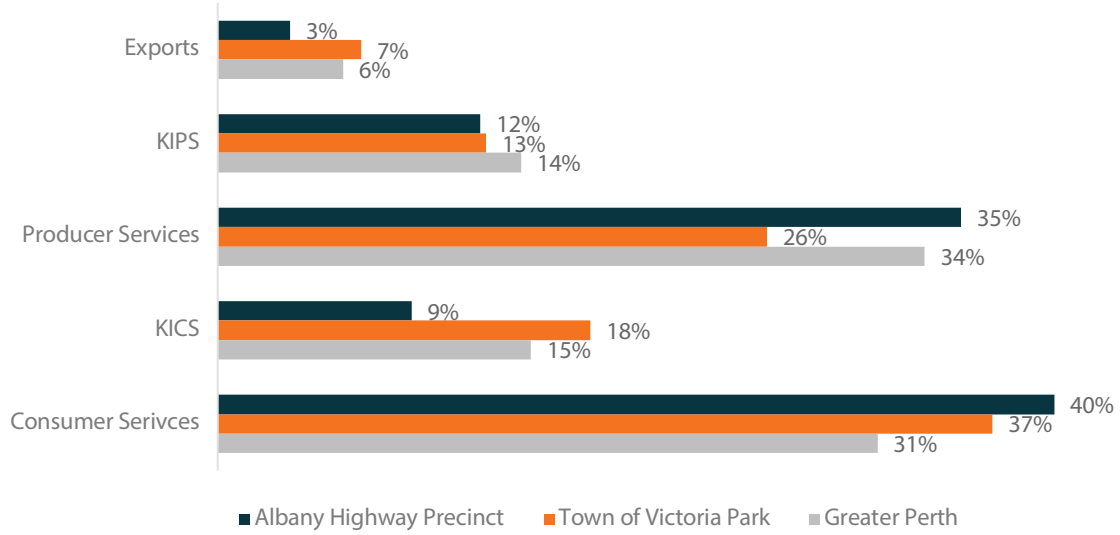
- Total Employment: 6,800
- Largest Industry: Food and Beverage Services 1,062
- Largest Non-Retail Industry: Professional, Scientific and Technical Services 833

Employment Quality and Employment Self-Sufficiency

The Employment Quality of the AHSC was assessed against the Town and Greater Perth. Employment Quality helps break down Population Driven and Strategic Employment. Population Driven employment relates to goods and services that meet the need of the local population including retail, food and beverage services, local government employees, etc. Strategic Employment incorporates the activities that are delivered to a wider population (exported) including professional services, mining, manufacturing, etc. Consumer Services, Knowledge Intensive Consumer Services (KICS) and Producer Services are Population Driven, while Exports and Knowledge Intensive Producer Services (KIPS) are considered Strategic Employment.[14]

[12] This assumes that migration will return to a long-term trend as the impact of the COVID-19 pandemic abates
[13] The AHSC employment estimate is based on ABS Destination Zones (DZNs) aligned as closely as possible to the 400m catchment. This is the smallest spatial area for Place of Work data.
[14] For further information please see Appendix 3, Employment Quality Categories

Figure 10. Employment Quality Distribution



Source: ABS Census 2016, Pracsys 2021

The AHSC is highly population driven with a concentration of 85% compared to 80% for both the Town and Greater Perth. It should be noted that when the Burswood South precinct is included with the AHSC the Population Driven concentration is 80%, indicating there is a strong strategic nature to Burswood South. This aligns with the type of employment in the Northern Sub-Precinct of the AHSC that accommodates significant professional services employment.

Population Driven employment and Strategic employment need to be considered when assessing the ability of a region to meet Employment Self-Sufficiency (ESS) targets. While Population Driven employment will grow to meet demand from new residents of an area, Strategic employment requires other drivers to grow over time.

Opportunity and Ancillary Industries

Shift Share analysis was used to build on the High Value Sectors identified in the Town's EDS.[15] Opportunity industries were identified based on the following criteria:

- They exhibit a higher concentration compared to Greater Perth (Employment Concentration Factor (ECF) of greater than 1)
- They employ more than 50 people
- They are either in a high growth industry or are outperforming in a low growth industry

The following more detailed opportunity industries were identified in the High Value Sectors (HVS):

[15] For further detail please see Appendix 1, Shift-Share Analysis and ECF

Figure 11. Opportunity Industries (please see Section 8.1, Appendix 1: Shift-Share Analysis and ECF, for a summary of Shift Share Score definitions)

HVS	Industry	Employment	Shift Share Score	ECF	PLUC
Retail and Hospitality	Motor Vehicle Parts Retailing	509	3	6.31	RET
	Food and Beverage Services	1,062	1	1.81	SHP
Professional Services	Heavy and Civil Engineering Construction	494	3	5.58	OFF
	Computer System Design and Related Services	190	4	1.65	OFF
	Professional, Scientific and Technical Services	833	4	1.37	OFF
Other	Transport Support Services	327	1	5.03	OFF
	Property Operators and Real Estate Services	353	1	2.37	OFF
	Social Assistance Services	484	1	2.05	OFF
	Construction Services	571	2	1.27	OFF
	Residential Care Services	248	1	1.09	HEL or RES
	Preschool and School Education	409	2	0.68	HEL

Source: ABS Census 2016

Further assessment considered ancillary industries that were underperforming and could present opportunities for growth in the AHSC.

Figure 12. Ancillary Industries

HVS	Industry	Employment	Shift Share Score	ECF	PLUC
Professional Services	Metal Ore Mining	68	1	0.45	OFF
	Oil and Gas Exploration	26	4	0.70	OFF
Tourism, Sports, Leisure and Events	Accommodation	24	3	0.37	RES
	Creative and Performing Arts	9	1	0.38	ENT
	Heritage Activities	8	1	0.39	ENT
	Motion Picture and Sound Recording Activities	4	4	0.25	ENT

Source: ABS Census 2016, Pracsys 2021

These opportunities have been considered when identifying opportunities for the AHSC (see Section 4.4, Sub-Precinct Floorspace Opportunities).

4 FLOORSPACE ANALYSIS

The floorspace analysis has investigated the provision of floorspace in the AHSC to understand potential gaps in the quantum and mix of uses. Benchmark comparison has been used to compare the AHSC to other inner metropolitan main street centres and identify strengths and weaknesses of the AHSC. The analysis has been undertaken using Department of Planning, Lands and Heritage (DPLH) Land Use and Employment Survey (LUES) data. Planning Land Use Categories (PLUCs) are used to summarise the analysis and include the following categories:

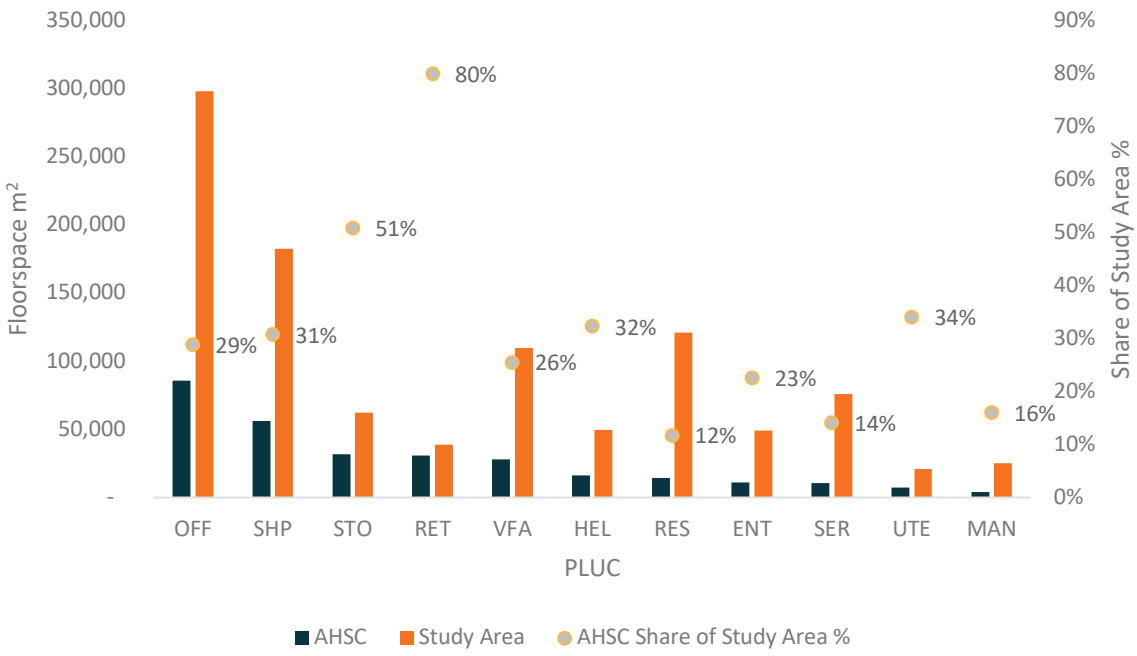
- SHP – Shop/Retail
- RET – Other Retail
- OFF – Office/Business
- HEL – Health/Welfare/Community Services (includes Education)
- ENT – Entertainment/Recreation/Cultural
- RES – Residential
- MAN – Manufacturing/Processing/Fabrication
- STO – Storage/Distribution
- SER – Service Industry
- UTE – Utilities/Communications
- VFA – Vacant Floor Area

Please see Section 8.2, Appendix 2: PLUC Glossary, for more detailed definitions.

4.1 Current Supply

The ASCH currently provides approximately 30% of total floorspace within the Study Area. The following graph shows the share of Study Area floorspace that is provided in the AHSC, by PLUC uses.

Figure 13. AHSC Share of Study Area Floorspace by PLUC (%)



Source: DPLH 2015

The ASHC has high concentrations of floorspace in:

- Other Retail (predominantly car retailing)
- Shop/Retail
- Health, Community and Social Services
- Office Business

These floorspace types are suited to secondary centres and their concentration at AHSC demonstrate its importance for providing access to goods and services in the Study Area.

There appears to be a low provision of both Residential and Entertainment, Recreation and Cultural Floorspace. Residential floorspace includes accommodation and age-appropriate dwellings, both of which are suited to activity centres as they both benefit from walkability and support activation. Entertainment, Recreation and Cultural floorspace appears to be limited with regards to uses in the nighttime economy. These uses are compatible with the AHSC's high levels of café and restaurant offering and could help activate certain precincts at night. Benchmark analysis has been used to assess the potential gaps in different floorspace uses and quantify them where relevant.

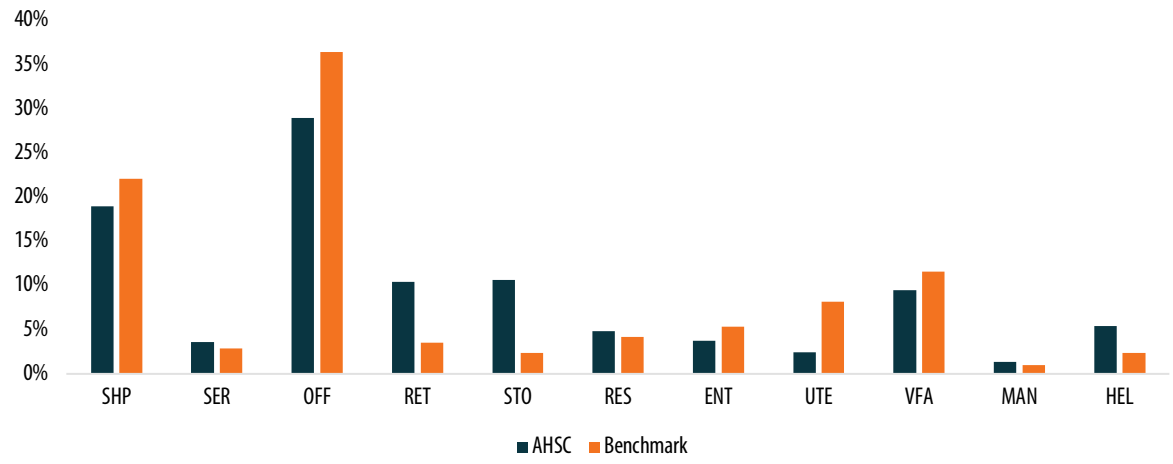
4.2 Main Street Benchmark Analysis

The following Main Street Centres were used for the analysis:

- Beaufort St
- Subiaco
- Leederville
- Claremont/Stirling Hwy

These centres were chosen as they have at least one secondary centre or two district centres and are Inner city Main St centres. ASCH and Subiaco are the largest centres and provide significant amenity and employment opportunities for their local populations, workers and visitors from around the Inner Metropolitan area. An inner-City Benchmark was developed by combining the benchmark centres to assess the strengths of the AHSC against an average floorspace provision. Data was sourced from the Department of Planning, Lands and Heritage (DPLH) Land Use and Employment Survey (LUES). The comparison assesses the concentration factor of a floorspace use in the ASCH compared to the concentration factor of that use in the benchmark centres.[16]

Figure 14. Benchmark Centre PLUC[17] Floorspace Comparison



Source: DPLH 2015

The AHSC has a greater diversity of offering than the benchmark centre comparison and a lower vacancy rate. It supports higher concentrations of Service, Other Retail, Storage, Residential, Manufacturing and Health, Welfare and Community Services floorspace. Potential gaps for investigation include a slightly lower provision of Shop/Retail, Office and Entertainment, Recreation and Cultural floorspace. Detailed Western Australian Standard Land Use Categories (WASLUCs) have been used to investigate these floorspace uses through WASLUC specific concentration factors.[18] The following Strengths and Potential Gaps are the most pertinent from the analysis.

[16] The concentration factor at a PLUC level is the % proportion of total floorspace that is comprised of a specific PLUC.
[17] Planning Land Use Categories (PLUC). For definitions, please see Section 8.2, Appendix 2: PLUC Glossary.
[18] WASLUC concentration factors are the % of total floorspace in a PLUC that is comprised of a specific WALSUC use

Figure 15. Initial WASLUC Floorspace Analysis Findings

PLUC	Strengths	Potential Gaps
HEL	Higher concentration in childcare and primary school education within the precinct that is key to supporting young families	Lower provision of optometry services Lower provision of welfare services
ENT	High level of gymnasium offering	Lower provision of nighttime / art and cultural economy with no reported motion picture venue, live entertainment theatre, night club or art galleries[19]
OFF	High Concentration of engineering services Higher concentration of real-estate and insurance broker services	The slightly lower provision of office space compared to benchmarks are more indicative of significant clusters in other benchmark centres (i.e. Subiaco has high concentrations of Architecture and Professional Services as it is essentially an extension of the CBD through West Perth) that are not necessarily relevant the AHSC
RES	High concentration of multi-story residential dwellings (up to three storey) Higher concentration of single storey dwellings	There appears to be no short-stay accommodation or hotel offering in the AHSC
RET	High concentration of Car Retail and Car Accessory Retail	Lower concentration of fuel retail, furniture retail and hardware retail (fuel and hardware retail may not be appropriate to expand)
SER	High concentration of construction services (i.e. electricians, plumbers, etc.)	Lower concentration of laundering and dry-cleaning services and self-service
SHP	High concentration of restaurant, café and function centres (this is important as a number of the benchmark centres are also known for this type of offering) Higher concentration of department store floorspace	Lower concentration of women's, men's and children's clothing and apparel Lower provision of homewares retail

Source: DPLH 2015

The above insights have been used to identify floorspace gaps and detailed opportunities for the AHSC and its sub-precincts (see Section 4.4, Sub-Precinct Floorspace Opportunities).

4.3 Floorspace Gaps

A gap analysis was undertaken using floorspace to population ratios. These ratios provide an indication of the demand by floorspace type and can be used to compare the provision of floorspace uses between areas. A 5km catchment was applied to the Main St Benchmarks to enable a comparison of the relative provision of floorspace in benchmark Main St centres to the AHSC. A high-level comparison using PLUC floorspace has

[19] Some of these uses may be provided for at a small scale in other use types

been used to assess floorspace provision at an aggregate level. In the following table, a negative/red gap ratio indicates the AHSC over providing compared to the benchmark centres (there is no gap); a green/positive gap ratio indicates the AHSC is under providing compared to the benchmark centres (there is a gap).

Figure 16. Benchmark Centre Gap Ratio

PLUC	AHSC Ratio	Benchmark Centres Ratio	Gap Ratio
OFF	0.66	1.08	0.42
SHP	0.43	0.65	0.22
STO	0.24	0.07	- 0.17
RET	0.24	0.10	- 0.13
HEL	0.12	0.07	- 0.05
RES	0.11	0.12	0.01
ENT	0.09	0.16	0.07
SER	0.08	0.09	0.01
MAN	0.03	0.03	- 0.00

Source: DPLH 2015

The AHSC provides higher levels of STO, RET, HEL and MAN floorspace compared to the benchmark centres. There is a gap in OFF floorspace which is largely due to the Subiaco centre which provides approximately 51% more office space than the AHSC. This gap is likely greater than what could be sustained at the AHSC, however, it does identify there is the opportunity to increase office floorspace in the AHSC. SHP and ENT floorspace are the next two largest gaps identifying the potential for the AHSC to potentially diversify its retail offering and increase its entertainment/nighttime economy offering.

Floorspace gaps have been quantified using detailed WASLUC floorspace uses to account for gaps based on the diversity of uses within each PLUC category. For instance, at an aggregate level the AHSC may provide more HEL floorspace than the benchmark centres; however, there may be a gap in specific WASLUC uses such as optometry. A set of rules have been used to develop the gap estimates and account for other floorspace in the broader Study Area. The rules used are applied in the following order:

- A gap could only be present where the concentration factor of a WASLUC floorspace use in the AHSC was lower than the benchmark centres (see Section 0)
- Three gaps were estimated based on different provision comparisons. The gap amount was the smallest gap greater than zero (Figure 17)
- Gaps across WASLUCs are summed to represent a conservative estimate of the additional floorspace per PLUC that is relevant to the AHSC and could be supported in the Study Area as a whole

Figure 17. Comparison Areas for Gap Estimates

Comparison	Representative Supply	Representative Population	Benchmark Supply	Benchmark Population
1	Study Area	Study Area	Greater Perth	Greater Perth
2	Study Area	Study Area	Benchmark 5km Total	Benchmark 5km
3	AHSC Supply	Study Area	Benchmark Inner Main St Supply	Benchmark 5km

Source: DPLH 2015

The estimated gaps should be interpreted as the total potential increase in that PLUC of which some could be supported in the AHSC.

Figure 18. Floorspace Gap Estimates in the Study Area

PLUC	Estimated Floorspace Gap (m^2)
OFF	55,422
SHP	21,812
STO	663
RET	9,223
HEL	12,853
RES	7,221
ENT	10,020
SER	3,640
MAN	2,195

Source: DPLH 2015

These floorspace gaps can be filled by a mix of different detailed floorspace uses, the final combination of which would be decided by market demand and business preferences. The identified gaps have been further refined based on specific WASLUC uses that are most relevant to the AHSC (Figure 19).

Figure 19. Floorspace Gap Estimates Most Relevant to the AHSC

PLUC	GAP
OFF	6,269
MAN	950
ENT	2,134
SER	320
RET	4,809
HEL	1,735
Total	**40,408**

Source: DPLH 2016, Pracsys 2022

Retail modelling will be used in stage two to test the viability of additional shop/retail floorspace specifically. The following section identifies specific WASLUC floorspace types by sub-precinct that are relevant to the identified gaps. It should be noted that the residential, storage distribution and utility floorspace types were assumed to be constant overtime because they were not considered to be uses that aligned with the purpose of precincts within the AHSC (Figure 44). The RES floorspace type in particular was held constant as it includes non-commercial uses. Additional accommodation floorspace which would fall under the commercial component of RES floorspace is estimated in Section 6.6.

4.4 Sub-Precinct Floorspace Opportunities

The AHSC was considered with six sub-precincts based on those identified in the Draft Activity Centres Strategy (2018). This section summarises the potential floorspace opportunities by precinct that could accommodate the identified floorspace gaps. This analysis was informed by the current purpose of the sub-precincts, their floorspace and relevant strategies from the Draft Activity Centres Strategy (see Section 0, Appendix 6 - Precinct Assessment). Opportunities and high-level development consideration by sub-precinct have been identified based on the employment and floorspace analysis undertaken to date.

Figure 20. Map of Centre Sub-Precincts



Source: DPLH 2015

Northern Sub-Precinct

The following summarises WASLUC opportunities for the sub-precinct by PLUC floorspace.

Figure 21. Summary of Sub-Precinct Opportunities by Relevant PLUC Floorspace

Opportunity	Description	PLUC Floorspace
Tourism	Potential for mixed-use developments that include commercial floorspace and short stay accommodation	RES
Ancillary Industries	High concentration of professional services that is strategically linked to Burswood South. There appear to be clusters in mining and construction. Could investigate potential for ancillary industries to locate in either the Northern Sub-precinct or Burswood South and their requirements.	OFF
Car Retail	Higher density uses would ideally occupy car yards, however, opportunities to include car retail as a ground floor use of mixed use developments should be considered	RET

Source: DPLH 2015

Literature review and analysis findings have been used to provide some initial development considerations for this sub-precinct:

- Demand for office space will be affected by mining boom-bust cycle and supply in the CBD
- Office space is highly competitive around the CBD with major centres including South Perth and Subiaco. The Town will need to consider how it can differentiate itself from these areas to attract businesses that need to be close to the CBD but either want a more unique environment or are price conscious
- Improving transport connections to the CBD and to other retail precincts in the AHSC will support growth in this sub-precinct
- As workforce increases, the demand for Shop/Retail uses (i.e. cafes, restaurants, convenience stores) will increase in this sub-precinct
- Car dealership models (new and second hand) are currently experiencing a rapid change such as agency models for new car distribution and high projected digital car purchases for used cars.[20] This means that in the medium term there could be a significant shift in the demand for car yards in their current form. These trends included a more experience-based display and smaller display areas. The Town should monitor these trends to see how best to transition the current uses while also maintaining the cluster of activity that has formed

[20] McKinsey 2019, Available from: https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/as-dramatic-disruption-comes-to-automotive-showrooms-proactive-dealers-can-benefit-greatly

Victoria Park Sub-Precinct

The following summarises WASLUC opportunities for the sub-precinct by PLUC floorspace.

Figure 22. Summary of Sub-Precinct Opportunities by Relevant PLUC Floorspace

Opportunity	Description	PLUC Floorspace
Night-time Economy	Increased entertainment floorspace could be considered for this sub-precinct to complement the current offering. This could include nighttime economy businesses such as small bars, movies/theatres and arts/cultural venues.	ENT
Population Services	Increased residential density will provide additional expenditure for health services, childcare and other activities that can diversify the local offering and attract greater expenditure through increased duration of stay.	HEL, OFF
Tourism	Short stay accommodation floorspace could also be considered in this Sub-precinct in mixed-use developments	RES
Aged Care	Providing Aged Care accommodation in centres enables easier access for residents and greater opportunity for social interaction/intergenerational interaction	RES

Source: DPLH 2015

Literature review and analysis findings have been used to provide some initial development considerations for this sub-precinct:

- Cafes and restaurants meet demand for a wider area. Growth will be dependent on a number of factors in additional to local population growth, including:
    - Increased worker population
    - Increased visitor population
    - Increasing the attractiveness of the area as a place to dine (i.e. improved amenity, greater diversity of offering to support multi-purpose visits, increased nighttime economy industries, etc.)
- Convenience offering currently appears to be addressing the needs of users. As the Study Area grows, the centre would be expected to increase in accordance with its size and proximity to new population (this will be measured using retail gravity modelling).
- Increased density within a walkable catchment of this precinct is more likely to create demand for additional convenience retail floorspace
- Improved transport connections to the CBD, North Sub-precinct and Town Centre Sub-precinct will support floorspace growth beyond that which is generated by Study Area population and increased density within a walkable catchment. This may be supported should the redevelopment of the Victoria Park Central shopping centre occur

Central Sub-Precinct

The following summarises WASLUC opportunities for the sub-precinct by PLUC floorspace.

Figure 23. Summary of Sub-Precinct Opportunities by Relevant PLUC Floorspace

Opportunity	Description	PLUC Floorspace
Active Frontages	Redevelopment should include adaptable frontages on the ground floor that can become active should there be sufficient activity to link the Victoria Park Sub-precinct to the Town Centre Sub-precinct. This would encourage greater movement between the centres when visitation and density levels are appropriate.	HEL, OFF
Tourism	Short stay accommodation floorspace could also be considered in this Sub-precinct in mixed-use developments.	RES
Car Retail	Higher density uses could occupy car yards, however, opportunities to relocate or consolidate car yards so as to maintain the cluster of activity that has formed in the Town should be considered.	RET
Furniture Retail	Opportunity to offer more homewares and furniture retail in the AHSC.	SHP, RET

Source: DPLH 2015

Literature review and analysis findings have been used to provide some initial development considerations for this sub-precinct:

- Residential development in this area will increase demand for the retail uses that currently serve the local and Study Area populations (i.e. supermarket, department store, etc.)
- Greater residential population will also increase the need for non-retail population services such as health and education. These should be provided for in the main activity centres to increase the diversity of local offering
- Car dealership models (new and second hand) are currently experiencing a rapid change such as agency models for new car distribution and high projected digital car purchases for used cars.[21] This means that in the medium term there could be a significant shift in the demand for car yards in their current form. These trends included a more experience-based display and smaller display areas. The Town should monitor these trends to see how best to transition the current uses while also maintaining the cluster of activity that has formed
- Homewares and Furniture retail in this area would likely be a display store with delivery instead of pick-ups

[21] McKinsey 2019, Available from: https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/as-dramatic-disruption-comes-to-automotive-showrooms-proactive-dealers-can-benefit-greatly

Victoria Park Town Centre

The following summarises WASLUC opportunities for the sub-precinct by PLUC floorspace.

Figure 24. Summary of Sub-Precinct Opportunities by Relevant PLUC Floorspace

Opportunity	Description	PLUC Floorspace
Nighttime Economy	Increased entertainment floorspace could be considered for this sub-precinct to complement the current offering. This could include nighttime economy businesses such as small bars and arts/cultural venues.	ENT
Population Services	Increased residential density will provide additional expenditure for health services, childcare and other activities that can diversify the local offering and attract greater expenditure through increased duration of stay.	HEL, OFF
Tourism	Short stay accommodation floorspace could also be considered in this Sub-precinct in mixed-use developments	RES
Aged Care	Providing Aged Care accommodation in centres enables easier access for residents and greater opportunity for social interaction/intergenerational interaction.	RES
Key Site Development	Long-term development opportunity of Park Centre could include mixed-use high density along Albany Hwy where there is currently car parking, allowing for active frontage to Albany Highway. This would support greater activation of this section of the centre and more pedestrian movement on the Main Street from the shopping centre	RES, SHP, ENT, OFF
Furniture Retail	Opportunity to offer more homewares and boutique furniture retail in the AHSC.	SHP, RET

Source: DPLH 2015

Literature review and analysis findings have been used to provide some initial development considerations for this sub-precinct:

- Cafes and restaurants meet demand for a wider area. Growth will be dependent on a number of factors in additional to local population growth, including:
    - Increased worker population
    - Increased visitor population
    - Increasing the attractiveness of the area as a place to dine (i.e. improved amenity, greater diversity of offering to support multi-purpose visits, increased nighttime economy industries, etc.)
- Convenience offering currently appears to be addressing the needs of users. As the Study Area grows, the centre would be expected to increase in accordance with its size and proximity to new population (this will be measured using retail gravity modelling).

- Increased density within a walkable catchment of this precinct is more likely to create demand for additional Shop/Retail floorspace
- Improved transport connections to the CBD, North-Sub Precinct and Town Centre will support floorspace growth beyond that which is generated by Study Area population and increased density within a walkable catchment
- Furniture retail in this area would likely be a display store with delivery instead of pick-ups

Residential Sub-Precinct

The following summarises WASLUC opportunities for the sub-precinct by PLUC floorspace.

Figure 25. Summary of Sub-Precinct Opportunities by Relevant PLUC Floorspace

Opportunity	Description	PLUC Floorspace
Active Frontages	Appropriate levels of ground floor activity should be planned to meet daily needs of residents. Some of these should be in the nighttime economy to enable a greater duration of activity.	SHP, HEL, OFF, ENT

Source: DPLH 2015

Literature review and analysis findings have been used to provide some initial development considerations for this sub-precinct:

- Commercial uses provided along this strip should be allowed primarily to serve local residents and support sufficient levels of activation so as to generate safety through passive surveillance
- Some activities in the nighttime economy should be allowed (i.e. restaurants, small bars, etc.) to support activation at night

Gateway (St James) Sub-Precinct

The following summarises WASLUC opportunities for the sub-precinct by PLUC floorspace.

Figure 26. Summary of Sub-Precinct Opportunities by Relevant PLUC Floorspace

Opportunity	Description	PLUC Floorspace
Redevelopment Scenario	As population increases in the AHSC, some of the current anchors of this centre could seek to either relocate or redevelop their store to provide a wider offering. Should this be the case there may be the need/opportunity to work with stakeholders to redevelop the site(s) in a way that allows for the use to be maintained and supports the vision for the centre.	SHP, HEL, OFF, ENT
Furniture Retail	This type of retail would compliment the comparison offering in the centre currently	SHP, RET

Source: DPLH 2015

Literature review and analysis findings have been used to provide some initial development considerations for this sub-precinct:

- Much of the offering in this sub-precinct is complementary to that of the other areas in the AHSC (i.e. Bunnings, Officeworks, car parts and accessories retailers). This offering serves a wider catchment and could be expanded without cannibalising other commercial areas in the AHSC
- The location has access to significant levels of passing traffic as the point where Albany Hwy merges with Shepperton Rd. There could be additional opportunities to capture passing trade however they might not be in alignment with the centre's purpose and care should be taken to not cannibalise trade from the rest of the AHSC
- The centre addresses the needs of the local population with regards to convenience retail and future development of the centre should maintain this level of offering

5 CENTRE PERFORMANCE

This section applies the six principles of economic activation to assess the AHSC. Economic activation relates to the quantity and frequency of transactions in a centre. Designing places with consideration of economic activation increases community cohesion, business viability and the overall sense of place.

The six principles of economic activation consist of the following:

Figure 27. Principles and Considerations of Economic Activation

Principle	Consideration
Purpose of Place	**This is used to determine what the precincts represent to its target user group (residents, visitors, tourists) and how it nests within the wider context of Perth.** Value is added by designing places which maximise both frequency and concentration of transactions
Access	**The means by which the precinct is accessed** • Decisions about access begin 5km from the place • Good design funnels users into the core of the place
Origins	**Origins are areas from which pedestrian movement begins** • Parking and public transport arrival points are the drivers of pedestrian movement • Strategic distributions of origin points will maximise pedestrian movement • Origin points should be spaced around the area to encourage pedestrian flow whilst maximising exposure onto retail and precinct elements • Locations of origins are more important than the number
Destinations	**Destinations are areas that attract high concentrations of visits. The main destination must be clearly defined.** • User behaviour • Maximise the impact of attractions through supporting uses to encourage multi-purpose trips and longer length of stay
Exposure	**Exposure areas are pedestrian roots that experience a high concentrations of foot traffic. These areas generally lie between origins and destinations, destinations and other destinations, etc.** Pedestrian movements should be channelled through activated frontages as retail sales are directly related to pedestrian traffic
Control	**Key Sites are locations that could be considered as future destinations and/or suitable sites for anchor tenants. Tenure control is a significant advantage for overall development success** • Identify active frontages and promote their usage • Corner sites determine uses on either side and are prime activation locations • Selectively choose active places – not all areas need to be active

Figure 28. Economic Activation Assessment of Albany Highway



Source: Pracsys 2021

5.1 Albany Highway Victoria Park and Northern Sub-Precinct

Figure 29. Economic Activation Principles of Northern, Victoria Park and Central Sub Precincts



Source: Pracsys 2021

Principles	Description and Assessment Consideration
Purpose of Place	Place Statement *Victoria Park and Northern sub precincts are the heritage heart of the Town. McCallum Park and Taylor Reserve provide opportunities for recreation and events with stunning views of the Perth skyline. Albany Highway offers an eclectic range of local businesses and is home to the Town of Victoria Park's administration offices. Victoria Park and Northern sub-precincts are the gateway to the Town from the CBD, and a much-loved place to live and visit.*[22] Findings • The Northern sub-precinct is the entry to the AHSC from the Perth CBD area; there is the opportunity to develop more of an entry statement to visitors from the CBD, especially as car yards redevelop • The Northern sub-precinct has the opportunity to continue developing as an office orientated precinct due to its proximity and access to the CBD. Retail uses in the sub-precinct (and adjacent precincts) should cater to the daytime requirements of workers • Retail and entertainment offerings should consider the needs of non-residents due to the proximity to the CBD and the Burswood Entertainment Precinct • Should additional high-density development occur in either (or both of) the Northern/Central sub-precincts, there may be a requirement for further provision of shop/retail uses (i.e. supermarket) to cater to their day-to-day shopping needs
Access Arrival Points	Main access is via bus and car with the Victoria Park Bus Transfer station to the north and frequent road access to Albany Highway from both east and west. Train access is available with the closest train stop being Lathlain, which is roughly 400m walk from the AHSC Findings • Albany Hwy can be accessed by numerous small roads from both east and west, although, some eastern connections are limited by Shepperton Rd. There is the opportunity to guide traffic along key access roads (those that have been highlighted in maps) or other appropriate roads as the Town sees fit to increase activation of certain areas (i.e. signage, closing connections of some smaller roads) • The future causeway pedestrian and cycling bridge will create better links between East Perth, the foreshore and these northern precincts. Access from the future Bridge to the Northern sub-precinct should be clear to both pedestrians and cyclists • Opportunity to enhance and support pedestrian and cyclist movements along Duncan St from the Victoria Park Train Station
Origins Car Parking, Apartments, Public transport	Primarily consists of street parking on Albany Hwy and side streets and the Victoria Park Central car park. There are a number of bus stops and Ursula Frayne Catholic College (school) which acts as both an origin and a destination Findings • Should the Northern sub-precinct continue to develop its concentration of office uses this will likely be a key arrival point for workers. There is an opportunity to create an improved pedestrian experience between the Victoria Park bus interchange and the Northern sub-precinct as development occurs. This could be addressed if a trackless tram or similar

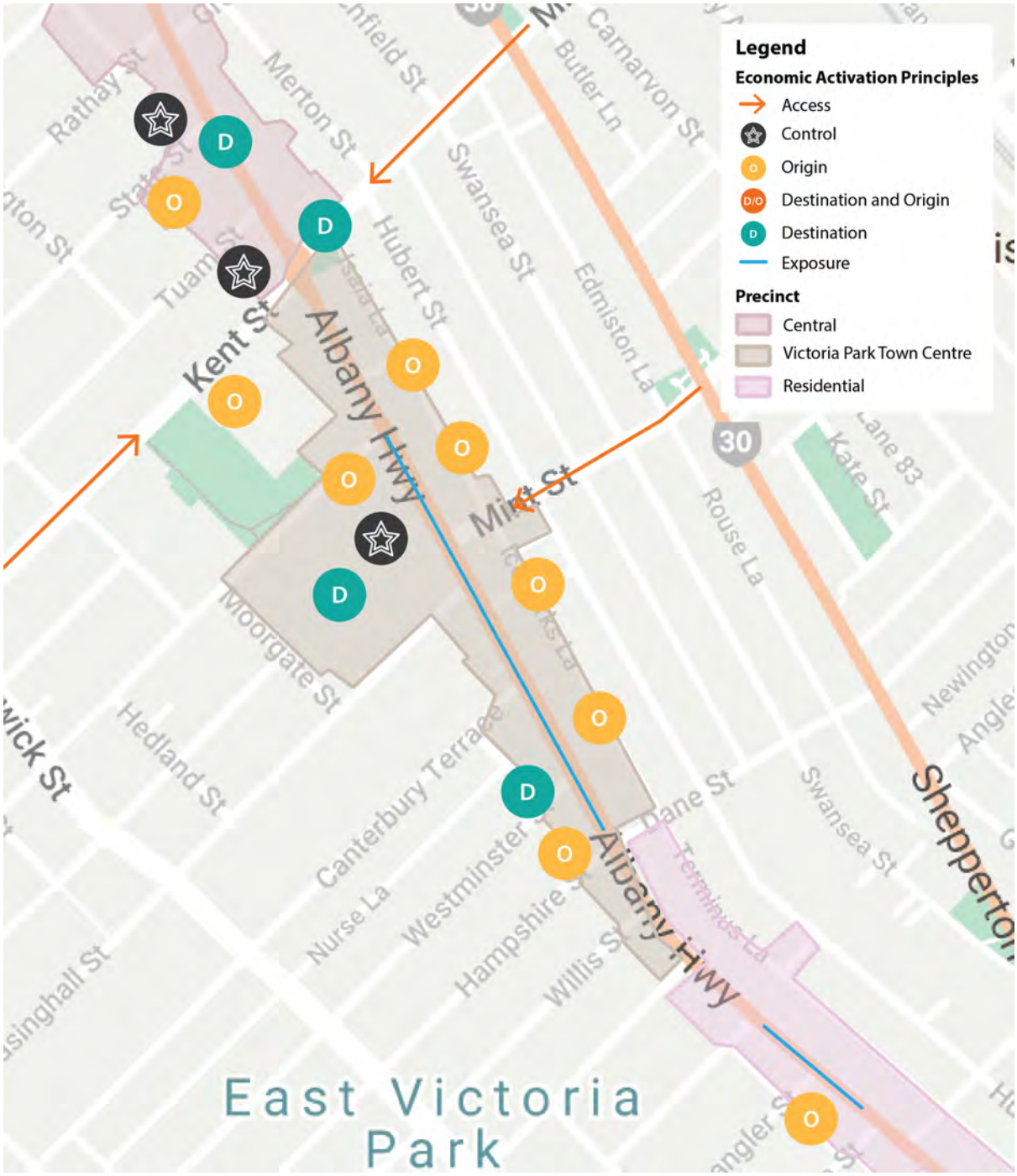
[22] Adapted from Town of Victoria Park's, Victoria Park Place Plan

Principles	Description and Assessment Consideration
	public transport infrastructure creates a direct connection from the Causeway to Albany Hwy • The provision of some roadside carparking would be appropriate as it supports activation. Opportunities to develop multi-story car parks as part of future development within the Victoria Park sub-precinct should be explored to cater for increased resident, visitor and work populations. Any car park should be strategically located to drive pedestrian traffic onto Albany highway. For instance, a parking lot at the intersections of the Northern and Victoria Park sub-precincts would support pedestrian movement along Albany Hwy to reach a destination in either sub-precinct. A parking lot would also be suitable at the southern end of the Victoria Park sub-precinct although it should be noted if Victoria Park central were to redevelop, patrons should be able to exit from the parking lot directly to Albany highway and not have to come through the shopping centre • Multi-storey residential developments can be important origins for activity centres. Any residential development directly abutting Albany Hwy or above shops on Albany Hwy should provide direct access for residents to Albany Hwy, where possible • The link between the Burswood entertainment precinct destination and the AHSC should continue to be supported. Although Burswood is 2km from the AHSC, it could be seen as an origin for the centre. The Town should continue to explore ways of connecting Burswood to the AHSC, including free buses, improved pedestrian/cycling connection, bike sharing system, etc. • The potential deviation of the proposed trackless tram from Albany Hwy to Kent St means that this intersection would become an important origin for the Central sub-precinct
Destinations Major Attractions, Anchors	Major destinations include entertainment and recreation venues, supermarkets and retail, and population-based services such as education and healthcare. Findings • As residential development occurs, it is likely there will be sufficient activity to support an additional anchor/destination (i.e. supermarket, entertainment offering such as a live venue). This should be located towards the intersection of the Northern and Victoria Park sub-precincts to increase pedestrian traffic along Albany Hwy, from offices to the north, to the Victoria Park Central destination to the south • Future residential development needs to consider walkable catchments to avoid unnecessary vehicle traffic from residents. At current spacing, every resident along the Albany Highway is within 600m of a supermarket. Demand levels should be monitored over time to identify when additional shop/retail floorspace such as supermarkets should be developed • The destinations in the southern section of the Central sub-precinct should be used to support an extension of the activity along Albany Hwy in the Victoria Park Town Centre sub-precinct. This is especially the case if the proposed trackless tram project progress • The opportunity to add an entertainment destination in the Victoria Park sub-precinct should be explored. This would contribute to greater night-time activation and increased duration of visits through multi-purpose trips

Principles	Description and Assessment Consideration
Exposure Pedestrian Movement	Main exposure area extends from Rushton Street to Temple Street Findings • As population increases, areas of low exposure between the Northern and Central sub-precinct should become more suitable to pedestrian movements • There is a small activity hub that has developed in the southern end of the Central sub-region with the Victoria Park Hotel and new Boston Brewing Co premises acting as destinations. This area of activity can act as a bridge between the two main activity centre nodes of Victoria Park and Victoria Park Town Centre. To the north there are a number of car yards, this area would be suited to residential and/or mixed-use precincts with some activated frontages to support walkability between destinations (Victoria Park Central – Victoria Park Hotel). It should be noted that activation of this area is to meet demand from residents and support walkability between destinations and not to create consistent exposure. To the south there is the opportunity to create a consistent exposure link to the Victoria Park Town Centre through activated frontages • As the Northern sub-precinct redevelops, there will be the opportunity for greater exposure along Albany Highway. Should the predominant uses be office, this area should cater to some of the daytime requirements of workers with some night-time uses to the southern section of the precinct to connect the workers to the Victoria Park sub-precinct • Should the proposed trackless tram project progress, it will travel through all three of these sub-precincts based on the notional maps. When planning for the Tram, it is key that the two sides of Albany Hwy maintain both their sense of connection in high pedestrian traffic areas and their high levels of urban amenity (i.e. wide foot paths, tree canopy, alfresco dining, etc.)
Control Strategic Sites	The key sites in these precincts are almost exclusively car yards that could be redeveloped in future Findings • Car yards in the Northern and Central sub-precincts provide significant opportunity for future residential and/or commercial development. Need to maintain awareness of future development plans for car dealership lots (super lots) and work with landowners/developers to maintain lot size as opposed to allowing sub-division • The car yards north of Rushton St would be most suited to office development and could also be suited to residential development (exposure findings apply whatever the development type) • The car yard on the corner of Albany Highway and State St should have an activated frontage in future to complement the Victoria Park Hotel • The car yards on the north western and south eastern corners of Albany Hwy, Kent St and Miller St should have an activated frontage in future to complement the Boston Brewing Co operation • The car yards adjacent to Read Park in the Central sub-precinct would be suited to residential or non-retail commercial uses given the POS and the fact that they are outside the main exposure areas

5.2 Albany Highway Victoria Park Town Centre Sub-Precinct

Figure 30. Economic Activation Principles of Victoria Park Town Centre Sub Precinct



Source: Pracsys 2021

Principles	Description and Assessment Consideration
Purpose of Place	Place Statement *East Victoria Park is a vibrant and diverse place where residential suburbs, key community assets and urban commercial streets combine.* *The Albany Highway strip forms a central active spine for the area drawing in surrounding residents to shop, socialise and enjoy the lively street environment. Important community assets are based in East Victoria Park including Leisurelife, Aqualife, Victoria Park Library, Edward Millen House and Reserve, Higgins Park sporting precinct and John Macmillan Park. These community assets and the Albany Highway strip attract people from across the town and beyond and provide an abundance of amenity to enrich the lives of the vibrant local community.*[23] Findings • This sub-precinct is likely to continue to grow in importance as the primary shopping destination for residents in the Study Area, particularly those south west of Orrong Rd • With additional residential density there will likely be the opportunity to increase the night-time activity in the sub-precinct
Access Arrival Points	Main access is via bus and car with Albany Highway the primary access point from other sub-precincts and Mint St from Shepparton Rd. Access by car is generally to the Park Centre car park or the car park on the southern side of Mint St. Train access is very limited with a 1.1km walk from the Carlisle Station Findings • Access by foot and bus/public transport is likely to increase in proportion as residential density increases along AHSC. Appropriate tree canopy and urban amenity should be provided from other precincts to support pedestrian journeys • The current proposed trackless tram route would deviate from Albany Hwy onto Kent St, making this the likely stop for the sub-precinct. This will place further importance on creating a high-quality pedestrian environment between the southern end of the Central sub-precinct and the Victoria Park Town Centre sub-precinct
Origins Car Parking, Apartments, Public transport	Primarily consists of the Park Centre and Mint St car parks, with a number of back of house parking lots for specific buildings. There are also a number of bus stops along Albany Highway Findings • Back of house parking reduces the level of foot traffic along the Main St. As redevelopment occurs an amalgamation of these parking lots should be encouraged to one or two multi-story facilities that are strategically located or visitors should be required to access buildings via Albany Hwy (buildings could still have internalised parking for workers and residents). Strategic location for parking lots would be towards the southern and/or northern end of the precinct to encourage greater pedestrian traffic along Albany Hwy. With appropriate urban amenity this should pose little inconvenience as the total length from one end of the sub-precinct to the other is approximately 800m • The potential deviation of the proposed trackless tram from Albany Hwy to Kent St means that this intersection would become an important origin for the sub-precinct

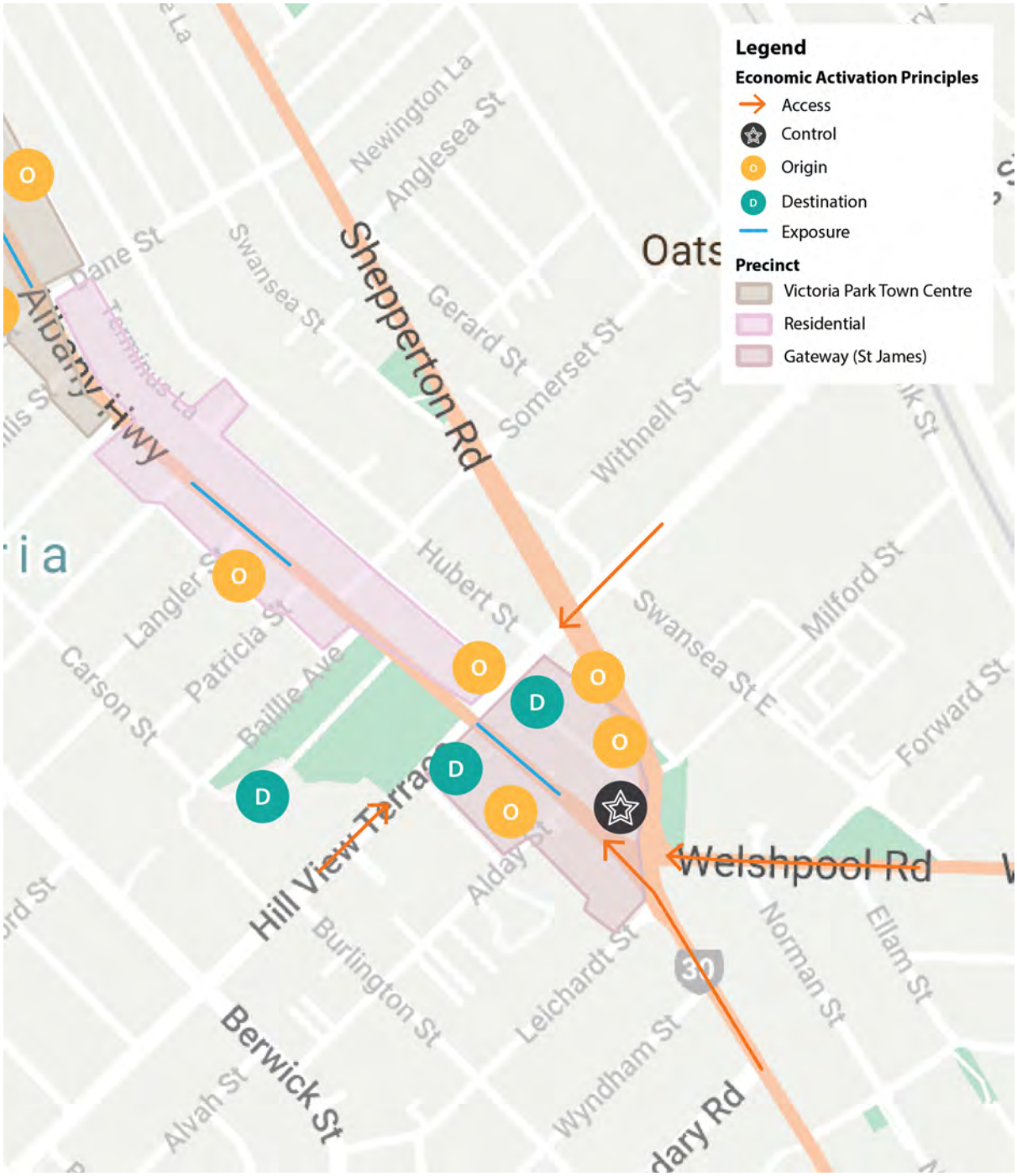
[23] Adapted from Town of Victoria Park's East Victoria Park Place Plan

Principles	Description and Assessment Consideration
	• The Park Centre car park should be reconsidered in the long term given its size and location directly adjacent to Albany Hwy. As the AHSC develops, opportunities for these parking spaces to be included in multi-story parking should be identified • Multi-storey residential developments can be important origins for activity centres. Any residential development directly abutting Albany Hwy or above shops on Albany Hwy should provide direct access for residents to Albany Hwy, where possible
Destinations Major Attractions, Anchors	Major destinations include recreation venues, supermarkets and retail, and population-based services such as education and healthcare. Findings • It will be important to create clear pedestrian access to the Leisurelife and Library facilities in the sub-precinct from Albany Highway as residential density increases along Albany Hwy. These facilities may need to be expanded as population density increases; opportunities to create a greater connection between these uses and commercial uses along Albany Hwy could be explored should an appropriate development opportunity occur (i.e. integrate with a Park Centre redevelopment that has an active frontage onto Albany Hwy) • The opportunity to add an entertainment destination (i.e. theatre or performance venue) in the sub-precinct should be explored. This would contribute to greater night-time activation and increased duration of visits through multi-purpose trips
Exposure Pedestrian Movement	The majority of the sub-precinct is exposed onto Albany Hwy. However, exposure opportunities are limited at the Shopping Centre as consumers will park their car and walk into the shopping centre. This is a missed opportunity. Similarly, the exposure of recreation offerings at John Macmillan Park and the surrounding community facilities does not encourage these users to walk towards Albany Highway. Findings • Two-sided activation of a road achieves better outcomes than single sided activation. Any major redevelopment of the Park Centre Shopping Centre should seek to have a frontage to Albany Highway, or, if no redevelopment eventuates, the section of the parking lot along Albany Highway should be developed. This will create a more consistent active frontage and support pedestrian foot traffic along the entirety of Albany Highway in the sub-precinct • Activation to the northern end of the sub-precinct is likely to increase due to the destinations and high-density residential development at the southern end of the Central sub-precinct. Planning should ensure that any redevelopment allows for fully activated frontages. This is particularly the case should a trackless tram stop be located near the intersection of Albany Hwy and Kent St • Exposure along the southern end of the sub-precinct is expected to increase as residential density increases, including residential growth in the Residential sub-precinct. Ensuring high-levels of urban amenity between these sub-precincts will support pedestrian traffic increases

Principles	Description and Assessment Consideration
Control Strategic Sites	The key site in this sub-precinct is the car park of the Park Centre Findings • The car park at Park Centre is a strategic site due its location along Albany Hwy. Future development should seek to maximise frontage onto Albany Highway. Should parking be integrated into a development it is important that visitors be guided onto Albany Highway before entering the centre. Internalised parking that exits into a shopping centre reduces the pedestrian traffic along Main St areas

5.3 Albany Highway Residential and Gateway Sub Precinct

Figure 31. Economic Activation Principles of Residential and Gateway Sub-Precincts



Source: Pracsys 2021

Principles	Description and Assessment Consideration
Purpose of Place	Place Statement *St James and Residential sub-precincts are primarily a residential neighbourhood with many established trees and local parks. The neighbourhood focal point is a bustling centre on Albany Highway with a number of major retailers and local businesses on offer.*[24] Findings • The Gateway sub-precinct is the southeastern entry to the AHSC. The Gateway sub-precinct has a different offering when compared to the other sub-precincts. This includes an shop/retail uses such as Aldi, and Other Retail uses including a Bunnings and an Office Works. As such, it supports both local and extended catchments This diversity of retail plays an important role in complimenting the retail offerings of other sub-precincts and opportunities such as an additional Other Retail anchor should be explored • The Residential sub-precinct includes many mixed-use residential/commercial developments as well as legacy low-density uses such as car maintenance yards and a fuelling station. This sub-precinct has experienced progressive development over the last two decades, with a number of single dwelling houses fronting Albany Hwy being used as commercial premises. The Residential sub-precinct should remain predominantly residential with small increases in commercial floorspace to meet population demand
Access Arrival Points	Main access points are via bus and car with the Gateway sub-precinct having direct access from Welshpool Rd and the continuation of Shepperton Rd / Albany Hwy. Primary access for the Residential sub-precinct is through Albany Hwy. Limited train access is provided by the Oats Street Train station – 800m from the Gateway sub-precinct. Findings • The Officeworks and F45 on the northern side of the Gateway sub-precinct can be accessed directly from Shepperton Road. Ideally, access should channel drivers past other businesses before reaching their destination. In the current format drivers have limited exposure to other businesses located along the retail core of Albany Hwy and Oats St. Future development should consider opportunities to aggregate parking so that pedestrians are encouraged to access business via Albany Hwy. Loading docks could then be used for large item pick ups • Hill View Tce and Albany Hwy should be prioritised as access points for Edward Millen house. As far as reasonably practicable, access to Edward Millen House – an important tourism and visitor destination – should be discouraged from the south through Berwick St or Carson St. This will increase the level of activation for business along Albany Hwy
Origins Car Parking, Apartments, Public transport	Primarily consists of car parks in and around the Gateway sub-precinct as well as numerous apartment complexes in the Residential sub-precinct. Findings • The St James sub-precinct has a good provision of car parking. Furthermore, this parking is located off Albany Highway (with Bunnings an exception) and for the most part pedestrians are required to access

[24] Adapted from Town of Victoria Park's St James Place Plan, however, the area north of Albany Highway to the train line is within the East Victoria Park Place Plan

Principles	Description and Assessment Consideration
	businesses via Albany Hwy. Should future mixed-use development occur, it will be important to ensure that internalised parking continues to lead visitors onto Albany Hwy • Some large apartment complexes exist in the Residential sub-precinct. They currently have direct access for pedestrians onto Albany Hwy. Future developments should maintain this direct access for pedestrians onto Albany Hwy as this will support the commercial businesses operating at street level. Should similar development occur at the Gateway sub-precinct, the same would apply • Future townhouse and apartment developments along Berwick St will become an important origin. Safe and convenient connections to Albany Hwy will need to be developed as these will support retail within the both the Victoria Park Town Centre and Gateway sub-precincts • The Welshpool Industrial Area may also be an opportunistic origin for the Gateway sub-precinct. Although the Gateway sub-precinct competes with the Bentley Shopping Centre, the diversity of food and beverage offerings could stimulate some daytime activity from workers. This opportunity could be realised as residential density increases and activates the sub-precinct, making it more attractive to visitors
Destinations Major Attractions, Anchors	Major destinations include large format retail offerings, and the historic Edward Millen House and park. Discount grocery stores and large format home improvement are large attractors with catchments well beyond the local populace. This brings additional expenditure to the area. Findings • Retail is currently anchored along the corner of Oats St and Albany Hwy. An additional anchor is needed for the lots facing Shepperton Rd along Albany Hwy, as this area is without a major destination. An additional anchor will encourage multi-purpose visits and encourage visitors to walk along Albany Hwy from Oats St to Shepperton Rd. This will benefit the businesses located along Albany Hwy. • Edward Millen House is a destination for tourists, visitors and residents. Developing links from Edward Millen House to Albany Hwy and the two sub-precincts will encourage visitors to the House to visit the Albany Hwy section of the sub-precinct
Exposure Pedestrian Movement	The key exposure passage in the Gateway sub-precinct is from Oat St to the Intersection of Shepparton Rd and Welshpool Rd, along Albany Hwy. Some Small activation exists in the vicinity of the apartments in the Residential sub-precinct. Findings • There is a small strip of active frontage that services the Residential sub-Precinct. Additional shop/retail uses demanded by population growth should be concentrated here where possible • Increasing the connection between Edward Millen House and the Albany Hwy section of the sub-precinct may generate additional pedestrian traffic that supports stores along Oats St that form part of the Aldi building • An additional destination in the southeastern corner of the sub-precinct would generate additional footfall in front of businesses along Albany Hwy. Aligning this destination with the current offering of Other Retail could increase the attractiveness of the centre as a whole

Principles	Description and Assessment Consideration
Control Strategic Sites	The key sites within the Gateway and Residential sub-precincts are vacant lots in prominent locations and low density lots. Findings • The development of the vacant lot on the corner of Shepperton Rd and Albany Hwy should be closely monitored. Its corner location and exposure onto a high volume traffic route allows it to attract visitors to the Gateway sub-precinct. Similarly, it has the ability to anchor the eastern portion of the Gateway sub-precinct. This will increase pedestrian movement along this stretch of Albany Hwy. There is a proposed development for the location that includes a Woolworths, this would be an appropriate attractor to create activation along Albany Hwy. The Gap analysis also identified furniture retail as a potential use for the Gateway sub-precinct. This complementary offering could increase the attractiveness of the Precinct as an Other Retail centre. The potential for such a business at the site should be further explored with landowners and private industry • The McDonalds site opposite the vacant lot has the same development potential. Its low plot ratio with large car park makes it a candidate for future development and a destination • Several single dwelling houses and low plot ratio commercial buildings exist within the Residential sub-precinct. These provide good candidates for future mixed used developments

6 NEEDS ASSESSMENT

The needs assessment considers the potential expenditure available to the AHSC from relevant user groups such as residents when assessing the potential need for and viability of proposed uses. Gravity modelling has been used to determine the residential expenditure for the Study Area. The model accounts for population growth in the network to estimate current and future levels of floorspace supportable within the AHSC.

Modelling Results Overview

The analysis estimates an increase in shop retail floorspace of 21,000m^2 in the base scenario and up to 34,000m^2 in the distributed scenario. Other Retail Floorspace increases by approximately 14,000m^2 in the base scenario and up to 22,000m^2 the distributed scenarios. Non-retail floorspace grows by approximately 56,000m^2 in the base scenario and up to 88,000m^2 in the distributed scenario.

The required level of strategic floorspace considered the OFF[25] and RES floorspace[26] needed to reach an ESS target of 146% within the AHSC. Total additional floorspace is estimated to be 40,000m^2 in the base case and up to 110,000m^2 in the distributed scenario (Figure 50). It should be noted that the current proportion of strategic floorspace to population driven floorspace was held constant, with the strategic floorspace projection being estimated using the population growth rate.

Figure 32. Shop Retail, Other Retail and Non-Retail Floorspace Projections Scenarios 2042

Scenario	Shop Retail	Other Retail	Non-Retail	Strategic Office	Strategic Accommodation	Additional Floorspace
Current 2022	56,490	36,007	147,039	NA	NA	NA
Base Case	77,929	49,672	202,842	32,880	6,996	130,783
High Scenario	80,537	51,334	209,631	43,599	9,268	154,833
Distributed	90,452	57,654	235,438	91,198	19,404	254,610
Concentrated	90,168	57,473	234,700	89,732	19,092	251,629

Source: DPLH 2015, Pracsys 2022

6.1 Gravity Model Methodology

Pracsys uses a proven retail gravity model methodology to examine the supply of and demand for retail floorspace within a defined Study Area. The Retail Gravity Model (also known as Huff's Gravity Model) is a modified version of Sir Isaac Newton's Law of Gravitation. The Gravity Model is a popular model widely used in international trade modelling, transport modelling and regional planning. Retail Gravity modelling studies retail supply, and the probability of a customer (demand) visiting a particular centre. The model accounts for the distribution and attractiveness of competing centres, along with the distance a customer will have to travel to each centre. Floorspace quantum (m^2) is used to represent the attractiveness of retail centres. Customers are willing to travel farther to shop at large centres, representing a higher level of attraction (they

[25] Includes Professional Service type uses
[26] Includes Hotel and Short Stay Accommodation uses

can generally satisfy multiple needs in one trip to a larger centre, which also contains a higher proportion of comparison goods).

The model provides an objective method of distributing expenditure among centres. Calibration is used to match the calculated distribution of expenditure to actual published turnover levels, optimising the model outputs. Having established a benchmarked current distribution of expenditure, new floorspace can be introduced and changes in expenditure distribution across time can be examined, allowing for various retail centre transformations such as planned expansions and new developments. This comprehensive approach creates a distribution of expenditure that is fundamentally unbiased, as it is based on mathematical rules. It is a widely used approach that has been accepted by the Department of Planning, Lands and Heritage and Western Australian Planning Commission (WAPC) through the review of a wide range of Structure Plans, Local Commercial Strategies and Retail Sustainability Assessments.[27] For more information on the gravity modelling methodology, please see Section 8.5**.**

[27] For example, in April 2014, the West Australian Planning Commission approved the Melville City Centre Structure Plan, which proposed the expansion of the Garden City shopping centre. The RSA prepared by Pracsys in support of the application was based on gravity modelling. Please see Melville City Structure Plan 2015.

6.2 Trends

The needs assessment includes consideration of current retail trends to inform planning that supports increased expenditure and overall business viability. The identified trends highlight the fast-changing nature of retail that businesses need to adapt to. It is key to ensure that planning for activity centres allows for flexibility in uses and floorspace areas. The following trends are worth considering as activation and development opportunities arise. [28]

Trend	Description	Drivers
Conscious Retail	Conscious retail is increasingly keeping customers loyal to a brand /distributor.	Many consumers have made a lifestyle choice to have a smaller global footprint, support brands that provide better conditions for factory workers in developing countries or support local products. Consumers are often willing to pay a premium for these products.
Data Retail	'Big Data' is being used to continually monitor and respond to changing consumer desires, shortening the product cycle.	Collecting and analysing data on retail sales is being used to inform all parts of the retail sale process, from supply chain to understanding customer satisfaction with their purchase. Retailers who don't use data to inform their decisions are much less likely to understand their customer's preferences or forecast demand and may find it difficult to remain competitive with those who do.
Subscription retail	Subscription retail allows retailers to encourage increased loyalty and connection to their brand.	Retailers need a business model that 'locks in' customers to increase the threshold of switching brand
Fast Retail	Business models comprised of virtual stores accessible from anywhere with fast distribution networks.	Technology has enabled customers to decide when, how and where to go. Consumers are no longer beholden to opening times or physical geography, consumer desires rather than retailers are driving consumption.
Small Retail	Speciality shops and smaller floorplates are becoming more popular.	Smaller stores with more curated selections, and specialty shops with niche products and more knowledgeable staff are predicted to be more competitive than larger stores where products can be harder to find.

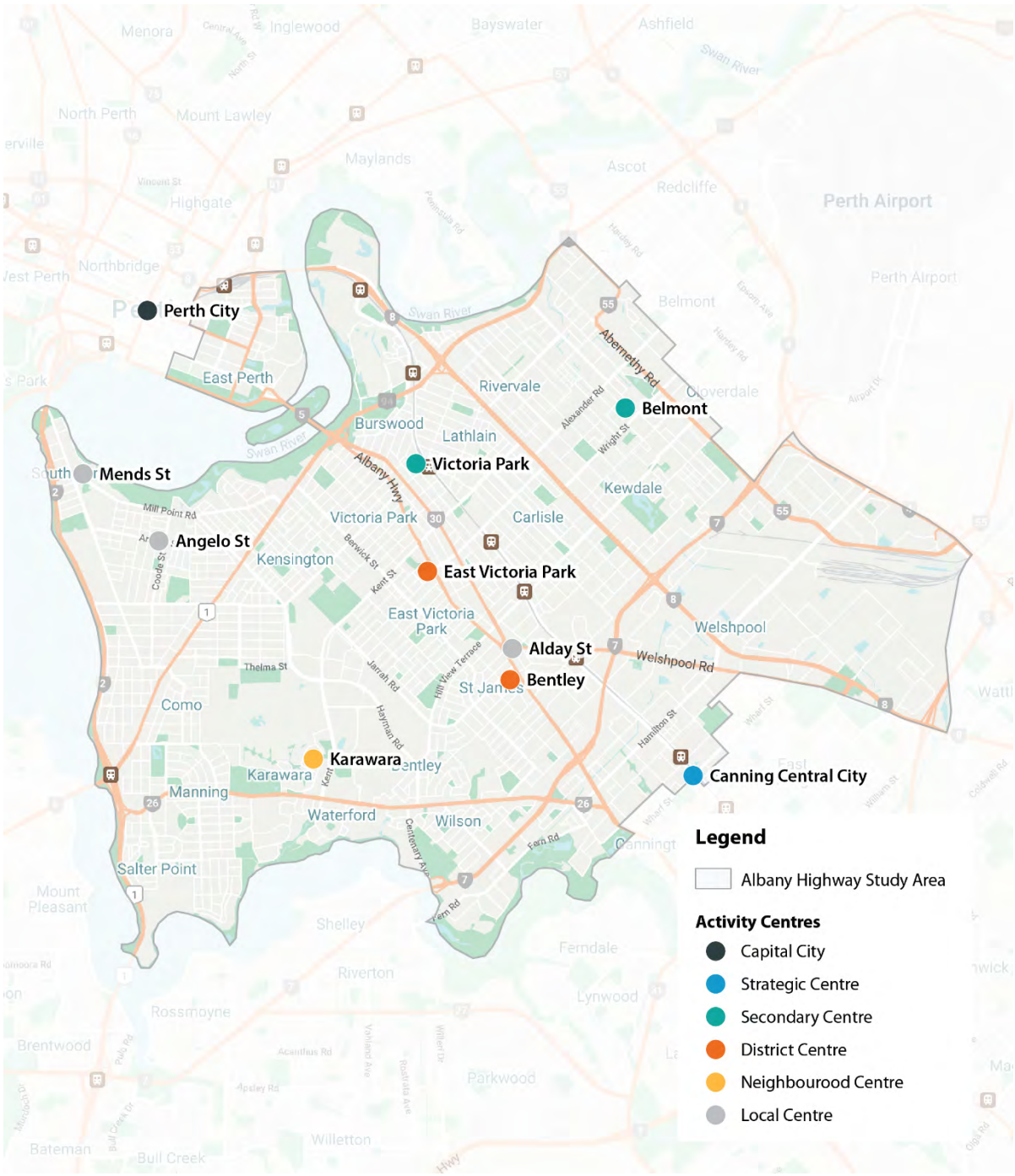
[28] Baptist World Aid Australia, The Australian Ethical Consumer Report, 2021. Available from: https://baptistworldaid.org.au/wp-content/uploads/2021/05/BWA-Australian-Ethical-Consumer-Visualised-Report_McCrindle.pdf.
KPMG, Australian Retail Outlook, 2021. Available from: https://assets.kpmg/content/dam/kpmg/au/pdf/2021/australian-retail-outlook-2021-report.pdf.
ABC, How COVID-19 changed the way we shop – and what to expect in 2022 and beyond, 2022. Available from: https://www.abc.net.au/news/2022-01-04/covid-changed-the-way-we-shop-contactless-cashless/100728038.

Trend	Description	Drivers
Personal Retail	Consumers are increasingly desiring products that can be personalised.	Consumers are going shopping with a strong idea of what they want, rather than shopping to see what is available and fits their needs. They want to find a product that reflects their personal brand and is tailored to their needs rather than generic and mass-produced.
Ethical Consumerism	Consumers are considering the ethical and environmental impact of their purchases; where the product was produced and if it reflects their values.	This has been driven by a range of factors such as COVID-19, social media raising awareness around working conditions and environmental impact, news, Oxfam and other organisations that rate brands.
Buying Local	Supporting local businesses and individuals	Consumers are becoming increasingly willing to purchase from small businesses and locally. This has been accelerated by COVID-19, with small businesses gaining community support and a lack of competing imported goods.
Open Air Shopping Experiences	People are starting to prefer outdoor malls rather than enclosed malls.	People wanting to be in nature, prefer to walk between shops outside rather than in a shopping centre, however, the trade area pull is larger for indoors than outdoors
Circular Fashion	More consumers partaking in a circular economy model where they consume and give away items in a more sustainable manner.	This has been driven by second-hand ecommerce like Etsy, people both buying and selling as individuals or small 'brands' and the growth of the sharing economy.
Authenticity	Customers are increasingly wanting to feel a personal connection with brands and are more aware of manipulative advertisements.	Increased availability of information is making consumers more aware of marketing tactics. Consumers are more inclined to purchase from brands they feel are authentic.

6.3 Retail Supply

Retail supply for the Study Area has been included in the gravity model. The identified activity centres are based on Department of Planning, Lands and Heritage current activity centres; with regards to the Albany Hwy Secondary Centre, it shows the three main activity centre nodes of Victoria Park, East Victoria Park and Alday St. Currently, the Victoria Park node is classified as a secondary centre.

Figure 33. Trade Area Retail Supply Network 2022



Source: Pracsys 2022

There is a total of almost 300,000m^2 in shop/retail floorspace in the AHSC.

Figure 34.Top 10 Analysis Study Area Shop/Retail Floorspace Supply 2022

Centre	Shop/Retail Floorspace (m^2)
Canning Central City	115,264
Belmont	43,148
Perth City (East Perth Only)	35,327
East Victoria Park	26,925
Victoria Park	22,248
Bentley	16,967
Karawara	13,083
Alday St	6,538
Mends Street	5,892
Angelo Street	4,181
Total Floorspace (Including all centres)	**296,906**

Source: DPLH 2016, Property Council 2021

Secondary research was engaged to find existing and planned floorspace supply (including expansions and new developments) which have been accounted for in the gravity modelling estimates.

The key expansions and new developments included within the report are as follows:

- Curtin University – Adding 3,000m^2 of shop retail by 2025
- Bentley Regeneration Project – Adding 4,500m^2 of shop retail by 2031 (Bentley District Centre)
- Chapman Road Activity Centre Expansion – Adding 17,407m^2 of shop retail by 2031
- Queens Park Activity Centre Expansion – Adding 6,910m^2 of shop retail by 2031
- Westfield Carousel Expansion – Adding 27,500m^2 of shop retail by 2018
- Civic Heart development – Adding 2,601m^2 of shop retail by 2023
- Burswood Peninsula – 31,000m^2 by 2050, included pro rata to 2042

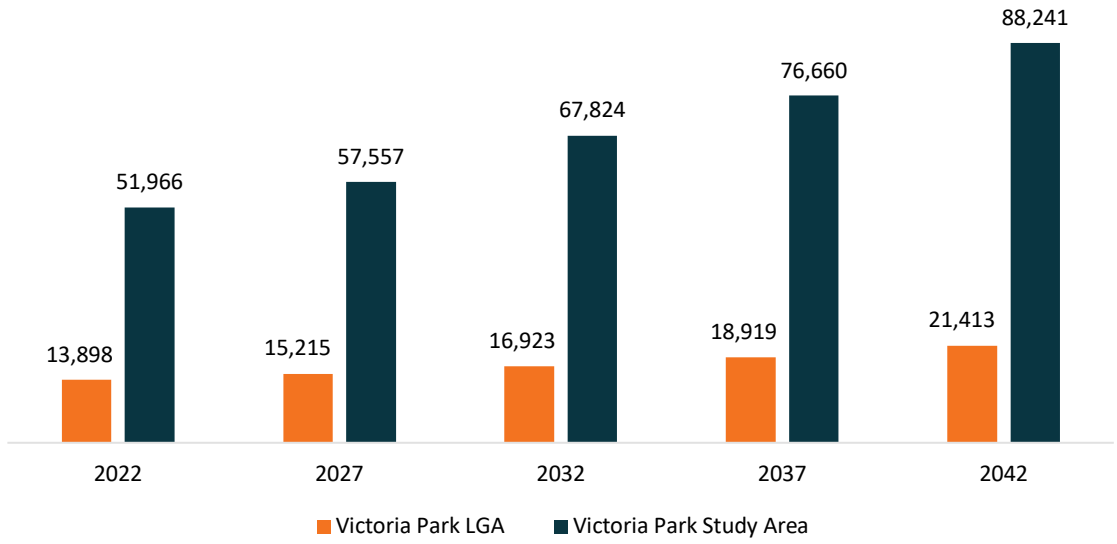
The total Shop/Retail offering within the Study Area has been estimated at 378,753m^2 (Figure 34)

6.4 Demand Projections

Demand projections are based on population projections for the Study Area. WA Tomorrow Forecasts have been applied to ABS 2016 dwellings over a 20-year period.[29] The Town provided estimates of additional dwellings in its precincts that would be required to meet the Central Sub-regional planning framework infill targets; these were merged with the WA tomorrow forecasts to inform the 20-year dwelling projection. Floorspace gaps were refined through identifying specific floorspace uses that suite the AHSC and used to develop floorspace estimates. Total dwelling projections for the study area and dwelling projection scenarios for the Victoria Park LGA based on the estimates provided by the Town of Victoria Park are show in (Figure 35).

[29] WA Tomorrow forecasts are provided to 2031. The average annual growth rate for the period 2026-31 is then used to project dwellings from 2031 to 2042.

Figure 35.Dwelling Projections based on Town of Victoria Park Projections



Source: DPLH 2015

The number of dwellings in the Study Area is expected to grow by 70% between 2022 and 2042; the number in the Town is expected to grow by 54% over the same period.

Dwelling scenarios for the AHSC were provided by the Town. The scenarios reflect different density targets for the AHSC that could be achieved by 2050. The base scenario involves an additional 1,089 dwellings by 2050, moderate scenario involves additional 2,474 dwellings and the high scenario involves an additional 3,727 dwellings. Average annual growth rates to achieve the 2050 targets were used to estimate dwelling growth over the 20-year period (Figure 36).

Figure 36. AHSC Dwelling Scenarios

Scenario	2022	2027	2032	2037	2042
AHSC (Base Scenario)	1,500	1,641	1,801	1,984	2,193
AHSC (Moderate Scenario)	1,500	1,750	2,061	2,450	2,935
AHSC (High Scenario)	1,500	1,820	2,243	2,800	3,534
					Growth Rate (% – five year period)
AHSC (Base Scenario)		9%	20%	32%	46%
AHSC (Moderate Scenario)		17%	37%	63%	96%
AHSC (High Scenario)		21%	50%	87%	136%

Source: DPLH 2015

The Town of Victoria Park further provided two full build-out dwelling scenarios within the AHSC. The dwelling scenarios estimate different dwelling density amongst the six precincts throughout the AHSC. The distributed scenario incorporates an additional 8,785 dwellings and concentrated scenario involves an additional 8,618 dwellings. These figures are modelled in 2042 to quantify the required additional floorspace to support the

additional population (Figure 37). These dwelling estimates are likely to occur outside of this timeframe but the additional floorspace required can still be used to monitor development rates and plan appropriately.

Figure 37. AHSC Full Build Out Dwelling Scenarios[30]

Scenario	2022	2027	2032	2037	2042
Distributed Scenario	2,462	3,440	4,907	7,131	10,536
Concentrated Scenario	2,462	3,430	4,875	7,054	10,369
					Growth Rate (% – five year period)
Distributed Scenario		40%	99%	190%	328%
Concentrated Scenario		39%	98%	187%	321%

Source: DPLH 2015

Retail Expenditure

Retail demand generated by dwellings in the Study Area is estimated to be $1.4 billion in 2022, increasing to $2.32 billion by 2042 (Figure 38).

Figure 38 Total Resident Retail Demand using Town of Victoria Park Projections ($ billions)

Scenario	2022	2027	2032	2037	2042
Base Scenario	1.4	1.53	1.79	2.01	2.29
Moderate Scenario	1.4	1.54	1.79	2.02	2.31
High Scenario	1.4	1.54	1.8	2.03	2.32
					Growth Rate (% – five year period)
AHSC (Base Scenario)		9%	28%	44%	64%
AHSC (Moderate Scenario)		10%	28%	44%	65%
AHSC (High Scenario)		10%	29%	45%	66%

Source: WA Tomorrow 2016, Town of Victoria Park 2022, Pracsys 2022

These projections demonstrate a significant increase in retail goods demand over the next 20 years, indicating potential for significant growth in retail floorspace in the Study Area. This projected growth in retail goods demand will require the provision of additional floorspace within the AHSC.

[30] Figures add up to more than the total AHSC dwelling projection as they include dwellings from spatial areas that go beyond the AHSC boundary.

Projected demand in the full build-out scenarios increases to approximately $2.48 billion; this will create significant additional demand for floorspace should full build-out occur (Figure 39). This equates to an increase of between 10% and 13% in retail expenditure growth to 2042 at the Study Area level. The gravity model accounts for the fact that this growth will be concentrated at the AHSC.

Figure 39. Total Resident Retail Demand using Town of Victoria Park Full Build Projections ($ billions)

Scenario	2022	2027	2032	2037	2042
Distributed Scenario	1.40	1.55	1.84	2.11	2.48
Concentrated Scenario	1.40	1.55	1.84	2.11	2.47
					Growth Rate (% – five year period)
Distributed Scenario		11%	31%	51%	77%
Concentrated Scenario		11%	31%	51%	76%

Source: WA Tomorrow 2016, Town of Victoria Park 2022, Pracsys 2022

Retail Floorspace Projections

Gravity modelling has been used to project Shop Retail floorspace to 2042. This process accounts for changes in the quantum and location of supply and demand over time. It also provides a means of applying the five dwelling scenarios in the AHSC to understand the additional floorspace at the AHSC itself. Other Retail floorspace includes the relevant gap identified through the floorspace analysis and has been projected using the changes in Shop Retail floorspace to account for changes in demand and supply (Figure 40 & Figure 41).

Figure 40. Total Supportable Increase in Shop Retail and Other Retail Floorspace Over Time

Base Scenario			
Year	**Shop Retail (m^2)**	**Other Retail (m^2)**	**Total**
2022	56,490	36,007	92,497
2027	60,390	38,492	98,882
2032	65,494	41,746	107,240
2037	71,467	45,553	117,020
2042	77,929	49,672	127,601
Moderate Scenario			
Year	**Shop Retail (m^2)**	**Other Retail (m^2)**	**Total**
2022	56,590	36,007	92,597
2027	60,613	38,635	99,248
2032	66,006	42,072	108,078
2037	72,380	46,135	118,515
2042	79,371	50,591	129,962
Higher Scenario			
Year	**Shop Retail (m^2)**	**Other Retail (m^2)**	**Total**
2022	56,490	36,007	92,497
2027	60,758	38,727	99,485
2032	66,365	42,301	108,666
2037	73,066	46,572	119,638
2042	80,537	51,334	131,871

Source: DPLH 2015, Pracsys 2022

The Town of Victoria Park could allow for an increase in Shop/Retail floorspace in the AHSC of 21,400m^2 in the base scenario and 24,000m^2 in the high scenario to meet demand within the Study Area. Other Retail uses could increase by between 13,700m^2 and 15,300m^2. (Figure 40)

Under the full build scenarios, the Town of Victoria Park could allow for an increase in Shop/Retail floorspace within the AHSC of 34,000m^2 in the distributed scenario and 33,700m^2 in the concentrated scenario to meet demand in the Study Area. Other Retail uses could increase by 21,600m^2 in the distributed scenario and 21,500m^2 in the concentrated scenario (Figure 41). The difference between the full build scenarios and the Base Case / High Scenarios is a step change that is relevant specifically to the AHSC. This means it can be applied once the high scenario population level is achieved, based on more accurate estimates of population growth that is being experienced.

Figure 41. Total Supportable Increase in Shop Retail and Other Retail Floorspace Over Time Full Build Out Scenario

Distributed Scenario			
Year	**Shop Retail (m^2)**	**Other Retail (m^2)**	**Total**
2022	56,490	36,007	92,497
2027	61,801	39,392	101,193
2032	69,053	44,014	113,068
2037	78,519	50,048	128,567
2042	90,452	57,654	148,105
Concentrated Scenario			
Year	**Shop Retail (m^2)**	**Other Retail (m^2)**	**Total**
2022	56,490	36,007	92,497
2027	61,785	39,382	101,167
2032	69,003	43,982	112,986
2037	78,394	49,968	128,361
2042	90,168	57,473	147,641

Source: DPLH 2015, Pracsys 2022

6.5 Non-Retail Floorspace Modelling

The level of supportable Non-retail floorspace has been estimated by first identifying the relevant floorspace gaps, specific to the use of the AHSC (see Section 4.3, Floorspace Gaps). These gaps were assumed to be addressed by 2027 and Non-Retail floorspace was projected to 2042 using the Shop/Retail growth. The Shop/Retail growth was used as it accounts for changes in supply and demand for activity centre uses. Using this methodology, the analysis demonstrates that the AHSC can significantly increase Non-retail floorspace in across all scenarios (Figure 42 & Figure 43). Please note that RES floorspace projections are not estimated in this section for a number of reasons including:

- LUES data for this PLUC includes a mix of residential and non-residential uses
- Hotel / short stay accommodation floorspace is not driven by the local population

RES estimates have been estimated based on strategic employment requirements, ensuring they reflect commercial uses only. RES floorspace is estimated in Section 6.6.

Total Non-Retail floorspace could increase by between 56,000m^2 and 63,000m^2 in the Base Case – High scenarios. Full build-out could generate a requirement for an additional 88,000m^2.

Figure 42. Total Supportable Increase Non-retail Floorspace Over Time

Base Scenario						
Year	ENT	HEL[31]	MAN	OFF	SER	Total
2022	14,246	23,607	4,970	92,811	11,405	147,039
2027	15,230	25,236	5,313	99,218	21,515	166,513
2032	16,517	27,369	5,762	107,605	13,223	170,476
2037	18,023	29,865	6,288	117,418	14,428	186,022
2042	19,653	32,566	6,856	128,034	15,733	202,842
Moderate Scenario						
Year	ENT	HEL	MAN	OFF	SER	Total
2022	14,246	23,607	4,970	92,811	11,405	147,039
2027	15,286	25,330	5,333	99,585	21,515	167,049
2032	16,646	27,584	5,807	108,446	13,326	171,810
2037	18,254	30,247	6,368	118,917	14,613	188,399
2042	20,017	33,169	6,983	130,404	16,024	206,597
Higher Scenario						
Year	ENT	HEL	MAN	OFF	SER	Total
2022	14,246	23,607	4,970	92,811	11,405	147,039
2027	15,323	25,390	5,346	99,824	21,515	167,398
2032	16,737	27,733	5,839	109,036	13,399	172,743
2037	18,427	30,534	6,429	120,046	14,751	190,186
2042	20,311	33,656	7,086	132,319	16,260	209,631

Source: DPLH 2015, Pracsys 2022

Note: ENT = Entertainment/Recreation/Cultural, HEL = Health/Welfare/Community Services, MAN = Manufacturing/Processing/Fabrication, OFF = Office/Business, RES=Residential, SER = Service Industrial, STO = Storage/Distribution, UTE = Utilities/Communications

Figure 43. Total Supportable Increase Non-retail Floorspace Over Time Full Build Scenarios

Distributed Scenario						
Year	ENT	HEL	MAN	OFF	SER	Total
2022	14,246	23,607	4,970	92,811	11,405	147,039
2027	15,586	25,826	5,437	101,537	21,515	169,902
2032	17,415	28,857	6,075	113,452	13,941	179,740
2037	19,802	32,812	6,908	129,004	15,852	204,379
2042	22,811	37,799	7,958	148,609	18,261	235,438
Concentrated Scenario						
Year	ENT	HEL	MAN	OFF	SER	Total
2022	14,246	23,607	4,970	92,811	11,405	147,039
2027	15,582	25,819	5,436	101,511	21,515	169,864
2032	17,402	28,836	6,071	113,370	13,931	179,610
2037	19,770	32,760	6,897	128,798	15,827	204,052
2042	22,740	37,680	7,933	148,143	18,204	234,700

Source: DPLH 2015, Pracsys 2022

It should be noted that the residential, storage distribution and utility floorspace types were assumed to be constant overtime because they were not considered to be uses that aligned with the purpose of precincts

[31] HEL includes Education

within the AHSC (Figure 44). The RES floorspace type in particular was held constant as it includes non-commercial uses. Additional accommodation floorspace is estimated in Section 6.6.

Figure 44. Non-retail Floorspace Kept Constant Over Time

PLUC Code	Floorspace
RES	21,515
STO	32,295
UTE	7,194
Total	61,004

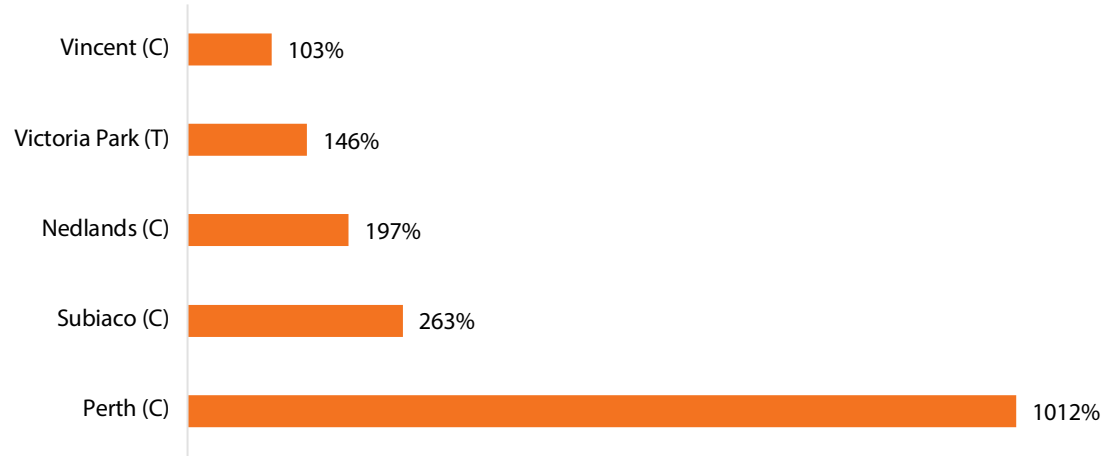
Source: DPLH 2015, Pracsys 2022

Dwellings within the Town can be used to understand the potential floorspace requirement of the AHSC at a given point in time. The dwellings within the AHSC can then be used to determine the appropriate scenario and their location (i.e. which sub-precinct they are being developed) should be used to determine where any additional floorspace to the base scenario is provided.

6.6 Employment Implications

The Town's ESS was estimated using ABS Census 2016 Place of Work and Place of Usual Residence data. The results differ from those provided in the Town's Investment Prospectus but have been used as they compare data from the same data set (ABS Census 2016). The Town's ESS is estimated to be 146%, meaning there are approximately 46% more jobs available in the Town than there are residents in the labour force. The Town is comparable to other inner metropolitan areas that contain highway centres such as Nedlands, and secondary centres such as Subiaco. These cities have a high ESS due their location and the role the centres play in employing their residents as well as providing employment opportunities outside of their city's boundaries, we conservatively assumed The Town's ESS will stay constant at 146% (Figure 45)

Figure 45. ESS in The Town



Source: ABS Census 2016

The Perth and Peel @ 3.5 million Strategic Planning Framework establishes a target ESS for the Central Sub-region of 139%. Given there is an expectation that the Perth CBD population will grow significantly, thereby reducing its ESS, we have measured the employment required for the Town to maintain its current ESS.

The AHSC would need to support an additional 2,000 Strategic jobs and 3,000 Population Driven jobs by 2042 to maintain the current ESS level, based on the current distribution of employment in the Town. These findings will be used to develop hypothetical floorspace requirements for the AHSC to support ESS targets.

Employment Analysis

The Central Sub-Regional Planning Framework provides Employment Self-Sufficiency (ESS) targets for the region. ESS represents the jobs available in a sub-region compared to the labour force of the sub-region. An ESS of 100% means that a sub-region has an equal number of jobs and labour force. The ESS targets were adjusted to determine the requirement employment target in 2042 for the Sub-region.

The employment estimates were determined through applying relevant floorspace ratios to each floorspace type and projecting the employment based on floorspace changes.

The Town of Victoria Park supplied five dwelling growth scenarios based on population projections and development capacity:

Population Projections to 2042

- Base: 1,089 additional dwellings
- Moderate: 2,474 additional dwellings
- High: 3,727 additional dwellings

Full Build-Out Capacity

- Distributed: 8,785 additional dwellings
- Concentrated: 8,618 additional dwellings

The ESS targets were projected to 2042 using the Base Case and High Scenario to provide an estimated range of strategic employment required to maintain the ESS target, detailed in Figure 46.

The analysis estimates that the number of jobs that will be addressed through population driven employment in the base case in 2042 is 2,887 jobs, requiring a further 1,339 strategic jobs to reach the ESS target. The high scenario generates 2,126 population driven jobs by 2042, needing a further 1,775 strategic jobs to meet the ESS target.

Figure 46. ESS Target Range 2022 - 2042

Scenario	Population Driven Employment	Strategic Employment Gap to ESS
Base Case	2,887	1,339
High Scenario	2,126	1,775

Source: Pracsys 2022

The ESS target was projected to 2042 for both the distributed and concentrated scenario in order to develop a target for both full build-out scenarios (Figure 47). Population driven employment will supply 4,500 jobs in both the distributed and concentrated scenario, needing approximately 3,700 more strategic jobs to reach both ESS targets.

Figure 47. ESS Target Full Build Scenarios 2022 - 2042

Scenario	Population Driven Employment	Strategic Employment Gap to ESS
Distributed	4,573	3,715
Concentrated	4,535	3,655

Source: Pracsys 2022

Based on the strengths of the area, it was assumed strategic employment would be possible in office and accommodation floorspace types. The AHSC is located 10 minutes from the CBD granting the region access to a larger market of clients and labour, making it an ideal area for the development of office commercial uses. The Town of Victoria Park will have to engage with stakeholders to drive accommodation employment, focussing on the advantages of the AHSC such as its proximity to the river, diverse café strips and unique retail offerings. Benchmarking was used to determine a suitable mix of office and accommodation floorspace for the AHSC to support strategic related employment. The proportion of the employment gap composed of office employment (96%) and accommodation employment (4%) was kept constant throughout all years projected, across all scenarios.

Floorspace Analysis

The additional office employment to meet the ESS target will require an estimated 33,000m^2 office floorspace in the base case and 44,000m^2 in the high scenario. The additional accommodation employment to meet the ESS target will require an estimated 7,000m^2 Residential floorspace in the base case 9,000m^2 of Residential in the high scenario (Figure 48).

Figure 48. Strategic Employment Gap Components to ESS Target Range 2022-2042

Scenario	Employment Type	Employment	Floorspace (m^2)
Base Case	Office	1,283	32,880
	Accommodation	56	6,996
High Scenario	Office	1,700	43,599
	Accommodation	75	9,268

Source: DPLH 2015, Pracsys 2022

The additional office employment to meet the ESS target will require an estimated 91,000m^2 office floorspace in the dispersed scenario and 90,000m^2 in the concentrated scenario. The additional accommodation employment to meet the ESS target will require an estimated 19,000m^2 Residential floorspace in both scenarios (Figure 49).

Figure 49. Strategic Employment Gap Components to ESS Target Full Build Scenarios 2022-2042

Scenario	Employment Type	Employment	Floorspace (m^2)
Distributed	Office	3,559	91,198
	Accommodation	157	19,404
Concentrated	Office	3,501	89,732
	Accommodation	154	19,092

Source: DPLH 2015, Pracsys 2022

6.7 Total Floorspace Needs Summary

The analysis estimates an increase in shop retail floorspace of 21,000m^2 in the base scenario and up to 34,000m^2 in the distributed scenario. Other Retail Floorspace increases by approximately 14,000m^2 in the base scenario and up to 22,000m^2 the distributed scenarios. Non-retail floorspace grows by approximately 56,000m^2 in the base scenario and up to 88,000m^2 in the distributed scenario.

The required level of strategic floorspace considered the OFF[32] and RES floorspace[33] needed to reach an ESS target of 146% within the AHSC. Total additional floorspace is estimated to be 40,000m^2 in the base case and up to 110,000m^2 in the distributed scenario (Figure 50). It should be noted that the current proportion of strategic floorspace to population driven floorspace was held constant, with the strategic floorspace projection being estimated using the population growth rate.

Figure 50. Shop Retail, Other Retail and Non-Retail Floorspace Projections Scenarios 2042

Scenario	Shop Retail	Other Retail	Non-Retail	Strategic Office	Strategic Accommodation	Additional Floorspace
Current 2022	56,490	36,007	147,039	NA	NA	NA
Base Case	77,929	49,672	202,842	32,880	6,996	130,783
High Scenario	80,537	51,334	209,631	43,599	9,268	154,833
Distributed	90,452	57,654	235,438	91,198	19,404	254,610
Concentrated	90,168	57,473	234,700	89,732	19,092	251,629

Source: DPLH 2015, Pracsys 2022

[32] Includes Professional Service type uses
[33] Includes Hotel and Short Stay Accommodation uses

7 IMPLEMENTATION

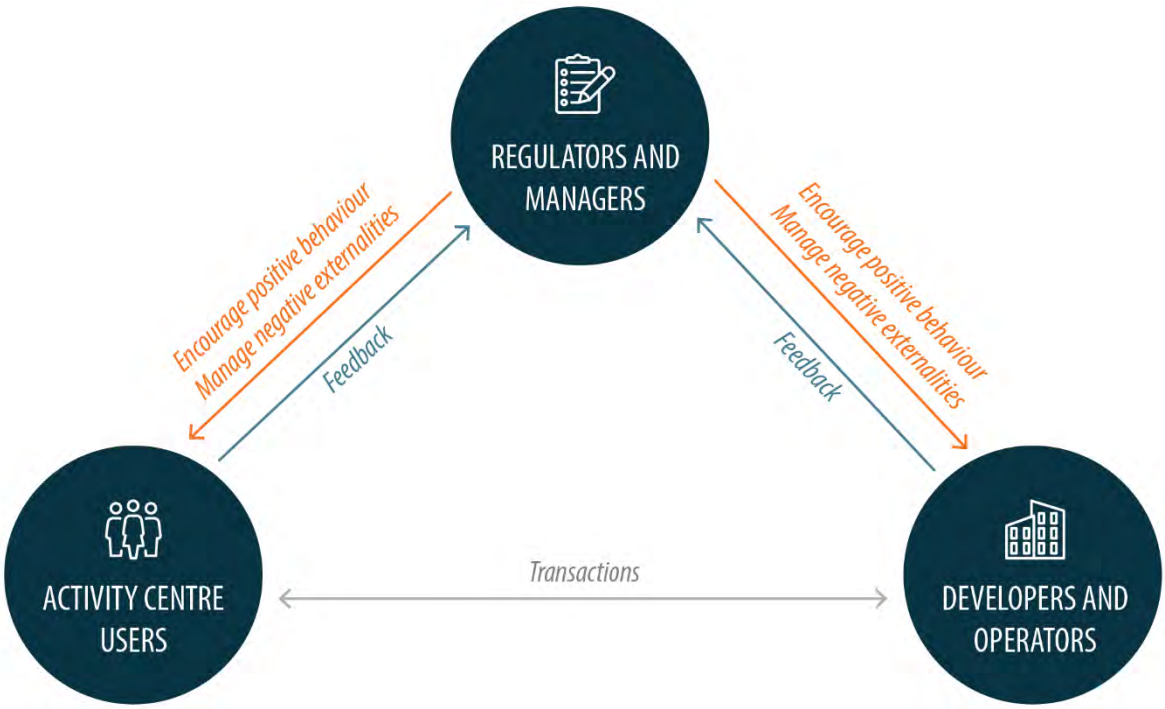
The Strategy will provide a guide to establishing the capacity for future Shop/Retail, Other Retail and Non-Retail floorspace development. It is assumed the Town will facilitate employment growth through an understanding of the key drivers that attract businesses to the AHSC.

Any strategy to reimagine the function, scale or use of the AHSC should respond to the 'felt needs' of the user groups it is catering for, including:

- Activity centre users;
- Enterprise developers/operators (and the workers); and
- Regulators/managers.

Decisions are made to benefit one or more of the user groups in the context of an overarching strategy vision.

Figure 51. User group interactions



The AHSC Precinct Structure Plan will work to benefit all three of these user groups. Understanding the drivers of user behaviour is require to achieve the vision for the AHSC. Regulators and managers (e.g. State and Local government and other authorities) can generally only encourage or influence certain behaviours, rather than control them. Ultimately the market and centre users will decide what activity is viable for the centre, with regulators and managers able to exert influence toward a desired approach. It is therefore paramount that the planning for the AHSC aligns with desired outcomes of users and employment providers.

There are a number of key drivers for population driven industries that need to be considered when planning an activity centre (Figure 52 and Figure 53).

Figure 52. Example demand drivers for population-driven businesses

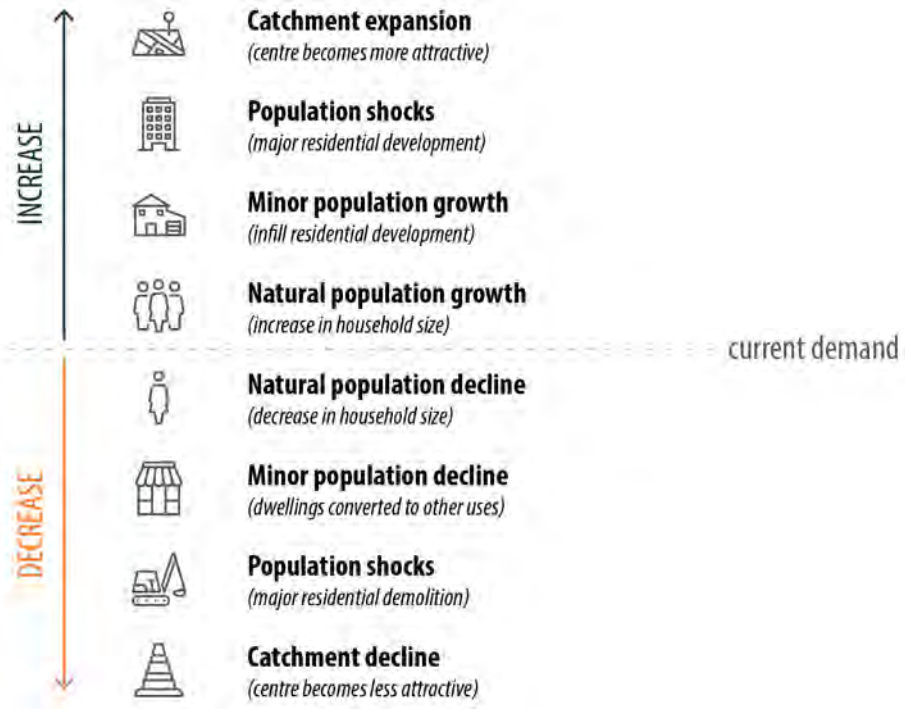


Figure 53. Example supply drivers for population-driven businesses



A change in any of the above characteristics will promote a change in floorspace and interest from the market for redevelopment. For example, on the demand side, an increase in the level of density a sub-precinct increases the effective userbase and proportion of expenditure that is likely to be directed and captured by

business in and adjacent to that sub-precinct, this will provoke a competitive response from developers in which investment will be made to capture this extra expenditure pool.

Similarly, a change in the urban fabric (on the supply side) that makes the AHSC more attractive will increase the catchment of the AHSC. This could, for example, be improved streetscaping or connectivity, activation and event strategies within the AHSC or improved connection to the local tourism areas. This will provoke a similar competitive response from developers wishing to take advantage of the extra expenditure pool.

When considering strategic employment, these drivers are largely exogenous to changes in these drivers and principally rely on the individual decisions of businesses. Changes in strategic employment can be affected through promoting the unique advantages of the area to business, encouraging business collaboration and other business friendly policies. Typical considerations include travel time to the CBD (to access clients), travel time to work for employees and the cost of the premises.

7.1 The Town's Role

In creating an attractive business environment within the AHSC, the role of the Town is to act as a central regulator, coordinator and facilitator, working to understand the challenges facing local businesses including; linking businesses with appropriate resources, advocating on behalf of local businesses, and supporting specific projects where appropriate. The levers available to the Town can be described under the following hierarchy:



CONTROL

e.g. Establishing local policy and regulation, directing internal resources, utilisation of local government-controlled land and assets, implementing programs and events, and supporting projects with seed funding



INFLUENCE

e.g. Facilitating the strengthening of networks that encourage the sharing of knowledge and investment opportunities, and supporting communication with State and Federal governments regarding the influence of wider policy, projects or funding decisions



MONITOR

e.g. Tracking economic performance indicators and collecting feedback from businesses regarding current issues or opportunities which relies on communication channels with industry and the broader community

Using these levers, the Town can actively attract and retain local businesses through an understanding of the relative strengths and weaknesses of the Town and how they relate to a business's locational preference drivers and hence it's operational productivity. These considerations differ depending on the nature of a business, with population/consumption-oriented businesses having different needs to those that operate business-to-business or are export driven.

The opportunities and constraints identified in this document should be assessed within the context of the Town's overarching strategic goals and actions. The Town's EDS identifies a number of over-arching objectives that are identified as Pathways to supporting economic development. A number of these pathways are relevant to the AHSC ERE Strategy. A review of other strategic documents and policies that relate to the AHSC was undertaken to identify relevant actions, these documents include:[34]

- Strategic Community Plan
- Local Commercial Activity Centre Strategy
- Precinct Plans
- Albany Hwy Tomorrow

Relevant actions have been consolidated and aligned with the EDS Pathways to provide specific actions relating to the AHSC (Figure 54).

Figure 54. EDS Objectives and Relevant AHSC Actions

EDS Objective	EDS Action	Relevant AHSC Action
Pathway 2: Identity	Support actions within the Tourism Western Australia, Tourism Action Plan focusing on target audiences that have a high propensity to visit WA and align with the competitive strengths of the Town	Facilitate increased entertainment and tourism offering in the AHSC
	Develop an understanding of the investment attraction process and translate it to the high value precincts and sectors	Communicate location advantages of sub-precincts to businesses: **Northern** • Proximity to CBD • Transport access • Established agglomeration of professional services **Victoria Park** • Food and beverage agglomeration • Nighttime uses (i.e. pubs, hotels and restaurants) • Walkable access for residential uses including aged care and tourism **Central** • Long-term developable land where current car yards are • Proximity to Victoria Park and Town Centre sub-precincts for residential uses **Town Centre** • Food and beverage agglomeration

[34] Not all actions from these documents pertaining to the AHSC have been included as they consider more than economic and employment factors. These documents should be consulted in tandem with this ERE Strategy to support development of the AHSC.

EDS Objective	EDS Action	Relevant AHSC Action
		• Nighttime uses (i.e. pubs, hotels and restaurants) • Walkable access for residential uses including aged care and tourism • Key site development opportunity **Residential** • Opportunity for small business to cater to local residential needs **Gateway (St James)** • High passing traffic (Albany Hwy and Shepparton Rd) • Concentration of bulky goods uses • Key site development opportunity (Cnr Albany Hwy and Shepparton Rd)
Pathway 4: Smart Town- Digital Innovation	Seed the creation of a digitally connected innovation district in the Burswood Peninsula and Causeway Precinct to attract businesses and industries working in the digital economy and creative industries.	Locational advantages of the Northern Sub-Precinct align with an innovation district.
	Actively develop the regional innovation ecosystem's capacity to nurture businesses, artists, creatives and innovators and generate economic growth in key industry sectors.	Provide more entertainment, arts and cultural uses in the Victoria Park and Town Centre sub-precincts.
	Prepare a Place Performance Measurement Manual to identify the key data that should be collected (including by new technologies) to improve decision making.	Monitoring and evaluation of the AHSC PSP should align with this action
Pathway 5: Creating and Enabling Business Environment	Adopt a 'Priority Planning' program that facilitates developments which contribute significant value to the Town.	A priority planning program should be developed for AHSC developments
	Remove unnecessary regulatory barriers, simplify application processes and actively promote improvements to the local business community.	There are a number of relevant regulatory implications, some that reduce red tape and some that ensure the desired vision for the AHSC are achieved: • Multi-storey car parking should be encouraged with major developments (i.e. Victoria Park Central) • Activated frontages should be required along Albany Hwy in key retail areas (i.e. Town Centre) • Allow car yards to remain along Albany Hwy as ground floor showrooms that form part of

EDS Objective	EDS Action	Relevant AHSC Action
		commercial and/or mixed-use developments • Protect car yard sites from sub-division to facilitate redevelopment in future • Specific floorspace categories should be identified where an application for change of use is not required in certain areas (i.e. clothing retail to restaurant)
Pathway 7: High Value Sectors – Tourism, Sports, Leisure and Events	Promote and position the Town as Perth's and WA's sports and events capital.	Improve connection between Optus Stadium, Burswood and the AHSC
	Profile a major events calendar as a key economic and visitation stimulator highlighting the broad events program to a state and national level. Including:	Develop an events calendar for the AHSC
	Taking into account the Tourism Western Australia, Tourism Action Plan, prepare a targeted destination marketing plan to promote the Town to priority markets, including criteria to guide the assessment of priority or premium events.	Incorporate AHSC into destination marketing plan
	Profile a major events calendar as a key economic and visitation stimulator highlighting the broad events program to a state and national level. Including: • Focus on the Town's major visitation event attraction on participatory sports such as AFL games, national and state championships and mass participation that extend over multiple days. • A targeted events program to maximise the use of 'riverside precincts' including exhibitions, music shows, lifestyle and arts events. • Continue to support community and civic events and celebrations as part of the overall events program via grant programs, sponsorship, and Town-run events. These include: Australia Day, Carols by Candlelight, outdoor film festivals, Anzac Day.	The AHSC and its businesses should be able capitalise on major events: • Create stronger link between Optus Stadium, Burswood and the AHSC • Create a better link between the AHSC and the Swan River. Provide additional capacity for arts, culture and entertainment uses in the AHSC. • Utilise AHSC where possible for major events

EDS Objective	EDS Action	Relevant AHSC Action
	Plan for the location of knowledge-based industries including appropriate land use, and identifying a city competitive advantages and incentives framework, and a coordinated business attraction strategy.	Locational advantages of the Northern Sub-Precinct align with knowledge based industries
	Coordinate a strategic approach to the development of knowledge and innovation industries in the town by: • Supporting greater access to affordable and new forms of meeting and working spaces, labs, shop fronts and open spaces, including Council-owned and private sector spaces. • Supporting the location of business incubators and shared space facilities that encourage entrepreneurship and employment opportunities. • Working with the State Government and developers, around affordable spaces for start-ups.	Locational advantages of the Northern Sub-Precinct align with knowledge based industries, incubators and shared space facilities
	Work with Optus Stadium and Crown Perth to facilitate opportunities to leverage event patronage spend in the areas of activity throughout the Town.	Create a stronger link between Optus Stadium, Burswood and the AHSC
	Explore and promote programs, including workshops and webinars, to help businesses integrate technology into the retail and hospitality offering.	Collect data for key retail areas along the AHSC (i.e. the Town Centre) and provide to businesses
	Collaborate with businesses to introduce Wi-Fi hotspots and identify opportunities to promote specific offers through digital avenues.	Improve linkages between sub-precincts to support multi-stop visits (i.e. someone has dinner in Victoria Park and then goes to the Town Centre for an arts and culture event)
	Support Town marketing campaigns and business initiatives to incorporate and promote the retail and hospitality offer across all precincts.	Improve linkages between sub-precincts and market the AHSC as a multi-stop destination
	Through Tourism Western Australia, promote the Town in key interstate and international markets as a place with a diverse range of authentic experiences including premium retail and hospitality offerings.	Encourage development of tourism, entertainment, arts and cultural uses in the AHSC.
	Identify opportunities to activate vacant spaces within precincts, and engage with leasing agents, property owners	Activate strategic locations along the AHSC that support current business viability and viable pop-up businesses

EDS Objective	EDS Action	Relevant AHSC Action
	and innovative retail and hospitality start-up businesses to promote and activate these spaces.	(i.e. this would be a vacant space in or on the edge of a high exposure area)
	Implement a Shopfront Improvement Grant Scheme.	Encourage active frontages in appropriate locations

The development of a set of strategically aligned goals forms a natural starting point to implementing the AHSC PSP. The Town should focus on controlling and influencing the attractors that are suited to population-driven industries as population growth continues in and around the Town. Opportunities for strategic employment will arise outside of population growth and should be encouraged to develop in the Northern Sub-Precinct. Monitoring will provide the Town with the ability to revisit its objectives with data to inform future planning and implementation strategies. The relevant actions have been consolidated and aligned with the Town's role in their implementation (Figure 55).

Figure 55. Opportunities for Control, Influence Monitor

Lever	PSP Implementation Actions
Control	Identify suitable locations for key opportunity uses in the AHSC. These include: • Office uses for strategic employment • Accommodation uses • Entertainment, arts and cultural uses • Nighttime economy uses
	Collect data across the key retail areas of the AHSC to support businesses (i.e. visitation data, pedestrian count, user experience data, etc.)
	Improve pedestrian connections from the Swan River and Burswood Peninsula to the AHSC
	Protect large car yards from subdivision
	Require key active frontages without separation from footpaths when redeveloped (i.e. large parking lot in Town Centre)
	Simplify regulatory/planning process
	Require active frontages for key sites and exposure areas as redevelopment occurs
	Allow future supermarket floorspace to develop at an appropriate scale (i.e. Woolworths metro) where high density workforce and/or residential development occurs
	Require that future multi-storey or internalised parking provides primary access via a Main St and not directly into a shopping centre
Influence	Advocate for improved connection from Causeway bus transfer and AHSC
	Advocate for stronger link between Optus Stadium, Burswood and the AHSC
	Advocate for new connection to AHSC from approved pedestrian and cyclist bridge between the Town's foreshore, Harrison Island and the City of Perth's foreshore

Lever	PSP Implementation Actions
	Identifying priority uses for important active frontages (i.e. food and beverage, high turnover retail, etc.) and allowing for some specialty uses in these locations (i.e. clothing and footwear retail, jewellery retail, etc.)
	Lobby State Government for improved transport connections along AHSC
	Market local industry advantages and capabilities to attract opportunity industries to relevant sub-precincts
Monitor	Track the level of visitation to the AHSC including but not limited to: • Pedestrian counts in high exposure areas • Visitors coming from the CBD and the Burswood Peninsula • Visitors coming from Optus Stadium events • Major event visitation (events held at AHSC)
	This information can be used to improve activation strategies, support local businesses, attract businesses and plan for tourism infrastructure requirements.
	Monitor employment growth in key sectors, including: • Professional services employment in the Northern Sub-Precinct • Arts and culture employment in the AHSC • Nighttime economy employment in the AHSC • Accommodation employment in the AHSC This data will allow the Town to understand progress achieved towards attracting key opportunity industries.
	Monitor new dwellings in the Town and the AHSC and increases in floorspace by PLUC category in the AHSC. This will allow the Town to track the changes in demand for population related floorspace and approve new development applications using an evidence-based approach.

These actions should be viewed alongside the detailed centre performance assessments to guide implementation of the PSP from a whole of AHSC perspective and for each individual sub-precinct.

8 APPENDICES

8.1 Appendix 1: Shift Share Analysis and ECF

Shift-Share Analysis

Shift-share analysis is a technique that uses historical employment growth to identify the industries that have recently been most competitive within the region. Employment growth is broken down into different components to determine the share of growth that is attributable to the broader national economy and particular industry, with the remainder then assumed to result from particular competitive strengths developed in the region. Under this approach, local industry performance can be defined under the following four categories.

Figure 56. Shift Share Model

High Growth	Local growth outperforms in a high growth industry at the national level	Shift Share Score	1	**Most competitive**
	Local growth underperforms in a high growth industry at the national level		2	
Low Growth	Local growth outperforms in a low growth industry at the national level		3	
	Local growth underperforms in a low growth industry at the national level		4	**Least competitive**

Source: ABS 2016, Pracsys 2021

Industries that score well in the shift share could have current skills gaps that affect continued employment growth or might experience skills gaps in the future as they continue to grow.

Employment concentration factors

An employment concentration factor (ECF) represents the concentration of a particular industry within a region compared with that industry's strength within the state (or nation). An ECF of 1.0 means that an industry has the same concentration in the region as it does the state. An ECF of greater than 1.0 identifies industries that employ more workers in the region than the national average for that same industry. By employing more workers than the national average, the industry is producing more goods and services than the region can consume and can therefore export the excess product out of the region.

Measurement of employment concentration factors is useful in urban economic analysis as it provides a strong indication of the agglomeration of an industry or group of industries. Care must be taken as the metric gives no indication of the relative size of the industry, i.e. a region may have a very high ECF with a small number of employees if the industry is small, whilst a low ECF in a large industry may still equate to a significant proportion of employees.

8.2 Appendix 2: PLUC Glossary

SHP – Shop/Retail

Any activity which involves the sale of goods from a shop located separate to, and/or in, a shopping centre other than those included in Other Retail.

RET – Other Retail

Many of these activities are not normally accommodated in a shopping centre. By virtue of their scale and special nature the goods of these activities separate them from the Shop/Retail category (for example car sales yard or carpet showroom).

OFF – Office/Business

Administrative, clerical, professional and medical offices are activities which do not necessarily require the land area/floor space or exposure of other land uses. Although offices require building and parking facilities, these needs are quite distinct from those of commercial uses and service industries.

HEL – Health/Welfare/Community Services

Government, government-subsidised and non-government activities that provide the community with a specific service, including hospitals, schools, personal services and religious activities.

ENT – Entertainment/Recreation/Cultural

Activities which provide entertainment, recreation and culture for the community and which occur in buildings and/or on land, such as passive and active sports venues, museums, amusements and gambling services.

RES – Residential

Includes all types of residential land use ranging from single housing to nursing homes for the aged, residential hotels, motels, other holiday housing, institutions and religious housing.

MAN – Manufacturing/Processing/Fabrication

This category includes land use activities involving the manufacture, processing and fabrication of all general goods. Both the scale and associated environmental impact of these activities separate them from other land use categories.

STO – Storage/Distribution

Any land use activity which involves the storage, warehousing or wholesaling of goods usually conducted from large structures, or involving large bulk goods, but does not include activities that attract the general retail trade activities.

SER – Service Industry

This category includes service industries offering a range of services. The scale and environmental impact of such activities require their separation from other land uses. These services include film processing, cleaning, motor vehicle and other repair services, and other servicing activities, including some construction activities.

UTE – Utilities/Communications

All forms of local, state, national and international communication, transportation and other utilities (for example, electricity, gas, water, sewerage, roads, parking and other transport or communications related activities) covering the public and private sectors.

VFA – Vacant Floor Area

This category accounts for vacant floor areas of buildings, including both non-residential and residential.

8.3 Appendix 3: Employment Quality Categories

Consumer services

Consumer services have a high transaction frequency and must locate in close proximity to their customer base in order to deal directly with them. Like retail tenancies, consumer services often locate in centres to minimise trip generation and benefit from convenience good attractors. Consumer services can include real estate agents, travel agents, shoe repair, dry cleaning services and beauty salons.

Producer services

Producer services deal directly with other businesses, rather than consumers. Like retail; wholesale producer services must locate close to the businesses they serve, due to the frequency of transactions required. For example, the Coles distribution warehouses must occupy a central location in order to carry out daily delivery of goods to supermarkets. Producer service industries include manufacturing, construction, and distribution.

Knowledge intensive consumer services

Knowledge intensive consumer services are those specialist services that deal directly with consumers, yet typically have a higher productivity and lower transaction frequency. KICS provide a skilled service to consumers that usually requires a higher level of education or training. Depending on the scale of their catchment, KICS may choose to locate within major or regional centres, or larger business districts with greater soft infrastructure and amenity levels. Examples of KICS include general practitioners, accountants, veterinarians and legal services.

Knowledge intensive producer services

Knowledge intensive producer services involve businesses dealing directly with other businesses, rather than consumers. Transactions are less frequent, however generally have a higher monetary value, due to the intellectual property or knowledge involved. KIPS businesses often locate near their client businesses, although with low transaction frequency and good communications infrastructure, they are to an extent 'footloose'. This means they can choose to locate in places with relevant physical infrastructure, high retail amenity, or soft infrastructure such as access to a solid education base. Examples of KIPS are engineers, architects, medical scientists and computer software developers.

Export-oriented activity

Export refers to jobs in industries in the subject area of study that have a comparative advantage - deemed strategic due to growth and development through exports and the inflow of funds. Export jobs are producer services, however they occur in strategic industries such as mining, oil and gas and defence. Export jobs are likely to be hands on, involving the physical construction of a marine vessel or operation of machinery on a mine site - as opposed to the mathematical or scientific analysis carried out by KIPS. Strategic industries tend to require physical infrastructure, such as ports, airports or universities.

8.4 Appendix 4: Employment Summary by Sub-precinct

Employment data was assessed using ABS Destination Zones (DZN) which were larger than the identified areas. The relevant sub-precincts have been aligned to the DZNs.

Figure 57. North Employment Zone (Northern Sub-precinct and Victoria Park Sub-precinct)

Rank	Industry	Employment
1	Other Heavy and Civil Engineering Construction	336
2	Other Transport Support Services nec	317
3	Car Retailing	171
4	Cafes and Restaurants	152
5	Local Government Administration	122
6	Other Social Assistance Services	120
7	Primary Education	101
8	Primary Education	101
9	Engineering Design and Engineering Consulting Services	95
10	Real Estate Services	81
	Total Employment	**2,649**

Source: ABS Census 2016

Figure 58. Central Precinct Employment (Victoria Park District Centre, Victoria Park Town Centre)

Rank	Industry	Employment
1	Cafes and Restaurants	113
2	Central Government Administration	109
3	Other Social Assistance Services	108
4	Combined Primary and Secondary Education	99
5	Car Retailing	94
6	Supermarket and Grocery Stores	90
7	Real Estate Services	87
8	Aged Care Residential Services	56
9	Hairdressing and Beauty Services	44
10	Legal Services	43
	Total Employment	**1,765**

Source: ABS Census 2016

Figure 59. Southern Precinct Employment (Victoria Park Town Centre, Residential Commercial Sub Precinct, Gateway (St James))

Rank	Industry	Employment
1	Cafes and Restaurants	405
2	Supermarket and Grocery Stores	143
3	Takeaway Food Services	107
4	Real Estate Services	105
5	Child Care Services	50
6	Department Stores	49
7	Other Social Assistance Services	48
8	Special School Education	47
9	Other Residential Care Services	46
10	Hairdressing and Beauty Services	38
	Total Employment	**2,384**

Source: ABS Census 2016

8.5 Appendix 5: Gravity Modelling Methodology

Gravity models allow for the measurement of spatial interaction as a function of distance to determine the probability of a given customer shopping at a centre and provide an approximation of trade area and sales potential for a development. This modelling technique uses the distance between a household and each centre, and a measure of 'attractiveness' to define the probability model. The 'attractiveness' of a centre has been defined by total floorspace and the distance has been calculated by measuring straight-line distances between each centre and population. The gravity model probability formula is shown in Figure 60.

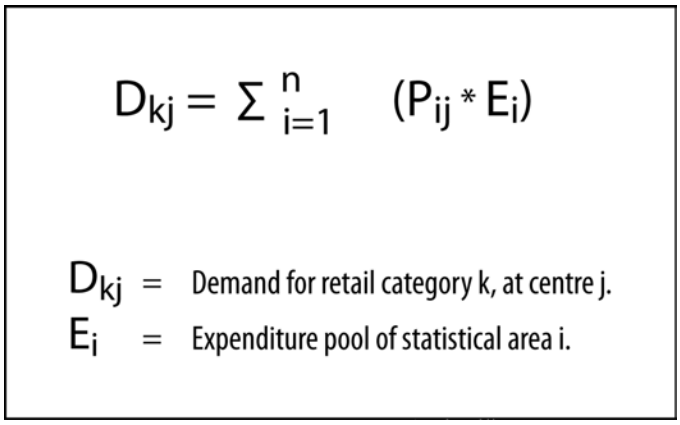
Figure 60. Gravity Model Probability Formula

$$P_{ij} = \frac{\frac{A_{jk}{}^{a}}{D_{ij}{}^{ß}}}{\sum_{j=1}^{m} \frac{A_{jk}{}^{a}}{D_{ij}{}^{ß}}}$$

P_{ij}	=	Probability of customer living/working in statistical area i shopping at complex j.
A_i	=	Area of floorspace in centre, j in square metres, according to the type of supply, k.
D_{ij}	=	Distance between statistical area of households, i and complex j.
a	=	Area exponent
ß	=	Distance exponent
k	=	Type of supply or expenditure, either Convenience or Comparison
i	=	Statistical area (i=1,...,n)
j	=	Complexes (j=1,...,m)

Source: Carter, C (1993) 'Assumptions Underlying the Retail Gravity Model', *Appraisal Journal,* Vol 61, No 4, pp510; Pracsys (2020)

Figure 61. Gravity Model Demand Formula



Source: Carter, C (1993) 'Assumptions Underlying the Retail Gravity Model', *Appraisal Journal,* Vol 61, No 4, pp510; Pracsys (2020)

Figure 61 shows that the demand for retail category k[35], at centre j, is equal to the sum of the probabilities of customers living in statistical areas i to n, multiplied by the expenditure pool of statistical area i. In other words, the demand for retail is a function of the probability of customer from particular statistical area attending the centre multiplied by the expenditure pool of that statistical area. The expenditure is pool is derived through the population multiplied by its income distribution.

In its core form gravity modelling provides a clearer, reproducible outcome that can be easily assessed. However, it does not consider local factors, including:

- The comparative value proposition of centres (e.g. the presence of an 'anchor' attractor that draws significant market share);
- The brand preference of users; or
- The efficiency of transport networks, as well as geographical barriers (e.g. in some cases it may be easier for customers to access a centre that lies physically further away).

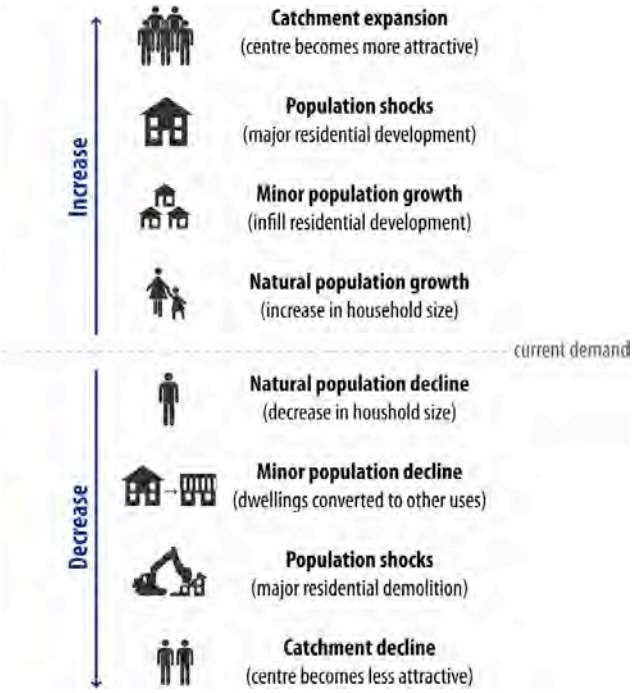
Drivers of Retail Floorspace Supply and Demand

Demand changes can result in increased or decreased expenditure. The potential causes of demand changes are shown in Figure 62. These largely show that an increasing population increases demand, and vice versa. There are significant amounts of commercial floorspace, especially office floorspace, flagged for the central sub-region of Perth and beyond. There will also be significant numbers of new dwellings provided across Perth. This increase in residents has the potential to boost demand for goods and services in the area.

Demand can also increase from rising incomes, or wealth, because people have more disposable income to spend on retail. Demand can also be increased by reducing leakage. Leakage for retail is largely caused by online retail, as well as travelling.

[35] Retail categories are determined by their PLUC code and whether they are convenience or comparison goods. Convenience goods are day-to-day items such as groceries, pharmaceuticals and fast food. Comparison goods are items where consumers are willing to travel further distances, and are bought less frequently such as clothing, furniture, electronics, or other household items.

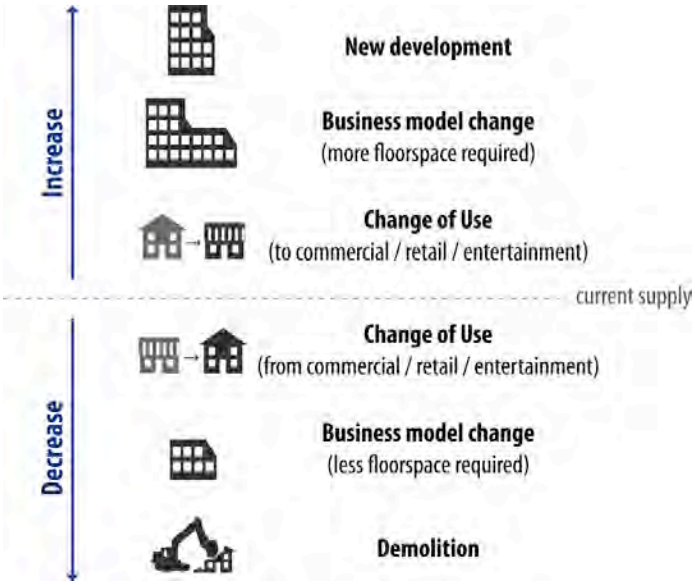
Figure 62. Drivers of Retail Floorspace Demand



Source: Pracsys 2020

Supply changes can result in increased or decreased retail floorspace. The potential causes of supply changes are shown in Figure 63.

Figure 63. Drivers of Retail Floorspace Supply



Source: Pracsys 2020

8.6 Appendix 6: Precinct Assessment

The following table summarises the current floorspace across all sub-precincts.

Sub-Precinct	ENT	HEL	OFF	RET	SER	SHP	UTE	Other	VFA	Total
Northern	100	2,900	16,600	15,070	350	1,445	1,050	1,862	2,325	41,702
Victoria Park	1,699	4,421	12,080	3,915	1,305	15,917	4,010	2,896	2,736	48,979
Central	2,424	286	1,283	16,379	1,764	3,241		1,590	1,816	28,783
Victoria Park Town Centre	8,743	2,403	9,146	8,469	905	27,648	184	730	2,547	60,775
Residential	1,100	340	2,917	90	230	940	300	230	1,306	7,453
Gateway (St James)	1,600	133	160	5,464	220	6,348	-	-	2,000	15,926
Secondary Centre Total	15,666	10,483	42,186	49,387	4,774	55,539	5,544	7,308	12,730	203,618

Source: DPLH 2015, PlanWest 2018

Northern Sub-Precinct

Purpose

Currently forms part of the Victoria Park Secondary Centre providing office space with clusters of mining and construction services. Secondary centres share similar characteristics with strategic centres but serve smaller catchments and offer a more limited range of services, facilities and employment opportunities. They perform an important role in the regional economy and provide essential services to their catchments.

Current floorspace

Figure 64. Floorspace m^2 (2015)

ENT	HEL	OFF	RET	SER	SHP	UTE	Other	VFA	Total
100	2,900	16,600	15,070	350	1,445	1,050	1,862	2,325	41,702

Source: DPLH 2015, PlanWest 2018

Draft Activity Centre Strategy – Relevant Sub-Precinct Strategies

The following points are relevant strategies for the sub-precinct from the Town's Draft Activity Centre Strategy (2018):

- Promote high intensity development
- Consider offices with ground floor vehicle trade operations

Additional Opportunities

The following summarises WASLUC opportunities for the sub-precinct by PLUC floorspace.

Figure 65. Summary of Sub-Precinct Opportunities by Relevant PLUC Floorspace

Opportunity	Description	PLUC Floorspace
Tourism	Potential for mixed-use developments that include commercial floorspace and short stay accommodation	RES
Ancillary Industries	High concentration of professional services that is strategically linked to Burswood South. There appear to be clusters in mining and construction. Could investigate potential for ancillary industries to locate in either the Northern Sub-precinct or Burswood South and their requirements.	OFF
Car Retail	Higher density uses would ideally occupy car yards, however, opportunities to include car retail as a ground floor use of mixed use developments should be considered	RET

Source: DPLH 2015

Considerations for Future Development

Literature review and analysis findings have been used to provide some initial development considerations for this sub-precinct:

- Demand for office space will be affected by mining boom-bust cycle and supply in the CBD
- Office space is highly competitive around the CBD with major centres including South Perth and Subiaco. The Town will need to consider how it can differentiate itself from these areas to attract businesses that need to be close to the CBD but either want a more unique environment or are price conscious
- Improving transport connections to the CBD and to other retail precincts in the AHSC will support growth in this sub-precinct
- As workforce increases the demand for Shop/Retail uses (i.e. cafes, restaurants, convenience stores) will increase in this sub-precinct
- Car dealership models are currently experiencing a rapid change. This means that in the medium term there could be a significant shift in the demand for car yards in their current form. These trends included a more experience-based display and smaller display areas. The Town should monitor these trends to see how best to transition the current uses while also maintaining the cluster of activity that has formed

Victoria Park Sub-Precinct

Purpose

Currently forms part of the Victoria Park Secondary Centre, providing retail and population related goods and services. Secondary centres share similar characteristics with strategic centres but serve smaller catchments and offer a more limited range of services, facilities and employment opportunities. They perform an important role in the regional economy and provide essential services to their catchments.

Current floorspace

Figure 66. Floorspace m² (2015)

ENT	HEL	OFF	RET	SER	SHP	UTE	Other	VFA	Total
1,699	4,421	12,080	3,915	1,305	15,917	4,010	2,896	2,736	48,979

Source: DPLH 2015, PlanWest 2018

Draft Activity Centre Strategy – Relevant Sub-Precinct Strategies

The following points are relevant strategies for the sub-precinct from the Town's Draft Activity Centre Strategy (2018):

- Continuous activated (glass) frontages on Albany Hwy with focus on cafés, restaurants and activating uses
- Support alfresco dining

Additional Opportunities

The following summarises WASLUC opportunities for the sub-precinct by PLUC floorspace.

Figure 67. Summary of Sub-Precinct Opportunities by Relevant PLUC Floorspace

Opportunity	Description	PLUC Floorspace
Nighttime Economy	Increased entertainment floorspace could be considered for this sub-precinct to complement the current offering. This could include nighttime economy businesses such as small bars and arts/cultural venues.	ENT
Population Services	Increased residential density will provide additional expenditure for health services, childcare and other activities that can diversify the local offering and attract greater expenditure through increased duration of stay.	HEL, OFF
Tourism	Short stay accommodation floorspace could also be considered in this Sub-precinct in mixed-use developments	RES
Aged Care	Providing Aged Care accommodation in centres enables easier access for residents and greater opportunity for social interaction/intergenerational interaction	RES
Furniture Retail	Opportunity to offer more furniture retail in the AHSC	SHP, RET

Source: DPLH 2015

Considerations for Future Development

Literature review and analysis findings have been used to provide some initial development considerations for this sub-precinct:

- Cafes and restaurants meet demand for a wider area. Growth will be dependent on a number of factors in additional to local population growth, including:
  - Increased worker population
  - Increased visitor population
  - Increasing the attractiveness of the area as a place to dine (i.e. improved amenity, greater diversity of offering to support multi-purpose visits, increased nighttime economy industries, etc.)
- Convenience offering currently appears to be addressing the needs of users. As the Study Area grows, the centre would be expected to increase in accordance with its size and proximity to new population (this will be measured using retail gravity modelling).
- Increased density within a walkable catchment of this precinct is more likely to create demand for additional convenience retail floorspace
- Improved transport connections to the CBD, North Sub-precinct and Town Centre Sub-precinct will support floorspace growth beyond that which is generated by Study Area population and increased density within a walkable catchment
- Furniture retail in this area would likely be a display store with delivery instead of pick-ups

Central Sub-Precinct

Purpose

Currently forms part of the Victoria Park Secondary Centre, providing a substantial car retail offering. Secondary centres share similar characteristics with strategic centres but serve smaller catchments and offer a more limited range of services, facilities and employment opportunities. They perform an important role in the regional economy and provide essential services to their catchments.

Current floorspace

Figure 68. Floorspace m^2 (2015)

ENT	HEL	OFF	RET	SER	SHP	UTE	Other	VFA	Total
2,424	286	1,283	16,379	1,764	3,241		1,590	1,816	28,783

Source: DPLH 2015, PlanWest 2018

Draft Activity Centre Strategy – Relevant Sub-Precinct Strategies

The following points are relevant strategies for the sub-precinct from the Town's Draft Activity Centre Strategy (2018):

- Promote redevelopment of car yards to support more intensive residential and mixed-use development
- Promote greater residential density
- Maintain large lots

Additional Opportunities

The following summarises WASLUC opportunities for the sub-precinct by PLUC floorspace.

Figure 69. Summary of Sub-Precinct Opportunities by Relevant PLUC Floorspace

Opportunity	Description	PLUC Floorspace
Active Frontages	Redevelopment should include active frontages on the ground floor to link the Victoria Park Sub-precinct to the Town Centre Sub-precinct. This would encourage greater movement between the centres.	HEL, OFF
Tourism	Short stay accommodation floorspace could also be considered in this Sub-precinct in mixed-use developments.	RES
Aged Care	Aged Care could also be considered in this Sub-precinct as it is conveniently located between two centres.	RES
Car Retail	Higher density uses would ideally occupy car yards, however, opportunities to relocate or consolidate car yards so as to maintain the cluster of activity that has formed in the Town should be considered.	RET

Source: DPLH 2015

Considerations for Future Development

Literature review and analysis findings have been used to provide some initial development considerations for this sub-precinct:

- Residential development in this area will increase demand for the retail uses that currently serve the local and Study Area populations (i.e. supermarket, department store, etc.)
- Greater residential population will also increase the need for non-retail population services such as health and education. These should be provided for in the main activity centres to increase the diversity of local offering
- Car dealership models are currently experiencing a rapid change. This means that in the medium term there could be a significant shift in the demand for car yards in their current form. These trends included a more experience-based display and smaller display areas. The Town should monitor these trends to see how best to transition the current uses while also maintaining the cluster of activity that has formed

Victoria Park Town Centre

Purpose

Majority of the sub-precinct forms part of the East Victoria Park District Centre. District centres have a greater focus on servicing the daily and weekly needs of residents. Their relatively smaller scale catchment enables them to have a greater local community focus and provide services, facilities and job opportunities that reflect the needs of their catchments. This being said the primary shopping centre for the AHSC is in this sub-precinct with a large Supermarket and a Discount Department Store.

Current floorspace

Figure 70. Floorspace m² (2015)

ENT	HEL	OFF	RET	SER	SHP	UTE	Other	VFA	Total
8,743	2,403	9,146	8,469	905	27,648	184	730	2,547	60,775

Source: DPLH 2015, PlanWest 2018

Draft Activity Centre Strategy – Relevant Sub-Precinct Strategies

The following points are relevant strategies for the sub-precinct from the Town's Draft Activity Centre Strategy (2018):

- Goal to accommodate a mix of civic/cultural and commercial/residential uses and a range of facilitates and services
- Promote high intensity development
- Support alfresco dining

Additional Opportunities

The following summarises WASLUC opportunities for the sub-precinct by PLUC floorspace.

Figure 71. Summary of Sub-Precinct Opportunities by Relevant PLUC Floorspace

Opportunity	Description	PLUC Floorspace
Nighttime Economy	Increased entertainment floorspace could be considered for this sub-precinct to complement the current offering. This could include nighttime economy businesses such as small bars and arts/cultural venues.	ENT
Population Services	Increased residential density will provide additional expenditure for health services, childcare and other activities that can diversify the local offering and attract greater expenditure through increased duration of stay.	HEL, OFF
Tourism	Short stay accommodation floorspace could also be considered in this Sub-precinct in mixed-use developments	RES
Aged Care	Providing Aged Care accommodation in centres enables easier access for residents and greater opportunity for social interaction/intergenerational interaction.	RES

Opportunity	Description	PLUC Floorspace
Key Site Development	Long-term development opportunity of Park Centre could include mixed-use high density along Albany Hwy where there is currently car parking. This would support greater activation of this section of the centre and more pedestrian movement on the Main Street from the shopping centre	RES, SHP, ENT, OFF
Furniture Retail	Opportunity to offer more furniture retail in the AHSC	SHP, RET

Source: DPLH 2015

Considerations for Future Development

Literature review and analysis findings have been used to provide some initial development considerations for this sub-precinct:

- Cafes and restaurants meet demand for a wider area. Growth will be dependent on a number of factors in additional to local population growth, including:
  - Increased worker population
  - Increased visitor population
  - Increasing the attractiveness of the area as a place to dine (i.e. improved amenity, greater diversity of offering to support multi-purpose visits, increased nighttime economy industries, etc.)
- Convenience offering currently appears to be addressing the needs of the users. As the Study Area grows, the centre would be expected to increase in accordance with its size and proximity to new population (this will be measured using retail gravity modelling).
- Increased density within a walkable catchment of this precinct is more likely to create demand for additional Shop/Retail floorspace
- Improved transport connections to the CBD, North-Sub Precinct and Town Centre will support floorspace growth beyond that which is generated by Study Area population and increased density within a walkable catchment
- Furniture retail in this area would likely be a display store with delivery instead of pick-ups

Residential Sub-Precinct

Purpose

This is primarily a residential precinct with a number of multi-store residential buildings that have ground floor commercial offerings. It lies across two small centres under LUES, which are more consistent with local centres that provide for the daily shopping needs of residents.

Current floorspace

Figure 72. Floorspace m² (2015)

ENT	HEL	OFF	RET	SER	SHP	UTE	Other	VFA	Total
1,100	340	2,917	90	230	940	300	230	1,306	7,453

Source: DPLH 2015, PlanWest 2018

Draft Activity Centre Strategy – Relevant Sub-Precinct Strategies

The following points are relevant strategies for the sub-precinct from the Town's Draft Activity Centre Strategy (2018):

- Support high-density residential
- Limited provision for commercial uses at street level

Additional Opportunities

The following summarises WASLUC opportunities for the sub-precinct by PLUC floorspace.

Figure 73. Summary of Sub-Precinct Opportunities by Relevant PLUC Floorspace

Opportunity	Description	PLUC Floorspace
Active Frontages	Appropriate levels of ground floor activity should be planned to meet daily needs of residents. Some of these should be in the nighttime economy to enable a greater duration of activity.	SHP, HEL, OFF, ENT

Source: DPLH 2015

Considerations for Future Development

Literature review and analysis findings have been used to provide some initial development considerations for this sub-precinct:

- Commercial uses provided along this strip should be allowed primarily to serve local residents and support sufficient levels of activation so as to generate safety through passive surveillance
- Some activities in the nighttime economy should be allowed (i.e. restaurants, small bars, etc.) to support activation at night

Gateway (St James) Sub-Precinct

Purpose

This sub-precinct forms part of the Alday St centre, which appears to be in line with a neighbourhood sized centre according to Draft SPP4.2. This centre includes a greater comparison retail offering through stores such as Bunnings, Officeworks and a number of car parts stores that would serve a reasonable portion of the Study Area. The convenience retail offering includes an Aldi and a number of restaurants/takeaway store that would serve more of a local catchment; although, the nature of Aldi stores means it likely draws some expenditure from outside of the local area.

Current floorspace

Figure 74. Floorspace m² (2015)

ENT	HEL	OFF	RET	SER	SHP	UTE	Other	VFA	Total
1,600	133	160	5,464	220	6,348	0	0	2,000	15,926

Source: DPLH 2015, PlanWest 2018

Draft Activity Centre Strategy – Relevant Sub-Precinct Strategies

The following points are relevant strategies for the sub-precinct from the Town's Draft Activity Centre Strategy (2018):

- Promote landmark buildings as entry statements
- Activated street frontages with suitable commercial uses

Additional Opportunities

The following summarises WASLUC opportunities for the sub-precinct by PLUC floorspace.

Figure 75. Summary of Sub-Precinct Opportunities by Relevant PLUC Floorspace

Opportunity	Description	PLUC Floorspace
Redevelopment Scenario	As population increases in the AHSC, some of the current anchors of this centre could seek to either relocate or redevelop their store to provide a wider offering. Should this be the case there would be the need/opportunity to redevelop the site(s).	SHP, HEL, OFF, ENT
Furniture Retail	This type of retail would complement the comparison offering in the centre currently	SHP, RET

Source: DPLH 2015

Considerations for Future Development

Literature review and analysis findings have been used to provide some initial development considerations for this sub-precinct:

- Much of the offering in this sub-precinct is complementary to that of the other areas in the AHSC (i.e. Bunnings, Officeworks, car parts and accessories retailers). This offering serves a wider catchment and could be expanded without cannibalising other commercial areas in the AHSC
- The location has access to significant levels of passing traffic as the point where Albany Hwy merges with Shepperton Rd. There could be additional opportunities to capture passing trade however they might not be in alignment with the centre's purpose and care should be taken to not cannibalise trade from the rest of the AHSC
- The centre addresses the needs of the local population with regards to convenience retail and future development of the centre should maintain this level of offering

Project Report

26/01/2023

Town of Victoria Park
Albany Highway Precinct Structure Plan

Mobility & Access Report

Prepared by: James Pearse & Caitlin Thacker

Reviewed by: Andrew Brodie

Issued as: Draft for client comment

Date: 26/01/2023



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Table of Contents

1. Introduction 3

1.1 Background 3
1.2 Purpose of this document 3
1.3 Planning Context 3
1.4 Community Engagement Findings 4

2. Existing Situation & Context 5

2.1 Overview 5
2.2 Traffic 6
2.3 Public Transport 7
2.3.1 Bus 7
2.3.2 Rail 8
2.3.3 Mid-tier transit 9
2.4 Active Transport 10
2.4.1 Walking 10
2.4.2 Cycling/micromobility 10
2.5 Parking 12

3. Proposed Recommendations 14

3.1 Guiding Principals 14
3.1.1 Providing greater transport choice to encourage modal shift 14
3.1.2 Treating Albany Highway as a destination, not a thoroughfare 15
3.1.3 Lowering speeds to create people-friendly environments 15
3.1.4 Taking a balanced approach to parking management 16
3.2 Proposed streetscape enhancements – Albany Highway 17
3.2.1 Albany Highway (typical) 17
3.2.2 Albany Highway (urban cores) 18
3.3 Proposed streetscape enhancements – Station Streets 19
3.3.1 Duncan Street 19
3.3.2 Oats Street 20
3.4 Streetscape Typologies 21
3.5 Catering for micromobility 23
3.6 Management of parking 24
3.6.1 On-street parking (Albany Highway) 24
3.6.2 On-street parking (other streets) 24
3.6.3 Provision of additional of-street parking 24
3.7 Possible reconfiguration of Canning Highway/Shepperton Road interchange 25

4. Review against SPP 7.2 27

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1. Introduction

1.1 Background

The Town of Victoria Park is preparing a Precinct Structure Plan for the Albany Highway Activity Corridor, extending from the Causeway to Welshpool Road. The purpose of the PSP is to establish a new planning framework that will shape Albany Highway's future land use, transport and economy.

1.2 Purpose of this document

The purpose of this document is to provide evidence/context for the various recommendations pertaining to transport. It provides an overview of the existing situation in terms of traffic, public transport and active transport; and how planned infrastructure upgrades are likely to influence on how people move to/from and through the Albany Highway Activity Corridor.

This report then goes on to establish a series of guiding principals and key recommendations for enhancing movement and access. The final section of this report evaluates the proposed recommendations against the objectives and criteria outlined in SPP 7.2.

1.3 Planning Context

Underpinning the development of this Precinct Structure Plan is SPP 7.2. From a transport standpoint, SPP 7.2 promotes active and public modes of transport to achieve a more sustainable built environment. It also specifies that precinct designs must provide places with good connectivity and sightlines of key locations which are easy to navigate.

In addition to SPP 7.2, the mobility and access recommendations for the Albany Highway corridor have been informed by the Town's Integrated Transport Strategy and Parking Management Plan (both of which received council endorsement in 2022).

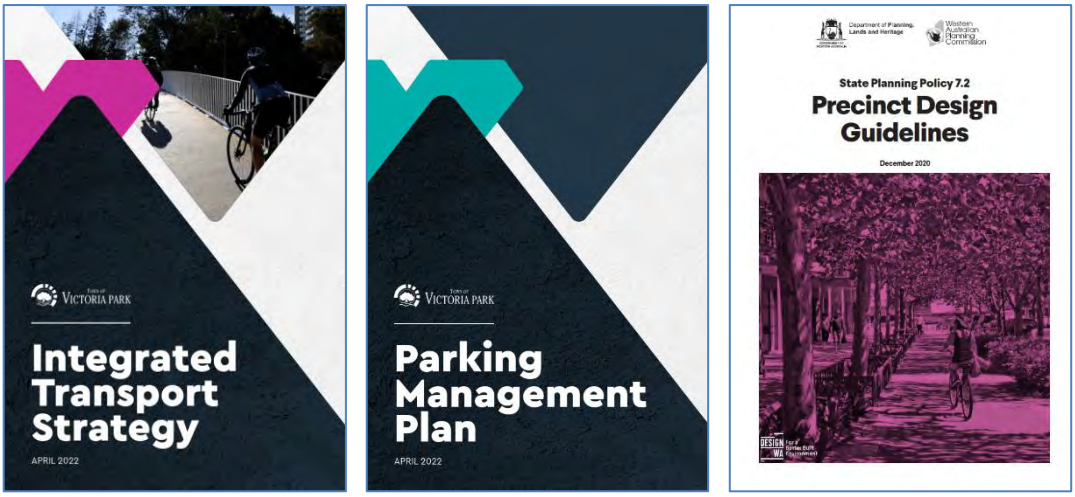


Figure 1: Key planning documents used in informing this Albany Highway PSP

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Outlined in the Integrated Transport Planning Strategy are a number recommendations pertaining specifically to the Albany Highway Activity Corridor. Notable recommendations include:

- Streetscape and public realm improvements through the *Streetscape Improvement Plan* and *Old Spaces New Places Program*
- Improve cycling infrastructure to ensure it is a safe, attractive and inclusive mode of transport
- Promote a mid-tier transit system along Albany Highway
- Deliver intersection upgrades to enhance pedestrian safety

Key recommendations outlined in the Parking Management Plan include:

- Tightening timed-parking in high demand areas to assist in frequent turnover of vehicles
- Monitor parking to assess whether occupancy targets are being achieved
- Remove an appropriate number of parking bays to provide space for pedestrian amenity and connectivity opportunities

1.4 Community Engagement Findings

In accordance with SPP 7.2, the development of this Precinct Structure Plan has involved a comprehensive community engagement process which has been used to inform the analysis, vision and ideas. Key engagement findings relating to transport include:

- Improving public transport availability, cost and coverage
- Developing a safe and well-connected cycling network
- Prioritising pedestrians, cyclists and public transport over cars
- Enhancing public spaces and streetscapes
- Reducing the vehicle dominance of Albany Highway where possible

Concerns raised at the Community Reference Group Workshop included:

- Impact of loss of parking on certain businesses
- Cars rat running and parking on side streets due to loss of parking along Albany Highway
- Whether the construction of new stations at Carlisle and Oats Street may impact on Albany Highway
- Issues arising between pedestrians and cyclist in shared spaces

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2. Existing Situation & Context

2.1 Overview

Albany Highway is a complex corridor which has both high movement and high place functions. The corridor caters for local and district-level trips, and provides access to a diverse arrange of residential, retail, and community land uses.



Figure 2: Pedestrian crossing along Albany Highway



Figure 3: Albany Highway, Victoria Park corridor

This Precinct Structure Plan has divided the activity corridor into six sub-precincts, including Causeway, Victoria Park, Central, East Victoria Park, East End and St James. The relationship between the various sub-precincts, key roads and nearby train stations is shown in Figure 4.

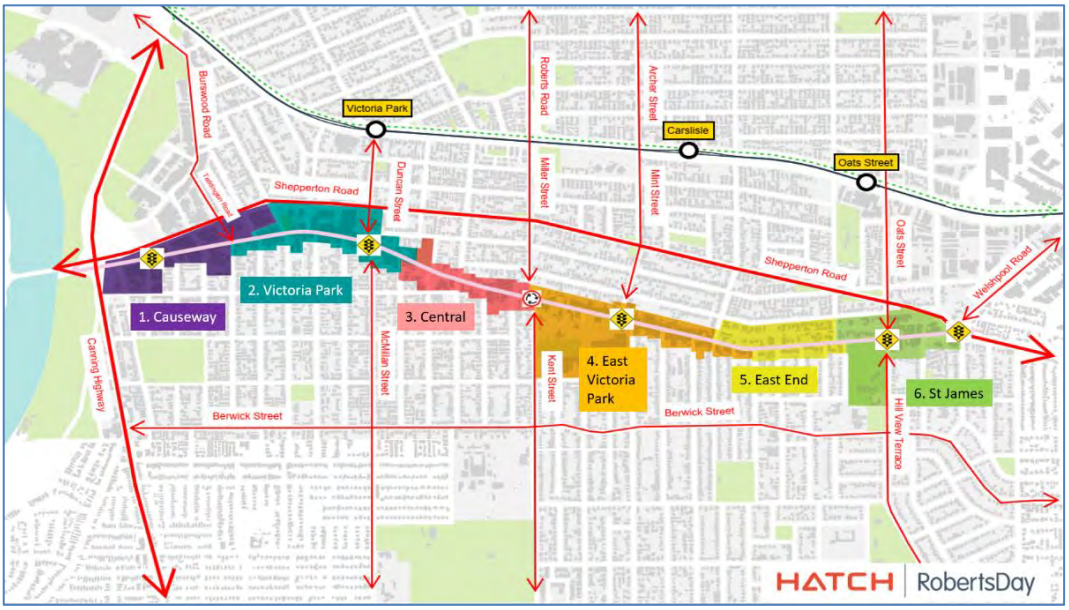


Figure 4: Overview of sub-precincts relation in relation to key road and train stations

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2.2 Traffic

Albany Highway is designated as a 40 km/h zone along the entire length of the study area. The corridor is currently classified as a Distributor B Road, while Shepperton Road (which was built to bypass Albany Highway) is a Primary Distributor.



Figure 5: Road hierarchy and traffic volumes (Canning Highway to Kent Street)

As shown in Figure 5 and Figure 6, traffic volumes along the corridor range from approximately 5,000 vehicles per day near to the Causeway to over 16,000 vehicles per day near Welshpool Road. Shepperton Road accommodates 28,000-30,000 trips per day, which is less than comparable urban arterials such as Stirling Highway (Nedlands) or Canning Highway (Applecross).

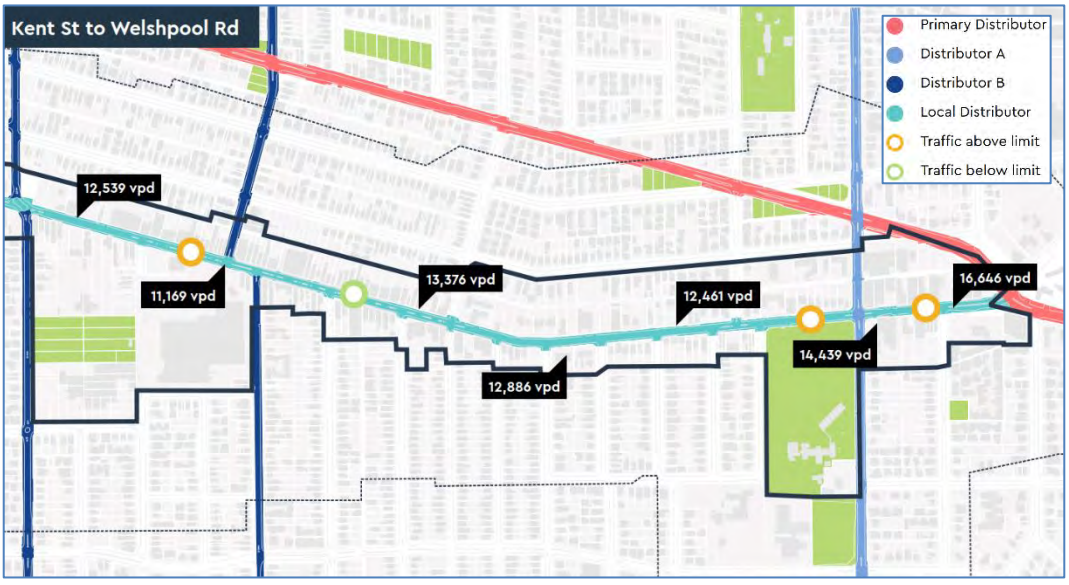


Figure 6: Road hierarchy and traffic volumes (Kent Street to Welshpool Road)

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In many places along the highway, cars regularly travel up to 5km/h above the posted limit. Between Hillview Terrace and Baillie Avenue, traffic is consistently more than 5km/h over the speed limit.

2.3 Public Transport

2.3.1 Bus

As shown in Figure 7, Albany Highway carries eight different bus routes providing connections to the Perth CBD, Curtin University, Canning Vale, Bentley, Cannington, Wilson, Bull Creek, Armadale, Belmont, and Mirrabooka. These broad, far-reaching connections provide for convenient city commuting during peak hours. They also offer a high degree regional access for local residents.

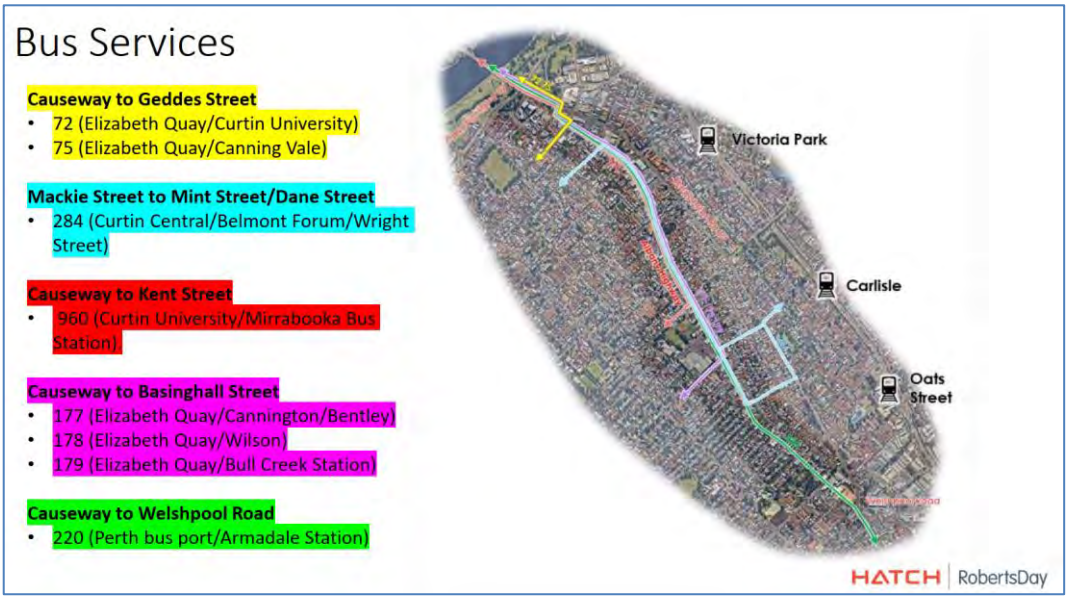


Figure 7: Albany Highway Bus Services

The Victoria Park Transfer Station (VPTS) is located at the northern end of Albany Highway, where Shepperton Road intersects with Canning Highway/Great Eastern Highway. The VPTS facilitates approximately 150 bus movements during the peak period. Approximately 70-80% of all departures from the VPTS involve transfers between buses. Five high-frequency bus services run through the VPTS, including:

- Route 910 – Elizabeth Quay to Fremantle via Canning Hwy
- Route 930 – Elizabeth Quay to Thornlie via Shepperton Rd and Albany Highway
- Route 935 – Kings Park to Redcliffe via Perth and Belmont Forum
- Route 960 – Mirrabooka to Curtin University via Alexander Drive, ECU Mt Lawley and Perth
- Route 940 – Elizabeth Quay to Redcliffe via Great Eastern Highway

The PTA is currently exploring options for reconfiguring the VPTS. The preferred layout is likely to involve a central island platform enabling easier transfers between buses. Based

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on this option, Perth-bound vehicular access between Albany Highway and the Causeway will be via Asquith Street.

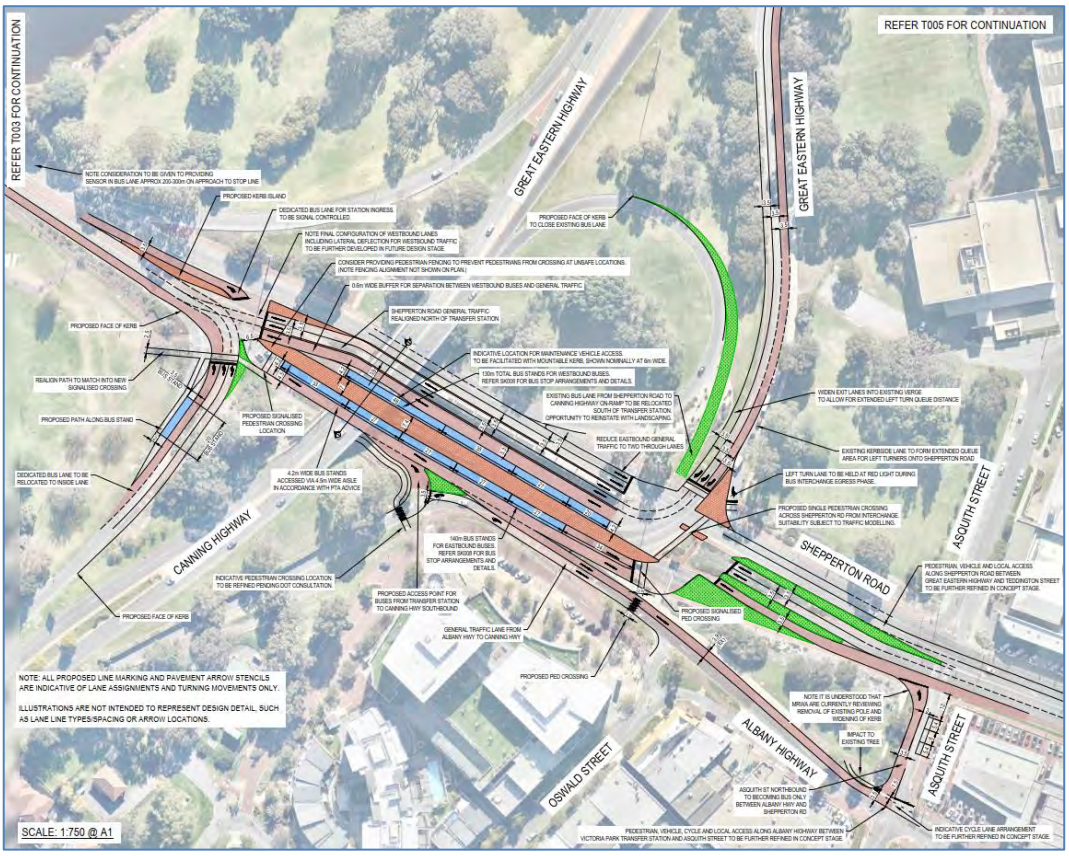


Figure 8: Feasibility layout for reconfigured Victoria Park Transfer Station

2.3.2 Rail

There are three Transperth train stations in relative proximity to Albany Highway - Victoria Park Station, Carlisle Station, and Oats Street Station. The stations are located at the terminus of Duncan Street, Mint/Archer Street and Oats Street and are respectively 540m, 830m and 740m from the highway. This equates to a walking time of 5 to 10 minutes, providing access to high frequency transit for residents, workers and visitors. Station ridership is very low with a cumulative daily boardings across all three stations of just 3,112 - 64% of which are at Oats Street (PTA 2017). Ridership at these stations is lower than comparable stations such as Subiaco and Maylands

The Victoria Park-Canning Level Crossing project will result in new, elevated train stations at Carlisle and Oats Street as shown in Figure 9. These stations will be reconstructed in more appropriate locations that will improve public realm, traffic flow and safety for both people and vehicles. This project is set to undergo construction in the near future and provides an opportunity to improve public and active transit networks and connections with the Albany Highway Precinct.

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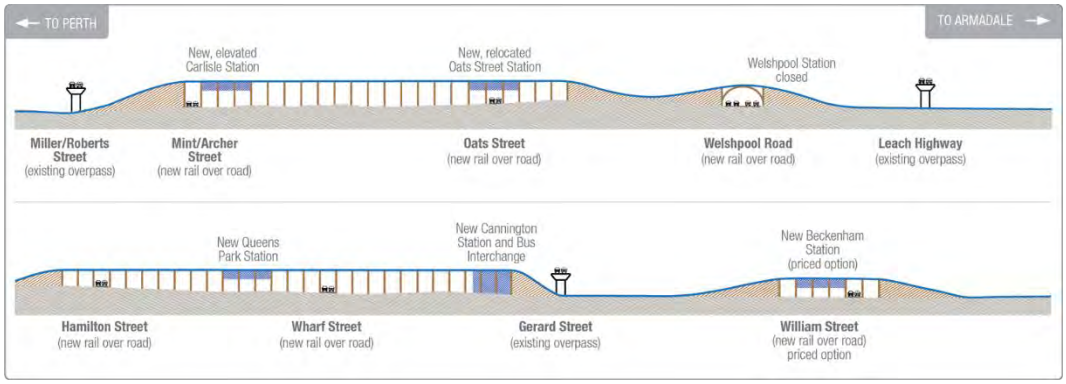


Figure 9: The Inner Armadale Level Crossing Removal Project will see new stations at Carlisle and Oats Street

2.3.3 Mid-tier transit

A potential rapid transit connection connecting UWA to Curtin University, passing through the Perth CBD and along part of Albany Highway, remains part of the Town's long-term planning agenda. IWA's Draft State Infrastructure Strategy (2021) recommends this project be progressed as a strategic priority to address congestion and help meet Perth's urban consolidation targets. This includes completing a full business case options assessment comparing the Knowledge Arc light rail corridor against a more extensive bus rapid transit system for Perth.

In parallel to this, a consortium consisting of fifteen metropolitan Local Governments is currently advocating for the development of a mid-tier transit strategy for Perth. The Town of Victoria Park was involved in the stakeholder workshops which identified important networks and created a high-level corridor plan as shown in Figure 10.

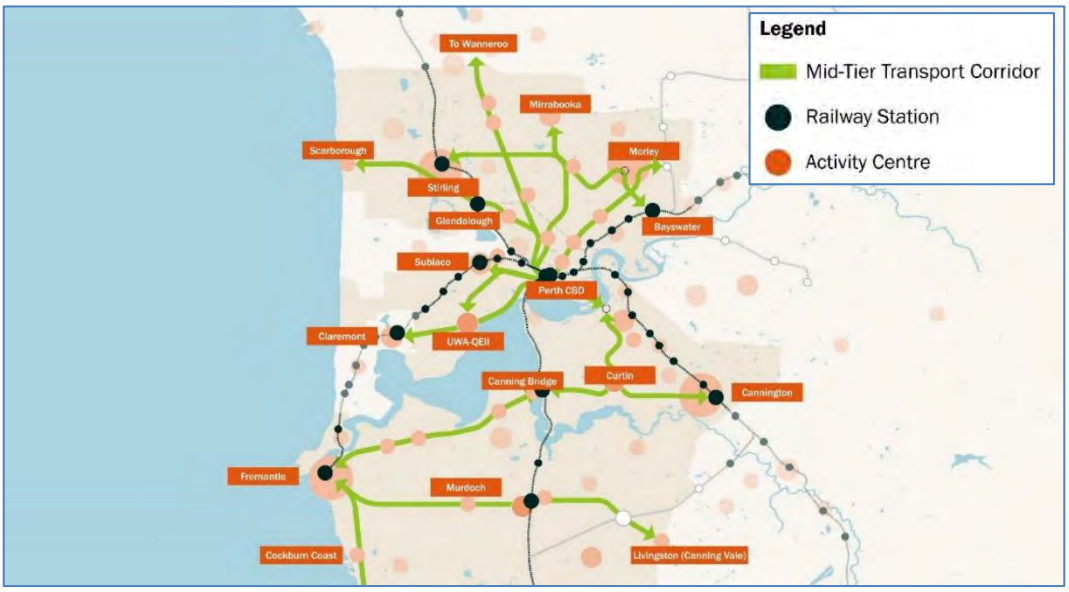


Figure 10: Shortlisted corridors identified by Mid-Tier Transit Consortium

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2.4 Active Transport

Based on available information (ABS journey-to-work data), active transport accounts for a relatively low modal share in the Albany Highway precinct. As of 2016, around 1.6% of workers accessed the Albany Highway precinct by walking, while approximately 4% cycled. Target mode shares for the Albany Highway corridor have been established in Section 3.1.1.

2.4.1 Walking

With its relatively high volumes, crossing Albany Highway can be difficult for pedestrians, particularly those with disabilities. Formal crosswalks along the Highway are limited to four locations (around one per kilometre) and key intersections generally prioritise vehicle movements over pedestrian access. In this environment, pedestrians are observed to rely on the median to help with crossing. At present, medians do not exist between the Causeway and Teddington Road, McMillan Street and Kent Street, and Shepperton Road and Hill View Terrace. Additionally, the median is generally painted only with a physical median only present between Dane Street and Sussex Street in East Victoria Park.

2.4.2 Cycling/micromobility

There is currently no dedicated cycling infrastructure along Albany Highway, with the exception of a short east-bound protected bike lane near the John Hughes car yards. The Town of Victoria Park / City of South Perth Joint Bike Plan identifies Albany Highway as a potential cycling corridor for future investigation (Figure 11). However, given the complex and busy nature of Albany Highway the interaction between different types of cyclists and other road users' needs to be carefully considered. Several parallel routes to Albany Highway have been considered for Safe Active Street treatments (explored further in Section 3.5).



Figure 11: Town of Victoria Park long term cycling network

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The Causeway Pedestrian and Cycling Bridge Project (Figure 12) is a Main Roads project set to undergo construction in early 2023. The bridge is projected to be complete by mid-late 2024, and will create a significantly walking/cycling connection between Victoria Park and the Perth CBD. The bridge will be 6.0m wide, and will comprise of separate pedestrian and cyclist paths. The completion of this project will enhance accessibility to Albany Highway Activity Centre and encourage local and regional commuters to choose active forms of transport to travel to and from this area.



Figure 12: The Causeway Pedestrian & Cyclist Bridge will improve connectivity between Victoria Park and the Perth CBD for active modes

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2.5 Parking

Based on the data provided by the Town of Victoria Park, there are around 600 public parking spaces within and adjacent to Albany Highway, contained within Town-owned car parks, as well as on-street parking along the Highway's length. There is also considerable private parking provided for workers and visitors at the rear of commercial premises and in large privately-owned car parks such as the Park Centre. Additional parking exists further afield within surrounding residential streets and at train stations.

In terms of Albany Highway itself, there are approximately 377 on-street bays between the Causeway and Welshpool road. As shown in Figure 13, these are relatively evenly distributed longitudinally, with slightly more bays in the southbound lane compared to the northbound lane.

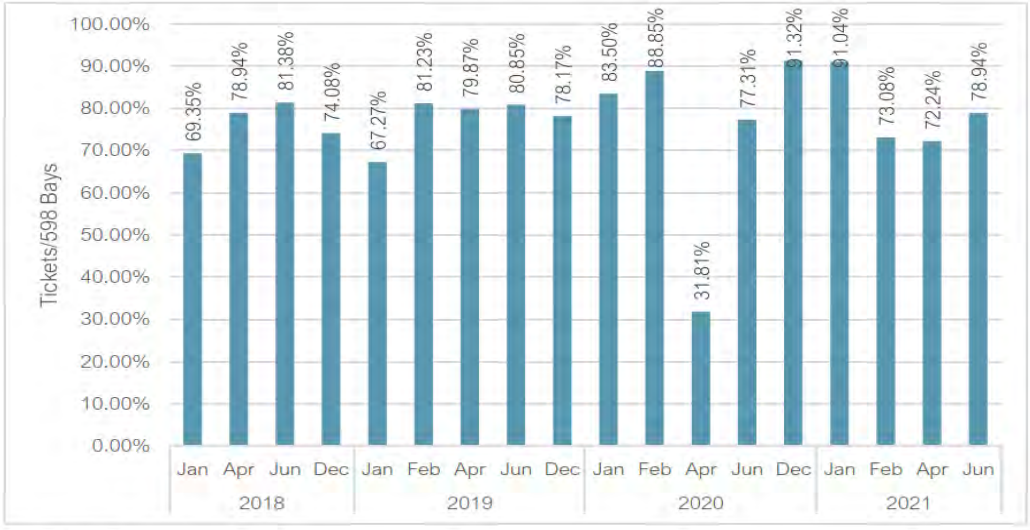
Precinct	Northbound lane	Southbound lane
Precinct 1. Causeway (Canning Highway to Cargill Street)	14	2
Precinct 2: Victoria Park (Cargill Street to Temple Street)	36	32
Precinct 3: Central (Temple Street to Miller Street)	32	41
Precinct 4: East Victoria Park (Miller Street to Dane Street)	55	69
Precinct 5: East End (Dane Street to Somerset Street)	27	41
Precinct 6: St James (Somerset Street to Welshpool Road)	11	17
Totals	175	202
Grand total	377	



(numbers approx.)

Figure 13: On-street parking bays buy sub-precinct

Paid parking data shows that most parkers are staying for 30-60 minutes, which has remained generally consistent since 2018.



Note: Includes free parkers

Figure 14: Average daily occupancy (7am-8pm) by month (Albany Highway ticketed on-street bays)

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The number of monthly paid parking transactions since 2018 have shown small but steady increases year on year, with monthly parking transactions exceeding 40,000 in November 2020 for the first time (Figure 14). This rate was exceeded in March, May and June of 2021. Parking and driving to Albany Highway therefore seems to have increased in the post-COVID period, contrary to policy objectives.

Parking data indicates that parking occupancy is routinely above 65% of capacity, with summer months approaching 85%. Peak demand for parking coincides with lunch (12pm-1pm) and dinner (5pm-7pm) times as shown in Figure 15.

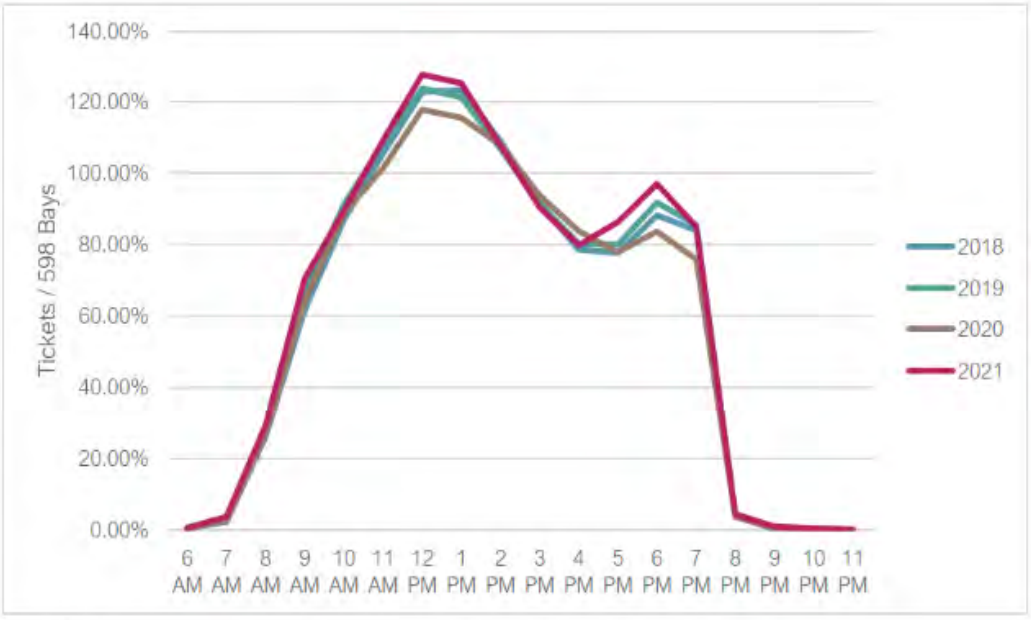


Figure 15: Average hourly parking occupancy by time of day (Albany Highway ticketed on-street bays)

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3. Proposed Recommendations

3.1 Guiding Principals

Outlined below are a series of transport-related principals which have guided the development of this Precinct Structure Plan. These principals have been established based on contemporary best-practice transport planning evidence, existing local and State Government policies, as well as feedback received from stakeholders and the broader community.

3.1.1 Providing greater transport choice to encourage modal shift

Car dependency is a problem that Perth has been grappling with for several decades. In addition to causing air and noise pollution, an over-reliance on private vehicles (particularly for short trips) is linked to higher rates of obesity and cardiovascular disease. The cost of owning and running a car is becoming increasingly expensive, placing further pressure on households. Although there is a global transition to electric vehicles, the vast majority of cars in Perth still run petrol/diesel which contributes to global resource depletion as well as global warming.

Fundamental to unlocking the potential of Albany Highway Activity Corridor is reducing the reliance on private motor vehicles. The provision of high-quality active transit networks and “car light areas” will improve safety and comfort, reduce air pollution and generally enhance the experience for people..

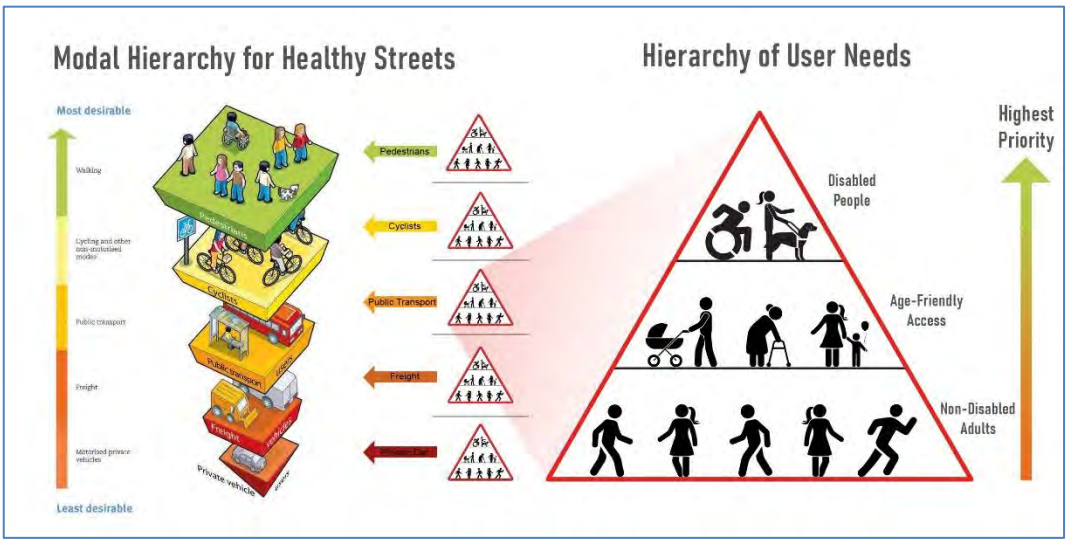


Figure 16: Modal hierarchy based on user needs (Kieran Ryan 2021)

Figure 16 recognises that motorised vehicles are the least desirable mode of transit to achieve healthy streets. While there is a clear need to prioritise sustainable modes of transport over private vehicles, it remains important to also consider the needs of certain groups including the young, elderly and those with impaired mobility.

Providing high-quality public and active transit options helps encourage modal shift, which leaves road space and parking for those people who genuinely need it. Adopting the recommendations outlined in the subsequent sections of this report will help achieve the mode shift targets outlined in Table 1 below.

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Table 1: Existing and target mode shares

Mode	Town of Victoria Park (journey to work only)		Albany Highway Activity Corridor (all trips)	
	Existing mode share (2016)	Target mode share (2031)	Existing mode share	Target mode share (2031)
Car, as driver	69%	62%	Unknown	44%
Car, as passenger	5%	6%	Unknown	8%
Train	5%	6%	Unknown	10%
Bus	12%	12%	Unknown	15%
Ferry	0%	1%	Unknown	1%
Bicycle	3%	5%	Unknown	10%
Walked Only	4%	6%	Unknown	10%
Other	2%	2%	Unknown	2%

3.1.2 Treating Albany Highway as a destination, not a thoroughfare

During this project's community consultation phase, there emerged a desire to treat Albany Highway as a "destination", rather than a "thoroughfare". A key strength of Albany Highway is the existence of parallel traffic routes including Shepperton Road, Orrong Road and (to a lesser extent) Berwick Street. While the Precinct Structure Plan recommends that full longitudinal connectivity us maintained, the intention is to reduce the amount of through traffic along Albany Highway by:

- Lowering the default speed limit from 40km/h to 30km/h (refer to Section 3.1.3)
- Introducing shared space environments in the Victoria Park, East Victoria Park and St James town centers (refer to Section 3.2.2)
- Implementing localised traffic calming interventions such as wombat crossings and bus embayments removals (refer to Section 3.4)

3.1.3 Lowering speeds to create people-friendly environments

Speed influences both likelihood and severity of traffic crashes. Vulnerable road users, such as pedestrians, cyclists and motorcycle riders, have little protection, so their chances of survival rapidly decrease at speeds greater than 30km/h. As shown in Figure 17, a pedestrian or cyclist is twice as likely to be killed by a car travelling at 50km/h than one travelling at 40km/h, and five times as great as one travelling at 30km/h.

In addition to setting speed limits which reflect the tolerances of the human body, it is also important that roads/streets are designed to be self-explaining to avoid an over-reliance on police enforcement. As key consideration outlined in this Precinct Structure Plan involves lowering Albany Highway's speed limit from 40km/h to 30km/h, and considering 10km/h shared zones in the three urban cores.

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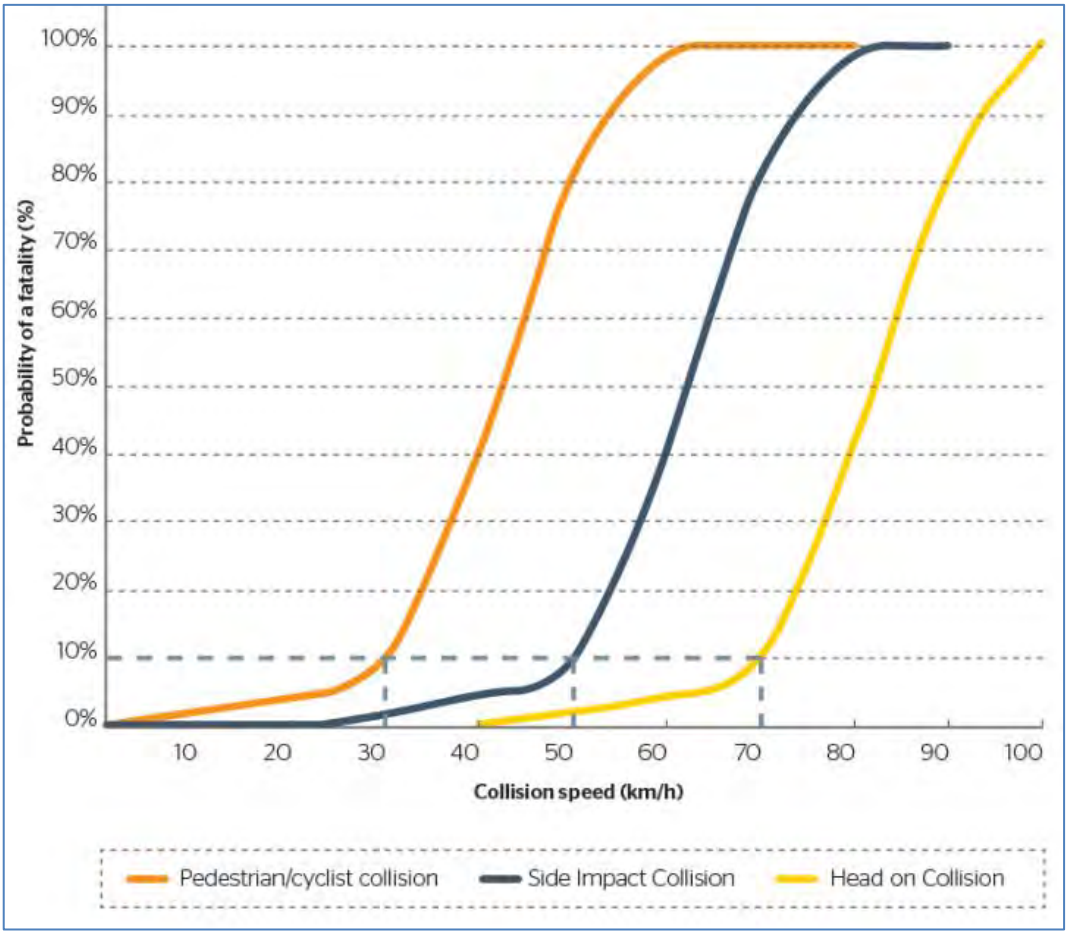


Figure 17: Likelihood of death based on impact speeds (RAC, derived from Wramborg 2005)

3.1.4 Taking a balanced approach to parking management

Car parking consumes large amounts of valuable land (approximately 15sqm per bay). In addition to contributing to the urban heat island effect, an oversupply of parking can further entrench car dependency and its associated problems (outlined in Section 3.1.1 above).

The Town of Victoria Park's Parking Management Plan seeks to provide adequate parking in appropriate places. However, the plan also acknowledges the role that increased rates of active and public transport can play in ensuring that parking bays remain available for those who need them most.

Potential planning mechanisms that can be used to manage parking and encourage modal shift include the implementation of maximum parking ratios and the use of dynamic pricing structures (particularly for high value bays).

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3.2 Proposed streetscape enhancements – Albany Highway

3.2.1 Albany Highway (typical)

Outside of the core urban areas, the proposed cross section for Albany Highway (shown in Figure 18) involves relatively minor changes and be undertaken in a staged approach. The proposed cross section involves maintaining the existing kerblines, median and sidewalks. Key changes proposed include:

- Introducing parklets and footpath widening at key locations
- Implementing traffic calming features (explored further in Section 3.4)
- Removing bus embayments

Benefits of this treatment include:

- Relatively low cost
- Enables retention of existing trees
- Enables retention of a significant amount on-street parking
- Provides additional footpath space in certain locations
- Achieves a safe-systems speed limit of 30km/h (see below)

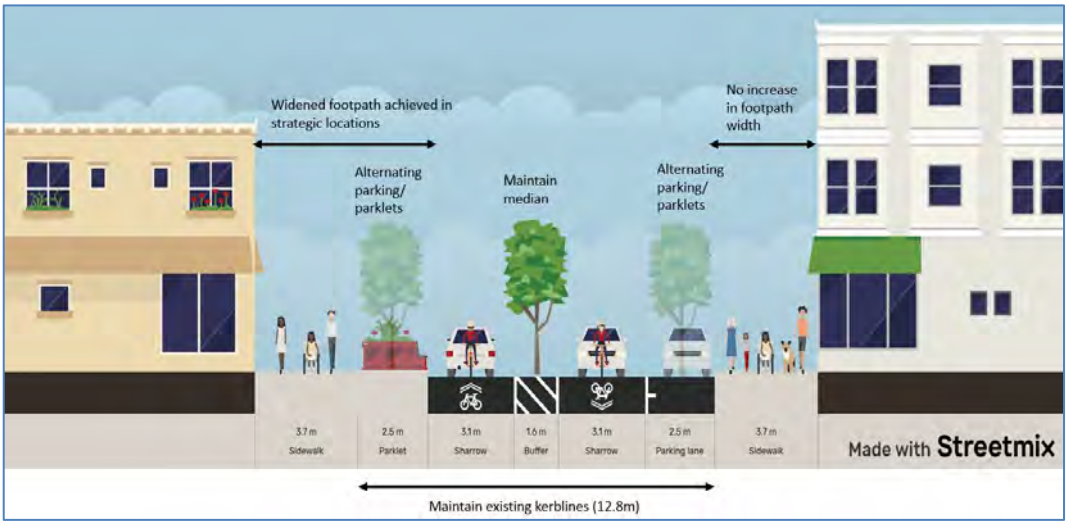


Figure 18: Proposed streetscape enhancement for Albany Highway (typical treatment outside urban cores)

A key recommendation of this Precinct Structure Plan involves reducing Albany Highway's speed limit from 40km/h to 30km/h. Other 30km/h zones in Perth include South Terrace in Fremantle, Oxford Street in Leederville and along the Scarborough beachfront. As discussed in 3.1.3, a speed limit of 30km/h creates a much safer and more inviting experience for people. A reduction to 30km/h will increase the journey time between the St James and the Causeway by approximately two minutes.

It is recommended the roll out of parklets be undertaken in a staged approach in line with demand and business/community support.

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3.2.2 *Albany Highway (urban cores)*

In order to provide an enhanced pedestrian experience, shared space environments are proposed for the Victoria Park, East Victoria Park and St James town centers. Under the Road Traffic Code 2000, drivers shall not exceed a speed 10 km/h when travelling throuh a shared zone.

This proposed cross section (shown in Figure 19 below) involves:

- Reducing the road width from ~12.8m to ~9.2m
- Removing the central median
- Reallocating road space to create wider footpaths (up to 5.5m)
- Repaving both the road and footpaths using higher quality materials
- Introducing flush kerbing
- Planting additional street trees

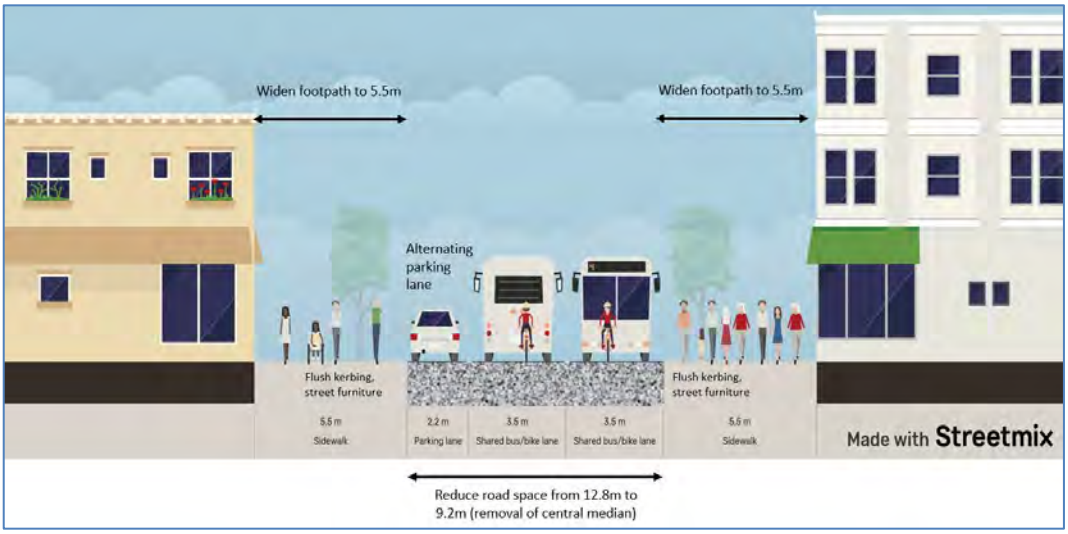


Figure 19: Proposed shared space zone cross section for Albany Highway

Shared zone environments are proposed in the following locations:

- Victoria Park: Between Mackie Street and McMillan Street
- East Victoria Park: Between Kent Street and Hampshire Street
- St James: Between Hill View Terrace and Welshpool Road

As indicated in Aspect's Public Realm Report, the roll out of these environments is recommended to be staged in line with business/community support.

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3.3 Proposed streetscape enhancements – Station Streets

3.3.1 Duncan Street

"Copenhagen" bicycle lanes are proposed for Duncan Street in order to connect the Victoria Park town centre to the Victoria Park train station and Perth-Armadale principal shared path. As shown in Figure 20, the proposed bicycle lanes will be raised above road level, providing additional safety/comfort for younger and less experienced bike riders.

In addition to bike lanes, other streetscape enhancements proposed for Duncan Street include:

- Narrowing traffic lane widths from 5m to 3.3m to pacify motorist behaviour and shorten crossing distances for pedestrians
- Widening footpaths from 1.6m to 2.0m
- Planting additional/more appropriate street trees
- Investigating the introduction of underground power (east of Shepperton Road)

The implementation of these streetscape enhancements is likely to necessitate the removal of on-street parking bays between Albany Highway and Shepperton Road (approximately 11 bays); and between Sunbury and Teague Streets (approximately 15 bays).

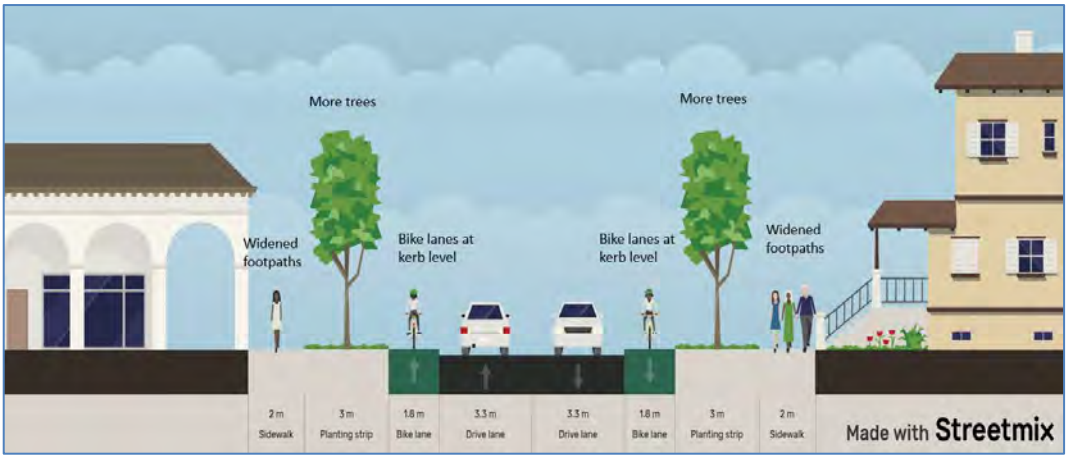


Figure 20: Proposed streetscape enhancement for Duncan Street

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3.3.2 Oats Street

Like Duncan Street, “Copenhagen” bicycle lanes are proposed for Oats Street in order to connect the St James town centre to the Oats Street train station and Perth-Armadale principal shared path. As shown in Figure 21, the proposed bicycle lanes will be raised above road level, providing a much greater level of safety/comfort for bike riders compared to the existing 1.1m wide sealed shoulders.

In addition to bike lanes, other streetscape enhancements proposed for Oats Street include:

- Removing the central median
- Increasing traffic lanes from 3.0m to 3.5m to support bus services
- Widening footpaths from 1.6m to 2.0m
- Planting additional/more appropriate street trees
- Exploring the feasibility of undergrounding the high voltage powerline (further consultation with Western Power required)

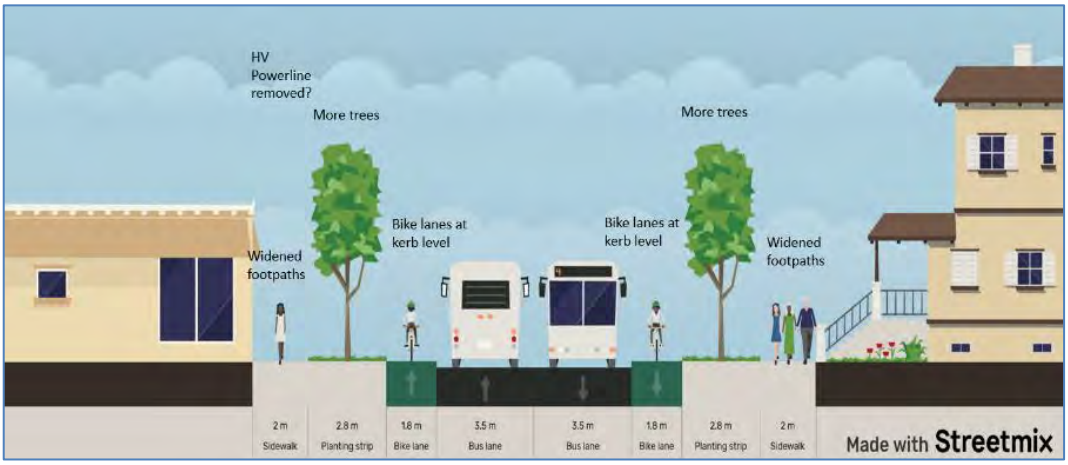


Figure 21: Proposed streetscape enhancement for Oats Street

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3.4 Streetscape Typologies

In addition to the typical cross sections discussed in Section 3.2, a number of streetscape typologies are proposed for Albany Highway as shown in Table 2 below. These have been addressed in Aspect's Public Realm report as approaches to improve the pedestrian experience along Albany Highway, and proposed for a number of locations along the corridor.

Table 2: Streetscape Typologies

Typology	Description/overview	Example
Traffic Calming – Raised plateau	Raised plateaus are recommended at key intersections to ensure slowing of vehicular traffic by providing a visual cue to drivers to reduce their speed. This enhances road and pedestrian safety and amenity.	 **Figure 22: Raised plateau**
Traffic Calming- Raised pedestrian crossing (wombat crossing)	A wombat crossing is a raised pedestrian (zebra) crossing. As with zebra crossings, wombat crossings also afford pedestrians priority over motorists. The use of a raised hump profile and associated signs/pavement markings significantly increases the likelihood that a motorist will acknowledge (and subsequently give way) to pedestrians crossing at these locations. A study undertaken by the *Australasian College of Road Safety* in 2017 found that wombat crossings can reduce road death and serious injuries by up to 63%.	 **Figure 23: Wombat crossing**

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Typology	Description/overview	Example
Corner Conversion	The use of generous corner radii can negatively impact on pedestrian safety and comfort. In addition to increasing crossing distances, they also encourage motorists to turn at higher speeds which reduces the likelihood they will give way to pedestrians. Reducing the size of a corner radius also provides an opportunity to improve public realm and create active corner frontages.	 **Figure 24: "Bulb-out" kerb extensions**
Shared Space (shared zone)	A shared zone is an all-inclusive design approach which removes the physical boundary between motor vehicles, pedestrians and cyclists. This is achieved by removing typical road/street features including kerbs, road markings and traffic signals. This form of place-making enables streets to become more of a destination and less of a thoroughfare. Under the *Road Traffic Code 2000,* a shared zone means a length of road with both a "shared zone" sign and an "end shared" sign; and no intersections between the signs. In addition to this, vehicles cannot exceed a speed limit of 10 km/h; and drivers must give way to any pedestrian in the zone.	 **Figure 25: Example of a shared zone (Hay Street, Perth)**
Kerb Extension	Kerb extensions involve widening the footpath to align with the parking lane. This reduces the crossing distance and time for pedestrians. It improves the safety of pedestrians as they become more visible to oncoming traffic, rather than being of being blocked by parked cars.	 **Figure 26: Kerb extension**

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Typology	Description/overview	Example
Bus embayment removal	The removal of bus embayments provides an opportunity to increase pedestrian space as well as slow down vehicle traffic. Transperth have indicated they will support the removal of certain bus embayments along Albany Highway. Transperth require (in most cases) embayments to be maintained at Timing Points/Timed Stops and potentially at other locations such as schools, train stations, major attractions or for operational requirements.	 **Figure 27: Bus embayment removal**

3.5 Catering for micromobility

As indicated in Section 2.4.2, it is difficult to achieve dedicated cycling infrastructure on Albany Highway while simultaneously maintaining two-way traffic and on-street parking, as well as finding space for trees, bus stops, parklets, street furniture and alfresco dining opportunities. Accordingly, it is recommended that a series of parallel residential streets be formalised as “low stress” cycling routes. As shown in Figure 28, potential corridors include:

- Hordern, Washington or Gloucester Streets (west of Albany Highway)
- Lichfield/Swansea or Merton/Hubert Streets (east of Albany Highway)

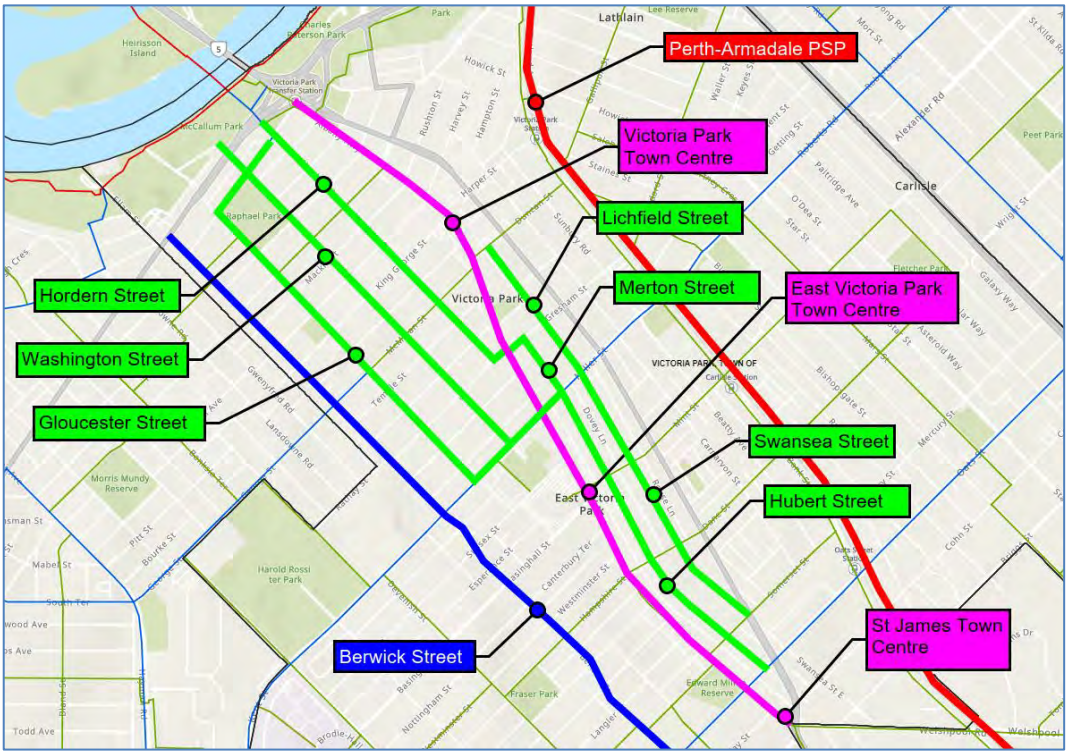


Figure 28: Potential alternative cycling routes parallel Albany Highway

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In order to make these streets appealing/suitable to people of all ages and abilities, a range of local area traffic management interventions should be considered. These may include changes in intersection priority, one-way slow points with bicycle bypass facilities, or modal filtering.

3.6 Management of parking

3.6.1 On-street parking (Albany Highway)

The potential removal of on-street parking bays from Albany Highway to facilitate other uses should be undertaken using a staged/considered approach. Recommendations for managing Albany Highway's on-street parking bays include:

- Tightening fee and time restrictions (particularly on high-value bays in town centres to encourage higher turnover)
- Expanding the use of dynamic pricing during busy periods
- Investing in smart parking technology (such as in ground sensors) to assist with enforcement and monitoring occupancy levels/trends.
- Monitoring business/community sentiment toward the removal of on-street bays for other users.

3.6.2 On-street parking (other streets)

The removal of parking bays on Albany Highway may inadvertently increase demand for parking on certain side streets, particularly those located near the Victoria Park and East Victoria Park town centers. Recommendations for managing on-street parking along these side streets include:

- Expanding the use of residential parking permits
- Investing in smart parking technology (such as in ground sensors) to assist with enforcement and monitoring occupancy levels/trends.

3.6.3 Provision of additional of-street parking

As land use intensifies along Albany Highway, it is recommended the Town investigate the possible development of one or more multideck parking structures. Potential locations include the King George Street Car Park (in Victoria Park) and the IGA Car Park (in East Victoria Park). The use of cash-in-lieu provisions and/or decoupling of minimum parking requirements from future residential or commercial land uses should be investigated as possible mechanisms for funding the development of such facilities.



Figure 29: King George Street car park



Figure 30: IGA car park

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Consideration should be given to “sleeving” multideck structures with retail businesses, or designing them in such a way that can facilitate future adaptive re-use.

3.7 Possible reconfiguration of Canning Highway/Shepperton Road interchange

During the development of this Mobility and Access Report, a range of ambitious ideas for improving Albany Highway have been identified. One such idea is centered on the possible removal and/or consolidation of Canning Highway/Shepperton Road Interchange located at the northern gateway to the Town. The interchange’s immense 7-hectare footprint and poor pedestrian environment effectively dissects the precinct from the Swan River. Importantly, the interchange creates a major barrier between the precinct and the WA Government’s new Causeway Pedestrian and Cyclist Bridge. This represents an enormous lost opportunity to leverage local economic development and increased active transport use from this significant $100 million investment.

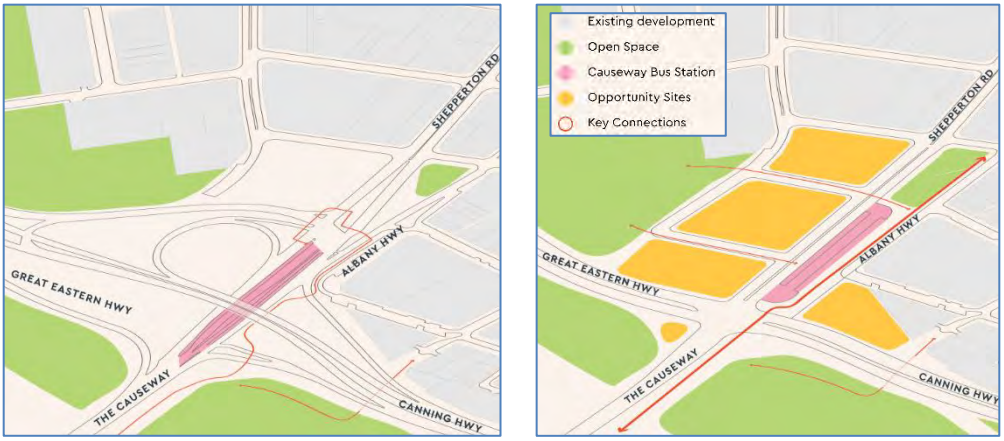


Figure 31: Land development opportunities asscoiated with interchange removal

There a several possible benefits that could be realised from removing and/or consolidating this interchange, including:

- Eliminating the visual (and physical) barrier separating Victoria Park from the Swan River and McCallum Park Foreshore;
- Improving connectivity between the Albany Highway activity corridor and the soon-to-be constructed Causeway Pedestrian and Cyclist Bridge;
- Improving connectivity to/from nearby destinations including McCallum Park, Heirisson Island, Burswood Park, Crown Entertainment Complex and Perth Stadium;
- Freeing up significant amounts of prime waterfront land, facilitating high density urban infill; and
- Enabling the re-imagining of the Victoria Park Transfer Station to improve bus operations and facilitate transit-oriented development.

The concept of removing highway interchanges in inner city areas (and particularly waterfront locations) is gaining momentum internationally, with notable examples including the Park East Freeway in Wisconsin, and Bonaventure Expressway in Montreal.

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While the removal of this interchange may have some negative impacts on traffic capacity, it could be argued the benefits outlined may outweigh the negative impacts associated with introducing one more set of signals to the Canning Highway / Great Eastern Highway corridor.

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4. Review against SPP 7.2

Objective	Consideration	Existing Situation		With Proposed Recommendations	
		Score	Justification	Score	Justification
O4.1 To ensure the movement network supports the function and ongoing development of the precinct.	C4.1.1 Address the current and future access needs of the precinct through an integrated transport planning and land use assessment process.	Poor	To date, there has been a lack of coordination/integration between land use planning and transport planning along Albany Highway. This has resulted in a somewhat disconnected and car-dependant transport network.	Good	The development of this Precinct Structure Plan considers the relationship between land use and transport.
	C4.1.2 Design the movement network in balance with place considerations, local access and neighbourhood/ district/regional access requirements for travel to, through and around the precinct.	Poor	At present, the Albany Highway Activity Corridor facilitates both local and interregional movement functions. As a result, place outcomes are compromised.	Good	As part of the Precinct Structure Plan's development, the corridor has been split into six sub-precincts. The proposed cross sections and traffic calming interventions seek to respond to the unique place characteristics of each sub-precinct.
	C4.1.3 Develop a movement network that enables convenient and comfortable travel and access for users of all ages and abilities.	Poor	At present, Albany Highway's active transport infrastructure is inadequate. There are limited formal/safe crosswalks at key intersections, and motor vehicles are often prioritised over pedestrian movements. In addition, existing cycling routes are not compelling for young or inexperienced users.	Fair	While it unlikely that "all ages and abilities" cycling infrastructure can be retrofitted to Albany Highway, the Town will investigate improving outcomes for micromobility users along parallel side streets including Hordern Street, Washington Street, Gloucester Street, Lichfield Street, Swansea Street, Merton Street and Hubert Street.
	C4.1.4 Design transport infrastructure that provides a safe network for all users.	Poor	There are no dedicated cycle lanes along Albany highway. Due to lack of infrastructure, cyclists are forced to either ride on the pedestrian paths or on the road with cars and busses.	Fair	
O4.2 To ensure a resilient movement network that prioritises affordable, efficient, sustainable and healthy modes of transport.	C4.2.1 Prioritise walking, cycling, public transport and shared mobility, to minimise car dependency.	Fair	While the precinct does have access to bus and train services, there remains a high reliance on private cars.	Good	The safety and comfort of people walking/cycling will be improved through the introduction of lower speed limits, traffic calming interventions and increased tree canopy. Public transport will be prioritised through targeted bus embayment removal and improvements to stop/shelters.
	C4.2.2 Establish mode share targets for the precinct	Poor	To-date, no mode share targets have established for this precinct.	Good	Council-wide mode share targets were established in the Town of Victoria Park's Integrated Transport Strategy published in April 2022. To support the development of this Precinct Structure Plan, specific precinct mode share targets have been established (refer Section 3.1.1).
O4.3 To enable a range of transport choices that meet the needs of residents, workers and visitors.	C4.3.1 Prioritise provision of direct and legible pedestrian routes within the precinct and to adjacent areas.	Poor	While there are pedestrian paths along Albany Highway, they lack connectivity and safe crossings. In some areas, pedestrians rely on painted medians to cross a highway that experiences high volumes of traffic.	Good	This Precinct Structure Plan recommends a number of treatments which will enhance the safety and comfort of pedestrians using Albany Highway including wider footpaths, lower traffic speeds, additional crossing points and more street trees.
	C4.3.2 Provide a bicycle network within	Poor	There are no dedicated cycle lanes along Albany highway. Due to lack	Fair	While it unlikely that "all ages and abilities" cycling infrastructure can

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Objective	Consideration	Existing Situation		With Proposed Recommendations	
		Score	Justification	Score	Justification
	the precinct that integrates with the broader cycle network and connects safely and conveniently to key destinations.		of infrastructure, cyclists are forced to either ride on the pedestrian paths or on the road with cars and busses.		be retrofitted to Albany Highway, the Town will investigate improving outcomes for micromobility users along parallel side streets including Hordern Street, Washington Street, Gloucester Street, Lichfield Street, Swansea Street, Merton Street and Hubert Street.
	C4.3.3 Identify public transport services and infrastructure to be upgraded or established to improve coverage, frequency, connection and user choice.	Fair	While the precinct does have access to bus and train services, there remains a high reliance on private cars.	Good	Recommendations include improving pedestrian and cycling access along Duncan and Oats Streets, and working with PTA to improve access to (and land use integration with) the Victoria Park Transfer Station.
	C4.3.4 Design public transport infrastructure to integrate with and be appropriate for the intended mode share, patronage and place character of the precinct.				
	C4.3.5 Consider access requirements for service vehicles and logistical freight movements within the precinct	Fair	At present, service vehicles generally have good access to homes and businesses along Albany Highway.	Fair	While the Precinct Structure Plan recommends the removal of some on-street parking bays from Albany Highway, loading bays and rear lane access will be maintained wherever possible.
	C4.3.6 Design the movement network to allow for private vehicle access and movement that is appropriate to the precinct function.	Poor	At present, Albany Highway acts as both a destination and a thoroughfare. Certain sections of the corridor carry in excess of 15,000 vehicles per day.	Good	The Precinct Structure Plan outlines a series of recommendations for reducing the quantum of through traffic along Albany Highway.
O4.4 To ensure the quantity, location, management and design of parking supports the vision of the precinct.	C4.4.1 Provide the minimum amount of car parking appropriate for the precinct.	Good	There are around 600 public parking spaces which are adjacent to Albany Highway. Data from the Town of Victoria Park indicates that around 80% of public parking along the Highway is regularly occupied.	Good	The Precinct Structure Plans seeks to adopt a balanced and considered approach to parking management. While some bays are planned to be removed, the provision of better public/active transport is intended to facilitate modal shift, reduce the demand for car parking.
	C4.4.2 Manage and locate car parking to prioritise access according to the needs of different user groups.	Fair	The corridor has existing ACROD bays.	Good	This Precinct Structure Plan recognises the need to support the movement needs of certain priority user groups including the young, elderly and disabled.
	C4.4.3 Design parking to be integrated with the urban form.	Fair	Some of Albany Highway's existing car parks detract from the corridor's urban form.	Good	Moving forward, new parking (including multideck structures) should be integrated with surrounding land uses. This may include "sleeving" structures with retail businesses, or designing structures with future adaptive re-use in mind.
	C4.4.4 Design parking for adaptability over time to accommodate potential future change of use.	Poor	Parking in the Albany Highway Precinct has not traditionally been designed to adapt to potential future land use changes.	Good	
	C4.4.5 Consider parking requirements and end of trip facilities for other transport modes.	Fair	While there is existing bike parking along Albany Highway, the provision of public end-of-trip facilities is currently limited.	Good	As part of planned upgrades to Council/Community facilities, the town should consider providing public end-of-trip facilities to encourage additional uptake in cycling and other forms of micromobility.

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Project Report

22/08/2024

Town of Victoria Park
Albany Highway Precinct Structure Plan

High Level Traffic Analysis



Date	Rev	Status	Prepared by	Checked by	Approved by
08/07/2024	A	Draft for comment	Dylan Melsom and Monica Yee	Dylan Melsom and James Pearse	James Pearse
22/08/2024	B	Draft Final	Dylan Melsom and Monica Yee	Dylan Melsom and James Pearse	James Pearse

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Table of Contents

1. Introduction **3**

2. Context **4**

2.1 Study area 4
2.2 Existing traffic 5

3. Analysis **12**

3.1 Development yields 12
3.2 Traffic generation 13
3.3 Allocation to traffic zones 15
3.4 Trip distribution 18
3.5 Background regional traffic growth (ROM24) 21
3.6 Traffic impacts 25
3.7 What-if scenarios 32

4. Summary and conclusions **39**

Appendix A: Development yields (provided by ToVP) **41**

Appendix B: ROM24 data (provided by Main Roads WA) **42**

Appendix C: ROM24 data summary **43**

Appendix D: Existing traffic volumes **44**

Appendix E: Background traffic 2042 (no development traffic) **45**

Appendix F: Traffic distribution **46**

Appendix G: Distributed development traffic **47**

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1. Introduction

This report has been prepared by Hatch on behalf of the Town of Victoria Park (the Town). The Town has recently prepared a draft Precinct Structure Plan (PSP) for the Albany Highway activity corridor. Spanning from the Causeway to Welshpool Road, the PSP will provide the strategic vision and statutory framework for the planning and development of Albany Highway by taking a holistic, long-term approach that can be updated over time in response to contemporary issues and community aspirations.

Consolidating the three existing activity centre nodes at Victoria Park, East Victoria Park and St James, the corridor is proposed to be reclassified as a single Secondary Centre under State Planning Policy 4.2 activity centre hierarchy. The PSP will guide movement and access, land use and built form within the Albany Highway Activity Centre, informing changes to the local planning framework to facilitate private development, as well as setting out the recommended servicing, infrastructure and public realm design requirements and their implementation that will be necessary to realise the vision and objectives for the activity centre.

The PSP identifies several sites to accommodate major development projects, along with smaller redevelopment opportunities that will progress incrementally across other minor landholdings. While some modelling has been undertaken to date to estimate development opportunities, the length and diversity of the corridor makes predicting the temporal and geographic staging of development challenging. It is estimated that over the 10-year timeframe of the PSP, only a small number of sites along Albany Highway will be developed, delivering approximately 400-800 additional dwellings.

This report responds to Main Roads WA's request for a technical assessment of the impacts of anticipated growth on the regional road network over the development horizon through to 2042. This report is intended to act as a supplement to the Albany Highway Precinct Structure Plan and supporting Transport Strategy, and should be read in conjunction with both documents.

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2. Context

2.1 Study area

The Albany Highway corridor is located in the Town of Victoria Park, approximately 1km from Perth's CBD. The corridor spans the section of the highway between the Causeway and Welshpool Road. As shown in Figure 2-1 below, the analysis undertaken as part of this study includes Albany Highway and the parallel movements corridors of Shepperton Road, Berwick Street and Orrong Road, along with Welshpool Road. Perpendicular movement corridors considered as part of this study include Canning Highway/ Great Eastern Highway, George Street / Duncan Street / McMillan Street, Kent Street / Miller Street, Mint Street / Archer Street and Hill View Terrace / Oats Street.

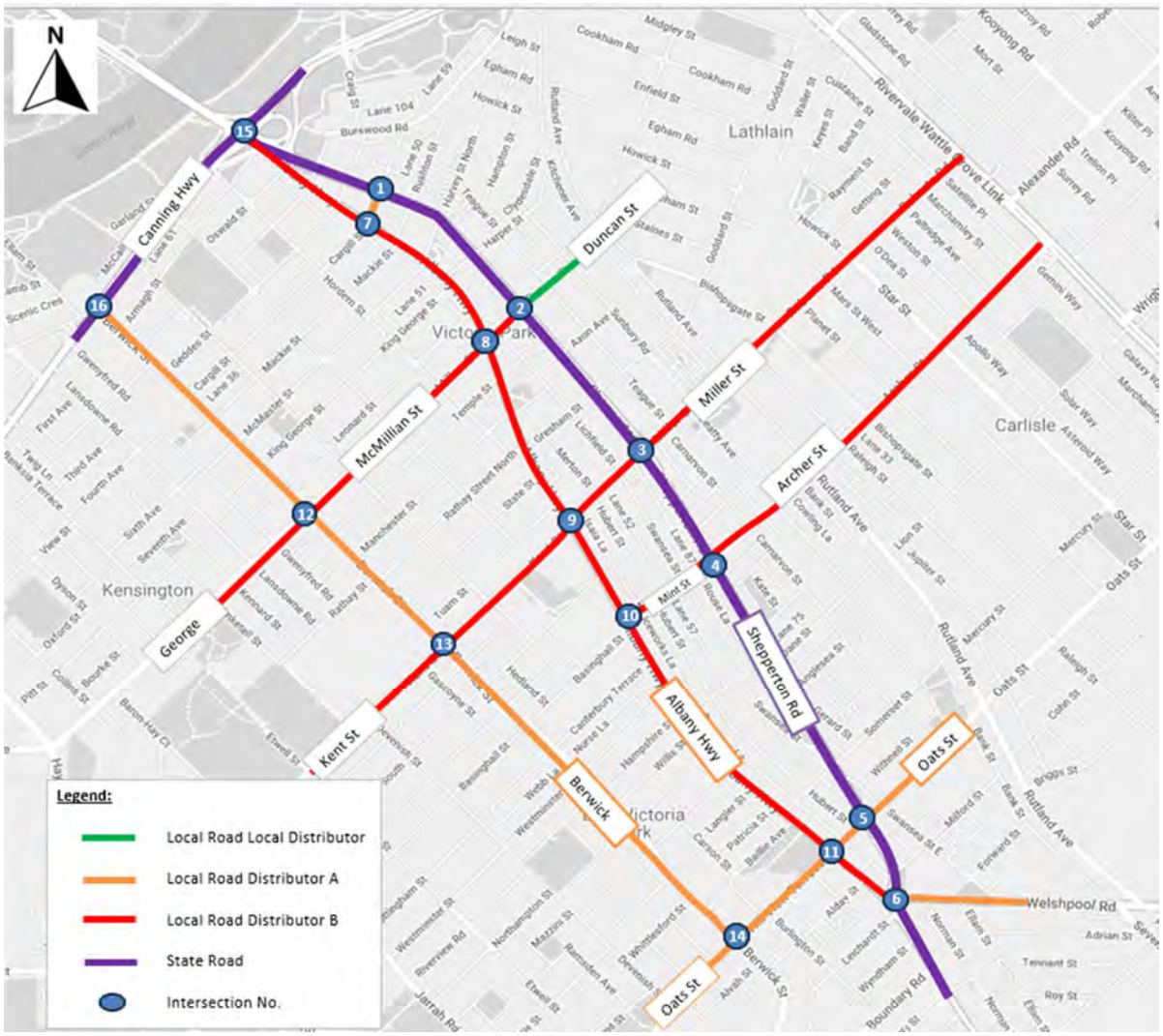


Figure 2-1 - Albany Highway precinct study area

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2.2 Existing traffic

Traffic count locations used to inform this analysis are shown in Figure 2-2. These have been obtained via Main Roads WA's TrafficMap and through engagement with the Town. A combination of midblock surveys and traffic signal data from between 2021-2024 was obtained and analysed.

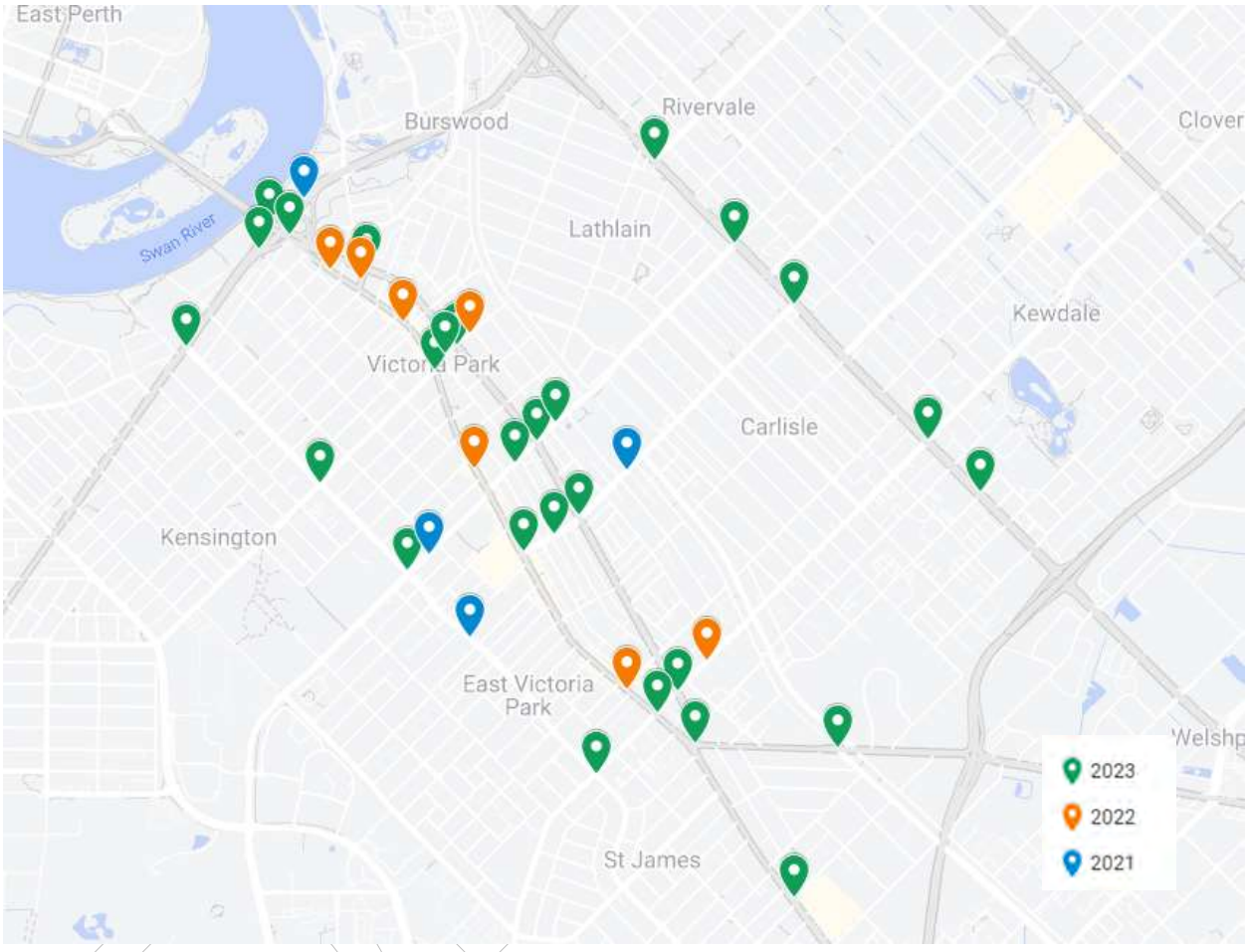


Figure 2-2 - Traffic count locations

Two-way traffic volumes along Albany Highway in the AM peak range from approximately 5,000 vehicles per day at the Causeway end to over 16,000 vehicles per day near Welshpool Road. Shepperton Road accommodates approximately 28,000-32,000 vehicles per day. Traffic volumes including from intersecting roads and other locations have been summarised in Appendix D.

To assess the existing traffic conditions across the network, a theoretical lane capacity midblock assessment has been undertaken based on Austroads and NSW Roads and Maritime Services Guide to Traffic Generating Developments Guidelines1 subject to the type of road.

Table 2-1 presents the assumed lane capacities and corresponding Level of Service (LoS) capacities calculated for each type of road based on a volume capacity ratio (V/C) which is calculated as follows:

[1] Guide to Traffic Generating Developments version 2.2 (nsw.gov.au)

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$$\text{Volume Capacity Ratio} = \frac{\text{Total measured traffic volume over 60 mins}}{\text{Threshold 60mins peak flow capacity per lane x (No. Lanes)}}$$

LoS is a numeric representation of a road user's perception of the quality of service on a road, where 'A' is free-flowing conditions and 'F' is a traffic jam. 'D' is generally considered the lowest acceptable level by roads authorities. The Town is willing to accept lower Levels of Service on local roads within the area as a means of supporting mode shift towards more sustainable modes such as active and public transport, given its identity as an inner city, infill area.

A peak period midblock flow capacity threshold of 1200 pc/h (passenger cars per hour) has been adopted in this analysis for all roads except Shepperton Road / Orrong Road / Canning Highway due to presence of parking. A midblock flow capacity threshold of 1400 pc/h was selected for Shepperton Road / Orrong Road / Canning Highway given that existing road arrangements are similar to clearway conditions.

These peak midblock threshold capacity values have been adopted assuming the following conditions exist within the boundaries of this traffic assessment:

- Adequate flaring at major upstream intersections.
- Uninterrupted flow from a wider carriageway upstream of an intersection approach and flowing at capacity.
- Control or absence of crossing or entering traffic at minor intersections by major road priority controls.
- Control or absence of parking.
- Control or absence of right turns by banning turning at difficult intersections.
- High-volume flows of traffic from upstream intersections during more than one phase of a signal cycle.
- Good co-ordination of traffic signals along the route.

The level of service volume to capacity ratio thresholds adopted for the various roads within the area of focus for this study are shown in Table 2-1.

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Table 2-1 - Adopted Level of Service V/C thresholds per road type

Level of Service	Roads with clearways (Shepperton Road / Orrong Road / Canning Highway)		Roads with interruptions (All other roads)	
	V/C Ratio	Lane capacity (pcu)	V/C Ratio	Lane capacity (pcu)
A	<0.35	490	<0.35	420
B	0.35-0.5	700	0.35-0.5	600
C	0.5-0.75	1050	0.5-0.75	900
D	0.75-0.9	1260	0.75-0.9	1080
E	0.9-1	1400	0.9-1	1200
F	>1	>1400	>1	>1,200

The Table 2-2 and Table 2-3 summarise the midblock LoS across the assessed network during the existing AM and PM peak periods (8:00-9:00 and 17:00-18:00). The analysis indicates the network is generally operating at a good level of Level of Service in both AM and PM peak periods.

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Table 2-2 - Existing AM peak Level of Service and two-way traffic volumes

Road	St_Seg	Segment_START	End_Seg	Segment_End	Direction	Capacity threshold per lane	Two-way traffic PM Peak	V/C2	LoS
Albany Hwy	10	Mint St / Archer St	11	Oat St / Hillview Tce	East-West	1200	726	0.30	A
Albany Hwy	11	Oat St / Hillview Tce	6	Shepperton Rd	East-West	1200	817	0.34	A
Albany Hwy	15ii	Canning Hwy / North Eastern Hwy	7	Teddington St	East-West	1200	631	0.26	A
Albany Hwy	6	Albany Hwy	24	Ashburton St/John St Sth	North-South	1400	2423	0.43	B
Albany Hwy	7	Teddington St	8	Duncan St / McMillian St	East-West	1200	422	0.18	A
Albany Hwy	8	Duncan St / McMillian St	9	Miller St / Kent St	East-West	1200	846	0.35	A
Albany Hwy	9	Miller St / Kent St	10	Mint St / Archer St	East-West	1200	843	0.35	A
Berwick St	12	Duncan St / McMillian St	13	Miller St / Kent St	East-West	1200	1403	0.58	C
Berwick St	13	Miller St / Kent St	14	Oat St / Hillview Tce	East-West	1200	1452	0.61	C
Berwick St	16	Canning Hwy / North Eastern Hwy	12	Duncan St / McMillian St	East-West	1200	1270	0.53	C
Canning Highway	15l	Albany Hwy	14	Berwick St	North-South	1400	2676	0.48	B
Duncan St / McMillian St	2	Shepperton Rd	8	Albany Hwy	North-South	1200	479	0.20	A
Duncan St / McMillian St	20	Teague St	2	Shepperton Rd	North-South	1200	332	0.14	A
Duncan St / McMillian St	8	Albany Hwy	12	Berwick St	North-South	1200	396	0.17	A
Miller St / Kent St	21	Beaty Av	3	Shepperton Rd	North-South	1200	840	0.35	A
Miller St / Kent St	3	Shepperton Rd	9	Albany Hwy	North-South	1200	912	0.38	B
Miller St / Kent St	9	Albany Hwy	13	Berwick St	North-South	1200	704	0.29	A
Mint St / Archer St	22	66 Mint St	4	Shepperton Rd	North-South	1200	777	0.32	A

[2] V/C Ratio refers to theoretical Capacity of the road based on traffic flow. Refer to Section 2.2 of this report for an explanation

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Road	St_Seg	Segment_START	End_Seg	Segment_End	Direction	Capacity threshold per lane	Two-way traffic PM Peak	V/C2	LoS
Mint St / Archer St	4	Shepperton Rd	10	Albany Hwy	North-South	1200	590	0.25	A
Oat St / Hillview Tce	11	Albany Hwy	14	Berwick St	North-South	1200	983	0.41	B
Oat St / Hillview Tce	23	Swansea St	5	Shepperton Rd	North-South	1200	791	0.33	A
Oat St / Hillview Tce	5	Shepperton Rd	11	Albany Hwy	North-South	1200	694	0.29	A
Orrong Rd	18	Francisco St	19	Roberts Rd	East-West	1400	4354	0.78	D
Orrong Rd	19	Roberts Rd	20	Archer St	East-West	1400	4078	0.73	C
Orrong Rd	20	Archer St	21	Oats St	East-West	1400	3615	0.65	D
Orrong Rd	21	Oat St / Hillview Tce	22	Briggs St	East-West	1400	3420	0.61	C
Shepperton Rd	1	Teddington St	2	Duncan St / McMillian St	East-West	1400	2625	0.47	B
Shepperton Rd	15I	Canning Hwy / North Eastern Hwy	7	Teddington St	East-West	1400	2194	0.39	B
Shepperton Rd	2	Duncan St / McMillian St	3	Miller St / Kent St	East-West	1400	2438	0.44	B
Shepperton Rd	3	Miller St / Kent St	4	Mint St / Archer St	East-West	1400	2475	0.44	B
Shepperton Rd	4	Mint St / Archer St	5	Oat St / Hillview Tce	East-West	1400	2592	0.46	B
Shepperton Rd	5	Oat St / Hillview Tce	6	Albany Hwy	East-West	1400	2428	0.43	B
Teddington St	1	Shepperton Rd	7	Albany Hwy	North-South	1200	711	0.30	A
Welshpool Rd	6	Shepperton Rd	23	Sevenoaks St	East-West	1400	1208	0.22	A

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Table 2-3 - Existing PM peak Level of Service and two-way traffic volumes

Road	St_Seg	Segment_START	End_Seg	Segment_End	Direction	Capacity threshold per lane	Two-way traffic PM Peak	V/C	LoS
Albany Hwy	10	Mint St / Archer St	11	Oat St / Hillview Tce	East-West	1200	1041	0.36	B
Albany Hwy	11	Oat St / Hillview Tce	6	Shepperton Rd	East-West	1200	1320	0.46	B
Albany Hwy	15ii	Canning Hwy / North Eastern Hwy	7	Teddington St	East-West	1200	541	0.19	A
Albany Hwy	6	Albany Hwy	24	Ashburton St/John St Sth	North-South	1400	3508	0.52	C
Albany Hwy	7	Teddington St	8	Duncan St / McMillian St	East-West	1200	434	0.15	A
Albany Hwy	8	Duncan St / McMillian St	9	Miller St / Kent St	East-West	1200	1126	0.39	B
Albany Hwy	9	Miller St / Kent St	10	Mint St / Archer St	East-West	1200	1178	0.41	B
Berwick St	12	Duncan St / McMillian St	13	Miller St / Kent St	East-West	1200	1417	0.49	B
Berwick St	13	Miller St / Kent St	14	Oat St / Hillview Tce	East-West	1200	1577	0.55	C
Berwick St	16	Canning Hwy / North Eastern Hwy	12	Duncan St / McMillian St	East-West	1200	1557	0.54	C
Canning Highway	15l	Albany Hwy	14	Berwick St	North-South	1400	3859	0.48	B
Duncan St / McMillian St	2	Shepperton Rd	8	Albany Hwy	North-South	1200	626	0.22	A
Duncan St / McMillian St	20	Teague St	2	Shepperton Rd	North-South	1200	282	0.10	A
Duncan St / McMillian St	8	Albany Hwy	12	Berwick St	North-South	1200	499	0.17	A
Miller St / Kent St	21	Beaty Av	3	Shepperton Rd	North-South	1200	1006	0.35	A
Miller St / Kent St	3	Shepperton Rd	9	Albany Hwy	North-South	1200	1109	0.38	B
Miller St / Kent St	9	Albany Hwy	13	Berwick St	North-South	1200	1021	0.35	A

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Road	St_Seg	Segment_START	End_Seg	Segment_End	Direction	Capacity threshold per lane	Two-way traffic PM Peak	V/C	LoS
Mint St / Archer St	22	66 Mint St	4	Shepperton Rd	North-South	1200	996	0.34	A
Mint St / Archer St	4	Shepperton Rd	10	Albany Hwy	North-South	1200	1003	0.35	A
Oat St / Hillview Tce	11	Albany Hwy	14	Berwick St	North-South	1200	944	0.33	A
Oat St / Hillview Tce	23	Swansea St	5	Shepperton Rd	North-South	1200	995	0.34	A
Oat St / Hillview Tce	5	Shepperton Rd	11	Albany Hwy	North-South	1200	1138	0.39	B
Orrong Rd	18	Francisco St	19	Roberts Rd	East-West	1400	5389	0.80	D
Orrong Rd	19	Roberts Rd	20	Archer St	East-West	1400	5276	0.78	D
Orrong Rd	20	Archer St	21	Oats St	East-West	1400	3818	0.57	C
Orrong Rd	21	Oat St / Hillview Tce	22	Briggs St	East-West	1400	3794	0.56	C
Shepperton Rd	1	Teddington St	2	Duncan St / McMillian St	East-West	1400	3150	0.47	B
Shepperton Rd	15I	Canning Hwy / North Eastern Hwy	7	Teddington St	East-West	1400	2861	0.42	B
Shepperton Rd	2	Duncan St / McMillian St	3	Miller St / Kent St	East-West	1400	3069	0.46	B
Shepperton Rd	3	Miller St / Kent St	4	Mint St / Archer St	East-West	1400	3074	0.46	B
Shepperton Rd	4	Mint St / Archer St	5	Oat St / Hillview Tce	East-West	1400	3196	0.47	B
Shepperton Rd	5	Oat St / Hillview Tce	6	Albany Hwy	East-West	1400	2739	0.41	B
Teddington St	1	Shepperton Rd	7	Albany Hwy	North-South	1200	877	0.30	A
Welshpool Rd	6	Shepperton Rd	23	Sevenoaks St	East-West	1400	1760	0.26	A

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3. Analysis

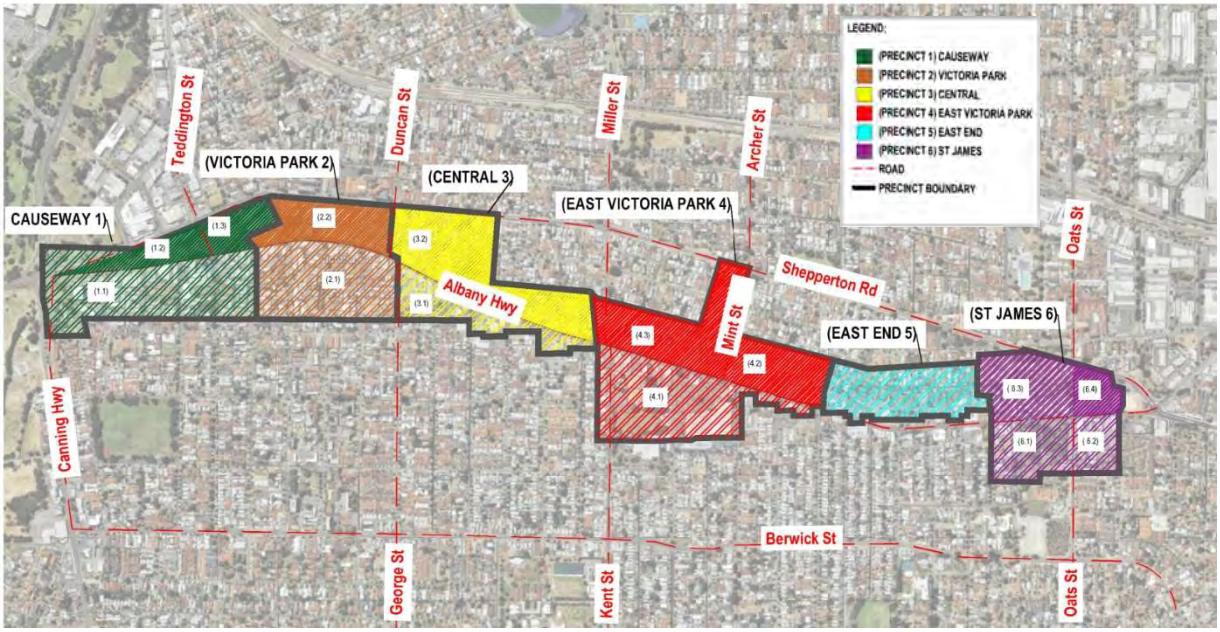
3.1 Development yields

To inform this analysis, Hatch has used the six development precincts identified in the PSP, these being:

1. Causeway
2. Victoria Park
3. Central
4. East Victoria Park
5. East End
6. St James

To provide additional granularity around land use inputs, the development precincts were disaggregated into 15 sub-precincts as shown in Figure 3-1.

Figure 3-1 - Albany Hwy PSP development precincts and sub-precincts



The Town of Victoria Park provided Hatch with a series of estimated development yields as taken from the draft Albany Highway Precinct Plan and subsequent Economic Strategy for the precincts described above. The 2042 yields based on a moderate growth scenario have been adopted for this study as they present a reasonable and conservative basis for estimating impacts. These are shown in Table 3-1, while the full yields provided by the Town are detailed in Appendix A.

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Table 3-1 - 2042 development yields (ERE Strategy based on Moderate Growth Scenario)

Precinct		Residential (Additional to base data)	Retail (food) SHOP	Retail (non-food) OTHER RETAIL	Commercial OFFICE	Industrial OTHER COMMERCIAL	Tourist Accommodation
		No. dwellings	GFA (m2)	GFA (m2)	GFA (m2)	GFA (m2)	GFA (m2)
1	Causeway	266	4853	2985	7760	4646	866
2	Victoria Park	207	3668	2263	5852	3512	660
3	Central	357	6149	3805	9796	5889	
4	East Vic Park	317	5520	3411	8799	5285	536
5	East End	69	1223	754	1951	1171	
6	St James	167	3038	1870	4855	2908	
	TOTAL	1383	24450	15088	39013	23410	2062

3.2 Traffic generation

The number of trips originating within the study area during peak travel periods were determined using rates obtained principally from Table 1 of WAPC Transport Impact Assessment Guidelines Volume 23, revised in 2016, with validation provided by other sources including the RTA Guide to Trip Generating Developments NSW (v2.24), Institute of Transportation Engineers' Trip Generation Manual5. The rates used are described in Table 3-2.

Table 3-2 - Trip generation rates

Land use	AM peak (08:00): 2-way trip rate	PM peak (17:00): 2-way trip rate	Unit	Reference
Residential	0.8	0.8	Per dwelling	TIA Guidelines Vol 2, Table I (p20)
Retail (food) – shop	2.5	10.0	Per 100m2 GFA	
Retail (non-food) – other retail	1.25	4.0	Per 100m2 GFA	
Commercial - office	2.0	2.0	Per 100m2 GFA	

[3] Transport Impact Assessment Guidelines Volume 2 – Planning Schemes, Structure Plans and Activity Centre Plans (www.wa.gov.au)
[4] Guide to Traffic Generating Developments version 2.2 (nsw.gov.au)
[5] Trip and Parking Generation - Institute of Transportation Engineers (ite.org)

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Industrial - other commercial	1.0	1.0	Per 100m2 GFA	
Tourist accommodation	2.3	2.3	Per 100m2 GFA	No data available (GtTGD). 0.5 trips per room adopted from ITE. Accommodation data to convert to per 100m2 GFA sourced from UNWTO and Statista6.

The rates described in Table 3-2 have been applied to the moderate growth development yields (residential dwellings, retail and non-retail floorspace forecasts) established in the Albany Highway PSP (refer Appendix A). Distribution of residential growth has been apportioned to precincts based on development capacity, stakeholder engagement and extent of urban zoned land available, whilst increasing the amount of employment-generating floorspace to maintain employment self-sufficiency within the Town7.

Table 3-3 and Table 3-4 provide an estimate of the number of trips generated from each PSP precinct for 2042 AM and PM weekday peak periods.

Table 3-3 – 2042 AM peak weekday trips generated

2042 TRIP GENERATION Rates per land use - AM Peak Weekday							
Precinct Name	Residential dwellings (Additional to base data)	Retail (food) SHOP	Retail (non-food) OTHER RETAIL	Commercial OFFICE	Commercial (SERVICE/ OTHER)	Tourist Accom.	Total trips all land uses
Unit	TRIPS per dwelling	TRIPS per 100sqm GFA	TRIPS per 100sqm GFA	TRIPS per 100sqm GFA	TRIPS per 100sqm GFA	TRIPS per 100sqm GFA	
Rate	0.8	2.5	1.25	2	1	2.3	
1. Causeway	213	121	37	155	46	20	593
2. Victoria Park	166	92	28	117	35	15	453
3. Central	285	154	48	196	59	0	741
4. East Vic Park	253	138	43	176	53	12	675
5. East End	55	31	9	39	12	0	146
6. St James	134	76	23	97	29	0	359
Total	1106	611.25	188.6	780	234	47.426	2968

[6] Based on average hotel room size (20m^2), 5, total hotels in Australia (5,960 in 2021), and 10% additional surface area for reception/ services.
[7] Refer to PSP Land Use Objective to *"Drive economic vitality by increasing office-based employment and expanding retail and hospitality floorspace in line with population growth".*

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Table 3-4 - 2042 PM peak weekday trips generated

2042 TRIP GENERATION Rates per land use - PM Peak Weekday							
Precinct Name	Residential (Additional to base data)	Retail (food) SHOP	Retail (non-food) OTHER RETAIL	Commercial OFFICE	Industrial OTHER COMMERCIAL	Tourist Accom.	Total trips all land uses
Unit	TRIPS per dwelling	TRIPS per 100sqm GFA	TRIPS per 100sqm GFA	TRIPS per 100sqm GFA	TRIPS per 100sqm GFA	TRIPS per 100sqm GFA	
Rate	0.8	10	4	2	1	2.3	
1. Causeway	213	485	119	155	46	20	1039
2. Victoria Park	166	367	91	117	35	15	791
3. Central	285	615	152	196	59	0	1307
4. East Vic Park	253	552	136	176	53	12	1183
5. East End	55	122	30	39	12	0	258
6. St James	134	304	75	97	29	0	639
Total	1106	2445	603.52	780	234	47.426	5217

3.3 Allocation to traffic zones

The Albany Highway PSP development yields provided by the Town for 2042 were disaggregated according to the PSP development precincts and sub-precincts described in Section 3.1. Each sub-precinct was then categorised into one of eight traffic zones established by Hatch to allow for logical analysis of traffic impacts. Typically bounded by the key roads, traffic zones A-H are shown in Figure 3-2.

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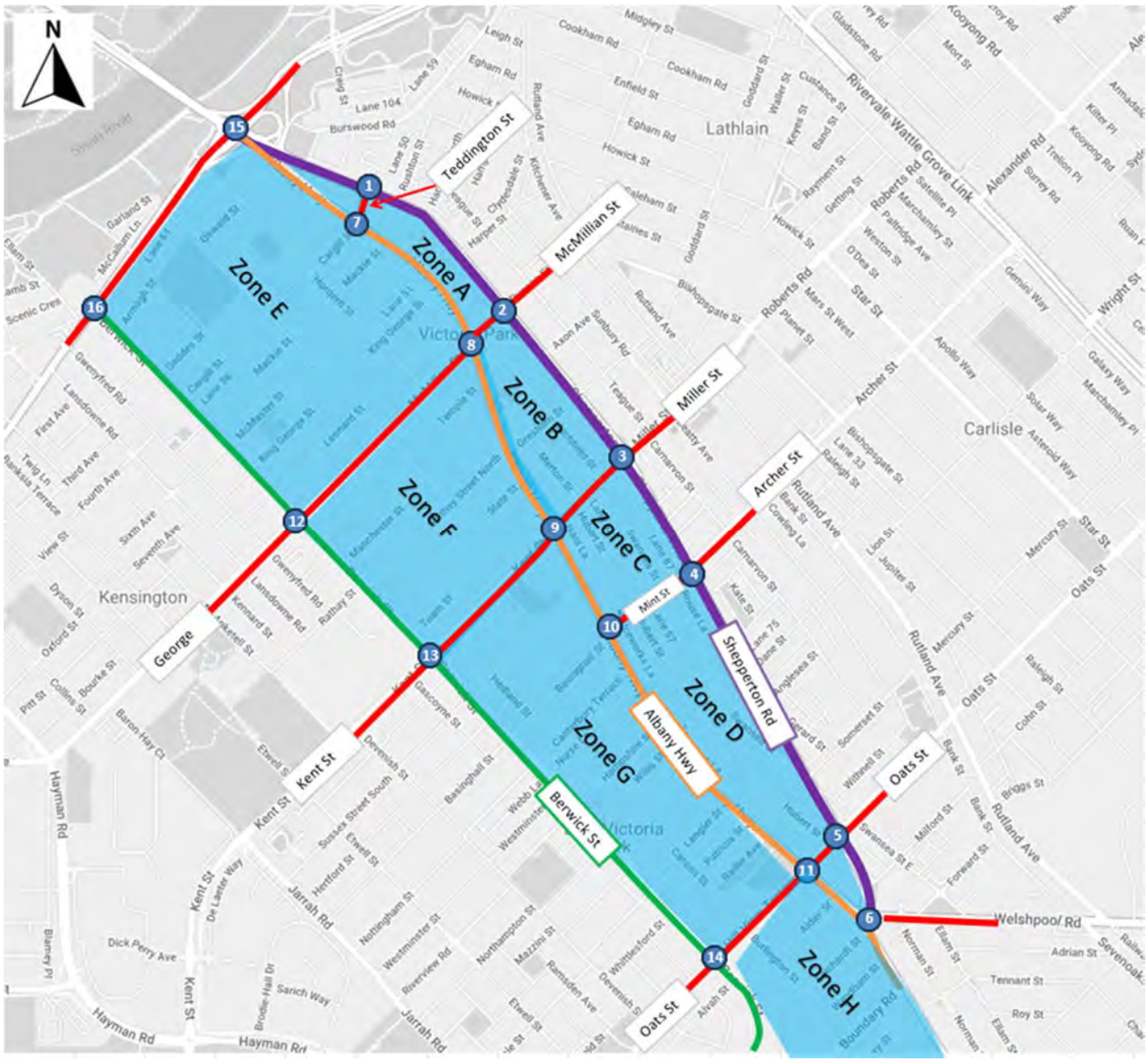


Figure 3-2 - Traffic zones

A series of simple calculations was used to translate the 2042 peak-hour traffic generation from the "development precincts" (shown in Figure 3-1) to the "traffic zones" shown in Figure 3-2. Illustrated in Table 3-5, this process involved:

- Calculating the relative percentage of sub-precincts, as a proportion of their corresponding parent precinct (column 3);
- Assigning each of the 15 sub-precincts into its appropriate traffic zone (column 4);
- Calculating the trips generated within each sub-precinct by multiplying its percentage area (column 3) by the total trips generated within each precinct (results shown columns 5-8); and then

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- Calculating the total trips generated within each traffic zone by summing together the trips generated within the sub-precincts that fall within each traffic zone (Table 3-6).

Table 3-5 presents the estimated trips generated within each development precinct and sub-precinct for the year 2042. These are conservative and do not assume any change to transport behaviour that may arise after the staged roll-out of development. The implications of such assumptions are considered in chapter 3.7.

Table 3-5 – Allocation of trips to sub-precincts (2042, two-way, weekday)

				2042 two-way weekday trips	
Precinct Sub-precinct	Area (m2)	% precinct area	Corresponding traffic zone	AM peak	PM peak
1	211,676			593	1039
1.1	155,211	73%	E	435	762
1.2	28,228	13%	A	79	139
1.3	28,237	13%	A	79	139
2	178,007			453	791
2.1	115,733	65%	E	295	514
2.2	62,273	35%	A	159	277
3	187,290			741	1307
3.1	60,291	32%	F	239	421
3.2	126,999	68%	B	503	886
4	277,635			675	1183
4.1	93,377	34%	G	227	398
4.2	55,223	20%	D	134	235
4.3	129,035	46%	C	314	550
5	89,038			146	258
5.1	89,038	100%	D	146	258
6	172,110			359	639
6.1	53,886	31%	G	113	200
6.2	29,392	17%	H	61	109
6.3	66,189	38%	D	138	246
6.4	22,642	13%	H	47	84
Total	1,115,755			2968	5217

Table 3-6 presents the estimated trips generated within each development precinct and sub-precinct for the year 2042. A conservative approach has been adopted that considers:

- AM peak, 80% of the movements are leaving the catchment area, while 20% are entering it.
- PM peak, 80% of the movements are entering the catchment area, and 20% are leaving it.

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Table 3-6 - Trips generated within each traffic zone (two-way, weekday)

Traffic zones	Year	Period	PSP two-way Trips	IN %	OUT%	IN TRIPS	OUT TRIPS
A	2042	AM Peak	317	20%	80%	63	253
B			503	20%	80%	101	402
C			314	20%	80%	63	251
D			419	20%	80%	84	335
E			729	20%	80%	146	583
F			239	20%	80%	48	191
G			340	20%	80%	68	272
H			109	20%	80%	22	87
A	2042	PM Peak	554	80%	20%	443	111
B			886	80%	20%	709	177
C			550	80%	20%	440	110
D			739	80%	20%	591	148
E			1276	80%	20%	1021	255
F			421	80%	20%	337	84
G			598	80%	20%	478	120
H			193	80%	20%	154	39

3.4 Trip distribution

In order to establish how future trips should be distributed across the road network, Hatch examined the existing travel behaviour of the study area's commuters (assumed broadly representative of general trips). Using 2021 ABS Census Journey to Work (JTW) data, this process assessed the general direction of travel for workers who live in the East Victoria Park and Victoria Park SA2 areas. To achieve this, trip directionality was categorised into the four key quadrants shown in Figure 3-3, these being northeast (NE), southeast (SE), southwest (SW) and northwest (NW).

The directional split of commuters (excluding residents who both live and work within orange highlighted SA2s) is shown in Table 3-7.

Table 3-7 - Distribution of JTW trips and key destinations

Direction	%	Key External Destinations
NW	46%	Perth CBD

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NE	19%	Belmont, Midland
SW	18%	Curtin, Kensington
SE	17%	Cannington, Armadale
Total	100%	

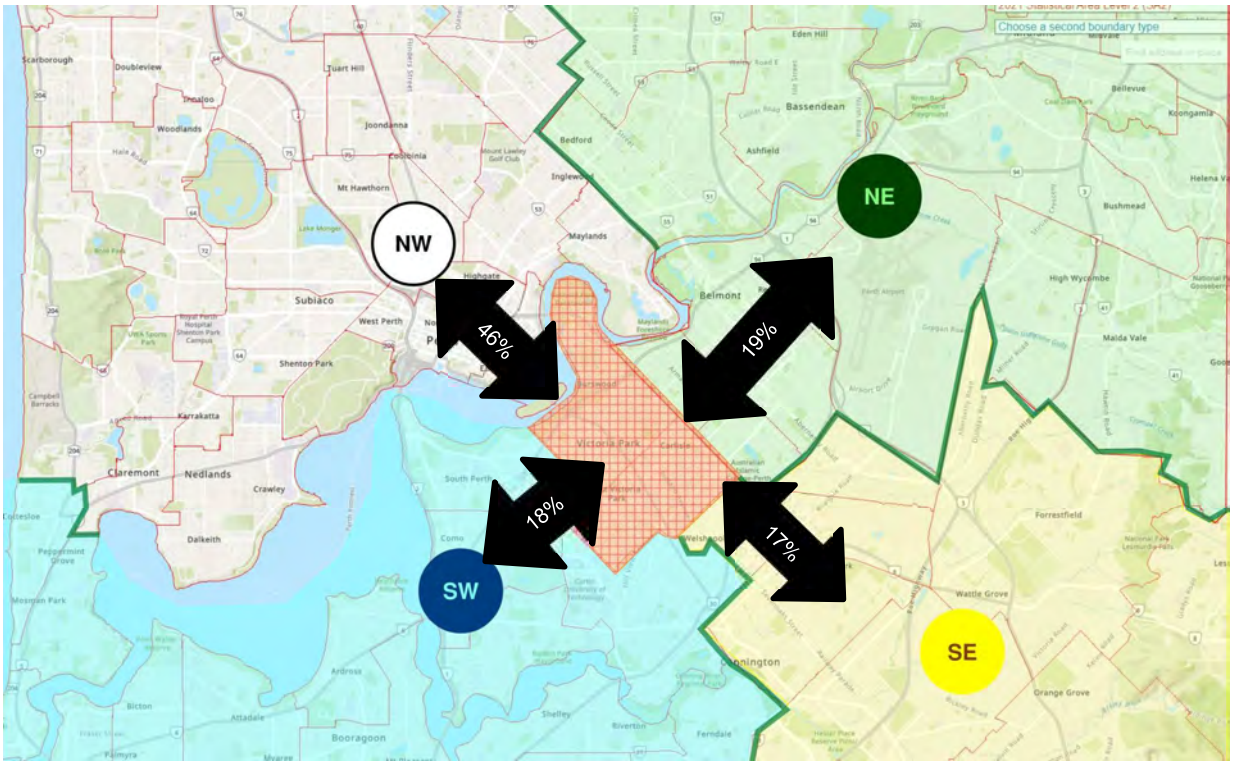


Figure 3-3 - SA2 JTW distribution

Using this information, Hatch developed a series of logical assumptions around trip distribution. To assign trips generated from each traffic zone onto the external network, the route assignment assumes the shortest travel distance to the specific destination based on google maps. In the AM peak:

- 46% of trips originating from the study area are assumed to travel towards the Perth CBD (North-West) via the Causeway Bridge via Shepperton Road.
- 19% of trips originating from the study area are assumed to travel across Orrong Road (North-East) towards Belmont and Midland via Miller Street, Archer/Mint Street or Oats Street. Upon reaching Orrong Road, trips were then re-assigned based on the directional splits experienced during the Peak hour.
- 18% of trips originating from the study area are assumed to travel towards Kensington/Curtin (South-West) University via Kent Street, George Street and Hill View Terrace

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- 17% of trips originating from the study area are assumed to travel towards Cannington/Armadale (South-East) via Albany Hwy.

PM peak trips were assumed to follow the opposite pattern. Self-contained vehicular trips (i.e. those which start and finish within the study area) were not considered in order to provide additional conservatism to this analysis.

Figure 3-4 illustrates the internal and external road network that the PSP Development traffic would use to travel to and from the various destinations.

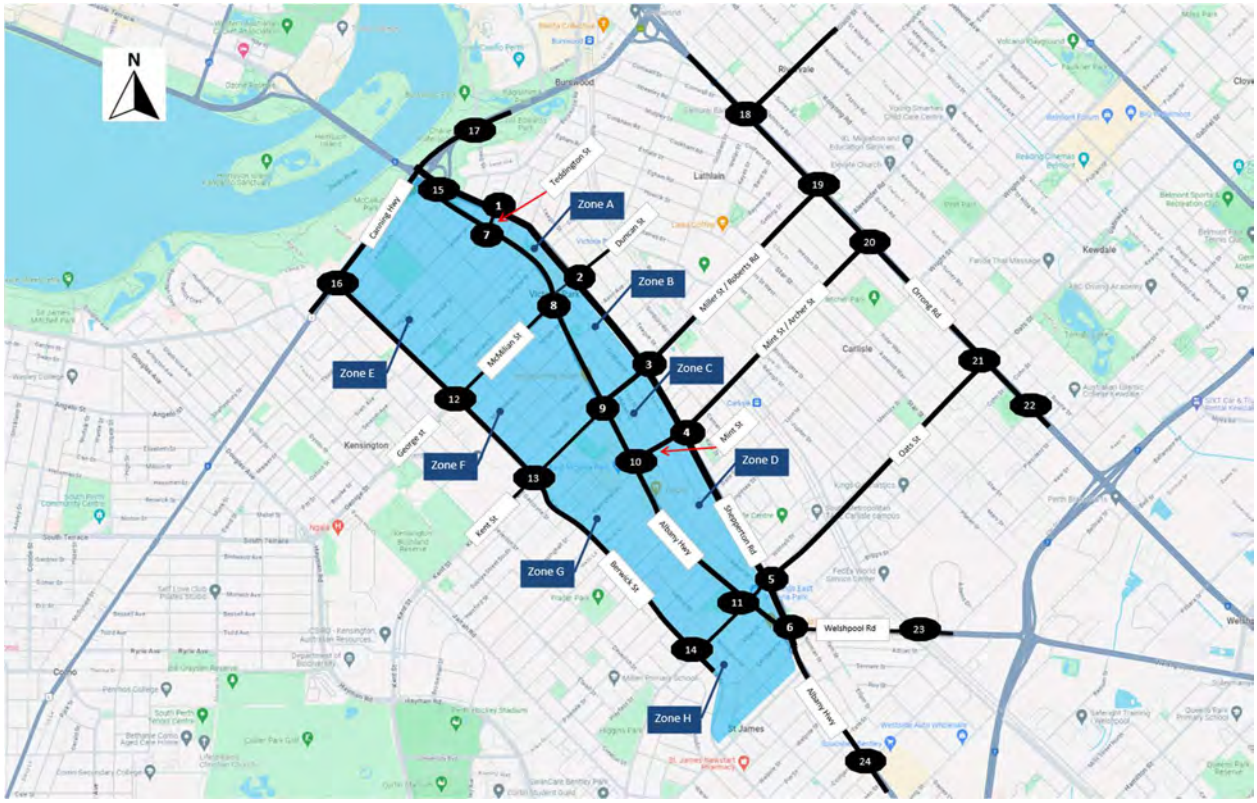


Figure 3-4 – internal and external road network traffic was dispersed across

To distribute traffic generated from each zone as calculated in Table 3-5, it is assumed that vehicles from each zone will choose the nearest road leading them in the desired direction during the AM/PM peak periods. For vehicles that disperse further outside the road network, the existing movement patterns in and out of the network were adopted. Figure 3-5 illustrates the routes that were used to distribute the generated traffic onto the greater road network.

Detailed distribution maps are provided in Appendix F.

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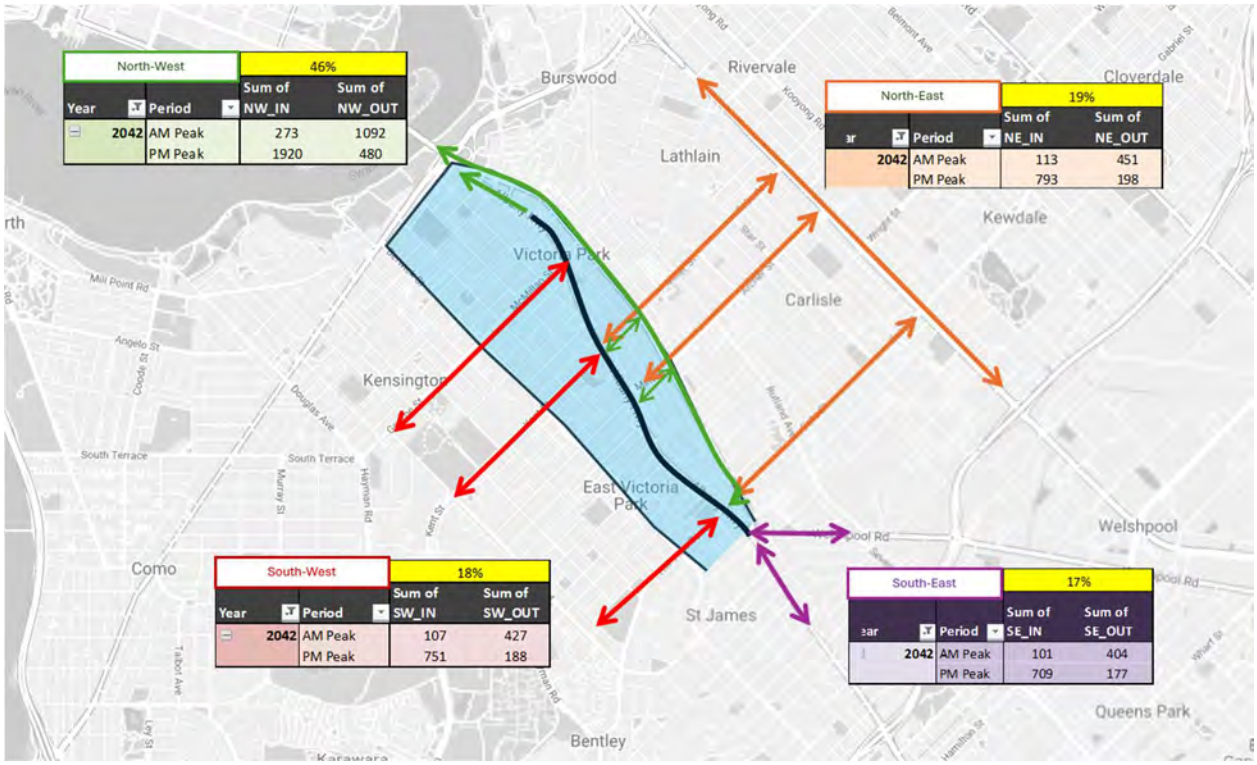


Figure 3-5 – Distributed PSP traffic on external network

3.5 Background regional traffic growth (ROM24)

Estimated 24-hour traffic volumes from key locations within the precinct for 2021, 2026, 2031, 2036 and 2041 were obtained from Main Roads WA's Regional Operations Model 24 Hours (ROM24), which considers changes in population, employment, and land use across the metropolitan area. Analysis of the estimated background traffic growth from the model showed that, on average, volumes across the precinct are anticipated to increase by 19.8% by 2041, equating to an average compounding rate of 0.89% per annum8.

This global annual growth rate of 0.89% across the precinct has been adopted and used to grow observed volumes observed through to 2042, with the results shown in Table 3-8. The ROM24 outputs, including modelling for 2021, 2031, 2036 and 2041, and 2021 validation data, are provided in Appendix B. The summary of the data is provided in Appendix C.

[8] Does not include consideration of development-related traffic

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Table 3-8 – Existing and forecast 2042 (based on ROM data) background traffic volumes

Road	St Seg	Segment START	End Seg	Segment END	Road Direction	AM PEAK			PM Peak		
						Existing Two-Way Traffic	2042 two-way traffic (resulting from background growth only)	Increase Traffic	Existing Two-Way Traffic	2042 two-way traffic (resulting from background growth only)	Increase Traffic
Albany Hwy	6	Albany Hwy	24	Ashburton St/John St Sth	North-South	2423	2919	+496	2912	3508	+596
Albany Hwy	7	Teddington St	8	Duncan St / McMillian St	East-West	422	508	+87	360	434	+74
Albany Hwy	8	Duncan St / McMillian St	9	Miller St / Kent St	East-West	846	1019	+174	935	1126	+191
Albany Hwy	9	Miller St / Kent St	10	Mint St / Archer St	East-West	843	1015	+173	978	1178	+200
Albany Hwy	10	Mint St / Archer St	11	Oat St / Hillview Tce	East-West	726	874	+149	864	1041	+177
Albany Hwy	11	Oat St / Hillview Tce	6	Shepperton Rd	East-West	817	984	+168	1096	1320	+224
Albany Hwy	15ii	Canning Hwy / North Eastern Hwy	7	Teddington St	East-West	631	760	+130	449	541	+92
Berwick St	12	Duncan St / McMillian St	13	Miller St / Kent St	East-West	1403	1690	+287	1176	1417	+241
Berwick St	13	Miller St / Kent St	14	Oat St / Hillview Tce	East-West	1452	1749	+297	1309	1577	+268
Berwick St	16	Canning Hwy / North Eastern Hwy	12	Duncan St / McMillian St	East-West	1270	1530	+260	1293	1557	+264
Canning Highway	15l	Albany Hwy	14	Berwick St	North-South	2676	3223	+548	3204	3859	+655

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Road	St Seg	Segment START	End Seg	Segment END	Road Direction	AM PEAK			PM Peak		
						Existing Two-Way Traffic	2042 two-way traffic (resulting from background growth only)	Increase Traffic	Existing Two-Way Traffic	2042 two-way traffic (resulting from background growth only)	Increase Traffic
Duncan St / McMillian St	2	Shepperton Rd	8	Albany Hwy	North-South	479	577	+98	520	626	+106
Duncan St / McMillian St	8	Albany Hwy	12	Berwick St	North-South	396	477	+81	414	499	+85
Duncan St / McMillian St	20	Teague St	2	Shepperton Rd	North-South	332	400	+68	234	282	+48
Miller St / Kent St	3	Shepperton Rd	9	Albany Hwy	North-South	912	1099	+187	921	1109	+188
Miller St / Kent St	9	Albany Hwy	13	Berwick St	North-South	704	848	+144	848	1021	+173
Miller St / Kent St	21	Beaty Av	3	Shepperton Rd	North-South	840	1012	+172	835	1006	+171
Mint St / Archer St	4	Shepperton Rd	10	Albany Hwy	North-South	590	711	+121	833	1003	+170
Mint St / Archer St	22	66 Mint St	4	Shepperton Rd	North-South	777	936	+159	827	996	+169
Oat St / Hillview Tce	5	Shepperton Rd	11	Albany Hwy	North-South	694	836	+142	945	1138	+193
Oat St / Hillview Tce	11	Albany Hwy	14	Berwick St	North-South	983	1184	+202	784	944	+160

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Road	St Seg	Segment START	End Seg	Segment END	Road Direction	AM PEAK			PM Peak		
						Existing Two-Way Traffic	2042 two-way traffic (resulting from background growth only)	Increase Traffic	Existing Two-Way Traffic	2042 two-way traffic (resulting from background growth only)	Increase Traffic
Oat St / Hillview Tce	23	Swansea St	5	Shepperton Rd	North-South	791	953	+162	826	995	+169
Orrong Rd	18	Francisco St	19	Roberts Rd	East-West	4354	5244	+891	4474	5389	+915
Orrong Rd	19	Roberts Rd	20	Archer St	East-West	4078	4912	+834	4380	5276	+896
Orrong Rd	20	Archer St	21	Oats St	East-West	3615	4354	+740	3170	3818	+648
Orrong Rd	21	Oat St / Hillview Tce	22	Briggs St	East-West	3420	4119	+700	3150	3794	+644
Shepperton Rd	1	Teddington St	2	Duncan St / McMillian St	East-West	2625	3162	+537	2615	3150	+535
Shepperton Rd	2	Duncan St / McMillian St	3	Miller St / Kent St	East-West	2438	2937	+499	2548	3069	+521
Shepperton Rd	3	Miller St / Kent St	4	Mint St / Archer St	East-West	2475	2981	+507	2552	3074	+522
Shepperton Rd	4	Mint St / Archer St	5	Oat St / Hillview Tce	East-West	2592	3122	+531	2653	3196	+543
Shepperton Rd	5	Oat St / Hillview Tce	6	Albany Hwy	East-West	2428	2925	+497	2274	2739	+465
Shepperton Rd	15l	Canning Hwy / North Eastern Hwy	7	Teddington St	East-West	2194	2643	+449	2375	2861	+486
Teddington St	1	Shepperton Rd	7	Albany Hwy	North-South	711	856	+146	728	877	+149
Welshpool Rd	6	Shepperton Rd	23	Sevenoaks St	East-West	1208	1455	+248	1461	1760	+299

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3.6 Traffic impacts

This chapter describes the traffic impacts when the traffic resulting from developments is added to 2042 background traffic (as described in Table 3-8).

The analysis considers the impacts on the arterial road network, which consists of a combination of local and State government roads. For a list of all the roads analysed, refer to Figure 2-1.

Table 3-9 and Table 3-10 represent the calculated AM peak and PM peak levels of service with and without the PSP development, combined with the applied background traffic growth for the 2042 assessment year.

Figure 3-6 and Figure 3-7 illustrates the Level of Service as a heat map based on the colour scheme provided in Table 2-1 that spatially identifies the congestion build up within the network.

The key findings upon reviewing this data is as follows:

AM Peak

During the AM peak period, the local road network within the immediate confines of the study area will generally experience free-flow midblock conditions. However, along the northern extents of the study area, Orrong Road will face significant midblock congestion due to the route nearing its saturation point. The additional 185 two-way trips generated by the PSP development onto Orrong Road, distributed between Roberts Road and Archer Street, further exacerbates the congestion, resulting in a Level of Service (LoS) dropping from D to E.

PM Peak

During the PM peak, Orrong Road is anticipated to continue to experience similar midblock conditions reported during the AM peak. Within the internal road network closer to the PSP additional the network will see more critical congestion build up along the following routes:

- Albany Rd between Oat St and Shepperton St
  - LoS changes from C to E from an additional + 884 two-way trips
- Shepperton Rd between Canning Hwy to Teddington St
  - LoS changes from C to F from an additional +2232 two-way trips
- Shepperton Rd between Teddington St to Duncan St
  - LoS changes from C to E from an additional +2028 two-way trips

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Table 3-9 - AM peak hour level of service impacts

				Background Traffic Growth Only			PSP Development			Difference
Road	Segment START	Segment End	Road Direction	Two-way traffic AM Peak	AM V/C	LoS	Two-way traffic AM Peak	AM V/C	LoS	
Albany Hwy	Albany Hwy	Ashburton St/John St Sth	North-South	2919	0.52	C	3249	0.58	C	+331
Albany Hwy	Canning Hwy / North Eastern Hwy	Teddington St	East-West	760	0.32	A	760	0.32	A	+0
Albany Hwy	Duncan St / McMillian St	Miller St / Kent St	East-West	1019	0.42	B	1544	0.64	C	+525
Albany Hwy	Miller St / Kent St	Mint St / Archer St	East-West	1015	0.42	B	1686	0.70	C	+672
Albany Hwy	Mint St / Archer St	Oat St / Hillview Tce	East-West	874	0.36	B	1627	0.68	C	+753
Albany Hwy	Oat St / Hillview Tce	Shepperton Rd	East-West	984	0.41	B	1560	0.65	C	+577
Albany Hwy	Teddington St	Duncan St / McMillian St	East-West	508	0.21	A	718	0.30	A	+210
Berwick St	Canning Hwy / North Eastern Hwy	Duncan St / McMillian St	East-West	1530	0.64	C	1530	0.64	C	+0
Berwick St	Duncan St / McMillian St	Miller St / Kent St	East-West	1690	0.70	C	1690	0.70	C	+0
Berwick St	Miller St / Kent St	Oat St / Hillview Tce	East-West	1749	0.73	C	1690	0.70	C	+0
Canning Highway	Albany Hwy	Berwick St	North-South	3223	0.58	C	3223	0.58	C	+0
Duncan St / McMillian St	Albany Hwy	Berwick St	North-South	477	0.20	A	799	0.33	A	+322
Duncan St / McMillian St	Shepperton Rd	Albany Hwy	North-South	577	0.24	A	973	0.41	B	+397
Duncan St / McMillian St	Teague St	Shepperton Rd	North-South	400	0.17	A	400	0.17	A	+0
Miller St / Kent St	Albany Hwy	Berwick St	North-South	848	0.35	A	848	0.35	A	+0
Miller St / Kent St	Beaty Av	Shepperton Rd	North-South	1012	0.42	B	1411	0.59	C	+400
Miller St / Kent St	Shepperton Rd	Albany Hwy	North-South	1099	0.46	B	1420	0.59	C	+322
Mint St / Archer St	66 Mint St	Shepperton Rd	North-South	936	0.39	B	1080	0.45	B	+145
Mint St / Archer St	Shepperton Rd	Albany Hwy	North-South	711	0.30	A	1115	0.46	B	+404
Oat St / Hillview Tce	Albany Hwy	Berwick St	North-South	1184	0.49	B	1204	0.50	B	+20
Oat St / Hillview Tce	Shepperton Rd	Albany Hwy	North-South	836	0.35	A	907	0.38	B	+71
Oat St / Hillview Tce	Swansea St	Shepperton Rd	North-South	953	0.40	B	973	0.41	B	+21
Orrong Rd	Archer St	Oats St	East-West	4354	0.78	D	4538	0.81	D	+185
Orrong Rd	Francisco St	Roberts Rd	East-West	5244	0.94	E	5518	0.99	E	+274

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				Background Traffic Growth Only			PSP Development			Difference
Road	Segment START	Segment End	Road Direction	Two-way traffic AM Peak	AM V/C	LoS	Two-way traffic AM Peak	AM V/C	LoS	
Orrong Rd	Oat St / Hillview Tce	Briggs St	East-West	4119	0.74	C	4310	0.77	D	+191
Orrong Rd	Roberts Rd	Archer St	East-West	4912	0.88	D	5096	0.91	E	+185
Shepperton Rd	Canning Hwy / North Eastern Hwy	Teddington St	East-West	2643	0.47	B	3623	0.65	C	+981
Shepperton Rd	Duncan St / McMillian St	Miller St / Kent St	East-West	2937	0.52	C	3480	0.62	C	+544
Shepperton Rd	Miller St / Kent St	Mint St / Archer St	East-West	2981	0.53	C	3380	0.60	C	+399
Shepperton Rd	Mint St / Archer St	Oat St / Hillview Tce	East-West	3122	0.56	C	3172	0.57	C	+50
Shepperton Rd	Oat St / Hillview Tce	Albany Hwy	East-West	2925	0.52	C	2925	0.52	C	+0
Shepperton Rd	Teddington St	Duncan St / McMillian St	East-West	3162	0.56	C	4113	0.73	C	+952
Teddington St	Shepperton Rd	Albany Hwy	North-South	856	0.36	B	886	0.37	B	+30
1Welshpool Rd	Shepperton Rd	Sevenoaks St	East-West	1455	0.26	A	1516	0.27	A	+61

Table 3-10 - PM peak hour level of service impacts

				Background Traffic Growth Only			PSP Development			Difference
Road	Segment START	Segment End	Road Direction	Two-way traffic PM Peak	PM V/C	loS	Two-way traffic PM Peak	PM V/C	LoS	
Albany Hwy	Albany Hwy	Ashburton St/John St Sth	North-South	3508	0.63	C	4053	0.72	C	+546
Albany Hwy	Canning Hwy / North Eastern Hwy	Teddington St	East-West	541	0.23	A	589	0.25	A	+49
Albany Hwy	Duncan St / McMillian St	Miller St / Kent St	East-West	1126	0.47	B	2671	1.11	F	+1545
Albany Hwy	Miller St / Kent St	Mint St / Archer St	East-West	1178	0.49	B	2184	0.91	E	+1006
Albany Hwy	Mint St / Archer St	Oat St / Hillview Tce	East-West	1041	0.43	B	1910	0.80	D	+870
Albany Hwy	Oat St / Hillview Tce	Shepperton Rd	East-West	1320	0.55	C	2206	0.92	E	+886

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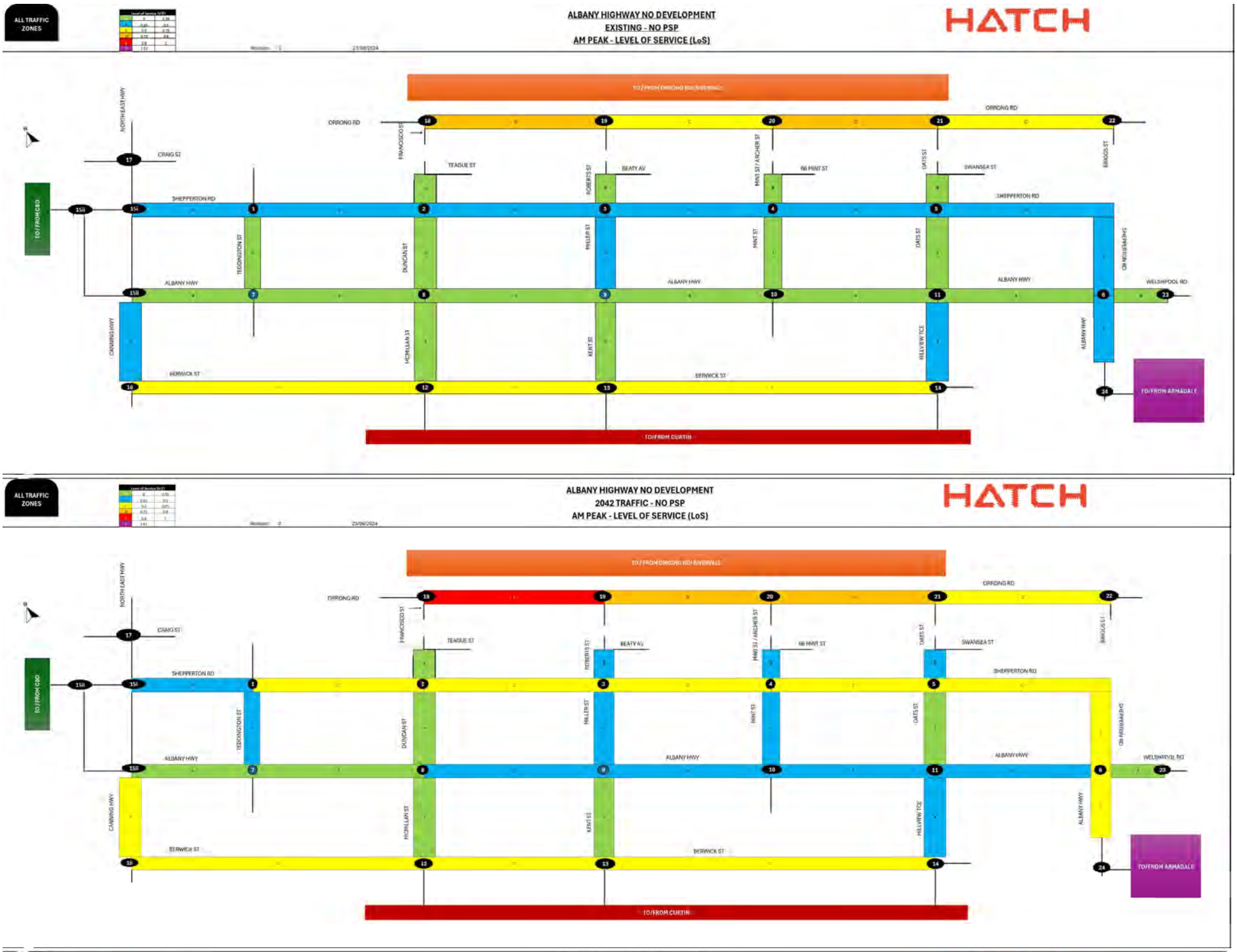
				Background Traffic Growth Only			PSP Development			
Road	Segment START	Segment End	Road Direction	Two-way traffic PM Peak	PM V/C	loS	Two-way traffic PM Peak	PM V/C	LoS	Difference
Albany Hwy	Teddington St	Duncan St / McMillian St	East-West	434	0.18	A	1897	0.79	D	+1464
Berwick St	Canning Hwy / North Eastern Hwy	Duncan St / McMillian St	East-West	1557	0.65	C	1557	0.65	C	+0
Berwick St	Duncan St / McMillian St	Miller St / Kent St	East-West	1417	0.59	C	1417	0.59	C	+0
Berwick St	Miller St / Kent St	Oat St / Hillview Tce	East-West	1577	0.66	C	1417	0.59	C	+0
Canning Highway	Albany Hwy	Berwick St	North-South	3859	0.58	C	3859	0.58	C	+0
Duncan St / McMillian St	Albany Hwy	Berwick St	North-South	499	0.21	A	1063	0.44	B	+565
Duncan St / McMillian St	Shepperton Rd	Albany Hwy	North-South	626	0.26	A	626	0.26	A	+0
Duncan St / McMillian St	Teague St	Shepperton Rd	North-South	282	0.12	A	282	0.12	A	+0
Miller St / Kent St	Albany Hwy	Berwick St	North-South	1021	0.43	B	1021	0.43	B	+0
Miller St / Kent St	Beaty Av	Shepperton Rd	North-South	1006	0.42	B	1706	0.71	C	+701
Miller St / Kent St	Shepperton Rd	Albany Hwy	North-South	1109	0.46	B	1109	0.46	B	+0
Mint St / Archer St	66 Mint St	Shepperton Rd	North-South	996	0.42	B	1250	0.52	C	+255
Mint St / Archer St	Shepperton Rd	Albany Hwy	North-South	1003	0.42	B	1003	0.42	B	+0
Oat St / Hillview Tce	Albany Hwy	Berwick St	North-South	944	0.39	B	979	0.41	B	+35
Oat St / Hillview Tce	Shepperton Rd	Albany Hwy	North-South	1138	0.47	B	1264	0.53	C	+126

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				Background Traffic Growth Only			PSP Development			
Road	Segment START	Segment End	Road Direction	Two-way traffic PM Peak	PM V/C	loS	Two-way traffic PM Peak	PM V/C	LoS	Difference
Oat St / Hillview Tce	Swansea St	Shepperton Rd	North-South	995	0.41	B	1032	0.43	B	+37
Orrong Rd	Archer St	Oats St	East-West	3818	0.68	C	4404	0.79	D	+586
Orrong Rd	Francisco St	Roberts Rd	East-West	5389	0.96	E	5885	1.05	F	+496
Orrong Rd	Oat St / Hillview Tce	Briggs St	East-West	3794	0.68	C	4379	0.78	D	+586
Orrong Rd	Roberts Rd	Archer St	East-West	5276	0.94	E	5785	1.03	F	+510
Sheppert on Rd	Canning Hwy / North Eastern Hwy	Teddington St	East-West	2861	0.51	C	5092	0.91	F	+2232
Sheppert on Rd	Duncan St / McMillian St	Miller St / Kent St	East-West	3069	0.55	C	4026	0.72	C	+957
Sheppert on Rd	Miller St / Kent St	Mint St / Archer St	East-West	2749	0.49	B	3453	0.62	C	+704
Sheppert on Rd	Mint St / Archer St	Oat St / Hillview Tce	East-West	3196	0.57	C	3284	0.59	C	+89
Sheppert on Rd	Oat St / Hillview Tce	Albany Hwy	East-West	2739	0.49	B	2739	0.49	B	+0
Sheppert on Rd	Teddington St	Duncan St / McMillian St	East-West	3150	0.56	C	5177	0.92	E	+2028
Teddingt on St	Shepperton Rd	Albany Hwy	North-South	877	0.37	B	877	0.37	B	+0
1Welshp ool Rd	Shepperton Rd	Sevenoaks St	East-West	1760	0.31	A	2045	0.37	B	+286

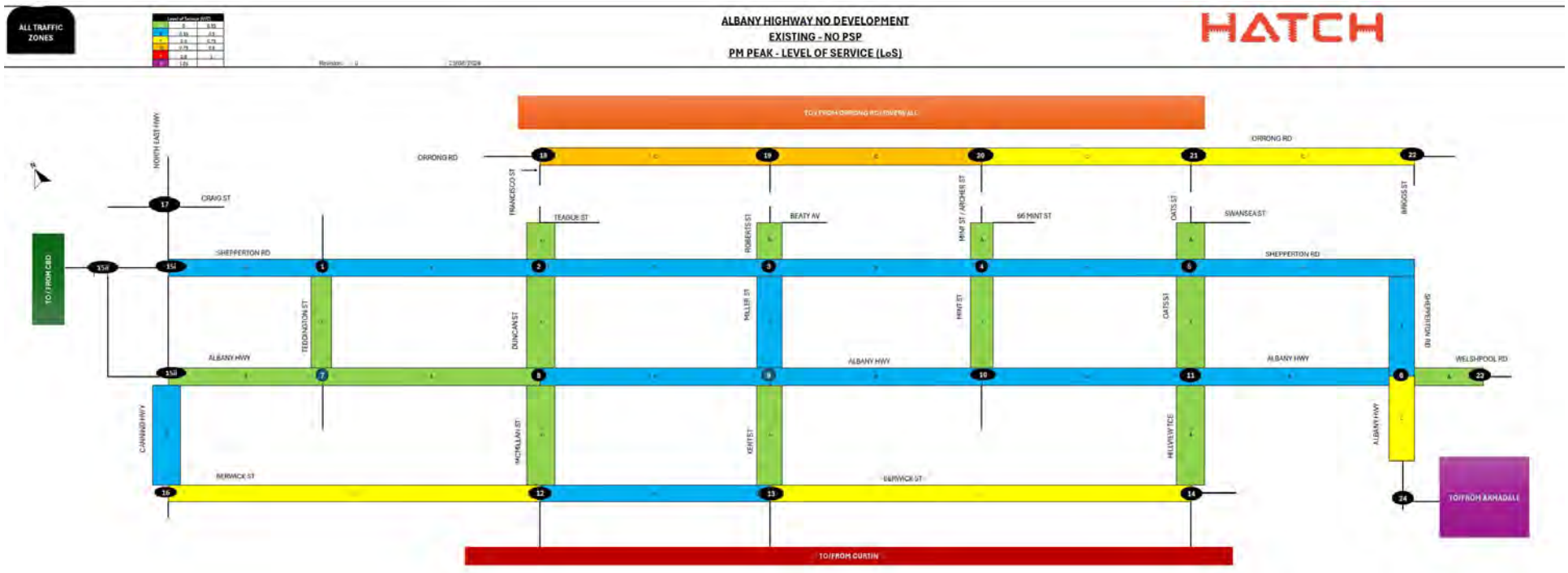
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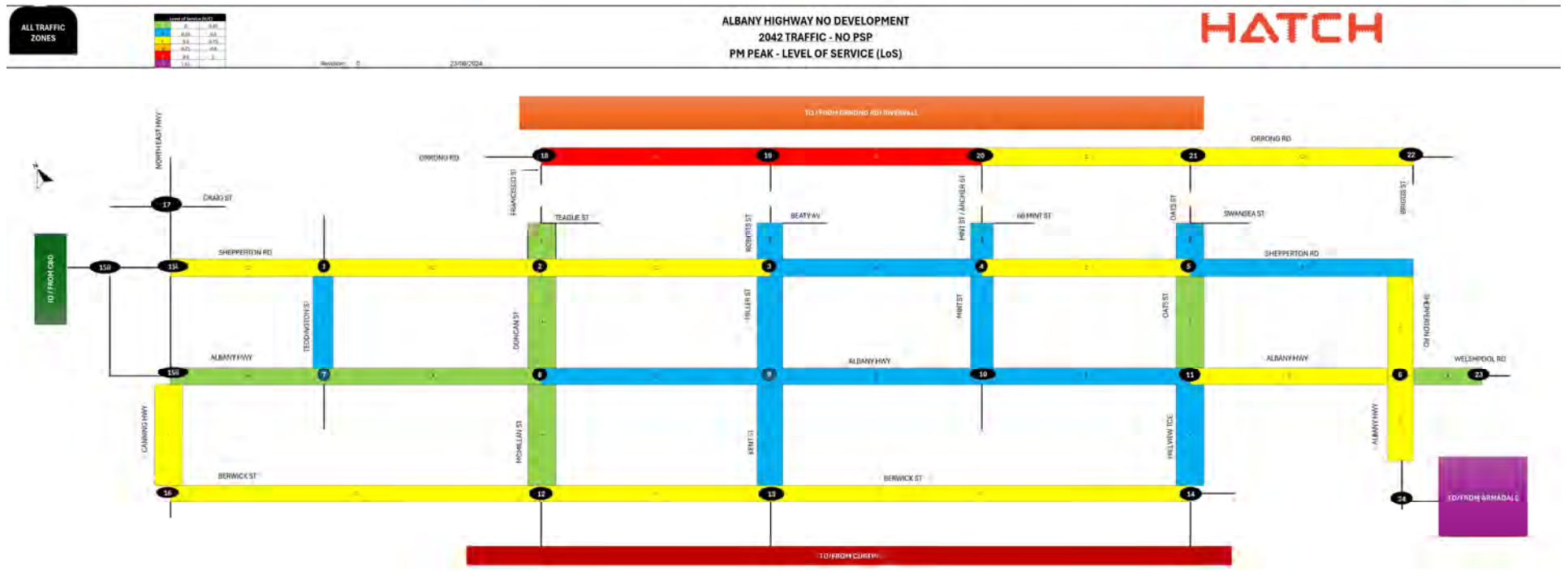
Figure 3-6 - AM peak hour Los Heat Map (Existing, 2042 Traffic Only & 2042 PSP development)

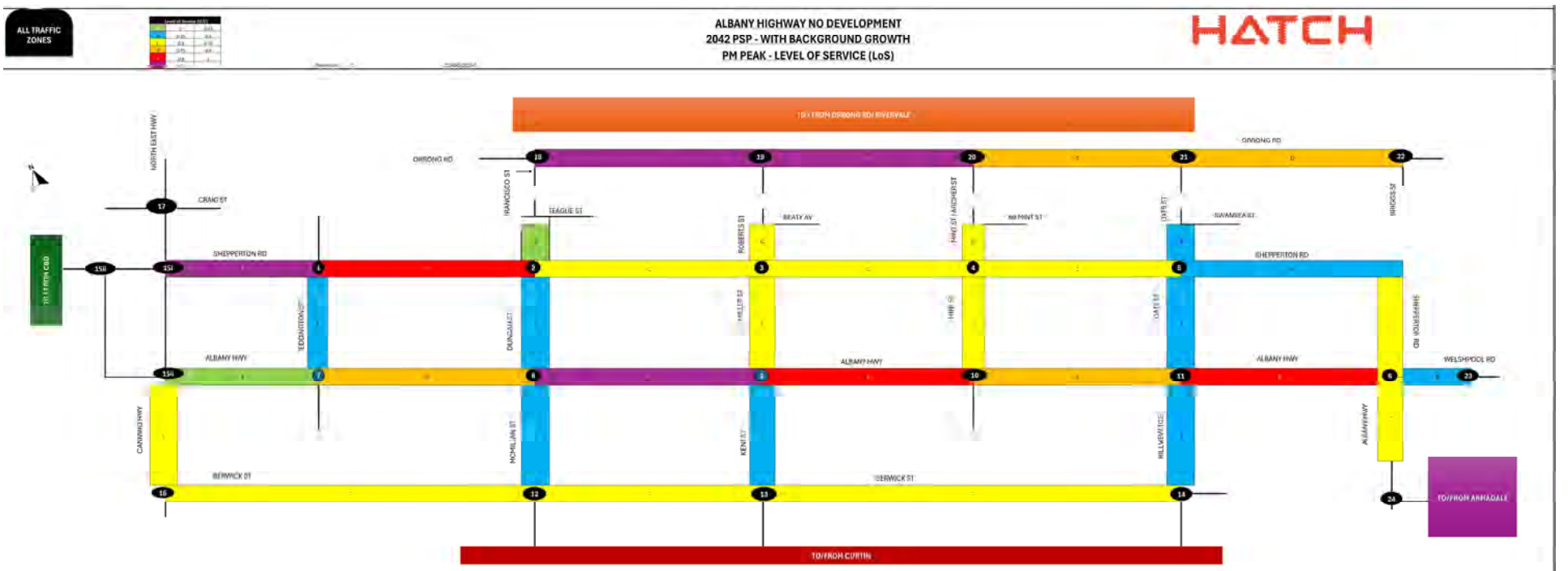


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Figure 3-7 - PM peak hour level of service LoS Heatmaps (Existing, 2042 Traffic Only & 2042 PSP development)







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3.7 What-if scenarios

The impacts described in Section 3.6 are based on typical trip generation rates for Australian cities, and are inherently conservative in terms of mode share. The Albany Highway PSP has been prepared to generally enable and promote a shift in travel behaviour of residents (and visitors) towards active travel and public transport, and away from private car. This is described in Chapter 6.4 – Movement of the PSP, along with specific objectives around

- Restructuring the precinct movement network to discourage unnecessary car trips and promoting modal shift to walking, cycling and public transport (Objective 10);
- Improving public transport services and encouraging a future transition to mid tier transport along Albany Highway (Objective 11); and
- Discouraging private residential parking in new development to reduce car dependence while ensuring sufficient public parking.

Hatch has developed high-level scenarios to test the implications for levels of service of a modal shift away from car dependency. This included comparing the impacts of 5%, 10% and 20% decreases in car-based trips emanating from the study area in the AM and PM peak periods for 2042.

The Albany Highway PSP9 targets a 7% decrease in car (as driver) mode share across the Town from 2016 levels (69%) by 2031. While the exact decrease in car-based trips expected under the PSP at full-build-out is difficult to estimate, the scenarios tested provide an indication of the impact on trips and therefore on levels of service on the road network.

To assess the impacts of targeted modal shifts to reduce reliance on private single occupant car travel, three (3) sensitivity test scenarios were undertaken to ascertain the impact specific target PSP reductions would have on the surrounding road network. The scenarios tested were as follows:

- Scenario 1 5% Reduction in PSP Development Traffic
- Scenario 2 10% Reduction in PSP Development Traffic
- Scenario 3 20% Reduction in PSP Development Traffic

Table 3-11 presents the overall gross PSP trip reduction (shown in brackets) across the assessed study area based on the 3 scenarios.

Table 3-11 – Net decrease in AM Peak and PM Peak period trips generated by the PSP

	2042 PSP	2042 PSP Traffic 5% Reduction	2042 PSP Traffic 10% Reduction	2042 PSP Traffic 20% Reduction
AM Peak	4541	4385 (-156)	4229 (-311)	3918 (-623)
PM Peak	7950	7689 (-261)	7428 (-522)	6907 (-1043)

[9] Table 26 – Existing and proposed mode share, also shown in Table 2 of the Albany Hwy PSP Transport Strategy report

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Tables 3-12 and 3-13 present a summary of all Level of Service (LoS) what-if scenarios performed as part of this high-level traffic analysis. The initial data indicates that the internal network will generally continue to provide a satisfactory level of service. The high-level analysis shows that introducing modal shift targets of 5% or 10% targeting PSP development traffic does little to reduce network congestion in the notable pinch points.

Areas identified as deteriorating to LoS E and F are mainly focused on Albany Hwy and Orrong Road, as well as the section of Shepperton Road located east of Teddington Street. Based on discussions, it has been identified that targeting a modal shift reduction of 20% could alleviate severe congestion, improving the midblock LoS from F to E along Albany Highway between Duncan Street and Miller Street during the PM peak.

It should be noted that this traffic analysis is based on highly conservative trip and distribution assumptions. Traffic generated by the PSP may disperse into surrounding regions, potentially reducing its impact within the immediate area.

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Table 3-12 AM Peak Comparison of Model Shift Scenarios

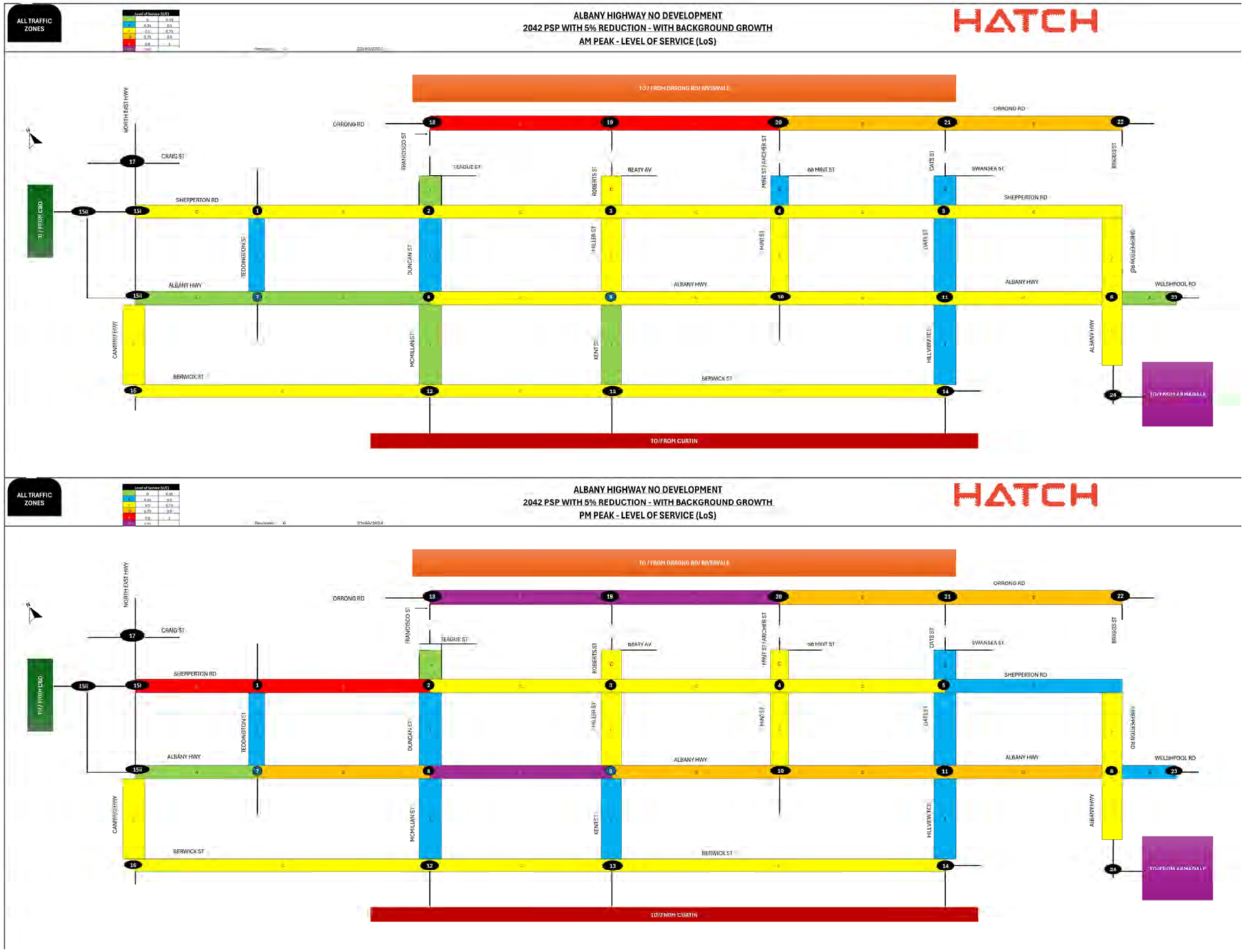
Road	Segment Start	Segment_End	EXISTING		2042 Background Traffic Growth Only		2042 PSP No Background Traffic Growth		2042 PSP With Background Traffic Growth		2042 PSP With Background Traffic Growth -5% Reduction		2042 PSP With Background Traffic Growth -10% Reduction		2042 PSP With Background Traffic Growth -20% Reduction	
			AM PEAK Two-Way Traffic	LoS	AM PEAK Two-Way Traffic	LoS	AM PEAK Two-Way Traffic	LoS	AM PEAK Two-Way Traffic	LoS	AM PEAK Two-Way Traffic	LoS	AM PEAK Two-Way Traffic	LoS	AM PEAK Two-Way Traffic	LoS
Albany Hwy	Albany Hwy	Ashburton St/John St Sth	2423	B	2919	C	3367	C	3249	C	3233	C	3216	C	3183	C
Albany Hwy	Canning Hwy / North Eastern Hwy	Teddington St	631	A	760	A	631	A	760	A	760	A	760	A	760	A
Albany Hwy	Duncan St / McMillian St	Miller St / Kent St	846	A	1019	B	1371	C	1544	C	1518	C	1491	C	1439	C
Albany Hwy	Miller St / Kent St	Mint St / Archer St	843	A	1015	B	1514	C	1686	C	1653	C	1619	C	1552	C
Albany Hwy	Mint St / Archer St	Oat St / Hillview Tce	726	A	874	B	1479	C	1627	C	1590	C	1552	C	1477	C
Albany Hwy	Oat St / Hillview Tce	Shepperton Rd	817	A	984	B	1393	C	1560	C	1531	C	1503	C	1445	C
Albany Hwy	Teddington St	Duncan St / McMillian St	422	A	508	A	631	A	718	A	707	A	697	A	676	A
Berwick St	Canning Hwy / North Eastern Hwy	Duncan St / McMillian St	1270	C	1530	C	1270	C	1530	C	1530	C	1530	C	1530	C
Berwick St	Duncan St / McMillian St	Miller St / Kent St	1403	C	1690	C	1403	C	1690	C	1690	C	1690	C	1690	C
Berwick St	Miller St / Kent St	Oat St / Hillview Tce	1452	C	1749	C	1452	C	1690	C	1749	C	1749	C	1749	C
Canning Highway	Albany Hwy	Berwick St	2676	B	3223	C	2676	B	3223	C	3223	C	3223	C	3223	C
Duncan St / McMillian St	Albany Hwy	Berwick St	396	A	477	A	718	A	799	A	783	A	767	A	734	A
Duncan St / McMillian St	Shepperton Rd	Albany Hwy	479	A	577	A	875	B	973	B	953	B	934	B	894	B
Duncan St / McMillian St	Teague St	Shepperton Rd	332	A	400	A	332	A	400	A	400	A	400	A	400	A
Miller St / Kent St	Albany Hwy	Berwick St	704	A	848	A	704	A	848	A	848	A	848	A	848	A
Miller St / Kent St	Beaty Av	Shepperton Rd	840	A	1012	B	1239	C	1411	C	1391	C	1371	C	1331	C
Miller St / Kent St	Shepperton Rd	Albany Hwy	912	B	1099	B	1234	C	1420	C	1404	C	1388	C	1356	C
Mint St / Archer St	66 Mint St	Shepperton Rd	777	A	936	B	921	B	1080	B	1073	B	1066	B	1051	B
Mint St / Archer St	Shepperton Rd	Albany Hwy	590	A	711	A	994	B	1115	B	1094	B	1074	B	1034	B
Oat St / Hillview Tce	Albany Hwy	Berwick St	983	B	1184	B	1003	B	1204	B	1203	B	1202	B	1200	B
Oat St / Hillview Tce	Shepperton Rd	Albany Hwy	694	A	836	A	765	A	907	B	903	B	900	B	892	B
Oat St / Hillview Tce	Swansea St	Shepperton Rd	791	A	953	B	812	A	973	B	972	B	971	B	969	B
Orrong Rd	Archer St	Oats St	3615	D	4354	D	3799	C	4538	D	4529	D	4520	D	4502	D
Orrong Rd	Francisco St	Roberts Rd	4354	D	5244	E	4628	D	5518	E	5504	E	5491	E	5463	E
Orrong Rd	Oat St / Hillview Tce	Briggs St	3420	C	4119	C	3610	C	4310	D	4300	D	4291	D	4272	D
Orrong Rd	Roberts Rd	Archer St	4078	C	4912	D	4262	D	5096	E	5087	E	5078	E	5059	E
Shepperton Rd	Canning Hwy / North Eastern Hwy	Teddington St	2194	B	2643	B	3174	C	3623	C	3574	C	3525	C	3427	C
Shepperton Rd	Duncan St / McMillian St	Miller St / Kent St	2438	B	2937	C	2981	C	3480	C	3452	C	3425	C	3371	C
Shepperton Rd	Miller St / Kent St	Mint St / Archer St	2475	B	2981	C	2874	C	3380	C	3360	C	3340	C	3300	C
Shepperton Rd	Mint St / Archer St	Oat St / Hillview Tce	2592	B	3122	C	2642	B	3172	C	3170	C	3167	C	3162	C
Shepperton Rd	Oat St / Hillview Tce	Albany Hwy	2428	B	2925	C	2428	B	2925	C	2925	C	2925	C	2925	C
Shepperton Rd	Teddington St	Duncan St / McMillian St	2625	B	3162	C	3576	C	4113	C	4065	C	4018	C	3923	C
Teddington St	Shepperton Rd	Albany Hwy	711	A	856	B	740	A	886	B	884	B	883	B	880	B
Welshpool Rd	Shepperton Rd	Sevenoaks St	1208	A	1455	A	1268	A	1516	A	1512	A	1509	A	1503	A

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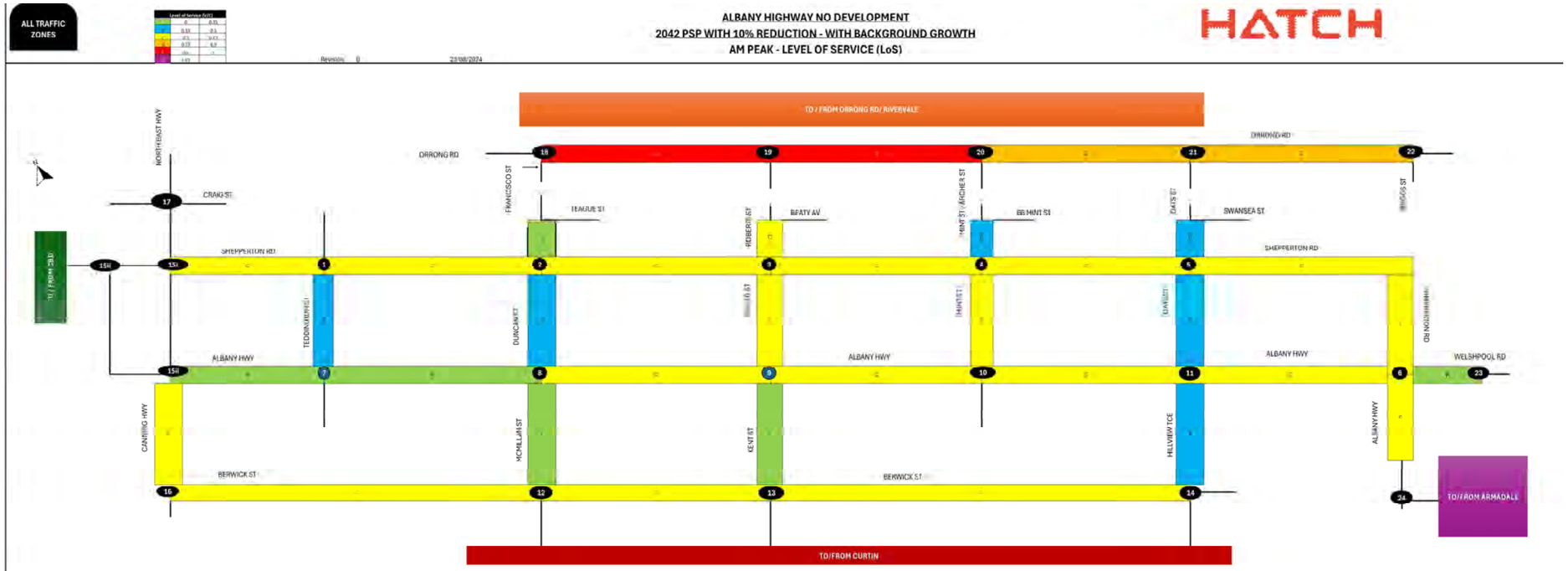
Table 3-13 PM Peak Comparison of Model Shift Scenarios

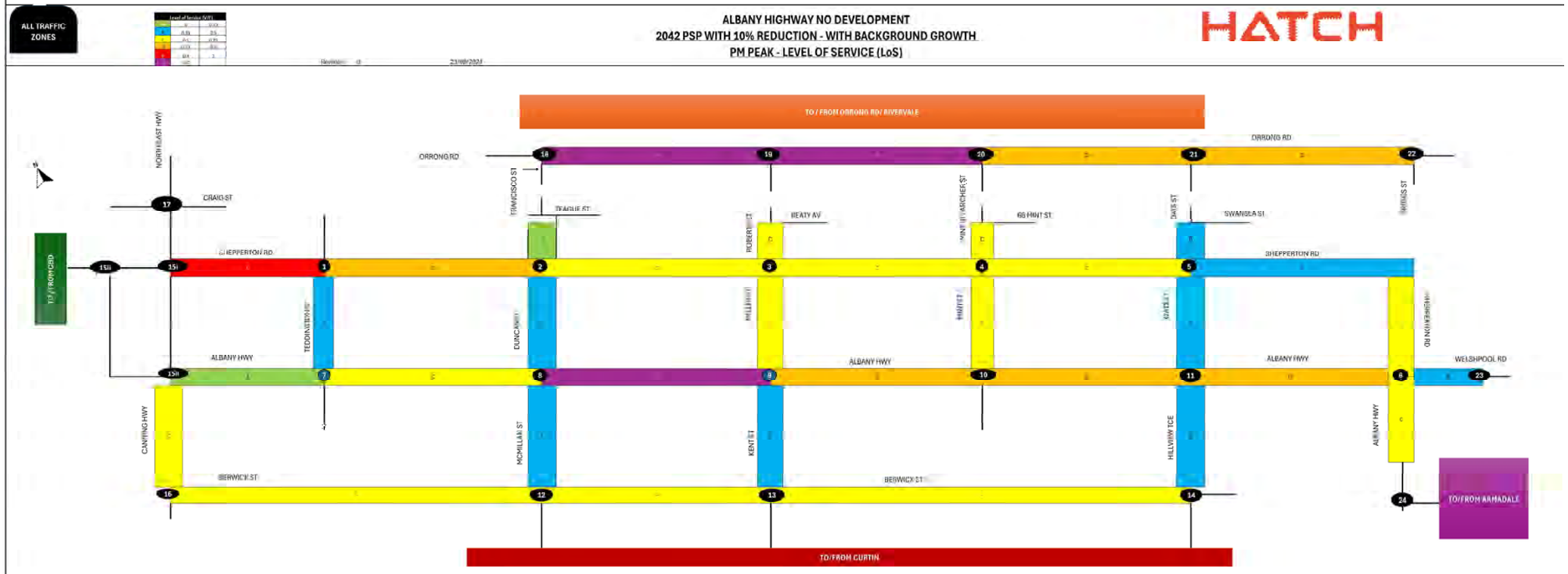
Road	Segment Start	Segment End	EXISTING		2042 Background Traffic Growth Only		2042 PSP No Background Traffic Growth		2042 PSP With Background Traffic Growth		2042 PSP With Background Traffic Growth -5% Reduction		2042 PSP With Background Traffic Growth -10% Reduction		2042 PSP With Background Traffic Growth -20% Reduction	
			PM PEAK Two-Way Traffic	LoS	PM PEAK Two-Way Traffic	LoS	PM PEAK Two-Way Traffic	LoS	PM PEAK Two-Way Traffic	LoS	PM PEAK Two-Way Traffic	LoS	PM PEAK Two-Way Traffic	LoS	PM PEAK Two-Way Traffic	LoS
Albany Hwy	Albany Hwy	Ashburton St/John St Sth	2912	C	3508	C	2844	C	4053	C	4026	C	3999	C	3944	C
Albany Hwy	Canning Hwy / North Eastern Hwy	Teddington St	449	A	541	A	489	A	589	A	589	A	589	A	589	A
Albany Hwy	Duncan St / McMillian St	Miller St / Kent St	935	B	1126	B	2480	F	2671	F	2594	F	2517	F	2362	E
Albany Hwy	Miller St / Kent St	Mint St / Archer St	978	B	1178	B	1984	D	2184	E	2133	D	2083	D	1983	D
Albany Hwy	Mint St / Archer St	Oat St / Hillview Tce	864	B	1041	B	1733	C	1910	D	1867	D	1823	D	1736	C
Albany Hwy	Oat St / Hillview Tce	Shepperton Rd	1096	B	1320	C	1982	D	2206	E	2162	D	2117	D	2029	D
Albany Hwy	Teddington St	Duncan St / McMillian St	360	A	434	A	1824	D	1897	D	1824	D	1751	C	1604	C
Berwick St	Canning Hwy / North Eastern Hwy	Duncan St / McMillian St	1293	C	1557	C	1293	C	1557	C	1557	C	1557	C	1557	C
Berwick St	Duncan St / McMillian St	Miller St / Kent St	1176	B	1417	C	1176	B	1417	C	1417	C	1417	C	1417	C
Berwick St	Miller St / Kent St	Oat St / Hillview Tce	1309	C	1577	C	1309	C	1417	C	1577	C	1577	C	1577	C
Canning Highway	Albany Hwy	Berwick St	3204	B	3859	C	3204	B	3859	C	3859	C	3859	C	3859	C
Duncan St / McMillian St	Albany Hwy	Berwick St	414	A	499	A	979	B	1063	B	1035	B	1007	B	950	B
Duncan St / McMillian St	Shepperton Rd	Albany Hwy	520	A	626	A	520	A	626	A	626	A	626	A	626	A
Duncan St / McMillian St	Teague St	Shepperton Rd	234	A	282	A	234	A	282	A	282	A	282	A	282	A
Miller St / Kent St	Albany Hwy	Berwick St	848	A	1021	B	848	A	1021	B	1021	B	1021	B	1021	B
Miller St / Kent St	Beaty Av	Shepperton Rd	835	A	1006	B	1535	C	1706	C	1671	C	1636	C	1566	C
Miller St / Kent St	Shepperton Rd	Albany Hwy	921	B	1109	B	921	B	1109	B	1109	B	1109	B	1109	B
Mint St / Archer St	66 Mint St	Shepperton Rd	827	A	996	B	1081	B	1250	C	1237	C	1225	C	1199	B
Mint St / Archer St	Shepperton Rd	Albany Hwy	833	A	1003	B	833	A	1003	B	1003	B	1003	B	1003	B
Oat St / Hillview Tce	Albany Hwy	Berwick St	784	A	944	B	819	A	979	B	977	B	976	B	972	B
Oat St / Hillview Tce	Shepperton Rd	Albany Hwy	945	B	1138	B	1071	B	1264	C	1258	C	1251	C	1239	C
Oat St / Hillview Tce	Swansea St	Shepperton Rd	826	A	995	B	863	B	1032	B	1030	B	1028	B	1024	B
Orrong Rd	Archer St	Oats St	3170	C	3818	C	3755	C	4404	D	4374	D	4345	D	4286	D
Orrong Rd	Francisco St	Roberts Rd	4474	D	5389	E	4970	D	5885	F	5860	F	5835	F	5785	F
Orrong Rd	Oat St / Hillview Tce	Briggs St	3150	C	3794	C	3735	C	4379	D	4350	D	4321	D	4262	D
Orrong Rd	Roberts Rd	Archer St	4380	D	5276	E	4889	D	5785	F	5759	F	5734	F	5683	F
Shepperton Rd	Canning Hwy / North Eastern Hwy	Teddington St	2375	B	2861	C	4606	E	5092	F	4980	E	4869	E	4646	E
Shepperton Rd	Duncan St / McMillian St	Miller St / Kent St	2548	B	3069	C	3505	C	4026	C	3978	C	3930	C	3835	C
Shepperton Rd	Miller St / Kent St	Mint St / Archer St	2552	B	2749	B	3256	C	3453	C	3418	C	3383	C	3312	C
Shepperton Rd	Mint St / Archer St	Oat St / Hillview Tce	2653	B	3196	C	2742	B	3284	C	3280	C	3276	C	3267	C
Shepperton Rd	Oat St / Hillview Tce	Albany Hwy	2274	B	2739	B	2274	B	2739	B	2739	B	2739	B	2739	B
Shepperton Rd	Teddington St	Duncan St / McMillian St	2615	B	3150	C	4643	D	5177	E	5076	E	4975	D	4772	D
Teddington St	Shepperton Rd	Albany Hwy	728	A	877	B	728	A	877	B	877	B	877	B	877	B
Welshpool Rd	Shepperton Rd	Sevenoaks St	1461	A	1760	A	1747	A	2045	B	2031	B	2017	B	1988	B

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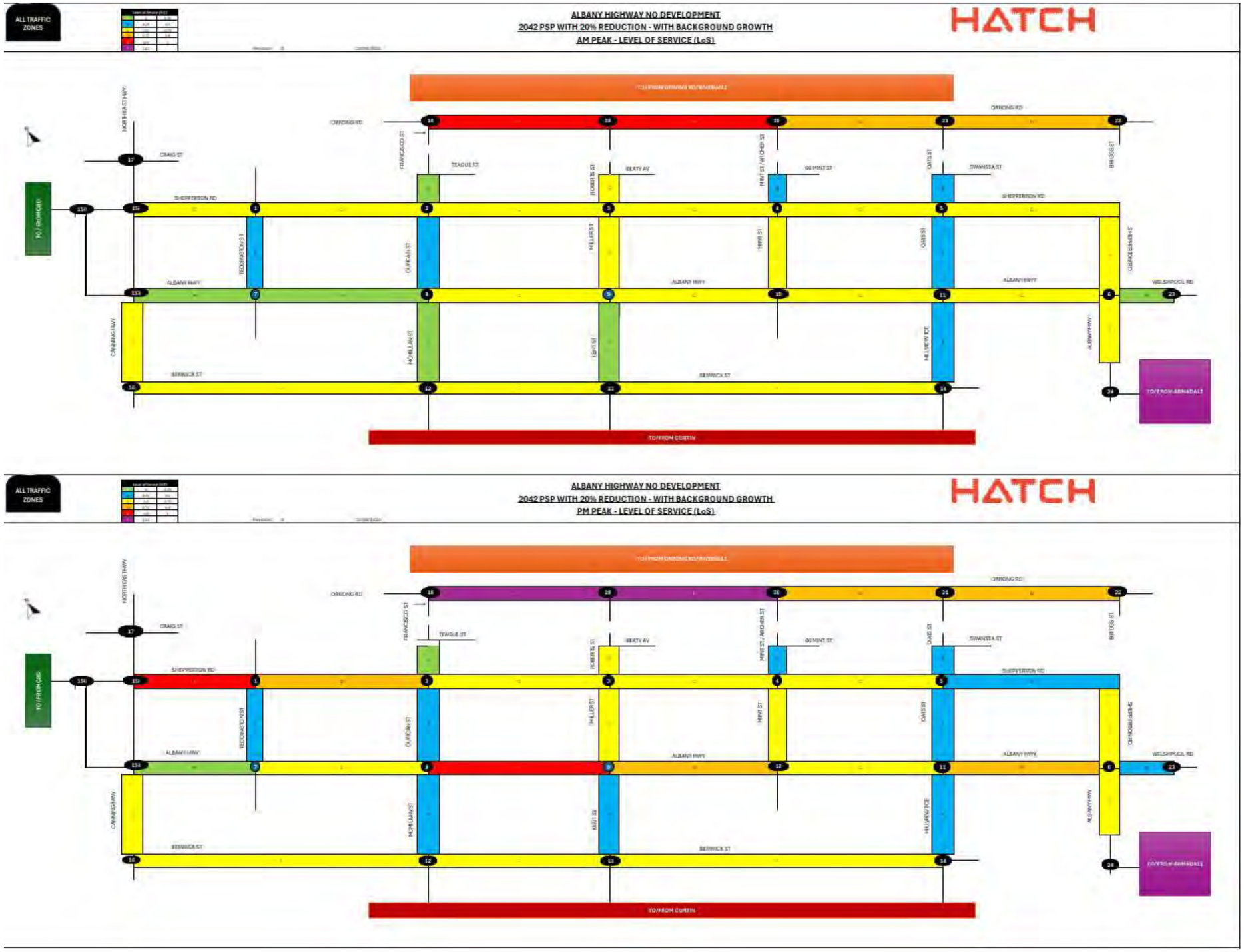


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4. Summary and conclusions

The purpose of this report was to undertake a high-level examination of the potential traffic impacts arising from proposed land use intensification along the Albany Highway corridor in Victoria Park and East Victoria Park. Employing a series of logical assumptions around future land use, trip generation and trip distribution, this exercise has explored the potential implications on midblock level-of-service for key arterial roads within and surrounding the study area.

The initial data review found that most of the study area currently operates at a satisfactory level-of-service, with the majority of the arterial road network exhibiting a midblock LoS of A or B. The main exception to this is Berwick Street which currently contains segments operating at LoS C in both the AM and PM peak periods.

The high-level analysis performed as part of this study indicates that most of the precinct's regional network can continue to operate at a satisfactory level of service after taking into consideration both planned development and forecast regional background traffic growth.

Areas identified as potentially deteriorating to Los E and F are mainly focused on Albany Highway and Orrong Road itself, as well as the section of Shepperton Road located east of Teddington Street. Feedback received during the community engagement process suggests there is broad community support around the notion of Albany Highway transitioning into a genuine destination rather than a traditional movement corridor. Underpinning the PSP are several 'key ideas' relating the movement and access which include:

- Reallocating spaces form cars to people
- Improving walking, cycling and transit infrastructure
- Reducing the native impacts of vehicle traffic
- Rethinking parking supply and management

As a result of the above, it is recommended the Town accept that Albany Highway's LoS may deteriorate over coming decades.

In terms of Shepperton Road, it is plausible to suggest that the long-term traffic forecasts for this corridor may be overly conservative. Major infrastructure projects including the Inner Armadale Level Crossing Removal (set to open in 2025) and Orrong Road Planning Study (not-yet committed) have the potential to significantly change travel behaviour patterns in Perth's southeastern corridor, particularly for longer distance journeys.

In reviewing the traffic analysis, a targeted modal shift of 20% could alleviate severe congestion, improving the midblock Level of Service (LoS) from F to E along Albany Highway between Duncan Street and Miller Street in the PM Peak. It should be noted that the distribution analysis is based on a set of highly conservative trip and distribution assumptions. Traffic generated by the PSP may disperse into surrounding regions, potentially reducing its impact within the immediate area.

Therefore, it is recommended that the city aim for a reduction target of between 10% and 20%.

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As a result of the above, it is recommended that Main Roads WA support the Albany Highway Precinct Structure Plan. Given the study area's proximity to the Perth CBD, as well as numerous active and public transport routes, there is strong evidence to suggest the area's transport infrastructure can support additional population and economic growth. This is further evidenced by the sensitivity testing which suggests that operational impacts on regional road network can be largely mitigated against through direct efforts to influence modal shift.

As development unfolds across the study area, travel behaviour should be carefully monitored to ascertain if the traffic growth foreshadowed in this report actually materialises. Additionally, the Town should continue working with other government agencies to ensure that sustained, ongoing investment is made in improving active and public transport to encourage modal shift away from private vehicles – a strategy that is used improve the capacity and liveability of inner-urban communities across the globe.

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Appendix A: Development yields (provided by ToVP)

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Base Data - based on ERE Strategy Moderate Growth for 2022 203617

Zone	PSP Residential (base)	Distribution of Development	Population @ 1.7 persons (2021 ABS for Flats / Apartments)	School (PreP to Secondary)	GLA TOTAL	Retail (food) SHOP	Retail (non-food) OTHER RETAIL	Commercial OFFICE	Industrial OTHER COMMERCIAL	Tourist Accommodation	Floorspace Distribution
Unit	*No. dwellings*	%	*Additional*	*Additional pupils (11% of pop at 2021 census)*	*(Non_resi)*	*GFA (m^2)*	*GFA (m^2)*	*GFA (m^2)*	*GFA (m^2)*	*GFA (m^2)*	%
Causeway			0	0	*56827*	1695	10802	36196	8134	-	24
Victoria Park			0	0	*61518*	16382	2881	25987	16268	-	26
Central			0	0	*25648*	3389	11882	2784	7592	-	11
East Vic Park			0	0	*69404*	27680	6121	20418	15184	-	29
East End			0	0	*11240*	1130	360	6497	3254	-	5
St James			0	0	*14899*	6214	3961	928	3796	-	6
TOTAL	**1800**		3060	0	**239536**	*56490*	*36007*	*92810*	*54228*	-	100
						24%	15%	39%	23%	0%	100%

To 2034 (ERE Strategy based on Moderate Growth Scenario)

Zone	Residential (Additional to base data)	Distribution of Development	Population @ 1.7 persons (2021 ABS for Flats / Apartments)	School (PreP to Secondary)	GLA Increase (from 2022 base)	Retail (food) SHOP	Retail (non-food) OTHER RETAIL	Commercial OFFICE	Industrial OTHER COMMERCIAL	Tourist Accommodation	Floorspace Distribution
Unit	*No. dwellings*	%	*Additional*	*Additional pupils (11% of pop at 2021 census)*	*(Non_resi)*	*GFA (m^2)*	*GFA (m^2)*	*GFA (m^2)*	*GFA (m^2)*	*GFA (m^2)*	%
Causeway	120	15%	204	22	*7870*	1889	1181	2990	1810	-	
Victoria Park	120	15%	204	22	*7870*	1889	1181	2990	1810	-	
Central	240	30%	408	45	*15739*	3777	2361	5981	3620	-	
East Vic Park	200	25%	340	37	*13116*	3148	1968	4984	3017	-	
East End	40	5%	68	7	*2623*	630	394	997	603	-	
St James	80	10%	136	15	*5246*	1259	787	1994	1207	-	
TOTAL	**800**	100%	1360	150	**52464**	*12591*	*7870*	*19936*	*12067*	0	52464
	11.6% of Ultimate Du's				33%	*24.0*	*15.0*	*38.0*	*23.0*	*0*	100
					Of Total Additional Floorspace						

Notes

PSP Interim (2034)Development Distribution - based on Stakeholder feedback and understanding of where development is more likely to occur over the next 10-15 years

To 2042 (ERE Strategy based on Moderate Growth Scenario)

Zone	Residential (Additional to base data)	Distribution of Development	Population @ 1.7 persons (2021 ABS for Flats / Apartments)	School (PreP to Secondary)	GLA Increase (from 2022 base)	Retail (food) SHOP	Retail (non-food) OTHER RETAIL	Commercial OFFICE	Industrial OTHER COMMERCIAL	Tourist Accommodation	Floorspace Distribution	
Unit	*No. dwellings*	*% (as of 2034 onwards)*	*Additional*	*No. additional pupils (11% at 2021 census)*	*(Non_resi)*	*GFA (m^2)*	*GFA (m^2)*	*GFA (m^2)*	*GFA (m^2)*	*GFA (m^2)*		
Causeway	266	25%	452	50	20759	4853	2985	7760	4646	866	21110	
Victoria Park	207	15%	353	39	15603	3668	2263	5852	3512	660	15954	
Central	357	20%	606	67	26051	6149	3805	9796	5889		25639	
East Vic Park	317	20%	538	59	23428	5520	3411	8799	5285	536	23552	
East End	69	5%	118	13	5201	1223	754	1951	1171		5098	
St James	167	15%	285	31	12980	3038	1870	4855	2908		12671	
TOTAL	**1383**	100%	2351	259	**104023**	*24450*	*15088*	*39013*	*23410*	*2062*	**104023**	104023
	20% of Ultimate Du's			Of Total Additional Fl	76%	23.5	14.5	37.5	22.5	2.0	100	
					51559	24450	15088	39013	23410			
					104023							

Ultimate Development (based on 85% Capacity) - estimated 50 years at 3.1% CA Pop GR

Zone	Residential (Additional to Base)	Distribution of Resi Development	Population @ 1.7 persons (2021 ABS for Flats / Apartments)	School (PreP to Secondary)	TOTAL GLA (85%)	GLA Increase	Retail (food) SHOP	Retail (non-food) OTHER RETAIL	Commercial OFFICE	Light Industrial/Service OTHER COMMERCIAL	Tourist Accommodation		Floorspace Distribution
Unit	*No. dwellings*	%	*Additional*	*No. pupils (11% at 2021 census)*		*(Non_resi)*	*GFA (m^2)*	*GFA (m^2)*	*GFA (m^2)*	*GFA (m^2)*	*GFA (m^2)*		%
Causeway	1725	25%	2933	323	89835	35659	2865	5710	14926	6964	6783	37249	27

Victoria Park	1035	15%	1760	194	80750	32916	8023	2498	12127.7	5849.76	5168	33667	25
Central	1380	20%	2346	258	42500	16458	2579	2498	5597.4	5014.08	0	15689	11
East Vic Park	1380	20%	2346	258	89250	35659	12035	3747	9329	6406.88	4199	35717	26
East End	345	5%	587	65	13600	5486	1146	892	1399.35	1671.36	0	5109	4
St James	1035	15%	1760	194	24820	10972	2006	2498	3265.15	1949.92	0	9719	7
TOTAL	**6900**		11730	1290	**340755**	**137150**	*28654*	*17844*	*46645*	*27856*	*16150*	***137149***	100
	85% Ulitmate Development						*28654*	*17844*	*46645*	*27856*	*16150*	*137149*	

PSP Development Distribution (Ultimate)

- Causeway: (25%) - 1,725
- Victoria Park: (15%) - 1,035
- Central: (20%) - 1,380
- East Victoria Park: (20%) - 1,380
- East End: 5% - (345)
- St James: (15%) - 1,035

Appendix B: ROM24 data (provided by Main Roads WA)

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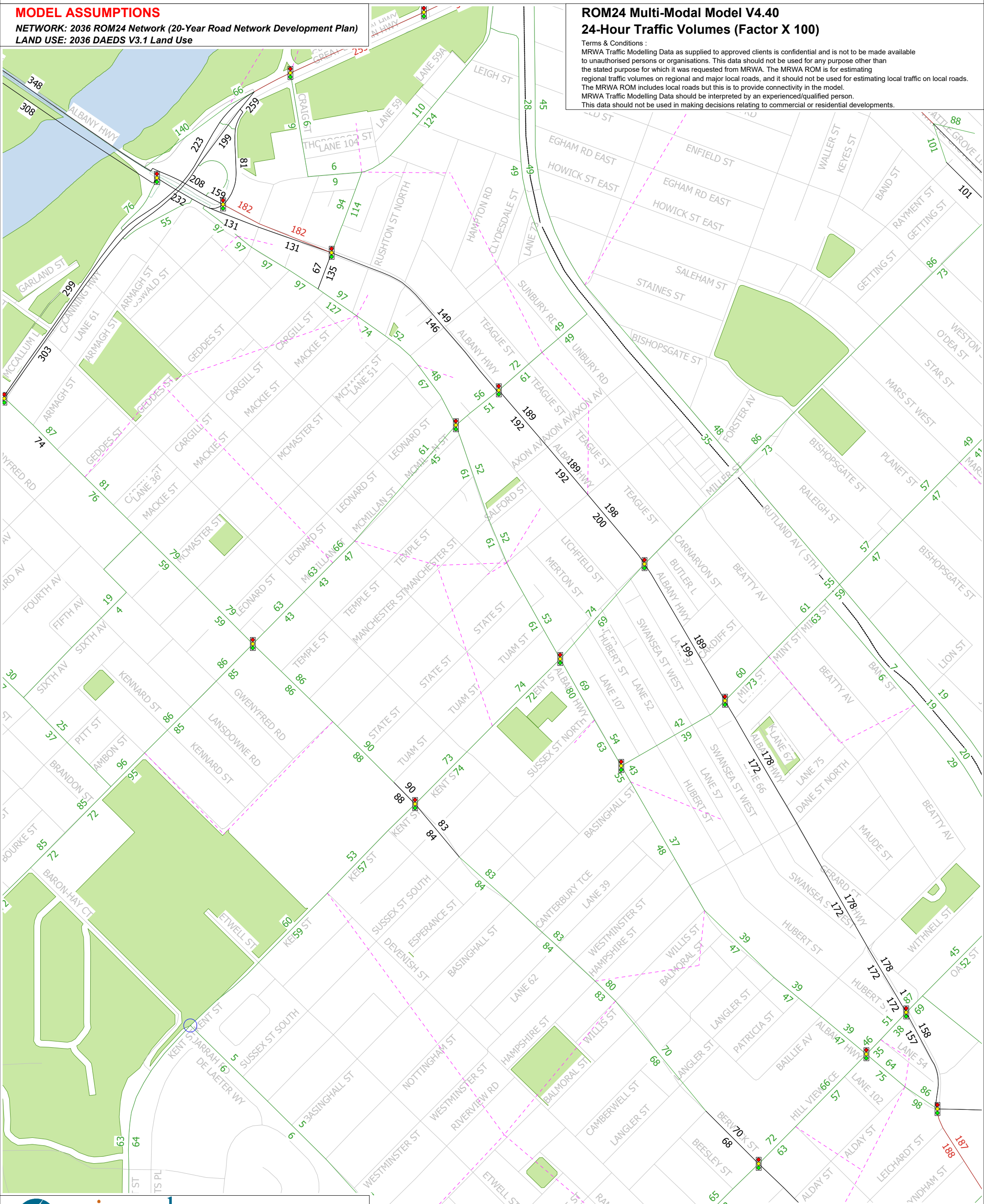
2036 ROM24 Scenario - Link Volume Plot for Albany Hwy Traffic Impact Analysis
All Day
Land Use Scenario: DAEDS Version 3.1

MODEL ASSUMPTIONS

NETWORK: 2036 ROM24 Network (20-Year Road Network Development Plan)
LAND USE: 2036 DAEDS V3.1 Land Use

ROM24 Multi-Modal Model V4.40
24-Hour Traffic Volumes (Factor X 100)

Terms & Conditions :
MRWA Traffic Modelling Data as supplied to approved clients is confidential and is not to be made available to unauthorised persons or organisations. This data should not be used for any purpose other than the stated purpose for which it was requested from MRWA. The MRWA ROM is for estimating regional traffic volumes on regional and major local roads, and it should not be used for estimating local traffic on local roads. The MRWA ROM includes local roads but this is to provide connectivity in the model.
MRWA Traffic Modelling Data should be interpreted by an experienced/qualified person.
This data should not be used in making decisions relating to commercial or residential developments.



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Transport Modelling Section
Enquiries Clare Yu 9323 4967
MRWA Reference Job #42951
Mon 24 Jun 2024
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1 Lane Each Direction
2 Lanes Each Direction
3 Lanes Each Direction
>=4 Lanes Each Direction
Zone Connector

MRWA Transport Modelling Data as supplied to approved clients is confidential and is not to be made available to unauthorised persons or organisations

cube
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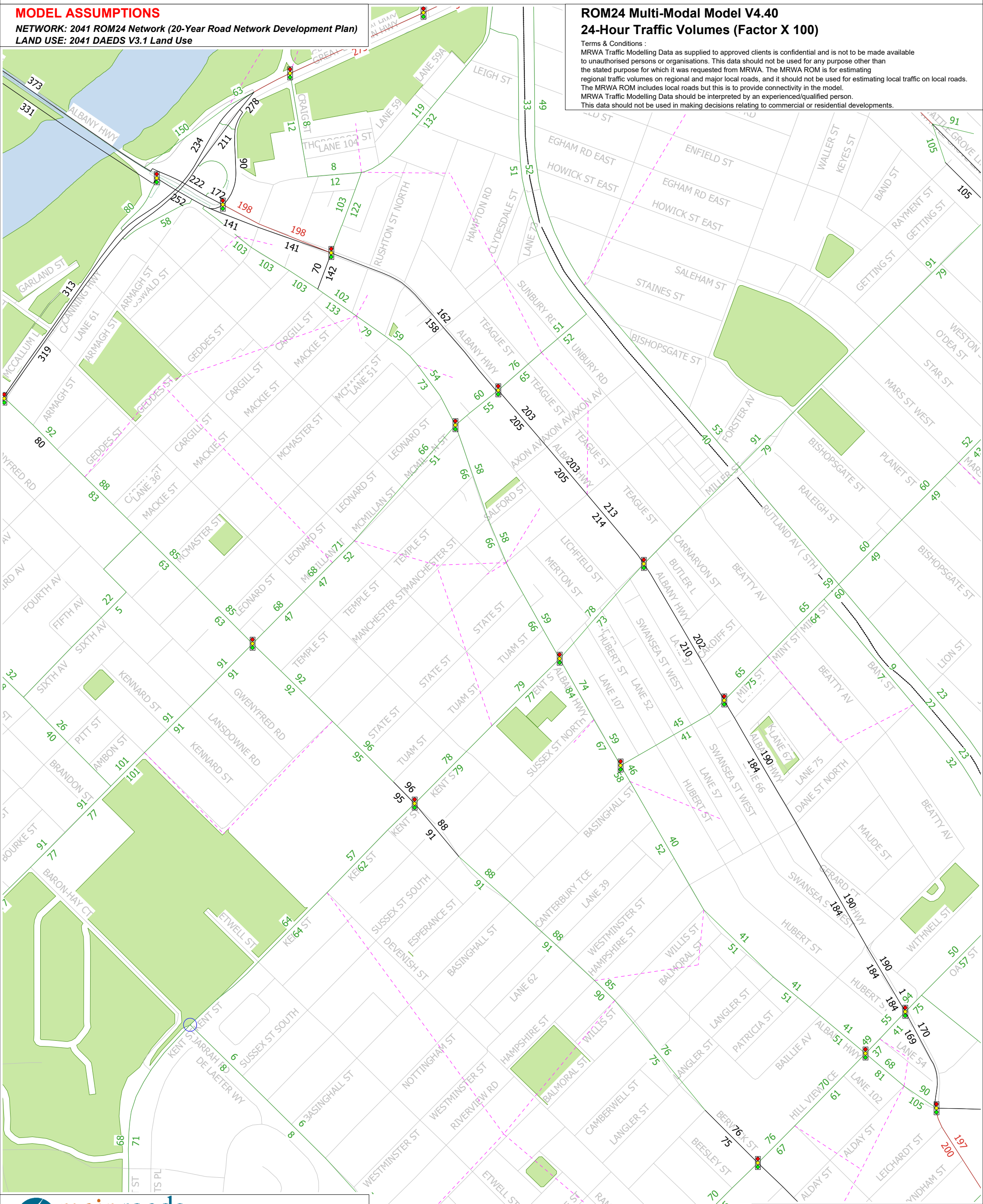
2041 ROM24 Scenario - Link Volume Plot for Albany Hwy Traffic Impact Analysis
All Day
Land Use Scenario: DAEDS Version 3.1

MODEL ASSUMPTIONS

NETWORK: 2041 ROM24 Network (20-Year Road Network Development Plan)
LAND USE: 2041 DAEDS V3.1 Land Use

ROM24 Multi-Modal Model V4.40
24-Hour Traffic Volumes (Factor X 100)

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1 Lane Each Direction
2 Lanes Each Direction
3 Lanes Each Direction
>=4 Lanes Each Direction
Zone Connector

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cube
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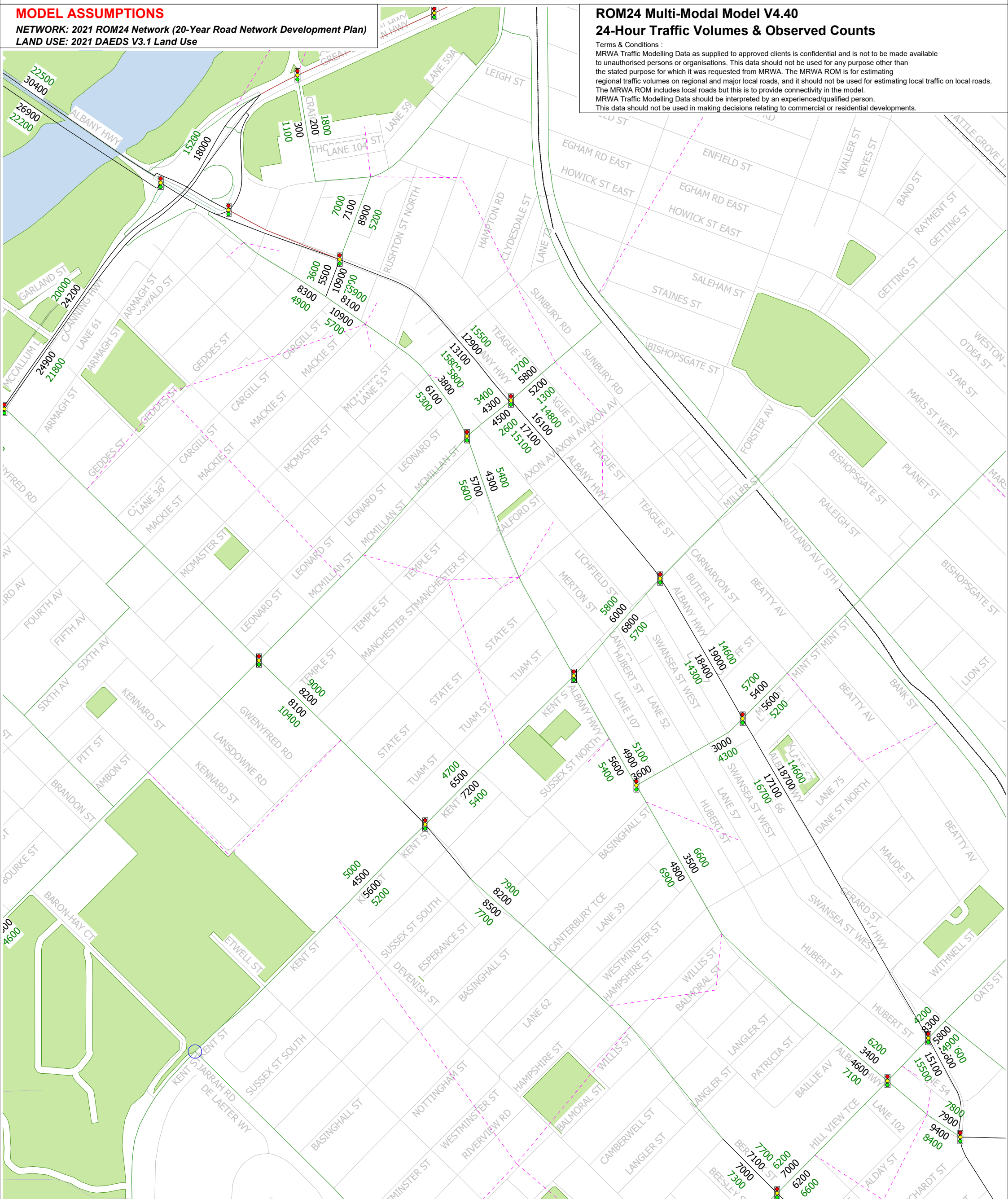
2021 ROM24 Scenario - Validation Plot for Albany Hwy Traffic Impact Analysis
All Day
Land Use Scenario: DAEDS Version 3.1

MODEL ASSUMPTIONS

NETWORK: 2021 ROM24 Network (20-Year Road Network Development Plan)
LAND USE: 2021 DAEDS V3.1 Land Use

ROM24 Multi-Modal Model V4.40
24-Hour Traffic Volumes & Observed Counts

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1 Lane Each Direction
2 Lanes Each Direction
3 Lanes Each Direction
>=4 Lanes Each Direction
Zone Connector
2021 Modelled
2021 Observed data from Trafficmap

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Transport Modelling Section
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Mon 24 Jun 2024
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cube

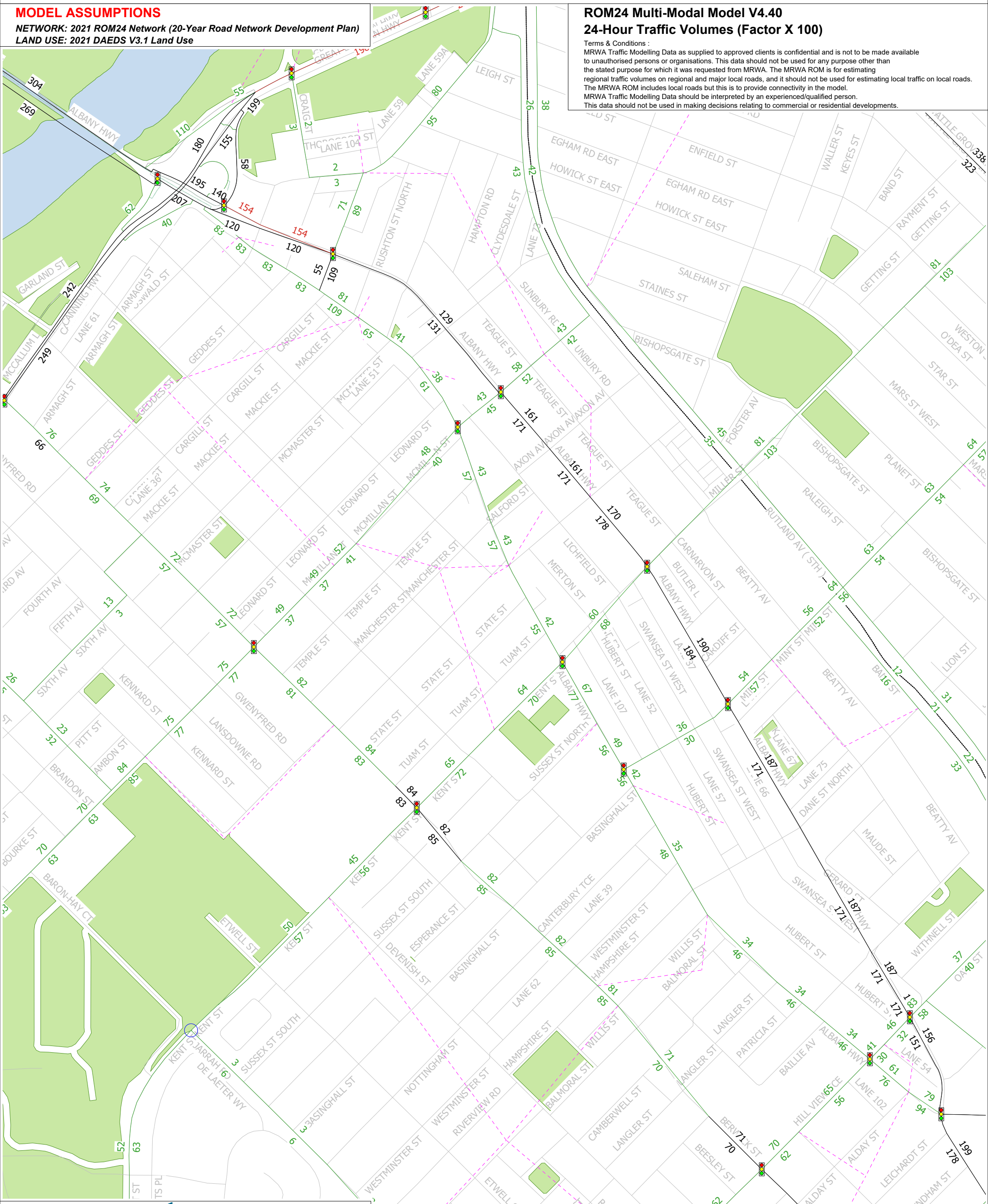
2021 ROM24 Scenario - Link Volume Plot for Albany Hwy Traffic Impact Analysis
All Day
Land Use Scenario: DAEDS Version 3.1

MODEL ASSUMPTIONS

NETWORK: 2021 ROM24 Network (20-Year Road Network Development Plan)
LAND USE: 2021 DAEDS V3.1 Land Use

ROM24 Multi-Modal Model V4.40
24-Hour Traffic Volumes (Factor X 100)

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MRWA Traffic Modelling Data should be interpreted by an experienced/qualified person.
This data should not be used in making decisions relating to commercial or residential developments.



mainroads WESTERN AUSTRALIA
Transport Modelling Section
Enquiries Clare Yu 9323 4967
MRWA Reference Job #42951
Mon 24 Jun 2024
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1 Lane Each Direction
2 Lanes Each Direction
3 Lanes Each Direction
>=4 Lanes Each Direction
Zone Connector

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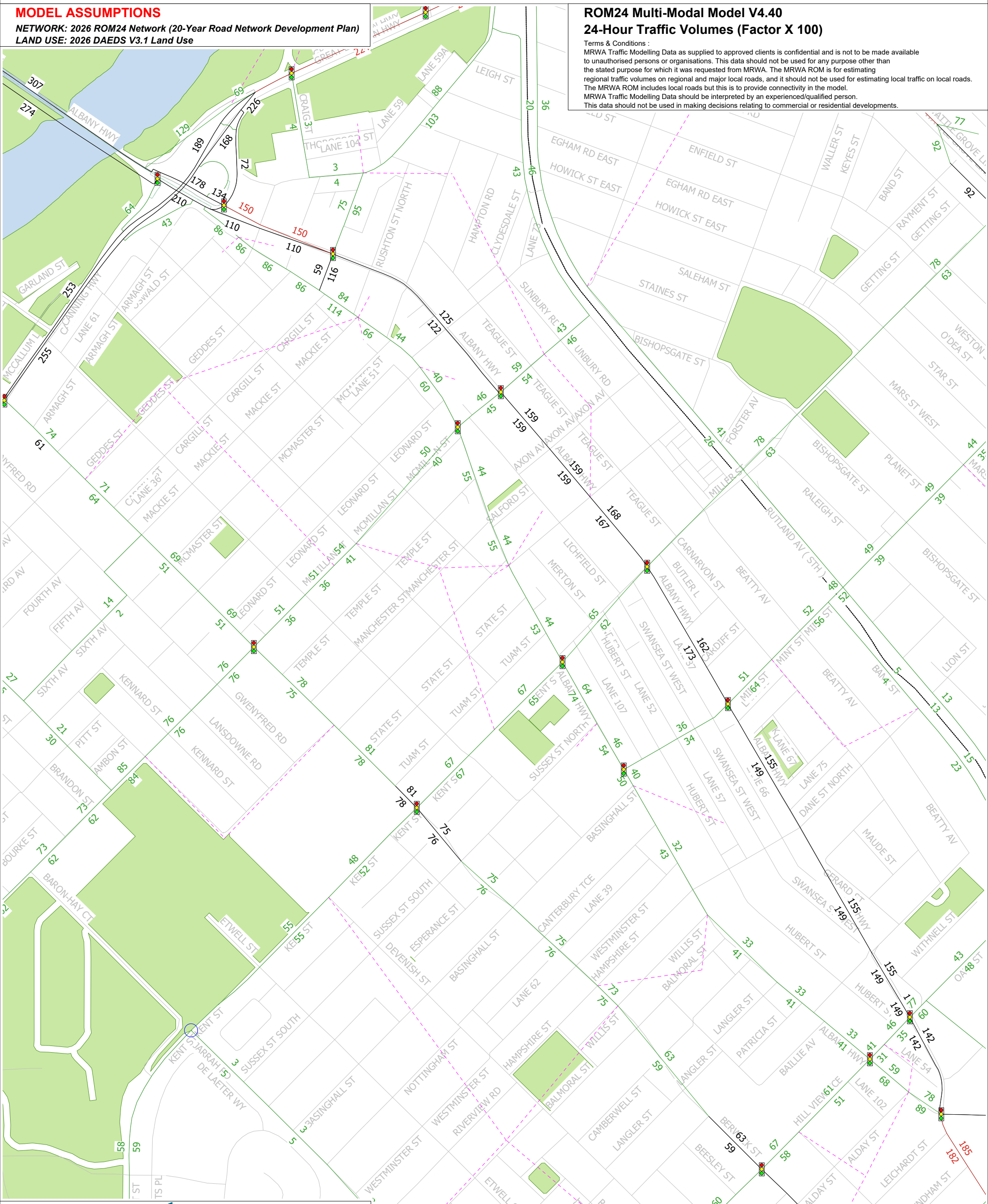
2026 ROM24 Scenario - Link Volume Plot for Albany Hwy Traffic Impact Analysis
All Day
Land Use Scenario: DAEDS Version 3.1

MODEL ASSUMPTIONS

NETWORK: 2026 ROM24 Network (20-Year Road Network Development Plan)
LAND USE: 2026 DAEDS V3.1 Land Use

ROM24 Multi-Modal Model V4.40
24-Hour Traffic Volumes (Factor X 100)

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1 Lane Each Direction
2 Lanes Each Direction
3 Lanes Each Direction
>=4 Lanes Each Direction
Zone Connector

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2031 ROM24 Scenario - Link Volume Plot for Albany Hwy Traffic Impact Analysis
All Day
Land Use Scenario: DAEDS Version 3.1

MODEL ASSUMPTIONS

NETWORK: 2031 ROM24 Network (20-Year Road Network Development Plan)
LAND USE: 2031 DAEDS V3.1 Land Use

ROM24 Multi-Modal Model V4.40
24-Hour Traffic Volumes (Factor X 100)

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- 1 Lane Each Direction
- 2 Lanes Each Direction
- 3 Lanes Each Direction
- >=4 Lanes Each Direction
- Zone Connector

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Appendix C: ROM24 data summary

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Site	Direction	Modelled	Modelled	Modelled	Modelled	Modelled	Total change	Annual change
		2021	2026	2031	2036	2041	2021-2041	2021-2041
Shepperton Rd E of Great Eastern Hwy	Eastbound	195	178	194	208	222	13.8%	0.65%
Shepperton Rd E of Great Eastern Hwy	Westbound	207	210	212	232	252	21.7%	0.99%
Shepperton Rd W of Asquith St	Eastbound	154	150	161	182	198	28.6%	1.26%
Shepperton Rd W of Asquith St	Westbound	120	110	120	131	141	17.5%	0.81%
Shepperton Rd at Twickenham Rd	Eastbound	154	150	161	182	198	28.6%	1.26%
Shepperton Rd at Twickenham Rd	Westbound	120	110	120	131	141	17.5%	0.81%
Shepperton Rd W of Harper St	Eastbound	129	125	136	149	162	25.6%	1.15%
Shepperton Rd W of Harper St	Westbound	131	122	134	146	158	20.6%	0.94%
Shepperton Rd E of Duncan St	Eastbound	161	159	175	189	203	26.1%	1.17%
Shepperton Rd E of Duncan St	Westbound	171	159	178	192	205	19.9%	0.91%
Shepperton Rd E of Axon Ave	Eastbound	161	159	175	189	203	26.1%	1.17%
Shepperton Rd E of Axon Ave	Westbound	171	159	178	195	205	19.9%	0.91%
Shepperton Rd E of Gresham St	Eastbound	170	168	185	198	213	25.3%	1.13%
Shepperton Rd E of Gresham St	Westbound	178	167	186	200	214	20.2%	0.93%
Shepperton Rd W of Cardiff St	Eastbound	190	162	176	189	202	6.3%	0.31%
Shepperton Rd W of Cardiff St	Westbound	184	173	187	199	210	14.1%	0.66%
Shepperton St W of Norseman St	Eastbound	187	155	166	178	190	1.6%	0.08%
Shepperton St W of Norseman St	Westbound	171	149	161	172	184	7.6%	0.37%
Shepperton Rd E of Norseman St	Eastbound	187	155	166	178	190	1.6%	0.08%
Shepperton Rd E of Norseman St	Westbound	171	149	161	172	184	7.6%	0.37%
Shepperton Rd E of Oats St	Eastbound	156	142	148	158	170	9.0%	0.43%
Shepperton Rd E of Oats St	Westbound	151	142	146	157	169	11.9%	0.56%
Shepperton Rd E of Leichardt St	Eastbound	199	185	177	187	197	-1.0%	-0.05%
Shepperton Rd E of Leichardt St	Westbound	178	182	178	188	200	12.4%	0.58%
Albany Hwy E of Cargill St	Eastbound	81	84	87	97	102	25.9%	1.16%
Albany Hwy E of Cargill St	Westbound	109	114	116	127	133	22.0%	1.00%
Albany Hwy E of Mcmaster St	Eastbound	41	44	46	52	59	43.9%	1.84%
Albany Hwy W of Mcmaster St	Westbound	65	66	66	74	79	21.5%	0.98%
Albany Hwy W of Leonard St	Eastbound	38	40	42	48	54	42.1%	1.77%
Albany Hwy W of Leonard St	Westbound	61	60	61	67	73	19.7%	0.90%
Albany Hwy E of Mcmillan St	Eastbound	43	44	47	189	58	34.9%	1.51%
Albany Hwy E of Mcmillan St	Westbound	57	55	57	192	66	15.8%	0.74%
Albany Hwy E of Manchester St	Eastbound	43	44	47	52	58	34.9%	1.51%
Albany Hwy E of Manchester St	Westbound	57	55	57	61	66	15.8%	0.74%
Albany Hwy W of Tuam St	Eastbound	42	44	46	53	59	40.5%	1.71%
Albany Hwy W of Tuam St	Westbound	55	53	55	61	66	20.0%	0.92%
Albany Hwy W of Mint St	Eastbound	49	46	49	54	59	20.4%	0.93%
Albany Hwy W of Mint St	Westbound	56	54	58	63	67	19.6%	0.90%
Albany Hwy W of Westminster St	Eastbound	35	32	34	37	40	14.3%	0.67%
Albany Hwy W of Westminster St	Westbound	48	43	45	48	52	8.3%	0.40%
Albany Hwy W of Patricia St	Eastbound	34	33	36	39	41	20.6%	0.94%
Albany Hwy W of Patricia St	Westbound	46	41	44	47	51	10.9%	0.52%
Albany Hwy E of Hill View Tce	Eastbound	61	59	61	39	68	11.5%	0.54%
Albany Hwy E of Hill View Tce	Westbound	76	68	71	47	61	-19.7%	-1.09%
Teddington Rd S of Shepperton Rd	Northbound	55	59	62	67	70	27.3%	1.21%
Teddington Rd S of Shepperton Rd	Southbound	109	116	120	135	142	30.3%	1.33%
Mcmillan St S of Shepperton Rd	Northbound	43	46	49	56	60	39.5%	1.68%
Mcmillan St S of Shepperton Rd	Southbound	45	45	47	51	55	22.2%	1.01%
Miller St S of Shepperton Rd	Northbound	60	65	69	74	78	30.0%	1.32%
Miller St S of Shepperton Rd	Southbound	68	62	65	69	73	7.4%	0.36%
Mint St S of Shepperton Rd	Northbound	36	36	40	42	45	25.0%	1.12%
Mint St S of Shepperton Rd	Southbound	30	34	36	39	41	36.7%	1.57%
Hill View Tce/Oats St S of Shepperton Rd	Northbound	46	46	49	51	55	19.6%	0.90%
Hill View Tce/ Oats St S of Shepperton Rd	Southbound	32	35	25	38	41	28.1%	1.25%
Average							**19.8%**	**0.89%**

Appendix D: Existing traffic volumes

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ALL TRAFFIC ZONES

Key:
- Traffic volumes during AM Peak
- Traffic volumes during PM Peak

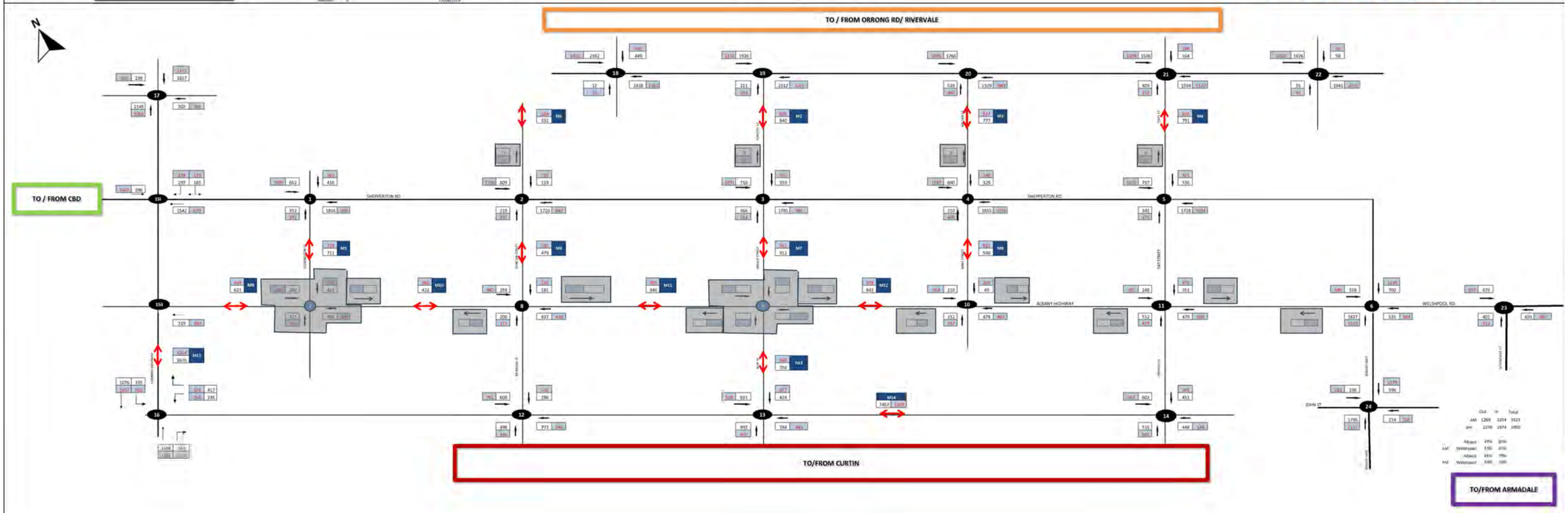
Annual Background Growth % p.a.
Years
cells covered with link are used for calculation distribution only where no two-way traffic data is available

Revision: 0

23/08/2016

ALBANY HIGHWAY
EXISTING
(NO DEVELOPMENT TRAFFIC)

HATCH



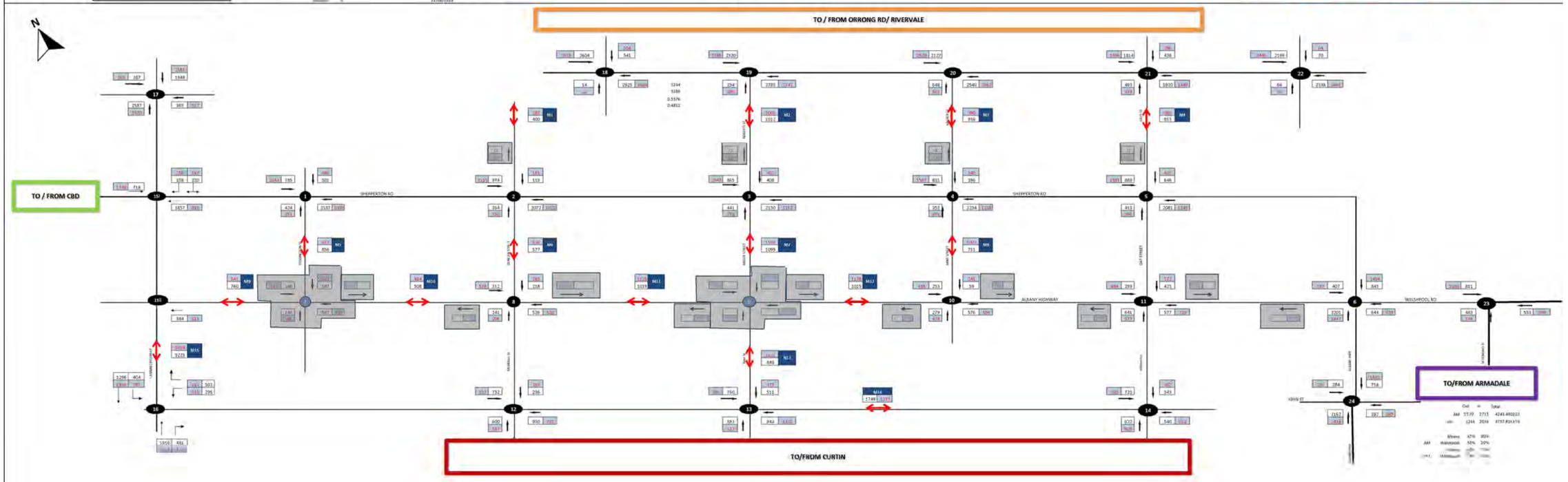
Appendix E: Background traffic 2042 (no development traffic)

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ALL TRAFFIC ZONES

ALBANY HIGHWAY
EXISTING + BACKGROUND GROWTH
(NO DEVELOPMENT TRAFFIC)

HATCH

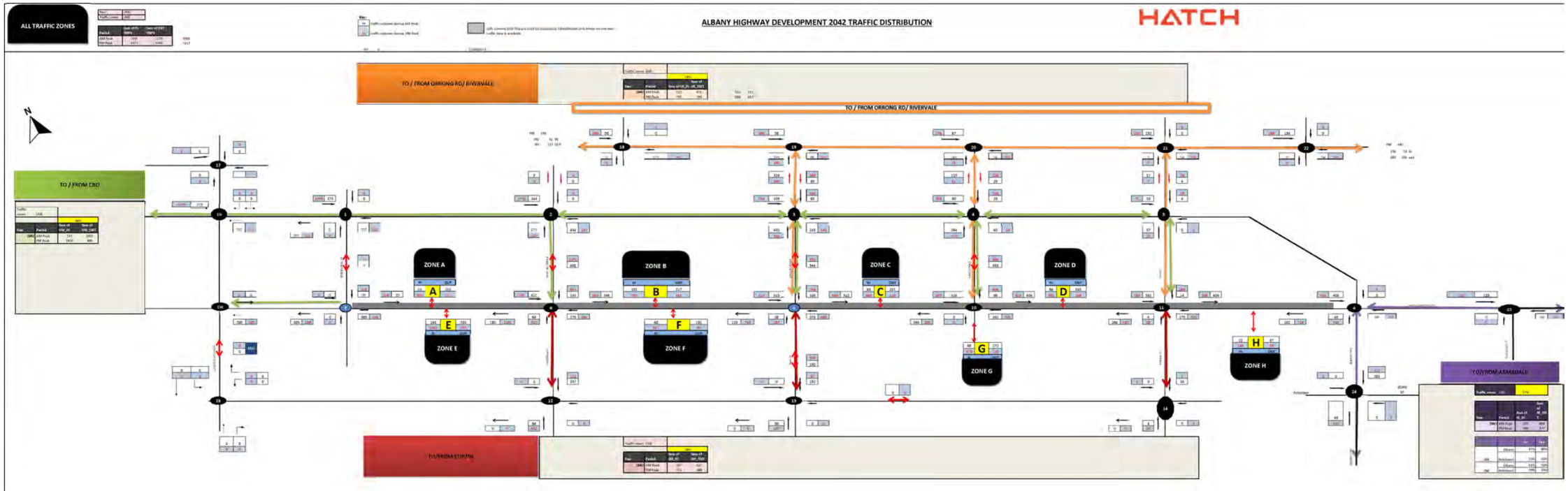


Appendix F: Traffic distribution

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ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

HATCH



ZONE A

ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

HATCH

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM CBD

ZONE A

TO/FROM CURTIN

TO/FROM ARMADALE

ZONE B

ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

HATCH

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM CBD

ZONE B

TO/FROM CURTIN

TO/FROM ARMADALE

ZONE C

ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

HATCH

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM CBD

ZONE C

C

TO/FROM CURTIN

TO/FROM ARMADALE

ZONE D

ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

HATCH

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM CBD

ZONE D

D

TO/FROM CURTIN

TO/FROM ARMADALE

ZONE E

ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

HATCH

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM CBD

TO/FROM CURTIN

TO/FROM ARMADALE

E

ZONE E

ZONE F

F

ZONE G

ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

HATCH

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM CBD

ZONE G

TO/FROM ARMADALE

TO/FROM CURTIN

ZONE H

ALBANY HIGHWAY DEVELOPMENT 2034 TRAFFIC DISTRIBUTION

HATCH

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM CBD

ZONE H

TO/FROM ARMADALE

TO/FROM CURTIN

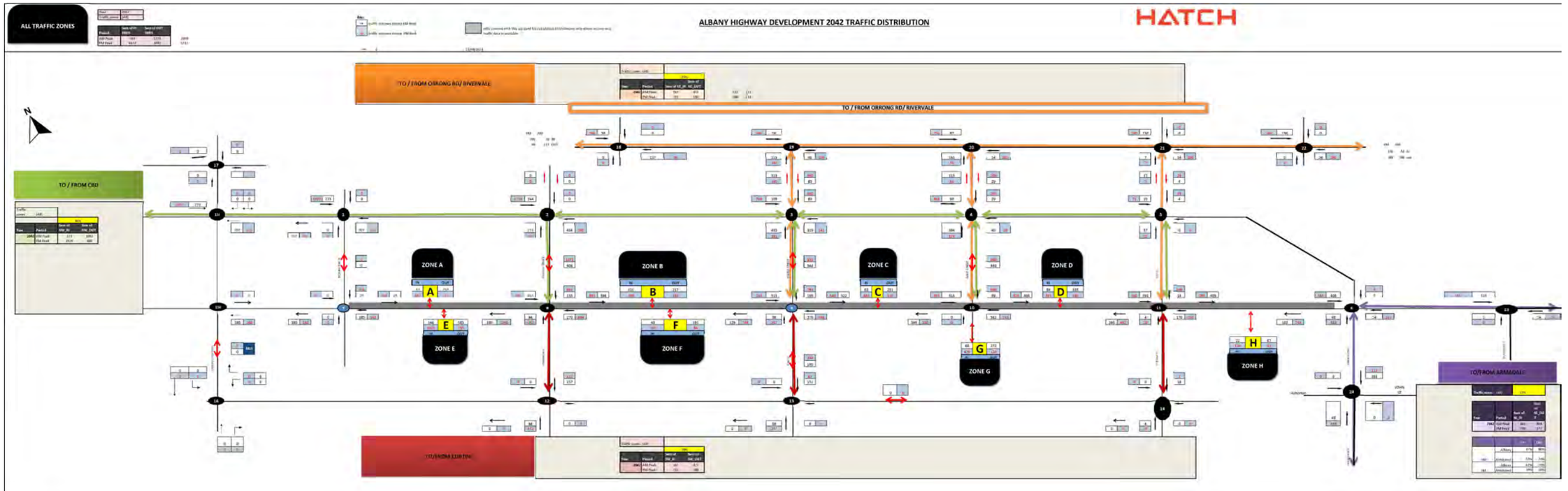
Appendix G: Distributed development traffic

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ALL TRAFFIC ZONES

ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

HATCH



ZONE A

ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

HATCH

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM CBD

ZONE A

A

TO/FROM CURTIN

TO/FROM ARMADALE

ZONE B

ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

HATCH

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM CBD

ZONE B

B

TO/FROM CURTIN

TO/FROM ARMADALE

ZONE C

ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

HATCH

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM CBD

ZONE C

TO/FROM CURTIN

TO/FROM ARMADALE

ZONE D

ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

HATCH

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM CBD

ZONE D

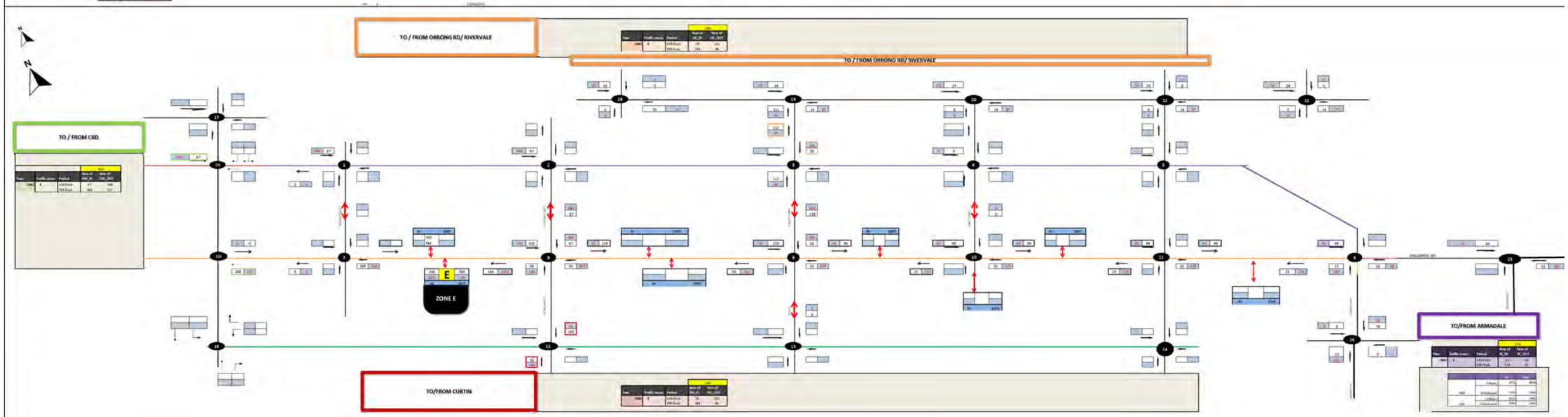
TO/FROM CURTIN

TO/FROM ARMADALE

ZONE E

ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

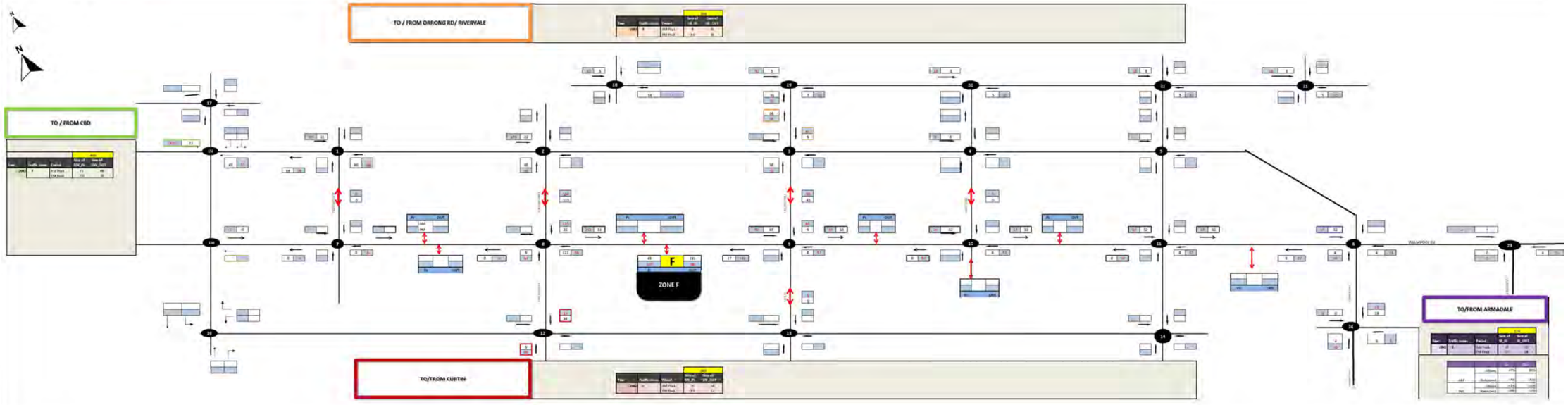
HATCH



ZONE F

ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

HATCH



ZONE G

ALBANY HIGHWAY DEVELOPMENT 2042 TRAFFIC DISTRIBUTION

HATCH

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM ORRONG RD/ RIVERVALE

TO / FROM CBD

ZONE G

TO/FROM ARMADALE

TO/FROM CURTIN

ZONE H

ALBANY HIGHWAY DEVELOPMENT 2034 TRAFFIC DISTRIBUTION

HATCH

TO / FROM ORRONG RD/ RIVERVALE

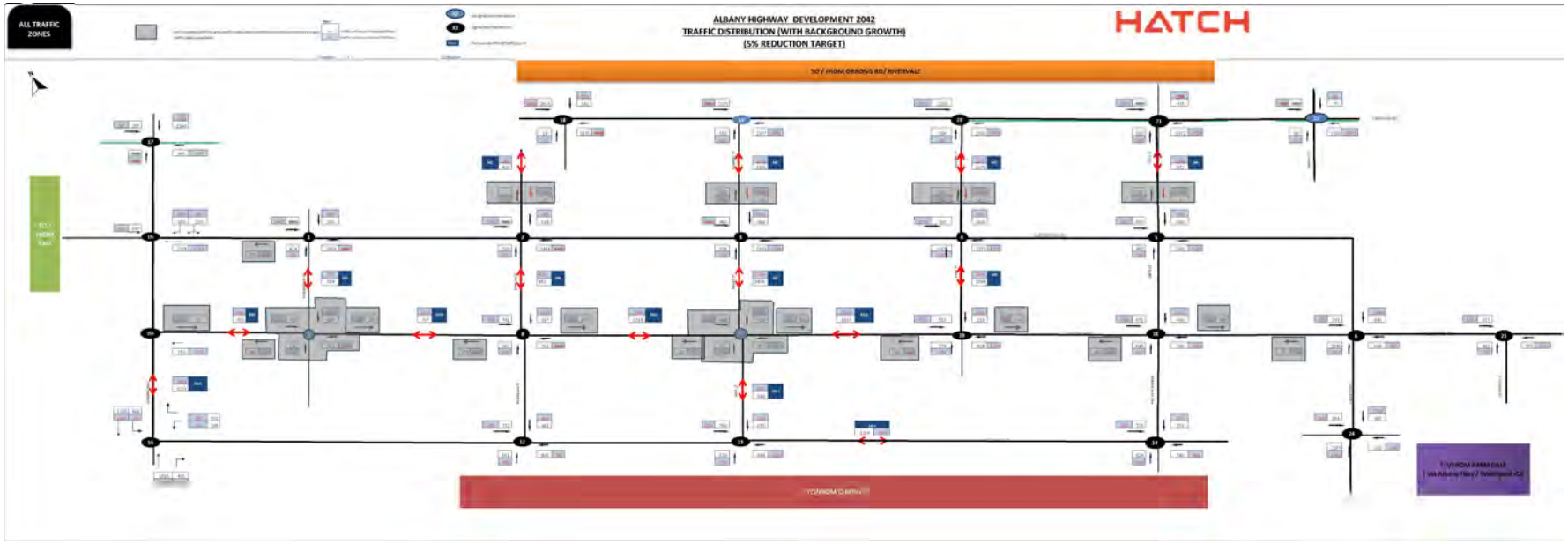
TO / FROM ORRONG RD/ RIVERVALE

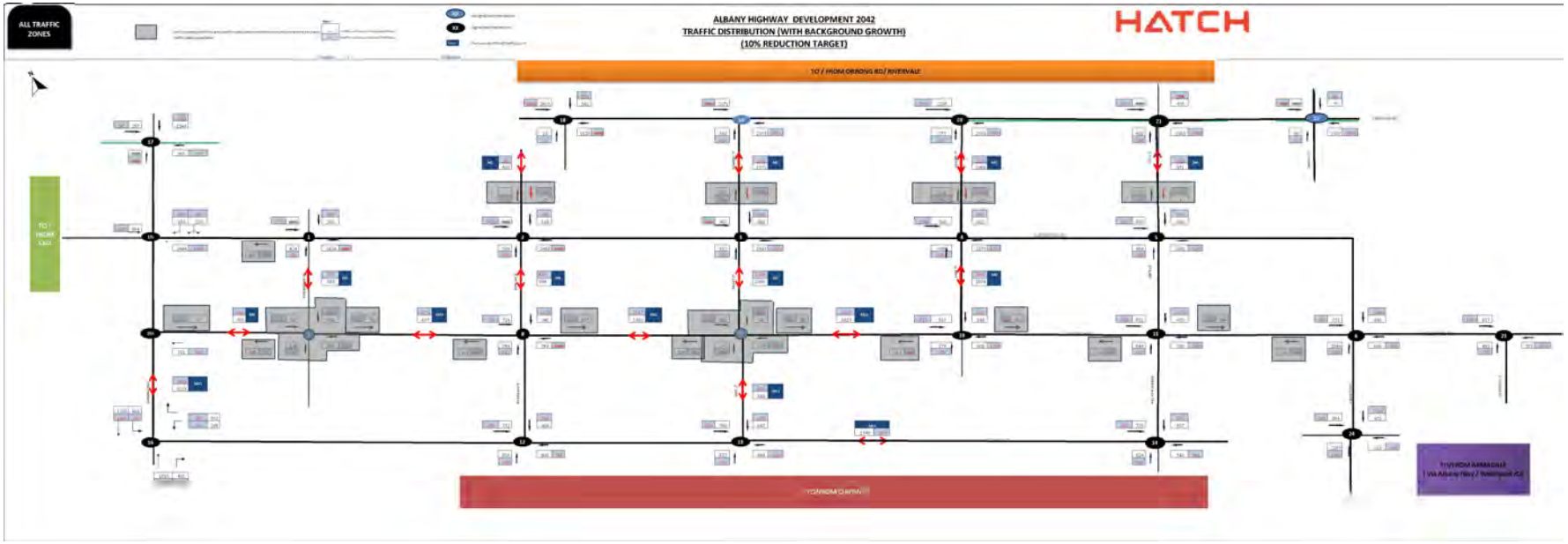
TO / FROM CBD

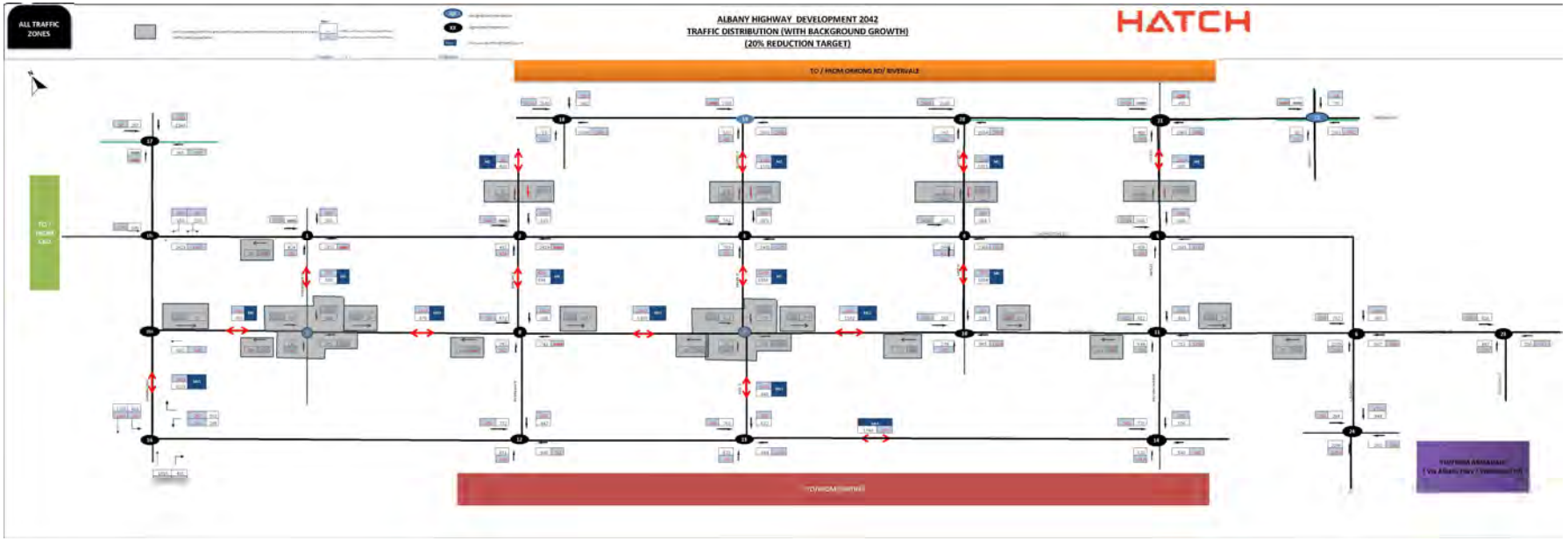
ZONE H

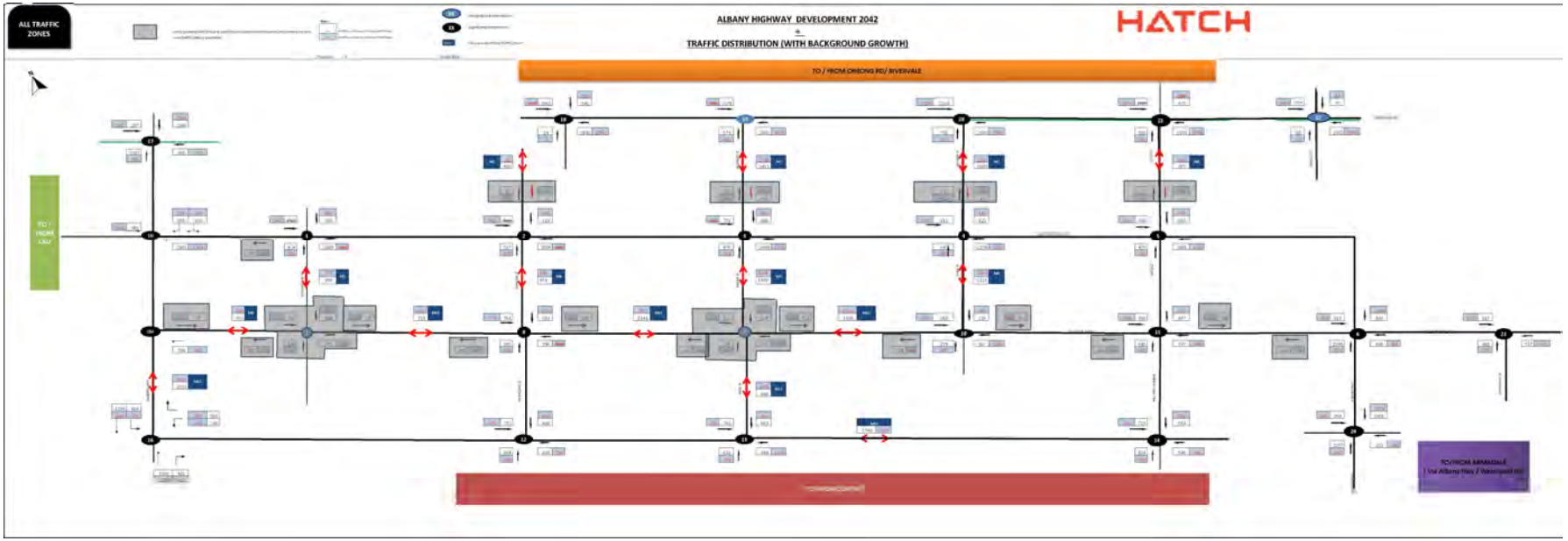
TO/FROM ARMADALE

TO/FROM CURTIN


ALL TRAFFIC ZONES
ALBANY HIGHWAY DEVELOPMENT 2042
TRAFFIC DISTRIBUTION (WITH BACKGROUND GROWTH)
(5% REDUCTION TARGET)
HATCH
TO / FROM ORRONG RD / RIVERVALE


ALL TRAFFIC ZONES
ALBANY HIGHWAY DEVELOPMENT 2042
TRAFFIC DISTRIBUTION (WITH BACKGROUND GROWTH)
(10% REDUCTION TARGET)
HATCH


ALL TRAFFIC ZONES
ALBANY HIGHWAY DEVELOPMENT 2042
TRAFFIC DISTRIBUTION (WITH BACKGROUND GROWTH)
(20% REDUCTION TARGET)
HATCH


ALL TRAFFIC ZONES
ALBANY HIGHWAY DEVELOPMENT 2042
+
TRAFFIC DISTRIBUTION (WITH BACKGROUND GROWTH)
HATCH
TO / FROM ORRONG RD/ RIVERVALE



Albany Highway Precinct Structure Plan

Water Management Strategy

DRAFT

Prepared for Town of Victoria Park

By Urbaqua

July 2024

urbaqua
land and water solutions

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Summary

Water is a basic prerequisite of urban liveability, supporting and sustaining vegetation within streets and open spaces as well as performing the core essential services of providing for drinking water and wastewater needs of the community.

The aims and objectives (Section 2) for this water management strategy have been developed consistent with the water management principles in draft *State Planning Policy 2.9 – Planning for Water* (WAPC, 2021) to address the site and planning context (Section 1.3 and Appendix A) of the Albany Highway precinct and will be achieved through implementation of water sensitive urban design strategies as described in Section 3. The aims and objectives are:

- City streets that are liveable and adaptive
    - Improve amenity and liveability of urban landscapes, including blue-green linkages.
    - Increase tree canopy coverage and promote cooling.
    - Achieve a net increase in natural assets (nature positive actions).
- Multi-functional and integrated public open space
    - Design urban spaces to manage stormwater and flood risks.
    - Make water infrastructure multi-functional.
    - Create opportunities for the community to engage with water resources and the environments they sustain.
- Efficient and sustainable use of water services
    - Optimise the use of water, encourage reuse/recycling, and reduce the use of non-renewable energy.
    - Sustainably manage our groundwater.

There are many different opportunities for delivering water sensitive urban design (WSUD) outcomes or retrofit projects in the Albany Highway Precinct. These have been categorised in Section 3 to assist with identification and implementation as follows:

- New development proposals
- Streetscape and carpark improvements
- Public Open Space and drainage improvements
- Investigation of alternative fit for purpose water sources

New development proposals

There is a key opportunity to promote and incentivise implementation of best practice water sensitive urban design in developments in the Albany Highway Precinct.

All development within the Albany Highway precinct area should aim to achieve the objectives of this water management strategy by applying standard criteria for implementation in all developments (Section 4.4.1) and additional 'best practice' criteria to be implemented by developments to demonstrate sustainability and/or community benefit where site bonuses are sought (Section 4.4.2).

Streetscape and carpark improvements

Streetscape improvements in the Albany Highway precinct should aim to achieve the following objectives:

- Improve amenity and liveability of urban landscapes, including blue-green linkages.
- Increase tree canopy coverage and promote cooling.
- Achieve a net increase in natural assets (nature positive actions).

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It is recommended that all upgraded streetscapes and carparks in the Albany Highway precinct are designed to function as blue-green links including management measures for the retention, detention and/or treatment of runoff from small rainfall events at-source. This can be achieved by using a combination of raingardens and tree pits allowing water to enter vegetated areas via kerb-breaks, incorporating them with the road and landscaping design as streetscapes are upgraded for the new built form. A description of these elements, along with case studies is outlined in Section 3.2.

It is recommended that all public carparking areas are considered for retrofitting of water sensitive urban design when upgrades are being proposed. This includes:

- Parking at Leisurelife Centre
- Parking at Town of Victoria Park council offices
- Parking at John Macmillan Park
- King George Street Car Park
- Hubert Street Car Park
- Shepperton Road Car Park No 12

Public open space and drainage improvements

Public open space improvements in the Albany Highway precinct will aim to achieve the following objectives:

- Design urban spaces to manage stormwater and flood risks.
- Make water infrastructure multi-functional.
- Create opportunities for the community to engage with water resources and the environments they sustain.

The creation of new or expanded public open space in is proposed in the following drainage sump locations inside the Albany Highway Precinct, with details provided in Section 3.3:

- Reed Park (Figure 5)
- Swansea Street (Figure 6)

There are numerous other drainage sumps and Water Corporation detention basins located in the areas surrounding the Albany Highway Precinct, some of which may provide similar opportunities to create new or expanded public open space. Appendix B provides a high-level review of the 24 drainage sumps, basins and underground storage sites in the area surrounding the precinct.

Mindeera Spring, just inside the northwestern boundary of the Study Area, has been recognised as an important cultural site in the Town of Victoria Park, that contributes to community awareness and understanding of local Aboriginal history. Investigation of opportunities to daylight the spring and restore an above ground living stream connecting to the Swan River is recommended.

Alternative fit for purpose water sources

Investigation of alternative fit-for-purpose water sources in the Albany Highway precinct will aim to achieve the following objectives:

- Optimise the use of water, encourage reuse/recycling, and reduce the use of non-renewable energy.
- Sustainably manage our groundwater.

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In response to the drying climate, the Department of Water and Environmental Regulation have indicated that reductions of 10% to annual water entitlements between 2028 and 2032 are likely throughout the Perth metropolitan area.

This reduction in groundwater availability is expected to be compounded by increased plant water needs due to increased evapotranspiration caused by climate change, estimated at 7.5 per cent at 2050 (Urbaqua, 2023) and increased public open space use by a growing population.

There are several alternative water source options discussed in Section 3.4 that could be used to address any future shortfall in available groundwater in the Town of Victoria Park. These include:

- Rainwater capture
- Stormwater harvesting
- Wastewater harvesting (sewer mining)
- Greywater reuse
- Groundwater trading
- Small scale desalination

Implementation

In order to achieve the water management objectives of this water management strategy in a manner consistent with the water management principles in draft *State Planning Policy 2.9 – Planning for Water* (WAPC, 2021), the water management strategies described in Section 3 need to be delivered as part of future planning and development in the Albany Highway precinct.

Key elements of this water management strategy will be delivered at the precinct and sub-precinct scale, led by the Town of Victoria Park as described in Sections 4.1 and 4.2.

The strategies are also to be incorporated into subdivision and development applications supported by water management information in accordance with the requirements outlined in Section 4.3 and using the checklist below.

Albany Highway Precinct – WSUD Checklist **Design criteria**	**Demonstrated** ☑/☒	**Details/ references**
Standard requirements		
All mixed use, multi-dwelling, and multi-storey developments are required to provide on-site retention (via infiltration where possible) for all on-site runoff generated by rainfall up to and including the critical 10% AEP event.	☐	
Single lot residential developments are required to provide on-site retention (via infiltration where possible) for all on-site runoff generated by the first 15mm of rainfall.	☐	
All flows from constructed impervious surfaces are to receive treatment prior to infiltration or discharge.	☐	
Flows from subsoil drains, where they are required, are to be treated prior to infiltration or discharge.	☐	

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Albany Highway Precinct – WSUD Checklist Design criteria	Demonstrated ☑/☒	Details/ references
Roads and public open spaces are to be designed to cater for the surface overflow for more severe storm events with habitable floors at least 0.3 m above the 1% AEP flood or storage level at any location.	☐	
Water quality treatment systems and stormwater management structures should be designed in accordance with the Stormwater Management Manual for Western Australia (DWER, 2004-07) and Adoption Guidelines for Stormwater Biofiltration Systems (CRCWSC, 2015).	☐	
All vegetation planted within stormwater management systems is to be consistent with the recommendations of Vegetation Guidelines for Stormwater Biofilters in the South-West of Western Australia (Monash University, 2014).	☐	
Gross pollutant traps are to be provided at inlets and/or outlets of detention structures and on any discharges from commercial and light industrial lots into the Town's drainage system.	☐	
Undertake regular cleaning of gullies and stormwater pollutant traps to enable pollution spills to be contained and educted before entering the Town's drainage system.	☐	
All new developments to incorporate water efficient fixtures, fittings and appliances, including WELS (Water Efficiency Labelling and Standards) 4* or above rated flow controllers, toilets, taps and urinals.	☐	
Smart metres for water in all new developments.	☐	
Use of waterwise, locally native plants in all landscaped areas.	☐	
Maximise efficiency of groundwater usage for irrigation of any additional open spaces so that additional allocations are not required.	☐	
Best practice requirements – to demonstrate sustainability and/or community benefit		
Infiltration of all stormwater from impervious areas (excess roof water, paved areas, and roads) to recharge superficial aquifers.	☐	
Landscaping which incorporates the use of waterwise gardens, rain gardens, smart irrigation systems, and use of alternative sources of water.	☐	
Buildings with roof gardens and green walls in new medium density commercial and residential areas.	☐	
Implementation of fit-for-purpose water supplies for irrigation such as greywater reuse or wastewater recycling.	☐	
Installation of better than WELS 4* fixtures, fittings and appliances.	☐	

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CONTENTS

1 Introduction and background 1
1.1 Guiding documents 3
1.2 Stakeholder consultation 5
1.3 Key site considerations 6

2 Water management objectives 8
2.1 City streets that are liveable and adaptive 8
2.2 Multi-functional and integrated public open space 9
2.3 Efficient and sustainable use of water services 10

3 Water management strategy 11
3.1 New development proposals 11
3.2 Streetscape and carpark improvements 13
3.3 Public open space and drainage improvements 17
3.4 Alternative fit for purpose water sources 22

4 Implementation 26
4.1 Precinct scale initiatives (Town led) 26
4.2 Local / Sub-precinct scale initiatives (Town-led) 26
4.3 Site scale initiatives (Developer-led) 27
4.4 Review 29

5 References and Resources 30
Appendix A Site context 31
Appendix B Review of drainage sumps, basins and underground storage sites 45

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Figures

Figure 1: Study area and land use 2
Figure 2: Streetscape raingarden examples 14
Figure 3: Wicking bed (left) and structural cell (right) concepts 15
Figure 4: Carpark raingarden and swale examples 17
Figure 5: Reed Reserve preliminary concept 18
Figure 6: Swansea Street Reserve preliminary concept 19
Figure 7: Rainwater tanks for community toilets 23
Figure 8: Urban Heat Index Blocks (Source WALGA, 2024) 34
Figure 9: Topography and soils 36
Figure 10: Surface water, wetlands, vegetation cover, and drainage 39
Figure 11: Groundwater 43

Tables

Table 1: Water management objectives 8
Table 2: Water management design criteria for site-scale implementation 28
Table 3: List of drainage storages in and around the Study Area 40
Table 4: Existing groundwater licences within the Study Area 42

Charts

Chart 1: The water management report and planning instrument hierarchy (WAPC, 2021) 1
Chart 2: Climate summary data (BoM station no. 9021, BoM, 2021) 32
Chart 3: Rainfall summary data (BoM station no. 9021, BoM, 2021) 33
Chart 4: Mean maximum temperature data (BoM station no. 9021, BoM, 2021) 33

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1 INTRODUCTION AND BACKGROUND

This water management strategy has been prepared to demonstrate how water resource protection and management outcomes are intended to be delivered through the *Albany Highway Precinct Structure Plan*. This strategy addresses the study area presented in Figure 1.

This water management strategy is delivered in response to draft State Planning Policy 2.9 – Planning for Water and supports the *Draft Albany Highway Precinct Plan* (Hatch Roberts Day, 2023) and addresses the requirements of a local water management report (see Chart 1) that are relevant for development in the described planning area. This level of water management report is required to establish a framework for delivery of future subdivision and development water management reports and to support the design and delivery of new and upgraded stormwater management systems by the Town of Victoria Park.

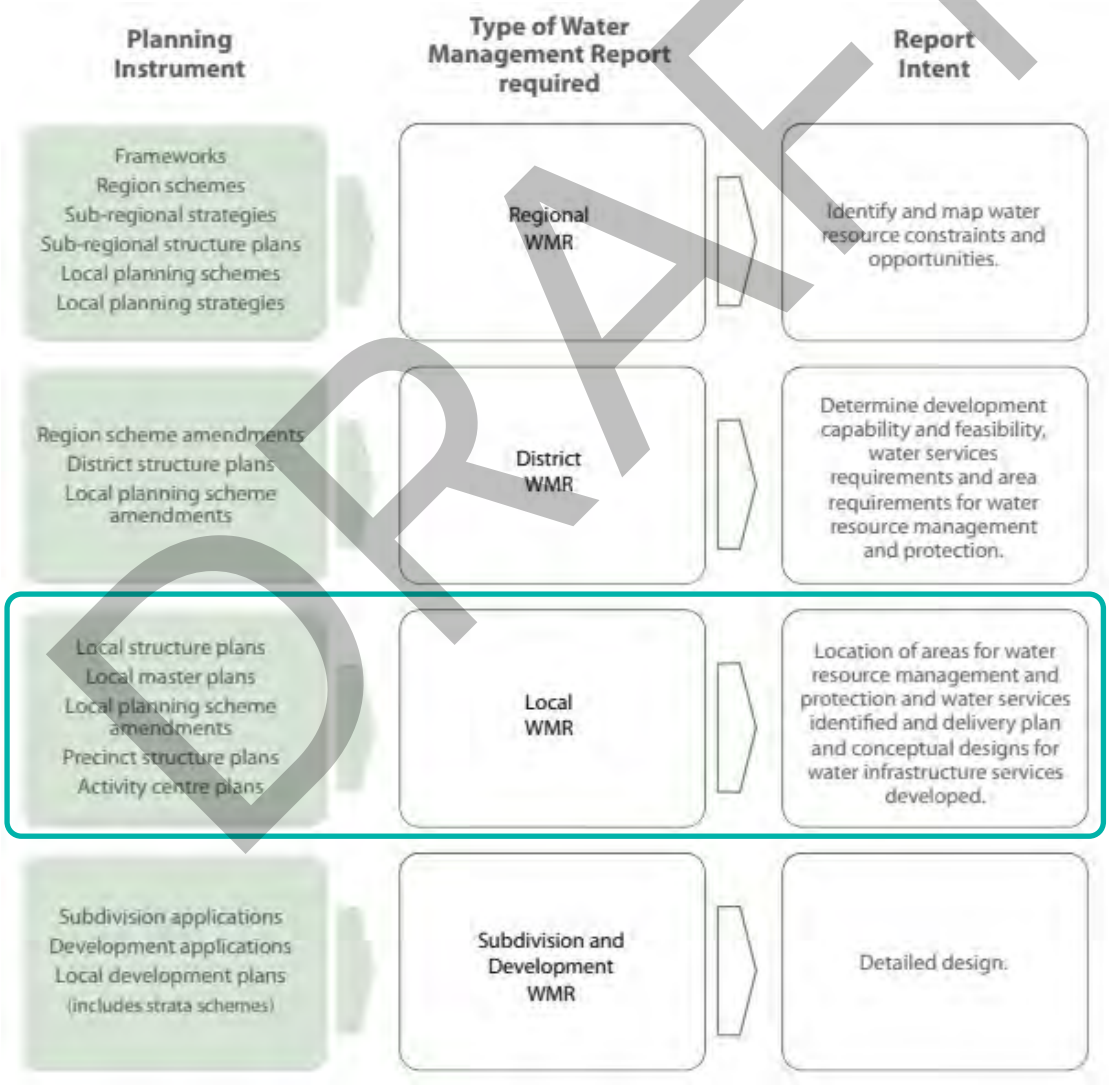
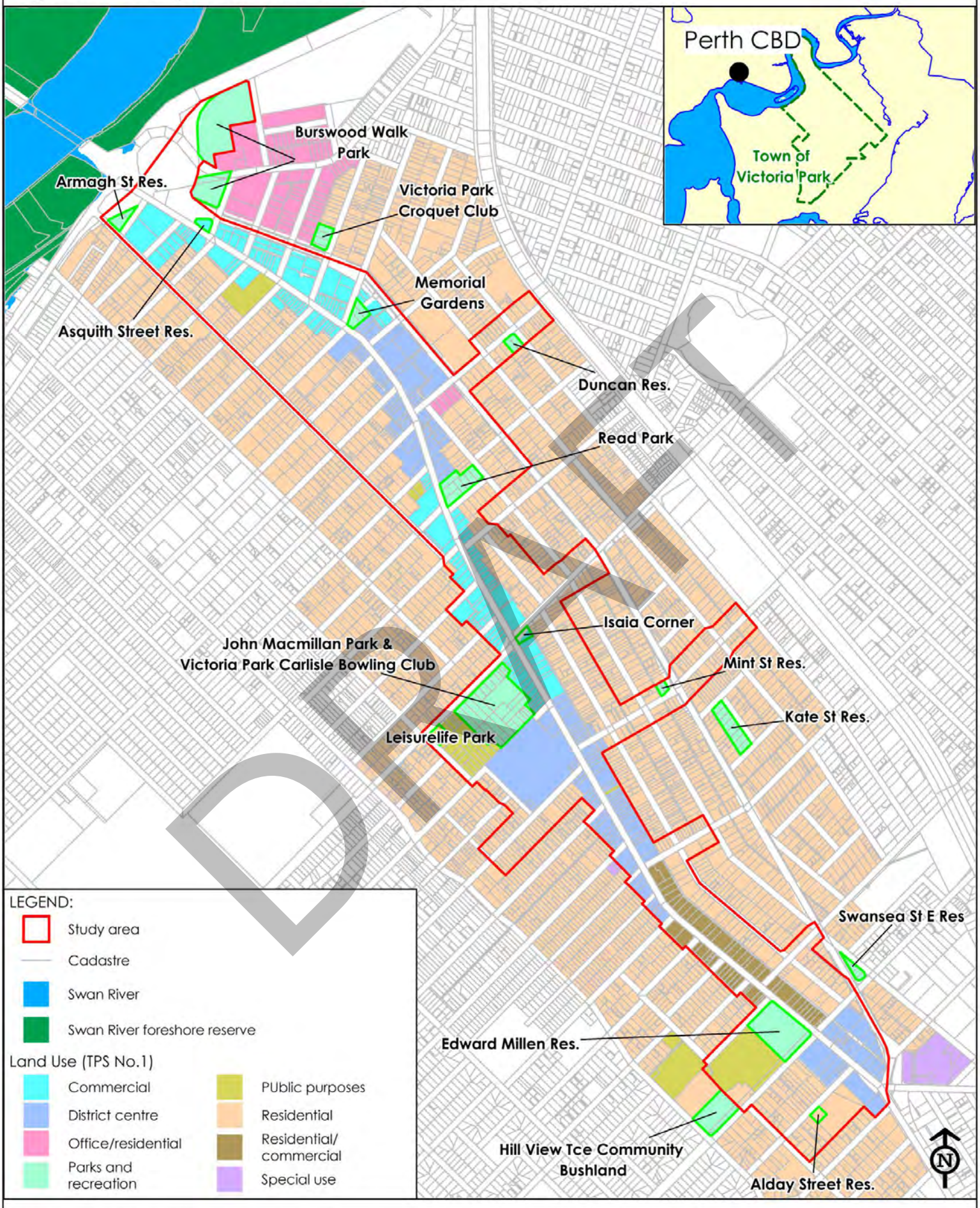


Chart 1: The water management report and planning instrument hierarchy (WAPC, 2021)

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Town of Victoria Park - Albany Hwy PSP Water Management Strategy
Figure 1 - Study Area and Land Use



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Data source:Landgate, Town of Victoria Park, Created by: HB Projection: MGA: zone 50.

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land and water solutions

1.1 Guiding documents

1.1.1 Local planning strategy

The Town of Victoria Park Local Planning Strategy (LPS) (ToVP, 2022) provides overarching strategic direction for planning and development in the Town of Victoria Park. The LPS refers to several supporting strategies which have implications and identified actions relating to water management. The most relevant of these documents are described below including:

- Environment Plan 2023-2028 (draft)
- Climate emergency plan (2021)
- Urban Forest Strategy (2018) and Urban Forest Implementation Action Plan 2019-2024 (2019)
- Stormwater Management Plan - Volume 1 and 2 (URS Australia, 2005) and Assessment of Drainage Hot Spots (Cardno, 2010)

1.1.2 Environment plan 2023-2028 (draft)

The draft Environment plan (ToVP, 2023) includes water management as a focus area and identifies the following objectives:

- Protect and enhance surface and groundwater resources to achieve a high quality of natural water resources, thereby creating a healthier environment for our plants, animals, and humans.
- Utilise water resources in a sustainable manner.
- Promote water management and water conservation.

Thirteen actions are specified for water management in the draft plan. These include several that are directly associated with the implementation of the Town's *Waterwise Council Action Plan* (2021). Improved water efficiency, flood management and water quality are the focus areas for these actions.

Water efficiency

1. Implement the Waterwise Council Action Plan.
2. Continue to encourage schools to participate in the Water Corporation's Waterwise Schools program.
3. Continue to participate in the Water Corporation's Waterwise Program.
4. As the need arises, replace all old, inefficient water-consuming fittings within Council owned or managed facilities (e.g. single flush toilets) with Water Efficiency Labelling Standard (WELS) rated fittings.
5. Continue to reduce the amount of irrigated turf area throughout the Town and replace it with local native plants with low water requirements.
6. Continue to create passive reserves and landscaped areas with waterwise plant species that have a low water requirement.
7. Prepare plans to reduce groundwater abstraction under every licence by 10% by 2030
8. Investigate the feasibility of alternative water sources for Town facilities.
9. Provide education and possible incentivisation to residents on grey water systems and rainwater tank installation.

Stormwater (flood) management

1. Integration of Water Sensitive Urban Design (WSUD) in infrastructure projects (e.g. swales, infiltration basins, permeable paving).

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2. Develop a Stormwater Management Strategy to improve flood management, stormwater re-use and recharge to improve water quality of the Swan and Canning River systems and their catchments.

Water quality

1. Improve the water quality of the Towns drainage system by undertaking an asset condition audit along with foreshore areas and review the requirements to improve gross pollutant trapping capability.
2. Develop a catchment water quality program that monitors the health of the receiving water bodies and provides education to our community and business on the importance of reducing pollution and keeping contaminants out of stormwater.

1.1.3 Climate emergency plan

The Town of Victoria Park Climate emergency plan (ToVP, 2021) identifies actions for the Town, community and local businesses towards achieving emissions reductions and responding to immediate climate change impacts.

Only two actions are identified that directly relate to water management, being:

- Promote best practice erosion and flood risk management through water sensitive design at planning stages within the Town and implementation of the recommendations of the Swan and Helena Floodplain Development Strategy.
- Implement the recommendations of the Town's Flood Adaptation Plan

Other actions within the plan have indirect links to water management including actions to improve energy efficiency, and responses to urban heat impacts which should both include consideration of irrigation systems and water efficiency.

1.1.4 Urban forest strategy and action plan

The Town of Victoria Park Urban Forest Strategy (ToVP, 2019) sets out a strategy for the town to increase urban canopy cover. The document identifies six strategic outcomes which include:

- Maintain high standards of vegetation health.
- Improve soil and water quality.
- Improve urban ecosystems.

The document recognises the critical link between water and the health of vegetation and urban ecosystems and notes that the cost of water is a significant component of the total cost to plant and establish trees.

Whilst large scale harvesting of stormwater is noted as a case study, there is little discussion of the differing success rates for establishment and ongoing tree health in different parts of the urban form. Street trees planted in raised beds or small footprint areas with kerbing surrounds have limited opportunity for passive watering from rainfall and are typically less successful and are more likely to be reliant on irrigation or manual watering during drought periods.

The document also acknowledges the contribution of trees intercepting rainfall and reducing stormwater runoff into the Town's existing drainage network and sumps. This is an important consideration for stormwater management and opportunities to increase on-site stormwater retention should be maximised.

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1.1.5 Stormwater Management Plan and Assessment of Drainage Hot Spots

The *Stormwater Management Plan - Volume 1 and 2 (URS Australia, 2005)* reviewed stormwater management needs, set local objectives, and identified a range of potential management regimes to solutions water quality and quantity. The *Assessment of Drainage Hot Spots (Cardno, 2010)* assessed known drainage 'hotspots' that experienced flooding issues, identifies probable causes, and provides recommendations to address current issues and longer-term solutions to meet policy standards.

Both of these documents are in need of review due to climate change effects and development intensification that has occurred since their completion, to provide improved guidance and identify opportunities for better management of the town's stormwater system.

1.2 Stakeholder consultation

The Water Corporation and Department of Water and Environmental Regulation have been consulted to provide their advice for water management in the precinct area.

The Water Corporation have indicated no known flooding issues on the section of their main drainage system that lies within the precinct.

Additionally, the Water Corporation have provided the following advice in relation to connections from the Town of Victoria Park drainage system to the Victoria Park Main Drain within the Albany Highway Precinct area:

> *"Thanks for that info which indicates that there are a number of connections to the Main Drain from ToVP network. This area is not required to be provided with the Main Drainage Service by the Corporation as it falls outside the declared drainage catchment boundary. It means that any local network in this area was not expected/approved to be connected to the Main Drain. They may be old connections, but they were expected to drain to the Swan River directly – not via Main Drain operated by the Corporation.*
>
> *At the next scheme review of the Victoria Park Main Drain, the Corporation will assess the impact on the catchment and Main Drain. The outcomes of the review, in particular the impact caused by the local drainage network outside the Corporation's service area, will be discussed with the Town.*
>
> *As you already know, the Corporation's Main Drains are operated on the basis that the post development flow would not exceed predevelopment flow. This is consistent with the Water Services Licence and the Best Stormwater Management Practices. As such, the structure plan that is drawn for the area now needs to consider suitable local strategies to limit the post development flow to that of the predevelopment level."*

The Department of Water and Environmental Regulation (DWER) have advised that they would not considered it necessary to be involved in this project, given there are limited water constraints. Therefore, they have indicated no objections and no comments.

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1.3 Key site considerations

Analysis of the site characteristics in the Albany Highway Precinct is provided in Appendix A. Key considerations for water management in the precinct are summarised below.

1.3.1 Land use and development

Development proposals in the Albany Highway Precinct provide great opportunities for integration of water sensitive urban design to deliver urban greening, improved water quality and more sustainable use of water resources.

Existing public spaces and reserves in the precinct are key sites where water sensitive urban design principles can be applied to provide improved urban amenity, maximise habitat opportunities and deliver better water quality outcomes for the City's downstream water resources including the Swan River, urban wetlands, and groundwater system.

1.3.2 Climate

It is important to consider historic, current, and future climate as an integral part of water management investigations and modelling to inform development and validation of strategies. This should include an understanding of the representativeness of local monitoring results and demonstrated understanding of how future changes are likely to impact on the total water cycle.

Urban greening and creation of blue-green links is an important way that mitigation of urban heat impacts can be achieved, and water sensitive urban design is a key contributor to the effectiveness of urban greening. It is critical that strategies are implemented to maintain soil moisture through retention and infiltration of stormwater as close to source as possible.

1.3.3 Geotechnical considerations

The nature of soils, particularly permeability, is a critical element in determining an appropriate drainage strategy. Highly permeable soils provide opportunities for on-site infiltration strategies to be applied to avoid any increases in peak flows to existing drainage systems and sensitive receiving water bodies and should be applied throughout the Study Area.

Further investigations are required prior to redevelopment to assess the risk of acid sulfate soils in accordance with DWER guidelines for identifying and managing acid sulfate soils and, for affected sites, to determine the extent of contaminated soil and/or groundwater in accordance with the Contaminated Sites Act (2003).

1.3.4 Surface water - drainage

Because the existing Study Area is highly urbanised, redevelopment is likely to have minimal impact on stormwater runoff volumes downstream. However, implementation of water sensitive urban design strategies provides an opportunity to increase distributed infiltration throughout the catchments to support urban greening, reduce reliance on individual sumps and improve water quality.

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1.3.5 Groundwater

Whilst groundwater is currently available for allocation within the study area, future reductions in the licensable volume in response to climate change are expected. Therefore, any proposals to expanded irrigated areas of public realm may require implementation of a program of irrigation upgrades to optimise the efficiency and operation of irrigation systems so that more can be achieved within the Town of Victoria Park's current licensed amount.

Areas proposed for redevelopment where the depth to maximum groundwater level is less than three metres will require further investigation prior to development to consider if basements can be included in designs, and to determine if groundwater management measures will be required.

1.3.6 Services

Where Water Corporation infrastructure needs upgrading due to the increase in development density it is usually recommended that a developer contribution scheme is established by the Local Authority. This is so a coordinated development approach is taken instead of individual landowners being responsible for the significant upgrades that may make their development unaffordable.

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2 WATER MANAGEMENT OBJECTIVES

Water is a basic prerequisite of urban liveability, supporting and sustaining vegetation within streets and open spaces as well as performing the core essential services of providing for drinking water and wastewater needs of the community.

The objectives in Table 1 have been developed to address the site and planning context of the Albany Highway precinct consistent with the water management principles in draft *State Planning Policy 2.9 – Planning for Water* (WAPC, 2021). The objectives are discussed in detail below and will be achieved through implementation of water sensitive urban design strategies as described in Section 3.

Table 1: Water management objectives

Aim	Objective
City streets that are liveable and adaptive	• Improve amenity and liveability of urban landscapes, including blue-green linkages. • Increase tree canopy coverage and promote cooling. • Achieve a net increase in natural assets (nature positive actions).
Multi-functional and integrated public open space	• Design urban spaces to manage stormwater and flood risks. • Make water infrastructure multi-functional. • Create opportunities for the community to engage with water resources and the environments they sustain.
Efficient and sustainable use of water services	• Optimise the use of water, encourage reuse/recycling, and reduce the use of non-renewable energy. • Sustainably manage our groundwater.

2.1 City streets that are liveable and adaptive

The key objectives for liveable and adaptive streets are:

- Improve amenity and liveability of urban landscapes, including blue-green linkages.
- Increase tree canopy coverage and promote cooling.
- Achieve a net increase in natural assets (nature positive actions).

Idea 7 of *Albany Highway Tomorrow* (Hatch Roberts Day, 2022) is focused on reallocating highway space from cars to people and Idea 2 is focused on increasing Albany Highway's biodiversity by increasing tree canopy, plant/tree diversity, urban farming, softscape and water sensitive urban design. In considering these ideas, *Albany Highway Landscape Precinct Structure Plan* (Aspect Studios, 2023) proposes interventions along the Highway and adjacent streets to create a pedestrianised Albany Highway with increased shade and biodiversity, consistent with the *Town of Victoria Park Urban Forest Strategy* (ToVP, 2018).

The creation of liveable and adaptive streets is an objective that is strongly aligned with water sensitive cities principles. Within a water sensitive city, water management aims to improve the liveability of a city, providing not only traditional functions (drainage, water supply and sewer) but also additional benefits of the amenity, cooling and ecological health (CRCWSC, 2012).

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A key focus of water sensitive cities is to use water to mitigate urban heat effects that increase the risk of illness and mortality, particularly during heatwaves (CRCWSC, 2020). Hard, impervious surfaces (roof, roads, and concrete) absorb more solar radiation and slowly release it into the atmosphere creating an urban heat island. Trees and other vegetation (green infrastructure) cool cities as they absorb less solar radiation and provide shade and evapotranspiration. Shade from tree canopies can reduce temperatures of hard, impervious systems by between 10 and 25°C.

Collection of runoff to create links between blue and green infrastructure provides passive irrigation, reducing the demand on potable and non-potable water sources. These systems can be integrated into the proposed built form through the installation of grates and grills prevent these pits from becoming a tripping hazard or installation of bollards to protect against damage from vehicles. Similarly, using structural cells and wicking beds can protect existing infrastructure (reduce pavement uplift and root intrusion) within road reserves and improve tree growth.

Studies have identified that well designed passive irrigation can increase the rate of canopy of growth (up to 8-10 times higher) (CRCWSC, 2020). Therefore, successful design and implementation of these systems is a considerable component of achieving the objectives of the *Town of Victoria Park Urban Forest Strategy* (ToVP, 2018).

Key considerations for creation of blue-green linkages in streetscape design include:

- Passive watering of street trees by stormwater maximises the beneficial use of water resources and can be easily achieved by directing runoff from road and footpath surfaces towards tree wells surrounded with flush or broken kerbing.
- The use of permeable surfaces maximises groundwater recharge and reduces runoff which in turn can reduce flows to sumps and basins creating opportunities for these assets to be reimagined as multifunctional blue/green urban spaces.
- Co-location of street trees within roadside swales and raingardens designed for collection and infiltration of stormwater improves infiltration performance through the presence of larger root structures and increased evapotranspiration rates.
- Increased vegetation and tree canopy increases interception of stormwater and in-turn helps to alleviate capacity issues within the downstream drainage network.

2.2 Multi-functional and integrated public open space

The key objectives for multi-functional and integrated public open space are:

- Design urban spaces to manage stormwater and flood risks.
- Make water infrastructure multi-functional.
- Create opportunities for the community to engage with water resources and the environments they sustain.

Idea 8 of the Albany Highway Tomorrow Report is focused on creating and delivering new open spaces within major sites while Idea 9 is focused on enhancing surrounding parks and streets. Additionally, Idea 2 is focused on increasing Albany Highway's biodiversity by increasing tree canopy, plant/tree diversity, urban farming, softscape and water sensitive urban design. In considering these ideas, *Albany Highway Landscape Precinct Structure Plan* (Aspect Studios, 2023) identifies parks that are key to creating the public realm network, particularly in areas with shortfalls on public realm and with low usage, and general open space typologies for application at locations throughout the precinct including at existing drainage sumps.

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Green infrastructure and water features are highly valued by communities, particularly the aesthetics and characteristics that trees, vegetation, and waterbodies provide. The presence of green infrastructure and spaces has been demonstrated to increase property values by up to 16% (CRCWSC, 2016).

Key considerations for multifunctional public open spaces include:

- Existing drainage basins and sumps are significant blue/green assets that can be successfully modified to create beautiful community spaces and beneficial urban habitats with a careful design process that includes detailed consideration of safety and drainage functionality.
- Vegetation planted within basins and sumps should be diverse and include species selected to provide effective water quality treatment.
- The Water Corporation and Department of Water and Environmental Regulation drainage for liveability initiative provides opportunities for the Town to deliver improved public open space outcomes through partnership approaches.

2.3 Efficient and sustainable use of water services

The key objectives for efficient and sustainable use of water services are:

- Optimise the use of water, encourage reuse/recycling, and reduce the use of non-renewable energy.
- Sustainably manage our groundwater.

Idea 1 of Albany Highway Tomorrow (Hatch Roberts Day, 2022) is focused on establishing the highway as a Low Carbon Leader and the report goes on to identify key opportunities for Albany Highway to respond to the challenges of climate change through new development controls and management practices including:

- Incentivising sustainability innovations in development such as grey water recycling and green roofs.
- Incorporation of Water Sensitive Urban Design (WSUD) provisions and considerations into engineering design.

Irrigation of vegetation is a significant component of urban cooling as demonstrated by research that measured temperatures of dry grass as high as road and roof surfaces (CRCWSC, 2020). Therefore, ongoing irrigation is required to maintain the health of trees and vegetation, but also to cool the urban environment through evapotranspiration processes and soil moisture.

As outlined in Appendix A, rainfall is projected to decrease and groundwater resources are limited, meaning efficiency of groundwater use for irrigation must be maximised and in future alternative water sources may be required. The use of urban runoff for passive irrigation of streetscapes is discussed in Section 3.2 and demonstrates the value of stormwater as a component of urban cooling, whilst also decreasing the stress on other water resources.

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3 WATER MANAGEMENT STRATEGY

There are many different opportunities for delivering water sensitive urban design (WSUD) outcomes or retrofit projects in the Albany Highway Precinct. These have been categorised to assist with identification and implementation as follows:

- New development proposals
- Streetscape and carpark improvements
- Public Open Space and drainage improvements
- Investigation of alternative fit for purpose water sources

3.1 New development proposals

There is a key opportunity to promote and incentivise implementation of best practice water sensitive urban design in developments in the Albany Highway Precinct. It is recommended that the following development objectives are adopted for the precinct:

- Improve amenity and liveability of urban landscapes, including blue-green linkages.
- Increase tree canopy coverage and promote cooling.
- Achieve a net increase in natural assets (nature positive actions).
- Improve amenity and liveability of urban landscapes, including blue-green infrastructure and connectivity.
- Increase tree canopy coverage and promote cooling.
- Achieve a net increase in natural assets (nature positive actions).
- Optimise the use of water, encourage reuse/recycling, and reduce the use of non-renewable energy.
- Sustainably manage our groundwater.

All development within the Albany Highway precinct area should aim to achieve these objectives by applying standard criteria for implementation in all developments and additional 'best practice' criteria to be implemented by developments to demonstrate sustainability and/or community benefit where site bonuses are sought.

3.1.1 Standard design criteria for development

It is the proponent's responsibility to undertake the necessary reviews, assessments, and modelling to demonstrate, to the satisfaction of the Town of Victoria Park, that proposed development in the Albany Highway precinct is consistent with the following design criteria:

Stormwater and groundwater management

- All mixed use, multi-dwelling, and multi-storey developments are required to provide on-site retention (via infiltration where possible) for all on-site runoff generated by rainfall up to and including the critical 10% AEP event.
- Single lot residential developments are required to provide on-site retention (via infiltration where possible) for all on-site runoff generated by the first 15mm of rainfall.
- All flows from constructed impervious surfaces are to receive treatment prior to infiltration or discharge.
- Flows from subsoil drains, where they are required, are to be treated prior to infiltration or discharge.
- Roads and public open spaces are to be designed to cater for the surface overflow for more severe storm events with habitable floors at least 0.3 m above the 1% AEP flood or storage level at any location.

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- Water quality treatment systems and stormwater management structures should be designed in accordance with the *Stormwater Management Manual for Western Australia* (DWER, 2004-07) and Adoption Guidelines for Stormwater Biofiltration Systems (CRCWSC, 2015).
- All vegetation planted within stormwater management systems is to be consistent with the recommendations of *Vegetation Guidelines for Stormwater Biofilters in the South-West of Western Australia* (Monash University, 2014).
- Gross pollutant traps are to be provided at inlets and/or outlets of detention structures and on any discharges from commercial and light industrial lots into the Town's drainage system.
- Undertake regular cleaning of gullies and stormwater pollutant traps to enable pollution spills to be contained and educted before entering the Town's drainage system.

Water resource use

- All new developments to incorporate water efficient fixtures, fittings and appliances, including WELS (Water Efficiency Labelling and Standards) 4* or above rated flow controllers, toilets, taps and urinals.
- Smart metres for water in all new developments.
- Use of waterwise, locally native plants in all landscaped areas.
- Maximise efficiency of groundwater usage for irrigation of any additional open spaces so that additional allocations are not required.

3.1.2 Best practice design criteria for development

Implementation of these additional design criteria in new developments demonstrates a commitment to water sensitive urban design principles that will help to make the Albany Highway Precinct more liveable and protect water resources into the future.

- Infiltration of stormwater from all impervious areas (excess roof water, paved areas, and roads) to recharge superficial aquifers.
- Landscaping which incorporates the use of waterwise gardens, rain gardens, smart irrigation systems, and use of alternative sources of water.
- Buildings with roof gardens and green walls in new medium density commercial and residential areas.
- Implementation of fit-for-purpose water supplies for irrigation such as greywater reuse or wastewater recycling.
- Installation of better than WELS 4* fixtures, fittings and appliances.

Urban development Case Study:

Greater Curtin University Masterplan is a 6 Star Green Star Community that includes public spaces, offices and other commercial buildings, residential apartments and a hotel.

Curtin provides access to a wide range of amenities and public transport to encourage healthy lifestyles and includes highly sustainable buildings and best practice storm water management systems, recognising and celebrating culture, heritage and identity.



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3.2 Streetscape and carpark improvements

Streetscape improvements in the Albany Highway precinct should aim to achieve the following objectives:

- Improve amenity and liveability of urban landscapes, including blue-green linkages.
- Increase tree canopy coverage and promote cooling.
- Achieve a net increase in natural assets (nature positive actions).

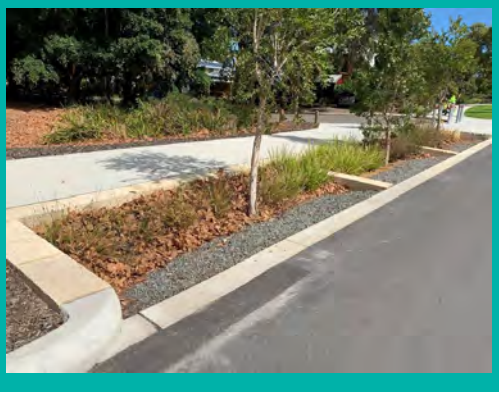
It is recommended that all upgraded streetscapes and carparks in the Albany Highway precinct are designed to function as blue-green links including management measures for the retention, detention and/or treatment of runoff from small rainfall events at-source. This can be achieved by using a combination of raingardens and tree pits allowing water to enter vegetated areas via kerb-breaks, incorporating them with the road and landscaping design as streetscapes are upgraded for the new built form. A description of these elements, along with case studies is outlined below.

Raingardens are small, vegetated basins with a flush kerb (or kerb break) that can collect frequent road and pavement runoff. These systems have porous fill material that allows for stormwater to infiltrate either to the underlying aquifer (retention) or to subsoil drainage that connects to the pit and pipe drainage system (detention). Whether the raingarden provides a retention or detention function, these systems assist in reducing flood risk downstream, as well as providing treatment of stormwater prior to entering the downstream system. Directing stormwater to vegetated area including trees also provides passive watering which increases the health and growth rate of the vegetation. Design of these systems is flexible, allowing for consideration of local street design and/or for the retention of existing trees.

Overflow from the raingardens (during minor event) can either cascade to the next entry pit downstream, or dedicated pits can be designed within the raingarden itself (above the invert). This eliminates the risk of localised flooding.

Raingarden Case Study:

Parkside Walk in Jolimont is a residential development consisting of townhouse and multiple dwelling lots and features narrow strips of POS to retain existing trees and provide amenity. Owing to the nearby conservation category wetland (Mabel Talbot Lake), treatment of road runoff is necessary. Raingardens have been used to capture and infiltrate at least the first 15 mm of rainfall from road surfaces. The raingarden design (shown below) requires minimal infrastructure that reduces cost and allows for street trees.



From a water quality perspective, amended filter media can be installed, and in conjunction with vegetation recommended by Monash (2014), allow for nutrient removal and improvement in water quality discharged downstream. Capturing stormwater runoff within raingardens on steeper slopes assists in reducing gutter flow velocities and associated erosion and safety concerns. These systems also capture sediment and litter.

The flexibility of raingarden design allows for integration into any streetscape design and will assist in delivering liveable communities by reducing hard surfaces and increasing green areas. Raingardens should also include trees to provide shade and evapotranspiration that cools the urban environment in line with the *Town of Victoria Park Urban Forest Strategy* (ToVP, 2018).

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Figure 2: Streetscape raingarden examples

The intention for raingardens is to capture runoff from impervious areas as close to source as possible. Therefore, raingardens should be considered for most streets within the precinct. These systems should be sized for runoff up to the first 15 mm of rainfall, but not excluded from the streetscape if there only space for smaller systems.

To improve tree growth, meet canopy targets and to protect existing infrastructure, wicking bed and structural cell designs can also be considered (CRCWSC, 2020). Wicking beds rely on soil media for capillary rise within a lined cell. As shown in Figure 3, the subsoil drainage outlet is designed to sit above remainder of the pipe to trap water and facilitate capillary rise. These systems retain soil moisture during extended dry periods experienced in Victoria Park.

Structural cells offer the benefit of being trafficable and can be incorporated into most urban streetscapes. These systems feature a frame and deck that supports pavement and provides a void for uncompacted soil media that allows for vegetation growth and stormwater infiltration. As shown in Figure 3, the area for stormwater storage can also be extended to under the pavement, increasing the potential capacity for treatment and integration with streetscape design and amenity. Structure cells combined with a wicking zone to improve tree growth.

Tree Pits Case Study:

Trees play a significant role in mitigating urban heat effects through shade and evaporation. Incorporating trees into the urban form can be achieved most situations. The image below is a tree that has been planted on St Georges Terrace in the Perth Central Business District. The tree is planted within a pit that provides limits risk to pedestrians, but also permits passive runoff from the surrounding pavement. This design reduces irrigation needs during establishment (up to 4 years from planting).



Expanding the urban canopy and providing improved street amenity are key aspect of improving the liveability within the precinct, consistent with the *Town of Victoria Park Urban Forest Strategy* (ToVP, 2018). Additionally, many of the drainage sumps within the precinct have been identified as having existing capacity constraints. Raingardens are an ideal solution to both issues as they incorporate a variety of vegetation and reduce runoff into the drainage system, however where space is limited tree pits are a suitable alternative. Tree pits function similarly to raingardens, providing water quality and stormwater detention/retention. However, tree pits are typically smaller and designed for tree planting only. Wicking bed and structural cells designs can also be used for tree pits.

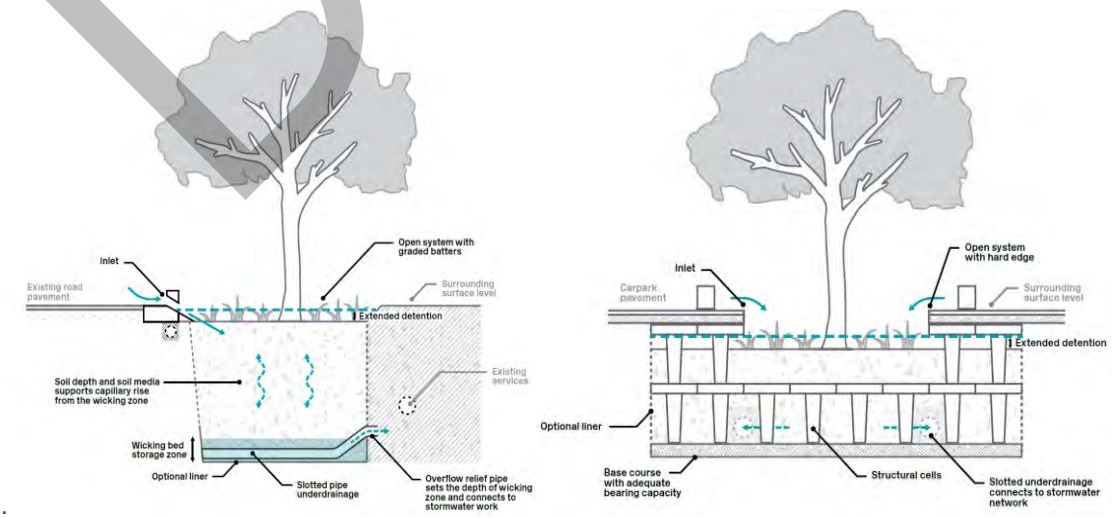


Figure 3: Wicking bed (left) and structural cell (right) concepts

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Raingardens and tree pits require maintenance to inspect tree and vegetation health, remove sediment and litter built up and ensure outlets are not blocked. Effective design can reduce these maintenance requirements, but regular inspection and watering is necessary during tree and vegetation establishment. Ongoing maintenance responsibility may be split between vegetation health (parks staff) and traditional drainage maintenance like blockage removal.

Trees within tree pits should be consistent with the species recommended in the *Town of Victoria Park Urban Forest Strategy* (ToVP, 2018). Along with the trees, ground cover vegetation should be used to improve ongoing infiltration performance of soil media.

Tree pits should be considered throughout the more heavily trafficked areas of the precinct, and within individual lots (discussed further below). These systems should also be installed in road reserves where raingardens cannot be installed owing to size restrictions or other design considerations.

Car parks provide many opportunities for integration of water sensitive urban design to increase capture of rainfall in the catchment, promote urban greening and increase liveability. Key options for car parks include the use of permeable paving, tree pits sited for passive watering and swales or biofilters for on-site management of larger rainfall quantities.

The benefits of integrating these strategies include reduced runoff, improved water quality, increased aquifer recharge and mitigation of urban heat impacts.

It is recommended that all public carparking areas are considered for retrofitting of water sensitive urban design when upgrades are being proposed. This includes:

- Parking at Leisurelife Centre
- Parking at Town of Victoria Park council offices
- Parking at John Macmillan Park
- King George Street Car Park
- Hubert Street Car Park
- Shepperton Road Car Park No 12

Car park Case Study:

Mineral Resources Park (home of the West Coast Eagles) was opened in July 2019.

A key element of the redevelopment of this site was to include water sensitive urban design outcomes including swales and grasscrete pavers which allows infiltration of stormwater.





Car parks provide many opportunities for integration of water sensitive urban design to increase capture of rainfall in the catchment, promote urban greening and increase liveability. Key options include the use of permeable paving, tree pits sited for passive watering and swales or biofilters for on-site management of larger rainfall quantities. The benefits of integrating these strategies include reduced runoff, improved water quality, increased aquifer recharge and mitigation of urban heat impacts.

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Figure 4: Carpark raingarden and swale examples

3.3 Public open space and drainage improvements

Public open space improvements in the Albany Highway precinct will aim to achieve the following objectives:

- Design urban spaces to manage stormwater and flood risks.
- Make water infrastructure multi-functional.
- Create opportunities for the community to engage with water resources and the environments they sustain.

The creation of new or expanded public open space in is proposed in the following drainage sump locations inside the Albany Highway Precinct:

- Reed Park
- Swansea Street

The existing Town of Victoria Park drainage sumps in these locations can be replaced with a combination of underground and above ground storage. Conceptually, as shown in Figure 7 and Figure 8, this would result in small and minor rainfall events being managed within an underground storage tank with public open space above. Larger (>20% AEP) rainfall events would then overflow from the underground storage into a defined area of above ground storage integrated with the public open space.

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TOWN OF VICTORIA PARK - WATER MANAGEMENT STRATEGY

Figure 5: Reed reserve preliminary concept

REVISION: B DATE: 29/07/2024

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TOWN OF VICTORIA PARK - WATER MANAGEMENT STRATEGY

Figure 6: Swansea Street Reserve preliminary concept

REVISION: B DATE: 29/07/2024

urbaqua land and water solutions

These locations can be upgraded in isolation from any surrounding development however pre and post development modelling of the stormwater system will be necessary to ensure run-off from future development scenarios is able to be adequately managed by the proposed stormwater system.

Drainage sumps, or dry retention or detention basins are designed to retain and infiltrate or detain stormwater and return to a dry state within a short while after the rain has ceased. Upgraded designs should include a vegetated area or underground storage component for management of frequent rainfall events, while the larger basin area is available to manage minor and major events and can provide a public open space function at other times.

Where underground storage is provided, the system should be sized to provide an appropriate level of service for the space above. Usually, sizing for the 20% AEP event to be stored underground would be sufficient in residential areas and generally no larger than the 10% AEP event would be required.

There are numerous other drainage sumps and Water Corporation detention basins located in the areas surrounding the Albany Highway Precinct, some of which may provide similar opportunities to create new or expanded public open space. Appendix B provides a high-level review of the 24 drainage sumps, basins and underground storage sites in the area surrounding the precinct. The review identifies known capacity information for each site and considers opportunities for integration of water sensitive urban design and or retrofitting for urban greening and improved urban amenity.

Sump Retrofit Case Study:

The White Gum Valley development precinct addresses water, energy, community and biodiversity in its "One Planet Living" approach, which is based on the idea that we all need to live within the limits of one planet's natural resources.

As part of the development, an existing drainage sump was retrofitted with underground infiltration cells to facilitate creation of a new landscaped public open space with full pedestrian access.



Detention basins have a low-level outlet that is generally sized to comply with a specified discharge rate. They detain and store flows in excess of the required discharge rate to avoid exceeding the downstream capacity of the drainage system which may cause flooding.

While Water Corporation detention basins cannot generally be converted fully to public open space, they are ideal locations to provide passive amenity, increased vegetation and habitat and may provide opportunities for public artwork and signage to increase public awareness of their function and connection to healthy waterways.

3.3.1 Mindeera Spring

Mindeera Spring, just inside the northwestern boundary of the Study Area, has been recognised as an important cultural site in the Town of Victoria Park, that contributes to community awareness and understanding of local Aboriginal history.

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Mindeera is a permanent spring that once existed to the south-east of the river's only crossing point, Matta Gerup, which made this place a neutral ground where different tribes could meet without conflict and where fighting was banned to enable safe passage to the river (Museum of Perth, 2024).

The spring was located on the corner of where Oswald and Hordern Streets are now situated in Victoria Park and has been historically enclosed within the piped drainage system.

Ongoing investigation of opportunities to daylight the spring and restore an above ground living stream connecting to the Swan River is recommended.

3.3.2 Vegetation selection

Trees are of primary importance as they not only provide bank stabilisation and prevent soil erosion, but they also provide canopies over the stream and reduce the temperature of the water

In nature, plants are not evenly spaced, but grown in groups or random patterns. In WSUD where possible this should be replicated. When designing WSUD assets consider the placement of species in appropriate positions corresponding to inundation frequency and drought tolerance.

The area that receives the most inundation is generally closest to the inlets and will be the lowest part of the system. This area may be appropriate for planting of wetland species, while the batters are likely to remain quite dry and require terrestrial plants. Steep batters may require creation of planting shelves.

Species selected should be indigenous to the area. Ensure there is a mix of shallow and deep-rooted plants, a mix of both fast and slow growing plants and that plants are tolerant of wetting and drying cycles. Take advantage of layering, create microclimates by incorporating native trees like the *Agonis flexuosa* (WA Peppermint tree) to provide shade and mitigate urban heat. Layering also increases total transpiration.

Seasonally wet areas (damp)

Plant dense rushes and sedges along the foreshore or buffer areas in seasonally wet areas as they trap soil and water runoff from adjacent land, which in turn limits the export of nutrients into a wetland or waterway. Species such as Juncus pallidus, Baumea juncea, Ficinia nodosa, Carex fascicularis, and Bolboschoenus caldwellii improve water quality by acting as 'nutrient strippers.

Detention Basin Retrofit Case Study:

Redevelopment of the Wharf Street detention basin in Cannington into an urban wetland has provided increased amenity, recreation and education within a piece of drainage infrastructure, whilst delivering improvements to natural systems, and providing for pedestrian access through previously inaccessible land.





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Shallow waters (emergent)

Emergent plants live near the water's edge and along the banks of a wetland or waterway. Their roots may be submerged by water for an extended time. These vascular plants often have deep and dense roots that stabilise shallow soils at water's edge. Their benefits include filtering and trapping soil and nutrients during runoff and absorption of nutrients. Species include Baumea articulata (Jointed Twig rush), Carex appressa (Tall sedge) and Baumea vaginalis (Sheath Twig rush).

Open waters (submergent and floating)

These areas can support both floating plants and fully submerged plants. Macrophytes are the larger plants that can be seen with the naked eye. They are attached to the river bottom with their roots in the sediment, but some are free floating. Common wetland tree species such as Melaleua rhaphiophylla (Swamp paperbark), Eucalyptus rudis (Flooded gum) and Melaleuca preissiana (Modong) can tolerate several years of continuous inundation. Extended periods of low water levels are likely to lead to mortality.

3.4 Alternative fit for purpose water sources

Investigation of alternative fit-for-purpose water sources in the Albany Highway precinct will aim to achieve the following objectives:

- Optimise the use of water, encourage reuse/recycling, and reduce the use of non-renewable energy.
- Sustainably manage our groundwater.

The Department of Water and Environmental Regulation (DWER) are responsible for water resource planning and allocation of surface and groundwater resources. In response to the drying climate, DWER have indicated that reductions of 10% to annual water entitlements between 2028 and 2032 are likely throughout the Perth metropolitan area.

This reduction in groundwater availability is expected to be compounded by increased plant water needs due to increased evapotranspiration caused by climate change, estimated at 7.5 per cent at 2050 (Urbaqua, 2023) and increased public open space use by a growing population.

There are a number of alternative water source options that could be used to address any future shortfall in available groundwater in the Town of Victoria Park in future. These include:

- Rainwater capture
- Stormwater harvesting
- Wastewater harvesting (sewer mining)
- Greywater reuse
- Groundwater trading
- Small scale desalination

These options are described below.

3.4.1 Rainwater capture

Replacing potable water with another source of water where appropriate is a good way to reach water saving targets and reduce the demand for water. The choice of solution will depend on the intended use. Plumbing a rainwater tank into a toilet is best, so that the

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demand is present during winter when it rains. There is limited benefit in installing a rainwater tank for garden watering/ irrigation during summer unless there is a large amount of land available for longer-term storage (e.g. POS areas).



Figure 7: Rainwater tanks for community toilets

3.4.2 Stormwater harvesting

Stormwater harvesting requires sufficiently large stormwater flows and, due to the seasonality of stormwater flows, a successful scheme will require a form of storage so that the water is available at a time when it is required. In the Perth context, the most effective form of storage is likely to be within the groundwater aquifers due to the large volumes that may need to be stored during winter.

Depending on the quality of the stormwater and the type of storage, it is also likely that some form of treatment will be required prior to storage and/or use for irrigation. This may require mechanical solutions such as filters and other treatments.

The cost and footprint of a stormwater harvesting system is highly dependent on the quality of the stormwater and the treatment and storage options used and cannot be determined without technical investigations to provide an understanding of achievable yields, flow seasonality and water quality. However, a study completed in 2009 by CSIRO for the National Water Commission identified an average levelised cost of $1.12/kL based on eight urban stormwater aquifer storage and recovery projects of between 75 and 2000 ML/yr (Dillon et al, 2009).

Stormwater Harvesting Case Study:

Growing demands on the City of Kalamunda to provide community sporting fields and recreational spaces, coupled with a drying climate and population growth were at the core of the Hartfield Park Managed Aquifer Recharge (MAR) project.

Groundwater allocations were insufficient for the irrigation needs of the growing council and the project was implemented to extract water from the nearby Water Corporation Woodlupine Main Drain during winter.



DRAFT

While there is an extensive stormwater drainage system throughout the Town of Victoria Park, there are no locations within the Albany Highway Precinct that are likely to be suitable for stormwater harvesting.

3.4.3 *Wastewater harvesting*

Wastewater harvesting can occur direct from centralised or decentralised wastewater treatment plants (WWTP) or at smaller scale from sewer pump stations which is known as sewer mining. This method allows 'on demand' extraction of raw wastewater from the wastewater network for local treatment and recycling without multi-day or seasonal storage. A 250 kL/day scheme is assumed to be able to service approximately 3 to 4 ha of active green space (e.g. sporting fields), or approximately 5 ha of passive open space (e.g. parklands).

Establishing a small-scale sewer mining scheme would involve the design and construction of a small (250 kL/day) Water Reclamation Plant designed to produce recycled water of a quality suitable for irrigation of green space with controlled access, plus short distribution pipelines to supply this water to a limited number of green space areas. Day tanks at each public open space (POS) area would be required for irrigation balancing, and residuals from the Water Reclamation Plant (which has a footprint of approximately 900 m^2) would be discharged to sewer.

There are no locations in the Albany Highway Precinct that are likely to be suitable for implementation of a wastewater harvesting scheme for irrigation of public open space.

3.4.4 *Greywater reuse*

Greywater is a stream of wastewater from all sources other than toilets (which is usually called blackwater). It is still classified as "sewage" under the *Health Act 1911* and so approvals are required from the Department of Health to install and operate greywater systems (with the exception of a domestic greywater system that reuses greywater via greywater diversion device (GDD) for watering garden via sub-surface irrigation – this needs Local Government approval).

A Greywater Treatment System (GTS) collects and treats greywater to a higher quality. A GTS is the simplest method of greywater reuse for multi dwelling and commercial premises (including aquatic centres and public facilities) as these premises are required by the Code of Practice (Department of Health, 2010) to treat the greywater prior to discharge. In order to reuse the greywater for sub-surface irrigation or surface drip irrigation, or for aquifer storage and recovery, the GTS needs to include disinfection. A GTS proposed by a Local Government, treating less than 5,000 L/day does not require approval from the Department of Health (DoH, 2010).

Greywater reuse Case Study:

Bentley Primary School is situated about 10 km south-east of the Perth city centre. The site was selected through a collaboration with the Department of Communities and the Department of Education as a demonstration project for greywater reuse.

Greywater is diverted from hand washing basins within the school and from external drinking water fountains and used to irrigate a green wall.



The viability of greywater is dependent on the volume and timing of greywater generated, which may be sufficiently large at some Town of Victoria Park buildings and facilities to provide for some nearby irrigation demands. Possible sites within the Victoria park Precinct include the Town of Victoria Park Administration Centre and the Leisurelife Centre.

DRAFT

3.4.5 Groundwater trading

Trading of water entitlements is an effective process for moving water to higher-value uses as it provides an opportunity for new water users to access the limited resources where an existing licence holder no longer requires access to the water source. Information on current water licences to facilitate trade discussions is publicly available on the Department of Water and Environmental Regulation's Water Register (https://maps.water.wa.gov.au/#/webmap/register).

Trading is most common when a water resource becomes fully allocated. Current licenses may increase efficiency or be used for low-value production. This water may be available to be traded to support development (DWER, 2021), however, it should also be noted that the Department may seek a portion of the traded licence to be returned for environmental reasons or to address the impacts of climate change.

3.4.6 Small scale desalination

The removal of salts from seawater through desalination provides an opportunity to create water suitable for a range of uses. The existing seawater desalination plants in Western Australia treat water to drinking water quality, however it is also feasible to treat water to a lower quality (higher salinity) to provide a fit-for-purpose use for irrigation. Desalination plants are also available at a range of scales (from 1LG/annum plants to 100GL/annum).

While seawater desalination provides a climate independent source of water, it requires large amounts of energy and produces a concentrated saline discharge which needs to be managed. It also requires a location on the coast and the ability to create a distribution network that does not impact on environmental values.

Farmers in the wheatbelt of WA have been increasingly adopting reverse osmosis (RO) desalinisation to improve water self-sufficiency when other sources are compromised, especially in low rainfall years or where better quality is required. The number of farmers seeking fresh water, and companies supplying units, have increased rapidly in recent drier than average seasons. More information is available through the Department of Primary Industries and Regional Development (DPIRD):

https://www.agric.wa.gov.au/water-management/groundwater-desalination-farms-western-australia

DRAFT

4 IMPLEMENTATION

In order to achieve the water management objectives of this water management strategy in a manner consistent with the water management principles in draft *State Planning Policy 2.9 – Planning for Water* (WAPC, 2021), the water management strategies described in Section 3 need to be delivered as part of future planning and development in the Albany Highway precinct.

The strategies are to be incorporated into subdivision and development applications supported by water management information. Elements of this water management strategy will also need to be delivered at the precinct scale, coordinated by the Town of Victoria Park.

4.1 Precinct scale initiatives (Town led)

The Albany Highway Precinct Water Management Strategy proposes to promote the enhancement of streetscape and public open space outcomes in the precinct through implementation of water sensitive urban design whenever streets and intersections are upgraded and through modification of existing drainage sumps.

The following initiatives are proposed to be implemented at the precinct scale to enhance streetscape and public open space outcomes, safeguard water resources for the future, and promote water sensitive urban design principles in the community.

1. Integration of raingardens and tree pits with road and landscaping design as streetscapes are upgraded to activate and support new built form outcomes.
2. Identify low traffic areas including pathways and medians in parking areas and incorporate permeable pavements where practicable.
3. Maintain street sweeping programs and develop a monitoring plan to assess the efficiency of current schedules and future procedures.
4. Use artwork and signage to emphasise environmental and hydrological connections between the urban drainage system, groundwater, and the Swan River.
5. Undertake an audit of water usage in all public open spaces to identify opportunities for modification to landscaping and irrigation systems to reduce water consumption and improve efficiency.
6. Promote water efficiency measures within the community and workplace including behaviour change and the retrofit of more water efficient fittings and fixtures.
7. Consider opportunities to develop alternative fit-for-purpose water sources.

4.2 Local / Sub-precinct scale initiatives (Town-led)

The following initiatives are proposed to be implemented at the sub-precinct scale to achieve improvements in the water quality of the stormwater system while maintaining the flood protection and conveyance capacity of the existing drainage system.

- St James (Welshpool Road to Ballie Avenue)
  - Retrofitting of water sensitive urban design into public carparking at Shepperton Road Car Park No 12.
  - Integration of raingardens and tree pits with upgraded road and landscaping designs.
- East End (Ballie Avenue to Hampshire Street)
  - Integration of raingardens and tree pits with upgraded road and landscaping designs.

DRAFT

- East Victoria Park (Hampshire Street to Miller Street)
    - Creation of new public open space at the Swansea Street drainage sump.
    - Retrofitting of water sensitive urban design into public carparking at Hubert Street, John Macmillan Park, and the Leisurelife Centre
    - Integration of raingardens and tree pits with upgraded road and landscaping designs.
- Central (Miller Street to McMillan Street)
    - Creation of expanded public open space surrounding the Reed Park drainage sumps.
    - Integration of raingardens and tree pits with upgraded road and landscaping designs.
- Victoria Park (McMillan Street to Harvey Street)
    - Retrofitting of water sensitive urban design into public carparking at King George Street and the Town of Victoria Park council offices.
    - Integration of raingardens and tree pits with upgraded road and landscaping designs.
- Causeway (Harvey Street to Canning Highway)
    - Integration of raingardens and tree pits with upgraded road and landscaping designs.
    - Daylighting of Mindeera Spring and creation of a restored living stream connected to the Swan River.

4.3 Site scale initiatives (Developer-led)

As the Albany Highway Precinct is an urban area, implementation of this water management strategy at the site scale will occur largely on an ad-hock basis, as development and redevelopment proposals are approved and constructed. The key opportunities for implementation of water sensitive urban design at the site scale through redevelopment include:

- Improved at-source stormwater management.
- Integration of water sensitive urban design in new public/private urban spaces.
- Urban greening including green roofs, facades, and other on-structure planting.
- Building scale use of alternative fit-for-purpose water sources.

All development within the Albany Highway precinct area should comply with the following standard design criteria. Where site bonuses are sought, the additional 'best practice' criteria can be applied.

Major developments may require detailed investigation and consideration of water management issues through the preparation of an urban water management plan. However, in most cases, development will not require this level of documentation.

Where a Water Management Report is not required, engineering and building drawings submitted to Council for development approval are to be supported by clear and auditable documentation, providing details outlining the water management requirements including any proposed staging, and demonstrating compliance with the design criteria through completion of the following checklist, with reference to supporting designs and documents as required.

It is the proponent's responsibility to undertake the necessary reviews, assessments, and modelling to demonstrate, to the satisfaction of the Town of Victoria Park, that proposed development in the Albany Highway precinct is consistent with the design criteria presented in the checklist below.

DRAFT

Table 2: Water management design criteria for site-scale implementation

Design criteria	Demonstrated ☑/☒	Details/ references
Standard requirements		
All mixed use, multi-dwelling, and multi-storey developments are required to provide on-site retention (via infiltration where possible) for all on-site runoff generated by rainfall up to and including the critical 10% AEP event.	☐	
Single lot residential developments are required to provide on-site retention (via infiltration where possible) for all on-site runoff generated by the first 15mm of rainfall.	☐	
All flows from constructed impervious surfaces are to receive treatment prior to infiltration or discharge.	☐	
Flows from subsoil drains, where they are required, are to be treated prior to infiltration or discharge.	☐	
Roads and public open spaces are to be designed to cater for the surface overflow for more severe storm events with habitable floors at least 0.3 m above the 1% AEP flood or storage level at any location.	☐	
Water quality treatment systems and stormwater management structures should be designed in accordance with the Stormwater Management Manual for Western Australia (DWER, 2004-07) and Adoption Guidelines for Stormwater Biofiltration Systems (CRCWSC, 2015).	☐	
All vegetation planted within stormwater management systems is to be consistent with the recommendations of Vegetation Guidelines for Stormwater Biofilters in the South-West of Western Australia (Monash University, 2014).	☐	
Gross pollutant traps are to be provided at inlets and/or outlets of detention structures and on any discharges from commercial and light industrial lots into the Town's drainage system.	☐	
Undertake regular cleaning of gullies and stormwater pollutant traps to enable pollution spills to be contained and educted before entering the Town's drainage system.	☐	
All new developments to incorporate water efficient fixtures, fittings and appliances, including WELS (Water Efficiency Labelling and Standards) 4* or above rated flow controllers, toilets, taps and urinals.	☐	
Smart metres for water in all new developments.	☐	
Use of waterwise, locally native plants in all landscaped areas.	☐	
Maximise efficiency of groundwater usage for irrigation of any additional open spaces so that additional allocations are not required.	☐	

DRAFT

Design criteria	Demonstrated ☑/☒	Details/ references
Best practice requirements		
Infiltration of all stormwater from impervious areas (excess roof water, paved areas, and roads) to recharge superficial aquifers.	☐	
Landscaping which incorporates the use of waterwise gardens, rain gardens, smart irrigation systems, and use of alternative sources of water.	☐	
Buildings with roof gardens and green walls in new medium density commercial and residential areas.	☐	
Implementation of fit-for-purpose water supplies for irrigation such as greywater reuse or wastewater recycling.	☐	
Installation of better than WELS 4* fixtures, fittings and appliances.	☐	

Where required, the Town of Victoria Park may seek the advice of the Department of Water and Environmental Regulation regarding water management measures outlined in any development application.

4.4 Review

This Water Management Strategy should be reviewed every 5 years or as required to ensure currency of recommendations and that ongoing, viable and sustainable water management solutions are being achieved.

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Western Australian Planning Commission (WAPC), 2021a. *Draft State Planning Policy 2.9 – Planning for Water*, Perth.

Western Australian Planning Commission (WAPC), 2021b. *Draft State Planning Policy 2.9 – Planning for Water Guidelines*, Perth.

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Appendix A Site context

The existing environmental conditions and land uses in the Study Area define the opportunities and constraints for water management. A summary of the conditions is provided in this Appendix.

Land use and development

Figure 1 shows the current land uses present in and surrounding the study area which are a mix of urban uses including twelve parks and reserves:

- Edward Millen Reserve
- Hillview Community Bushland
- Read Park
- John Macmillan Park and Victoria Park Carlisle Bowling Club
- Burswood Walk Park
- Memorial Gardens
- Duncan Reserve
- Mint Street Reserve
- Kate Street Reserve
- Armagh Street Reserve
- Swansea Street East Reserve
- Victoria Park Croquet Club

The *Draft Albany Highway Precinct Built Form Strategy* (Hatch Roberts Day, 2023) subdivides the Study Area into six sub-precincts, which relate to individual neighbourhood Place Plans with varying expectations for growth and development. These are:

- St James (Welshpool Road to Ballie Avenue)
  - Predominantly residential growth (lower priority for retail).
  - Mainly low-rise development along the highway (4-6 storeys).
  - Some mid-rise sites (up to 8 storeys) and major development sites (up to 14 storeys) are identified.
- East End (Ballie Avenue to Hampshire Street)
  - Residential growth with lower intensity (4-6 stories).
  - Allows for possible commercial and retail development.
- East Victoria Park (Hampshire Street to Miller Street)
  - Retail floorspace expansion is the priority.
  - Predominantly low-rise built form (4-6 stories).
  - More significant development (up to 20 stories) around identified major development sites tapering down towards the highway and key public spaces.
- Central (Miller Street to McMillan Street)
  - Predominantly residential growth (low priority for retail but not precluded).
  - Mainly mid-rise (4-8 stories) with high-rise (up to 16 stories) for major sites.
- Victoria Park (McMillan Street to Harvey Street)
  - Expansion of retail and employment floor space prioritised.
  - Predominantly low-rise (4-6 stories) with high-rise (up to 20 stories) for major sites along Shepperton Rd and within the Victoria Park Central site.
- Causeway (Harvey Street to Canning Highway)
  - High-value local employment prioritised.
  - Other employment generating uses accommodated (hotels, healthcare, retail, and regionally significant entertainment).

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Implications for future development

Development proposals in the Albany Highway Precinct provide great opportunities for integration of water sensitive urban design to deliver urban greening, improved water quality and more sustainable use of water resources.

Existing public spaces and reserves in the precinct are key sites where water sensitive urban design principles can be applied to provide improved urban amenity, maximise habitat opportunities and deliver better water quality outcomes for the City's downstream water resources including the Swan River, urban wetlands, and groundwater system.

Climate

The climate for the Study Area is typical of the Southwestern region of Western Australia and is characterised by the Köppen Climate Classification as Dry Subtropical featuring mild and wet winters and hot to very hot summers. Most of the rainfall is experienced in the winter between May and September and the driest months are between December and March.

The rainfall record at the nearest Bureau of Meteorology weather station (Perth Airport station no. 9021, approximately 9 km from the Study Area) has an annual average rainfall of 760.4 mm since 1944. The average has decreased since 2000, recording an average of 665.3 mm, a 12.5% decrease in rainfall.

Evaporation data (Albany Highway) show evaporation exceeds rainfall between September and April, and from May to August rainfall exceeds evaporation.

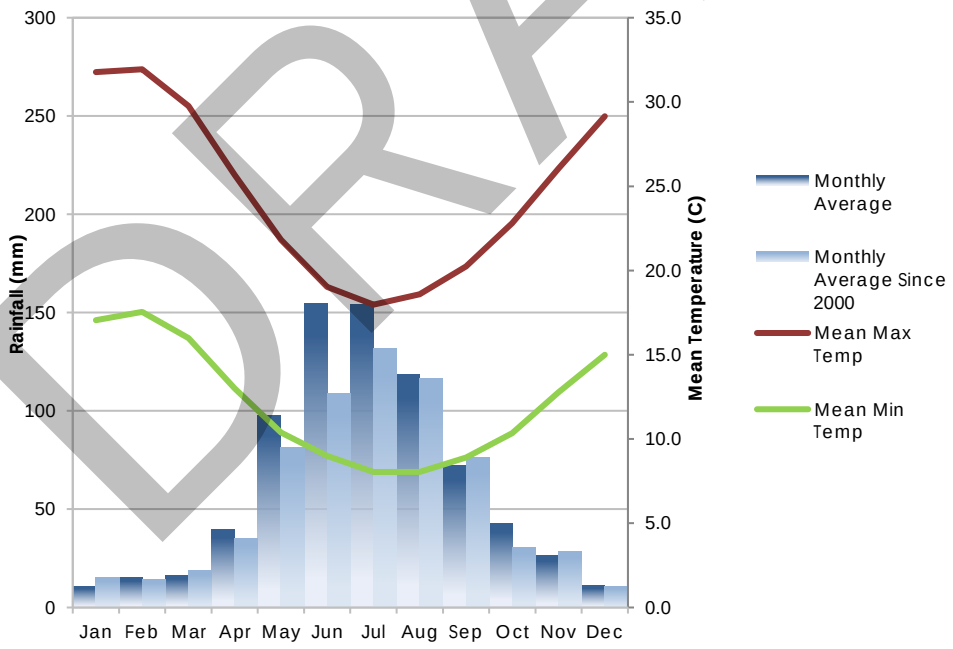


Chart 2: Climate summary data (BoM station no. 9021, BoM, 2021)

Decreasing rainfall is noted in the *Selection of future climate projects for Western Australia* (DoW, 2015). Mean annual rainfall decreases projected by DWER, based on the 1961-1990 baseline, varies between -4% (wet scenario) and -25% (dry scenario) by 2050. This extends to -7% (wet) and -47% (dry) by 2090.

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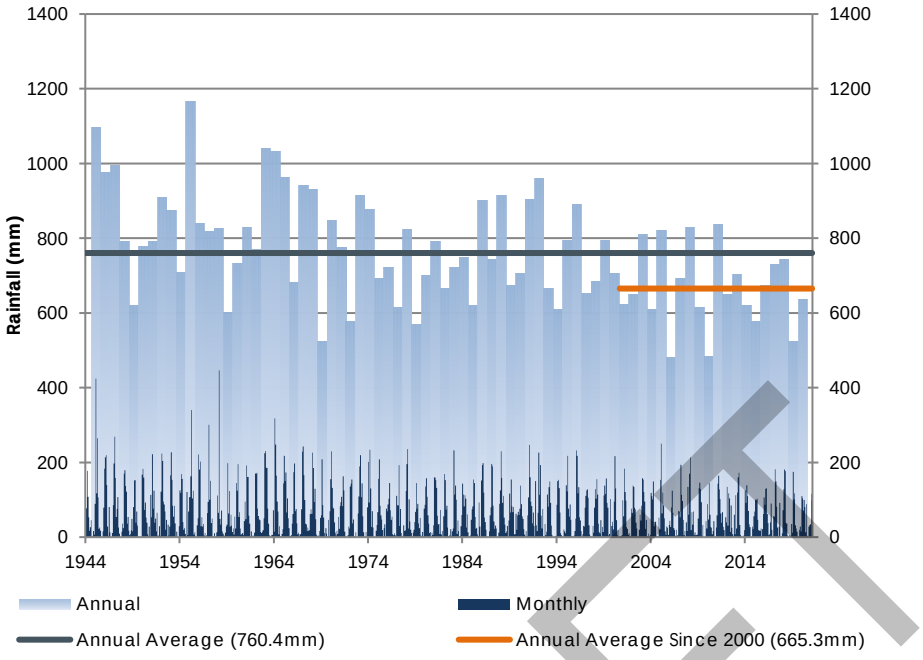


Chart 3: Rainfall summary data (BoM station no. 9021, BoM, 2021)

Increasing urban heat due to climate change has also been recognised as a significant issue for the Perth region linked to loss of urban canopy and increasing populations. Chart 4 shows the increases that have been observed in mean maximum temperatures recorded at the nearest Bureau of Meteorology weather station (Perth Airport station no. 9021).

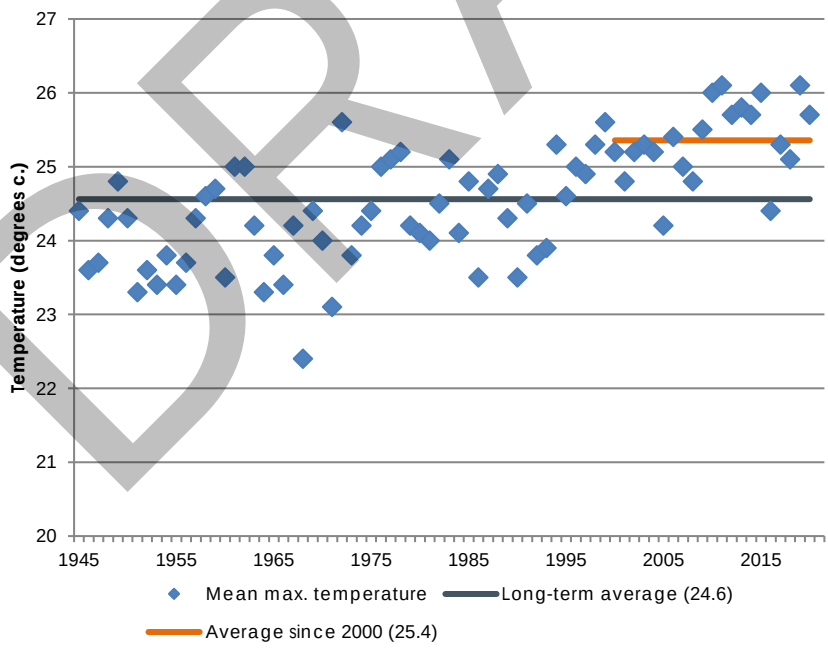
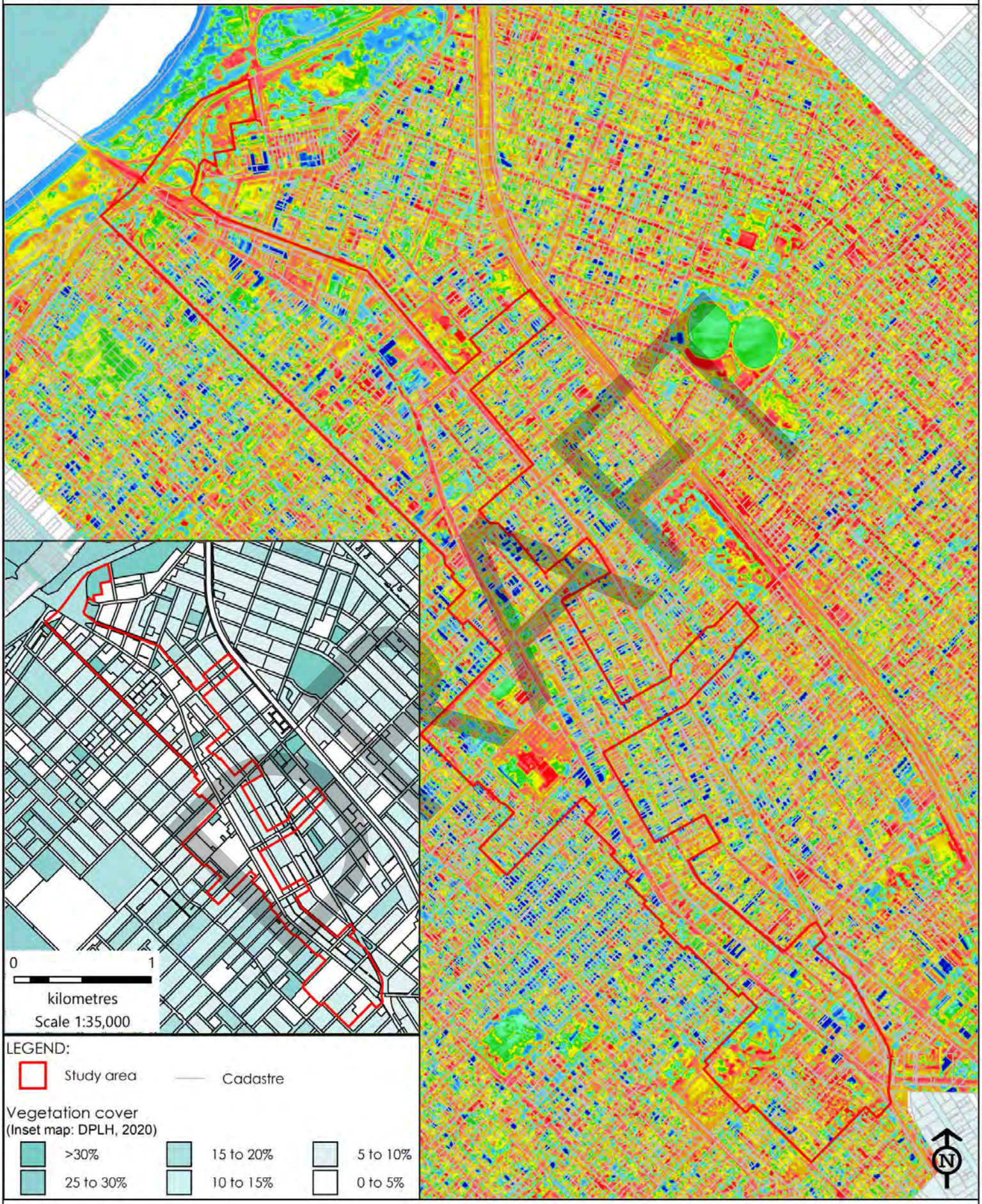


Chart 4: Mean maximum temperature data (BoM station no. 9021, BoM, 2021)

Urban heat mapping of the Town of Victoria Park is presented in Figure 8 and most of the Albany Highway Precinct is observed to be hot. Hotspots of note are in St James, Causeway, and East Victoria Park precincts. This corresponds to areas of lower vegetation cover that can be seen in the Figure 8 inset map.

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Town of Victoria Park - Albany Hwy PSP Water Management Strategy
Figure 8 - Urban heat mapping and vegetation cover

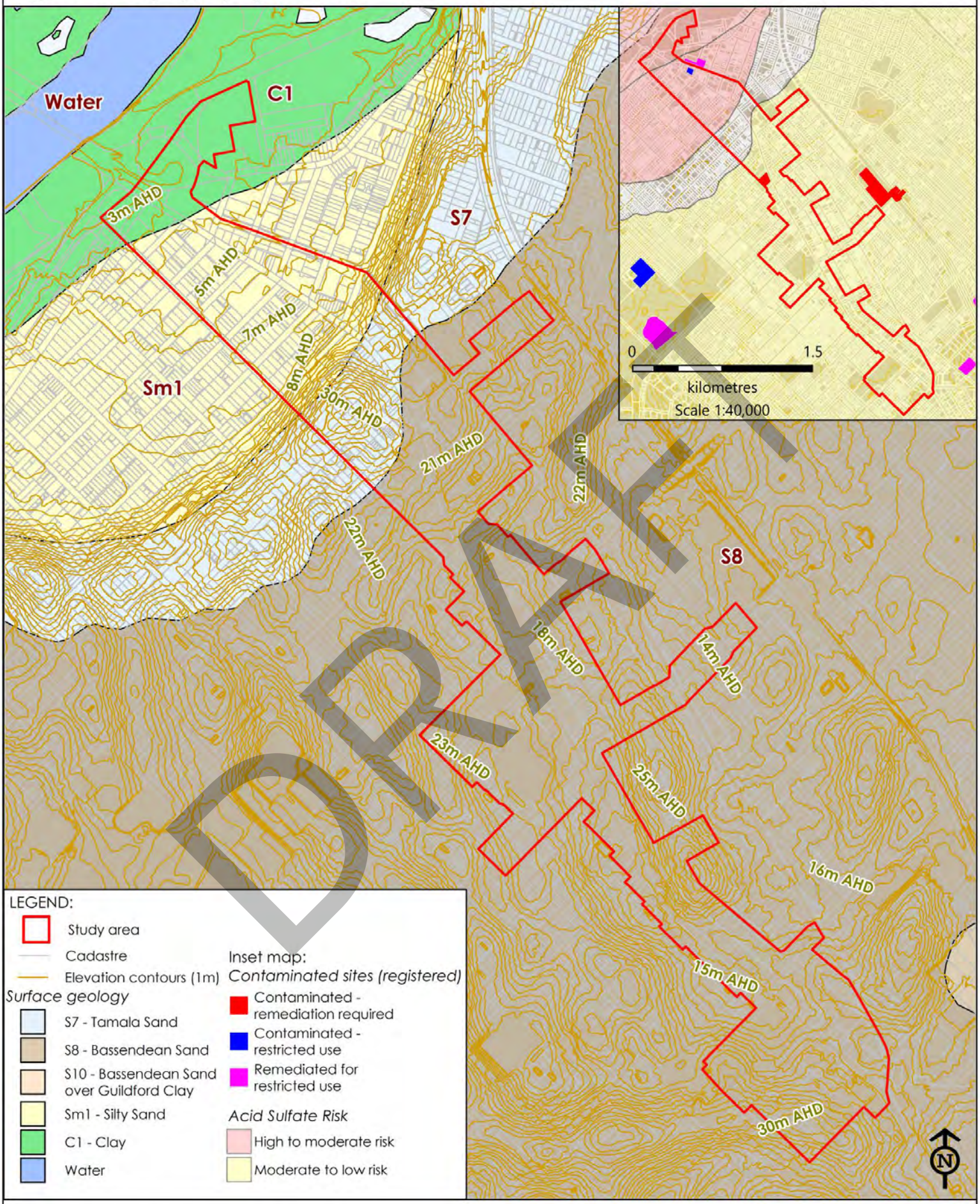


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Data source:Landgate, Town of Victoria Park. Created by: HB Projection: MGA: zone 50.

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Town of Victoria Park - Albany Hwy PSP Water Management Strategy
Figure 9 - Topography and soils



LEGEND:

- Study area
- Cadastre
- Elevation contours (1m)

Surface geology

- S7 - Tamala Sand
- S8 - Bassendean Sand
- S10 - Bassendean Sand over Guildford Clay
- Sm1 - Silty Sand
- C1 - Clay
- Water

Inset map:

Contaminated sites (registered)

- Contaminated - remediation required
- Contaminated - restricted use
- Remediated for restricted use

Acid Sulfate Risk

- High to moderate risk
- Moderate to low risk

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Implications for future development

It is important to consider historic, current, and future climate as an integral part of water management investigations and modelling to inform development and validation of strategies. This should include an understanding of the representativeness of local monitoring results and demonstrated understanding of how future changes are likely to impact on the total water cycle.

Urban greening is an important way that mitigation of urban heat impacts can be achieved. In recognition of this, the Urban Greening Grant Program was created to expand tree canopy and vegetative cover in high urban heat risk areas in 33 Local Governments within the Boorloo (Perth) and Bindjareb (Peel) regions. Funded by the Department of Water and Environmental Regulation (DWER) and delivered collaboratively with WALGA, the program provides a total of $3.75 million (ex GST) to support additional planting or to bring forward future tree planting in winter 2024 and winter 2025. A UHI rating of 3 or above, based on WALGA mapping shown in Figure 8, has been specified as a criterion for grant eligibility.

Water sensitive urban design is a key contributor to the effectiveness of urban greening. It is critical that strategies are implemented to maintain soil moisture through retention and infiltration of stormwater as close to source as possible.

Topography, geology, and soils

The physical and topographical conditions for the site influence the hydrological conditions including the ability to retain and infiltrate runoff. A summary is provided below based on regional mapping which are also presented in Figure 9.

Topography

The topography of the site slopes from northwest to southeast the elevation ranging 5m to 20 mAHD with a surface slope of approximately15%. The southeastern portion of the site is relatively flat with topography ranging from 15 m to 20 mAHD. The northwestern portion of the site the elevation ranges between 15mAHD and 5mAHD.

Regional soil mapping

The surface geology of the Study Area, shown in Figure 9, has been classified as Sand (S8), Sand (S7), Silty Sand (Sm1), Clay (C1) (Gozzard, 1986) as follows:

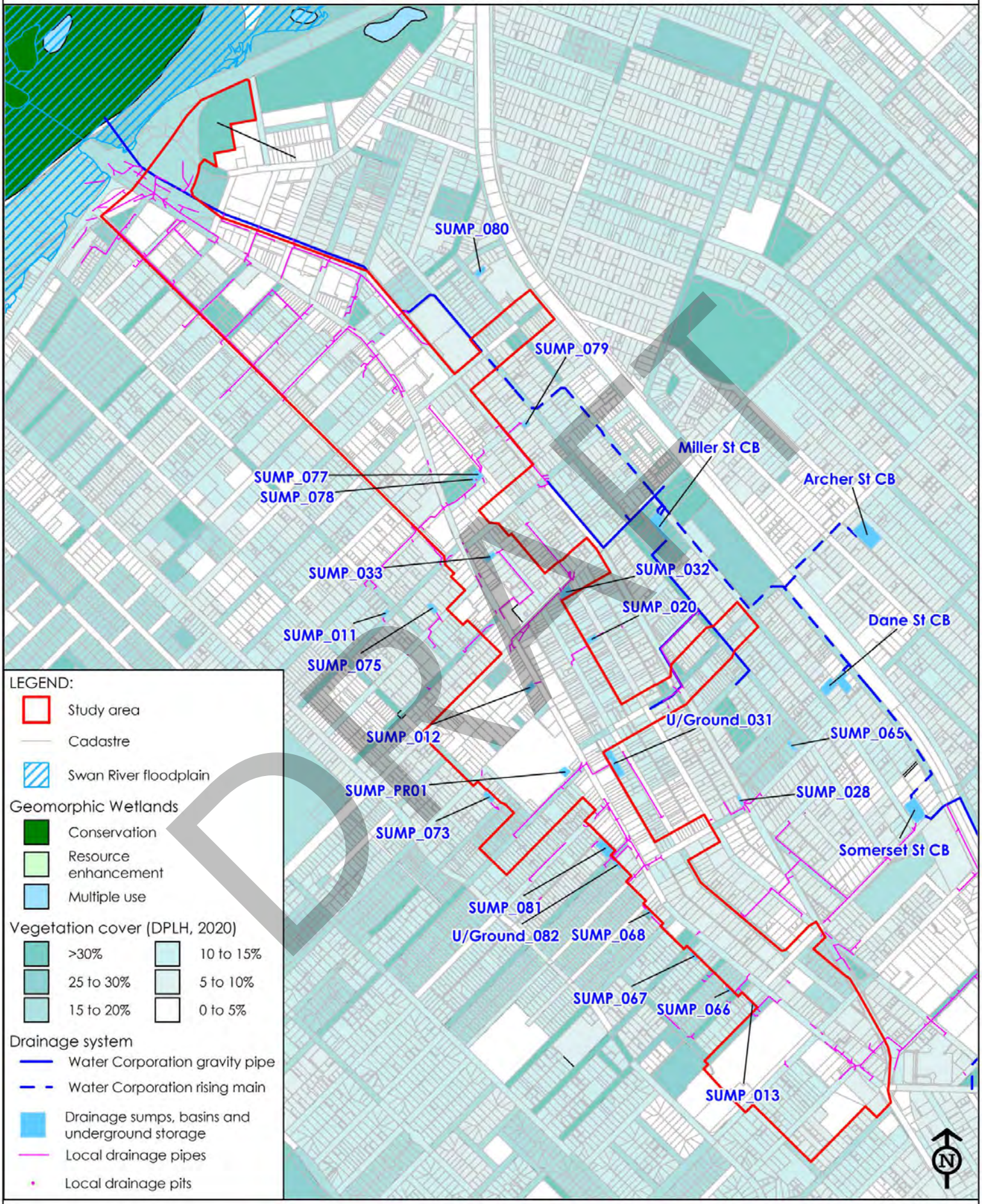
- S8: The sands found on the majority of the Study Area are described as white to pale grey at surface, yellow at depth, fine to medium-grained, moderately sorted, subangular to subrounded, minor heavy minerals of aeolian origin.
- S7: The sand is described as pale and live yellow at the surface, medium to coarse-grained, subangular to subrounded, moderately sorted, trace of feldspar.
- Sm1: The silty sand is described as strong brown, leached at surface, fine to medium-grained, variable silt content.
- C1: The clay is described as mild to dark grey at the surface, soft, saturated, prominent 0.2 m thick oyster shell bed near surface of alluvial origin.

Acid sulphate soils

The Study Area is classified as having moderate to low and high to moderate risk of developing Acid Sulphate Soils (ASS) within the first 3 m from the natural surface based on regional mapping shown in the inset to Figure 9.

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Town of Victoria Park - Albany Hwy PSP Water Management Strategy
Figure 10 - Surface water, wetlands, vegetation cover, and drainage



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Areas of acid sulfate soils cannot be confirmed or discounted at this stage of the development process and will need to be determined by an acid sulfate soils investigation, potentially with sampling within the site. Acid sulfate soils can be managed through appropriate management plans, sampling, and treatment, which is addressed through a DWER approval process that should be undertaken prior to any subdivision.

Contamination

There are three registered contaminated sites located within the Study Area and several others located close to the boundary of the Study Area as shown in the inset to Figure 9. Within the study area, two sites are classified 'remediated for restricted use', and one is classified 'contaminated – remediation required'.

Restrictions on the use of the two adjacent sites that have been remediated, which are currently a service station, are specified in DWER records as follows:

> *The land use of the site is restricted to commercial use which excludes children's daycare centres and should not be developed for a more sensitive use such as recreational open space, residential use, or day care centres.*
>
> *Access to soils and groundwater are restricted until further chemical testing of the soil and the groundwater, and an assessment of the risk to site users is undertaken.*

According to DWER records, Hydrocarbons (such as from oil) remain in the soils and groundwater beneath the unremediated site, which is currently a car sales yard and vehicle workshop, and the following restrictions on use apply:

> *Access to soils below seven metres depth is restricted until further chemical testing and an assessment of the risk to site users is undertaken.*
>
> *Other than for analytical testing or remediation, groundwater abstraction is not permitted at this site because of the nature and extent of groundwater contamination.*

Implications for future development

The nature of soils, particularly permeability, is a critical element in determining an appropriate drainage strategy. Highly permeable soils provide opportunities for on-site infiltration strategies to be applied to avoid any increases in peak flows to existing drainage systems and sensitive receiving water bodies and should be applied throughout the Study Area.

Further investigations are required prior to redevelopment to assess the risk of acid sulfate soils in accordance with DWER guidelines for identifying and managing acid sulfate soils and, for affected sites, to determine the extent of contaminated soil and/or groundwater in accordance with the Contaminated Sites Act (2003).

Surface water, wetlands, and drainage

The western boundary of the Study Area is located at the boundary of the mapped Swan River floodplain but contains no natural waterways. However, there is an extensive existing network of urban drains, mainly in discrete catchments terminating at fenced drainage sumps. The drains are predominantly managed by the Town of Victoria Park, although some are managed by the Water Corporation and Main Roads. Surface water features, wetlands and drains are shown on Figure 10.

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Wetlands and vegetation

There are no classified wetlands within the Study Area although the Swan River, on the northwestern boundary, is classified as a conservation category wetland in the Department of Biodiversity, Conservation and Attractions geomorphic wetlands mapping (DBCA, 2023).

The study area has very low vegetation cover, as shown in Figure 10, which is a significant contributor to urban heat. Integration of water sensitive urban design approaches into streetscapes and modification of the existing urban drainage system provide significant opportunities to support urban greening initiatives and develop blue-green linkages throughout the precinct.

As previously noted and shown in Figure 8, urban heat hotspots of note are located in St James, Causeway, and East Victoria Park precincts and as can be seen in Figure 10, these locations are also notable for their very low vegetation coverage.

Town of Victoria Park drainage system

The Town of Victoria Park managed drainage system within and adjacent to the Study Area includes nineteen sumps and two underground storage tanks. There is also one privately owned sump located at the Park Centre shopping centre in the Study Area. Additionally, some of the Town of Victoria Park drainage system connects to the Water Corporation's main drainage system.

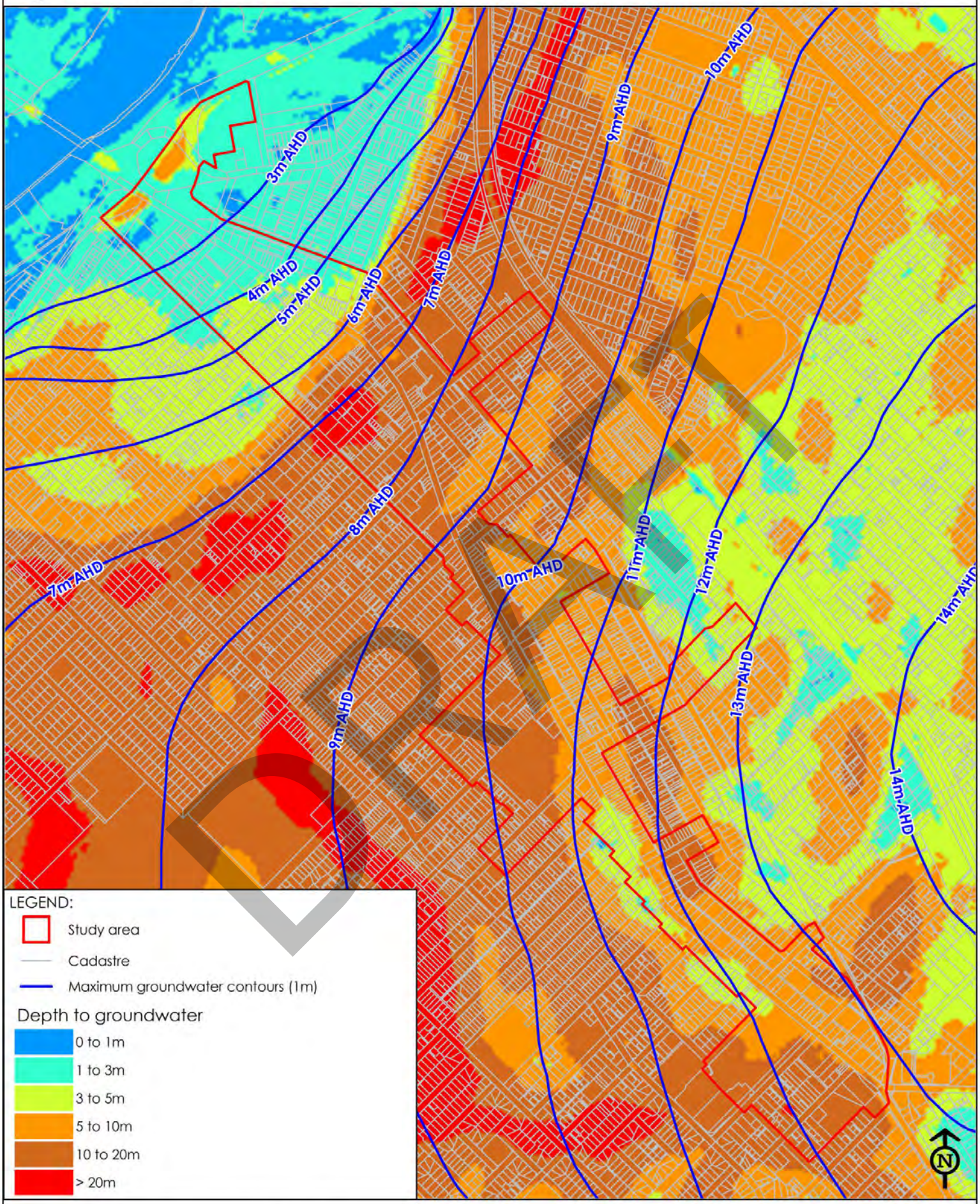
The sumps, underground storages and basins present within the Study Area and immediate surrounds are listed in Table 3 with an estimate of the connected catchment area for each.

It has been previously noted, in *Hydrological Assessment of Stormwater Runoff within the Town of Vitoria Park* (Curtin University, 2011), that several of the sumps within the Study Area are under-capacity and expected to flood in minor (1:5 year) rainfall events.

Appendix A provides a high-level review of the 24 drainage sumps, basins and underground storage sites within the Study Area. The review identifies known capacity information for each site and considers opportunities for integration of water sensitive urban design and or retrofitting for urban greening and improved urban amenity.

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Town of Victoria Park - Albany Hwy PSP Water Management Strategy
Figure 11 - Groundwater



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Water Corporation drainage system

There is a pumped Water Corporation main drain (Victoria Park Main Drain) that mostly lies to the east of the Study Area but enters the northern part of the Study Area, where it transitions to a gravity pipe before ultimately discharging into the Swan River.

Some of the Town of Victoria Park drainage system connects to the Water Corporation's system and there are three Water Corporation compensating basins located close to the Study Area, that service parts of the study area, that are also included in Table 3 and Appendix A.

Table 3: List of drainage storages in and around the Study Area

		Location		
Ref. No.	Storage type	Suburb	Street address	Approx catchment area (ha)
S011	Sump	Victoria Park	205 Washington Street	4.63
S012	Sump	East Vic Park	763 Albany Highway	8.31
S013	Sump	East Vic Park	1 Baillie Avenue	10.97
S020	Sump	East Vic Park	21 Swansea Street	6.84
S028	Sump	East Vic Park	47 Dane Street	12.14
S031	Underground	East Vic Park	55 Hubert Street	17.29
S032	Sump	East Vic Park	3 Swansea Street	10.88
S033	Sump	Victoria Park	3 Merton Street	9.79
S064	Sump	East Vic Park	274 Rutland Avenue	3.45
S065	Sump	East Vic Park	79 Dane Street	10.55
S066	Sump	East Vic Park	1 Patricia Street	21.83
S067	Sump	East Vic Park	2 Camberwell Street	5.10
S068	Sump	East Vic Park	4 Willis Street	7.89
S073	Sump	East Vic Park	11 Esperance Street	7.61
S075	Sump	Victoria Park	19 State Street	6.69
S077	Sump	Victoria Park	21 Lichfield Street	7.06
S078	Sump	Victoria Park	21 Lichfield Street	19.97
S079	Sump	Victoria Park	10 Axon Avenue	22.35
S080	Sump	Victoria Park	6 Sunbury Road	11.61
S081	Sump	East Vic Park	1-3 Westminster Street	12.01
S082	Underground	East Vic Park	4 Westminster Street	6.82
Miller St CB	WC basin	East Vic Park	13 Beatty Avenue	115.9
Dane St CB	WC basin	East Vic Park	85 Bank Street	84.7
Somerset St CB	WC basin	East Vic Park	118 Beatty Avenue	117.67

Note: Sumps inside the Albany Highway Precinct are highlighted

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Implications for future development

Because the existing Study Area is highly urbanised, redevelopment is likely to have minimal impact on stormwater runoff volumes downstream. However, implementation of water sensitive urban design strategies provides an opportunity to increase distributed infiltration throughout the catchments to support urban greening, reduce reliance on individual sumps and improve water quality.

Areas with a high urban heat index (UHI>3) and low vegetation cover (<5%), such as parts of St James, Causeway, and East Victoria Park precincts should be targeted for urban greening strategies that provide for links between green assets (vegetation and trees) and blue assets (stormwater systems).

It is noted that the Town of Victoria Park drainage network between Harper Street and Twickenham Road in Victoria Park does not incorporate any storage systems and connects directly to the Victoria Park Main Drain.

This area is outside the declared drainage catchment boundary provided by the Water Corporation. This means that any local network in this area was not expected/approved to be connected to the Main Drain. Whilst these connections may be long-standing, they are in catchments that were expected to drain to the Swan River directly, not via the Main Drain operated by the Water Corporation. Therefore, the impact of these drainage connections to the catchment and Main Drain has not been assessed.

It is therefore recommended that, at the next scheme review of the Victoria Park Main Drain, these connections are included in modelling by the Water Corporation to fully consider the capacity of the system.

The Water Corporation's Main Drains are operated on the basis that post development flows should not exceed predevelopment flows. This is consistent with the Water Services Licence and Water Sensitive Design Principles. As such, a key consideration for the structure plan will be to consider suitable local strategies to mitigate any increase in predicted post development flows into the Water Corporation's system.

Groundwater

Groundwater is a resource that provides opportunity and constraints for the development and is an environmental asset that requires protection.

Groundwater allocation

The study area is located within the Town of Victoria Park and Perth South Confined groundwater management subareas.

The Department of Water and Environmental Regulation's Water Register (DWER, 2023b) shows that there is limited groundwater available for allocation from the Superficial Aquifer within the Study Area, and there is none available for allocation from the underlying Leederville or Yarragadee Aquifers.

There are currently four active groundwater licences within the Study Area used for irrigation of public open spaces and schools. The licences are summarised in Table 4. It should be noted that these licenses include allocations for properties outside of the Study Area in addition to those within.

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Table 4: Existing groundwater licences within the Study Area

Licence Number	Licence Allocation	Groundwater Area	Groundwater Subarea	Issue Date	Expiry Date
GWL155439	155,250 KL	Perth	Town of Victoria Park	22/12/2021	21/12/2031
GWL167466	408,405 KL	Perth	Town of Victoria Park	31/10/2019	30/10/2029
GWL173478	4,875 KL	Perth	Town of Victoria Park	25/06/2021	24/06/2031
GWL207958	8,000 KL	Perth	Town of Victoria Park	25/10/2022	24/10/2032

Groundwater levels

Regional groundwater mapping in the *Perth Groundwater Map* (DWER, 2023c) indicates maximum groundwater levels varying between 12 m AHD and 3 m AHD across the Study Area sloping down in a north-west direction. The depth to groundwater ranges from approximately 10m to 2m in lower lying areas as shown in Figure 11.

Implications for future development

Whilst groundwater is currently available for allocation within the study area, future reductions in the licensable volume in response to climate change are expected. Therefore, any proposals to expanded irrigated areas of public realm may require implementation of a program of irrigation upgrades to optimise the efficiency and operation of irrigation systems so that more can be achieved within the Town of Victoria Park's current licensed amount.

Areas proposed for redevelopment where the depth to maximum groundwater level is less than three metres will require further investigation prior to development to consider if basements can be included in designs, and to determine if groundwater management measures will be required.

Water and wastewater services

Reticulated water and sewerage are currently available throughout the subject area. Depending on the increase in development density, upgrading of the current system may be required to prevent existing customers being affected by the proposed development. When the proposed demands are provided, the Water Corporation will need to review their current schemes to determine the full extent of any upgrade requirements.

Implications for future development

Where Water Corporation infrastructure needs upgrading due to the increase in development density it is usually recommended that a developer contribution scheme is established by the Local Authority. This is so a coordinated development approach is taken instead of individual landowners being responsible for the significant upgrades that may make their development unaffordable.

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Social and heritage values

There are no registered Aboriginal Cultural Heritage Sites within the Study Area according to the Department of Planning, Lands and Heritage (DPLH) Aboriginal heritage enquiry system (2023). However, the Swan River is a registered aboriginal heritage site at the western boundary of the Study Area.

Additionally, Mindeera Spring just inside the northwestern boundary of the Study Area, has been recognised as an important cultural site in the Town of Victoria Park, that contributes to community awareness and understanding of local Aboriginal history.

Mindeera is a permanent spring that once existed to the south-east of the river's only crossing point, Matta Gerup, which made this place a neutral ground where different tribes could meet without conflict and where fighting was banned to enable safe passage to the river (Museum of Perth, 2024).

The spring was located on the corner of where Oswald and Hordern Streets are now situated in Victoria Park and has been historically enclosed within the piped drainage system. However, potential opportunities to expose and restore the spring as an above ground living spring are currently being investigated by the Town's Mindeera Advisory Group.

There are over one hundred places with heritage values listed in the Heritage Council's InHerit online mapping system and on the Town of Victoria Park Municipal Heritage Inventory within and in the vicinity of the Study Area, including seven State Registered Places, as follows:

- Broken Hill Hotel, Victoria Park
- Windmill & Wishing Well
- Victoria Park Post Office
- Edward Millen Home (fmr)
- Victoria Park Police Station
- Victoria Park Primary School
- St Peter's Anglican Church & Memorial Hall

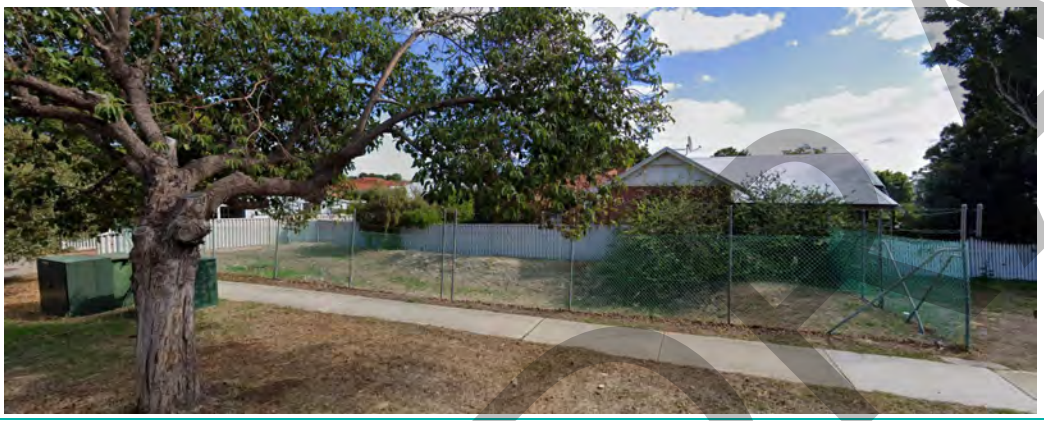
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Appendix B Review of drainage sumps, basins and underground storage sites

Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S011	Sump	Victoria Park	205 Washington Street	4.63	221	

Small sump on residential street. Catchment contains only residential land uses.

Estimated 1m deep ~200m3 volume.





Limited opportunities for improvement exist at this site. Options could include:

- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities.
- Redevelopment as a park with underground storage although ability to create canopy would be limited by underground storage cells.
- Underground storage in adjacent road reserve to allow for sale and development as a residential lot.

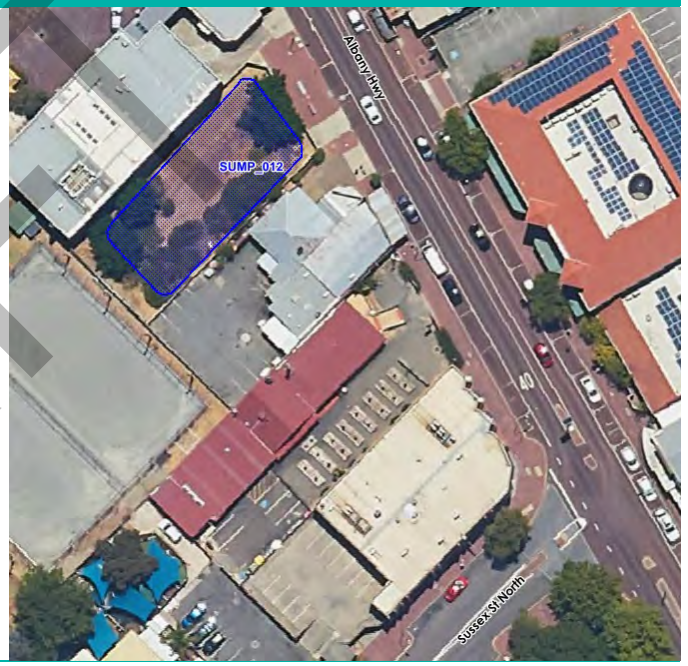
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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S012	Sump	East Vic Park	763 Albany Highway	8.31	497	

Large sump in commercial zone on Albany Hwy. Catchment contains commercial and public purposes (3.5 ha inc. John Macmillan Reserve, Bowling club, Arts Centre etc) land uses.

Estimated 2m deep ~1,000m3 volume





Limited opportunities for improvement exist at this site. Options could include:

- Redevelopment as a park or other community space with combination of underground and above ground storage. Ability to retain and increase tree canopy may be limited by underground storage cells.
- Underground storage in adjacent road reserve or carparks to allow for sale and development as a commercial or mixed-use lot.

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S013	Sump	East Vic Park	1 Baillie Avenue	10.97	172	

Small sump in residential street, across road from park. Catchment contains Edward Millen Reserve (1.86 ha), residential & public purposes (Edward Millen house – 2.5 ha) land uses.

Estimated 1m deep ~150m3

Connected to S066





Limited opportunities for improvement exist at this site. Options could include:

- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities.
- Redevelopment as a park with underground storage although ability to create canopy would be limited by underground storage cells.
- Develop new consolidated storage area in Edward Millen Reserve to allow for sale and redevelopment as a residential or parking lot.
- Underground storage in adjacent road reserve/laneway to allow for sale and development as a residential or parking lot.

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S020	Sump	East Vic Park	21 Swansea Street	6.84	472	

Large sump in residential street. Catchment contains only residential land uses.

Estimated 1.5m deep ~750m3





Limited opportunities for improvement exist at this site. Options could include:

- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities.
- Redevelopment as a park with underground storage although ability to create canopy would be limited by underground storage cells.
- Underground storage in adjacent road reserve to allow for sale and development as a residential lot.

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S028	Sump	East Vic Park	47 Dane Street	12.14	234	

Small sump in residential street on corner of Shepperton Rd. Catchment contains only residential land uses (and Shepperton Road reserve).

Estimated 1.5m deep ~400m3





Limited opportunities for improvement exist at this site. Options are likely to be further limited by proximity to Shepperton Road but could include:

- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities.
- Redevelopment as a park with underground storage although ability to create canopy would be limited by underground storage cells.
- Underground storage in adjacent road reserve to allow for sale and development as a residential lot.

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S031	Underground	East Vic Park	55 Hubert Street	17.29	1,950	

Underground storage with car park above. Catchment contains commercial and residential land uses.

Unknown volume.





No further opportunities exist at this site but presence of underground storage should be noted as it will constrain (but not prevent) ability to redevelop the car parking site.

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S032	Sump	East Vic Park	3 Swansea Street	10.88	869	

Large sump in residential street. Catchment contains mostly residential with some commercial land uses.

Estimated depth 2m ~1500m3





The scale and location of this site provides good opportunities for improvement although its depth and capacity may be difficult to replace without limiting redevelopment potential. Options could include:

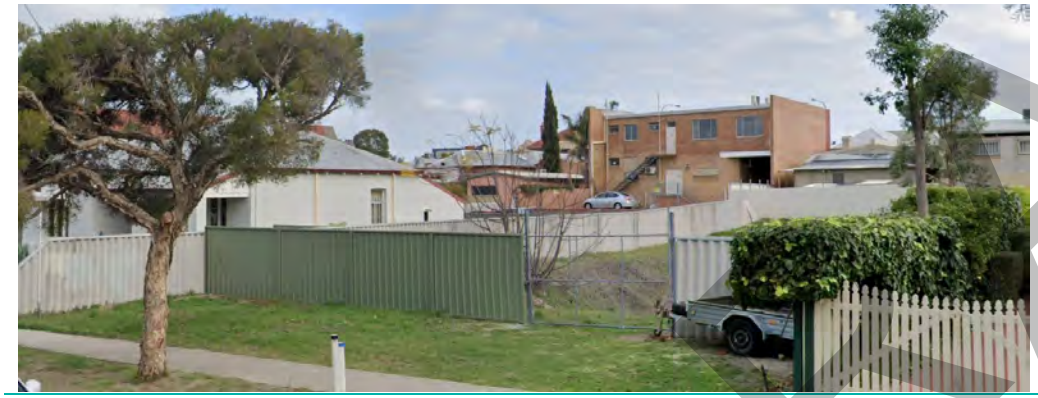
- Redevelopment as a park or other community space with underground storage although ability to create canopy would be limited by underground storage cells.
- Underground storage in adjacent road reserve to allow for sale and development as a residential lot.

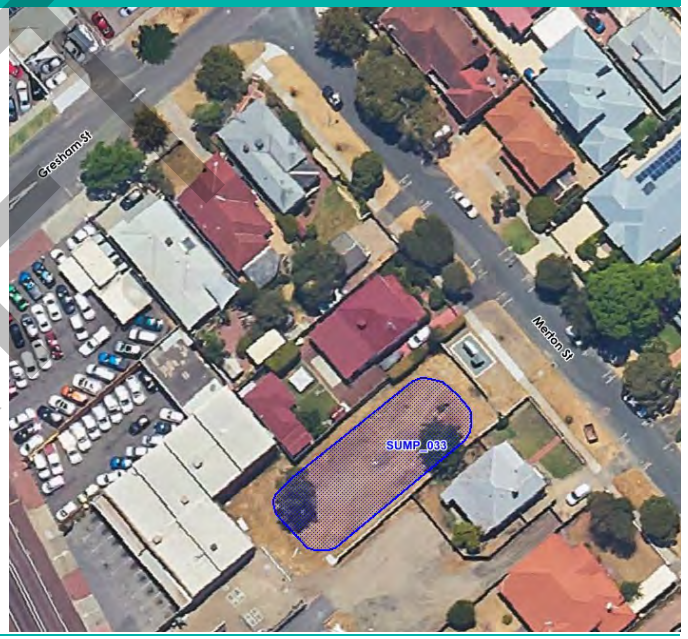
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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S033	Sump	Victoria Park	3 Merton Street	9.79	460	

Large sump in residential street, adjacent commercial area. Catchment contains residential and commercial land uses.

Estimated depth 1m ~400m3





Limited opportunities for improvement exist at this site. Options could include:

- Redevelopment as a park with underground storage although ability to create canopy would be limited by underground storage cells.
- Underground storage in adjacent road reserve to allow for sale and development as a residential lot.

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S064	Sump	East Vic Park	274 Rutland Avenue	3.45	348	

Suspect recent conversion to underground storage. Catchment contains only commercial land uses.

Unknown volume.

No further opportunities exist at this site but presence of underground storage should be noted as it will constrain (but not prevent) ability to redevelop the site.

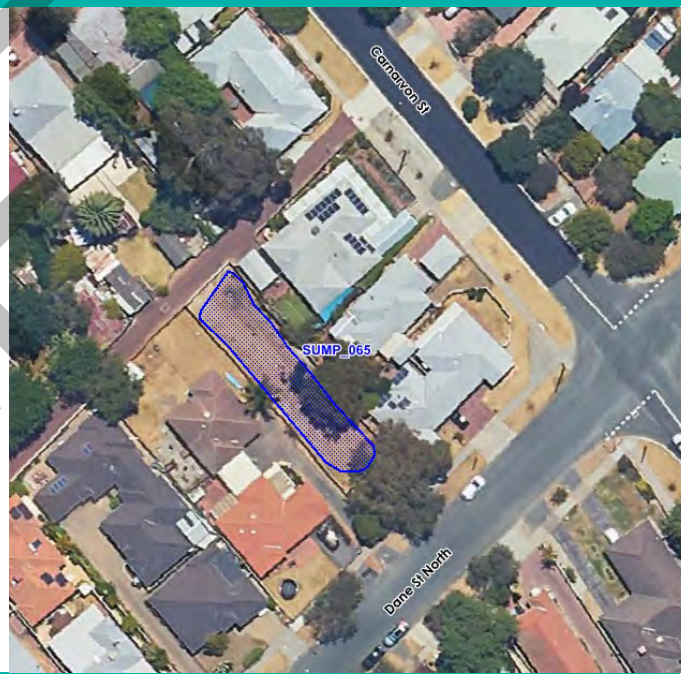
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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S065	Sump	East Vic Park	79 Dane Street	10.55	281	

Small sump in residential street. Catchment contains residential land uses and part Kate Street Reserve.

Estimated depth 1m ~250m3





Limited opportunities for improvement exist at this site. Options could include:

- Underground storage in adjacent road reserve/laneway to allow for sale and development as a residential or parking lot.

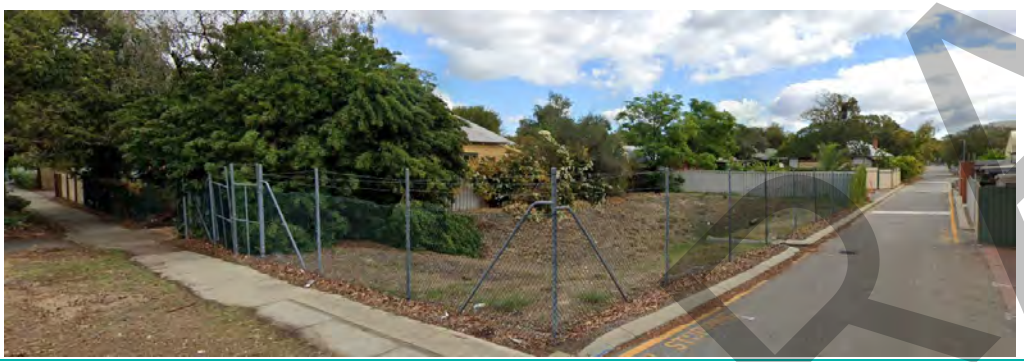
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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S066	Sump	East Vic Park	1 Patricia Street	21.83	197	

Small sump in residential street. Catchment contains residential and commercial land uses as well as Carson St School and Hillview Tce bushland.

Estimated depth 2m ~300m2

Connects to S013



Limited opportunities for improvement exist at this site. Options could include:

- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities.
- Redevelopment as a park or other community space with underground storage although ability to create canopy would be limited by underground storage cells.
- Underground storage in adjacent road reserve/laneway to allow for sale and development as a residential or commercial lot.

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S07	Sump	East Vic Park	2 Camberwell Street	5.10	268	

Small sump in residential street adjacent commercial area. Catchment contains residential and commercial land uses.

Estimated depth 1.5m ~400m3





Limited opportunities for improvement exist at this site. Options could include:

- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities.
- Redevelopment as a park or other community space with underground storage although ability to create canopy would be limited by underground storage cells.
- Underground storage in adjacent road reserve/laneway to allow for sale and development as a residential or commercial lot.

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S068	Sump	East Vic Park	4 Willis Street	7.89	196	

Small sump in residential street adjacent commercial area. Catchment contains residential and commercial land uses.

Estimated depth 1m ~ 150m3





Limited opportunities for improvement exist at this site. Options could include:

- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities.
- Redevelopment as a park or other community space with underground storage although ability to create canopy would be limited by underground storage cells.
- Underground storage in adjacent road reserve/laneway to allow for sale and development as a residential or commercial lot.

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S073	Sump	East Vic Park	11 Esperance Street	7.61	458	

Large sump in residential street. Catchment contains residential and public purposes land uses.

Estimated depth 2m ~600m3 volume.





Limited opportunities for improvement exist at this site. Options could include:

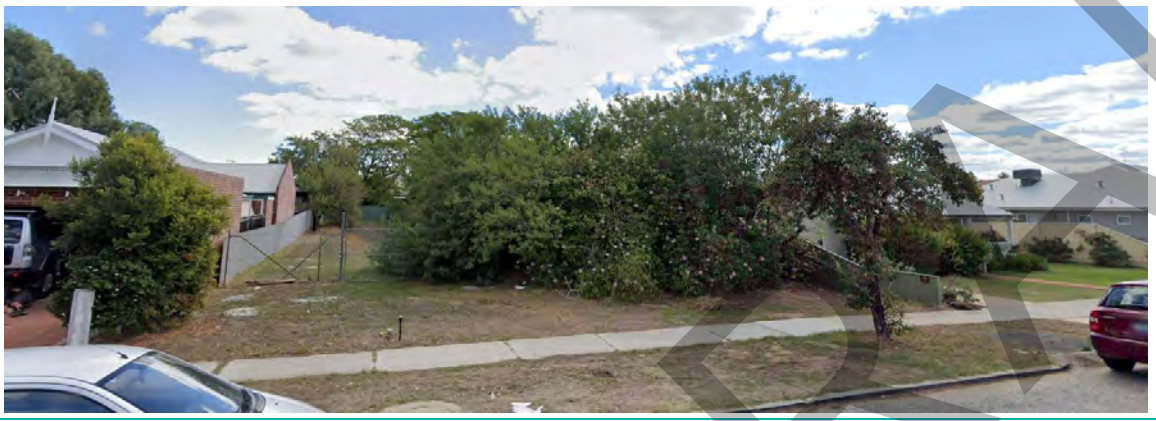
- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities.
- Redevelopment as a park or other community space with underground storage although ability to create canopy would be limited by underground storage cells.
- Underground storage in adjacent road reserve to allow for sale and development as a residential or commercial lot.

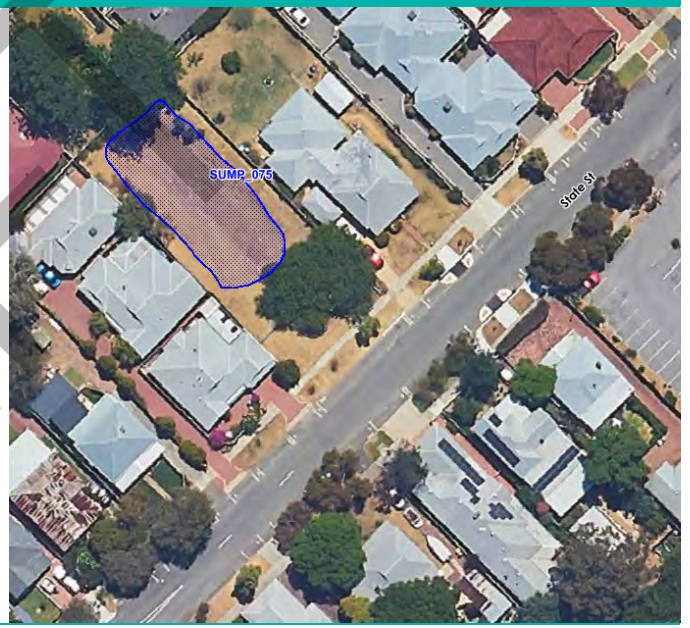
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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S075	Sump	Victoria Park	19 State Street	6.69	434	

Large sump in residential street. Catchment contains residential land uses only.

Estimated depth 2m ~600m3 volume.





Limited opportunities for improvement exist at this site. Options could include:

- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities.
- Redevelopment as a park or other community space with underground storage although ability to create canopy would be limited by underground storage cells.
- Underground storage in adjacent road reserve to allow for sale and development as a residential or commercial lot.

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S077	Sump	Victoria Park	21 Lichfield Street	7.06	497	
Estimated depth 2m ~750m3 volume.						
S078	Sump	Victoria Park	21 Lichfield Street	19.97	198	
Twin sumps in residential street within Reed Park. Catchment contains residential and commercial land uses and Reed Park (0.8 ha inc. sumps). Estimated depth 1m ~200m3 volume.						
 						
The scale and location of this site provides good opportunities for improvement although its depth and capacity may be difficult to replace without limiting redevelopment potential. Options could include: • Redevelopment as extension to Reed Park with underground storage although ability to create canopy would be limited by underground storage cells. • Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities.						

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S079	Sump	Victoria Park	10 Axon Avenue	22.35	282	

Large sump in residential street adjacent to vacant lot recently cleared for development? Catchment contains residential land uses only.

Estimated depth 2m ~400m3





Limited opportunities for improvement exist at this site and clarification of status of adjacent lot is required. Options could include:

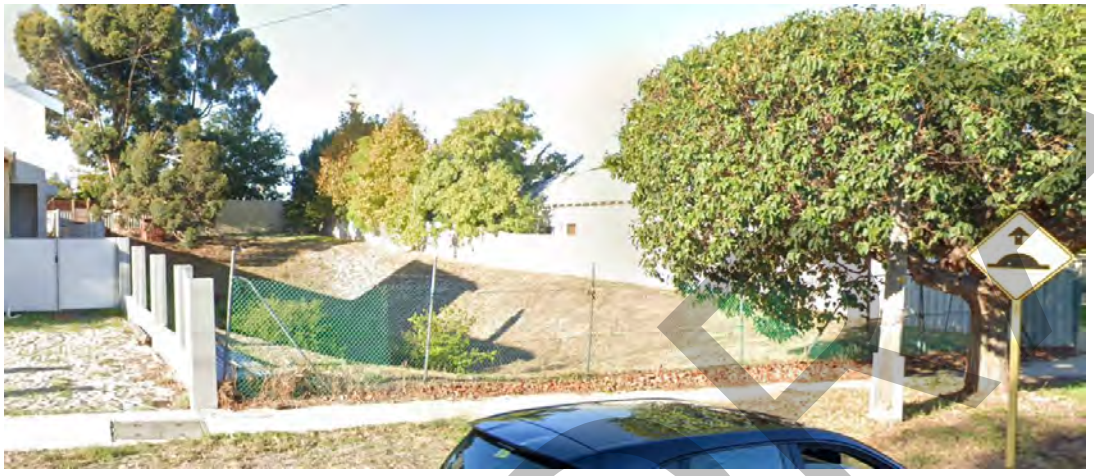
- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities.
- Redevelopment as a park or other community space with underground storage although ability to create canopy would be limited by underground storage cells.
- Underground storage in adjacent road reserve to allow for sale and development as a residential or commercial lot.

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S080	Sump	Victoria Park	6 Sunbury Road	11.61	503	

Large sump in residential street adjacent to commercial area. Catchment contains residential and commercial land uses.

Estimated depth 2m ~1,000m3 volume.





Limited opportunities for improvement exist at this site. Options could include:

- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities.
- Redevelopment as a park or other community space with underground storage although ability to create canopy would be limited by underground storage cells.
- Underground storage in adjacent road reserve to allow for sale and development as a residential or commercial lot.

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
S081	Sump	East Vic Park	1-3 Westminster Street	12.01	1,474	

Large sump and paired underground storage in residential street adjacent to commercial area. Catchments (2) contain residential and commercial land uses.

Estimated depth 2m ~2,500m3 volume.



S082	Underground	East Vic Park	4 Westminster Street	6.82	224	

Unknown volume of underground storage augmenting sump capacity.

Limited opportunities for improvement exist at this site. Options could include:

- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities.
- Redevelopment as a park or other community space with underground storage although ability to create canopy would be limited by underground storage cells.
- Underground storage in adjacent road reserve/carparking to allow for sale and development as a residential or commercial lot.

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
WC13753	WC basin	East Vic Park	Miller St Compensating Basin	243.62	1,820	

Large Water Corporation wet detention basin adjacent to POS. Catchment contains residential and commercial land uses. Basin is part of larger Victoria Park MD. Pumped discharge to Swan River

Estimated depth 3m with +1m standing water ~3,000m3 available capacity







Site could be investigated as a potential Drainage for Liveability project in partnership with the Water Corporation. Options could include:

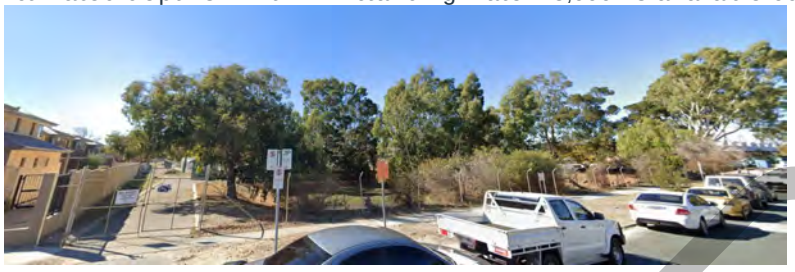
- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities. May require expansion into surrounding land.
- Redevelopment as a park or other community space with fencing to enable steeper banks to be retained and limit loss of storage capacity

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
WC13755	WC basin	East Vic Park	Dane St Compensating Basin	117.67	2,629	

Large Water Corporation wet detention basin adjacent to power substation and across road from park. Catchment contains residential and commercial land uses. Basin is part of larger Victoria Park MD. Pumped discharge to Miller St CB.

Estimated depth 3m with +1m standing water ~5,000m3 available capacity







Site could be investigated as a potential Drainage for Liveability project in partnership with the Water Corporation. Options could include:

- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities. May require expansion or provision of overflow storage in park across the road.

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Ref. No.	Type	Location		Approx. catchment area (ha)	Approx. surface area (m2)	Image
		Suburb	Street address			
• Redevelopment as a park or other community space with fencing to enable steeper banks to be retained and limit loss of storage capacity						
WC19701	WC basin	East Vic Park	Somerset St Compensating Basin	45.90	2,311	

Large Water Corporation wet detention basin in light industrial area. Catchment contains residential commercial and light industrial land uses. Basin is part of larger Victoria Park MD. Pumped discharge to Dane St CB.

Estimated depth 4m with +1m standing water ~6,000m3 available capacity



Site could be investigated as a potential Drainage for Liveability project in partnership with the Water Corporation but has limited scope for modification or redevelopment due to lack of surrounding space. Options could include:

- Modification and partial revegetation to facilitate removal of fencing and provide additional tree canopy/habitat opportunities – would require expansion into adjacent land areas.
- Redevelopment as a park or other community space with fencing to enable steeper banks to be retained and limit loss of storage capacity

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land and water solutions

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Client: Hatch Roberts Day

Report	Version	Prepared by	Reviewed by	Submitted to Client	
				Copies	Date
Preliminary draft	V1	HB/JS	HB	electronic	Oct 2023
Draft WMS	V2	HB/JS	HB	electronic	Jul 2024

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Albany Highway Precinct

Sustainability Strategy

Hatch RobertsDay

Job No:	1030481
Doc Ref:	1030481-RPT-SY-001
Revision:	A
Revision Date:	11 August 2024

Project title	Albany Highway Precinct	Job Number
Report title	Sustainability Strategy	1030481

Document Revision History

Revision Ref	Issue Date	Purpose of issue / description of revision
—	12 August 2021	Draft issue for review
A	11 August 2024	Issue for Town of Vic Park

Document Validation (latest issue)

X	X	X
Principal author	Checked by	Verified by

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Executive Summary

This report outlines the recommended sustainability initiatives to be integrated within the new Albany Highway Precinct Structure Plan.

Based on the first phase Strategic Review, we reviewed a number of similar Structure Plans, Activity Centre Plans and Local / State Planning Policies. In doing so we ranked these as ranging from Poor through to Australian Excellence.

We would expect the Albany Highway Precinct Structure Plan to take on Best Practice and Australian Excellence level of sustainability initiatives.

Since the first phase of the report, in consultation with the Town of Vic Park and Hatch Roberts Day, we have further outlined our recommendations for the project, and what we believe should be incorporated in the Plan.

In Section 8, we have provided comments and recommendations on the Albany Highway Precinct Structure Plan 'Section 4.1.6 Sustainability and Environmental Performance' which includes:

- Additional sustainability objectives.
- Recommendations for Minimum Sustainability Certifications, e.g., Green Star Buildings. We have also suggested a tiered approach where, depending on the size and scale of the development, the developer will be required to align with suitable and appropriate sustainability targets.
- Additional rationale for ensuring no new gas connections to developments within the precinct.
- Suggested rewording of the Productive Roof Space objectives.

Overall, we feel that the updated Sustainability Objectives will help enhance the sustainability outcomes of development within the precinct.

Contents

1.0	**Introduction**	**4**
2.0	**Planning for Sustainability**	**5**
2.1	State Planning Policies	5
2.2	Local Structure Plans	6
2.3	Local Planning Policies	6
3.0	**Best practice sustainability policy**	**7**
4.0	**Current Planning Framework**	**8**
4.1	State	8
4.2	Local	8
5.0	**Neighbouring planning frameworks**	**10**
6.0	**Other WA planning frameworks**	**11**
7.0	**Sustainability objectives for precinct planning**	**13**
8.0	**Recommendations**	**15**
9.0	**Conclusion**	**18**

Appendices

No table of contents entries found.

Tables

Table 1:Cundall's assessment matrix	7
Table 2: Relevant state planning framework	8
Table 3: Current planning framework	8
Table 4: Neighbouring planning framework	10
Table 5: Other WA planning framework	11
Table 6: State Planning Policy 7.2 achievement methodology	13
Table 7: Example Green Star rating requirements approach	16

Figures

Figure 1: Albany Highway Precinct area 4

Figure 2: Western Australian planning framework (City of Kalamunda, 2021) 5

Figure 3: State planning framework (State Planning Policy 1, 2017) 5

1.0 Introduction

Encompassing approximately 86.4 hectares the Albany Highway Precinct is a 3.7km length of commercially zoned land along Albany Highway from Canning Highway in the north to the Town of Victoria Park boundary in the south, including a small residentially zoned strip along Hubert Street. A number of public parks and open spaces will be included within the precinct including Asquith Reserve, Memorial Park, Reid Park, Isaia Corner, John Macmillan Park and Edward Millen Park. Located entirely within the local council of the Town of Victoria Park, a Precinct Structure Plan for the area is currently being developed.

This Precinct Structure Plan's purpose is not only to form a comprehensive precinct plan that will guide the continued growth and development of this commercial corridor, but to ensure a cohesive, united piece of sustainability framework is applied uniformly across the precinct. By gathering together Victoria Park's currently implemented sustainability schemes and initiatives and comparing them against Perth's current standard as well as other 'best practice' cases, the local council can make an informed decision based on contemporary context as to how they intend to integrate sustainable design/development into their precinct governance.

This report will outline and contextualise the quality and use of sustainability initiatives within local councils around Perth, laying the groundwork for Victoria Park to develop its own initiatives for the new precinct.



Figure 1: Albany Highway Precinct area

2.0 Planning for Sustainability

In Western Australia, the Planning and Development Act 2005 grants power to government bodies to enact policies and plans regulating the development of land within the state. It is this act through which local councils are granted the power to produce sustainability framework to ensure best practice design is upheld in their community. Within the context of the Town of Victoria Park's Albany Highway Precinct Plan, many different forms of planning framework will apply, and as such this report has outlined the relevant frameworks and their impact on sustainable design. Figure 2 below outlines the way various forms of planning framework impact each other and how each is empowered.

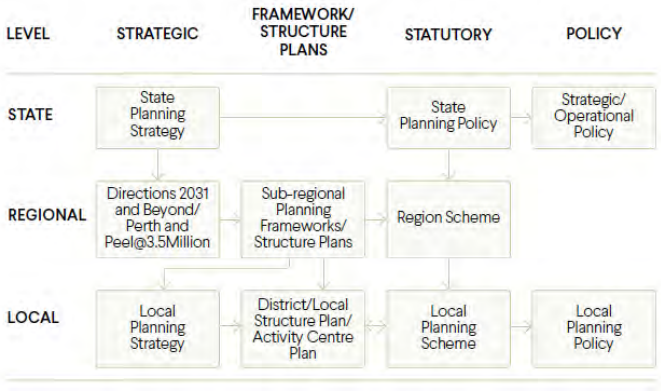


Figure 2: Western Australian planning framework (City of Kalamunda, 2021)

2.1 State Planning Policies

State planning policies (SPP) are considered the highest level of planning policy control and guidance in Western Australia. Prepared under Part 3 of the Planning and Development Act 2005, they are used to enforce/achieve the principles and goals outlined in state strategic frameworks (Figure 3). Currently these state planning policies provide local governments with a framework by which they develop land in a sustainable manner (subdivision, density, land use etc), whilst relying on their own local planning policies to regulate individual developments and building elements. Ultimately, when discussing sustainable planning SPPs are utilised across the state to ensure a unified vision for 'good design' is being promoted and to safeguard against conflicting planning ideologies.



Figure 3: State planning framework (State Planning Policy 1, 2017)

2.2 Local Structure Plans

Structure plans are guidance documents used to coordinate the subdivision and development of land within identified areas. This ensures local councils are able to realise their vision for a community into completion by controlling development from the earliest stages of design. Structure plans are particularly useful for managing land use/type as well as lot size and density at a macro scale. Various types of structure plans include;

- **District Structure Plans (DSP)** – strategic framework for the planning, assessment, coordination and implementation of future subdivision and zoning of an area of land within a broad district sized area which features a broad level of detail and establishes the key development principles of that area.
- **Local Structure Plans (LSP)** – a plan for the coordination of future subdivision and zoning of an area of land within a more defined area than a district structure plan and deals with residential density, subdivision, and the coordination of infrastructure on a neighbourhood or smaller scale.
- **Activity Centre Plans (ACP)** – guides the types of land uses and the overall development (including built form) that is intended to occur within the activity centre. It can detail land use and infrastructure requirements as well as environmental assets, residential density, built form, infrastructure, and access arrangements.
- **Precinct Plans** – A plan to guide the design, assessment and control of subdivision, land use and development in a precinct.

These plans are frequently utilised to promote sustainability by outlining framework for commercial development (Green Star minimum), however they also have a less direct impact on the sustainability of developments by providing a larger network of infrastructure to facilitate many developments within the plan. Outlining transport hubs, arterial roads, height restrictions etc all have a direct impact on the many aspects of sustainability within individual projects.

2.3 Local Planning Policies

Local councils will adopt a set of Local Planning Policies (LPP) relating to urban planning/design matters in order to provide a consistent approach to the way in which certain types of planning applications and forms of development will be assessed and determined.

LPPs can be very effective in outlining best practice when it comes to sustainability and providing guidelines on how to best implement initiatives at a micro level. Currently many local councils will produce LPPs to encourage residents to employ passive design techniques when building and/or renovating. These policies are designed to ensure buildings are developed with sustainability in mind and ultimately offer a passive long-term reduction in emissions and resource consumption. Whilst not law, these policies give local governments a framework by which they can assess proposed developments, in order to assess their viability within the council's vision for the community.

3.0 Best practice sustainability policy

The standard by which sustainability initiatives are judged is constantly improving and as such policies should be regularly revised and updated to maintain a high level of quality. Whilst many of the sustainability initiatives upheld by the local governments of Perth began as ambitious looking back on them now, they have rapidly fallen behind the times; as such when outlining a new sustainability policy, it is important to exceed expectations to futureproof these developments.

The table below is our outline ranking of what we believe would be considered Poor sustainability initiatives and what would be considered Australian Excellence:

Table 1:Cundall's assessment matrix

Sustainability Initiatives	**Cundall's Assessment of Local Government's Sustainability Initiatives**			
	Poor	**Average**	**Best practice**	**Australian excellence**
NCC Section J compliance (non-residential)	Minimum compliance	Minimum compliance	5% better than minimum	10% better than minimum
NatHERS (residential)	6-star minimum compliance	6.5-star rating	7-star rating	≥8-star rating
Passive design techniques	Recommend	Recommend	Encourage	Required
Green Star Buildings rating	-	4-star rating	5-star rating	6-star rating
Life-cycle assessment (LCA)	-	-	-	Required
NABERS (Energy)	-	3-star rating	4-star rating	≥5-star rating
Carbon Neutral or Net Zero Carbon	-	-	Carbon Neutral	Net Zero Carbon

4.0 Current Planning Framework

Planning framework currently utilised by the Town of Victoria Park to regulate sustainability standards within the built environment comes in various forms, be it SPP, LPP or Local Structure Plan. In the tables below, the Town of Victoria Park's sustainability initiatives have been catalogued.

4.1 State

The table below outlines the key state planning policies that outline sustainability initiatives relevant to the proposed Albany Highway Precinct Plan.

Table 2: Relevant state planning framework

State	Plan/Policy	Sustainability Requirements	Cundall Assessment
Western Australia	**Policy** SPP 7.0: Design of the Built Environment	▪ Outlines formula for 'good design' that must be considered by all bodies when granting approvals	Average
	Policy SPP 7.2: Precinct Design Guidelines	▪ Follow general design objectives and considerations for developments in the "Precinct Design Guidelines" (see section 7 of this report)	Average
	Policy SPP 7.3: Residential Design Codes	▪ Follow R-codes for the sustainable use and development of land whilst optimising zoning to improve social sustainability	Average

4.2 Local

The table below outlines the key items of local planning framework created and employed by the Town of Victoria Park to regulate sustainability within new developments. Whilst the majority of these plans and policies are not directly applicable to the proposed site, they will be used to better establish a baseline of what is 'best practice' and to help the local council weigh their action on sustainability against other councils.

Table 3: Current planning framework

Council	Plan/Policy	Sustainability Requirements	Cundall Assessment
Town of Victoria Park	**Plan** Belmont Park Racecourse Redevelopment Structure Plan	▪ NatHERS (6-star minimum) ▪ Green Star (4.5-star for commercial and retail)	Average
	Policy LPP 36 – Climate Control	▪ Encourage Passive Design Principles	Poor

Council	Plan/Policy	Sustainability Requirements	Cundall Assessment
	Policy LPP 40 – Burswood Station East Precinct	▪ Green Star (development benefits for ≥6-star)	Australian Excellence

5.0 Neighbouring planning frameworks

The table below outlines planning framework and implemented sustainability initiatives from local councils adjacent to the Town of Victoria Park. This information has been gathered to increase the scope of context for the Albany Highway Precinct Plan's sustainability initiatives and further progress the definition of 'best practice'.

Table 4: Neighbouring planning framework

Council	Plan/Policy	Sustainability Requirements	Cundall Assessment
City of South Perth	**Plan** Canning Bridge Activity Centre Plan	▪ Green Star (5-star minimum)	Best Practice
	Plan South Perth Activity Centre Plan	▪ Green Star (4-star minimum)	Average
	Policy Policy P350.01 – Environmentally Sustainable Building Design	▪ Green Star (4-star minimum)	Average
City of Canning	**Plan** Canning City Centre Activity Centre Plan	▪ Life Cycle Assessment or Green Star (development with ≥10 dwellings) ▪ Reduce water Usage (80kL/person/year)	Average

6.0 Other WA planning frameworks

The table below outlines planning framework and implemented sustainability initiatives from local councils all over Perth's metropolitan area. These details have been included to highlight some more unique initiatives as well as continuing to expand the context of these initiatives to a city-wide scale.

Table 5: Other WA planning framework

Council	Plan/Policy	Sustainability Requirements	Cundall Assessment
City of Fremantle	**Policy** LPP 2.13 Sustainable Buildings Design Requirements	▪ Green Star (4-star minimum) or One Planet Living recognition	Average
	Policy LPP 2.2 Split Density Codes and Energy Efficiency and Sustainability Schedule	▪ NatHERS (6 star) ▪ 1.5kW Solar PV system (Class 1a) ▪ 3,000L Rainwater Tank (Class 1a)	Best Practice
City of Nedlands	**Policy** LPP – Hollywood Design Guidelines	▪ Heating/Cooling Systems (5 star) ▪ Encourage Passive Design Principles	Average
	Policy LPP – Swanbourne Design Guidelines A	▪ NatHERS (5 star but encourage 6)	Poor
City of Perth	**Policy** PPM – Section 6.3 – Goderich Design Policy	▪ Encourage Passive Design Principles	Poor
City of Vincent	**Policy** Built Form Policy No. 7.1.1	▪ Life Cycle Assessment ▪ Green Star (5-star minimum)	Average
City of Subiaco	**Plan** Subiaco Activity Centre Plan	▪ Green Star (5-star minimum for landmark sites)	Best Practice

Council	Plan/Policy	Sustainability Requirements	Cundall Assessment
	Plan North Subiaco Structure Plan	▪ Green Star (5-star minimum)	Best Practice
City of Joondalup	**Plan** Joondalup Activity Centre Plan	▪ Encourage Passive Design Principles	Poor
City of Bayswater	**Plan** Morley Activity Centre Plan	▪ Encourage Passive Design Principles	Poor
City of Stirling	**Plan** Stirling City Centre Structure Plan	▪ Green Star (5-star minimum)	Best Practice
City of Melville	**Plan** Canning Bridge Activity Centre Plan	▪ Green Star (4-star minimum)	Average
	Plan Riseley Activity Centre Structure Plan	▪ Encourage Passive Design Principles	Poor

7.0 Sustainability objectives for precinct planning

Below are the State Planning Policy 7.2 Precinct Design Guidelines and our commentary on how the Albany Highway Precinct Structure Plan could achieve these.

https://www.dplh.wa.gov.au/getmedia/3a7c6a33-6fa7-4f75-b348-bc1952721d81/DWA-Precinct-Design-Guidelines

Table 6: State Planning Policy 7.2 achievement methodology

Design Element	Objective	Considerations	How to Achieve
Design Element 1: Urban Ecology	**O1.3** – To reduce the environmental and climate change impacts of the precinct development.	**C1.3.1** – Identify opportunities to retain existing trees and enhance the tree canopy through new planting.	
		C1.3.2 – Consider the influence of the precinct design on energy demand and review the potential for precinct scale energy generation, distribution, and storage.	
		C1.3.3 – Prioritise consideration of waste management at the relevant scale in line with low-waste, circular economy objectives.	
		C1.3.4 – Promote water conservation including water reuse and recycling.	
		C1.3.5 – Evaluate the performance of precinct development proposals against leading Australian sustainability performance standards.	
Design Element 3: Public Realm	**O3.3 –** To ensure that key environmental attributes are protected and enhanced within the public realm.	**C3.3.1** – Integrate environmental features of the precinct within the public realm.	
		C3.3.2 – Ensure the public realm contributes to creating and/or improving the urban tree canopy within the precinct and its surrounds.	
		C3.3.3 – Incorporate waterwise species into the green network and public realm where appropriate.	
		C3.3.4 – Incorporate water sensitive urban design into the public realm.	
		C3.3.5 – Provide opportunities for urban greening, such as community gardens and rooftop gardens.	
Design Element 4: Movement	**O4.2** – To ensure a resilient movement network that prioritises affordable, efficient, sustainable and healthy modes of transport.	**C4.2.1** – Prioritise walking, cycling, public transport and shared mobility, to minimise car dependency	
		C4.2.2 – Establish mode share targets for the precinct.	

Design Element	Objective	Considerations	How to Achieve
Design Element 6: Built Form	**O6.3** – To ensure that built form design reduces energy demand across the precinct by facilitating climate-responsive design.	**C6.3.1** – Locate and arrange buildings to optimise solar access to buildings and the public realm.	
		C6.3.2 – Consider the placement and layout of buildings to optimise natural ventilation and minimise wind impact at street level and on adjoining properties and public spaces and streets.	

8.0 Recommendations

Section 4.1.6 of the Albany Highway Precinct Structure Plan outlines the required Sustainability and Environmental Performance requirements expected for development within the precinct.

We provided comments on the draft Structure Plan in December 2023 and then again in March 2024. Many of our comments have been incorporated into this section of the Structure Plan.

Based on the latest version of the Structure Plan Our comments and recommendations are as follows:

> ***Objectives***
>
> *i. Address the climate crisis through sustainable and low carbon development*
>
> *ii. Reduce energy consumption, water use and waste generation in new development*
>
> *iii. Incorporate water sensitive urban design principles in new development to improve water management, natural features and public open space, and reduce flooding risk*
>
> *iv. New development considers future climate risks and adopts resilient design solutions*
>
> *v. Support active and sustainable modes of transport and reduce car parking on-site*

Generally, the Objectives are relatively high-level with a focus on climate resilient and carbon reduction, which are considered the key areas of focus for sustainability within the built environment. We suggest adding an objective related to transport. Other topics that could be touched upon in the Objectives could include materials, waste, circular economy, and social / cultural sustainability. However, the primary sustainability issues have been outlined and the Minimum Sustainability Certification requirement below should assist with capturing the other issues not covered.

> ***Development Requirements***
>
> ***Minimum Sustainability Certification***
>
> *All development shall achieve and provide certification of at least a 4 star Green Star Buildings rating under the Green Building Council of Australia (GBCA) or other formally recognised sustainability rating certification. The rating system is to be holistic in nature and cover a range of sustainability issues.*

The above requirement is good and recommended. We think that this section may also benefit from a tiered approach to the application of certification as per the table below.

This table is only a guide, and the Town of Vic Park may choose to represent this in their own way or format. The recommended development sizes are also only to be used as a guide, and we have provided potential tiered options based on either project cost, storey heights or floor area.

Please note that a 6 star Green Star rating could be considered by the council as a Community Benefit. We believe that anything less than a 6 star cannot reasonably be considered as providing huge benefit to the wider community.

Table 7: Example Green Star rating requirements approach

Development size (guide)	ESD Report	Green Star 'equivalent'[1]	Green Star Buildings certified rating	Green Star Accredited Professional	Building is all electric?
<$5million	Yes	-	-	No	Yes
>$5million; or >1,000 m^2 GFA	Yes	Yes	-	Yes	Yes
>$20million; or Min. 4 storeys; or >3,000 m^2 GFA	Yes	-	Yes, minimum 4 star rating	Yes	Yes
>$50million; or Min. 6 storeys; or >5,000 m^2 GFA	Yes	-	Yes, minimum 5 star rating	Yes	Yes

[1] – Green Star 'equivalent' generally means meeting all expectations of a Green Star rating, but without registering and certifying with the GBCA

Minimum Residential Energy Efficiency

All residential development should ~~aim to~~ achieve at least 1 star above the minimum National Construction Code (NCC) NatHERS requirements. For example, if a multi-residential development is required to achieve an average 6 Star NatHERs, then the development should achieve 7 Star NatHERS average for the development.

The above requirement is good and recommended. Would it be possible to remove the 'aim to' wording? This adds ambiguity and allows for non-compliance with this requirement.

Gas Free Development

Development shall not provide a gas connection to development for individual residential unit usage. Refurbishment should consider removal of gas connections where they exist. Gas is not part of a sustainable future as this is a fossil fuel that contributes to climate change. Therefore, developments are encouraged to be fully electric and powered by renewables.

The above requirement is good and recommended. Added wording to provide a rationale behind why a development should be 'gas-free'.

~~Productive Roof Space~~ Reduced Urban Heat Island

All development shall provide a minimum 50% of ~~unobstructed roof surface~~ site area as green roof, rooftop agriculture and/or photovoltaic array.

~~Unobstructed roof space means total roof area less space occupied by building servicing and any applicable clearance requirements.~~

We agree with the overall objective of this requirement. However, some developments may not have much roof area, such as when there are rooftop plant areas or there is a car park as the top level. We recommend this potentially be reworded to suggest that 50% of the site area, in lieu of roof area, *'shall provide a minimum 50% …'*.

Tree Canopy and Deep Soil Zones

All Residential and Non-Residential development shall achieve the Element Objectives and applicable provisions of the Residential Design Codes - Volume 2 with respect to tree canopy and deep soil areas.

We have no comments on this requirement and would request that this is referred to a Landscape Consultant for input to this requirement.

Water Management

A Development Water Management Report (DWMR) shall be submitted with a development application to demonstrate how the design criteria and objectives contained within the Albany Highway Local Water Management Strategy (LWMS) are met with respect to water conservation, stormwater management, water sensitive urban design and groundwater management.

Where a development is unable to meet the design criteria identified in the LWMS, a DWMR shall be submitted with a development application and demonstrate how water management matters within or impacted by the development will be appropriately managed.

We have no comments on this requirement and would request that this is referred to a Civil Consultant for input to this requirement.

9.0 Conclusion

The Albany Highway Precinct Structure Plan has outlined encouraging sustainability targets for the precinct, where previously there may have been minimal targets for this area. The Sustainability Objectives will ensure that this will implement a *'bold community-led vision'* for the local community and all its residents / occupants.

Alongside this ambition the Structure Plan aims to evolve the precinct into an area of 'distinct, diverse, and sustainable place'. In order to do this, the council would like to set ambitious yet feasible targets for its developments within the precinct.

As outlined in the Recommendations section above, we have set out attainable and feasible targets and requirements that are considered to align with today's best practice for sustainability in the built environment.

We trust that these targets and requirements can be implemented easily and sufficiently to help push the sustainability vision forward and meet the expectations from the local community.

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TOWN OF VICTORIA PARK

SCHEDULE OF SUBMISSIONS

No.		Summary of Submission	Officer Response	Modification to PSP
1.	**GOVERNMENT SUBMISSIONS**			
1.1	**Department of Education**	AHPSP falls within the student enrolment intake areas of East Victoria Park, Millen, and Victoria Park Primary Schools. The Primary Schools are currently operating close to or above their accommodation capacity and will continue to do so over the short to medium term. It is anticipated that the schools will not be able to accommodate **the long-term student demand** from the proposed Structure Plan area within the existing facilities Notwithstanding this, the Department has no in principle objections. The Department will continue to monitor student enrolment demands and would like to engage with the Town to forward plan for the longer term primary school educational needs of the locality. Any requirement for primary school developer contributions will be assessed and applied at the subdivision stage	Noted. The Town will continue to engage with the Department with relation to long term needs. In following up the Department, it is noted that contributions are only applied through the subdivision process, they are not applied to built-strata.	**None**
1.2	**Main Roads WA**	Main Roads has reviewed the draft AHPSP proposal and is unable to provide a recommendation at this point in time as the impact of the proposed AHPSP	**Noted.** As an identified infill activity precinct, the Draft AHPSP aligns with growth and density as detailed in the State	**Modify Plan 1 to show Investigation Area over the Causeway Major Site**

No.		Summary of Submission	Officer Response	Modification to PSP
		upon the state road network and associated intersections upgrades is uncertain. **Canning Highway/Causeway/Shepperton Road Interchange** The proposed at-grade intersection to replace Canning Highway/ Causeway/ Shepperton Road (current interchange) does not align with Main Roads' future road planning. All references to this at-grade proposal should be removed from the AHPSP and supporting documents. **Shepperton Road Future Planning** Long-term plan or a future six-lane divided carriageway with improved signalised intersections is expected to be implemented in stages as funding becomes available. It is unclear how these intersections will perform as a result of the AHPSP. The intersection assessment is required to mitigate the effects of diverting the current Albany Highway traffic and cater for future traffic growth from the PSP. Forward planning for transport infrastructure upgrades should be identified part of the PSP process. The Town is encouraged to establish a Developer Contribution Plan under the provisions of State Planning Policy 3.6 – Infrastructure Contributions to ensure upgrades are appropriately funded and considered.	Government's Perth & Peel @3.5million Strategy and associated Central Sub-regional Planning Framework (2018) and State Planning Policies (SPP) 4.2 Activity Centres & SPP 7.2 Precinct Design. **Canning Highway/Causeway interchange**. Plan 1 does not modify the current zoning of this area. This is a "big idea" from previous stages of the AHPSP process to which Main Roads has provided previous comments on not supporting the idea. This provides a long-term vision for the area and should be retained within the document to guide future discussions. It is appropriate to identify this as an Investigation Area within the AHPSP. **Shepperton Road Future Planning** The Town can progress traffic calming measures on its local road network outside the scope of a Precinct Structure Plan. It is not known how traffic calming will impact traffic movements onto the surrounding road network. The intent of traffic calming as identified in the AHPSP is improve the movement and place function	**M1 area.**

No.		Summary of Submission	Officer Response	Modification to PSP
			of the activity precinct. Given the length and diversity of the precinct, it makes predicting the temporal and geographic staging of development challenging given the uncertainty of when/where growth will occur. The Precinct is currently zoned District Centre and Mixed Use which already enables some development to occur. Major developments. It is estimated that over the 10-year timeframe of the PSP, only a small number of sites along Albany Highway will be developed, delivering approximately 800 additional dwellings. It is not considered necessary to establish a DCP for the following reasons: **Limited Development Activity and Timeframe** The feasibility analysis undertaken as part of the AHPSP process indicates that only modest development is likely to occur within the 10-year timeframe of the plan. Specifically: - Approximately 800 additional dwellings are forecast across the entire precinct	

No.		Summary of Submission	Officer Response	Modification to PSP
			with development expected to be dispersed across multiple sub-precincts. Market conditions indicate low-to-mid rise typologies are more viable in the short term Major site redevelopment will be subject to detailed TIAs through the development assessment process, as per the WAPC Guidelines, as and when they occur. This limited development activity means that the "need and nexus" requirement for development contributions would be difficult to established. The "timing and priority" principle would not be satisfied given the staggered, unpredictable nature of development. Administrative costs of establishing and operating a DCP would be disproportionate to funds collected. **Equity and Fairness Considerations** SPP 3.6 requires that infrastructure contributions are levied equitably among landowners who will benefit from the infrastructure. In this context: - The costs of preparing, administering and collecting contributions under a formal	

No.		Summary of Submission	Officer Response	Modification to PSP
			DCP would be significant - The limited number of developments would result in a financial burden on early developers that is disproportionate to their impact - The "equity" principle would be undermined as developers would pay contributions toward infrastructure that benefits the broader region. **Staged Implementation** - The AHPSP includes a staged implementation plan for local streetscape and transport improvements where works can be prioritised based on community need. This enables the Town to progress improvements according to priorities rather than predicting development timing.	
1.3	**Department of Communities**	Communities owns several assets across the precinct and supports the opportunities created in the plan to deliver development at increased densities. This strategic approach will facilitate the delivery of a diverse range of housing products, catering to various household needs and preferences within this key location. The plan sets a minimum requirement of 10% affordable dwellings in Major Site developments.	Noted. A definition for Affordable Housing has been developed and is incorporated into Appendix 1 of the Community Benefits Framework. Town's definition of Affordable Housing does not include the analysis of crisis, supported or social housing. As such, Social Housing has not specifically been	**None**

No.		Summary of Submission	Officer Response	Modification to PSP
		These affordable dwellings are to be delivered in partnership with an approved housing provider or a not-for-profit organization recognized by the Housing Authority. This collaboration is essential for ensuring that the affordable housing targets are met effectively. The plan currently does not include a definition for affordable housing. To enhance clarity we encourage the town to develop a clear and comprehensive definition for affordable housing. The department supports the inclusion of affordable housing and universal design as key public benefits. Universal design ensures that housing is accessible to people of all ages and abilities, fostering an inclusive community. The town is encouraged to include social housing in the list of public benefit outcomes. This inclusion will further incentivise the delivery of dwellings for individuals and families on very low-income levels. Social housing, managed by Communities, plays a vital role in providing stable and affordable housing options for those most in need.	included as a public benefit – noting the Town's draft Affordable Housing Study identifies how the Town can support promotion and growth of private sector involvement in delivering both social and affordable housing via Precinct Planning mechanisms. The Town's Draft Affordable Housing Study identifies a gap in the delivery of Affordable Housing options, with the benefit framework acknowledging that gap.	
1.4	**DPLH (Heritage Council)**	The Structure Plan in Part 1, Section 3.5.1b contains specific development requirements for development adjoining heritage-protected places.	Noted. Existing Heritage site (P2219) requires Adjoining Sites as subject to 3.5.1(b)	**Modify the Sub-Precinct Plans as follows:** **Change the Heritage**

No.		Summary of Submission	Officer Response	Modification to PSP
		The Heritage Act 2018 requires referral for development that is likely to affect a registered place. This applies to proposals for a registered place and those adjacent or "in close proximity to a registered place". The Town should consider applying the requirements more broadly than just to adjoining properties and amend the wording to reflect this. Consideration should be given to amending the setbacks to lots adjacent to State Heritage Registered Place Victoria Park Police Station (P2219) to ensure sight lines of the building are not impinged by future development. Inconsistencies on the Precinct Plan maps to the Local Heritage Inventory and State Heritage list. AHPSP should review site locations.	requiring the submission of a Heritage Impact Statement. Possible to include an Incentive for bonus where coordinated development approach or amalgamation support heritage outcomes. The AHPSP precinct mapping has been reviewed with modifications proposed to the mapping errors.	**Marker from grey hatch to pink triangle ▲ (on all Sub-Precinct Plans (2.1 – 2.6) to avoid conflict with POS markers.** **Plan 2.5 - Remove Heritage Hatching from Lots 932 & 934 Albany Highway & 974 Albany Highway** **Plan 2.3 Remove Heritage Marker from 3 Tuam Street**
1.5	**Department of Transport**	The width of the AHPSP corridor (frame) around Albany Highway is potentially too small. While community preference may be to maintain low density character housing outside of the AHPSP area, this lack of increased density will hinder many of the AHPSP's goals (including transport goals). In order to sustain the precinct in line with the Vision (Chapter 5) and Design Response Objectives (Chapter 6) and Precinct Intent (Chapter 7), especially if this vision is for a less car-dependent precinct, it is likely that a broader strategy	Noted. The Town will continue to collaborate with the Department of Transport through implementation of its Integrated Transport Strategy in delivering the broader network upgrades that will support the future vision for AHPSP. Parking Maximums have not been pursued at this time however the Town will monitor parking carefully with future modifications	**Update Table 9 to "SPP 7.3 Residential Design Code"** **Update Table 19 to car-sales**

No.		Summary of Submission	Officer Response	Modification to PSP
		encompassing the area to Berwick St/Devonish St south west of Albany Highway through to the Armadale Train Line north east of the Highway will be required There are several local and secondary LTCN routes within the Albany Highway Precinct Structure Plan (AHPSP) area, however most of them remain categorised as 'existing needs improvement'. Ideally delivery of the AHPSP will include high quality upgrades to LTCN routes. Gloucester St is already a secondary LTCN route, albeit classed as 'non-existing/inadequate'. Opportunities to develop Gloucester Street and other proposed parallel routes that could form more ideal routes should be discussed with DoT's Active Transport branch The intent to create more accessible 'Copenhagen style' bike lanes along Duncan Street and Oats Street to connect Albay Hwy to the railway PSP is supported Specific modifications that impact people on bikes should be discussed with DoT's Active Transport branch to ensure suitability for people of all ages and abilities. Table 9 incorrectly references the "planning design codes". This should reference "State Planning Policy 7.3 Residential Design Codes" with regards to	to the AHPSP and/or the Town's Local Planning Parking Policy a possibility.	

No.		Summary of Submission	Officer Response	Modification to PSP
		provision of bike parking and EOTF. Table 9 requires 1 employee and 1 visitor bike parking bay per 100sqm net lettable area which is above the requirements of Austroads, however, given the location of the AHPSP this is supported. Table 9 should read 1 shower for the first 5 bike parking bays, or part thereof, plus and additional shower for each 10 bike parking bays thereafter DoT supports the 'major site requirements' for new public connections and increasing the pedestrian and cycling network. Table 19 should read car-**sales** Vic Park Primary School - Safe crossings along Albany Hwy should reflect likely active transport routes for children and families within the school intake area It is recommended that "**the** movement and place hierarchy" is revised to "**a** movement and place hierarchy" and a reference included to the section of the Transport Strategy where information on the methodology and process for how the hierarchy classifications were assigned can be found. Ongoing consultation with PTA and DoT (re. Mid-Tier Transport) is encouraged. Objective 9: Lowering speed limits has some merit, however the AHPSP's competing desires for a highly		

No.		Summary of Submission	Officer Response	Modification to PSP
		pedestrian oriented corridor as well as an efficient public transport and future mid-tier transport corridor will require further investigation and consultation with the Transport Portfolio Discouraging private parking is supported, however the lack of a maximum parking rate risks provision of excess parking which will undermine many objectives of the AHPSP. The Town should monitor how this is reflected in development applications to ensure that desired outcomes are being achieved The Interim target of 800 new dwellings by 2034 appears low.		
2.	**PRIVATE LANDOWNERS/OCCUPIERS**			
2.1	**Petition.** **Merton Street**	76 Signatures from approx. 60 residences Make the following Amendments to the (Central Sub-Precinct) draft AHPSP: • Change the zoning boundary along Merton Street to CE1 • Change Bonus Building Heights of CE1 from 5 to 4 storeys' • Sensitively manage the redevelopment including activation of the Urban Forest Strategy by adding requirements for native flora landscaped	Noted. Partially Agree. Support the Residential Streetscape Character for interface treatments along portion of Merton Street. Do not support the change in Bonus Height to 4 storey's as this undermines the calibration for bonus incentives and the broader Secondary Centre function of the Precinct. Landscaping requirements are already covered by the R-Codes vol.2 however this	**Modify Plan 1** Precinct Structure Plan **and Plan 2.3** Central **to reflect CE1 typology** (and subsequent figures within the Part 2 of the AHPSP) for Lots 23, 341,340, 339, 338, 337, 402, 403, 404 & 333 Merton Street **Modify Table 8 Residential Frontage Type**

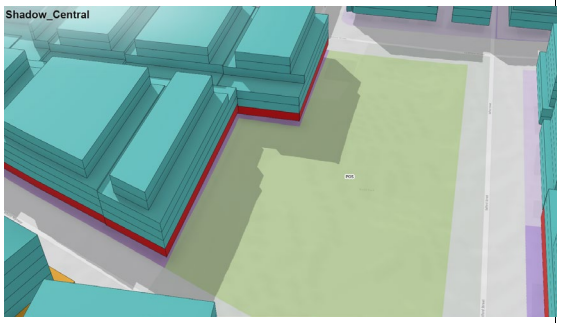
No.		Summary of Submission	Officer Response	Modification to PSP
		setbacks and native verge conversion (Section 3.4.4) • Change the status of 3 Merton Street Sump & Micro Park from development to open space, Biodiversity in Table 23	could be reiterated under Section 3.4.4. – Table 8 Residential Frontage Requirements. Native Verge conversions or enhancements can also be considered a community priority for inclusion under the Community Benefits Framework (i.e additional to street tree planting as a quick win).	Requirements to include additional guidance on Landscaping within front setback areas to enhance the public realm, contribute to urban greening and support visual privacy without impeding passive surveillance. **Modify Table 23** to show Merton Street Sump as Biodiversity function
2.2	Rathay Street (phone call)	Support more diverse housing on the Highway and provide opportunities for residents to down-size. Don't want to see High-Rise development like that in South Perth – it needs to be sympathetic to the existing local community and character. More Vic Quarter style developments in the Central precinct. The opportunity in Central Precinct exists, why is not being developed?	Noted. Private investment in development is influenced by many factors outside the control of Local Governments. The proposed PSP has potential to incentivize development to occur along Albany Highway through density changes. The draft PSP reflects the sentiments stated.	None
2.3	Temple Street & Manchester Street	concerned about Hordern Street being zoned CE2 allowing mixed-use, commercial frontage, max bonus story height of 8, nil street setback & VP2 (max bonus story height of 6). We own two properties in temple street and fear	Lots along Hordern Street, from Mackie Street to Temple Street, have a Residential Zoning under Plan 1 of the AHPSP, requiring a Residential Frontage Type. Plan 2.3 Central Sub-Precinct should show these	**Update Plan 2.3 Central** Sub-precinct to show Lots zoned Residential on Plan 1 of the PSP (along Hordern Street, between McMillan

No.		Summary of Submission	Officer Response	Modification to PSP
		with the above there will be too many cars parked around our area and will take away the serenity of a residential area. there is so much room in Albany highway which should first be developed before encroaching on inner streets. The same consideration given to Hubert Street should be considered for Hordern Street. the existing proposal will devalue properties around the area.	lots as CE1 as per the Built Form Strategy. The Town will continue to monitor parking demand and occupancy and implement the parking strategies identified in the Town's adopted Integrated transport Strategy in response to the needs of a growing population. The PSP supports a diversity of development opportunities that allow a better market response to development feasibility options as well as providing diverse housing typologies. AHPSP is expected to deliver improvements to local amenities (public realm) and provide more diverse housing choices which generally do not impact negatively on property values.	and Temple) **as CE1**
2.4		Commends the council for developing an exciting and aspirational vision for Victoria Park. Exciting to see the vision for the development of underutilised lots. expresses disappointment that the plan prioritizes extensive and relentless urban development and massing, with little concern for existing residents within proximity. the Plan doesn't respond to the reason people are	The Vision for the precinct has undergone extensive community consultation, with Stage 1 and Stage 2 of the project, including Listening Posts, Reference Group Workshops and a review of previous engagement undertaken for the Town's Strategic Community Plan (Vic Vision). Albany Highway is classified as a Secondary Centre under the Town's Local	**Include Solar Modelling images in Section 7.0 for each sub-precinct**

No.		Summary of Submission	Officer Response	Modification to PSP
		attracted to Victoria Park for lifestyle, community and ambience - a busy, low rise urban hub in close proximity to the centre of Perth, offering the town environment and amenities many people desire, without the intrusive urban massing of a city landscape. Residents recently voted to retain its title of a Town over converting to a City, which reflects how Victoria Park residents see the suburb. The magnitude and massing in the plan contradict the ethos of Victoria Park residents and pose safety and privacy concerns for young families with overlooking concerns. Supports development but believes it should have less emphasis on massing and extensive multiple-storey developments, particularly near existing single-storey residential areas Criticizes the plan for having almost no consideration of integration with the existing streetscape or managing impacts on current residents. <u>Specific concerns</u>: The block bordered by Manchester Street, Hordern Street (south side), and Rathay Street, where the proposed CE1 development of up to five storeys would significantly overshadow and overlook	Planning Strategy. Noting this includes high-density activity nodes (Centre Zones) mid-rise urban centres (Mixed-use Zones) and higher density residential (Residential zones). The PSP boundary responds to both State Planning Policy requirements (400m-800m precinct radius) as well as local strategic direction (maintaining residential heritage areas). Part 3.5.3 builds on previous stages of the PSP and responds to scale transition by requiring development above 2 storey's (within 18m of sensitive interface) setback within a 45° plane to adjoining low-scale residential areas. Rear setbacks also require a minimum 6m setback from the sensitive interface. Upper-Level setbacks are introduced to reduce overshadowing as per R-Codes planning guidance. R-Codes Vol.2 still applies with new development required to meet Section 3.2 Orientation and Section 3.5 Visual Privacy with the objective of these elements to reduce impacts on neighbouring	

No.		Summary of Submission	Officer Response	Modification to PSP
		neighbouring properties. Part 1 Section 3.5.3 – 'sensitive interface' and other supporting documents provides no realistic comprehension of what it would be like to live next to a development of this massing where a combined growth scenario is stated as being preferred at this location, the interface has been poorly thought through. Major site M5 provides the opportunity for extensive development, the transition to neighbouring heights should be capped at 2 storeys, with a maximum of 3 storeys to provide a sympathetic development in the form of low-level townhouses or similar. Part 2 objectives do not include any consideration of the retention and protection of what current residents love about Victoria Park - the successful balance between amenity and convenience blended with the residential and community lifestyle without the urban massing of the CBD. Criticizes Section 7.3.2: Central Development Vision, stating that the proposed mid-rise residential infill does not properly transition between significant and low-level development heights. Objects to the Garden Rise development along the Hordern end of Rathay due to its proximity to	properties. The AHPSP further provides guidelines for discretionary decision-making, allowing for site-specific responses when the standard transitional requirements might not be the most appropriate solution. CE1 "Rathay and Manchester" has a rear setback requirement of 6m to Podium and must comply with the Sensitive Interface Requirements. Part 2 section 7.3 shows a plan that was prepared prior to feedback being received on the Built Form Strategy in Stage 2 – the updarted BFS identifies this site for inclusion in the PSP boundary. The Stage 2 modelling of Growth Scenarios was informed by testing shadowing and visual impacts to neighbouring properties. Testing of achievable building envelope to ensure viable apartment depth. The preferred combined growth scenario supports a nuanced approach to development, accommodating a range of built form typologies to support diverse housing opportunities, housing targets and broader Activity Centre economic self-	

No.		Summary of Submission	Officer Response	Modification to PSP
		existing residential houses and insufficient setbacks—recommends limiting height to 2–3 storeys. Solar availability assessment prioritizes Albany Highway and public areas, disregarding impacts on neighbouring residents It is also noted that Part 2 section 7.3 shows development lot bound between Manchester, Rathay and Horden as undeveloped / outside of development boundary or retaining existing building height. This provides a preferred and reasonable response, however this may be an oversight. while the vision is bold and exciting, the plan prioritizes council returns over resident impacts and does not respect what current residents appreciate about Victoria Park. The transitioning details within the plan needs to be reconsidered, limiting maximum development heights to 2 or 3 storeys to better align with the community's expectations.	sufficiency. Independent Development Applications are still required to be submitted and assessed against the R-Codes for any residential development proposal.	
2.5	Taylor Burrel Barnett on behalf of 484 Albany Hwy (Central Sub-	**Broadly supports the draft precinct plan** and its intended outcomes. However, there are **some requirements which would constrain development:** CE3 Base 6 with bonus of 10 requests the Town to	<u>Read Park Overshadowing</u> Within the Precinct, existing open space accounts for around 6.5% with Read Park being one of only four areas of existing Public Open Space currently servicing the	**Modify 4.0 Community Benefit Development Requirements as per Officer Recommendation.** **Modify AHPSP Appendix 1**

No.		Summary of Submission	Officer Response	Modification to PSP
	Precinct)	consider either greater height and/or de-constraining bonus height requirements Shadowing Restriction The subject site directly adjoins Read Park and the restricted overshadowing portion is approximately 20m from the boundary to 484 Albany Highway which unduly constrains the height and intensity of development on the subject site. Contributions Clause 3.2.1 requires public open space contributions at a rate of 5% of the land value. The cumulative impact of these contributions is onerous and could risk unfeasible development. Particular concern with public benefit contributions. **Subject site (moderate example**) – CE3 zone – 10 storey development permitted with bonuses (six storey base height). Assuming $80 million construction value, the contribution equates to $1.6 million. **M4 zone (high contribution example**) – 24 storey development permitted with bonuses (eight storey base height). Assuming $150 million construction value, the contribution equates to $9 million. We recommend the need for all contributions is further reviewed and recommend a significant scaling back of contributions to ensure	Albany Highway precinct. Read Park is further identified on the Town's Local Municipal Heritage Inventory for its social value. An established community garden exists within the POS. Read Park is considered a significant public asset within the Precinct.  Modelling has been carried out across the precinct on the proposed base heights which shows shadowing of 20m over Read Park from 12noon onwards within the acceptable range. It is noted the bonus height for 484 Albany Highway is restricted given the solar requirements of Read Park. The PSP establishes a strategic framework to guide growth, built form, and public realm outcomes across the entire precinct.	**Community Benefit Framework as per Officer Recommendation** **Update Part Two – Section 7.0 with Solar Modelling for each sub-precinct** **Remove 3.2.1 Cash-in-lieu of POS**

No.		Summary of Submission	Officer Response	Modification to PSP
		development can be feasible.	It is acknowledged that individual site constraints may impact development feasibility on a case-by-case basis. It is not the role of the PSP to **maximize development potential for every individual lot**. Instead, the Plan provides a broader **coordinated vision** that ensures orderly and proper planning, promotes high-quality urban outcomes, and balances development opportunities with public benefit. Site Specific Design Response is therefore required – a coordinated development approach (with adjoining landowners) to achieve development outcomes and delivering on community benefit and bonus is a possible solution. <u>Contributions</u> The impact of accumulated contributions on development feasibility is noted. It is further noted the Community Benefits Strategy is an opt-in for bonus heights with the base heights and plot ratios established taking into consideration overall capacity and growth of the Precinct, community feedback and feasibility studies.	

No.		Summary of Submission	Officer Response	Modification to PSP
			Current Metro Inner DAP applications provide good insight into current development costs. - City of Melville 7 Storey (with rooftop Terrace) 57 Multiple Dwellings at $38.5M - City of Nedlands 8 Storeys Mixed Use Development (45 Multiple Dwellings) $31.5M - City of Vincent 7 Storey Mixed Use (88 Co-Living) $22M - City of Stirling 17 Storey Mixed Use $190M (Ocean Front with Public Amenities) Large-scale developments that seek bonus height and plot ratio beyond the acceptable base controls must contribute proportionally to the community, as these developments: - Exceed the established expectations of the community regarding urban form and scale. - Generate higher demands on local infrastructure, services, and amenities. Under the current model - it may discourage significant projects on major	

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			sites that are key to achieving housing and density targets. To ensure contributions toward community benefits are fair, equitable, and proportionate to the scale of bonus development sought, a graduated contribution rate will apply based on the extent of additional development height above the base maximum. An $80M development with a base height of 6 storeys proposing 10 storeys (66% bonus) would attract a 1.5% % contribution up to 9 storeys and a 3% contribution on the additional storey. Effectively reducing the value of the contribution from $1.6M under the current methodology to $880,000 in the tiered methodology. Under the M4 example, a $150M development would be reduced to $5.4M community benefit under the tiered approach. Development Bonus' above 150% uplift will need to demonstrate how community needs are being met with the Local Government retaining its discretion to negotiate additional community benefit	

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			outcomes based on context, demand, and infrastructure needs. It is also considered appropriate to consider the methodology for 1% Art Contribution under LPP29. This should apply only to Base Height Development costs, any Bonus development (costs above the base) should not be required to calculate the art contribution as other benefits are being provided. Under the revised CBF method, the cumulative Contribution Value (Art + CBF) on a CE3 $80M development would be $1.4M (value = 1.7% of construction cost).	
2.6		encourage the use of lighted signage (above awnings) for shops on Albany Highway from about the corner of Duncan Street down to roughly Rushton street. Regardless of style and position, there just happens to be a lot of unused space above those awnings at the moment. Some of the shops already have lighted signsand it really adds something cool and interesting, especially at night. How iconic that little strip would look if every shop had light-up signage, all adding to a mix of colour and style and ambiance.	Noted. This could be addressed in Wayfinding, Place Activation, Economic Development Strategies (to be considered under the implementation requirements)	None

No.		Summary of Submission	Officer Response	Modification to PSP
		It would become an additional reason for people to visit, while also serving the dual-purpose of drawing attention to businesse		
2.7		Comprehensive plan, however: **Miller St / Albany highway roundabout** is only slightly raised in 1.1.6.3 (p83). There are multiple cases daily of irate drivers due to the blind corner travelling East on Miller. This encourages hoon behaviour leaving the roundabout, up Miller. Emergency services use Miller to rapidly access Orrong or Shepperton and traffic calming may not be possible.	Noted. The PSP Transport Strategy focuses on the Movement and Place function of Albany Highway itself as well as the important role of the Station Street access roads in encouraging greater mode shift choices for accessing the Highway and for future residents within the Precinct. Kent Street and Miller Street are District Distributor B roads with a primary movement function connecting to the broader network. It is under the Management of the Local Government however and various interventions are proposed for this road as identified in the Town's Integrated Transport Strategy. https://www.victoriapark.wa.gov.au/about/strategic-direction/strategic-programs/integrated-transport-strategy	None.

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2.8	Element Advisory on behalf of Oahu Management Pty Ltd (Hawaiian's Park Centre)	Whilst major redevelopment of the site is not an immediate priority, the subject site has considerable redevelopment opportunities to provide enhanced retail and commercial spaces, improvements to community facilities and the ability to accommodate substantial residential density opportunity for future redevelopment to occur on what is currently a high performing retail asset the subject site is suitably identified as a 'Major Site 7' (M7) in AHPSP **Sussex Street ROW** - Sussex Street is not a public street or road. It is noted the Draft AHPSP currently depicts this within the document rejects the requirement to cede the R.O.W. (Sussex) - Road apportioning should be equal between each lot fronting a R.O.W. Facilitating improved pedestrian connections can be achieved through nominating public connections through future redevelopment and utilising John Macmillan Park **Community Benefit Staging** - essential there is clarity, or a differentiation made within the Draft AHPSP between the Town being able to contemplate smaller or partial redevelopment proposals without triggering the suite of benefits the Town are requesting when subsequent applications are	Sussex Street ROW - Whilst Plan 1 does not show Sussex Street as a connecting road it does include a future PSP Micromobility route through M7. Plan 2.4 EVP Sub-Precinct identifies a future ROW under 3.5.4 which requires a minimum width of 6m ceded free "equally between each lot fronting a R.O.W. and where both properties fall within the AHPSP area". This would trigger the requirement for the Town to also cede land towards the ROW. Ensuring a legible and functional connection between M6 and M7 is integral to the sub-precinct design as per State Planning Policy 7.2 which encourages an Urban Structure that: • supports ease of movement to and through the precinct • provides straight streets and clear sightlines which are easier to navigate and safer for pedestrians. • identifies opportunities to create new or enhance existing connections to and through the precinct. Whilst the Sussex Street connection is	**Modify the Sussex Street ROW to 'Public Space' on Plan 2.4** **Update 3.5.7 Major Sites** to include Staging Requirements **Update 4.0 Community Benefits** to require staging plan to identify triggers for benefits in a staged development **Modify Table 12**: (c) to remove unrestricted vehicle access (d) to remove requirement for minimum 2,000sqm single POS to allow for a more distributed and integrated POS across the site.

No.		Summary of Submission	Officer Response	Modification to PSP
		lodged. a staging plan should be encouraged prior to any major redevelopment **POS/Plaza** - a 2,000sqm (approx.) POS has been noted within the centre of the subject site will be problematic to activate given its size POS to be distributed to create smaller allotments of POS that could be better integrated with future redevelopment proposals John Macmillan Park sits adjacent to the subject site, reducing the need and nexus for a large POS area within the Park Centre development M7 provisions propose the development to provide POS at the corner of Sussex Street and Albany Hwy. This is not a desirable location to provide POS, but rather this should be incorporated within the internal POS M7 requirements states development within fifteen metres of Albany Highway, Moorgate Street, and Basinghall Street must not exceed six-storeys and includes a maximum podium height of three storeys. These setbacks and building height requirements are considered restrictive within the context of a Major Site, potentially limiting both dwelling yields, commercial activity and the ability to design each frontage to suit its immediate context	currently not a public street, it is an existing connection that provides an important mobility link for the community. This should be enhanced through any future development of M7 - whether privately owned or ceded through future subdivision processes. Agreed it should not necessarily be required ceded free of cost however, it is expected the interface between M6 and M7 is appropriately addressed to ensure development on M7 provides an active frontage to the existing MacMillan reserve and connections via Sussex Street (north and south) are maintained and enhanced. A 'Laneway Major Space Typology' could be an option as opposed to ROW. Any public realm connection (privately owned or ceded ROW) in this location is considered a Community Benefit under the PSP. Requiring a pedestrian friendly connection in this location is vital to overall mobility and connectedness of the Albany Highway precinct achieve the desired outcome for public amenity and access.	

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		Cultural Floorspace - Further clarification is required regarding the provision of cultural floorspaces in the context of Park Centre as a Major Site. Part 2 Objective 14 of the Draft AHPSP states that Major Sites are required to contribute creative floorspace as a part of a Local Development Plan (LDP). Given creative floorspace is also listed as a community benefit contribution under Part 4, this provision raises questions regarding the total floorspace contribution required as a minimum for Major Sites and what amount the Town considers a community benefit queries relating to the future management of these creative spaces **Sustainability** – the certification process for Green Star is extremely expensive and onerous on developers. It does not allow for Gas to a development which is problematic for hospitality ladn uses. The right approach is to rely on the National Construction Codes to regulate sustainability as opposed to adding further sustainability measures. It should be clarified that the rating only applies to new development and should not retrospectively apply to existing assets **Building Height** - It is recommended a staging plan is proposed to accompany a Development Application for the subject site which will address	Community Benefit Staging – Agreed. Staging to be included under 3.5.7 for Major Sites POS/Plaza – Agreed – whilst the central plaza is identified as an important means to promote activation day and nightm, the size of the Plaza should be indicative only with other public realm benefits also needing to be considered holistically through staging within M7. Modify is indicative only as per Part 2	

No.		Summary of Submission	Officer Response	Modification to PSP
		bonus building height requirements. Recommend the base height is increased from eight-storeys to 14-storeys. Given that Park Centre is a designated District Centre and is also situated on a strategic urban corridor, a base height of 14 storeys should be as-of-right based on the locational factors of the site aligning with key planning principles and strategic planning documents. Requiring community benefit contributions for eight-storeys and above for a site in this location is onerous. M7 setbacks and building height requirements are considered restrictive within the context of a Major Site, potentially limiting both dwelling yields, commercial activity and the ability to design each frontage to suit its immediate context. i.e. Opportunity to provide two-storey semi-detached dwellings to maintain an appropriate interface for residential zoned properties along the western portion of the subject site. Park Centre will achieve a coherent transition in height **to surrounding residential areas** in alignment with the Town's strategic aspirations for the precinct. There is significant urban design and planning merit for the above considerations to be accepted in		

No.		Summary of Submission	Officer Response	Modification to PSP
		the progression of the PSP to its final format		
2.9		Parking Reducing car dependency by limiting parking and promoting public transportation and active transport is commendable, but there are situations where using private vehicles becomes essential rather than optional Inadequate on-site parking provisions will put pressure on street parking & verge parking and planning should ensure adequate private parking for residential and commercial developments. imposing additional time restrictions, and more enforcement measures are not good long-term strategies additional pick up/drop off zones should be created on the New Development with land intensification, residential parking permits & enforcement will become essential Victoria Park should not be seen as starved of parking because of a relaxation in private parking requirements Service and Loading Parking (Verges) Request 3.4.4 is reviewed with particular attention to the adequacy of service vehicle parking. Vic Quarter (for example) has insufficient on-site	Parking We understand the concerns raised around parking management in the Town. The Town has an established position on parking and the draft AHPSP reflects the Town's Integrated Transport Strategy and associated Parking Management Plan (adopted 2022). The Town will continue to monitor parking demand and occupancy and implement the parking strategies in response to the needs of a growing population. The removal of minimum parking requirements will help to deliver affordable housing options and a market-led approach to parking provision. Service and Loading Parking (Verges) Noted. Service and Loading requires a town-wide response and is dealt with under Local Planning Policy 23. It is noted that reference to LPP 24 is outdated as LPP24 was revoked following the adoption of LPP 23 (September 2024). LPP 23 applies to all development within the Town and includes requirements and design criteria	**Modify PSP to refer to LPP23 under Part Two** **Modify Plan 1** Precinct Structure Plan and Plan 2.3 Central to reflect CE1 typology (and subsequent figures within the Part 2 of the AHPSP) for Lots 23, 341,340, 339, 338, 337, 402, 403, 404 & 333 Merton Street

No.		Summary of Submission	Officer Response	Modification to PSP
		parking for service vehicles. The AHPSP needs high quality design for all public frontages, adequate parking, loading and service bay provisions & ensure pedestrian safety Setbacks – Central Sub-Precinct CE2 In response to Objective (xi.) Built Form '*Ensure new development responds sensitively to adjacent lower density residential character*' - Request consideration to incorporate a Front Setback into residential side streets to allow the opportunity for more tree canopy and a continuation of the existing residential streetscape (Merton Street - Keep the residential streetscape to both sides of the street) currently proposes Merton Street to have a Mid-Rise building topology with zero-setback frontage (commercial). To blend into a residential streetscape, the Garden-Mid Rise typology (with landscaped front setbacks and residential frontage) is suggested as a preferred type for Merton Street as a more sensitive & appropriate approach to surrounding streets. Amend Merton Street from CE2 to CE1 Requests the Town plant verge trees within the Albany Highway Precincts. Irrespective of the current use or future development on these sites, the Town can provide verge trees.	for loading bays. The AHPSP should be updated to reference the correct/revised Policy. Setbacks – Central Sub-Precinct CE2 Noted and Agreed that portion of Merton Street (from No.1 Merton Street to No.21 Merton Street) is better suited to Residential Frontage typology to reflect existing character of the street. Lots fronting Gresham and Miller are suited to CE2 to allow change of use over time and reflect commercial frontage typologies on adjacent sites. Noted with regards to verge trees – the Town is actively pursuing tree planting along Albany Highway as part of its Urban Forest Strategy.	

No.		Summary of Submission	Officer Response	Modification to PSP
		Draft Albany Highway Precinct Structure Plan is appreciated, and we look forward to the new developments on & around "The Strip"		
2.10		Striping across Lots is not clear	Noted. As per the Legend and under Part Specific Requirements, the hatched sites are identified as places of heritage significance. Lots on Tuam Street should not be included in the heritage sites and will be removed from the Plan	Remove Heritage identifier from Tuam Street Plan
2.11		Requests to reconsider the CE2 zoning along Merton Street and removal of 3 Merton Street Micro Park/Sump as development? CE2 zoning along Merton Street does not recognise the residential character of the street and is inconsistent with Urban Ecology and Built Form objectives of AHPSP. Zero setback will change the look and feel of Merton St and will remove tree canopy from Merton Street. CE2 Building heights will create overshadowing onto residential lots. Merton Street will be the secondary access for Albany Highway increasing traffic and parking congestion on this residential street. Merton Street sump has been created into a micro park adding significant (urban ecology) value.	Noted and Partially Agree. Noting 3 Merton Street is currently zoned Residential R40 and will retain its underlying Residential/Urban Zone. However it plays a significant biodiversity role and as such the AHPSP should reflect that. The CE1 3-5 storey's is appropriate given location within the Activity Centre and proximity to high-frequency transport routes (balancing the Centre function with residential context). The max 2 storey podium with upper level setbacks will reduce building bulk and massing. The bonus up to 5 storeys would need to ensure community benefit is	Modify Plan 1 Precinct Structure Plan and Plan 2.3 Central to reflect CE1 typology (and subsequent figures within the Part 2 of the AHPSP) for Lots 23, 341,340, 339, 338, 337, 402, 403, 404 & 333 Merton Street Modify Table 23 to show 3 Merton Street as Biodiversity enhancement.

No.		Summary of Submission	Officer Response	Modification to PSP
		The draft precinct plan lists the sump for development, which would be a massive loss of biodiversity and should be reconsidered. Negative Impact on property values on the eastern side of Merton Street due to the scale of the development on the opposite side.	provided. There is no justification for negative impacts on property values as a result of new development.	
2.12	Developed on behalf of Major Holdings	strongly objects to the proposed Clause 3.2.1, which mandates a minimum 5% of the gross subdivisible area to be ceded free of cost for Public Open Space (POS), or the equivalent in cash-in-lieu contributions, for all residential subdivisions (including built strata). - Impact on Housing Affordability - (R-Codes) mandate the provision of communal open spaces within mixed-use and residential developments, effectively resulting in double-dipping Request the Town reconsider the proposed 5% POS contribution requirement as the added financial pressure could hinder funding availability. Removal will allow the PSP to function in a manner that does not restrict future development based on a fixed contribution.	Noted and partially agree – the concern about the impact of the 5% POS contribution on affordability is valid, particularly in urban areas where development costs are already high. At the same time, the limited POS availability within the Albany Highway precinct (6.5% with New Open Space as identified in the AHPSP), underscores the importance of ensuring adequate public open space for both residents and workers. POS contributions are a mechanism to ensure adequate public amenities as density increases. R-Codes communal open space provisions serve a different function, primarily benefiting private residents of a development.	**Remove 3.2.1 POS Cash-in-lieu**

No.		Summary of Submission	Officer Response	Modification to PSP
			POS (contributions) provide a function beyond that of private communal open space, helping to enhance the overall well-being and livability for residents as well as supporting the growing local worker population and contributing to the success of the local economy. However, noting concerns and in further review of the Community Benefits Strategy where Publicly Accessible Private Open Space can be considered for density bonus, a more flexible approach to delivering enhanced or new POS through the development bonus clause is considered acceptable. As such, this Clause can be revoked provided the Community Benefits Strategy is consistently reviewed in line with this.	
2.13		Cargill Street and Mackie Street mis-labelled on Plan 1	Noted. Review of street names	**Update Plan 1 and Plan 2.1**
2.14		More residential is needed. The plan is not doing enough to deliver more residential in both East Victoria Park and St James. **Central Sub-Precinct Plan -** laneways parallel to	Noted. Laneways can be ceded for public access and improve connectivity as part of POS Contributions and Community Benefits	Update Community Benefit Strategy to reflect opportunities for all development (not just major sites) to provide

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		Albany Highway are not being pushed in **East Victoria Park Sub-Precinct Plan.** Laneways need to be enforced, particularly western side of Albany Highway from Basinghall Street southward. Is there full connection **East End Sub-Precinct plan** – should be higher than a baseline '3 storeys' – base should be 5 storeys with 6 or more bonus storeys. Goal should be to maximise good design (external, internal), and deliver much needed residential for a variety of household sizes. **Oats Street should be widened** to allow dedicated bus lanes, safe cycle path, wide pedestrian path with incentives for adjoining property owners**. Funding mechanism required for the sinking of Western Power high voltage lines. Existing laneway onto Oats is dangerous. Vehicle driver behaviour is dangerous. Widening would address this.** Disagrees that bus services are robust - Night services are worse, and lighting is awful and non-existent –particularly Oats Street St James. Mid-tier should be explored past Albany Highway from Oats Street Station – Hillview Terrace – Curtin University Agree new public open spaces need to be created	Strategy. CBS to reflect/include ceded or enhanced movement links not just within major sites but for all developments. Public Realm Strategy further identifies laneway opportunities. The ongoing **transport planning** for the area is focused on **targeted improvements** to the movement network, including ongoing **advocacy** with public transport authority on its Mid-Tier program**, parallel cycling paths**, and improved **pedestrian amenity** that fit within the existing road reserve. **Sinking power lines** requires substantial capital costs beyond the ability of the local government (as a State-owned asset).	connections along mid-block Sensitive Interface Treatments. Update Precinct-wide Implementation Actions to ensure Integrated Transport Strategy alignment

No.		Summary of Submission	Officer Response	Modification to PSP
2.15		The owner supports the intent of the Albany Highway Precinct Structure Plan to achieve additional density AHPSP proposes a 5 storey height limit, with potential for 3 additional storeys. Densities should be greater to ensure meaningful development can occur on a site which is within an Activity Centre and is on a high frequency bus route. The Town on has one chance to ensure quality density. Limiting development to just 5 storeys is considered underdevelopment in such an area. Affordable housing should not be the role of Local Government. Affordable housing occurs with Government incentives and with increased density (otherwise projects are not commercially viable). Spaces for art, culture etc, should not be in the plan. These areas should be provided by Local Government, not developers. Developers provide housing. This limits development potential	<u>Height and Density</u> Albany Highway is considered a mid-rise urban centre under the context of State Planning Policy 7.3 R-Codes Vol2, which typically comprise development up to approximately 6-storeys. The Built Form Strategy also considered up to 6 storeys as appropriate in this location. The BFS did however identify additional height potential for the northern side of Albany Highway to address topography and rear laneway access. Noting the final development controls for each sub-precinct were calibrated to provide sufficient incentive for developers to pursue bonus developments while ensuring that the community receives valued benefits. The CE2 base 5-storey height with an 8-storey bonus aligns with the R-Codes' definition of mid-rise development. It is important for growth to be carefully managed to balance development potential with sustainable growth, infrastructure capacity, preserving the area's character and ensuring positive	Modify Albany Highway (north-side) from EE2 to a new EE3 with the following Development Controls: 5 base height; 8 bonus height. Plot Ratio of 2.0 and bonus 2.5. **(As per CE2)**

No.		Summary of Submission	Officer Response	Modification to PSP
			community outcomes. Notwithstanding, the CE2 provisions could be implemented to those EE2 lots on the northern side of Albany Highway, consistent with the Built Form Strategy and to address broader concerns. <u>Affordable Housing</u> Local government plays a key role in facilitating opportunities for affordable housing through **planning frameworks** within **strategic urban developments**. The inclusion of affordable housing as a priority benefit provides an incentive for private delivery of affordable housing options, it is not mandatory. <u>Cultural Land Use</u> Similarly, the economic development strategy for the precinct identifies gaps is certain types of land uses, specifically affordable spaces for arts & culture, as they contribute to the **overall livability** and **attractiveness** of the precinct. Clause 3.1.2 is being amended to require mandatory provisions to development with commercial floorspace exceeding 1,000sqm to reduce the oversupply of these uses. Other developments still	

No.		Summary of Submission	Officer Response	Modification to PSP
			having the flexibility to opt-in through the Community Benefits Strategy to deliver these uses when seeking a development bonus.	
2.16		concerns are: Solar overshadowing for properties near to development on Hordern Street as it is zoned CE2 with a maximum height of eight storeys. The topography difference combined with a five to eight storey development will lead to significant overshadowing of adjacent residential properties. Significant height will overlook into current residential properties Hordern Street is zoned CE2 which has no building set back. This will add significant crowding to the street and greatly change Hordern Street No building set back will remove a large volume of the tree canopy on the eastern side of Hordern Street. Significant increase of traffic and parking demand on Hordern Street which already suffers from parking congestion why Hubert Street in East Victoria Park has a more conservative zoning (EV2) with a maximum height of five storeys and four metre street set backs	Noted. Partially Agree. Portion of CE2 along Hordern Street could be supported at CE1 – similar to VP2, reducing bulk and height on Hordern and maintaining streetscape consistency. The AHPSP acknowledges the importance of maintaining the local street character and residential amenity within the precinct. Secondary street interfaces play a significant role in providing a transition between the more active primary street corridors and residential areas. Nil setback for secondary street frontages up to 10m, then a 2m setback applies. This applies for buildings along secondary streets within the residential transition area to **enhance streetscape continuity and** maintain **residential character**, and create space for **green infrastructure** such as **street trees** and **landscaping**. Strengthening the AHPSP's **design**	**Modify 18 – 22 McMillan Street, 138-146 Hordern Street & 7 Temple Street to CE1** **Modify Table 8 'Frontage Type Design Requirements'** as per the Officer Recommendation to address Secondary Frontages and Improved Landscaping outcomes in setback areas

No.		Summary of Submission	Officer Response	Modification to PSP
			guidance for **secondary street interfaces** will ensure **better alignment** with **SPP 7.3 and Precinct Design Principles**. Such as - Require active frontages to all street frontages, - Require **design articulation** in secondary frontages, to reduce impact of bulk and blank walls. - require landscaping within setback areas and specify fencing types	
2.17		Reducing on-street parking by 20% (for example) to create space for native trees would make a significant improvement to the town's 12% canopy coverage, while only having a relatively minor impact on parking supply Noting the limited availability of space for large trees, consider other options to achieve the same outcome (i.e. increased urban canopy coverage by integrating plants with urban infrastructure – not just trees) Drainage sumps are underutilised and provide the opportunity to create ecologically valuable pocket-parks through the neighbourhood Increased population density reduces the	Noted. Comments are addressed in AHPSP and associated implementation Strategies.	

No.		Summary of Submission	Officer Response	Modification to PSP
		availability of private open space, making access to public open space (functioning like a de-facto backyard) even more important Concentrating development around high-amenity green space Visually reinforcing the fact that Albany Hwy is a pedestrian-friendly space to slow traffic and discourage the sue of Albany Hgihway as a thoroughfare Support the expansion of District Centre and Mixed-Use zones (including my home).		
2.18		not opposed to making a portion of Albany Hwy more people friendly, but any further removal of parking bays from the area in question will add further pressure to adjacent streets Drivers ignore No Stopping signage and obstructing driveways and use the verge area to turn around, often ignoring footpaths creating safety issues. Having fair and reasonable consideration of the effects of reduced parking on Albany Hwy on ourselves and our neighbours would improve our rightful enjoyment of our properties and unobstructed access	Noted. Understand parking and traffic impacts associated with living within an Activity Precinct. Public Realm Strategy identifies a corner conversion at Albany Highway and Canterbury intersection and removing on-street parking to create more space for urban canopy. This location to be identified for consideration as a High Priority for implementation via the Town's Public Places and Integrated Transport Strategies. Whilst Redevelopment of Major Sites is also likely to increase parking supply	Precinct-Wide Implementation Actions to be identified in Part 7.0 including Parking Facility Upgrades under the Parking Management Plan

No.		Summary of Submission	Officer Response	Modification to PSP
			however the Town's Parking Management Plan should reflect active steps towards Precinct Parking.	
2.19		Opposes all rezoning along Merton Street - proposed change would significantly reduce the value of my house and the amenity. Parking problems, traffic and unacceptable behaviour are bound to increase if such developments took place There are no other street that has significant commercial property opposite housing – Merton street is Residential on both sides.	Noted. AHPSP will be modified to ensure appropriate streetscape character is maintained	Modify Plan 1 Precinct Structure Plan and Plan 2.3 Central to reflect CE1 typology (and subsequent figures within the Part 2 of the AHPSP) for Lots 23, 341,340, 339, 338, 337, 402, 403, 404 & 333 Merton Street
2.20	Lateral Planning	Lot 550 (No.930) Albany Highway, East Victoria Park Request an increase to the building height and plot ratio primary controls for the East-End Sub-Precinct Sub-Area EE2 the topography of the site rises by 6.5 metres from Albany Highway to Terminus Lane (equivalent to 2 story's). The site forms part of a group of six vacant sites that have a combined area of over 6,000m2. With no established commercial / retail uses, the sites provide a unique opportunity to achieve a significant amount of housing The building height primary controls fail to account	Noted. This submission raises valid concerns regarding topographical constraints, access limitations, and their impact on development feasibility in EE2. Additional height and plot ratio may be considered given topography demonstrably limits development feasibility without compromising broader urban design and precinct objectives. In this regard, bonus incentives linked to site-responsive design outcomes is more appropriate. Whilst direct vehicle access is generally discouraged, site specific response that	**Modify Albany Highway (north-side) from EE2 to a new EE3** with the following Development Controls: 5 base height; 8 bonus height. Plot Ratio of 2.0 and bonus 2.5. (As per CE2) **Include Additional Bonus Incentives in the Community Benefits Strategy** for the

No.		Summary of Submission	Officer Response	Modification to PSP
		for the significant fall in the topography of the area from Sub-Area EE1 - Hubert Street to Sub-Area EE2 Albany Highway due to the topography, a 6 storey building on the subject site would actually be lower (not higher as intended) than a 5 storey building on the adjacent land in EE1 The base building height for EE2 should be increased to a base of 6 storeys; and bonus of 9 storeys The Town indicated that they would not support access from Albany Highway, with parking required to be accessed from Terminus Lane the effect is that car parking will inevitably be located above Albany Highway -due to the 6.5 metre fall from Terminus Lane to Albany Highway: to provide basement parking below Albany Highway with access from Terminus Lane would require an extensive ramp system, which will take up a significant amount of area within the site and result in highly inefficient floor plates. car parking will therefore need to be located above ground level, occupying floor area that would otherwise be available for residential accommodation – development penalty due to the access requirement and topographical constraints. With a base height of only three storeys the site is not capable of being developed for residential purposes In contrast, for EE1, the requirement to provide access from terminus Lane has no impact	consider shared access agreements or amalgamation of lots to facilitate a single, well-designed access point (from Albany Highway or the laneway), particularly if supported by a Local Development Plan (LDP) could be considered. The submitter notes the opportunity to create a 6,000sqm development site in this location which could accommodate shared access. It is recommended the Community Benefits Strategy is modified to include a performance-based incentive towards the amalgamation of fragmented lots or other Coordinated Development Outcomes (such as via a Local Development Plans) to be assessed on the merits of how the proposal improves development efficiency, access, and urban design outcomes (in-line with the Cygnet West report recommendation). This performance-based bonus incentive allows for flexibility in achieving integrated and high-quality development outcomes while responding to site-specific constraints such as fragmented ownership, access limitations, and	Amalgamation of Fragmented Lots where it demonstrably improves development outcomes by addressing: coordinated development outcome Access and servicing constraints (e.g., shared access, consolidated parking solutions). Topographical challenges (e.g., better site utilization, minimizing excessive excavation and retaining). Improved streetscape and built form outcomes Enhanced pedestrian and vehicle movement (e.g. reducing vehicle crossovers on Albany Highway and secondary streets).

No.		Summary of Submission	Officer Response	Modification to PSP
		whatsoever on the number of floors that can be developed with residential dwellings The allocation of the same plot ratio (2.0:1) to both EE1 and EE2 is inconsistent with the stated intent of these Sub-Areas, and undermines the residential development potential within EE2 With access required to be provided from Terminus Lane, car parking will inevitably be provided above ground level, meaning it is required to be included in the calculation of plot ratio floor area The draft Plan does not realistically offer any bonus plot ratio to encourage residential development in EE2 with respect to those sites which slope downward from Terminus Lane. For EE1the requirement to provide access from Terminus Lane has no impact whatsoever on plot ratio, because car parking situated at or below ground level is excluded from the calculation of plot ratio floor area Therefore request the base and bonus plot ratio controls for EE2 to increase from 1.5 base to 2.0 (base) and from 2.0 to 4.0 (bonus). Consideration should also be given to excluding the area of car parking bays from the calculation of plot ratio, to ensure there is no 'penalty' for those sites required to provide parking above ground due to	topographical challenges. It is further noted the AHPSP and broader Town Policy supports reduced on-site parking with no minimums applied. Notwithstanding the above, an increase in the **base height to 5-storeys with an 8-storey bonus aligns with the R-Codes' definition** of mid-rise development. Given the initial Built Form Strategy identifies the northern side of Albany Highway as supporting some additional height it is recommended this location be modified as per the CE2 requirements (Outside of District Centre zone – more aligned to Mid-Rise urban context). Excluding car parking from plot ratio is not supported as it is creates inconsistencies within the precinct and wider planning framework. Parking is required to be sleeved behind active frontages to Albany Highway. Shared Access from Albany Highway, where coordinated development occurs (via LDP or similar), might be considered an acceptable design solution without setting a precedent for access. Access will still need to be integrated into the Built Form.	

No.		Summary of Submission	Officer Response	Modification to PSP
		access requirements	To be assessed on a case-by-case design outcome and should exemplify community benefit outcomes. Not as-of-right.	
2.21	Planning Solutions c/- Major Holdings Group	Generally support the Maximum built form outcomes (height and setbacks) however request amendment to increase base heights and maximum podium heights to be made consistent. Recommend that podiums be controlled by street frontage, with the same heights permitted on both sides of the street. Request a consistent minimum podium height of 4 storeys fronting Albany Highway. Objects to aspects of the contributions framework and remove the notion of monetary contributions in lieu of community benefits Support the1% for public art but allow this to include public realm upgrades. Do not support the 3% CBF methodology and 5% POS cash-in-lieu in addition to the 1% art and the cumulative impact of this on development feasibility. Current requirements do not meet established SPP3.6 need & nexus principles for development contributions. In the absence of a Scheme Amendment it is not clear whether monetary contributions can be provided. This **cash-in-lieu concept replaces the historic approach to assessing community**	Noted and partially agree. Podium Heights reflect the Built-Form Principles outlined **to promote variety and interest through differing street-wall heights along the Highway** – This Key Principle has been supported through endorsement of the Built Form Strategy. Acceptable variations to podiums heights has also been introduced under 3.4.2 Applying a generic 8 storey height limit will not achieve the desired urban structure or urban character of the Precinct. The height framework has been strategically calibrated to respond to site context and sub-precinct community values. While development feasibility is acknowledged, height limits must also support the long-term vision for a diverse, and legible urban environment. Major Site requirements including eh 10% commercial requirement respond to the role these sites play in achieving the broader function of a Secondary Activity	Modify Requirements to LPP29 where 1% art applies to base/primary control construction costs only Modify CBF to introduce a tiered structure for CBF methodology (as per Officer Recommendation). **Remove 3.2.1 POS Cash-in-lieu**

No.		Summary of Submission	Officer Response	Modification to PSP
		benefits based on a performance assessment against clear planning outcomes. The concept of development incentives is supportable in-principle, provided that it is limited to strategic locations and not applied to all sites. Using the primary controls for plot ratio and building height to trigger public benefit contributions across every site within the precinct looks very much like an attempt to standardise contributions as a default development requirement entirely contrary to state planning policy which requires them to be limited to a focussed area or a specific site with the aim of achieving clear planning objectives. **Request** that existing service commercial and caryard uses become capable of approval as part of the wholescale redevelopment of the lots. Under the proposed zoning of lots along Albany Highway these uses would not be capable of approval and would remain non-conforming uses. With regards to M5, **Objects to**: the failure to include Lot 9 (8) Manchester Street within the boundaries of the major site designation to facilitate coordinated redevelopment. the requirement for 10% of the floor area to be non-residential floorspace - accept a requirement that the ground floor provide an active, non-residential	Centre, including the need for strategic office and diversified commercial offerings. Likewise, these sites provide an opportunity for increasing the urban ecology of the precinct. However the terminology for "net-gain" in site biodiversity could be more flexible whilst still achieving ecological goals for the precinct. Lot 9 has not been included in the Major Site given its separation by Hordern Street and its role in transitioning to the lower scale residential character area. This site can be developed in isolation or under an LDP with M5 if the proponent sees benefit in this. The Town understands the cumulative effect of contributions on development feasibility. However, it is important to ensure the needs and wellbeing of the Town's population are met. The contributions methodology has been reviewed holistically in response to a broad range of feedback, taking into consideration cumulative impacts on development.	

No.		Summary of Submission	Officer Response	Modification to PSP
		interface to Albany Highway The provision for net gain in site biodoiversity is entirely redundant and warrants deletion The requirement for the development to incorporate a quantum of community and cultural floorspace - it might warrant retention within the CBF but should not be required as a mandatory requirement Within Perth generally 3-7 storey buildings have become non-viable in most locations due to a combination of cost escalations, changes to the National Construction Code and rising costs associated with development approvals. It is necessary for most locations to have an as-of-right height limit of 8 storey's. **Categories of Public Benefits listed under Table 12**: Public Realm enhancements – should not include Development of or ceding POS and the upgrading of drainage sumps, or functional upgrades and enhancements to public streets to accommodate additional demand caused by development (can be a standard condition) Social & Community Infrastructure requires preparation of A Development Contribution Plan and should be excluded (strongly object to inclusion)	Under the revised methodology, it is anticipated that any value of cumulative contributions (POS, Art + CBF) would equate to approximately 1.8% - 2.8% of construction costs. The methodologies used seek to place a dollar value on in-kind community benefits being delivered. **It is not the Town's preference to manage monetary contributions.** (However and noting that a monetary contribution remains an option for a negotiated benefit outcomes that may not be able to be provided on-site – this will be assessed case-by-case at the time of development). • The CBF has been reviewed to introduce a tiered structure for its methodology. • 1% art shall apply to the base development costs only (given CBF applies to Bonus). The 5% Cash-In-lieu POS contribution ensures the current shortfall in POS across the Precinct is addressed. Noting the comments, it is the Town's intent to seek a maximum 5%. Agree that anything above the 5% would be considered as	

No.		Summary of Submission	Officer Response	Modification to PSP
		Affordable Housing – do not object however the introduction of a 10% minimum will limit future flexibility and discretion – delete 10% minimum Recommend that the 1% public art contribution be included only as an optional Public Benefit Items	Community Benefit. Further noting the provision of 5% Cash-in-Lieu of POS is subject to the agreement of the Western Australian Planning Commission under Section 153 of the Planning & Development Act 2005. The Community Benefits Framework will be updated to require Agreements should monetary contributions be accepted, these agreements will be required to identify **how** contributions expenditure is to be managed. Social and Community Infrastructure items remain a viable option where these can be delivered on-site. The application of community benefit incentives across the entire precinct is consistent with the intent of SPP 3.6 and the R-Codes, which support the targeted application of incentives where they deliver clear planning outcomes. The Albany Highway PSP has identified the whole precinct, including both residential and mixed-use zones, as an area of coordinated growth, strategically aligned with local and regional planning objectives. The community benefit framework does not standardise contributions as a default requirement. Instead, it establishes a	

No.		Summary of Submission	Officer Response	Modification to PSP
			voluntary, opt-in mechanism that enables additional development potential where corresponding benefits to the community are delivered. By embedding this approach across the precinct, the framework ensures fairness, consistency, and opportunity for a broad range of sites to participate in place-shaping outcomes, rather than limiting it to a small number of large sites. This precinct-based application reflects a carefully planned local area, as encouraged by both SPP 3.6 and the R-Codes. Noted with regards to Car Sales use – Schedule B allows the continued use. **Scheme Amendment to modify the Conditions** under 'Schedule B Specified Uses for zoned Land in Scheme Area: A20 motor vehicle, boat or caravan sales. *See LPS2 Amendment Documentation* Agree that Secondary Street Frontages should respond to prevailing and/or planned local character and underlying established frontage type. AHPSP to be updated. Podium Heights along Albany Highway are considered to appropriately respond to existing and desired future	

No.		Summary of Submission	Officer Response	Modification to PSP
			character.	
2.22		Request extension of Major Sites zoning within Causeway to include land up to Hordern and Cargill, perhaps even up to Mackie. This will provide much needed housing. Plan now to have high density living close to major transport and to protect the remaining residential character areas.	Noted. The AHPSP proposes increased density in the Causeway area with support for high density Mixed Use transitioning through to medium density in this location.	None.
2.23		Mapping incorrect for Heritage listed place on Leaonard Street. Incorrectly show 15 Leonard Street.	Noted. Map to be updated to show Heritage Place only at 11-13 Leonard Street Further Note the Municipal Heritage Inventory identifies the address as 11-15 Leonard Street. Not 11-13.	Update Heritage Listing on Plan 2.2
2.24		Please confirm that the John Macmillan park adjacent to Leisurelife will not have any buildings placed on it. It would be a tragedy if any of the little parkland and open space currently available in the suburb were lost to development, particularly with all these high rise apartments leading to an increase in population density.	Noted. Confirming the park itself will be retained for POS as per the Plan 1	None.
2.25		There needs to be more crosswalks for people to cross as it is unsafe, close to EVP centre (Sussex and Basinghall)	Noted. The Public Realm Strategy identifies a Shared Space in this location. The Town will proactively be looking to implement a staged approach to the public realm improvements.	None.

No.		Summary of Submission	Officer Response	Modification to PSP
2.26		Height inconsistencies between the Built Form Strategy and the table of development standards in the Draft AHPSP. It doesn't look like the built form modelling was based on the development standards that are now proposed. The modelling should be updated to show the actual development standards proposed, so that the impacts can be properly assessed and understood	The Built Form Strategy provides clear direction for the drafting of the AHPSP, outlining a range of built form typologies. The development controls in the draft AHPSP have been refined through its drafting process to respond better to the preferred outcome. The principles that underpin the Built Form Strategy however remain the same. It is noted there are some inconsistencies in the Central Transition Areas which have been addressed through other submissions.	Updates as per previous submissions.
2.27		While we support progress and growth, the proposed 5–10 storeys with nil setbacks will drastically impact our street's character by increasing crowding, removing tree canopy, exacerbating parking congestion, and increasing traffic volume on local and major roads Hubert Street in East Victoria Park has been given a more sensitive zoning (EV2) with a five-storey limit and four-meter setbacks. At the very least, we ask for the same consideration for our area (Rathay – Central Precinct) Victoria Park has made great strides in expanding the urban canopy, as part of the urban Forrest	Noted. Refer to comments above with regards to impacts. The Precinct boundary includes a limited number of lots away from Albany Highway itself with proposed development supporting the economic function of the Precinct.	None.

No.		Summary of Submission	Officer Response	Modification to PSP
		strategy, and it would be disappointing to see this progress undone by excessive high-rise development		
2.28		Horrified to see that the council believes it is acceptable to build as high as 5 stories with a bonus of a staggering 8 stories. I have never seen such high rise development ever look appealing or benefit a city or town in all my travels around the globe. However close we may be to the City of Perth, we are not the City of Perth, and so therefore do not need to have such high density living. Traffic along Temple street is already busy and difficult to navigate, and any more would be detrimental. Parking is also problematic, especially when trying to get shopping done. We have minimal green space, or beautiful gardens to uplift the soul, and now you want to increase the density to unpleasant proportions, which I fear will make Victoria Park a very unpleasant place to live.	Noted. Density of 5 to 8 storeys within an inner-city urban precinct will not only support the economic function of the Activity Centre but will also provide housing diversification within an area with good access to public transport. Benefit incentives are also in place to ensure any uplift in development is also providing some form of benefit to the community, such as more greening and public realm improvements.	None.
2.29		Overpass - Our main concern is the proposed demolition of the overpass bridge for the Great Eastern highway(GEH)/Canning highway to add four sites to the council's landholding. As locals, we drive on the overpass regularly.	Noted. M1 is an investigation Area – subject to ongoing consultation with State Government. The Plan will be updated to reflect this.	**Insert Investigation Area over M1.**

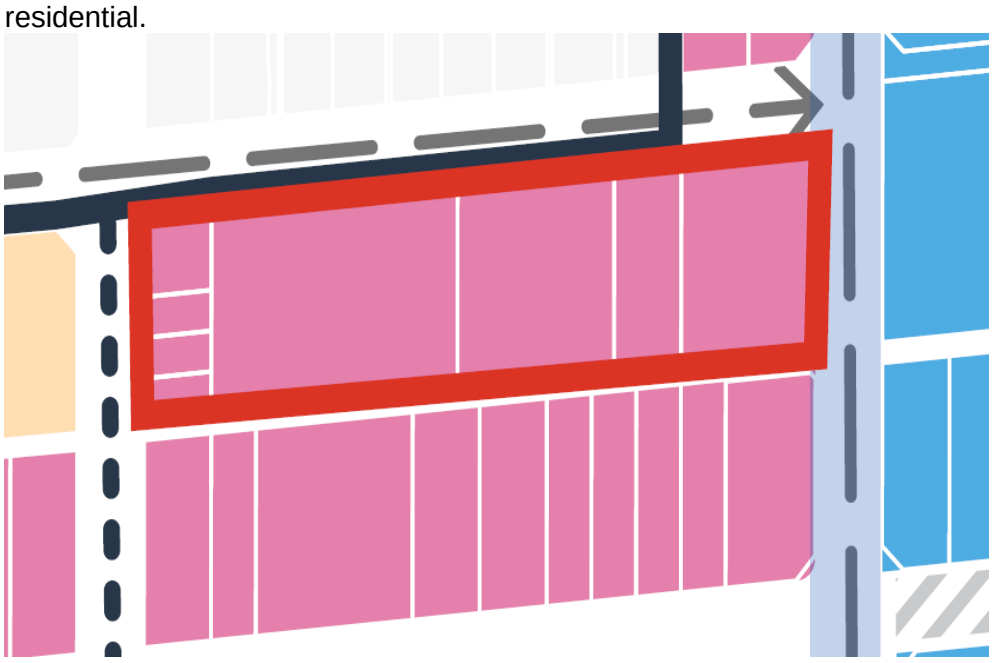
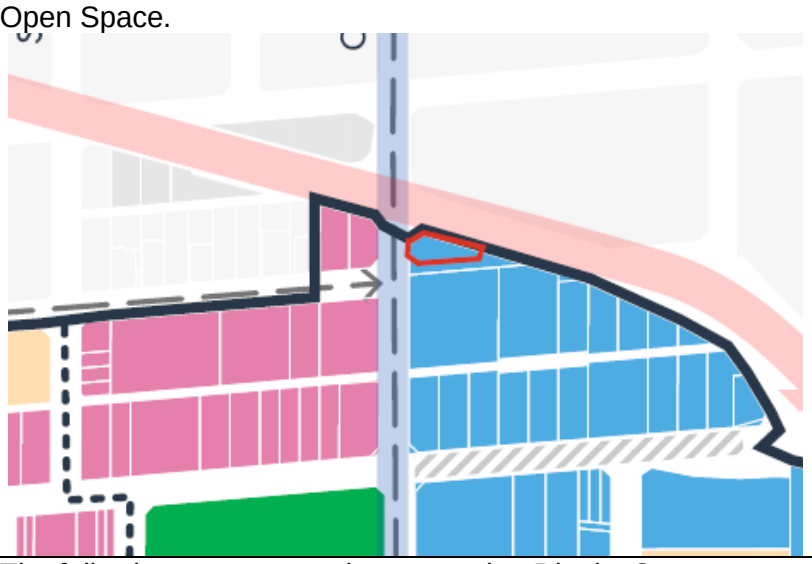
No.		Summary of Submission	Officer Response	Modification to PSP
		When we commute to the city by bike we take Albany highway and can typically pass under the bridge and get straight through to the causeway without stopping. This makes for a good cycling experience and indicates that the highway is already well connected to the river. This route is heavily trafficked by many other bicycles. Adding an intersection here would add delays and effort to their journeys Traffic - We live on Canterbury terrace which is a wide residential street. Evenings and weekends cars are parked bumper to bumper and have blocked our driveway on occasion! Some people speed down it too, certainly way above 50kph. We support traffic calming here, perhaps with a central islands or the suggested reduced corner radii to organically slow people down. We suspect with added residential development at Albany highway and slower speeds the pressures on Berwick St will rise. It is already difficult to turn right onto this street when driving at peak times. We also note the school catchment area for government school Millen PS includes many houses on the other side of Berwick street. We try to walk to school often and note there are few crossings for kids/people with extra needs to safely cross this fast		

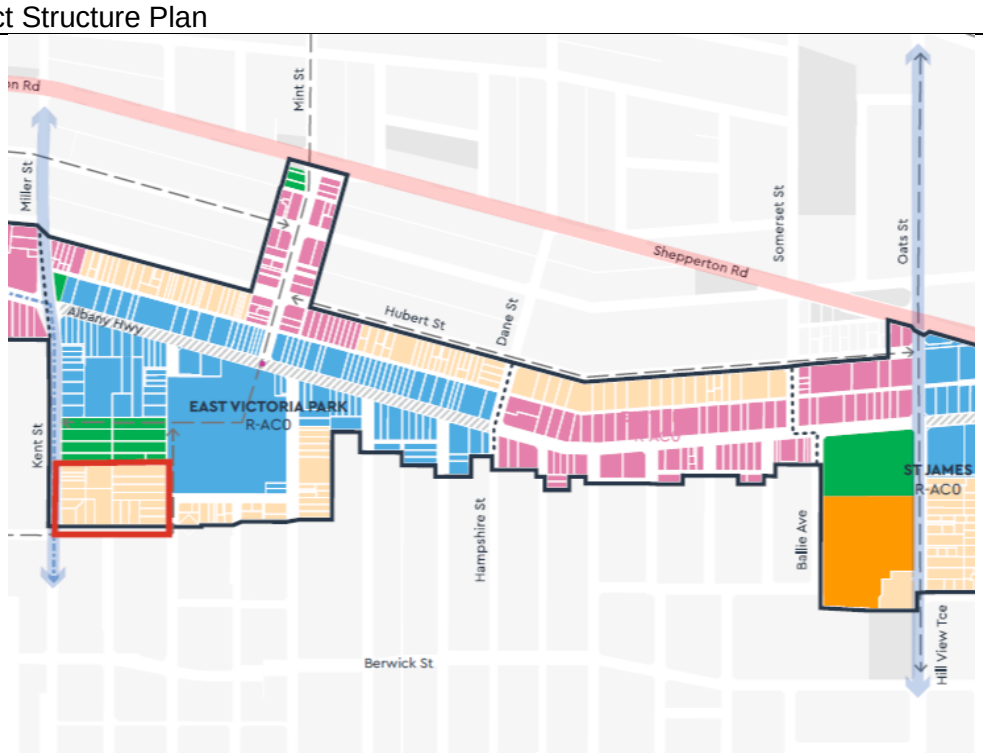
No.		Summary of Submission	Officer Response	Modification to PSP
		and busy street. Parking - It is not yet possible to live in Perth without a car, so we need parking for residents and if we want people to visit they need spots too. However, we welcome the encouragement to own fewer cars. Heritage - support proposals but something of John Hughes should (also) be protected and the Bowling Club - these are key places for Vic Park and hold many important local stories.		

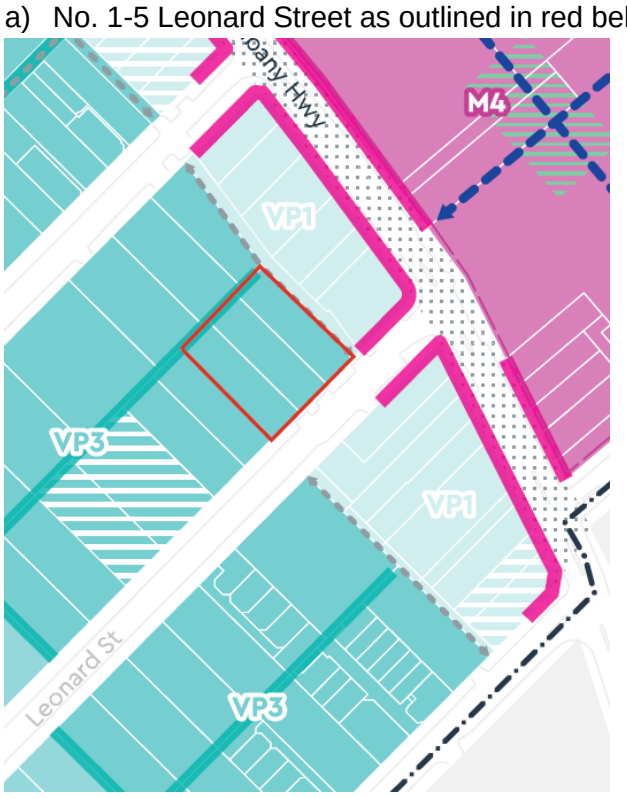
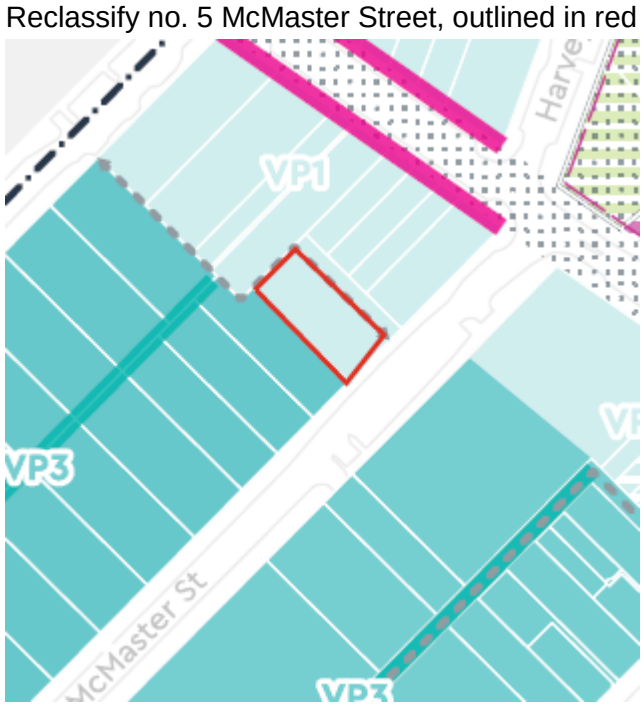
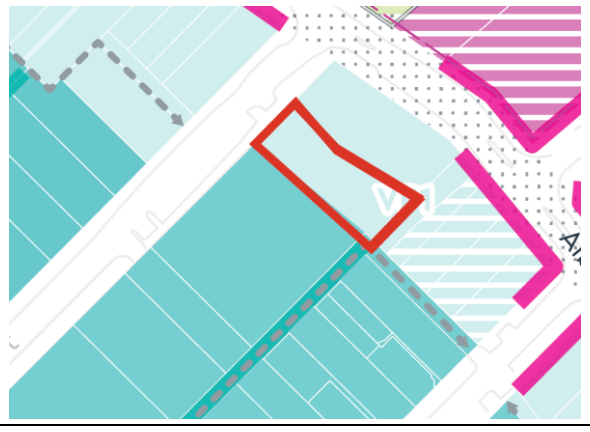
Albany Highway Precinct Structure Plan

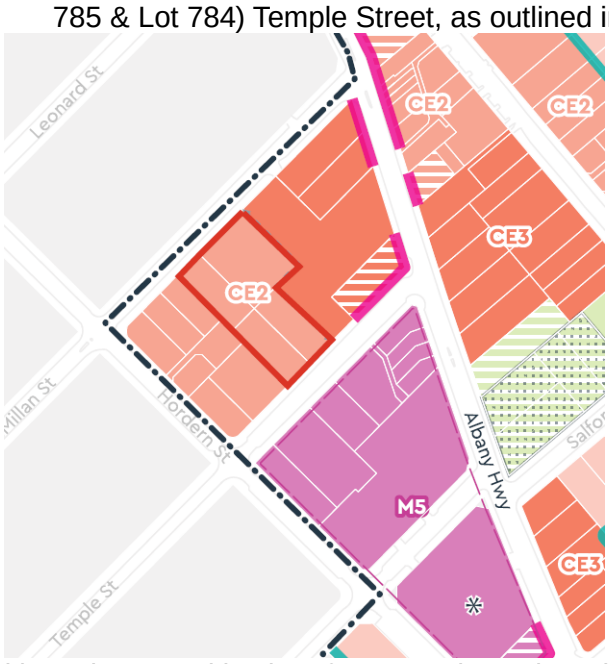
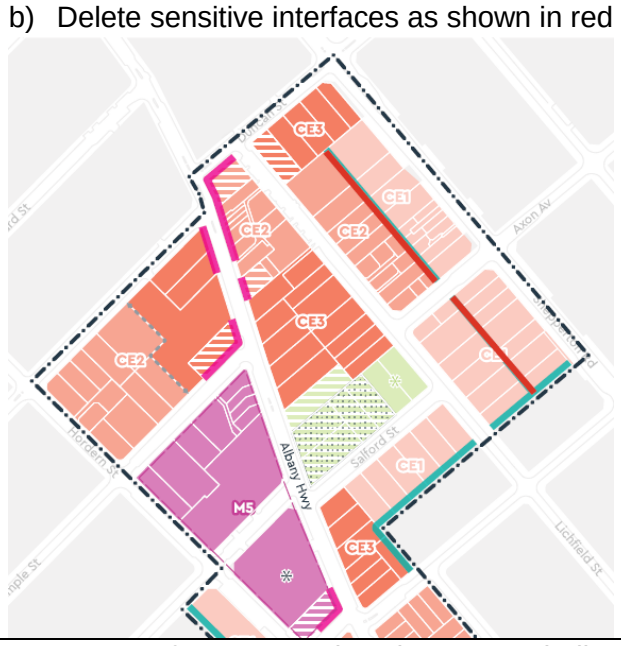
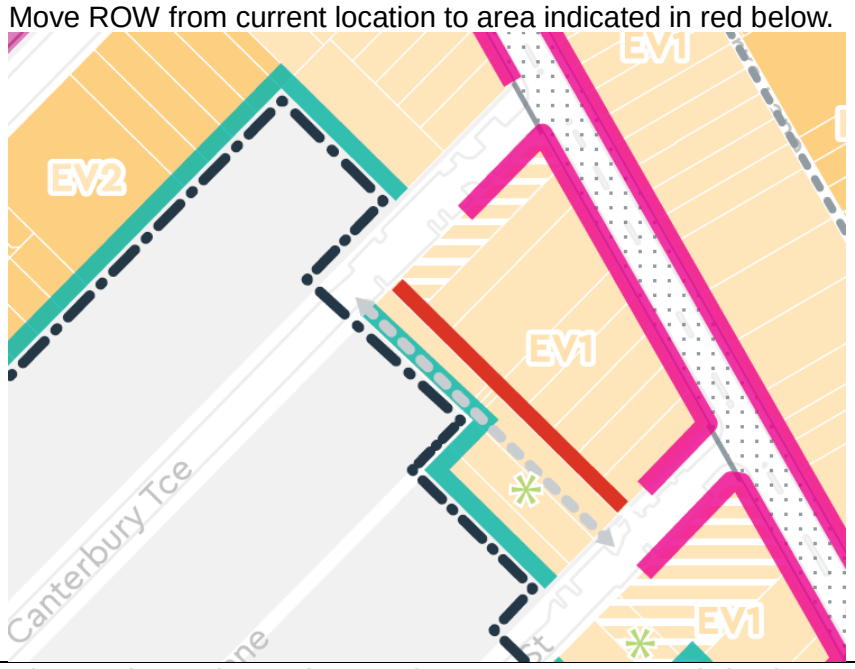
DPLH Schedule of Modifications

ATTACHMENT 5

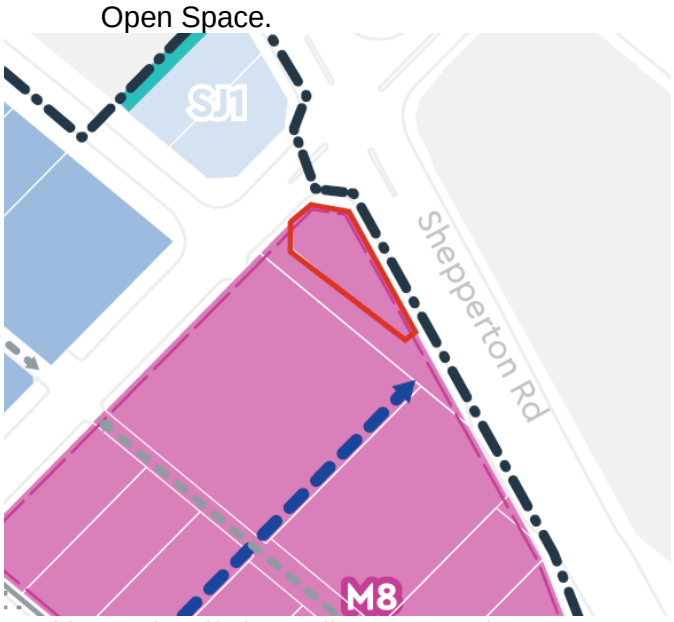
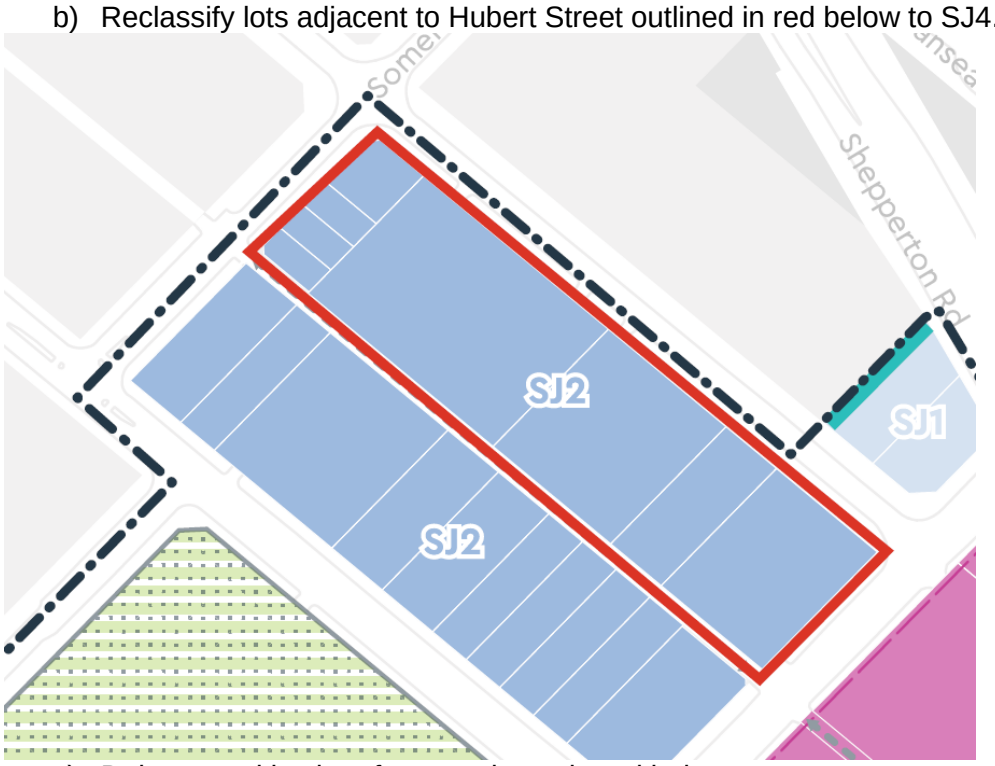
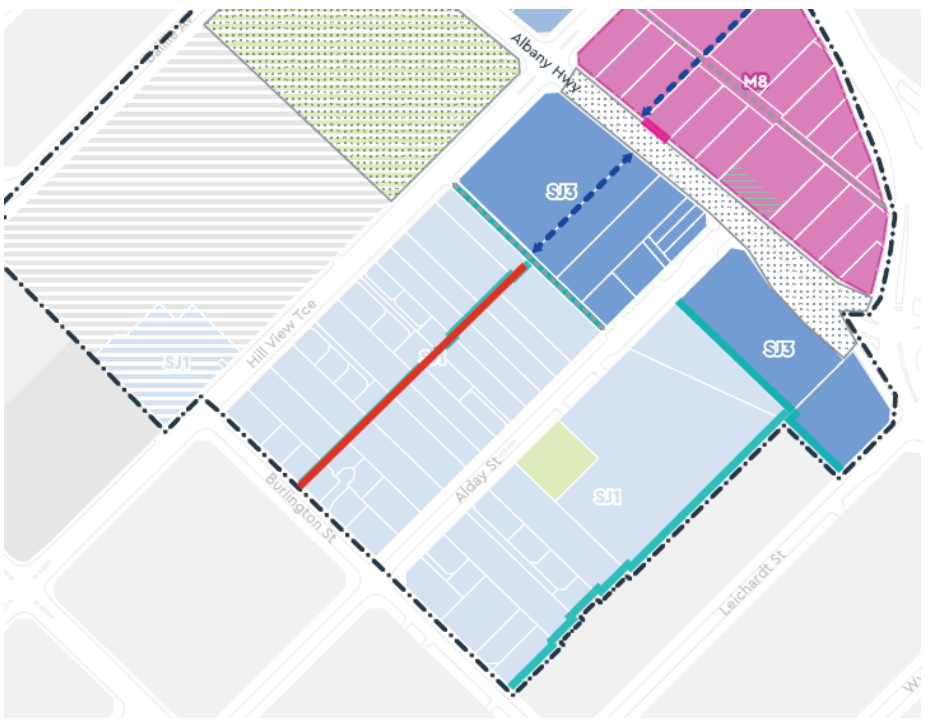
No.	Section	Recommended Modification	Comments
General			
1.	All	Modify the PSP in accordance with the modified version of the Town's Schedule of Modifications appended to this document.	See modified version of the Town's Schedule of Modifications for comments.
2.	All	Relabel M1 as 'M1 - Causeway Investigation Area' in Part 1 and 2.	This area is reserved for Primary Regional Roads, so the inclusion of urban development provisions is not consistent with the reserve (in response to MRWA submission).
3.	All	Replace any reference to the Town Planning Scheme No. 1 with Local Planning Scheme No. 2 (unless referring to the previous scheme intentionally).	To ensure consistency with the current planning framework.
4.	All	Replace any reference to 'State Planning Policy 7.3 – Residential Design Codes' with the 'Residential Design Codes'.	To ensure consistency with the current planning framework.
5.	All	Any necessary grammar, spelling or formatting corrections.	Accuracy.
6.	All	Ensure area and percentage of PSP area classified as public open space is correct and consistent throughout the PSP.	This is to ensure the proportion of the PSP area that constitutes POS is clear. Currently the Summary Table indicates 5.8ha (4.6 percent), Table 21 indicates 8.3ha (6.5 percent) and Table 22 indicates 7.9ha (6.2 percent) of the PSP area is open space.
7.	Summary Table	Update summary table in accordance with the revised built form controls shown in **Attachment 10 – DPLH Primary Controls**.	To ensure revised primary controls are accommodated in the gross residential calculation, estimated number of dwellings and estimated population.
Plan 1			
8.	Part 1 - Plan 1	Rezone No. 155-169 Hubert Street as outlined in red, from mixed use to residential. 	To ensure consistency with the Town's Report Modification no. 34, which reclassifies these lots from SJ2 (mixed use) to SJ1 (residential), to ensure consistency with the existing residential land use, and to provide for an appropriate built form transition to the residential area outside the PSP.
9.	Part 1 – Plan 1	Lot 125 Shepperton Road, as outlined in red below, to be rezoned Public Open Space. 	To align with the intended Public Open Space use of the lot, which is owned by the Town.
10.	Part 1 - Plan 1	The following areas are to be rezoned to District Centre: a. Lot 22 (No. 2) Cargill Street, Victoria Park. b. The area outlined in red below.	a. To ensure consistency with DPLH modification 18(b). b. To ensure consistency with Plan 2.4 and with Table 4, which categorize the area as M6 with a Centre zoning, and to correct the Town's Plan 1 Modification 13, which designates the lots as mixed use.

			
Part 1			
11.	Part 1	Replace reference to 'AHAHPSP' with 'AHPSP'	Accuracy.
12.	Part 1 – cl. 1.5 Interpretations	Modify definition of podium in cl. 1.5 Interpretations to state: *Podium means the lower storeys or base tier of a building, whether or not upper storeys or a tower element are constructed above it.*	To ensure buildings with no tower are still subject to podium restrictions.
13.	Part 1 – cl. 3.1.2	Remove cl. 3.1.2 Creative and Cultural Uses.	To remove mandatory community benefit requirements, as the provision of creative and cultural uses is a preferred community benefit listed on Table 12. Specific sub-precincts where this community benefit is to be prioritised can be included in the major site provisions and sub-precinct objectives.
14.	Part 1 – cl. 3.2.1 POS Cash-in-lieu	Remove cl. 3.2.1 Cash-in-lieu for POS	The provision is inconsistent with the WAPC's Position Statement: Public Open Space. The modification will allow POS contributions to be provided in accordance with the requirements of the relevant planning framework and is consistent with the recommendation of the Town's planning officers.
15.	Part 1 – cl. 3.2.2 Notifications on Title	Modify cl. 3.2.2 Notifications on Title in accordance with the red text below: All lots within the AHPSP area containing new development that will be exposed to high levels of noise (including transport noise and entertainment precinct noise) shall incorporate a notification on the relevant certificate(s) of title ~~pursuant to Section 70A of the Transfer of Land Act 1893~~ pertaining to road noise and/or entertainment noise. Notice of this notification is to be included on the diagram or plan of survey. The required wording of the notification is to be specified as a requirement of development or subdivision approval.	To ensure the provision also relates to noise notifications applied under all relevant legislation (such as through the *Planning and Development Act 2005*).
16.	Part 1 – All sub-precinct primary control tables	a) Modify sub-precinct primary controls in accordance with **Attachment 10 – DPLH Primary Controls.** b) Ensure superscript references the correct note. For example, note 2 on Table 1 is referenced by the CW2 podium height, despite note 2 not relating to podium heights. c) Amend Sub-precinct Development Requirements labels for each sub-precinct table as follows: a. Plot Ratio (maximum) b. Bonus Plot Ratio (maximum) c. Building Height (max. storeys) d. Bonus Building Height (max. storeys) e. Street Setback (minimum) f. Side Setback (minimum) g. Rear Setback (minimum)	a) As justified in **Attachment 10** and in SPC report. b) Accuracy and clarity. c) Clarity.
17.	Part 1 – All sub-precinct plans	Amend each sub-precinct plan's legend to ensure bonus building heights align with **Attachment 10 – DPLH Primary Controls.**	Consistency and clarity.
18.	Part 1 - Plan 2.1	a. Reclassify Lot 901 (No. 181) Albany Highway to CW3. b. Reclassify Lot 22 (No. 2) Cargill Street to CW1. c. Delete all sensitive interfaces in this sub-precinct.	a) The Town's endorsed modifications included the reclassification of Lot 901 Albany Highway, Victoria Park from CW4 (18 storey maximum) to CW2 (6 storey maximum), due to the property being adjacent to a primary school. The principle of mitigating the built form impact on the primary school is supported, however, the property should be classified CW3 (a commercial frontage type), as the frontage type for CW2 is residential, which does not reflect the current commercial use or PSP objective applicable to the property. b) The Town's endorsed modifications included the reclassification of Lot 2 Cargill Street to CW3 (8 storey maximum) from CW2 (6 storey maximum). This was because the lot contains a commercial frontage, which is not consistent with CW2's residential frontage requirement. Instead of this, the lot should be reclassified CW1 as this also has a non-residential frontage, CW1 is adjacent to Lot

			2 Cargill Street and CW1 has a six storey maximum, which is consistent with all the adjacent lots. c) CW2 has an existing rear setback requirement of 6m. The protection of the existing residential development can be facilitated through the R-Codes. There are no sensitive interfaces in this sub-precinct that are adjacent to the PSP boundary.
19.	Part 1 – Table 1	Delete all primary controls for M1 and replace with 'subject to investigation'.	The area is reserved for Primary Regional Roads, so the inclusion of an urban development provisions would not be consistent with the reserve (in response to MRWA submission).
20.	Part 1 - Plan 2.2	a) No. 1-5 Leonard Street as outlined in red below, to be reclassified VP1.  b) Delete all sensitive interfaces in this sub-precinct. c) Reclassify no. 5 McMaster Street, outlined in red below, to VP3.  d) Reclassify the area within Lot 46 (No. 6) McMaster Street, that is outlined in red below, to VP3. 	a) To reflect the existing commercial (VP1) use of these properties and to ensure consistency with the Town's Plan 1 modification no. 9, which rezones these properties to District Centre. b) VP2 and VP3 have existing rear setback requirements of 6m. The protection of the existing residential development can be facilitated through the R-Codes. There are no sensitive interfaces in this sub-precinct that are adjacent to the PSP boundary. c) To reflect the existing residential (VP3) use on the lot and to ensure consistency with Plan 1, which zones the lot as Residential. d) Lot 46 currently contains one and two storey commercial buildings along Albany Highway and a six storey residential apartment complex and a number of townhouses in the rest of the lot, This modifications is to reflect the existing distribution of residential (VP3) and commercial (VP1) uses with the lot, and to ensure consistency with the Town's Plan 1 Modification No. 10.

			
21.	Part 1 – Plan 2.3	a) Reclassify No.12-16 (Lot 11 & Lot 795) McMillan Street and No.3-5 (Lot 785 & Lot 784) Temple Street, as outlined in red below, from CE2 to CE1.  b) Delete sensitive interfaces as shown in red below. 	a) To ensure consistency with the existing residential (CE1) land use and to align with the zoning designated in Plan 1. b) CE1 has an existing rear setback requirement of 6m. The protection of the existing residential development can be facilitated through the R-Codes.
22.	Part 1 – Plan 2.4	Move ROW from current location to area indicated in red below. 	Current location of ROW does not reflect existing ROW location.
23.	Part 1 – Table 4	Change the zoning under EV3 from Centre to Centre/Mixed Use.	Significant areas of EV3 are designated for Mixed Use zoning in the associated scheme amendment and in Plan 1. Unlike the EV3 properties fronting Albany Highway, these properties are intended to be zoned Mixed Use to transition to the surrounding residential areas. The zoning change in Table 4 to EV3 will reflect this.
24.	Part 1 – Plan 2.5	Retain Heritage Place at No. 974 Albany Highway.	No. 974 Albany Highway is a listed local heritage site.

Albany Highway Precinct Structure Plan

25.	Part 1 – Plan 2.6	a) Lot 125 Shepperton Road, as outlined in red below, to be classified as Open Space.  b) Reclassify lots adjacent to Hubert Street outlined in red below to SJ4.  c) Delete sensitive interface as shown in red below. 	a) To align with the intended Public Open Space use of the lot, which is owned by the Town. b) The Town's modification no. 34 recommended these lots be reclassified as SJ1 due to the existing residential development on the lots and because SJ2 has a commercial frontage type. However, SJ1 has a maximum building height of six storeys, which is less than the eight storey maximum prescribed under the draft Built Form Strategy and one of the lots proposed for rezoning contains a nine storey residential structure. To correct the frontage type inconsistency, the lots should be modified to SJ4, which has an eight storey maximum and a residential frontage type. c) SJ1 has an existing rear setback requirement of 6m. The protection of the existing residential development can be facilitated through the R-Codes.
26.	Part 1 – Table 6	Modify Table 6: St James Sub-Precinct Primary Controls to introduce SJ4 with the primary controls shown in **Attachment 10 – DPLH Primary Controls**.	It is appropriate for the lots being reclassified in DPLH Modification 25 b) to have a maximum building height of eight storeys and need a residential frontage type for the reasons outlined above. No zone in this sub-precinct meets these criteria.
27.	Part 1 – cl. 3.4.6 Sustainability and Environmental Performance e.	a) Delete cl. 3.4.6 b. b) Modify cl. 3.4.6 d. to encourage the provision of green roofs, rooftop agriculture and/or photovoltaic arrays, but not to mandate them. c) Modify cl. 3.4.6 e. by adding the text in red below: *All Residential and Non-Residential development shall achieve the Element objectives and applicable provisions of the Residential Design Codes – Volume 2 with respect to tree canopy and deep soil areas.* *Where subdivision or development approval is granted and it does not meet any of the criteria listed below, the applicant/landowner shall install a minimum of one street tree within the adjacent verge. The applicant is required to maintain the street tree(s) for a two-year period to the satisfaction of the Town of Victoria Park. The number, planting, location, and species of verge tree(s) are to be to the specification of the Town.*	a) This can be addressed via the R-Codes Part 2, which require all dwellings to exceed minimum NatHERS requirements by 0.5 stars or to incorporate one significant energy efficiency initiative exceeding minimum practice. b) The existing provision has the potential to impact feasibility and does not appear to be implementable, as some sites may not have 50 percent of the area covered by roofs. c) The planting of mature street trees can be required through subdivision/development conditions as a standard requirement of development and, therefore, is not a community benefit but can be provided as a requirement.

		This requirement does not apply if the subdivision or development meets any of the criteria listed below: *a. there is an existing street tree in the adjacent road reserve;* *b. the subdivision does not create any additional lots;* *c. the development application is for a minor renovation, extension, alteration, improvement or repair of an existing structure; or* d. *the responsible authority advises no planting is required.*	
28.	Part 1 – cl. 3.5.1b Heritage Places	Modify 'b. Development Adjoining Heritage Places' and the associated paragraphs as shown in red below: ***b. Development Adjoining Heritage Places*** *Notwithstanding any provisions in this Part, development which directly abuts a place recorded on the State Register of Heritage Places or Local Heritage List as identified in* ***Part 3.3*** *must demonstrate how the proposed building height, podium height, massing and design appropriately responds to the heritage significance of the registered place. Developments that are likely to impact a State Registered Heritage Place require referral to the Heritage Council of Western Australia in accordance with the requirements of the Heritage Act 2018.* ~~*This must be demonstrated through the submission of a Heritage Impact Statement prepared in accordance with Heritage Council requirements.*~~	The PSP area contains 35 heritages places in the Local Heritage Survey. Seven of these places are also included in the State Heritage Register. To protect these locations, the PSP Part 1 cl. 3.5.1 includes development requirements that only apply to heritages places shown in the sub-precinct primary control plans. However, HCWA advised that this is inconsistent with the *Heritage Act 2018*, as cl. 3.5.1b only requires a development application adjoining a heritage listed property to demonstrate how the proposal would not impact the heritage significance of the adjoining place, while the *Heritage Act 2018* requires a referral to the Heritage Council where a development application is adjacent or 'in close proximity to a registered place'. Additionally, a Heritage Impact Statement is not required under the *Heritage Act 2018* and that the inclusion of both State and local heritage listed places under the same requirement may lead to confusion as they have different requirements. While the inconsistencies are noted, the PSP is not intended to replicate the requirements of the *Heritage Act 2018*, which would need to be complied with regardless. Requiring cl. 3.5.1b to impact any proposal in proximity to a heritage place would be difficult to implement. Therefore, the clause should be modified to remind applicants of their obligations under the *Heritage Act 2018* (irrespective of the requirements under the PSP) and that the requirement for a Heritage Impact Statement be removed from the PSP.
29.	Part 1 – cl. 3.5.4	a) Replace cl. 3.5.4 a. with: *If a development or subdivision contains an area of open space under Part 3.3 and is required to provide open space in accordance with Part 4 and/or due to a condition, the open space is to be provided in a location generally consistent with Part 3.3 unless otherwise agreed with the Town.* b) Modify cl. 3.5.4 b. as outlined in red: *If a development or subdivision contains a R.O.W under Part 3.3 and is required to provide a R.O.W in accordance with Part 4 and/or due to a condition, the R.O.W is to be provided in a location generally consistent with Part 3.3 unless otherwise agreed with the Town.* *Where any development or subdivision is adjacent to and is required to take access from a R.O.W and widening is required to achieve a minimum width of 6m, this area shall be ceded free of cost to the Town with any required widening apportioned as follows:* *a. Equally between each lot fronting a R.O.W. where both properties fall within the AHPSP area; or* *b. Fully within the lot fronting a R.O.W. that is contained within the AHPSP area where the adjacent lot is outside of the AHPSP area.* *If a development or subdivision is adjacent to a R.O.W and widening is required to allow it to achieve a minimum width of 6m, but the development or subdivision does not make use of the R.O.W, then development on the site is to be set back from the R.O.W by at least the widening requirement outlined above to allow future acquisition by the Town.* c) Replace cl. 3.5.4 c. with: *If a development or subdivision contains a pedestrian link under Part 3.3 and is required to provide a pedestrian link in accordance with Part 4 and/or due to a condition, the pedestrian link is to be provided in a location generally consistent with Part 3.3 unless otherwise agreed with the Town.* *Pedestrian Links must maintain clear and unobstructed public access with a* *minimum vertical clearance to any overhanging building element of 1.5 times width or 6 metres, whichever is less.* d) Remove cl. 3.5.4 d.	a) Public space to be provided through the community benefit framework or via subdivision conditions in accordance the current planning framework not as a mandatory community benefit. b) R.O.Ws are to be ceded through the community benefit framework or via conditions in accordance the current planning framework not as a mandatory community benefit or ceded without nexus. c) Pedestrian links to be provided through the community benefit framework or via conditions in accordance with the wider planning framework not as a mandatory community benefit. d) This clause is no longer necessary due to the modifications to cl. 3.5.4 a., b., and c.
30.	Part 1 – Table 11	a) Replace all major site requirements for M1 Causeway with: *Any future development would resolve and coordinate local and State public realm and movement network design needs.* b) Replace the requirements of M2 d., M4 d., M6 c., M7 d. and e, and M8 b. with: *If a development is proposed within this major site that is required to make a community benefit in accordance with Part 4(a), the preferred community benefit under Part 4(b) is the provision of open space(s)*	a) The area is reserved for Primary Regional Roads, so the inclusion of an urban development provisions would not be consistent with the reserve (in response to MRWA submission). b) Public space to be provided through the community benefit framework or via subdivision conditions in accordance the current planning framework not as a mandatory community benefit.

		unless otherwise agreed by the Town. This is to be provided in a location generally consistent with Part 3.3. c) Replace the requirements of M3 b., M4 c., M6 d., M7 g., and M8 c. with: *If a development is proposed within this major site that is required to make a community benefit in accordance with Part 4(a), the preferred community benefit under Part 4(b) is the provision of a pedestrian link(s) unless otherwise agreed by the Town. This is to be provided in a location generally consistent with Part 3.3.* d) For M2, M4, M5, M6, M7 and M8, remove the following requirement: Development must incorporate a quantum of community and cultural floorspace consistent with Part 4. Modified Table 11: Major Site Requirements accommodating Town and DPLH modifications below.	c) Pedestrian links to be provided through the community benefit framework or via conditions in accordance with the wider planning framework not as a mandatory community benefit. d) As noted in submission 2.21, mandating a community benefit is not appropriate if the developments are delivered at the base density.
31.	Part 1 – 4.0 Community Benefit b.	Modify 4.0 Community Benefit b., as outlined in red: *Where under Part 4(a) a community benefit contribution is required, the contribution is to be in the form of one or more of the benefit categories outlined in Table 12 ~~or an alternative contribution which is considered to benefit the broader community to the satisfaction of the Responsible Authority~~.* *A community benefit is to be provided in one of the following ways:* *i. a monetary contribution paid to the local government to be expended on items within the ACP area; or* *ii. on-site delivery or in kind works to the equivalent monetary contribution value; or* *iii. a combination of both.* *A community benefit must have a minimum monetary value calculated in accordance with the AHPSP Community Benefits Framework and Procedural Guide.* *Where a community benefit provides a direct financial benefit to the development, its monetary value as a community benefit shall be proportionately discounted or excluded from the above formula.* *Where an item listed in Table 12 is required due to a mechanism unrelated to Part 4 (such as POS required through the State planning framework, or a street tree required under Part 3.4.6), the provision of this item shall not contribute towards the community benefit contribution requirement.*	To prevent the provision of community benefit contributions that are not listed in Table 12 to ensure that community benefit contributions are legitimate community benefits; and to ensure items listed as community benefits that are provided as of right due to other requirements in the planning framework do not also contribute to community benefit contribution requirements.
32.	Part 1 – Table 12	Replace Table 12 with the DPLH Preferred Community Benefit List appended below.	This is to ensure all community benefits are legitimate community benefits that would not be provided as of right through subdivision and/or development conditions and provide a benefit to the community.
Other			
33.	Draft Community Benefit Framework	A list of specific and costed Social and Community Infrastructure projects within the AHPSP area should be developed and included in the Community Benefit Framework.	This is in relation to the Social and Community Infrastructure preferred community benefit. It will ensure that community infrastructure provided through the Community Benefit Framework is within the PSP area, and in the PSP documentation.
34.	Draft Community Benefit Framework	Modify the community benefit formulas listed under s. 4.0 of the Technical Note on Impact Testing and Feasibility Analysis and s. 2 of the CBF Procedural Guide as shown in red below: **Plot Ratio:** ((Total Plot Ratio – Permitted "Base" Plot Ratio) / Total Plot Ratio) x Total Construction Cost Contract Sum x 3% **Height:** ((Total Height in Storeys – Permitted "Base" Height in Storeys) / Total Height in Storeys) * Total Construction Cost Contract Sum x 3%	The community benefit calculation for the PSP is based on a contribution of three percent of the total construction costs proportional to the number of storeys proposed above the base height compared to the base height. This, in conjunction with potential public open space and public art contributions, has the potential to disincentivize development, as noted in submissions 2.5 and 2.21. Additionally, there is no relevant feasibility modelling to support the proposed PSP calculation as the feasibility calculations provided by Hatch do not reflect the calculation proposed in the PSP.
35.	Draft Community Benefit Framework	Modify the base and bonus maximum building heights and plot ratios in s. 1.2 of the Outline of Place and Community Needs and s. 5.1 of the Technical Note on Impact Testing and Feasibility Analysis in accordance with **Attachment 10 – Albany Highway Building Height and Plot Ratio**.	As per justification to modification no. 16.
36.	Draft Community Benefit Framework	Delete s. 5.4 and the last paragraph of s. 2.0 of the technical note draft Methodology Calculation of Community Benefit Liability.	The planting of street trees adjacent to the development site could be required through a subdivision or development condition and is not a community benefit. Additionally, the alternative community benefit process has no mechanism to ensure the contribution is proportional to the additional development entitlement, which is inconsistent with s. 2.8 of the R-Codes.
37.	Part 2 – Section 7.3	Update Plans in Section 7.3 of Part Two as per revised built form controls.	To ensure updated modelling reflects new primary control requirements.
38.	Part 2 – Objective 5	Modify Part 2 – Objective 5 to outline what 'subject to investigation' means in the context of M1.	This is intended to provide clarity for what 'subject to investigation' means for M1 in Part 1 of the PSP.

Albany Highway Precinct Structure Plan

Modified Town's Schedule of Modifications: see modification 1

Ref No.	PLAN 1 MODIFICATIONS	DPLH Comments
1	Modify Legend Civic and Cultural to "**Civic and Community**"	Supported to ensure consistency with the current planning framework.
2	Rename Future Mid-Tier Transport to "**High Frequency Public Transport Corridor**"	Supported as while both labels are accurate, High Frequency Public Transport Corridor is more significant and currently relevant.
3	Modify Hordern Street Underpass from **"Civic"** to "**Road"**	Supported to ensure consistency with the current planning framework.
4	Rename Mackie Street to Cargill Street - and Show Mackie Street on the sub-precinct boundary	Supported to ensure accuracy.
5	Identify the Follow Street Names on the Plan 1: - Hordern Street - Harper Street - King George Street - Rathay Street - Gresham Street - Basinghall Street - Balmoral Street - Burlington Street	Supported to ensure clarity.
6	Show the additional Major Connections under Movement Network: - Berwick as District Distributor - Burswood & Teddington as District Distributor Roads - Duncan & McMillan as Major Connections (District Distributor) - Gloucestar & Sussex (portion of as Local Distributor) - Basinghall as District Distributor - Swansea Street (Local Distributor portion) with Street Name	Supported to ensure clarity.
7	Extend Hordern Street PSP Movement as per Boorloo Bridge (Identify Boorloo Bridge Location)	Supported to ensure clarity.
8	Identify Major Site "M1" in the Causeway as "Investigation Area"	Supported, see modification No. 1 in DPLH Schedule of Modifications.
9	Modify 1-5 Leonard ST to District Centre & Lots 11, 12 & 13 King George Street to District Centre	Supported to reflect the existing commercial (VP1) use of these properties.
10	293-307 Albany Highway & 6 McMaster - Zoned part District Centre/Part Resi	Supported to reflect existing development distribution.
11	Modify 7 to 19 Lichfield Street, 4 - 14 Lichfield Street, and 1A & 1B Axon Ave to Residential Zone	Supported to reflect existing residential character.
12	Modify 1 to 21 Merton Street to Residential zone	Supported to reflect existing residential character.
14	Modify: - 4 to 6 Willis Street to Residential - 2 Camberwell to Residential - 1 Patricia St to Residential	Supported to align with current Scheme zoning, correct mixed-use zoning and in accordance with justification from the Town.
15	Modify 180 - 182 Hubert Sttreet to Residential	Supported to reflect existing residential character and to align with VP1.
16	Identify "**East End"** Sub-Precinct Location	Supported to ensure clarity.
17	Change MRS Reserve Parks and Recreation to alternate green for better clarity against LPS2 POS Reserve	Supported to ensure clarity.
Ref. No	**AHPSP PART ONE: IMPLEMENTATION**	**DPLH Comments**
2	**Table and Figures - Referencing Errors throughout documen**t as follows: Part One: - Modify 3.5.7 Major Site Requirements to reference Table 11 - Modify Table 9 to state "Residential Design Codes" Part Two: In Text References to the following Tables: 1.3 Governance Context - 1.3 Governance Context: - 1.3.1 Environment (page 69) to reference Table 13 as follows: "*the precinct summarised in Table* ~~14~~ **13"** **-** 1.3.2 Planning (page 70) to reference Table 14 as follows: **"***Those relevant to Albany Highway are summarised in Table* ~~**15**~~ **14"** **-** 1.3.2.2 Local Planning Framework (page 73) to reference Table 15 as follows "*Key documents applicable to the Highway are set out in Table* ~~16~~ **15"** **-** 1.3.2.3 Local Planning Policies (page 75) as follows: "Key LPPs that apply to Albany Highway are summarised in Table ~~17~~ **16** - 1.3.3 Community and Economic Development (page 78) to reference Table 17: "Those relevant to Albany Highway are summarised in Table ~~18~~ **17"** - 1.3.4 Existing Plans and Projectsable (page 79) to reference Table 18 as follows: "*Key projects relevant to the AHPSP are summarised in Table ~~19~~* **18"** 2.0 Opportunities and Constraints Analysis (page 80) Modify Reference to Table 19: "These are presented in Table ~~20~~ **19"** 6.0 Design Response - Objective 13 (Page 137) to Reference **Table 30**: Residential Yield Target by Sub-Precinct "A breakdown of these targets by sub-precinct is provided in Table ~~31~~ **30** - Objective 14 (page 139) to Reference Table 31: Ground Floor Creative Uses (pg 140): **"***Table ~~32~~* ***31*** *provides further explanatory context*" - Building Typologies (page 150) "The distribution of typologies is shown in ~~Table 33~~.Figure 31. - Street Interface (page 151) "the rationale for the application of these frontages is detailed in Table 34 and illustrated on Figure ~~31~~ **32**	Supported in addition to DPLH Modification 4.
5	MODIFY Element Objective (ii) under 3.4.6 'Sustainability and Environmental Performance' as follows: ii. Reduce energy consumption, water use and waste generation in new development through integrated design solutions	Supported to ensure clarity.
6	INSERT new Clause 3.4.7 Waste Management in Section 3.4 Development Requirements as per Attachment A 'Report on Submissions'	Supported to ensure Waste Management is appropriately addressed within the PSP.

	3.4.7 Waste Management for Commercial and Mixed Use **Element Objectives** i. Ensure commercial waste management is considered in early design phases of development ii. Minimise impacts of waste collection on public realm and residential amenity iii. Support flexible and adaptable waste solutions that accommodate changing needs iv. Reduce waste-related vehicle movements on Albany Highway **Development Requirements** **a. Design Integration** Waste storage facilities shall be: i. Located to utilise laneway or secondary street access where available. ii. Screened from public view and integrated into the building design. iii. Adequately separated from surrounding sensitive uses through appropriate buffer treatments. **b. Waste Management Plan** A Waste Management Plan shall be submitted for the following Commercial or Mixed Use development proposals: i. Greater than 1,000sqm GFA ii. Proposing food and beverage uses Waste Management Plans shall address the following: i. **Separated waste streams for residential and commercial uses** ii. **Consolidated collection points where practical** iii. Demonstrate adequate separation between waste facilities and sensitive uses, **ensuring commercial waste management does not impact residential amenity** iv. Demonstrate how waste collection vehicles can service/access the site v. Ensure noise/odour impacts are mitigated through design vi. Complement WSUD strategies through appropriate treatment of bin wash-down areas	
7	Modify "Open Space (ref 3.5.4)" to "Public Space (Ref 3.5.4)" on Plan 2.1, Plan 2.2, Plan 2.3, Plan 2.4, Plan 2.5 & Plan 2.6. and Modify the Marker to include a Green Dashed Border for ease of reference	Supported to ensure clarity.
8	Update Table 8. 'Frontage Type Design Requirement' under Clause 3.4.4 as per Attachment A 'Report on Submissions'	Supported to provide additional detail and clarity.
10	Update 3.5.7 'Major Sites' and Table 11 Additional Major Site Requirements as per the Officer Recommendation in Attachment A 'Report on Submissions'	Supported subject to modification No. 28 in DPLH Schedule of Modifications.

Centre Frontage Type

Component	Requirements
Primary Street	**d. Shopfront Design:** Incorporate design details including ~~stall-risers, sills, pilasters, and clerestory windows with a minimum 0.5m depth difference between building frontage and retail tenancy doorway~~ i. Base Treatments: Include a defined base element (such as stall-risers) up to between 0.45m-1.2m. ii. Vertical Articulation: Incorporate vertical elements (such as pilasters or similar architectural features) to define shopfront boundaries and create rhythm along the streetscape. These elements may be expressed through material changes, projections, or colour variations. iii. Window Treatment: Design windows with defined framing elements such as sills and consider incorporating upper glazing details (such as clerestory windows or transom panels) to reference traditional shopfront designs while meeting contemporary needs. iv. Entry Definition: Create a sense of arrival through recessed doorways or alternative design approaches that clearly identify entry points. A minimum 0.3m-0.5m depth difference between the primary building line and doorway is encouraged where site conditions permit, though alternative entry treatments that achieve similar place-making outcomes may be considered.
Secondary Street Frontage	f. ~~As per Centre Primary Frontage or Commercial Primary Frontage requirements~~ Should respond to the existing/future planned surrounding streetscape character and may incorporate Centre, Commercial or Residential Frontage Types on secondary streets.

Commercial Frontage Types

Component	Requirements
Secondary Street Frontages	g. ~~As per Commercial Primary Frontage or Residential Primary Frontage requirements~~ Should respond to the existing/planned surrounding streetscape character and may incorporate Commercial or Residential Frontage Types on secondary streets

Residential Frontage Types

Component	Requirements
Primary Street, Pedestrian Link or POS Frontage	d: **Setback area**: Enhance entrances by incorporating features such as low walls, steps, and porches and landscaping. (INSERT NEW) Landscaping should aim to include in-ground deep soil zones and tree planting that enhances the public realm and contributes to urban greening as per the Town's Urban Forest Strategy.

Insert new Element Objective:

iv. Development on Major Sites must contribute to improved urban ecology

Development Requirements
a. Major Site Requirements Any new development, extension to existing development or subdivision of land within a Major Site as designated in Part 3.3 and Figure 7 must satisfy the requirements of Table 12 through a Development Application and related approval conditions or the preparation of a Local Development Plan (LDP).

A Development Application or LDP for a Major Site must be accompanied by:

i. Schematic drawings and technical documentation necessary to demonstrate satisfaction of the requirements outlined in Table 12.
ii. A Frontage Hierarchy Plan that identifies and justifies the proposed Frontage Type for each street frontage in response to existing and desired future streetscape character
iii. Where bonus height or plot ratio is sought, a schedule of specific public benefits and associated staging plan outlining the timing for the delivery of nay such benefit shall be provided consistent with 4.0 Community Benefit.

The following development is exempt from these requirements:

i. Temporary uses or changes of use; and
ii. Internal modifications or minor extensions to existing development

Modify Table 11: Additional Major Site Development Requirements as follows:

Major Site	Requirements
M1 Causeway (Investigation Area)	
M2 Causeway	d. Development must provide ~~a public space on Albany Highway with~~ a minimum area of 1,500m² ~~a suitable area~~ of publicly accessible open space on Albany Highway in a location generally consistent with Part 3.3. e. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context.
M3 Victoria Park	d. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context.
M4 Victoria Park	d. Development must provide a mid-block publicly accessible open space with a minimum area of 1,500m², in a location generally consistent with Part 3.3. g. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context.
M5 Central	b. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context. d. Development must ~~consolidate deep soil zones in a central mid-block location to~~ aim to maximize the contiguous surface area of landscaped space. Development is to provide consolidated deep soil zones that maximise the usable surface area for tree planting and landscaping. Where a central mid-block location is not practical, an alternative arrangement may be considered, provided it delivers equivalent or improved canopy coverage and landscape function to the satisfaction of the Town.
M6 East Victoria Park	c. Development must provide two additional publicly accessible open spaces with a combined minimum area of 2,000m², in a location generally consistent with Part 3.3 e. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other

		ecological enhancements appropriate to site context	
	M7 East Victoria Park	c. Development must provide for unrestricted public ~~vehicular~~ access along Sussex St between Moorgate St and Albany Highway d. Development must provide a mid-block publicly accessible open space with a minimum area of 2,000m², in a location generally consistent with Part 3.3. e. Development must provide publicly accessible open space at Sussex St/Albany Highway corner in a location generally consistent with Part 3.3, ensuring retention of existing mature trees. i. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context	
	M8 St James	d. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context	
	3.3 SUB-PRECINCT CONTROLS		
13	Modify Heritage Marker from "grey hatch" to "pink triangle" on all Sub-Precinct Plans		Supported to ensure clarity.
14	Modify Open Space Marker to include Green Boundary on all Sub-Precinct Plans		Supported to ensure clarity.
	CAUSEWAY (PLAN 2.1)		
16	Clearly identify Primary School site (with yellow Public Purpose underlay)		Supported to ensure clarity.
18	Show M1 as an Investigation Area		Supported, see modification No. 1 in DPLH Schedule of Modifications.
	VICTORIA PARK (PLAN 2.2)		
19	Modify King George Car Park (1-5 Leonard ST) to VP1		Supported if the address is corrected to reference lots 11, 12 and 13 King George Street.
20	Remove Heritage Marker from 15 Leonard Street - Marker should be applied to 11-13 Leonard Street		Supported, heritage site at no. 15 Leonard Street has been redeveloped into residential.
	CENTRAL PLAN (2.3)		
21	Modify Merton Street Resi Zone (as updated on Plan1) to CE1		Supported to ensure consistency with the existing residential land use, to allow appropriate transition from residential to commercial uses and to respond to community petition (submission 2.1).
22	Modify CE2 to CE3 for Lots corner Ken Street & Alb. Hwy (657-671 Alb Hwy)		Supported to allow for appropriate scale transition from M6 to these lots.
23	CE3 notation Missing from corner of McMillan and Albany Highway (Mixed Use zone)		Supported to ensure clarity.
24	Remove Heritage Marker from 3 Tuam Street		Supported to ensure accuracy.
25	Modify CE2 to CE1 for lots bounded by McMillan, Temple and Hordern Streets (18 – 22 McMillan Street, 138-146 Hordern Street & 7 Temple Street to CE1)		Supported to ensure consistency with the existing residential land use, draft built form strategy and submission 2.3.
26	Modify CE1 to CE2 (Mixed Use) for Lot 9(8) Albany Highway, bound by Hordern Street, Rathay Street and Manchester St		Supported to ensure consistency with the existing commercial land use and to allow appropriate transition from major site to low density residential outside the PSP area.
27	Modification of 7 Lichfield Street to 19 Lichfield Street to CE1 on Plan 2.3 (as per Plan 1 Modification)		Supported to ensure consistency with the existing residential land use and to allow appropriate transition from residential to commercial uses.
28	Modification of 4 - 14 Lichfield Street & 1A & 1B Axon Ave to CE1 on Plan 2.3 (as per Plan 1 Modification)		Supported to ensure consistency with the existing residential land use and to allow appropriate transition from residential to commercial uses.
	EAST VICTORIA PARK (PLAN 2.4)		
29	Modify Sussex Street ROW to "Public Place"		Supported to ensure accuracy in response to submission 2.8.
	EAST END (PLAN 2.5)		
31	Remove Heritage Markers from Lots 932 & 934 Albany Highway & 974 Albany Highway		Supported subject to modification No. 24 in DPLH Schedule of Modifications.
32	Update Plan 2.5 and Table 5 to Include New EE3 for Lots on northern side of Albany Highway (bounded by Terminus Lane, Dane St and Somerset)		Supported in accordance with draft Built Form Strategy and submission 2.20, and in consideration of the topographical and access constraints raised in submission 2.20. Primary controls to be modified in accordance with revised values.

Albany Highway Precinct Structure Plan

Plan 2.5: East End Sub-Precinct Plan



		EE3
a.	**Zoning**	Mixed Use
b.	**R-Code**	R-AC0
c.	**Plot Ratio**	2.0
d.	**Bonus Plot Ratio**	2.5
e.	**Building Height** (storeys)	5
f.	**Bonus Building Height** (storeys)	8
g.	**Podium Height** (storeys)	3
h.	**Street Setback** a) to podium	Nil[2]
	b) above podium height	4.0m
i.	**Side Setback** a) to podium	Nil
	b) above podium height	4.0m
j.	**Rear Setback** a) to podium	Nil
	b) above podium height	6.0m
k.	**Frontage Type** (Ref. 3.4.4)	Commercial

33	Modification of 4 - 6 Willis Street, 1 Patricia Street and Camberwell Street (that do not front Albany Highway) from EE2 Commercial Frontage to EE1 Residential Frontage	Supported to align with current Scheme zoning, correct mixed-use zoning and in accordance with justification from the Town.
	AHPSP PART TWO: EXPLANATORY	**DPLH Comments**
38	Modify 1.3.2.3: - Remove reference to LPP24 (revoked) - Modify Policy Analysis with regards to LPP23 to state : This policy will continue to apply to development within the AHPSP, any inconsistency between this Policy and the AHPSP, the AHPSP shall prevail. ~~- Modify LPP29 Policy Analysis to state:~~ LPP 29 The policy promotes community identity and character through public art contributions in developments, enhancing the visual and cultural landscape. This policy will continue to apply ~~to the base primary controls only for development zoned Mixed Use or Centre development~~ within the AHPSP area.	Supported to ensure consistency with the current planning framework and in the implementation of LPP 29.
39	Modify Table 23 to show Merton Street Sump and 763 Albany Highway as having a Preferred Outcome of “Open Space, Biodiversity”	Supported in accordance with intent for these areas outlined in PSP.
41	Update Solar Modelling images in Section 7.0 for each sub-precinct	Supported to provide further details regarding solar modelling.
42	Update Figure 32. Street Interface Typologies to reflect modifications to the PSP and Plan1 and Plans 2.1 through 2.6	Supported to ensure consistency.
43	Insert "Precinct-Wide Implementation and Parallel Actions" under Part 2, Section 7.0 Future of the Precinct - as per Attachment A 'Report on Submissions TABLE 41. PRECINCT-WIDE IMPLEMENTATION	Supported to provide more detailed implementation strategy and clarity in how the PSP integrates with the wider local planning framework.

Objective	Action	ToVP Strategy
Active Transport Implementation Plan	Design and deliver a network of safe cycling routes parallel to Albany Highway Deliver a range of improvements to the Town’s bicycle network to ensure cycling is an attractive mode of transport for all ages and abilities. Implement key “Station Street” upgrades as per the AHPSP Transport Strategy to support enhanced pedestrian and cyclist movements Integrated Transport Strategy	Integrated Transport Strategy - Bike Network Sub-Program
	Implement strategic pedestrian crossings at key crossings	Integrated Transport Strategy Public Places Program
	Create secure end-of-trip facilities at key locations	AHPSP Community Benefits Integrated Transport Strategy

		Planning Program
	Develop a wayfinding strategy for pedestrians and cyclists	Integrated Transport Strategy Public Places Program
Public Realm Enhancement	Develop and implement Public Realm Design Guidelines	Planning Program Public Places Program
	Deliver Albany Highway Greening via the Urban Forest Strategy	Urban Forest Strategy
	Implement a Public Art Strategy specific to Albany Highway's character areas	Public Places Program
	Implement water sensitive urban design elements in all public realm projects	Public Places Program
Parking Management	Draw upon various methods including existing and emerging technologies for managing parking demand in the Town's activity centres. Maximise the benefits of changes in technology to achieve the vision of the Town's transport network	Integrated Transport Strategy Parking Management Strategy
	Incorporate parking into broader Wayfinding Strategy for the Town	Integrated Transport Strategy Public Places Program
	Invest in upgrades to consolidated public parking facilities at strategic locations near Albany Highway activity nodes: The following off-street car parks are managed by the Town: • Hubert Street Off-street Car Park (free) • King George Street Off-street Car Park (paid)	Integrated Transport Strategy Parking Management Strategy
	Explore innovative and appropriate kerbside management initiatives - Create dedicated zones for rideshare / pickup with strict time limits	Integrated Transport Strategy Parking Management Strategy Street Operations
	Develop parking/transport partnerships with major businesses to share private parking facilities during off-peak hours	Planning Program Integrated Transport Strategy Economic Development Strategy
Safety and Security Enhancement	Install improved, energy-efficient street lighting focused on pedestrian areas and laneways	AHPSP Community Benefit Public Places Program Economic Development Strategy Street Operations
	Develop a night-time economy safety strategy with local businesses	Economic Development Strategy
	Activate key public spaces to increase passive surveillance	Economic Development Strategy
Waste Management	Develop precinct-specific waste management guidelines for new developments	Planning Program Operations
	Identify and implement consolidated waste collection points for fine-grain retail areas	Planning Program Public Places Program Street Operations
	Include Community Benefits for innovative waste systems within major activity nodes	AHPSP Community Benefits Planning Program
	Establish designated service/collection times to minimize pedestrian disruption	Street Operations Technical Services Parking Rangers

DPLH Table 11: Additional Major Site Requirements – see modification 29 and Town's modification 10

Major Site	Requirements
M1 Causeway (Investigation Area)	a. Any future development would resolve and coordinate local and State public realm and movement network design needs.
M2 Causeway	a. Notwithstanding Part 3.3, development within 15m of Albany Highway lot boundary must not exceed 6 storeys. b. Development must achieve at least 20% non-residential plot ratio. c. Maximum of two building elements exceeding 12 storeys per street block. d. If a development is proposed within this major site that is required to make a community benefit in accordance with Part 4(a), the preferred community benefit under Part 4(b) is the provision of open space(s) unless otherwise agreed by the Town. This is to be provided in a location generally consistent with Part 3.3. e. Development must provide for a net gain in site biodiversity. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to the site context.
M3 Victoria Park	a. Development must ensure an active interface to Memorial Gardens. b. If a development is proposed within this major site that is required to make a community benefit in accordance with Part 4(a), the preferred community benefit under Part 4(b) is the provision of a pedestrian link(s) unless otherwise agreed by the Town. This is to be provided in a location generally consistent with Part 3.3. c. Development must preserve significant trees in Memorial Gardens and on adjacent private land. d. Development must provide for a net gain in site biodiversity. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to the site context e. Notwithstanding Part 3.3, development fronting Shepperton Road must demonstrate a contextually suitable design interface with colonnades or setbacks of at least 3m.
M4 Victoria Park	a. Maximum of four building elements exceeding 12 storeys consistent with Part 3.3. b. Notwithstanding Part 3.3, development within 15m of Albany Highway lot boundary must not exceed 6 storeys. c. If a development is proposed within this major site that is required to make a community benefit in accordance with Part 4(a), the preferred community benefit under Part 4(b) is the provision of a pedestrian link(s) unless otherwise agreed by the Town. This is to be provided in a location generally consistent with Part 3.3. d. If a development is proposed within this major site that is required to make a community benefit in accordance with Part 4(a), the preferred community benefit under Part 4(b) is the provision of open space(s) unless otherwise agreed by the Town. This is to be provided in a location generally consistent with Part 3.3. e. Development must provide an improved pedestrian connection with the existing Shepparton Rd underpass to enhance safety and school access. f. Development must achieve at least 20% non-residential plot ratio. g. Development must provide for a net gain in site biodiversity. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to the site context.
M5 Central	a. Development must achieve at least 10% non-residential plot ratio. b. Development must provide for a net gain in site biodiversity. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to the site context. c. Development must aim to maximize the contiguous surface area of landscaped space. Development is to provide consolidated deep soil zones that maximise the usable surface area for tree planting and landscaping. Where a central mid-block location is not practical, an alternative arrangement may be considered, provided it delivers equivalent or improved canopy coverage and landscape function to the satisfaction of the Town.
M6 East Victoria Park	a. Development must achieve at least 20% non-residential plot ratio. b. Development must preserve significant trees in John Macmillan Park and on adjacent private land where possible. c. If a development is proposed within this major site that is required to make a community benefit in accordance with Part 4(a), the preferred community benefit under Part 4(b) is the provision of open space(s) unless otherwise agreed by the Town. This is to be provided in a location generally consistent with Part 3.3. d. If a development is proposed within this major site that is required to make a community benefit in accordance with Part 4(a), the preferred community benefit under Part 4(b) is the provision of a pedestrian link(s) unless otherwise agreed by the Town. This is to be provided in a location generally consistent with Part 3.3. e. Development must provide for a net gain in site biodiversity. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to the site context.
M7 East Victoria Park	a. Maximum of six building elements exceeding 12 storeys consistent with Part 3.3. b. Notwithstanding Part 3.3, development within 15m of Albany Highway, Moorgate St, and Basinghall St lot boundary must not exceed 6 storeys. c. Development must provide for unrestricted public access along Sussex St between Moorgate St and Albany Highway. d. If a development is proposed within this major site that is required to make a community benefit in accordance with Part 4(a), the preferred community benefit under Part 4(b) is the provision of open space(s) unless otherwise agreed by the Town. This is to be provided in a location generally consistent with Part 3.3. e. Development must achieve at least 20% non-residential plot ratio. f. If a development is proposed within this major site that is required to make a community benefit in accordance with Part 4(a), the preferred community benefit under Part 4(b) is the provision of a pedestrian link(s) unless otherwise agreed by the Town. This is to be provided in a location generally consistent with Part 3.3. g. Development must maintain public access to on-site parking during trading hours, with management requirements at the discretion of the operator. h. Development must provide for a net gain in site biodiversity. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to the site context.
M8 St James	a. Notwithstanding Part 3.3, development within 15m of Albany Highway must not exceed 6 storeys. b. If a development is proposed within this major site that is required to make a community benefit in accordance with Part 4(a), the preferred community benefit under Part 4(b) is the provision of open space(s) unless otherwise agreed by the Town. This is to be provided in a location generally consistent with Part 3.3. c. If a development is proposed within this major site that is required to make a community benefit in accordance with Part 4(a), the preferred community benefit under Part 4(b) is the provision of a pedestrian link(s) unless otherwise agreed by the Town. This is to be provided in a location generally consistent with Part 3.3. d. Development must provide for a net gain in site biodiversity. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to the site context.

DPLH Preferred Community Benefit List – see modification 31

Category	Description
Affordable Housing	Applicant has entered into a contract to deliver a minimum 10% affordable dwellings in partnership with an approved housing provider or not-for-profit organisation recognised by the Department of Communities.
Public Spaces	Delivery of new POS, publicly accessible and suitable private open space, right-of-way, or pedestrian link within the AHPSP area where specified in part 3.3 or in addition to part 3.3 where agreed with the Town. The upgrade of existing public streetscapes, drainage sumps and/or public open spaces in the AHPSP area for: a. Enhancement of public open space or drainage sump in accordance with one or more of the major space typologies identified in the Albany Highway Public Realm Strategy. b. The comprehensive enhancement of a streetscape in accordance with one or more streetscape typologies identified in the Albany Highway Public Realm Strategy. c. A monetary contribution for the above.
Creative and Cultural Floorspace	Provision of creative and cultural floorspace within a development, ceded free of cost to the Town including but not limited to the following: a. Live performance spaces such as event halls theatrettes, rehearsal space, meeting rooms. b. Light industrial creative production space, such as ceramics, glass, woodwork and metalwork. c. Artist studios. d. Photography, film and music production facilities. e. Affordable workspace equipped for use by creative sector businesses managed by a charity or other suitable provider or ceded free of cost to the Town.
Social and Community Infrastructure	Delivery of a community infrastructure item identified in the AHPSP Community Benefit Framework or a monetary contribution towards the same.
Public Amenities (toilets, secure micro-mobility/bike parking)	Provision of publicly accessible amenities that support active transport and improve user comfort and convenience in the precinct, including but not limited to: a. Secure bicycle and micro-mobility parking infrastructure b. End-of-trip facilities including toilets, change rooms or lockers These amenities are to be located in accessible, safe, and well-lit areas, and maintained for public use for the life of the development.

ALBANY HIGHWAY PRECINCT STRUCTURE PLAN:

REPORT ON SUBMISSIONS

The outcomes of the consultation process will inform refinements to the Albany Highway Precinct Structure Plan (AHPSP), ensuring its alignment with stakeholder and community feedback while maintaining the strategic objectives outlined in the Town's Local Planning Strategy (2022), Strategic Community Plan (2022-2032) and the broad vision and objectives for the AHPSP established throughout the previous Stages (1 and 2) of the precinct planning project.

The purpose of this report is to:

- Record the public advertising activities carried out for the draft Albany Highway Precinct Structure Plan;
- Provide a summary of government and community submissions received; and
- Respond to submissions and provide recommendations for final modifications to the Albany Highway Precinct Structure Plan for Council's consideration, prior to its lodgement with the WA Planning Commission for final approval.

Advertising Dates and Activities:

The draft Albany Highway Precinct Structure Plan was initially publicly advertised from 7th November 2024 to 16th January 2025, which is 70 Days (including 3 Public Holidays). The advertising activities included:

- Public Notice given over 3 consecutive fortnights commencing 7th November 2024 & One Full Page Display Advert on 26 December 2024 in the Perth Now Southern Gazette
- Town of Victoria Park Your Thoughts community engagement web page (https://yourthoughts.victoriapark.wa.gov.au/shape-albany-highway) with Stage 1, Stage 2 and Stage 3 documents, FAQs, Optional On-line Surveys.
- Posters and copies of the draft AHPSP available for viewing at the Town of Victoria Park Administration Centre and Library
- Direct Emails (over 500) to registered stakeholders identified through Stages 1 and 2 of the project
- Direct Emails to relevant State Government agencies
- Information Stall at the Town's Summer Street Party held 16 November 2024
- Multiple e-news advertisements through the Town's e-vibe newsletter (Dec & Jan)
- Multiple social media posts on Facebook and LinkedIn.

An Additional direct mail out campaign commenced on the 17th February, extending the advertising period to 13th March 2025.

The Total Advertising Period was 94 Days.

SHAPE ALBANY HIGHWAY: STAGE 3 CONSULTATION

There were **7,295 Total Visits** to the Your Thoughts page during the advertising period:

- 5,041 Aware Participants (Individual Activity)
- 3,440 Informed Visitors (downloaded a document)
- 168 Engaged Visitors (completed the online survey or made a written submission)

Number and Distribution of Submissions.

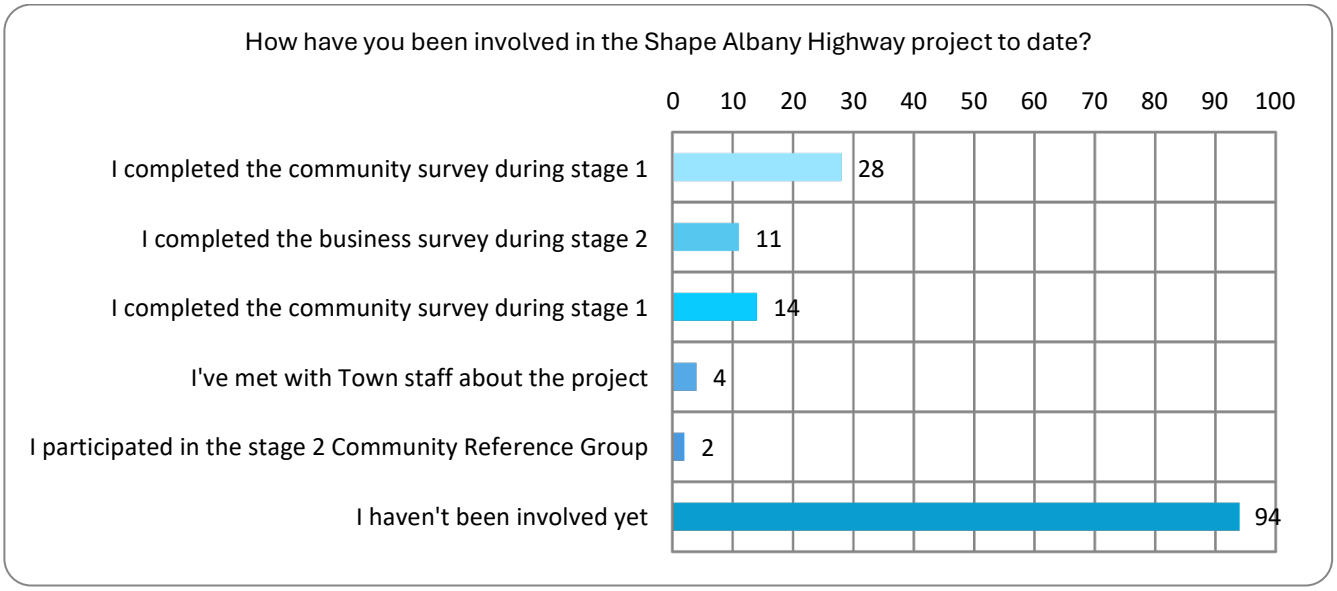
A total of 168 submissions were received during the advertising period comprising:

- 135 Online Surveys completed
- 27 written community submissions (email or letter)
- 1 Petition (comprising 75 signatures)
- 5 Government Agency submissions

Your Thoughts Analysis: Summary of Survey Responses

Of the survey respondents:

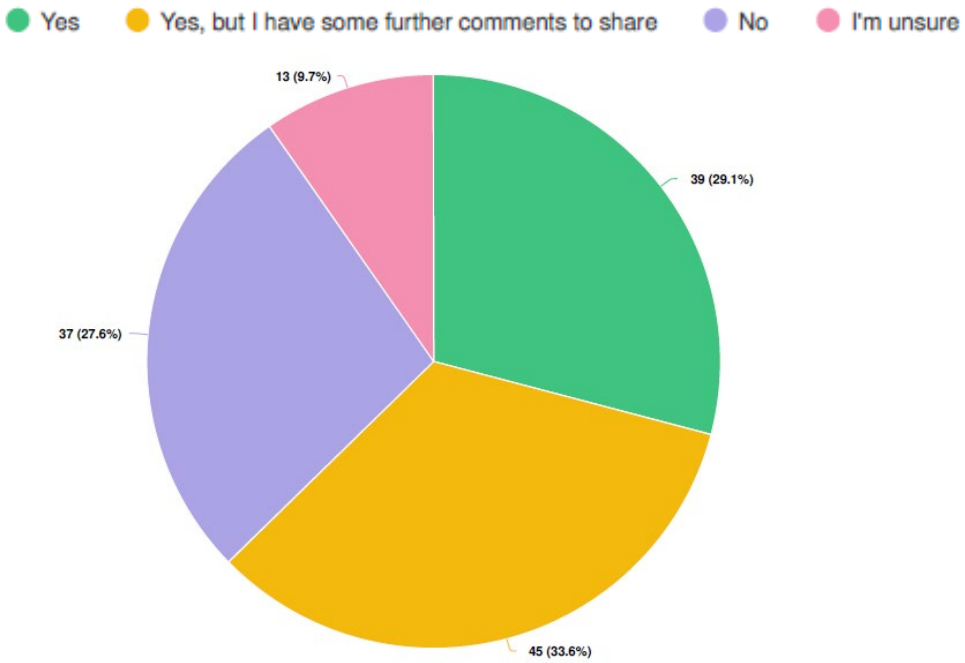
- 84% of submitters live within the Town of Victoria Park.
- 7% own a business within the Town of Victoria Park.
- 14% work within the Town of Victoria Park.
- Majority of Survey Respondents had not been involved in previous stages of the project.



SURVEY RESPONSES

While informed visitors (3,440) represent those who actively sought information, only 166 (4.8%) provided feedback through the survey.

Q. Overall, do you support the Albany Highway Precinct Structure Plan



- 63% of survey respondents have expressed support for the general direction of the AHPSP.
- Those explicitly opposing the plan (37 respondents) represent only 1% of the informed visitors, suggesting that outright opposition may not be broadly representative of the wider engaged community.
- The "Yes, but..." category (45 respondents) provides input by respondents on specific elements of the plan while maintaining general support for its direction.
- The “Unsure” category (13 respondents) highlights concerns that may be addressable through additional clarification or refinements.

The open comments provided by respondents offers valuable insights into the survey responses and provides constructive suggestions for considering potential modifications to the AHPSP.

KEY THEMES FROM SUPPORTIVE RESPONDENTS

The 'Yes’ and ‘Yes, but...’ responses reflect diverse and sometimes competing community perspectives on development and built form outcomes, highlighting the challenge of balancing growth with varying community priorities in the Albany Highway Precinct.

Built Form and Development Potential

- More areas should be allowed over 6 storeys.
- Less restrictions should be placed on development.
- Favouritism of Major Sites is unfair; more surrounding areas should be upzoned.
- This is one of the last chances to achieve meaningful density and development along a major transport route. The Town should be ensuring maximum development potential while it has the chance.
- Excessive development requirements add significant cost to development.

Streetscapes & Residential Interface

- Insufficient consideration of integration with existing streetscape - More sensitive zoning and consistent minimum setbacks of 4+ meters can help preserve tree canopy and maintain residential character.
- Better transitions are needed between higher-density areas and existing/surrounding residential streets.
- Development needs to respect residential quality of life - the scale of development (8-storey height limits) would lead to overpopulation and place strain on roads.
- Objection to mid-rise residential (up to 6 storeys) in residential areas.
- Solar overshadowing impacts on residential solar systems.

Urban Ecology & Public Realm

- Stronger Green Links via Tree Canopy and Biodiversity are needed.
- Leaving space in the public realm for tree canopy is essential.
- More minimum setbacks are needed to preserve tree canopy.
- Improvements to public spaces must address safety and security.

Traffic, Parking & Movement

- Better public transport options over bike lanes—more connectivity between precincts and a free 'hop-on-hop-off' service along the strip.
- Bikes on the Highway are dangerous.
- Existing issues around parking must be addressed—short-term parking for Uber, pickups, and deliveries is needed.
- Increased density will create increased traffic; More traffic calming is needed on surrounding road network.
- Visitors to the area need improved parking facilities/options; Businesses are the backbone of the community & need parking for customers.
- Nothing is planned to address parking impacts on surrounding streets.

Land Use

- Do not support retention of car sales as a land use.
- Do not support Night-Clubs as a land use.
- Scepticism around office-based employment needs in Causeway.

Safety & Security

- Public space improvements must address safety and security.
- Current safety and anti-social behaviour prevents enjoyment of the area; personal safety concerns make people drive elsewhere for dining out.
- Better Lighting is needed for improved safety.
- More action needed regarding feeling safe around the strip.

Housing Affordability and Social Impact

- Achieving affordable housing is not the role of local government.
- Do not support affordable housing, citing concerns over social issues.

Waste, Noise, and Environmental Impacts

- Rubbish collection remains an issue, and the impact of collection on surrounding streets needs to be addressed.
- Noise levels from entertainment and evening activities will disrupt residential areas.
- Laneway improvements offer an opportunity for streetscape enhancement but lack detail.

Site-Specific Concerns

- Leave Merton Street as is.
- Do not support Merton Street Sump redevelopment.
- 8-story height limit on Hubert Street would lead to overpopulation and strain on infrastructure.
- Overshadowing impacts on lower-scale residential solar panels.

Implementation & Design

- Lack of detail on how streetscape and pedestrian amenity will be achieved.
- Too much focus on major developers rather than upgrades to existing infrastructure and supporting existing local businesses.
- Need for a more ambitious vision - tree-lined pedestrian mall with 4 storey development either side and Town-owned strategic properties.
- Do not support cash-in-lieu of public benefits.

KEY THEMES FROM NON-SUPPORTIVE AND UNSURE RESPONDENTS

Concerns from "Unsure" Respondents

- **Public Realm Maintenance** – Waste and cleanliness concerns.
- **Crime Prevention** – Need for smart infrastructure investment.
- **Pedestrian Safety** – Accessibility and Priority.
- **Character and Liveability** – More consideration for existing homeowners.
- **Bike Lanes & Parking** – Need for improved provisions.
- **Building Heights & Setbacks** – Concerns over excessive heights and overshadowing.
- **Noise** – Impacts from entertainment land uses.
- **Community Benefits** – Need for clearer articulation.

KEY THEMES FROM "NO" RESPONDENTS

- **Density Concerns** – General opposition to higher density.
- **Parking & Traffic** – Increased congestion in residential streets without parking management.
- **Crime & Safety** – Perceptions that density could lead to increased crime.
- **Property Impacts:**
  - Negative impact on existing property values.

  - Loss of views for existing residents.
  - Better transitions required between proposed and existing development, including streetscape character, overshadowing and overlooking considerations.

- **Building Height Limits** – Preference for max **3-5 storeys** over 8+.
- **Development Focus** – Prioritise existing vacant land and car yard redevelopment.
- **Equitable Development** – Concerns about unfair zoning changes (e.g. Boundary /transitions along Hordern St – why only 1 side of the street can develop).
- **Housing Affordability** – Belief that density will not solve affordability issues, and that Victoria Park already has enough affordable housing
- **Do not support Merton Street Sump redevelopment.**
- **Do not support Commercial Frontage Type Transitions on established residential streets** (such Merton Street, Gresham Street and Lichfield Street).

OFFICER RESPONSE

Whilst some opposition to the AHPSP is present, it represents a small proportion (1%) of informed visitors.

In saying this, feedback received from the additional information provided by respondents has been constructive.

Many of the themes raised across all respondents, whether in support or against the proposal are relatively consistent.

- **Density Concerns** – Albany Highway is a vibrant activity centre within an inner-metropolitan urban context. The PSP focuses on achieving higher density development within active nodes and major sites in strategic locations. This aligns with state planning objectives to accommodate growth in establishes areas with good access to services and transport**. It is noted that some refinements to Residential transitions are warranted, and they are addressed in this report.**
- **Crime and safety** – AHPSP promotes mixed-use development to encourage activity throughout more hours of the day and Active Frontage requirements to ensure "eyes on the street" at ground level. **This issue is a notable Community Priority and can be addressed through modifications to the Community Benefit priorities.**
- **Waste and Environment** – Waste is a key concern raised and in response it is recommended a new Development Requirement is included addressing waste management and design integration. This can also be included as a Community Priority in the Community Benefits section for enhanced waste management outcomes.
- **Parking & Traffic** -Traffic management approaches include improved connections to train stations and a phased approach to streetscape upgrades that will slow vehicles, discourage non-essential through-traffic while maintaining local access. **An Implementation Action for the Town is to consider the delivery of existing parking facility upgrades in accordance with the Town's Parking Management Plan.**
- **Overshadowing & Overlooking –** The R-Codes Volume 2 provides robust protection through building separation, visual privacy, and solar access requirements. The AHPSP strengthens these provisions with location-specific controls such as Upper-level setbacks to reduce

visual bulk, Graduated Height Transitions & Sensitive Interface setbacks**.**

- **Property Values** – it is uncertain whether the AHPSP will impact property values however, the AHPSP aims to improve local amenities, streetscapes, economic vitality and housing diversity. The intended outcome being to support aging in place and make Victoria Park a more dynamic and desirable place to live.
- **Development Priority** - The AHPSP prioritizes redevelopment of underutilized sites like vacant land and car yards, particularly in the Causeway, Central and St James sub-precincts. Major Sites identified in the plan include many of these properties, with generous specific development requirements to ensure they deliver high-quality, high-density outcomes. The plan's approach to fine-grain areas along Albany Highway is more conservative, focusing on retaining character while allowing modest increases in height and density**.**

  As per the advice received in the Cygnet West report, it is important to unlock diverse development opportunities that can respond to varying market feasibilities.
- **Equitable Development -** the concerns about one-sided development along streets like Hordern Street reflect the AHPSP's careful approach to precinct boundaries. These boundaries have been established based on detailed analysis of existing character, development potential, and strategic importance. The AHPSP boundary reflects the different roles and characters of different areas whilst supporting various development opportunities.

Development will occur gradually over many decades. While the AHPSP theoretically provides capacity for over 6,000 new dwellings, current projections based on the Town's historical growth patterns and broader WA growth trends suggest approximately 800 new dwellings could realistically be delivered over the next 10 years, depending on development uptake.

The AHPSP provides a long-term framework to guide this gradual evolution while ensuring that when (and where) development does occur, it contributes positively to the precinct's vibrancy, character and amenity.

In addressing community concerns regarding the Albany Highway Precinct Structure Plan, it is important to recognise the **AHPSP is not being developed in isolation but rather as part of a broader strategic vision for the Town,** in alignment with the following key strategies:

- **Social Infrastructure Strategy:** The Town is committed to ensuring that population growth is supported by essential social infrastructure, including community facilities and services.
- **Economic Development Strategy:** The AHPSP aligns with the Town's goal of strengthening local businesses, employment, and investment along Albany Highway. A well-planned urban corridor will contribute to the economic vitality of the area while supporting local retailers, hospitality venues, and services.
- **Integrated Transport Strategy & Parking Management Plan:** Addressing concerns regarding traffic, pedestrian safety, parking and bike infrastructure, the Town is implementing transport strategies to improve connectivity and accessibility. The AHPSP supports these initiatives by incorporating pedestrian-friendly design, enhancing connections to the broader cycling network, and prioritising mode-shift targets.
- **Public Places & Urban Forest Strategies:** The Town is actively working to improve streetscapes, public open spaces, and urban greening. The AHPSP will complement these efforts by ensuring new developments contribute to the Urban Forest initiatives, provide new public spaces, landscaping, and amenities that enhance the character of Victoria Park.

For the AHPSP to be successful, the Town must continue delivering on its broader strategic commitments. Whilst the AHPSP includes key actions within each sub-precinct for successful implementation, a precinct-wide implementation strategy is not included.

By leveraging the Town's existing strategies, the Town can demonstrate its commitment to implementing the AHPSP in a way that addresses broad community priorities and enhances the Albany Highway precinct.

PROPOSED MODIFICATION:

It is recommended the following Precinct-Wide Implementation and Parallel Actions are included under Part 2, Section 7.0 for integration of the AHPSP with the Town's strategic programs:

TABLE 41. PRECINCT-WIDE IMPLEMENTATION

Objective	Action	ToVP Strategy
Active Transport Implementation Plan	Design and deliver a network of safe cycling routes parallel to Albany Highway Deliver a range of improvements to the Town's bicycle network to ensure cycling is an attractive mode of transport for all ages and abilities. Implement key "Station Street" upgrades as per the AHPSP Transport Strategy to support enhanced pedestrian and cyclist movements Integrated Transport Strategy	Integrated Transport Strategy - Bike Network Sub-Program
	Implement strategic pedestrian crossings at key crossings	Integrated Transport Strategy Public Places Program
	Create secure end-of-trip facilities at key locations	AHPSP Community Benefits Integrated Transport Strategy Planning Program
	Develop a wayfinding strategy for pedestrians and cyclists	Integrated Transport Strategy Public Places Program
Public Realm Enhancement	Develop and implement Public Realm Design Guidelines	Planning Program Public Places Program

	Deliver Albany Highway Greening via the Urban Forest Strategy	Urban Forest Strategy
	Implement a Public Art Strategy specific to Albany Highway's character areas	Public Places Program
	Implement water sensitive urban design elements in all public realm projects	Public Places Program
Parking Management	Draw upon various methods including existing and emerging technologies for managing parking demand in the Town's activity centres. Maximise the benefits of changes in technology to achieve the vision of the Town's transport network	Integrated Transport Strategy Parking Management Strategy
	Incorporate parking into broader Wayfinding Strategy for the Town	Integrated Transport Strategy Public Places Program
	Invest in upgrades to consolidated public parking facilities at strategic locations near Albany Highway activity nodes: The following off-street car parks are managed by the Town: • Hubert Street Off-street Car Park (free) • King George Street Off-street Car Park (paid)	Integrated Transport Strategy Parking Management Strategy
	Explore innovative and appropriate kerbside management initiatives - Create dedicated zones for rideshare / pickup with strict time limits	Integrated Transport Strategy Parking Management Strategy Street Operations
	Develop parking/transport partnerships with major businesses to share private	Planning Program Integrated Transport

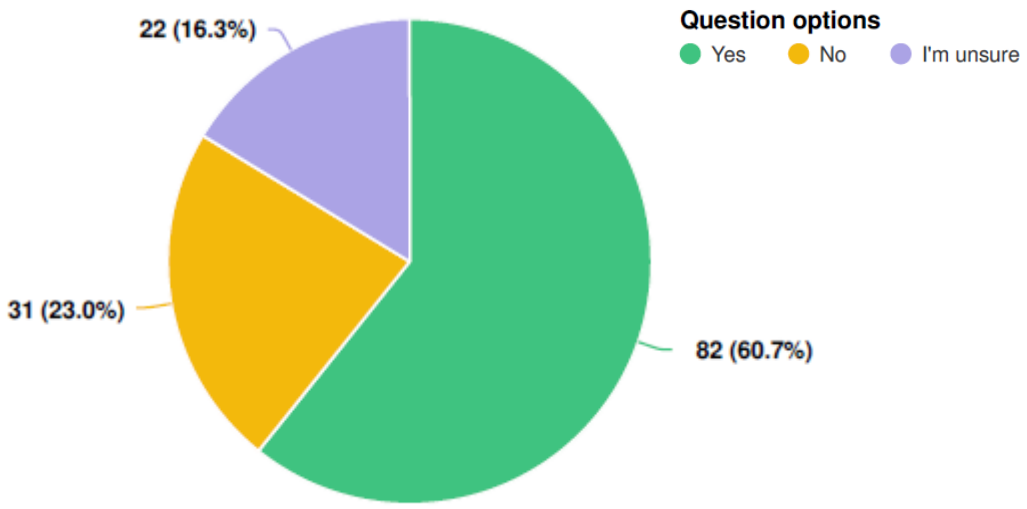
	parking facilities during off-peak hours	Strategy Economic Development Strategy
Safety and Security Enhancement	Install improved, energy-efficient street lighting focused on pedestrian areas and laneways	AHPSP Community Benefit Public Places Program Economic Development Strategy Street Operations
	Develop a night-time economy safety strategy with local businesses	Economic Development Strategy
	Activate key public spaces to increase passive surveillance	Economic Development Strategy
Waste Management	Develop precinct-specific waste management guidelines for new developments	Planning Program Operations
	Identify and implement consolidated waste collection points for fine-grain retail areas	Planning Program Public Places Program Street Operations
	Include Community Benefits for innovative waste systems within major activity nodes	AHPSP Community Benefits Planning Program
	Establish designated service/collection times to minimize pedestrian disruption	Street Operations Technical Services Parking Rangers

While the Town's strategic programs address many of the implementation concerns raised, the AHPSP also presents an opportunity to fill specific gaps by:

- Including Waste Management Objectives for Mixed Use developments:
- Including additional Community Benefit Priorities for:
    - Smart infrastructure for crime prevention;
    - Innovative waste solutions/initiatives;
    - Enhanced on-site Landscaping, positively contributing to the Urban Forest Strategy and urban greening.
- Refine Built Form Transitions through secondary frontage types and to address streetscape transitions between AHPSP and surrounding/existing residential areas.

CREATIVE AND CULTURAL USES: Clause 3.1.2 Creative Floorspace proposes that Development on land zoned as mixed use or district centre within the AHPSP area which exceeds 1,000m2 floor area must include non-residential space dedicated to creative production and cultural activities. This includes affordable premises for artists and creative businesses, live entertainment, and performance and exhibition spaces.

Q. Do you support this requirement?



KEY THEMES FROM SUBMISSIONS

Support and Benefits

- Strong community support aligning with previous engagement outcomes
- Identified as contributing to precinct vibrancy
- Potential to enhance and diversify the night-time economy

Implementation Concerns

- Financial viability impacts on new developments
- Questions about responsibility (private vs public sector)
- Need for greater flexibility in floorspace requirements

Operational Considerations

- Amenity impacts on surrounding residential areas
- Management of noise and parking
- Preference for multi-purpose adaptable spaces
- Clarity around who will operate these spaces

OFFICER RESPONSE:
The requirement for creative floorspace supports the broader objective for the precinct to enhance the night-time economy. It further delivers on the Town's strategic direction to develop and grow local talent and seek ways to attract, retain and support the creative community, as outlined in the Town's Arts & Culture Plan and Making Space for Culture report.

Requiring developments to deliver suitable spaces will ensure that creative businesses and artists remain embedded in the community. Table 31 in Part Two outlines specific fit-out requirements and unit sizing for various creative uses to help guide decision making around acceptable design requirements for dedicated creative floorspace.

Clause 4.0 Community Benefits includes Creative Floorspace as an eligible Community Benefit, as such any development can go beyond the minimum requirements or opt-in to deliver creative floorspace in exchange for bonus development provisions.

OFFICER RECOMMENDATION:

To address submission feedback, the following recommendations are proposed to Part One of the AHPSP:

- Modify 3.1.2 to apply only when commercial (not gross) floor space exceeds 1,000 sqm. This will ensure creative spaces are strategically located within the precinct and more viable to deliver within larger mixed-use developments.
- Refining Clause 3.1.2 provides greater clarity around the expectations to deliver diverse commercial offerings in new developments:

PROPOSED MODIFICATION:

3.1.2 Creative and Cultural Uses

Development on land zoned as District Centre or Mixed Use which exceeds 1,000 sqm of net lettable floor area, must include a dedicated space that has been designed and fit-out to meet the needs of creative production and cultural activities.

Creative and cultural uses include:

i. The display, production or sale of art and craft;

ii. Live entertainment, including the delivery or rehearsal of live or pre-recorded music, film, theatre, comedy, dance or other performance;

iii. Office, commercial and light industrial floorspace suited to use by businesses in the design, media, film and technology sectors; and

iv. Other cultural or creative activities as approved by the Town

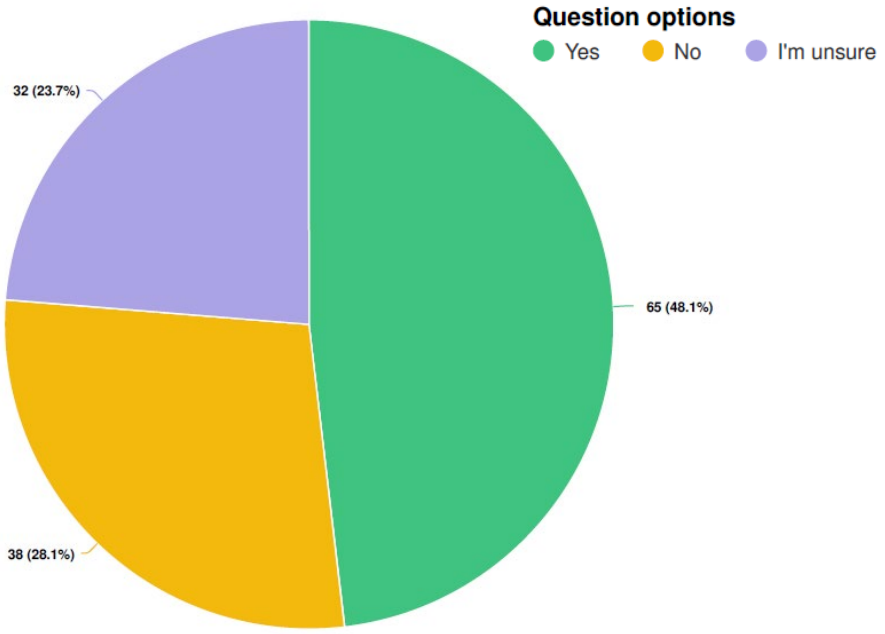
Ground floor creative and cultural uses must satisfy the relevant Frontage Type Design Requirements under Clause 3.4.4

The approved creative and cultural space must be maintained for the life of the development, with any proposed change of use limited to other creative and cultural activities as defined in this clause.

To be eligible for a Bonus Plot Ratio or Bonus Height under Clause 3.4, the quantity of creative and cultural space must comply with the typologies for Creative Uses as set out in the Community Benefits Framework under Clause 4.0.

SUSTAINABILITY AND ENVIRONMENTAL PERFORMANCE: Clause 3.4.6 Sustainability And Environmental Performance proposes development requirements to meet increased sustainability and environmental performance objectives.

Q. Do you feel these requirements meet community expectations for new development to adequately address environmental performance and establish the precinct as a low carbon leader?



KEY THEMES FROM SUBMISSIONS

Sustainability Standards and Certification

- Mixed views on proposed Green Star requirements
- Some stakeholders are seeking more ambitious targets for carbon reduction
- Others are concerned about financial viability impacts on development and feel the enhancement of existing publics spaces should be the priority

Urban Ecology and Heat Management

- Strong support for increased urban greenery and tree canopy requirements
- Concerns about urban heat island effects caused by new development
- Some requests for enhanced setback requirements to support large trees

Energy and Resource Management

- Support for electric-only in residential developments with an understanding of the need for commercial tenancies to require gas connections, particularly in the food and beverage industry
- Calls for better integration of renewable energy systems

Transport and Parking

- Divided opinions on whether removing car parking will achieve the desired reduction in car dependency without concurrent improvements to alternative transport options or existing parking facilities.
- Concerns around removing parking minimums from new development and its impact on surrounding streets.
- Some question the suitability of Albany Highway as a cycling route with others in support for increased bike infrastructure.

Waste Management

- Requests for improved commercial waste strategies and reducing business-generated waste
- Interest in precinct-wide waste management solutions

OFFICER RESPONSE

Based on the Sustainability Strategy prepared by Cundall (August 2024), the proposed sustainability requirements are considered to represent an appropriate balance between environmental leadership and development feasibility, positioning the Albany Highway Precinct to achieve best practice sustainability outcomes without impeding viable development.

The proposed tiered approach to Green Star certification aligns with best practice. Requirements are scaled based on development size to ensure feasibility.

The AHPSP provides a framework to balancing ambitious sustainability targets with practical delivery with these requirements aligning to State Planning Policy 7.2 sustainability objectives. The Proposed standards reflect current industry benchmarks across Perth metropolitan area.

Parking:
Removing minimum parking requirements for new developments within the Precinct aims to ensure that future population growth does not have a corresponding increase in vehicle traffic, seeking to facilitate a shift towards walking, cycling, micromobility and public transport for its future residents. The AHPSP approach to reduced parking is supported by:

- Prioritising improving links for station access
- Ongoing advocacy for a Mid-tier transit network within the Town
- Prioritising improvements to the micromobility network
- Enhancing the pedestrian environment
- Implementation via the the Town's Integrated Transport and Parking Management Strategy.

Rather than forcing cycling onto Albany Highway as a primary route, the plan supports a safer parallel network using side streets with proposed dedicated cycling lanes on station access streets to connect the Highway with upgraded train stations and the broader network, including the Perth-Armadale Principal Shared Path and new Causeway Bridge.

Waste Management:
Waste Management for Mixed Use developments is not addressed in the AHPSP. Whilst the R-Codes provides guidance on waste management for residential components of development, commercial waste management and the interface between residential and commercial waste and precinct-specific considerations are needed.

Waste management interfaces with multiple sections of the AHPSP including:

- Frontage and Access (3.4.4) - collection points and service entry locations

- Parking and End of Trip Facilities (3.4.5) - service vehicle access
- Sustainability (3.4.6) - waste minimisation and resource recovery

Waste Management practices for Mixed Use development should address:

- Protection of Albany Highway streetscape amenity (Impacts of waste collection on frontage design and public realm outcomes)
- Design Integration to reduce impacts on sensitive uses

OFFICER RECOMMENDATION:

It is recommended that Waste Management for Commercial Land Uses be integrated into the AHPSP via the following means:

- Include dedicated waste management objectives that emphasize integration with built form
- Establish waste management as a design consideration rather than just an operational afterthought
- Link waste management to broader sustainability and urban design goals
- Require waste management plans with certain development applications (similar to the Water Sensitive Design approach)

PROPOSED MODIFICATION:

MODIFY Element Objective (ii) under 3.4.6 'Sustainability and Environmental Performance' as follows:

ii. Reduce energy consumption, water use and waste generation in new development through integrated design solutions

INSERT new Clause 3.4.7 Waste Management in Section 3.4 Development Requirements as follows:

3.4.7 Waste Management for Commercial and Mixed Use
Element Objectives i. Ensure commercial waste management is considered in early design phases of development ii. Minimise impacts of waste collection on public realm and residential amenity iii. Support flexible and adaptable waste solutions that accommodate changing needs iv. Reduce waste-related vehicle movements on Albany Highway
Development Requirements
a. Design Integration Waste storage facilities shall be: i. Located to utilise laneway or secondary street access where available. ii. Screened from public view and integrated into the building design. iii. Adequately separated from surrounding sensitive uses through appropriate buffer treatments.
b. Waste Management Plan

A Waste Management Plan shall be submitted for the following Commercial or Mixed Use development proposals:

i. Greater than 1,000sqm GFA
ii. Proposing food and beverage uses

Waste Management Plans shall address the following:

i. Separated waste streams for residential and commercial uses
ii. Consolidated collection points where practical
iii. Demonstrate adequate separation between waste facilities and sensitive uses, ensuring commercial waste management does not impact residential amenity
iv. Demonstrate how waste collection vehicles can service/access the site
v. Ensure noise/odour impacts are mitigated through design
vi. Complement WSUD strategies through appropriate treatment of bin wash-down areas

This approach creates a clearer assessment pathway for planners evaluating development applications as opposed to modifications to various sections. It also enables developers to propose innovative waste management solutions tailored to specific site constraints and enables adaptation to emerging technologies and changing waste practices.

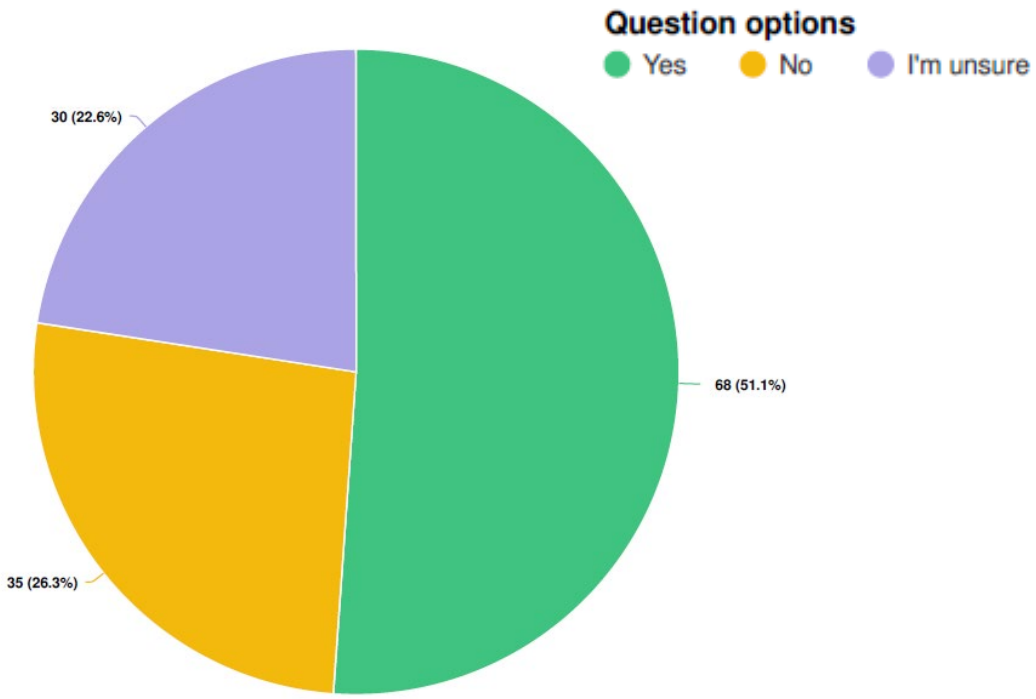
Innovative Waste Management solutions could also be considered a broader Community Benefit, given the concerns raised by community through this consultation.

It is further recommended that **Table 12: Schedule of Priority Public Benefits under Section Part 4.0 Community Benefits be amended to include** Enhanced Waste Management practices (refer Community Benefits section)

FRONTAGE DESIGN

Clause 3.4.4. Frontage & Access requires development to positively enhance street activity and must adhere to the Centre, Commercial or Residential Frontage types.

Q. Do you feel the Frontage Design requirements in table 8 of the AHPSP respond appropriately to sub-precinct character and sets adequate design quality benchmarks for the precinct?



KEY THEMES FROM SUBMISSIONS

Mixed feedback received with strong views on both potential restrictiveness on development and need for streetscape character preservation:

Development Flexibility

- Some argue the controls are "overly restrictive and conservative" with a view they limit development potential and innovation or provide limited aesthetic benefits.
- Arguments that land owners should be able to make their own design choices.

Character Preservation

- Support to maintain the area's "non-uniform, interesting look"
- Support for incorporating historical elements and local identity
- Concerns about loss of local character through redevelopment
- Focus should be on streetscape quality and pedestrian experience
- Emphasis on "fine grain fabric and realistic development outcomes"

Other Comments

- Mixed views on glazing requirements and commercial frontage standards
- Concerns about commercial frontages facing residential streets
- Concerns about reduced space for tree canopy due to zero setbacks
- Urban heat island effects from reduced landscaping
- Concerns about vacant shopfronts - Need for enforcement of upkeep standards

Specific Location Concerns

- Lichfield Street - opposition to commercial frontage standards on both sides
- Merton Street - concerns about commercial interfaces with residential
- Central Sub-Precinct - issues with service vehicle access and setbacks

OFFICER RESPONSE:

The frontage requirements within the Albany Highway Precinct Structure Plan (AHPSP) have been carefully developed to address recent design challenges while supporting appropriate development outcomes.

The AHPSP's frontage requirements respond directly to evidence of:

- Loss of fine-grain character through unsympathetic development
- Erosion of the precinct's distinctive architectural diversity
- Poor quality street interface outcomes affecting pedestrian amenity

It is further acknowledged that some established streetscape interfaces have not been appropriately responded to in the AHPSP. Following a review of submissions and the Proposed Sub-Precinct Primary Controls and Frontage Types, some modifications are required to address transitions between commercial frontage types and existing residential streetscape character.

OFFICER RECOMMENDATION:

Whilst the AHPSP provides clear parameters for good design outcomes, some added clarity and flexibility is considered beneficial and responds to the view that Frontage Design controls as restrictive. Additionally, the Frontage Type requirements provide an opportunity to clarify secondary frontage design response to existing and future planned streetscape character as well as identify opportunities for landscaping within setback areas to contribute to urban greening efforts.

To ensure appropriate streetscape character, urban form, and transition between higher-density development and existing lower-density residential areas, the following provisions should be incorporated:

PROPOSED MODIFICATION:

Modify Table 8 Centre Types under Clause 3.4.4 as follows:

Centre Frontage Type	
Component	**Requirements**
Primary Street	**d. Shopfront Design:** Incorporate design details including ~~stall-risers, sills, pilasters, and clerestory windows with a minimum 0.5m depth difference between building frontage and retail tenancy doorway~~

	i. Base Treatments: Include a defined base element (such as stall-risers) up to between 0.45m-1.2m. ii. Vertical Articulation: Incorporate vertical elements (such as pilasters or similar architectural features) to define shopfront boundaries and create rhythm along the streetscape. These elements may be expressed through material changes, projections, or colour variations. iii. Window Treatment: Design windows with defined framing elements such as sills and consider incorporating upper glazing details (such as clerestory windows or transom panels) to reference traditional shopfront designs while meeting contemporary needs. iv. Entry Definition: Create a sense of arrival through recessed doorways or alternative design approaches that clearly identify entry points. A minimum 0.3m-0.5m depth difference between the primary building line and doorway is encouraged where site conditions permit, though alternative entry treatments that achieve similar place-making outcomes may be considered.
Secondary Street Frontage	f. ~~As per Centre Primary Frontage or Commercial Primary Frontage requirements~~ Should respond to the existing/future planned surrounding streetscape character and may incorporate Centre, Commercial or Residential Frontage Types on secondary streets.

Commercial Frontage Types	
Component	**Requirements**
Secondary Street Frontages	g. ~~As per Commercial Primary Frontage or Residential Primary Frontage requirements~~ Should respond to the existing/planned surrounding streetscape character and may incorporate Commercial or Residential Frontage Types on secondary streets

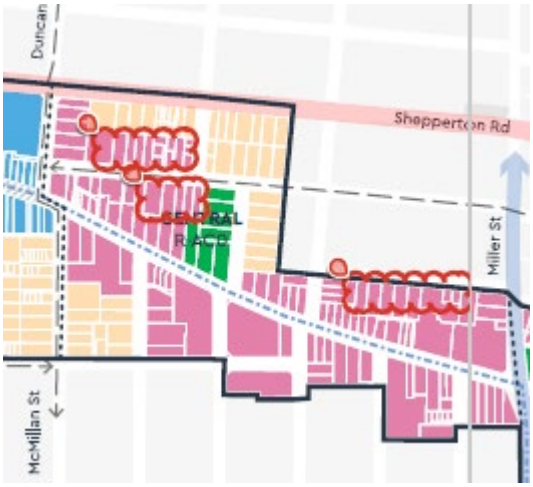
Residential Frontage Types	
Component	**Requirements**
Primary Street, Pedestrian Link or POS Frontage	d: **Setback area**: Enhance entrances by incorporating features such as low walls, steps, and porches and landscaping. (INSERT NEW) Landscaping should aim to include in-ground deep soil zones and tree planting that enhances the public realm and contributes to urban greening as per the Town's Urban Forest Strategy.

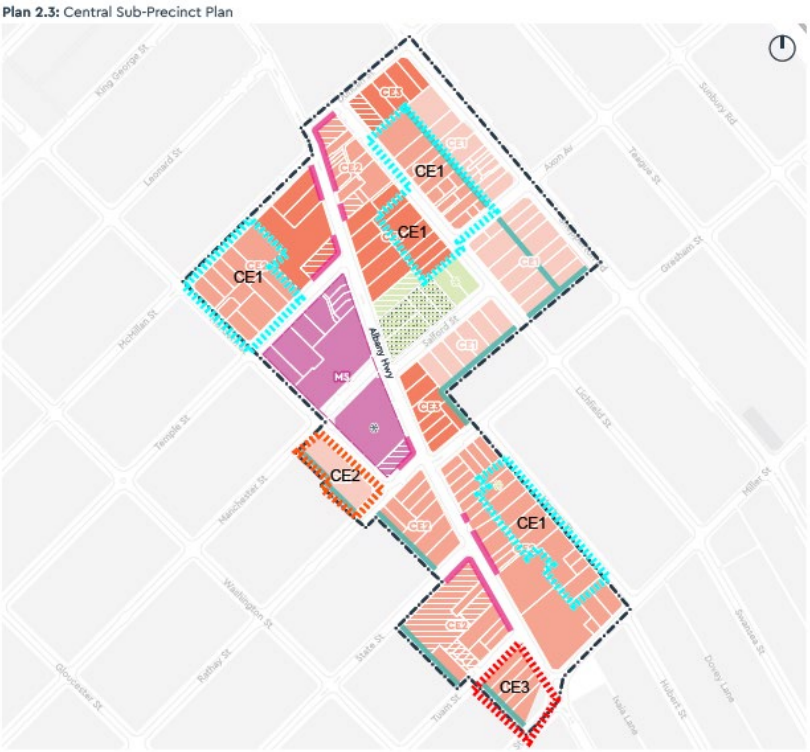
Modify Sub-Precinct Plans as follows:

The following modifications to Plan 1 of the AHPSP are recommended to address transitions between commercial and residential areas:

CENTRAL:

- Modification for Lots 23, 341,340, 339, 338, 337, 402, 403, 404 & 333 Merton Street from 'Mixed Use' to 'Residential' on Plan 1 and from 'CE2 Commercial Frontage' to 'CE1 Residential Frontage' on Plan 2.3 Central
- Modification to Lots on corner of Hordern and McMillan from 'CE2 Commercial Frontage' to 'CE1 Residential Frontage' (as per Built Form Strategy) on Plan 2.3
- Modification of 7 Lichfied Street to Residential 19 Lichfield Street from 'Mixed Use' to 'Residential' on Plan 1 and from CE2 to ''CE1 Residential Frontage on Plan 2.3 Central
- Modification of 4 - 14 Lichfield Street & 1A & 1B Axon Ave from 'Mixed Use' to 'Residential' on Plan 1 and from 'CE3 Commercial Frontage' to 'CE1 Residential Frontage' on Plan 2.3 Central





EAST END

- Modification of 4 - 6 Willis Street, 2 Camberwell St and 1 Patricia Street (that do not front Albany Highway) from 'Mixed Use' to 'Residential' on Plan 1 and from 'EE2 Commercial Frontage' to 'EE1 Residential Frontage' on Plan 2.5 East End

- Modify Lots on the northern side of Albany Highway, Between Dane St and Somerset Street (913 – 974 Albany Highway & 2 Dane Street) from Mixed Use EE2 to Mixed Use EE3 on Plan 2.5 and introduce New EE3 zone as follows:



Plan 2.5: East End Sub-Precinct Plan

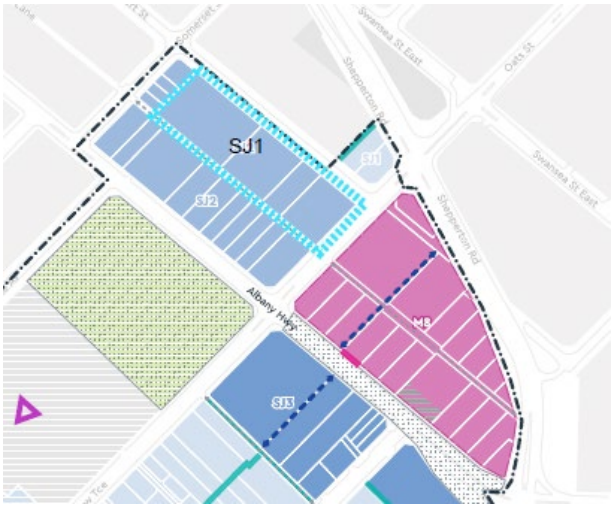


		EE3
a.	**Zoning**	Mixed Use
b.	**R-Code**	R-AC0
c.	**Plot Ratio**	2.0
d.	**Bonus Plot Ratio**	2.5
e.	**Building Height** (storeys)	5
f.	**Bonus Building Height** (storeys)	8
g.	**Podium Height** (storeys)	3
h.	**Street Setback** a) to podium	Nil[2]
	b) above podium height	4.0m
i.	**Side Setback** a) to podium	Nil
	b) above podium height	4.0m
j.	**Rear Setback** a) to podium	Nil
	b) above podium height	6.0m
k.	**Frontage Type** (Ref. 3.4.4)	Commercial

ST JAMES

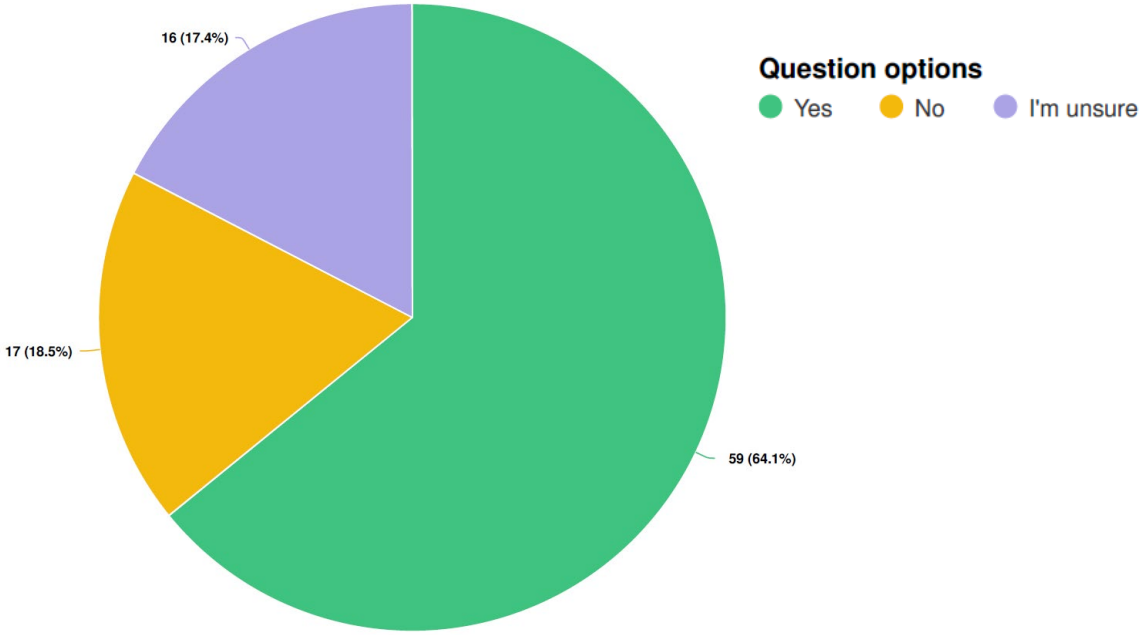
- Modification of 159 – 173 fronting Hubert Street from 'SJ2 Commercial Frontage' to 'SJ1 Residential Frontage' on Plan 2.6 St James





CONTRIBUTORY FRONTAGES - Clause 3.5.2 Contributory Frontages relates to development which retains a highly contributory frontage being permitted an additional storey of building height where it can be demonstrated that this is necessary to accommodate permitted plot ratio which is unable to be developed within the portion of the site containing the retained frontage.

Q. Do you support this requirement?



KEY THEMES FROM SUBMISSIONS

There is clear support for this response to heritage within the Precinct with many respondents raising concerns about the loss of local identity and supporting the AHPSP intention to maintain the character of the Town and preserve our local history.

Some respondents however questioned whether the plot ratio transfer goes far enough as an incentive suggesting it may not be economic viable to retain all frontages.

OFFICER RESPONSE

The AHPSP provides a robust framework for assessing and managing contributory frontages through:

- Detailed condition assessment requirements
- Clear criteria for determining heritage value
- Flexible approach to retention based on significance
- Design Review Panel oversight
- Professional heritage assessment requirements

An opportunity to include High Value heritage retention within the Community Benefits Framework would complement existing Clause 3.5.2 requirements:

- Provide an additional pathway for viable retention outcomes
- Support broader case-by-case assessment of retention costs
- Enable appropriate development bonuses based on preservation quality
- Increase support of high value retention outcomes

OFFICER RECOMMENDATION

It is recommended the Part 4.0 Community Benefits Framework includes an option for "Enhanced Heritage Retention"

Where development involves the retention and restoration of a High Contributory heritage frontage (including internal features), and it can be demonstrated the costs and design constraints of retention materially exceed the value of the permitted plot ratio transfer and standard incentives set out under Section 3.5.2.

Refer CBF Proposed Modification.

MAJOR SITES - The AHPSP requires any new development, extension to existing development or subdivision of land within a major site must satisfy the requirements of Table 12 in the AHPSP.

Survey responses specifically addressing Major Sites were limited, however relevant comments appeared throughout various sections of the consultation feedback, The following key themes and concerns emerged from survey respondents regarding Major Site provisions:

Height:

- Preference for heights similar to "Vic Quarter Development"
- Opposition to "towers like in South Perth"
- Concerns about impacts on residential interfaces and overshadowing

Development Equity:

- Comments about "favouritism of major sites" and fairness to other property owners
- Questions about development rights distribution
- Views that "all residential landowners should be up-zoned"

Community Impact:

- Need for resident consultation on major site proposals
- Concerns about impacts on local character
- Questions about infrastructure capacity
- Traffic and parking implications

Major Site owners typically provided site-specific submissions which are addressed under the Schedule of Submissions.

OFFICER RESPONSE

The AHPSP takes a strategic approach to Major Sites that balances development opportunity with community benefit. Major Sites:

- Contribute to precinct "urban structure" objectives
- Provide opportunity to deliver new public spaces and amenities
- Are strategically sized and located so that impacts can be managed on-site

Development Scale and Distribution

- The Plan adopts a varied growth approach responding to precinct character
- Development potential is balanced between Major Sites and surrounding areas
- Additional heights are subject to specific obligations and benefit delivery
- Bonus provisions apply to all developments to ensure fairness and equity

The existing requirement for detailed documentation and planning through either Development Applications or Local Development Plans ensure:

- site-specific development requirements are satisfied
- off-site impacts managed
- Flexibility in detailed design allows context-responsive solutions
- Interface treatments are guided by Major Site objectives
- Appropriate consultation is undertaken

M7 – Park Centre

The Victoria Park Secondary Centre (AHPSP) is considered a mid-high density urban centre under the context of State Planning Policy 7.3 R-Codes Vol2, which typically comprises a range of developments from 4 to 10 storeys. Major Site M7 is located within a priority activity sub-precinct, directly adjacent to key commercial and mixed-use nodes, and is considered a strategic redevelopment opportunity.

Given its high-density urban context, the site has greater potential to accommodate additional height while managing built form impacts on-site through appropriate design responses. The site's size, location and frontage afford opportunities for integrated development that can deliver meaningful public benefit outcomes. An increased base height of 10 storeys is therefore considered appropriate and justified, reflecting the site's strategic significance and its capacity to deliver high-quality, higher-density development outcomes consistent with the objectives of the AHPSP and State Planning Policy.

Net-gain in Site Biodiversity

Table 12 currently requires development on Major Sites to "provide for a net gain in site biodiversity and demonstrate best practice water management." Feedback from submissions highlights the need for clearer and more assessable language that sets expectations. Major Site requirements should therefore be modified to provide performance-based guidance that supports improved urban ecology outcomes while remaining adaptable to individual site context and design flexibility.

The revised wording shifts the focus to a requirement that development demonstrates improved urban ecology through measures such as increased native planting, habitat creation, and integrated water-sensitive urban design (WSUD), as demonstrated through landscape and servicing plans at the development application stage.

PROPOSED MODIFICATION

Modify Table 4: East Victoria Park Sub-Precinct Primary Controls as follows:

M7	**e. Building Height (storey's)**	**10**

Modify Major Site Requirements under 3.5.7 Major Sites as follows**:**

Insert new Element Objective:

iv. Development on Major Sites must contribute to improved urban ecology

Development Requirements
a. Major Site Requirements Any new development, extension to existing development or subdivision of land within a Major Site as designated in Part 3.3 and Figure 7 must satisfy the requirements of Table 12 through a Development Application and related approval conditions or the preparation of a Local Development Plan (LDP). A Development Application or LDP for a Major Site must be accompanied by: i. Schematic drawings and technical documentation necessary to demonstrate satisfaction of the requirements outlined in Table 12. ii. A Frontage Hierarchy Plan that identifies and justifies the proposed Frontage Type for each street frontage in response to existing and desired future streetscape character iii. Where bonus height or plot ratio is sought, a schedule of specific public benefits and associated staging plan outlining the timing for the delivery of nay such benefit shall be provided consistent with 4.0 Community Benefit. The following development is exempt from these requirements: i. Temporary uses or changes of use; and ii. Internal modifications or minor extensions to existing development

Modify Table 12: Additional Major Site Development Requirements as follows:

Major Site	Requirements

M1 Causeway (Investigation Area)	
M2 Causeway	d. Development must provide ~~a public space on Albany Highway with a minimum area of 1,500m^2~~ a suitable area of publicly accessible open space on Albany Highway in a location generally consistent with Part 3.3. e. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context.
M3 Victoria Park	d. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context.
M4 Victoria Park	d. Development must provide a mid-block publicly accessible open space ~~with a minimum area of 1,500m^2,~~ in a location generally consistent with Part 3.3. g. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context.
M5 Central	b. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context. d. Development must ~~consolidate deep soil zones in a central mid-block location to~~ aim to maximize the contiguous surface area of landscaped space. Development is to provide consolidated deep soil zones that maximise the usable surface area for tree planting and landscaping. Where a central mid-block location is not practical, an alternative arrangement may be considered, provided it delivers equivalent or improved canopy coverage and landscape function to the satisfaction of the Town.
M6 East Victoria Park	c. Development must provide two additional publicly accessible open spaces ~~with a combined minimum area of 2,000m^2,~~ in a location generally consistent with Part 3.3 e. Development must provide for a net gain in site biodiversity

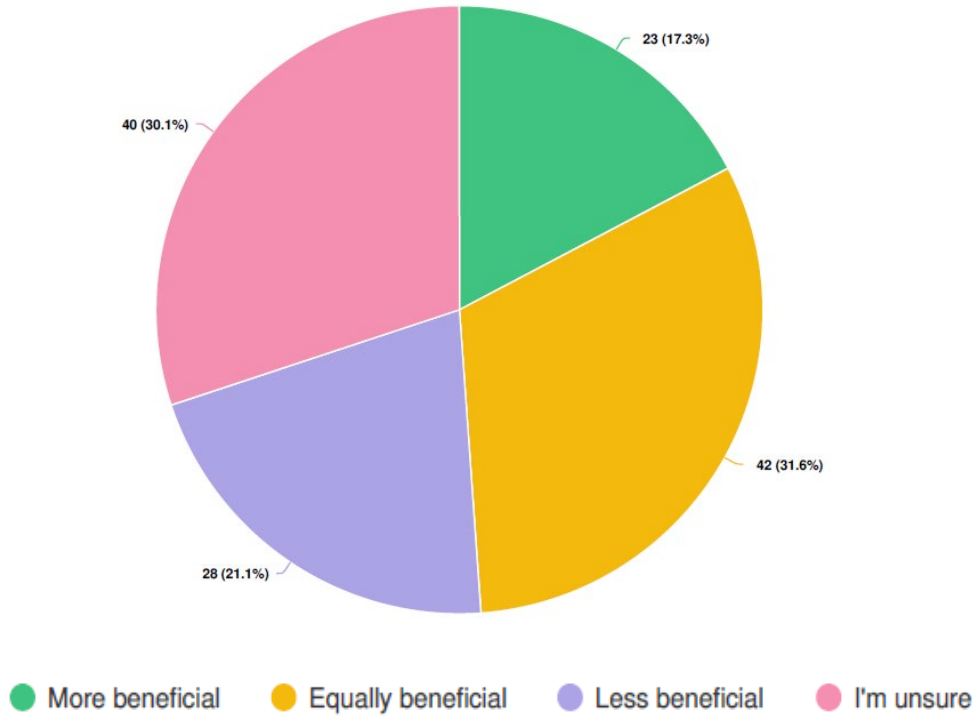
	~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context
M7 East Victoria Park	c. Development must provide for unrestricted public ~~vehicular~~ access along Sussex St between Moorgate St and Albany Highway d. Development must provide a mid-block publicly accessible open space ~~with a minimum area of 2,000m^2,~~ in a location generally consistent with Part 3.3. e. Development must provide publicly accessible open space at Sussex St/Albany Highway corner in a location generally consistent with Part 3.3, ensuring retention of existing mature trees. i. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context
M8 St James	d. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context

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COMMUNITY BENEFITS - The AHPSP includes development concessions, which are bonus incentives where a development delivers additional benefits to the community. These bonuses are offered as higher plot ratios or additional building heights, up to certain limits.

Q. Do you think the proposed community benefits assessment accurately reflects the future needs of the Albany Highway precinct? Are there any other benefits that we should consider including in the framework?

Q. How do you view in-kind contributions (i.e. delivery of new or upgrades to existing infrastructure) compared to monetary contributions?



KEY THEMES FROM SUBMISSIONS

- Suggestions for more flexible/generic community spaces that can be multi-use/adaptable
- Strong emphasis on safety improvements and the need for CCTV and security measures
- Interest in better street lighting to improve walkability
- Concerns about the impact on development viability
- Questions about long-term management and maintenance
- Questions about the Council's funding role for facilities
- Some don't support bonus incentives
- Some prefer maximum standards should be set and benefits should be included in any building design

Affordable Housing Debate with mixed views on its high priority status:

- Mixed responses as to whether this is a Community Benefit
- Broad understanding of inner-urban affordability pressures
- Some recognition of the need for diverse housing options and the benefit of affordable housing in creating a vibrant, sustainable precinct that supports local businesses and community facilities
- Concerns about ongoing implementation and management
- Questions about appropriate locations needing to be identified
- Suggestions for merit-based (tenant) allocation

Specific Benefits and Prioritisation responses:

- Concerns about seniors' facilities being low priority - should be higher priority or at least equal priority as childrens playgrounds
- Suggestions to elevate importance of family spaces
- One respondent queries why a high quality children's playground is needed in the middle of a commercial centre, others suggest that children's playgrounds should be higher priority when high density living is being proposed.
- Some facilities are better located in surrounding areas with some preferences for distributed rather than centralized facilities
- The planting of mature trees should be a given/an expectation, not a bargaining tool.

Additional Benefits Suggested:

- Pet exercise areas
- Youth engagement spaces
- Public amenities (toilets, secure micro-mobility/bike parking)
- Women's refuge facilities
- Crime prevention measures
- Active Transport infrastructure
- Community Gardens/Urban Farming Opportunities
- use of front, side or rear setbacks to maximise tree canopy, contributing to the urban forest tree canopy goal and the quality of the public realm experience

OFFICER RESPONSE

It is important to recognise that Community Benefits are considered an acceptable incentive for negotiating development uplift within an identified Precinct. It is the Town's preference for any benefits to be provided in-kind, with the acceptance of any monetary contribution needing need to be negotiated and agreed with the Town. The framework provides a transparent mechanism to place a costed value on these negotiated development outcomes.

Following a review of the submission feedback, some modifications to the Community Benefit Priorities and the Framework Methodology are considered necessary to achieve greater flexibility and place-based responsiveness in negotiating public benefit outcomes, while ensuring that delivered infrastructure remains aligned with community priorities.

Affordable Housing:

Despite mixed community views in incentivising affordable housing supply, this item should remain a key component of the Community Benefits Framework for the following reasons:

- Albany Highway's role as an urban corridor relies on housing diversity
- Student housing supports nearby education institutions
- Supports community diversity
- Aligns with state housing strategies
- Supports local business workforce needs
- Enhances precinct activation and customer base
- Contributes to day/night economy
- Provides housing options for essential service workers and students
- Housing security for vulnerable groups and creates housing pathways

It is recommended to retain affordable housing within the Community Benefits Framework. The AHPSP addresses community concerns through:

- Clear definition of affordable housing types

- Quality design requirements
- Integration with market housing
- Focus on key worker and student housing
- Support for aging in place

The Local Government has a responsibility to support its whole community, including vulnerable groups. The provision of affordable housing through development incentives represents a balanced approach to addressing an essential community need.

Additional Benefits

In response to community feedback and to better align with the precinct's strategic objectives, additional categories of community benefit can be introduced to provide greater flexibility, support innovation, and allow development to respond to specific infrastructure or site-based opportunities. A broader set of benefit categories allows the Framework to remain outcome-driven, place-responsive, and aligned with community aspirations, while avoiding one-size-fits-all expectations. Additional Community Priority items will ensure that community benefit delivery can respond not just to bonus development potential, but to real precinct needs and context.

Monetary vs In-Kind Contributions:

The Town's preferred approach remains for community benefits to be delivered in-kind, on or adjacent to the site, where the benefit directly supports the liveability, safety, and functionality of the precinct. However, to provide flexibility, a monetary contribution should still be accepted where a formal agreement is in place with the Town to deliver an identified community need directed related to growth within the precinct. This will ensure that monetary contributions do not become a default application process or perceived development contribution.

Methodology:

In response to feasibility concerns and the cumulative impact of development contributions, the Community Benefits methodology has been reviewed with consideration given to the combined effect of POS, Public Art, and Community Benefit contributions, as well as the varied bonus development potential across different zones.

The previous standard 3% methodology risked applying disproportionate contributions relative to the development impact or value uplift. A more equitable approach is the adoption of a tiered contribution model, which adjusts based on the scale of bonus development sought.

Further refinement to the methodology distinguishes between height and plot ratio contributions:

- Height increases are more likely to result in exponential development yield and visual/amenity impacts;
- Plot ratio increases often deliver more modest uplifts in development capacity, particularly on constrained sites.

A tiered model applied to both height and plot ratio bonus development will ensure fairness across all site scales and contexts while maintaining the delivery of valued community benefits.

OFFICER RECOMMENDATION

Contributions like POS (land value-based), public art (1% of construction), and CBF (3% of bonus construction cost) can cumulatively impact feasibility, especially given escalating construction costs.

Integrating POS, Public Art and Community Benefit costs into development must be done in a way that remains fair and equitable for all development. In recognition of these impacts, the Community Benefits Strategy (CBS) has been reviewed and it is recommended it is modified to consider cumulative

feasibility impacts.

Revised Methodology:

- Introduce a tiered structure for CBF calculation methodology.
- 1% art shall apply to the base development costs only (given CBF applies to Bonus) for Mixed Use and Centre zone developments. Any art contribution above the required base calculation would be calculated towards Community Benefit.
- The 5% Cash-In-lieu POS contribution ensures the current shortfall in POS across the Precinct is addressed. It is the Town's intent to seek a maximum 5% towards POS. Anything above the 5% would be considered as Community Benefit.

CBF Calculation

The refined structure helps **balance development feasibility with community expectations**, aligning contribution requirements with the **actual scale of uplift** sought, and providing a **clear, transparent and scalable framework.** A reduced CBF rate helps to maintain equity and financial viability across a range of development scenarios.

Building Height

The 1.5% contribution value is seen to better support development feasibility (when combined with other contributions) and is more likely to encourage uptake of smaller bonus incentives that still deliver a public benefit. This applies to any initial bonus portion in development height up to 60% (i.e a 5-storey development seeking an additional 3 storey's).

The 3% value is then only applied to that portion of a development seeking additional heights greater than the initial 60% uplift. This recognises the greater development impact and need for corresponding public benefits.

Plot Ratio

The 1.5% contribution value is applied to the initial portion of bonus development where the proposed plot ratio does not exceed 60% above the primary control. This ensures that the contribution is proportionate to the value uplift, while supporting development feasibility and encouraging modest bonus uptake that still delivers measurable public benefit outcomes.

A reduced contribution rate of 0.5% then applies to the portion of bonus plot ratio that exceeds 60% and up to 150% above the primary control. This acknowledges that increases in plot ratio do not always result in exponential development yield or amenity impacts in the same way that height does, particularly for constrained or smaller sites.

To ensure fairness and reflect the diminishing value of higher plot ratio uplifts, a tiered contribution rate is also applied to bonus plot ratio development. Unlike height, plot ratio increases do not scale linearly with development value. Therefore, a decreasing contribution percentage is used to maintain feasibility for larger developments and avoid over-penalising smaller sites with higher plot ratio uplifts.

It is considered this approach reflects the principle of proportionality in SPP 3.6 (i.e. the contribution relates to the need for infrastructure arising from the development) and supports development feasibility without undermining community benefit delivery.

Where bonus height and plot ratio uplift exceeds 150% of the base primary control, any additional value of benefit to be provided will be subject to a negotiated agreement with the Town, based on

community need, infrastructure demand, public realm outcomes, and the specific characteristics of the site and proposal.

Proposed Modification

The revised CBF priorities and methodology ensure that while growth and investment are encouraged, they occur in a manner that is balanced, fair, and responsive to community expectations.

Modify Part One Section 4.0 Community Benefit as follows:

b. Provision of Community Benefit
Where under Part 4(a) a community benefit contribution is required, the contribution is to be provided in the form of one or more of the benefit categories outlined in Table 12 'Community Benefit Items', or an alternative contribution that delivers a measurable public benefit to the satisfaction of the Responsible Authority.

A community benefit must have a minimum monetary value generally in accordance with the formula as set out in the AHPSP Community Benefits Framework. The scale and form of the community benefit must be proportionate to the level of bonus development sought, based on the following tiered incentive model:

Bonus Height
(% x Total Contract Sum) x (number of storeys above the Primary standard ÷ Primary number of storeys)

i. Bonus development up to and including 60% above the base height:
   Value of benefit is calculated at 1.5%
ii. Bonus development greater than 60% and up to 150% above the base height:
   Value of benefit is calculated at 3%
iii. Bonus development exceeding 150% above the base height:
   Minimum value of benefit as per the above, with any additional contributions subject to negotiated agreement based on community need.

The **value of the community benefit must be calculated cumulatively**, with each tier applying in addition to the preceding tier(s) where relevant.

Bonus Plot Ratio
The value of the community benefit contribution for plot ratio uplift shall be calculated as:
(% × Total Contract Sum) × (Plot Ratio above the Primary Standard ÷ Total Plot Ratio)

i. Bonus development up to and including 60% above the base plot ratio:
   Value of benefit is calculated at 1.5%
ii. Bonus development greater than 60% and up to 150% above the base plot ratio:
   Value of benefit is calculated at 0.5%
iii. Bonus development exceeding 150% above the base plot ratio:
   Minimum value of benefit as per the above, with any additional contributions subject to negotiated agreement based community need.

The **value of the community benefit must be calculated cumulatively**, with each tier applying in addition to the preceding tier(s) where relevant.

A community benefit may be delivered through:

i. On-site works or in-kind contributions, directly associated with the development

ii. Off-site delivery, including improvements to adjacent laneways, streetscapes, or publicly accessible open space
iii. Monetary contribution, where a formal agreement is in place to fund specific, identified community benefit items that are directly linked to the development site.

Where a community benefit provides a direct financial benefit to the development, its monetary value as a community benefit shall be proportionately discounted or excluded from the above formula.

Modify Table 12: Schedule of Priority Public Benefits under Section Part 4.0 Community Benefits to include the following new Categories:

Table 12.

Category	Description
Smart Infrastructure Initiatives	Provision of smart infrastructure within public interface areas to enhance public safety and crime prevention within the precinct, including but not limited to: a. Smart lighting infrastructure with adaptive brightness and motion sensors, improving energy efficiency and public safety; b. Digital infrastructure supporting safety and emergency response technologies such as High Definition & Motion Sensing CCTV and Smart Poles.
Enhanced Waste Management Strategies	Implementation of advanced and community-focused waste management infrastructure or programs that exceed standard service levels, including but not limited to: a. Provision of communal waste and recycling hubs integrated within developments; b. Installation of smart bins with compaction and fill-level monitoring capabilities to optimise collection efficiency in public areas; c. Integration of neighbourhood-level organic waste composting infrastructure or drop-off points; d. Community programs or infrastructure promoting waste reduction, re-use, and circular economy practices; b. Support for precinct-wide waste collection systems in high-density mixed-use developments, including laneway-specific solutions.

Urban Greening	Landscaping and 'in-ground' deep soil zones exceeding primary requirements that: a. Integrate trees with other green infrastructure elements like water sensitive urban design b. contribute to broader biodiversity and urban greening of landscaped setbacks that contribute to the public realm experience c. include greening of laneways, verge planting, and street trees
Public Amenities (toilets, secure micro-mobility/bike parking)	Provision of publicly accessible amenities that support active transport and improve user comfort and convenience in the precinct, including but not limited to: a. Secure bicycle and micro-mobility parking infrastructure b. End-of-trip facilities including toilets, change rooms or lockers c. located in accessible, safe, and well-lit areas, and maintained for public use for the life of the development.
Sustainability	Provision of energy efficiency infrastructure and/or building performance that exceeds primary requirements including but not limited to: a. 6 star or Green Star rating or equivalent; b. ~~landscaping and deep soil zones exceeding primary requirements;~~ c. Site or District energy generation; d. ~~Recycling and composting infrastructure; and~~ e. Rainwater and greywater recycling.
Enhanced Heritage Retention and Restoration	Where development involves the retention and restoration of a High Contributory heritage frontage (including internal features), and it can be demonstrated the costs and design constraints of retention materially exceed the value of the permitted plot ratio transfer and standard incentives set out under Section 3.5.2, the development may be eligible for additional height or development bonuses. To qualify, the retention must: a. Be consistent with clause 3.5.2(b), including restoration of original features and fabric to a high standard; b. Be supported by a heritage impact assessment

	and feasibility report confirming the additional costs and constraints

Modify Appendix A Community Benefits Framework in line with the above and as follows:

i. Update to the Methodology Calculation of Community Benefit Liability with regards to the revised Bonus Height and Bonus Plot Ratio tiered approach;
ii. Update to the Treatment of Medium Density to include Smart Infrastructure Initiatives;
iii. Update the Public Benefit Contribution Categories to identify that cash-in-lieu or monetary contributions towards community benefits will require a formal agreement to be in place with the Town to identify the item and location of public benefit to be delivered.
iv. Update the Methodology Calculation of Community Benefit Liability to allow for a negotiated reduced contribution value where development consolidates two or more fragmented or undersized lots (<1,500sqm) and demonstrates improved planning, built form, and servicing outcomes that address:
    a. Servicing or access constraints (e.g., shared accessways, consolidated parking);
    b. Respond to topographical challenges through efficient design (e.g. reducing the need for retaining or excavation).
    c. Enhance overall streetscape character and the built form;
    d. Sensitive built form transitions where adjacent or adjoining an identified heritage place, including appropriate setbacks, sightlines and materiality.

Modify Part Two of the AHPSP as follows:

1.3.2.3 Local Planning Policies

Table 17: Local Planning Policy Context

LPP 29 The policy promotes community identity and character through public art contributions in developments, enhancing the visual and cultural landscape. This policy will continue to apply to *the base primary controls only for development zoned Mixed Use or Centre* ~~development~~ within the AHPSP area.

Attachment 'C'
Albany Highway Precinct Structure Plan: Schedule of Modifications

Ref No.	PLAN 1 MODIFICATIONS
1	Modify Legend Civic and Cultural to "**Civic and Community**"
2	Rename Future Mid-Tier Transport to "**High Frequency Public Transport Corridor**"
3	Modify Hordern Street Underpass from "Civic" to "**Road"**
4	Rename Mackie Street to Cargill Street - and Show Mackie Street on the sub-precinct boundary
5	Identify the Follow Street Names on the Plan 1: - Hordern Street - Harper Street - King George Street - Rathay Street - Gresham Street - Basinghall Street - Balmoral Street - Burlington Street
6	Show the additional Major Connections under Movement Network: - Berwick as District Distributor - Burswood & Teddington as District Distributor Roads - Duncan & McMillan as Major Connections (District Distributor) - Gloucestar & Sussex (portion of as Local Distributor) - Basinghall as District Distributor - Swansea Street (Local Distributor portion) with Street Name
7	Extend Hordern Street PSP Movement as per Boorloo Bridge (Identify Boorloo Bridge Location)
8	Identify Major Site "M1" in the Causeway as "Investigation Area"
9	Modify 1-5 Leonard ST to District Centre & Lots 11, 12 & 13 King George Street to Disctrict Centre
10	293-307 Albany Highway & 6 McMaster - Zoned part District Centre/Part Resi
11	Modify 7 to 19 Lichfield Street, 4 - 14 Lichfield Street, and 1A & 1B Axon Ave to Residential Zone
12	Modify 1 to 21 Merton Street to Residential zone
13	Modify Residential Portion of M6 MacMillan Precinct (Gloucester side) from Residential to Mixed Use
14	Modify: - 4 to 6 Willis Street to Residential - 2 Camberwell to Residential - 1 Patricia St to Residential

Attachment 'C'
Albany Highway Precinct Structure Plan: Schedule of Modifications

15	Modify 180 - 182 Hubert Sttreet to Residential
16	Identify "**East End"** Sub-Precinct Location
17	Change MRS Reserve Parks and Recreation to alternate green for better clarity against LPS2 POS Reserve
REPORT	
Ref. No	**AHPSP PART ONE: IMPLEMENTATION**
1	Update Summary Table as follows: - Update Gross Residential Density to 65du/ha (All Land including roads etc) - Include Residential Site Density as 80du per hectare (Land only Zoned Urban/Residential)
2	**Table and Figures - Referencing Errors throughout documen**t as follows: Part One: - Modify 3.5.7 Major Site Requirements to reference Table 11 - Modify Table 9 to state "Residential Design Codes" Part Two: In Text References to the following Tables: 1.3 Governance Context - 1.3 Governance Context: - 1.3.1 Environment (page 69) to reference Table 13 as follows: "*the precinct summarised in Table* ~~14~~ **13"** **-** 1.3.2 Planning (page 70) to reference Table 14 as follows: **"***Those relevant to Albany Highway are summarised in Table* ~~15~~ **14"** **-** 1.3.2.2 Local Planning Framework (page 73) to reference Table 15 as follows "*Key documents applicable to the Highway are set out in Table* ~~16~~ **15"** **-** 1.3.2.3 Local Planning Policies (page 75) as follows: "Key LPPs that apply to Albany Highway are summarised in Table ~~17~~ **16** - 1.3.3 Community and Economic Development (page 78) to reference Table 17: "Those relevant to Albany Highway are summarised in Table ~~18~~ **17"** - 1.3.4 Existing Plans and Projectsable (page 79) to reference Table 18 as follows: "*Key projects relevant to the AHPSP are summarised in Table* ~~19~~ **18"** 2.0 Opportunities and Constraints Analysis (page 80) Modify Reference to Table 19: "These are presented in Table ~~20~~ **19"** 6.0 Design Response - Objective 13 (Page 137) to Reference **Table 30**: Residential Yield Target by Sub-Precinct "A breakdown of these targets by sub-precinct is provided in Table ~~31~~ **30** - Objective 14 (page 139) to Reference Table 31: Ground Floor Creative Uses (pg 140): **"***Table* ~~*32*~~ ***31*** *provides further explanatory context*" - Building Typologies (page 150) "The distribution of typologies is shown in ~~Table 33~~.Figure 31. - Street Interface (page 151) "the rationale for the application of these frontages is detailed in Table 34 and illustrated on Figure ~~31~~ **32**

Attachment 'C'
Albany Highway Precinct Structure Plan: Schedule of Modifications

3	Modify 3.1.2 Creative and Cultural Uses as follows: **3.1.2 Creative and Cultural Uses** Development on land zoned as District Centre or Mixed Use which exceeds 1,000 sqm of net lettable floor area, must include a dedicated space that has been designed and fit-out to meet the needs of creative production and cultural activities. Creative and cultural uses include: i. The display, production or sale of art and craft; ii. Live entertainment, including the delivery or rehearsal of live or pre-recorded music, film, theatre, comedy, dance or other performance; iii. Office, commercial and light industrial floorspace suited to use by businesses in the design, media, film and technology sectors; and iv. Other cultural or creative activities as approved by the Town Ground floor creative and cultural uses must satisfy the relevant Frontage Type Design Requirements under Clause 3.4.4 The approved creative and cultural space must be maintained for the life of the development, with any proposed change of use limited to other creative and cultural activities as defined in this clause. To be eligible for a Bonus Plot Ratio or Bonus Height under Clause 3.4, the quantity of creative and cultural space must comply with the typologies for Creative Uses as set out in the Community Benefits Framework under Clause 4.0.
~~4~~	~~Remove Clause 3.2.1 POS Cash-in-lieu~~
5	MODIFY Element Objective (ii) under 3.4.6 'Sustainability and Environmental Performance' as follows: ii. Reduce energy consumption, water use and waste generation in new development through integrated design solutions
6	INSERT new Clause 3.4.7 Waste Management in Section 3.4 Development Requirements as per Attachment A 'Report on Submissions': **3.4.7 Waste Management for Commercial and Mixed Use** **Element Objectives** i. Ensure commercial waste management is considered in early design phases of development ii. Minimise impacts of waste collection on public realm and residential amenity iii. Support flexible and adaptable waste solutions that accommodate changing needs iv. Reduce waste-related vehicle movements on Albany Highway

	Development Requirements **a. Design Integration** Waste storage facilities shall be: i. Located to utilise laneway or secondary street access where available. ii. Screened from public view and integrated into the building design. iii. Adequately separated from surrounding sensitive uses through appropriate buffer treatments. **b. Waste Management Plan** A Waste Management Plan shall be submitted for the following Commercial or Mixed Use development proposals: i. Greater than 1,000sqm GFA ii. Proposing food and beverage uses Waste Management Plans shall address the following: i. **Separated waste streams for residential and commercial uses** ii. **Consolidated collection points where practical** iii. Demonstrate adequate separation between waste facilities and sensitive uses, e**nsuring commercial waste management does not impact residential amenity** iv. Demonstrate how waste collection vehicles can service/access the site v. Ensure noise/odour impacts are mitigated through design vi. Complement WSUD strategies through appropriate treatment of bin wash-down areas
7	Modify "Open Space (ref 3.5.4)" to "Public Space (Ref 3.5.4)" on Plan 2.1, Plan 2.2, Plan 2.3,Plan 2.4, Plan 2.5 & Plan 2.6. and Modify the Marker to inlcude a Green Dashed Border for ease of reference
8	Update Table 8. 'Frontage Type Design Requirement' under Clause 3.4.4 with the following and in accordance with Attachment A 'Report on Submissions':

Centre Frontage Type	
Component	**Requirements**
Primary Street	**d. Shopfront Design:** Incorporate design details including ~~stall-risers, sills, pilasters, and clerestory windows with a minimum 0.5m depth difference between building frontage and retail tenancy doorway~~ i. Base Treatments: Include a defined base element (such as stall-risers) up to between 0.45m-1.2m. ii. Vertical Articulation: Incorporate vertical elements (such as pilasters or similar architectural features) to define shopfront boundaries and create rhythm along the streetscape. These elements may be expressed through material changes, projections, or colour variations. iii. Window Treatment: Design windows with defined framing elements such as sills and consider incorporating upper glazing details (such as clerestory windows or transom panels) to reference traditional shopfront designs while meeting contemporary needs. iv. Entry Definition: Create a sense of arrival through recessed doorways or alternative design approaches that clearly identify entry points. A minimum 0.3m-0.5m depth difference between the primary building line and doorway is encouraged where site conditions permit, though alternative entry treatments that achieve similar place-making outcomes may be considered.
Secondary Street Frontage	f. ~~As per Centre Primary Frontage or Commercial Primary Frontage requirements~~ Should respond to the existing/future planned surrounding streetscape character and may incorporate Centre, Commercial or Residential Frontage Types on secondary streets.

Commercial Frontage Types

	<table><tr><th>Component</th><th>Requirements</th></tr><tr><td>Secondary Street Frontages</td><td>g. ~~As per Commercial Primary Frontage or Residential Primary Frontage requirements~~ Should respond to the existing/planned surrounding streetscape character and may incorporate Commercial or Residential Frontage Types on secondary streets</td></tr></table> <table><tr><th colspan="2">Residential Frontage Types</th></tr><tr><th>Component</th><th>Requirements</th></tr><tr><td>Primary Street, Pedestrian Link or POS Frontage</td><td>d: Setback area: Enhance entrances by incorporating features such as low walls, steps, and porches and landscaping. (INSERT NEW) Landscaping should aim to include in-ground deep soil zones and tree planting that enhances the public realm and contributes to urban greening as per the Town's Urban Forest Strategy.</td></tr></table>
9	Update Table 9 Parking and End of Trip Requirements' to Refer to SPP7.3 Residential Design Codes
10	Update 3.5.7 'Major Sites' and Table 11 Additional Major Site Requirements per the Officer Recommendation in Attachment A 'Report on Submissions, as follows: **Insert new Element Objective:** iv. Development on Major Sites must contribute to improved urban ecology <table><tr><th>Development Requirements</th></tr><tr><td>a. Major Site Requirements Any new development, extension to existing development or subdivision of land within a Major Site as designated in Part 3.3 and Figure 7 must satisfy the requirements of Table 12 through a Development Application and related approval conditions or the preparation of a Local Development Plan (LDP).</td></tr></table>

A Development Application or LDP for a Major Site must be accompanied by:

i. Schematic drawings and technical documentation necessary to demonstrate satisfaction of the requirements outlined in Table 12.
ii. A Frontage Hierarchy Plan that identifies and justifies the proposed Frontage Type for each street frontage in response to existing and desired future streetscape character
iii. Where bonus height or plot ratio is sought, a schedule of specific public benefits and associated staging plan outlining the timing for the delivery of nay such benefit shall be provided consistent with 4.0 Community Benefit.

The following development is exempt from these requirements:

i. Temporary uses or changes of use; and
ii. Internal modifications or minor extensions to existing development

Modify Table 11: Additional Major Site Development Requirements as follows:

Major Site	Requirements
M1 Causeway (Investigation Area)	
M2 Causeway	d. Development must provide ~~a public space on Albany Highway with~~ a minimum area of 1,500m^2 ~~a suitable area~~ of publicly accessible open space on Albany Highway in a location generally consistent with Part 3.3. e. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context.
M3 Victoria Park	d. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat

	creation, best practice water management, or other ecological enhancements appropriate to site context.	
M4 Victoria Park	d. Development must provide a mid-block publicly accessible open space with a minimum area of 1,500m^2, in a location generally consistent with Part 3.3. g. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context.	
M5 Central	b. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context. d. Development must ~~consolidate deep soil zones in a central mid-block location to~~ aim to maximize the contiguous surface area of landscaped space. Development is to provide consolidated deep soil zones that maximise the usable surface area for tree planting and landscaping. Where a central mid-block location is not practical, an alternative arrangement may be considered, provided it delivers equivalent or improved canopy coverage and landscape function to the satisfaction of the Town.	
M6 East Victoria Park	c. Development must provide two additional publicly accessible open spaces with a combined minimum area of 2,000m^2, in a location generally consistent with Part 3.3 e. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other	

		ecological enhancements appropriate to site context
	M7 East Victoria Park	c. Development must provide for unrestricted public ~~vehicular~~ access along Sussex St between Moorgate St and Albany Highway d. Development must provide a mid-block publicly accessible open space with a minimum area of 2,000m^2, in a location generally consistent with Part 3.3. e. Development must provide publicly accessible open space at Sussex St/Albany Highway corner in a location generally consistent with Part 3.3, ensuring retention of existing mature trees. i. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context
	M8 St James	d. Development must provide for a net gain in site biodiversity ~~and demonstrate best practice water mangement~~. This may include measures such as increased native planting, habitat creation, best practice water management, or other ecological enhancements appropriate to site context
~~11~~	Modify Section 4.0 Community Benefit and Update Table 12. Community Priorities as per Attachment A 'Report on Submissions: **b. Provision of Community Benefit** Where under Part 4(a) a community benefit contribution is required, the contribution is to be provided in the form of one or more of the benefit categories outlined in Table 12 'Community Benefit Items', or an alternative contribution that delivers a measurable public benefit to the satisfaction of the Responsible Authority.	

		A community benefit must have a minimum monetary value generally in accordance with the formula as set out in the AHPSP Community Benefits Framework. The scale and form of the community benefit must be proportionate to the level of bonus development sought, based on the following tiered incentive model: <u>Bonus Height</u> (% x Total Contract Sum) x (number of storeys above the Primary standard ÷ Primary number of storeys) i. Bonus development up to and including 60% above the base height: Value of benefit is calculated at 1.5% ii. Bonus development greater than 60% and up to 150% above the base height: Value of benefit is calculated at 3% iii. Bonus development exceeding 150% above the base height: Minimum value of benefit as per the above, with any additional contributions subject to negotiated agreement based on community need. The **value of the community benefit must be calculated cumulatively**, with each tier applying in addition to the preceding tier(s) where relevant. <u>Bonus Plot Ratio</u> The value of the community benefit contribution for plot ratio uplift shall be calculated as: (% × Total Contract Sum) × (Plot Ratio above the Primary Standard ÷ Base Plot Ratio) i. Bonus development up to and including 60% above the base plot ratio: Value of benefit is calculated at 1.5% ii. Bonus development greater than 60% and up to 150% above the base plot ratio: Value of benefit is calculated at 0.5% iii. Bonus development exceeding 150% above the base plot ratio: Minimum value of benefit as per the above, with any additional contributions subject to negotiated agreement based community need. The **value of the community benefit must be calculated cumulatively**, with each tier applying in addition to the preceding tier(s) where relevant. A community benefit may be delivered through:	

i. On-site works or in-kind contributions, directly associated with the development
ii. Off-site delivery, including improvements to adjacent laneways, streetscapes, or publicly accessible open space
iii. Monetary contribution, where a formal agreement is in place to fund specific, identified community benefit items that are directly linked to the development site.

Where a community benefit provides a direct financial benefit to the development, its monetary value as a community benefit shall be proportionately discounted or excluded from the above formula.

Modify Table 12: Schedule of Priority Public Benefits under Section Part 4.0 Community Benefits to include the following new Categories

Table 12.

Category	Description
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Enhanced Waste Management Strategies	Implementation of advanced and community-focused waste management infrastructure or programs that exceed standard service levels, including but not limited to: a. Provision of communal waste and recycling hubs

			integrated within developments; b. Installation of smart bins with compaction and fill-level monitoring capabilities to optimise collection efficiency in public areas; c. Integration of neighbourhood-level organic waste composting infrastructure or drop-off points; d. Community programs or infrastructure promoting waste reduction, re-use, and circular economy practices; b. Support for precinct-wide waste collection systems in high-density mixed-use developments, including laneway-specific solutions.	
		Urban Greening	Landscaping and 'in-ground' deep soil zones exceeding primary requirements that: a. Integrate trees with other green infrastructure elements like water sensitive urban design b. contribute to broader biodiversity and urban greening of landscaped setbacks that contribute to the public realm experience c. include greening of laneways, verge planting, and street trees	
		Public Amenities (toilets, secure micro-mobility/bike parking)	Provision of publicly accessible amenities that support active transport and improve user comfort and convenience in the precinct, including but not limited to: a. Secure bicycle and micro-mobility parking infrastructure b. End-of-trip facilities including toilets, change rooms or lockers c. located in accessible, safe, and well-lit areas, and	

	maintained for public use for the life of the development.	
Sustainability	Provision of energy efficiency infrastructure and/or building performance that exceeds primary requirements including but not limited to: a. 6 star or Green Star rating or equivalent; b. ~~landscaping and deep soil zones exceeding primary requirements;~~ c. Site or District energy generation; d. ~~Recycling and composting infrastructure; and~~ e. Rainwater and greywater recycling.	
Enhanced Heritage Retention and Restoration	Where development involves the retention and restoration of a High Contributory heritage frontage (including internal features), and it can be demonstrated the costs and design constraints of retention materially exceed the value of the permitted plot ratio transfer and standard incentives set out under Section 3.5.2, the development may be eligible for additional height or development bonuses. To qualify, the retention must: a. Be consistent with clause 3.5.2(b), including restoration of original features and fabric to a high standard; b. Be supported by a heritage impact assessment and feasibility report confirming the additional costs and constraints	

Attachment 'C'
Albany Highway Precinct Structure Plan: Schedule of Modifications

	3.3 SUB-PRECINCT CONTROLS
13	Modify Heritage Marker from "grey hatch" to "pink triangle" on all Sub-Precinct Plans
14	Modify Open Space Marker to include Green Boundary on all Sub-Precinct Plans
	CAUSEWAY (PLAN 2.1)
15	Modify Cnr Geddes & Albany Highway (181 Albany Highway) to ~~CW3~~ CW2
16	Clearly identify Primary School site (with yellow Public Purpose underlay)
17	Change Lot 2 Cargill Street to CW3 - Commercial Frontage
18	Show M1 as an Investigation Area
	VICTORIA PARK (PLAN 2.2)
19	Modify King George Car Park (1-5 Leonard ST) to VP1
20	Remove Heritage Marker from 15 Leonard Street - Marker to be applied to 11-13 Leonard Street only
	CENTRAL PLAN (2.3)
21	Modify Merton Street Resi Zone (as updated on Plan1) from 'CE2 Commercial Frontage' **to 'CE1 Residential Frontage'** (for Lots 23, 341,340, 339, 338, 337, 402, 403, 404 & 333 Merton Street)
22	Modify Lots corner Kent Street & Alb. Hwy (657-671 Alb Hwy) from CE2 **to CE3 Commercial**
23	Insert missing CE3 notation from corner of McMillan and Albany Highway (Mixed Use zone)
24	Remove Heritage Marker from 3 Tuam Street
25	Modify lots bounded by McMillan, Temple and Hordern Streets (18 – 22 McMillan Street, 138-146 Hordern Street & 7 Temple Street) from CE2 'Commercial' **to CE1 Residential**
26	Modify Lot 9(8) Albany Highway, bound by Hordern Street, Rathay Street and Manchester St from CE1 'Commercial' **to CE2** Commercial (Mixed Use)
27	Modification of 7 Lichfield Street to 19A Lichfield Street (inclusive) (Lots 1, 301, 133, 3 & 1) from CE3 'Commercial' **to CE1 'Residential'** (as per Plan1 Modification)
28	Modification of 4 - 14 Lichfield Street (lots 501, 174, 3, 2, 5) & 1, 1A & 1B Axon Ave (Lots 1, 2 & 3) from CE2 'Commercial' **to CE1 'Residential'** (as per Plan 1 Modification)
	EAST VICTORIA PARK (PLAN 2.4)
29	Modify Sussex Street ROW to "Public Place"
30	Modify **e. Building Height'** for **M7** to **10 Storey's** under Table 4. East Victoria Park

	M7 | **e. Building Height (storey's)** | **10**
	EAST END (PLAN 2.5)
31	Remove Heritage Markers from Lots 932 & 934 Albany Highway & 974 Albany Highway
32	Update Plan 2.5 and Table 5 to Include New EE3 for Lots on the northern side of Albany Highway (bounded by Terminus Lane, Dane St and Somerset, (Modify 913 – 974 Albany Highway & 2 Dane Street from EE2 Mixed Use **to EE3 Mixed Use**) as follows:



		EE3
a.	**Zoning**	Mixed Use
b.	**R-Code**	R-AC0
c.	**Plot Ratio**	2.0
d.	**Bonus Plot Ratio**	2.5
e.	**Building Height** (storeys)	5
f.	**Bonus Building Height** (storeys)	8
g.	**Podium Height** (storeys)	3
h.	**Street Setback** a) to podium	Nil[2]
	b) above podium height	4.0m
i.	**Side Setback** a) to podium	Nil
	b) above podium height	4.0m
j.	**Rear Setback** a) to podium	Nil
	b) above podium height	6.0m
k.	**Frontage Type** (Ref. 3.4.4)	Commercial

Attachment 'C'
Albany Highway Precinct Structure Plan: Schedule of Modifications

33	Modification of 4 - 6 Willis Street, 1 Patricia Street and Camberwell Street (that do not front Albany Highway) from EE2 Commercial **Frontage to EE1 Residential Frontage**
	ST JAMES (PLAN 2.6)
34	Modification of 159 – 173 fronting Hubert Street from SJ2 Commercial Frontage to **SJ1 'Residential'** Frontage
35	Modify 4 - 6 Willis Street, 2 Camberwell St and 1 Patricia Street (that do not front Albany Highway) from 'EE2 Commercial Frontage' to 'EE1 Residential Frontage'
	4.0 COMMUNITY BENEFIT
~~**36**~~	~~Modify 4.0 'Development Requirements' Clause b. as per the Officer Recommendation in Attachment A 'Report on Submissions'~~ ~~**b. Provision of Community Benefit**~~ ~~Where under Part 4(a) a community benefit contribution is required, the contribution is to be provided in the form of one or more of the benefit categories outlined in Table 12 'Community Benefit Items', or an alternative contribution that delivers a measurable public benefit to the satisfaction of the Responsible Authority.~~ ~~A community benefit must have a minimum monetary value generally in accordance with the formula as set out in the AHPSP Community Benefits Framework. The scale and form of the community benefit must be proportionate to the level of bonus development sought, based on the following tiered incentive model:~~ ~~Bonus Height~~ ~~(% x Total Contract Sum) x (number of storeys above the Primary standard ÷ Primary number of storeys)~~ ~~iv. Bonus development up to and including 60% above the base height:~~ ~~Value of benefit is calculated at 1.5%~~ ~~v. Bonus development greater than 60% and up to 150% above the base height:~~ ~~Value of benefit is calculated at 3%~~ ~~vi. Bonus development exceeding 150% above the base height:~~ ~~Minimum value of benefit as per the above, with any additional contributions subject to negotiated agreement based on community need.~~

	~~The **value of the community benefit must be calculated cumulatively**, with each tier applying in addition to the preceding tier(s) where relevant.~~ ~~Bonus Plot Ratio~~ ~~The value of the community benefit contribution for plot ratio uplift shall be calculated as:~~ ~~(% × Total Contract Sum) × (Plot Ratio above the Primary Standard ÷ Base Plot Ratio)~~ ~~iv. Bonus development up to and including 60% above the base plot ratio:~~ ~~Value of benefit is calculated at 1.5%~~ ~~v. Bonus development greater than 60% and up to 150% above the base plot ratio:~~ ~~Value of benefit is calculated at 0.5%~~ ~~vi. Bonus development exceeding 150% above the base plot ratio:~~ ~~Minimum value of benefit as per the above, with any additional contributions subject to negotiated agreement based community need.~~ ~~The **value of the community benefit must be calculated cumulatively**, with each tier applying in addition to the preceding tier(s) where relevant.~~ ~~A community benefit may be delivered through:~~ ~~iv. On-site works or in-kind contributions, directly associated with the development~~ ~~v. Off-site delivery, including improvements to adjacent laneways, streetscapes, or publicly accessible open space~~ ~~vi. Monetary contribution, where a formal agreement is in place to fund specific, identified community benefit items that are directly linked to the development site.~~ ~~Where a community benefit provides a direct financial benefit to the development, its monetary value as a community benefit shall be proportionately discounted or excluded from the above formula.~~
~~37~~	~~Modify Table 12 Community Priorities as per the Officer Recommendation in Attachment A 'Report on Submissions':~~ ~~**Category**~~ | ~~**Description**~~

~~**Smart Infrastructure Initiatives**~~	~~Provision of smart infrastructure within public interface areas to enhance public safety and crime prevention within the precinct, including but not limited to:~~ ~~a. Smart lighting infrastructure with adaptive brightness and motion sensors, improving energy efficiency and public safety;~~ ~~c. Digital infrastructure supporting safety and emergency response technologies such as High Definition & Motion Sensing CCTV and Smart Poles.~~	
~~**Enhanced Waste Management Strategies**~~	~~Implementation of advanced and community-focused waste management infrastructure or programs that exceed standard service levels, including but not limited to:~~ ~~a. Provision of communal waste and recycling hubs integrated within developments;~~ ~~b. Installation of smart bins with compaction and fill-level monitoring capabilities to optimise collection efficiency in public areas;~~ ~~c. Integration of neighbourhood-level organic waste composting infrastructure or drop-off points;~~ ~~d. Community programs or infrastructure promoting waste reduction, re-use, and circular economy practices;~~ ~~e. Support for precinct-wide waste collection systems in high-density mixed-use developments, including laneway-specific solutions.~~	
~~**Urban Greening**~~	~~Landscaping and 'in-ground' deep soil zones~~	

		~~exceeding primary requirements that:~~ ~~d. Integrate trees with other green infrastructure elements like water sensitive urban design~~ ~~e. contribute to broader biodiversity and urban greening of landscaped setbacks that contribute to the public realm experience~~ ~~f. include greening of laneways, verge planting, and street trees~~	
	~~**Public Amenities (toilets, secure micro-mobility/bike parking)**~~	~~Provision of publicly accessible amenities that support active transport and improve user comfort and convenience in the precinct, including but not limited to:~~ ~~d. Secure bicycle and micro-mobility parking infrastructure~~ ~~e. End-of-trip facilities including toilets, change rooms or lockers~~ ~~f. located in accessible, safe, and well-lit areas, and maintained for public use for the life of the development.~~	
	~~**Sustainability**~~	~~Provision of energy efficiency infrastructure and/or building performance that exceeds primary requirements including but not limited to:~~ ~~a. 6 star or Green Star rating or equivalent;~~ b. landscaping and deep soil zones exceeding primary requirements; ~~c. Site or District energy generation;~~ d. Recycling and composting infrastructure; and ~~e. Rainwater and greywater recycling.~~	
	~~**Enhanced Heritage Retention**~~	~~Where development involves the retention and~~	

	~~**and Restoration**~~	~~restoration of a High Contributory heritage frontage (including internal features), and it can be demonstrated the costs and design constraints of retention materially exceed the value of the permitted plot ratio transfer and standard incentives set out under Section 3.5.2, the development may be eligible for additional height or development bonuses.~~ ~~To qualify, the retention must:~~ ~~c. Be consistent with clause 3.5.2(b), including restoration of original features and fabric to a high standard;~~ ~~d. Be supported by a heritage impact assessment and feasibility report confirming the additional costs and constraints~~
	AHPSP PART TWO: EXPLANATORY	
38	**Modify 1.3.2.3**: - Remove reference to LPP24 (Policy has been revoked) - Modify Policy Analysis with regards to LPP23 to state : This policy will continue to apply to development within the AHPSP, any inconsistency between this Policy and the AHPSP, the AHPSP shall prevail. ~~- Modify LPP 29 Policy Analysis to state:~~ **LPP 29** The policy promotes community identity and character through public art contributions in developments, enhancing the visual and cultural landscape. This policy will continue to apply ~~to the base primary controls only for development zoned Mixed Use or Centre development~~ within the AHPSP area.	
39	Modify Table 23 to show Merton Street Sump as Biodoversity Function	
40	Update Plans in Section 7.3 of Part Two as per endorsed Built Form Strategy	
41	Update Solar Modelling images in Section 7.0 for each sub-precinct	
42	Update Figure 32. Street Interface Typologies to reflect modifications to the PSP and Plan1 and Plans 2.1 through 2.6	

43	Insert the following "Precinct-Wide Implementation and Parallel Actions" under Part 2, Section 7.0 Future of the Precinct - as per Attachment A 'Report on Submissions:

TABLE 41. PRECINCT-WIDE IMPLEMENTATION

Objective	Action	ToVP Strategy
Active Transport Implementation Plan	Design and deliver a network of safe cycling routes parallel to Albany Highway Deliver a range of improvements to the Town's bicycle network to ensure cycling is an attractive mode of transport for all ages and abilities. Implement key "Station Street" upgrades as per the AHPSP Transport Strategy to support enhanced pedestrian and cyclist movements Integrated Transport Strategy	Integrated Transport Strategy - Bike Network Sub-Program
	Implement strategic pedestrian crossings at key crossings	Integrated Transport Strategy Public Places Program
	Create secure end-of-trip facilities at key locations	AHPSP Community Benefits Integrated Transport Strategy

		Planning Program
	Develop a wayfinding strategy for pedestrians and cyclists	Integrated Transport Strategy Public Places Program
Public Realm Enhancement	Develop and implement Public Realm Design Guidelines	Planning Program Public Places Program
	Deliver Albany Highway Greening via the Urban Forest Strategy	Urban Forest Strategy
	Implement a Public Art Strategy specific to Albany Highway's character areas	Public Places Program
	Implement water sensitive urban design elements in all public realm projects	Public Places Program
Parking Management	Draw upon various methods including existing and emerging technologies for managing parking demand in the Town's activity centres. Maximise the benefits of changes in technology to achieve the vision of the Town's transport network	Integrated Transport Strategy Parking Management Strategy
	Incorporate parking into broader Wayfinding Strategy for the Town	Integrated Transport Strategy Public Places Program
	Invest in upgrades to consolidated public parking facilities at strategic locations near Albany Highway activity nodes: The following off-street car parks are	Integrated Transport Strategy Parking Management Strategy

	managed by the Town: • Hubert Street Off-street Car Park (free) • King George Street Off-street Car Park (paid)	
	Explore innovative and appropriate kerbside management initiatives - Create dedicated zones for rideshare / pickup with strict time limits	Integrated Transport Strategy Parking Management Strategy Street Operations
	Develop parking/transport partnerships with major businesses to share private parking facilities during off-peak hours	Planning Program Integrated Transport Strategy Economic Development Strategy
Safety and Security Enhancement	Install improved, energy-efficient street lighting focused on pedestrian areas and laneways	AHPSP Community Benefit Public Places Program Economic Development Strategy Street Operations
	Develop a night-time economy safety strategy with local businesses	Economic Development Strategy
	Activate key public spaces to increase passive surveillance	Economic Development Strategy
Waste Management	Develop precinct-specific waste management guidelines for new developments	Planning Program Operations

		Identify and implement consolidated waste collection points for fine-grain retail areas	Planning Program Public Places Program Street Operations
		Include Community Benefits for innovative waste systems within major activity nodes	AHPSP Community Benefits Planning Program
		Establish designated service/collection times to minimize pedestrian disruption	Street Operations Technical Services Parking Rangers

	AHPSP APPENDICES (SUPPORTING STRATEGIES)
44	~~Update Community Benefits Strategy as per Modifications to Part One 4.0 Community Benefits (refer Attachment A 'Report on Submissions'):~~ ~~i. Update to the Methodology Calculation of Community Benefit Liability with regards to the revised Bonus Height and Bonus Plot Ratio tiered approach;~~ ~~ii. Update to the Treatment of Medium Density to include Smart Infrastructure Initiatives;~~ ~~iii. Update the Public Benefit Contribution Categories to identify that cash-in-lieu or monetary contributions towards community benefits will require a formal agreement to be in place with the Town to identify the item and location of public benefit to be delivered.~~ ~~iv. Update the Methodology Calculation of Community Benefit Liability to allow for a negotiated reduced contribution value where development consolidates two or more fragmented or undersized lots (<1,500sqm) and demonstrates improved planning, built form, and servicing outcomes that address:~~ ~~a. Servicing or access constraints (e.g., shared accessways, consolidated parking);~~ ~~b. Respond to topographical challenges through efficient design (e.g. reducing the need for retaining or excavation).~~ ~~c. Enhance overall streetscape character and the built form;~~ ~~d. Sensitive built form transitions where adjacent or adjoining an identified heritage place, including appropriate setbacks, sightlines and materiality.~~

State Planning Policy 7.2: Precinct Design assessment

ATTACHMENT 8

Design Element 1: Urban Ecology		
Objective	**Considerations**	**Assessment**
O1.1 To protect, enhance and respond to the ecological systems of the precinct.	C1.1.1 Identify and respond to the topography and landscape of the precinct and its surrounding area.	Identified in PSP Part 2 1.1.4. Topography is considered in built form modelling e.g. the introduction of EE3.
	C1.1.2 Identify opportunities to develop and/or enhance the extent, connectivity and quality of the green network.	The plan identifies priority greening initiatives along Albany Highway and mandates protective measures for significant trees to ensure their retention during major site redevelopments. Included in draft Public Realm Strategy and in community benefit framework.
	C1.1.3 Consider the total water cycle and how any proposed management responds to the hydrological system, the site and its development context.	This has been considered through the Albany Highway Water Management Strategy, which identifies hydrological features, drainage systems, groundwater, and potable and non-potable water needs. Development Water Management Reports are required for developments through the PSP Part 1 s. 3.4.6 f.
	C1.1.4 Identify opportunities to support habitat protection and enhancement in the precinct.	Identified through draft Public Realm Strategy and implemented through PSP objective ii: *Protect, enhance and celebrate Albany Highway's limited ecological features, with an aim of reconnecting the Highway as a wildlife corridor with the Swan River habitat.*
O1.2 To enhance sense of place by recognising and responding to Aboriginal, cultural and built heritage.	C1.2.1 Acknowledge and incorporate local Aboriginal knowledge, concepts and stories of place.	Establishes Aboriginal land knowledge as a key objective and identified opportunities to protect, restore and celebrate significant natural features and identifies specific sites identified through consultation with Mindeera Advisory Group.
	C1.2.2 Consider and integrate the cultural heritage of the area into the precinct design.	The Plan emphasises the need for a consistent and intentional approach to public realm design including materiality and planting palette to reinforce the precincts cultural identity and sense of place, including encompassing cultural elements significant to Albany Highway and its community.
	C1.2.3 Identify and incorporate unique built features, including built heritage, into precinct design.	Identified in 3.5.1 Heritage Places, with the element objective being: *Protect and reinforce the heritage value of the Highway's heritage buildings and places while encouraging adaptive reuse and restoration.* This is implemented in the PSP through s. 3.5.2 Contributory Frontages and S.3.5.1 Heritage Places.
O1.3 To reduce the environmental and climate change impacts of the precinct development.	C1.3.1 Identify opportunities to retain existing trees and enhance the tree canopy through new planting.	The plan identifies priority greening initiatives along Albany Highway and mandates protective measures for significant trees to ensure their retention during major site redevelopments. Additionally, s.3.4.6 e. extents tree canopy and deep soil area requirements in the R-Codes to non-residential development. Tree planting is included in the community benefit framework as an alternative pathway, but this is proposed for removal as discussed in the planning report.
	C1.3.2 Consider the influence of the precinct design on energy demand and review the potential for	No precinct scale energy generation, distribution and storage proposed, but energy efficiency requirements are included in PSP s. 3.4.6 including all

	precinct scale energy generation, distribution and storage.	development not being allowed any gas connection, being required to achieve a NatHERs requirement one star above the minimum under the NCC and a minimum Green Star requirement of either 4 or 5 depending on the size of the development.
	C1.3.3 Prioritise consideration of waste management at the relevant scale in line with low-waste, circular economy objectives.	No waste management plan prepared, but element objective 3.4.6 ii. is: *Reduce energy consumption, water use and waste generation in new development.* The Sustainability Strategy 8.0 notes this as a gap but notes minimum sustainability certification requirements will allow this to be captured. Town Part 1 modification no. 6 includes Waste Management criteria into the PSP, and this is supported.
	C1.3.4 Promote water conservation including water reuse and recycling.	Captured under cl. 3.4.6 f. which requires a development water management report or local development plan being submitted with any DA demonstrating compliance with the Albany Highway Water Management Strategy.
	C1.3.5 Evaluate the performance of precinct development proposals against leading Australian sustainability performance standards.	This has occurred through the Sustainability Strategy. Proposed sustainability requirements are generally consistent with best practice.

State Planning Policy 7.2: Precinct Design assessment

Design Element 2: Urban Structure		
Objective	**Considerations**	**Assessment**
O2.1 To ensure the pattern of blocks, streets, buildings and open space responds and contributes to a distinct, legible precinct character.	C2.1.1 Design the urban structure in response to the existing or intended future precinct character.	Addressed via diverse development requirements tied to the character of six distinct sub-precincts, protections for fine-grain heritage and shopfront typologies, high density development concentrated on major sites, and building heights and typologies calibrated to support activity and transition sensitively to surrounding residential areas.
	C2.1.2 Create blocks and lots of the appropriate size, proportion and orientation to support the intended character and functions of the precinct.	Subdivision is restricted to appropriate densities for grouped dwellings, but lots are already highly fragmented. PSP s. 3.2 – subdivision for amalgamation may be appropriate.
	C2.1.3 Identify existing key landmarks to create view corridors and highlight destinations and focal points within the urban structure.	Yes, implemented through major sites and Albany highway streetscape upgrades.
O2.2 To promote an urban structure that supports accessibility and connectivity within and outside the precinct.	C2.2.1 Design a legible, interconnected and functional urban structure that supports ease of movement to and through the precinct.	Addressed via Albany highway streetscape upgrades and pedestrian orientation, cycling infrastructure enhancements, improving linkages to train stations and mode shift. Noting that existing cycling infrastructure is poor, but public transport access is good.
	C2.2.2 Develop an urban structure that gives priority to safe walking and cycling, with a focus on achieving 400m and 800m walkable catchments around nodes of activity and public transport hubs.	
	C2.2.3 Identify opportunities to create new or enhance existing connections to and through the precinct.	Addressed via cycling infrastructure enhancements and improving linkages to train stations.
O2.3 To ensure the urban structure supports the built form, public realm and activity intended for the precinct.	C2.3.1 Provide block configurations that support the function and amenity of the precinct.	Lots are existing and highly fragmented, limiting capacity to rearrange lot configuration. However, the PSP does include restrictions on subdivision at undesirably low densities to prevent further fragmentation.
	C2.3.2 Design lots (size and configuration) that can support intended retail, commercial and mixed use development.	
	C2.3.3 Design lot layouts to respond to local climate, topography and existing natural features, while supporting intended built form.	
	C2.3.4 Design an urban structure that can accommodate lots for large format uses outside the precinct core where desired.	
	C2.3.5 Create an urban structure that contributes to the development of accessible, safe and well located public spaces.	
O2.4 To ensure an adaptable urban structure that can respond to and facilitate	C2.4.1 Develop a street block pattern that can accommodate change over time.	Lots are existing, very limited capacity to rearrange street block configuration.
	C2.4.2 Identify long-term strategic opportunity/catalyst sites and detail how they are to be protected from under-development.	Addressed via Major Site provisions, minimum building heights and subdivision restrictions.

change within a precinct.	C2.4.3 Illustrate the relationship between the proposed urban structure and precinct staging	Staging is outlined through the implementation timeframe for each sub-precinct in the PSP Part 2 section 7.

State Planning Policy 7.2: Precinct Design assessment

Design Element 3: Public Realm		
Objective	**Considerations**	**Assessment**
O3.1 To ensure the public realm is designed to promote community health and wellbeing.	C3.1.1 Provide a range of public spaces that support and contribute to the community's health and wellbeing, in response to identified community need.	The PSP identifies the conversion of existing public spaces from paved areas to greenspaces in response to community input. Additionally, upgrade of drainage sumps and delivery of other public spaces through community benefit framework.
	C3.1.2 Design public spaces for multiple uses, to efficiently accommodate a range of functions and activities.	Use of Albany Highway itself for temporary events with a shared space intervention Figure 25 and Figure 26. Also considered as part of Major Space Typology design in the draft Public Realm Strategy. Can be implemented through community benefit framework.
	C3.1.3 Consider year-round user comfort in the design of the public realm.	Increase vegetation, seating, and recreational amenities for new open space, sumps and through Major Sites and community benefit framework.
O3.2 To enable local character and identity to be expressed in public realm design to enhance sense of place.	C3.2.1 Public realm design should incorporate local natural topography, habitats and vegetation to enhance sense of place.	Effective use of the drainage sumps. Increased provision of street trees through community benefit (or street tree provision requirement introduced through DPLH modification).
	C3.2.2 Demonstrate appropriate interpretation of Aboriginal knowledge, history and heritage within public realm design.	The PSP Part 1 cl. 3.3.1 f. states the following as an objective for the Causeway sub-precinct: *Facilitate public realm and biodiversity improvements to all sub-precinct streetscapes and appropriately recognise and respond to the historic location of Mindeera Spring and Aboriginal Lands Trust land.* Additionally, the PSP Part 2 Table 21 includes the following: *The Plan emphasises the need for a consistent and intentional approach to public realm design including materiality and planting palette to reinforce the precinct's cultural identity and sense of place, including encompassing cultural elements significant to Albany Highway and its community.* Also see pg. 50 of the draft Public Realm Strategy.
	C3.2.3 Design the public realm to reflect the heritage significance of the precinct and support the precinct's intended character and identity.	The Plan emphasises the need for a consistent and intentional approach to public realm design including materiality and planting palette to reinforce the precincts cultural identity and sense of place, including encompassing cultural elements significant to Albany Highway and its community. This is implemented in the PSP through s. 3.5.2 Contributory Frontages and S.3.5.1 Heritage Places, and public realm design in draft Public Realm Strategy.
O3.3 To ensure that key environmental	C3.3.1 Integrate environmental features of the precinct within the public realm.	Improving access and reducing barriers to existing greenspaces, including Read Park, Asquith Reserve and Memorial Gardens.

State Planning Policy 7.2: Precinct Design assessment

attributes are protected and enhanced within the public realm.	C3.3.2 Ensure the public realm contributes to creating and/or improving the urban tree canopy within the precinct and its surrounds.	Albany Highway streetscape to be modified to prioritise pedestrians, which include tree planting. Landscaping requirements are outlined in PSP Part 1 cl. 3.4.6, with additional landscape enhancement being a community benefit listed in cl. 4.0. Also included in major site provisions and DPLH modification introducing street tree provision.
	C3.3.3 Incorporate waterwise species into the green network and public realm where appropriate.	This is not specifically mentioned in the PSP, but the Water Management Strategy includes an objective requiring: *Improve amenity and liveability of urban landscapes, including blue-green linkages.*
	C3.3.4 Incorporate water sensitive urban design into the public realm.	Objective 8 of the PSP includes the upgrade of Albany Highway streetscape to introduce additional vegetation and water sensitive urban design features. Major space and streetscape typologies in the draft Public Realm Strategy reference water sensitive urban design, which can be implemented through community benefit.
	C3.3.5 Provide opportunities for urban greening, such as community gardens and rooftop gardens.	3.4.6 d. requires development to provide a minimum 50% of site area as green roof, rooftop agriculture and/or photovoltaic array to reduce the urban heat island effect. It is recommended this requirement is removed as it can be addressed via R-Codes Vol. 2 requirements as discussed in the planning report.
O3.4 To ensure the public realm is designed to be inclusive, safe and accessible for different users and people of all ages and abilities.	C3.4.1 Develop legible routes and intersections, connected by identifiable landmarks to aid navigation through the public realm.	Yes, considered through the implementation of major sites as landmarks and improving walkability. See PSP 2.0 objective ix.
	C3.4.2 Accommodate and promote inclusion and accessibility for people of all ages and abilities in the public realm.	Universal design is a key principle for streetscape and major space design outlined in the draft Public Realm Strategy. This would be implemented partially through community benefit under Public Realm Enhancement.
	C3.4.3 Design the public realm according to the principles of Crime Prevention through Environmental Design (CPTED).	Integrated into PSP Part 1 3.4.4 – element objective 1. Also, for Centre frontage Table 8- requires 60% of ground floor comprising clear vision glass.
O3.5 To ensure public realm design is integrated with the built form, movement network and landscape of the precinct.	C3.5.1 Design well-proportioned and appropriately scaled public spaces and streets.	While public spaces and streets are existing, the PSP Part 2 Figure 25 outlines Space Reallocation Opportunities for Albany Highway (in accordance with the draft Public Realm Strategy) to increase pedestrian orientation.
	C3.5.2 Consider and enhance relationships between the public realm and surrounding land uses and activities to create mutual benefit.	This has been considered in the strategic placement of shared space streetscape typologies shown in the draft Public Realm Strategy pg. 14. Also noted in the PSP Part 2 Figure 25. This is also considered through the major site requirements. For example, the PSP Part 1 Table 11 M4 requires the development of an internal public realm network and a mid-block publicly accessible private open space.

	C3.5.3 Design the public realm as a series of well connected, legible spaces.	Proposed modification to Albany Highway streetscape is designed to improve connectivity of public spaces. See discussion in PSP Part 2 Objective 8 as well as the draft Public Realm Strategy Suggested Location Examples pg. 7/8.
	C3.5.4 Integrate services and utilities to minimise impact on function and amenity of public spaces, streets and surrounding built form.	Integrated into PSP Part 1 for Centre frontage type Table 8.

State Planning Policy 7.2: Precinct Design assessment

Design Element 4: Movement		
Objective	**Considerations**	**Assessment**
O4.1 To ensure the movement network supports the function and ongoing development of the precinct.	C4.1.1 Address the current and future access needs of the precinct through an integrated transport planning and land use assessment process.	This is addressed through the PSP and the associated Mobility and Access Report, which considers the relationship between land use and transport.
	C4.1.2 Design the movement network in balance with place considerations, local access and neighbourhood/ district/regional access requirements for travel to, through and around the precinct.	The Mobility and Access Report section 4 states the following: *The corridor has been split into six sub precincts. The proposed cross sections and traffic calming interventions seek to respond to the unique place characteristics of each sub-precinct.* Additionally, the Mobility and Access Report cl. 3.1.2 considers this by noting the presence of parallel traffic routes that are able to absorb additional traffic from the traffic calming interventions proposed for Albany highway.
	C4.1.3 Develop a movement network that enables convenient and comfortable travel and access for users of all ages and abilities.	The PSP does note under objective 9 the following: *Rates of walking, cycling and public transport usage are relatively low despite good access in the precinct. Further investment is therefore required to encourage and enable people of all ages and abilities to safely and conveniently adopt these alternative transport options.* The PSP area has no cycling infrastructure along Albany Highway and it is unlikely this could be retrofitted. However, the area does contain some cycling infrastructure on nearby roads, much of which needs updating as per DoT submission. Importantly, the Town identifies Station Access Streets for upgraded cycling infrastructure, connecting the precinct to the nearby trainline.
	C4.1.4 Design transport infrastructure that provides a safe network for all users.	
O4.2 To ensure a resilient movement network that prioritises affordable, efficient, sustainable and healthy modes of transport.	C4.2.1 Prioritise walking, cycling, public transport and shared mobility, to minimise car dependency.	Traffic calming interventions and improved bus infrastructure are proposed to address this through the draft Public Realm Strategy, with implementation partially coming through provision of Community Benefit Framework.
	C4.2.2 Establish mode share targets for the precinct.	The PSP is consistent with this, with a proposed mode share outlined in Table 26, increasing car use from 69% to 40% by 2031 within the precinct, with significant increases to train, bus, bicycle and walking access.
O4.3 To enable a range of transport choices that meet the needs of residents, workers and visitors.	C4.3.1 Prioritise provision of direct and legible pedestrian routes within the precinct and to adjacent areas.	The PSP recommends a number of treatments which will enhance the safety and comfort of pedestrians using Albany Highway including wider footpaths, lower traffic speeds, additional crossing points and more street trees. The traffic management is intended to take advantage of parallel roads (Berwick, Orrong and Shepperton) by funnelling traffic along those routes.
	C4.3.2 Provide a bicycle network within the precinct that integrates with the	The PSP area has no cycling infrastructure along Albany Highway and it is unlikely this could be retrofitted. However, the area does contain some cycling infrastructure

	broader cycle network and connects safely and conveniently to key destinations.	on nearby roads, much of which is in need of updating as per DoT submission. Importantly, the Town identifies Station Access Streets for upgraded cycling infrastructure, connecting the precinct to the nearby trainline.
	C4.3.3 Identify public transport services and infrastructure to be upgraded or established to improve coverage, frequency, connection and user choice.	Cycling infrastructure provided along station access roads, improving integration with high-frequency bus services, and potential redevelopment of the transfer station.
	C4.3.4 Design public transport infrastructure to integrate with and be appropriate for the intended mode share, patronage and place character of the precinct.	
	C4.3.5 Consider access requirements for service vehicles and logistical freight movements within the precinct.	Service access provision is not expected to change.
	C4.3.6 Design the movement network to allow for private vehicle access and movement that is appropriate to the precinct function.	Reducing vehicle traffic is a core objective of the PSP as excessive vehicle traffic would compromise the intended function of the precinct, which is intended to be a destination, not just a thoroughfare. This will be implemented through improvement to public realm and alternative movement networks, and through removal of minimum parking requirement.
O4.4 To ensure the quantity, location, management and design of parking supports the vision of the precinct.	C4.4.1 Provide the minimum amount of car parking appropriate for the precinct.	The PSP includes general development requirements for Parking and End of Trip Facilities under cl. 3.4.5, which are designed to facilitate mode shift from driving to walking, cycling or public transport use in the PSP area. Most notably, Table 9 prescribes no minimum private car parking requirement for developments in the precinct. This is a significant modification to the R-Codes Part 2, which requires 0.75/1 resident bays per dwelling and one visitor bay per four dwellings up to 12 dwellings and one visitor bay per eight dwellings above 12 dwellings. In response to this, seven submissions raised concerns regarding availability of public car parking with the increase in residential density and removal of private car parking requirements. While the communities concerns regarding the impact of the PSP on public parking demand are noted, the PSP area benefits from access to eight bus routes along Albany Highway (one of which is high frequency), many additional high frequency bus routes through the Causeway Bus Transfer Station, Shepperton Road and Berwick Street, as well as being 400/500 metres from Victoria Park, Carlisle and Oats Street train stations. This provides an opportunity to promote active and public transport modes, which is consistent with the objectives of SPP 7.2 and SPP 4.2. The Mobility Access Report notes that there are around 600 public parking spaces adjacent to

		Albany Highway, of which 80 percent are regularly occupied. This indicates provision is currently adequate. Additionally, the PSP Part 2 Objective 11 outlines the following to reduce public parking demand: • *Tightening fee and time restrictions particularly in high-value bays in core retail areas.* • *Expanding the use of dynamic pricing during busy periods.* • *Investing in smart parking technology to assist with enforcement and monitoring.* • *Creation of additional pick up/drop off zones and ride sharing bays at key locations.* • *Increased parking supply on suitable side streets supported by expanded use of residential parking permits to ensure resident parking availability in high-demand areas.* • *Encouraging increased supply of public parking on private land as land use intensifies within the precinct.* • *Identifying existing off street public parking areas in strategic locations for further investigations into their suitability for expansion into adaptable decked parking structures.*
	C4.4.2 Manage and locate car parking to prioritise access according to the needs of different user groups.	PSP allows for the adaptable expansion of existing public parking facilities in strategic locations, to satisfy any additional demand.
	C4.4.3 Design parking to be integrated with the urban form.	S. 3.4.5 of the PSP requires parking on private land to not be visible from public areas and be able to be converted to alternative uses or electrical vehicle charging in the future.
	C4.4.4 Design parking for adaptability over time to accommodate potential future change of use.	
	C4.4.5 Consider parking requirements and end of trip facilities for other transport modes.	Table 9: Bicycle parking is to be provided in accordance with the R-Codes for residential and 1 employee bicycle bay and 1 visitor bicycle bay per 100sqm of net lettable area 1 shower per 10 bicycle parking bays and 1 locker per bicycle parking bay. It is also recommended public end-of-trip facilities be included as a preferred community benefit.

State Planning Policy 7.2: Precinct Design assessment

Design Element 5: Land Use		
Objective	**Considerations**	**Assessment**
O5.1 To ensure current and planned land uses respond to the needs and expectations of the community.	C5.1.1 Review existing zonings and land uses within and adjacent to the precinct to identify gaps and determine the appropriate zones and land use mix.	This is considered through the PSP report and is discussed in the LPS Amendment No. 2 report. Gaps include retail and dining uses being restricted to the three main nodes, low capacity for generating commercial floorspace under current zoning, and a lack of office floorspace and creative uses.
	C5.1.2 Consider the current and future need for services, utilities and social infrastructure, including community, civic and cultural facilities.	The PSP identifies a gap in cultural floorspace, which is to be rectified through community benefit, major site provisions, and through cl. 3.1.2, which requires district centre or mixed-use development exceeding 1,000m2 floor area to include space dedicated to creative production and cultural activities. It is recommended the major site provisions related to community and cultural floorspace and cl. 3.1.2 be deleted for the reasons discussed in the planning report.
	C5.1.3 Identify locations for staged land use transition to meet changing community needs.	Managing staged land use and density transition is considered in the PSP through: • the approach to car sales uses and spatial distribution of retail and employment uses, which are outlined in Part 2 Objective 12; and • sensitive interface requirements in Part 1 cl. 3.5.3.
O5.2 To ensure the planned land use types contribute positively to the precinct character and amenity.	C5.2.1 Co-locate land uses that have a mutual, positive benefit.	Land use permissibilities are not included in the PSP but are regulated through the LPS No. 2. The PSP Sub-Precinct Primary Controls outline the intended character and function of each sub-precinct. Amendment no. 2 does not modify any zone permissibilities but does rezone large areas adjacent to Albany Highway from residential to mixed use between the three core centres to increase commercial development in these areas. Additionally, it increases residential densities through the RAC-0 coding and the associated built form provisions included in sub-precinct primary controls tables.
	C5.2.2 Locate and distribute land uses to manage amenity impacts such as noise, visual and air pollution.	
	C5.2.3 Distribute land uses across the precinct to support and benefit from the movement network.	
O5.3 To achieve a mix of land uses and activity that supports the precinct vision.	C5.3.1 Determine the appropriate land use mix for the precinct.	As outlined in the PSP Part 2 cl. 6.5, the land use mix for the precinct is designed to address the following issues, as outlined in the Economic, Retail and Employment Strategy: • gaps in some employment generating land uses limiting daylight activity; • new residential density being limited by market conditions, site availability and strict density restrictions; • a lack of affordable and diverse housing; and • a lack of creative and cultural land uses due to a lack of affordable spaces for this purpose, thereby restricting economic diversity and sustained evening activity. To address this, the PSP broadly seeks to:

		• expand employment generating land uses (particularly office space) through expansions of the mixed-use zone in residential areas, and through major sites; • increase residential densities through the widespread adoption of the R-AC0 density designation; • a minimum 10% affordable housing requirement for major sites and a community benefit option for affordable housing; and • major sites being required to incorporate community and cultural floorspace, as well as community and cultural floorspace being a community benefit item.
	C5.3.2 Determine the appropriate distribution of residential density to support the intended character and function of the precinct.	This has been determined through the draft Built Form Strategy and will be regulated through building height and plot ratio restrictions for each sub-precinct zone outlined in PSP cl. 3.3. Additionally, the PSP complies with the SPP 4.2 density requirements as outlined under objective 6 in Part 2 of the PSP.
	C5.3.3 Provide for land uses that appropriately activate and promote safety in the public realm.	This is provided for in the Centre and Mixed-Use zones per the PSP Part 1 Table 8, which requires ground floor activation through minimum tenantable space at ground level equal to 30 to 40 percent of total site area and includes preferred ground floor use which include uses design to activate the area.
	C5.3.4 Identify a land use mix that supports local employment and the local economy.	This is discussed in PSP Part 2 Objective 12, which notes that there is an under provision of office, tourism, entertainment and cultural, and service industry issues compared to other similar centres in the Central Sub-Region, which limits employment opportunities. However, it is noted that the Town had an Employment Self-Sufficiency of 146% in 2016, compared to the 139% target set in Perth and Peel. This was informed by the Economic, Retail and Employment Strategy prepared by Pracsys to support the draft PSP. To address these deficiencies, minimum commercial floorspace requirements for major sites are set to ensure adequate office space is provided. Additionally, the rezoning of residential areas to Mixed Use provides for additional commercial/office floorspace opportunities. Also, the PSP Part 1 4.0 provides for Creative and Cultural Floorspace as a community benefit, responding to the shortage of this form of employment in the area.

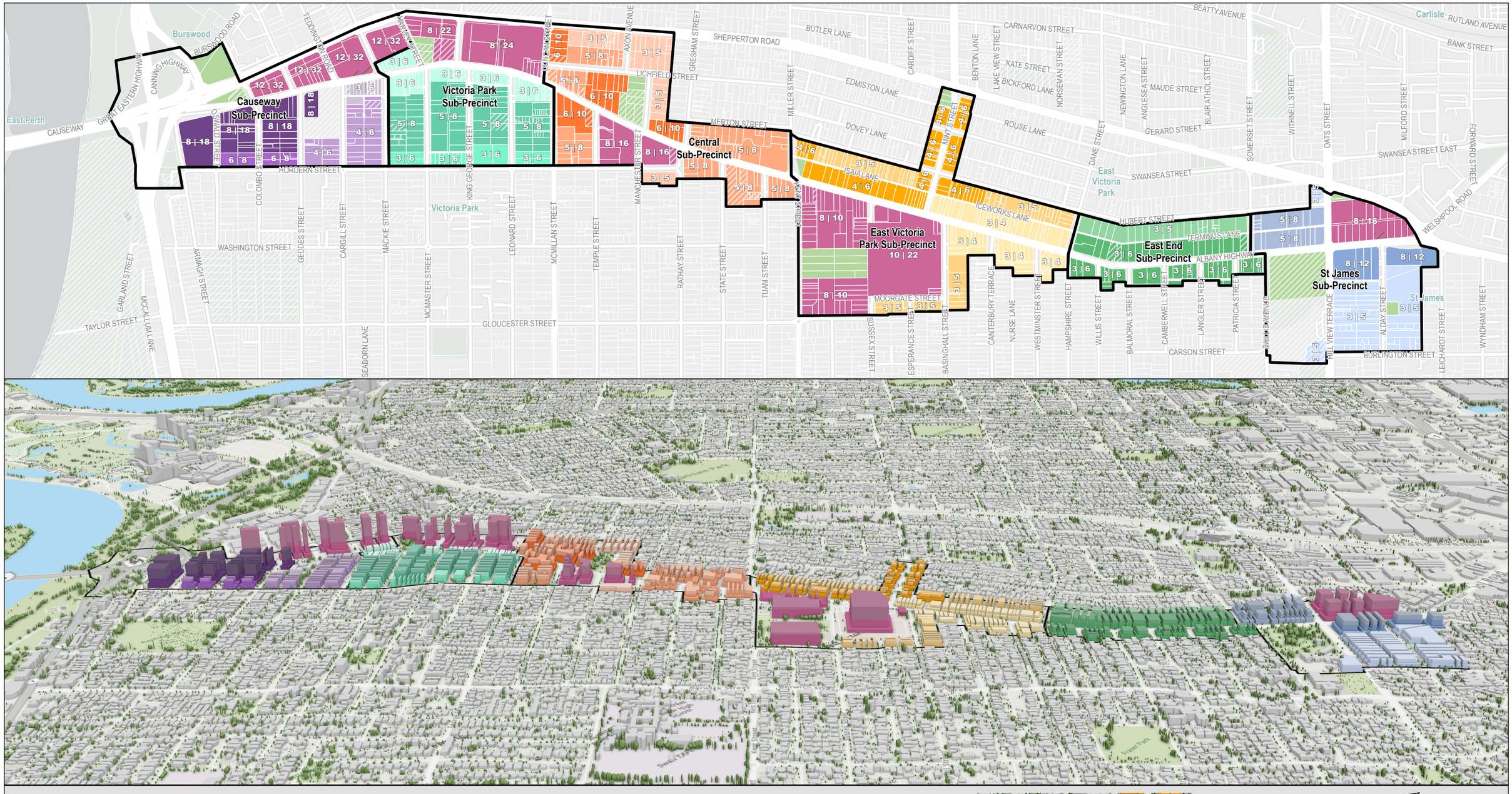
State Planning Policy 7.2: Precinct Design assessment

Design Element 6: Built Form		
Objective	**Considerations**	**Assessment**
O6.1 To ensure that the built form is responsive to the purpose, context and intended character of the precinct.	C6.1.1 Address how the precinct built form will respond to the physical and cultural characteristics of the precinct.	Discussed in draft Built Form Strategy and addressed through sub-precinct primary controls, heritage provisions, and contributory frontage requirements. Calibration of primary controls is designed to concentrate development in major sites, to provide a transition to surrounding residential and to allow for sensitive increases in density to valued community centres in Victoria Park and East Victoria Park sub-precincts.
	C6.1.2 Manage the built form transitions between and within the precinct.	Yes, transitioned is managed via the calibration of primary controls (building height, plot ratio, setbacks), which are tightened adjacent to the residential area outside the precinct. Examples of this include sub-precinct zones CW2, VP2, CE1, EE1 and SJ1. Also managed through s. 3.5.3 Sensitive Interfaces and application of R-Codes Vol. 2 provisions for visual privacy, which are not varied by the PSP.
	C6.1.3 Promote a diversity of built form types appropriate to the precinct.	Addressed, precinct provides for a wide variety of built form types via primary controls in different areas, heritage requirements, frontage types and major site provisions.
	C6.1.4 Identify buildings with potential for retention and adaptive reuse (including temporary use) with a priority on heritage buildings and buildings that contribute to place character.	Identified in 3.5.1 Heritage Places, with the element objective being: *Protect and reinforce the heritage value of the Highway's heritage buildings and places while encouraging adaptive reuse and restoration.*
O6.2 To ensure building placement, scale and massing is appropriate for the intended precinct and streetscape character.	C6.2.1 Set height controls to ensure buildings within a precinct have a positive impact on the surrounding streetscape and public spaces.	Building height controls are appropriate given the significance of the activity centre and intended future character of the precinct. High densities are concentrated to major sites, allowing for predominantly mid-rise development outside of these areas.
	C6.2.2 Develop setback controls in consideration of the intended relationship between buildings, and between buildings and the street.	Building setback controls are generally appropriate and consistent with other similar areas. Steet setback controls in residential areas are excessive and have been reduced to R80 values.
	C6.2.3 Apply built form envelopes to define the streetscape and reinforce the precinct character.	While built form envelopes are not specifically referenced (with the exception of sensitive interfaces 3.5.3 Table 10), plot ratio restrictions serve a similar function and are set for each sub-precinct zone. However, it is noted that plot ratio controls were not tested against the proposed building heights. Modified plot ratios have been set based on testing by DPLH in **Attachment 9**.
	C6.2.4 Determine plot ratio controls appropriate for the existing or intended future character of the precinct, where relevant.	

State Planning Policy 7.2: Precinct Design assessment

O6.3 To ensure that built form design reduces energy demand across the precinct by facilitating climate-responsive design.	C6.3.1 Locate and arrange buildings to optimise solar access to buildings and the public realm.	Addressed in PSP Part 1 s. 3.4.2 iii. and s.5.5. This will also be managed for residential development through implementation of the R-Codes Vol. 2 Element 4.1, which is not being varied by the PSP.
	C6.3.2 Consider the placement and layout of buildings to optimise natural ventilation and minimise wind impact at street level and on adjoining properties and public spaces and streets.	Addressed in PSP Part 1 s. 3.4.1 iii. *Excessive building bulk which does not suitably provide for internal amenity and outlook, deep soil zones, cross-ventilation or modulation of building form is not supported.* This will also be managed for residential development through implementation of the R-Codes Vol. 2 Element 4.5, which is not being varied by the PSP.
O6.4 To ensure that built form design is responsive to the streetscape and contributes to a safe and comfortable public realm.	C6.4.1 Design and setback buildings to enable passive surveillance and outlook to the street.	Integrated into PSP Part 1 3.4.4 – element objective 1. Also, for Commercial and Centre frontage Table 8: requires 60% of ground floor comprising clear vision glass. Active frontage requirements in Major Site requirements.
	C6.4.2 Design for weather protection for pedestrian priority streets and public spaces, where appropriate.	S. 3.4.4 Frontage type design requirements include awning requirements for Centre (100 percent of frontage) and Commercial (60 percent of frontage) frontage types.

ATTACHMENT 9

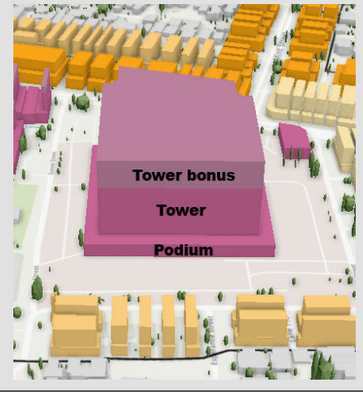


Legend

- Sub-precinct boundary
- Existing public open space
- Proposed open space
- Local Heritage place

Subprecinct code | Building storeys | Bonus Stories

- CW1 | 3 storeys | 6 storeys (bonus)
- CW2 | 4 storeys | 6 storeys (bonus)
- CW3 | 6 storeys | 8 storeys (bonus)
- CW4 | 8 storeys | 10 storeys (bonus)
- M2 | 12 storeys | 32 storeys (bonus)
- VP1 | 3 storeys | 6 storeys (bonus)
- VP2 | 3 storeys | 6 storeys (bonus)
- VP3 | 5 storeys | 8 storeys (bonus)
- M3 | 8 storeys | 22 storeys (bonus)
- M4 | 8 storeys | 24 storeys (bonus)
- CE1 | 3 storeys | 5 storeys (bonus)
- CE2 | 5 storeys | 8 storeys (bonus)
- CE3 | 6 storeys | 10 storeys (bonus)
- M5 | 8 storeys | 16 storeys (bonus)
- EV1 | 3 storeys | 4 storeys (bonus)
- EV2 | 3 storeys | 5 storeys (bonus)
- EV3 | 4 storeys | 6 storeys (bonus)
- M6 | 8 storeys | 10 storeys (bonus)
- M7 | 10 storeys | 22 storeys (bonus)
- EE1 | 3 storeys | 5 storeys (bonus)
- EE2 | 3 storeys | 6 storeys (bonus)
- EE3 | 5 storeys | 8 storeys (bonus)
- SJ1 | 3 storeys | 5 storeys (bonus)
- SJ2 | 5 storeys | 8 storeys (bonus)
- SJ3 | 8 storeys | 12 storeys (bonus)
- M8 | 8 storeys | 16 storeys (bonus)



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metres

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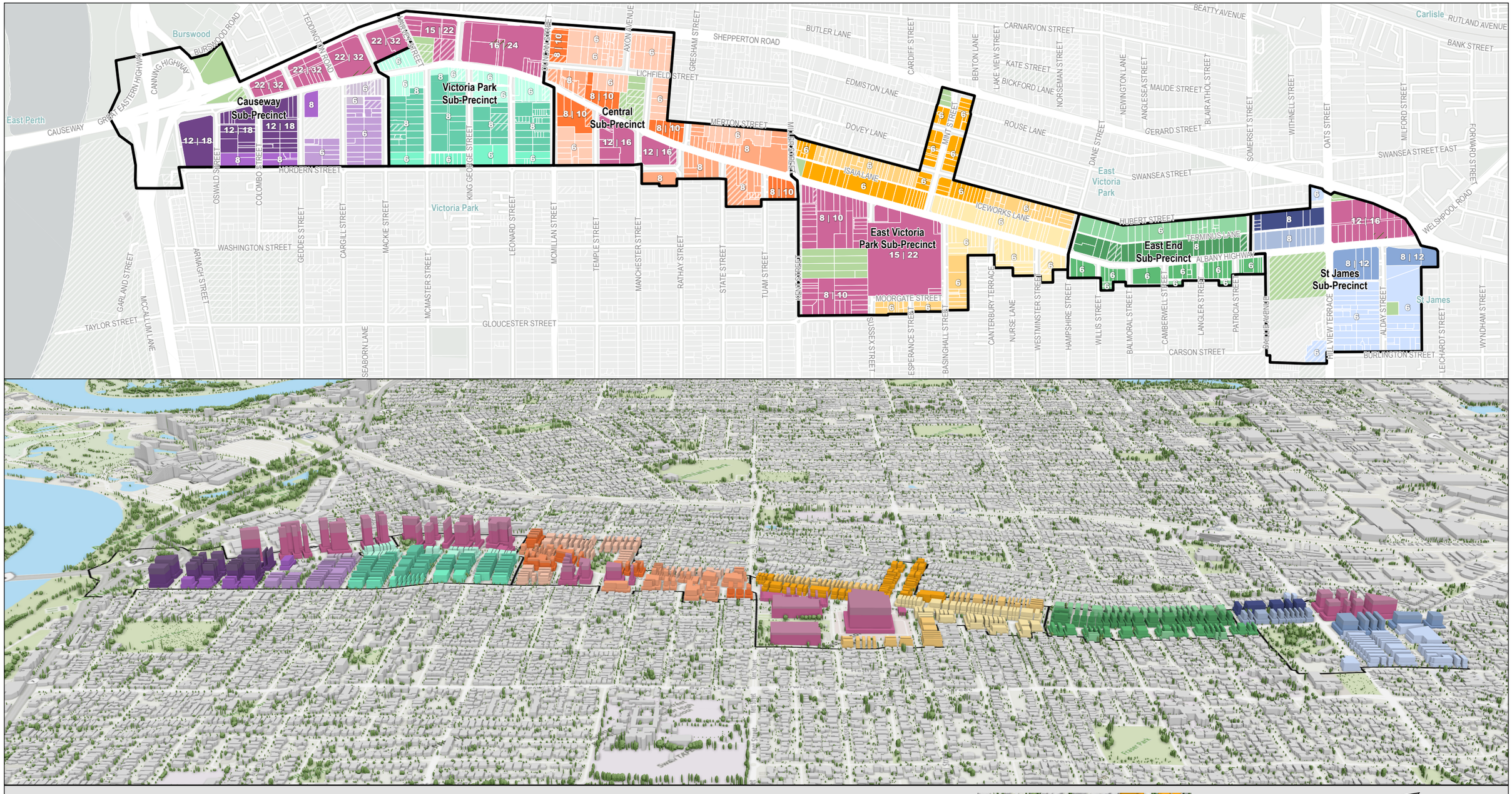
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Building massing is indicative of plot ratio only and does not represent actual buildings.

Spatial Reference GDA2020 MGA Zone 50

Advertised scenario

Albany Highway Precinct Structure Plan

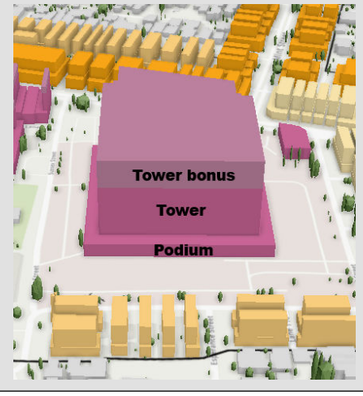


Legend

- Sub-precinct boundary
- Existing public open space
- Proposed open space
- Local Heritage place

Subprecinct code | Building storeys | Bonus storeys

- CW1 | 6 storeys
- CW2 | 6 storeys
- CW3 | 8 storeys
- CW4 | 12 storeys | 18 storeys (bonus)
- M2 | 22 storeys | 32 storeys (bonus)
- VP1 | 6 storeys
- VP2 | 6 storeys
- VP3 | 8 storeys
- M3 | 15 storeys | 22 storeys (bonus)
- M4 | 16 storeys | 24 storeys (bonus)
- CE1 | 6 storeys
- CE2 | 8 storeys
- CE3 | 8 storeys | 10 storeys (bonus)
- M5 | 12 storeys | 16 storeys (bonus)
- EV1 | 6 storeys
- EV2 | 6 storeys
- EV3 | 6 storeys
- M6 | 8 storeys | 10 storeys (bonus)
- M7 | 15 storeys | 22 storeys (bonus)
- EE1 | 6 storeys
- EE2 | 6 storeys
- EE3 | 8 storeys
- SJ1 | 6 storeys
- SJ2 | 8 storeys
- SJ3 | 8 storeys | 12 storeys (bonus)
- SJ4 | 8 storeys
- M8 | 12 storeys | 16 storeys (bonus)



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metres

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Building massing is indicative of plot ratio only and does not represent actual buildings.

Spatial Reference GDA2020 MGA Zone 50

Modified scenario

Summary of Proposed Primary Controls

Sub-precinct	Code	Land Use	Recommended PSP Provisions											
			Modified Podium Height	Modified Base Height (storeys)	Modified Bonus Height (storeys)	Modified Base PR	Modified Bonus PR	Street setback to podium (m)	Side setback to podium (m)	Rear setback to podium (m)	Street setback to tower (m)	Side setback to tower (m)	Rear setback to tower (m)	Frontage Type
Causeway	**CW1**	Centre	2	6	-	2.5	-	0	0	0	6	0	3	Centre
	CW2	Mixed Use	2	6	-	2.5	-	2	3	6	4	5	6	Residential
	CW3	Mixed Use	3	8	-	3	-	2	0	0	4	4	6	Commercial
	CW4	Mixed Use	3	12	18	3.5	4.5	1	0	0	4	4	6	Centre
	M2	Mixed Use	4	22	32	5	7.5	1	0	0	6	4	6	Centre
Victoria Park	**VP1**	Centre	2	6	-	2.5	-	0	0	0	6	0	3	Centre
	VP2	Residential	2	6	-	2.5	-	2	3	6	4	5	6	Residential
	VP3	Residential	2	8	-	3	-	2	3	6	4	5	6	Residential
	M3	Centre	3	15	22	3.5	5	0	0	0	4	6	6	Centre
	M4	Centre	3	16	24	3.5	5	0	0	0	4	6	6	Centre
Central	**CE1**	Residential	2	6	-	2	-	2	3	6	6	4	6	Commercial
	CE2	Mixed Use	3	8	-	3	-	0	0	0	4	4	6	Commercial
	CE3	Mixed Use	3	8	10	3	3.5	0	0	0	4	4	6	Commercial
	M5	Mixed Use	4	12	16	3.5	4	0	0	0	4	6	6	Commercial
East Victoria Park	**EV1**	Centre	2	6	-	2.5	-	0	0	0	6	0	2	Centre
	EV2	Residential	2	6	-	2	-	2	3	0	4	3	2	Residential
	EV3	Centre/Mixed Use	3	6	-	2.5	-	0	0	0	6	0	2	Centre
	M6	Centre	3	8	10	3	4	0	0	0	0	6	0	Centre
	M7	Centre	3	15	22	3.5	5	0	0	0	6	6	0	Centre
East End	**EE1**	Residential	2	6	-	2	-	2	3	0	6	3	3	Residential
	EE2	Mixed Use	2	6	-	2.5	-	0	0	0	4	4	3	Commercial
	EE3	Mixed Use	3	8	-	3	-	0	0	0	4	4	3	Commercial
St James	**SJ1**	Residential	2	6	-	2	-	2	3	6	6	3	6	Residential
	SJ2	Mixed Use	3	8	-	3	-	0	0	0	4	4	2	Commercial
	SJ3	Centre	3	8	12	3	3.5	0	0	0	6	4	6	Centre
	SJ4	Residential	3	8	-	3	-	2	3	0	4	4	3	Residential
	M8	Centre	3	12	16	3.5	4	0	0	0	6	4	6	Centre

In Town's Modifications
DPLH Modification
DPLH Reduction

Building Height

Sub-precinct	Area Code	Advertised PSP Provisions					Recommended Provisions				Justification for modified height
		Height in Built Form Strategy	Podium Height	Base Height	Bonus Height	Increase from Base Height	Modified Podium Height	Modified Base Height	Modified Bonus Height	Increase from Base Height	
Causeway	**CW1**	5	2	3	6	100%	2	6	6	0%	In accordance with Built Form Strategy (BFS) and R-Codes mid-rise centre height. While this is inconsistent with low mid-rise built form outlined for this area in Figure 31 (PSP Part 2), its proximity to Major Site 2 and the protective measures of the contributory frontage requirement result in six storeys being recommended in accordance with the Town's bonus maximum height.
	CW2	6 or 10	2	4	6	50%	2	6	6	0%	In accordance with BFS, to align with R-Codes mid-rise centre building maximum and to accommodate storey increase from street tree provision. This area is currently residential, but is being rezoned mixed use. The building heights allow for this transition to be managed. Increasing further may impact primary school.
	CW3	6 to 22	3	6	8	33%	3	8	8	0%	In the built form strategy this area was included as part of a major site with building heights between 6 and 22 storeys. While CW3 is immediately adjacent to CW4 lots that can go up to 18 storeys, the reduction for these lots from the BFS heights to improve the transition to the adjacent R30 residential area is warranted. It is recommended the bonus height be maintained to mitigate impact on adjacent primary school.
	CW4	6 to 22	3	8	18	125%	3	12	18	50%	Increased to reduce gap from base to bonus and to align more closely with BFS.
	M1	6 to 12	4	12	22	83%	N/A	N/A	N/A	N/A	Removed
	M2	6 to 32	4	12	32	167%	4	22	32	45%	Increased to reduce gap from base to bonus, to align with BFS and tower high-rise in PSP indicates intended built form is between 12 and 30 storeys.
Victoria Park	**VP1**	5	2	3	6	100%	2	6	6	0%	In accordance with BFS, R-Codes mid-rise centre height and to accommodate increase from street tree provision. However, this is inconsistent with low mid-rise built form outlined for this area in Figure 31. Sub-precinct is designated for sensitive change through community consultation. Noted that the area is on the opposite side of the sstreet treet to two major sites, which provide for up to 24 storeys. It also backs onto VP3, which provides for and already contains 6 storey developments. The contributory frontage requirements will protect existing heritage frontages.
	VP2	6	2	3	6	100%	2	6	6	0%	In accordance with BFS, R-Codes mid-rise centre height and to accommodate increase from street tree provision.
	VP3	6 or 8	2	5	8	60%	2	8	8	0%	To align with BFS, which assigns most of the VP3 area as having an eight story building height.
	M3	6 to 22	3	8	22	175%	3	15	22	47%	Increased to reduce gap from base to bonus, to align with BFS and tower high-rise in PSP indicates intended built form is between 12 and 30 storeys.
	M4	6 to 22	3	8	24	200%	3	16	24	50%	Increased to reduce gap from base to bonus, to align with BFS and tower high-rise in PSP indicates intended built form is between 12 and 30 storeys.
Central	**CE1**	6	2	3	5	67%	2	6	6	0%	In accordance with BFS, to accommodate increase from street tree provision, to align with R-Codes mid-rise centre building maximum and to provide an appropriate transition between the mixed use area and the adjacent residential. Noting a petition (submission 2.1) signed by 76 people requesting the bonus height be reduced to 4 storeys, which the Town did not support to enable CB contributions and due to the secondary centre classification of the Site.
	CE2	6 or 8	3	5	8	60%	3	8	8	0%	Increased to reduce gap from base to bonus, in accordance with BFS, transformative change intended for the precinct and to provide a height increase from CE1.
	CE3	6 or 8	3	6	10	67%	3	8	10	25%	Increased in accordance with the BFS and to allow for Town's intended built form. It is noted that submission 2.5 requested the building height be increased or the bonus building height be deconstrained.
	M5	6 to 16	4	8	16	100%	4	12	16	33%	Increased to reduce gap from base to bonus, to align with BFS and tower high-rise in PSP indicates intended built form is between 12 and 30 storeys.
East Victoria Park	**EV1**	4, 5, 6 and 8	2	3	4	33%	2	6	6	0%	In accordance with BFS, to remove community benefit provisions for lower density areas and provide an increased building height more appropriate for the Centre classification. Contributory frontage and two storey podium height will protect existing heritage frontages.
	EV2	4	2	3	5	67%	2	6	6	0%	To align with R-Codes mid-rise centre building maximum and general increase given the area is immediately adjacent to M7.
	EV3	4 or 6	3	4	6	50%	3	6	6	0%	In accordance with BFS, to align with R-Codes mid-rise centre building maximum and to remove community benefit provisions for lower density areas. Not viable to combined with EV1 due to differences in the podium heights.
	M6	4 to 10	3	8	10	25%	3	8	10	25%	Retained as is to align with BFS and to transition to adjacent residential.
	M7	6 to 18	3	10	22	120%	3	15	22	47%	Increased to reduce gap from base to bonus, tower high-rise in PSP indicates intended built form is between 12 and 30 storeys and submission 2.8 requested a base height of 14 storeys.
East End	**EE1**	4	2	3	5	67%	2	6	6	0%	In accordance with R-Codes mid-rise centre height and accommodate additional development potential to reflect topographic challenges as per submission no. 2.20, which are also relevant to this area.
	EE2	5	2	3	6	100%	2	6	6	0%	In accordance with R-Codes mid-rise centre height.
	EE3	6	3	5	8	60%	3	8	8	0%	To provide additional development potential to reflect topographic challenges as per submission no. 2.20. This area is immedately adjacent to SJ2, which has a base building height of 8, so requiring a contribution to achieve the same height would not be reasonable. Submission no. 2.20 requested this be increased to 9 storeys.
St James	**SJ1**	5 or 8	2	3	5	67%	2	6	6	0%	In accordance with BFS (which shows a majority of the area as 5 storeys), to provide for an appropriate transition to adjacent low density residenial development while still providing adequate density for transformative change and to remove community benefit provisions for lower density areas.
	SJ2	8	3	5	8	60%	3	8	8	0%	In accordance with BFS, transformative change intended for the precinct, adjacent to M8, front Albany Highway and no heritage frontage.
	SJ3	Up to 14	3	8	12	50%	3	8	12	50%	Retained to provide appropriate density adjacent to M8 and to allow for Town's intended built form, while still providing a transitionary height down to the adjacent residential.
	SJ4	8	-	-	-	-	3	8	8	0%	In accordance with DPLH Modification no. 26.
	M8	Up to 14	3	8	16	100%	3	12	16	33%	Increased to reduce gap from base to bonus, to align with BFS and tower high-rise in PSP indicates intended built form is between 12 and 30 storeys.
Key	In Town's Modifications				Average excluding zero	84.6%			Average excluding zero	40.5%	
	DPLH Modification										

Plot Ratio

Sub-precinct	Code	Advertised PSP Provisions			Recommended Provisions			Justification for modified plot ratio
		Base PR	Bonus PR	Percentage Increase from PR	Modified Base PR	Modified Bonus PR	Percentage Increase from PR	
Causeway	CW1	1.5	3.5	133%	2.5	2.5	0%	Increased base requirement to accommodate base building height increase . Reduction due to unusually high plot ratio without explanation. R-Codes Part 2 provide for 6 storey buildings to have a plot ratio up to 2.0, so 3.5 was excessive.
	CW2	1.5	2.5	67%	2.5	2.5	0%	Increased base requirement to accommodate base building height increase and to align with R-Codes that prescribe a plot ratio of 2.0 for six storeys for residential development.
	CW3	2	3	50%	3	3	0%	Base increased to accommodate increased base building height and because 2.5 plot ratio is not sufficient for 8 storey mixed use development in this area given the constrained lot sizes.
	CW4	3	3.5	17%	3.5	4.5	29%	Base plot ratio to be increased to accommodate increase in base building height to 12 storeys. It is recommended the bonus is increased to 4.5 as 0.5 is not sufficient to accommodate 6 additional storeys. M3, M4 and M7 provide for 22/24 bonus storeys and have a plot ratio of 5, so 4.5 is considered appropriate for 18 storeys given how fragmented the lots in the area of CW4 are.
	M1	3	4	33%	N/A	N/A	N/A	Removed
	M2	3	5.5	83%	5	7.5	50%	Recommend base be increased from 3 to 5 to align with increase in base building height. A bonus plot ratio of 5.5 for 32 storeys was not considered adequate, given M3, M4 and M7 provide for 22/24 bonus storeys and have a plot ratio of 5 and 0.5 is not sufficent to accommodate 8 to 10 additional storeys. This value is also similar to the maximum for the Canning Bridge ACP M15 zone, which provides for 30 storeys and a 7.5 plot ratio.
Victoria Park	VP1	1.5	2.5	67%	2.5	2.5	0%	Increased to accommodate increase from mature tree provision, base building height increase and to align with R-Codes that prescribe a plot ratio of 2.0 for six storeys for residential development.
	VP2	1	2.5	150%	2.5	2.5	0%	Increased base requirement to accommodate base building height increase and to align with R-Codes that prescribe a plot ratio of 2.0 for six storeys for residential development.
	VP3	2	3	50%	3	3	0%	Increased base requirement to accommodate base building height increase and to align with R-Codes that prescribe a plot ratio of 3.0 for nine storey residential development.
	M3	2	5	150%	3.5	5	43%	Increased to not result in a reduced PR from VP2 to M3. R-Codes provide for a 3.0 plot ratio for 9 storeys, so existing value of 2.0 was low. Also, previous differential of 150% was excessive.
	M4	2	5	150%	3.5	5	43%	Increased to not result in a reduced PR from VP2 to M4. R-Codes provide for a 3.0 plot ratio for 9 storeys, so existing value of 2.0 was low. Also, previous differential of 150% was excessive.
Central	CE1	1	2	100%	2	2	0%	Increased base requirement to remove community benefit provisions for lower density areas, to accommodate base building height increase and to align with R-Codes that prescribe a plot ratio of 2.0 for six storeys for residential development.
	CE2	2	2.5	25%	3	3	0%	Increased to accommodate increased base building height and because original plot ratio was insufficient based on built form modelling.
	CE3	2.5	3	20%	3	3.5	17%	Increased to accommodate increased base building height and because original plot ratio was insufficient based on built form modelling.
	M5	2.5	4	60%	3.5	4	14%	Increased to accompany increase to base building height and to align with R-Codes which provides for 3.0 plot ratio for 9 storeys.
East Victoria Park	EV1	1.5	1.5	0%	2.5	2.5	0%	Increased base requirement to accommodate base building height increase and to align with R-Codes that prescribe a plot ratio of 2.0 for six storeys for residential development.
	EV2	1	2	100%	2	2	0%	Increased base requirement to accommodate base building height increase and to align with R-Codes that prescribe a plot ratio of 2.0 for six storeys for residential development.
	EV3	1.5	2.5	67%	2.5	2.5	0%	Increased base requirement toaccommodate base building height increase and to align with R-Codes that prescribe a plot ratio of 2.0 for six storeys for residential development.
	M6	3	4	33%	3	4	33%	Retained as is, generally consistent with R-Codes values.
	M7	2	5	150%	3.5	5	43%	R-Codes provide for a 3.0 plot ratio for 9 storeys, so existing value of 2.0 was low. Also, previous differential of 150% was excessive.
East End	EE1	1	2	100%	2	2	0%	Increased base requirement to accommodate base building height increase and to align with R-Codes that prescribe a plot ratio of 2.0 for six storeys for residential development.
	EE2	1.5	2	33%	2.5	2.5	0%	Increased base requirement to accommodate base building height increase and to align with R-Codes that prescribe a plot ratio of 2.0 for six storeys for residential development, noting that commercial development typically results in higher plot ratio than residential equivalents.
	EE3	2	2.5	25%	3	3	0%	Increased to accommodate increased base building height and because 2.5 plot ratio is not sufficient for 8 storey mixed use development in this area given the constrained lot sizes. Submission 2.20 requested this bonus plot ratio be increased to 4.0.
St James	SJ1	1.5	2	33%	2	2	0%	Increased base requirement to accommodate base building height increase and to align with R-Codes that prescribe a plot ratio of 2.0 for six storeys for residential development.
	SJ2	2	3	50%	3	3	0%	Increased to accommodate transformative change along Albany Highway, increase in building heights and to allow sufficient plot ratio to provide for the proposed building height given the fragmented lots in the area.
	SJ3	3	3.5	17%	3	3.5	17%	Retained as is, generally consistent with R-Codes values.
	SJ4	-	-	-	3	3	0%	Proposed as plot ratio of 3.0 is appropriate for 8 storey residential buildings as justified for VP3.
	M8	3	4	33%	3.5	4	14%	Increased to accompany increase to base building height.
Key	In Town's Modifications			69.1%			30.2%	
	DPLH Modification							
	DPLH Reduction							

Setback

Sub-precinct	Code	Advertised PSP Provisions						Proposed PSP Provisions						Justification for Setback Modification
		Street setback to podium (m)	Side setback to podium (m)	Rear setback to podium (m)	Street setback to tower (m)	Side setback to tower (m)	Rear setback to tower (m)	Street setback to podium (m)	Side setback to podium (m)	Rear setback to podium (m)	Street setback to tower (m)	Side setback to tower (m)	Rear setback to tower (m)	
Causeway	CW1	0	0	0	6	0	3	0	0	0	6	0	3	
	CW2	4	3	6	4	5	6	2	3	6	4	5	6	Any grouped dwellings proposed in this area would be considered at the R80 density code, meaning a 2m street setback would be provided for, which should be replicated for apartment development.
	CW3	2	0	6	4	4	6	2	0	0	4	4	6	Six metre rear setback is not nescesary to the podium as the rear of each CW3 lot only interfaces with other CW3 lots, CW4 lots or a sensitive interface.
	CW4	1	0	0	4	4	6	1	0	0	4	4	6	
	M1	1	0	0	6	4	6	N/A	N/A	N/A	N/A	N/A	N/A	Removed
	M2	1	0	0	6	4	6	1	0	0	6	4	6	
Victoria Park	VP1	0	0	0	6	0	3	0	0	0	6	0	3	
	VP2	4	3	6	4	5	6	2	3	6	4	5	6	These areas are currently zoned R60 or R80, which prescribes a minimum street setback requirement of 2m. Given the intensification proposed, increasing the street setback requirement would not be appropriate.
	VP3	4	3	6	4	5	6	2	3	6	4	5	6	
	M3	0	0	0	4	6	6	0	0	0	4	6	6	
	M4	0	0	0	4	6	6	0	0	0	4	6	6	
Central	CE1	4	3	6	6	4	6	2	3	6	6	4	6	This area is currently zoned R60, which prescribes a minimum street setback requirement of 2m. Given the intensification proposed, increasing the street setback requirement would not be appropriate.
	CE2	0	0	0	4	4	6	0	0	0	4	4	6	
	CE3	0	0	0	4	4	6	0	0	0	4	4	6	
	M5	0	0	0	4	6	6	0	0	0	4	6	6	
East Victoria Park	EV1	0	0	0	6	0	2	0	0	0	6	0	2	
	EV2	4	3	0	4	3	2	2	3	0	4	3	2	Theis area is currently zoned R30, R40 and R60, which prescribes a minimum street setback requirement of 4m, 3m and 2m respectively. Given the intensification proposed, increasing the street setback requirement for a large part of the area would not be appropriate. Additionally, any grouped dwellings propsoed in this area would be considered at the R80 density code, meaning a 2m street setback would be provided for, which should be replicated for apartment development.
	EV3	0	0	0	6	0	2	0	0	0	6	0	2	
	M6	0	0	0	0	6	0	0	0	0	0	6	0	
	M7	0	0	0	6	6	0	0	0	0	6	6	0	
East End	EE1	4	3	0	6	3	3	2	3	0	6	3	3	This area is currently zoned R40, which prescribes a minimum street setback requirement of 3m. Given the intensification proposed, increasing the street setback requirement would not be appropriate. Additionally, any grouped dwellings proposed in this area would be considered at the R80 density code, meaning a 2m street setback would be provided for, which should be replicated for apartment development.
	EE2	0	0	0	4	4	3	0	0	0	4	4	3	
	EE3	0	0	0	4	4	6	0	0	0	4	4	3	EE3 was introduced by the Town's Report Modification No. 32. The rear setback distance above podium height was proposed due to the increased building height from EE2 (maximum of 6 storeys) to EE3 (maximum of 8 storeys) and to manage the transition between EE3 and EE1 (maximum of 5 storeys). EE3 was modelled on the requirements of CE2, which has the same building heights and a six metre rear setback. The reduction to EE3 rear setback above podium was requested by Lateral Planning, as the six metre requirement was excessive compared to the three metre requirement under EE2, particularly because there is also a four metre (to be widened to six metre) wide laneway separating it from the EE1 area. The Town acknowledged that the laneway meant that a three metre rear setback would be adequate. Given the reasons raised above, it is recommended the rear setback requirement is reduced for EE3 to three metres.
St James	SJ1	4	3	6	6	3	6	2	3	6	6	3	6	Any grouped dwellings proposed in this area would be considered at the R80 density code, meaning a 2m street setback would be provided for, which should be replicated for apartment development.
	SJ2	0	0	0	4	4	2	0	0	0	4	4	2	
	SJ3	0	0	0	6	4	6	0	0	0	6	4	6	
	SJ4	-	-	-	-	-	-	2	3	0	4	4	3	No rear podium and reduced tower setback due to existing laneway.
	M8	0	0	0	6	4	6	0	0	0	6	4	6	

Key

In Town's Modifications	DPLH Modification

Existing Framework and Advertised Provisions

Sub-precinct	Code	Existing framework				Advertised PSP Provisions - Building Height						Advertised PSP Provisions - Plot Ratio		
		Current TPS 2 Zone	Additional site and development requirements	Current R-Coding	Current TPS 2 Maximum Height	Increase to base height in PSP	Intended TPS 2 Zone	Height in draft Built Form Strategy	Base Height	Bonus Height	Increase from Base Height	Base PR	Bonus PR	Percentage Increase from PR
Causeway	**CW1**	District Centre	ASR 12 (only DC)	R60	3	0	Centre	5	3	6	100%	1.5	3.5	133%
	CW2	Residential	N/A	R30 and R60	2 or 3	1 or 2	Mixed Use	6 or 10	4	6	50%	1.5	2.5	67%
	CW3	Mixed Use (1 lot), Residential and District Centre	ASR 11 (only mixed use) and ASR 12 (only DC)	R30 and R60	2 or 3	3 or 4	Mixed Use	6 to 22	6	8	33%	2	3	50%
	CW4	Mixed Use and Residential	ASR 11 (only mixed use)	R30 and R60	2, 3 or 6	2, 5 or 6	Mixed Use	6 to 22	8	18	125%	3	3.5	17%
	M1	N/A - Primary Regional Road	N/A	N/A	N/A	N/A	N/A	6 to 12	12	22	83%	3	4	33%
	M2	Mixed Use	ASR 11 (only mixed use)	R60	6	6	Mixed Use	6 to 32	12	32	167%	3	5.5	83%
Victoria Park	**VP1**	District Centre (90%) and Residential	ASR 12 (only DC)	R60 and R80	3, 4, 5 and 6	0, -1, -2 or -3	Centre	5	3	6	100%	1.5	2.5	67%
	VP2	Residential	N/A	R60 and R80	4	-1	Residential	6	3	6	100%	1	2.5	150%
	VP3	Residential (95%) and District Centre	ASR 12 (only DC)	R60 and R80	3, 4 or 5	0, 1 or 2	Residential	6 or 8	5	8	60%	2	3	50%
	M3	Mixed Use and District Centre	ASR 11 and 12	R60	12	-4	Centre	6 to 22	8	22	175%	2	5	150%
	M4	District Centre	ASR 12	R60	8	0	Centre	6 to 22	8	24	200%	2	5	150%
Central	**CE1**	Residential	N/A	R60	3	0	Residential	6	3	5	67%	1	2	100%
	CE2	Residential and Mixed Use	ASR 13 (only mixed use) and ASR 14 (only DC)	R30, R40 and R60	2 or 3	2 or 3	Mixed Use	6 or 8	5	8	60%	2	2.5	25%
	CE3	Mixed use, District Centre and Residential (1 lot)	ASR 12 (only DC), ASR 13 (only mixed use) and ASR 14 (only DC)	R40 (1 lot) and R60	2 or 3	3 or 4	Mixed Use	6 or 8	6	10	67%	2.5	3	20%
	M5	Mixed Use, Civic and Community and Residential	ASR 13 (only mixed use)	R60	3	5	Mixed Use	6 to 16	8	16	100%	2.5	4	60%
East Victoria Park	**EV1**	DC, Residential and Special Use (SU3)	ASR 14 (only DC)	R30 and R60	2 or 3	0 or 1	Centre	4, 5 or 6	3	4	33%	1.5	1.5	0%
	EV2	Residential	N/A	R30, R40 and R60 (2 lots)	2 or 3	0 or 1	Residential	4	3	5	67%	1	2	100%
	EV3	DC, Residential	ASR 14 (only DC)	R30 and R60	2 or 3	1 or 2	Centre/Mixed Use	4 or 6	4	6	50%	1.5	2.5	67%
	M6	DC, Civic and Community and POS	ASR 14 (only DC)	R60	3	5	Centre	4 to 10	8	10	25%	3	4	33%
	M7	DC	ASR 14 (only DC)	R60	3	7	Centre	6 to 18	8	22	175%	2	5	150%
East End	**EE1**	Residential	N/A	R40	2	1	Residential	4	3	5	67%	1	2	100%
	EE2	District Centre, Mixed Use and Residential (drainage sump lots)	ASR 14 (only DC, no impact on heights) ASR 15 (only mixed use)	R30 (sumps) R60 and R80	2, 3 or 4	1, 0 or -1	Mixed Use and Residential (sumps)	5	3	6	100%	1.5	2	33%
	EE3	Mixed Use	ASR 15 (only mixed use)	R80	3	2	Mixed Use	6	5	8	60%	2	2.5	25%
St James	**SJ1**	Residential	N/A	R30 and R40	2	1	Residential	5 or 8	3	5	67%	1.5	2	33%
	SJ2	Mixed Use and Residential	ASR 15 (only mixed use)	R40 and R80 (90%)	3	2	Mixed Use	8	5	8	60%	2	3	50%
	SJ3	DC	ASR 16 (only DC)	R60	3	5	Centre	Up to 14	8	12	50%	3	3.5	17%
	M8	DC and Residential (1 Lot)	ASR 16 (only DC)	R30 (1 lot) and R60	2 (1 lot) or 5	3 or 6	Centre	Up to 14	8	16	100%	3	4	33%
										Average excluding zero	86.7%		Average excluding zero	69.1%

Notes

Density classification areas in draft Built Form Strategy do not align exactly with PSP areas

Note - R30/40 is 2, R50/60 is 3 and R80 is 4

Causeway Sub-Precinct

CW1	Base	Bonus	Modified Base	Modified Bonus
Building floors	3	6	6	6
Desired plot ratio	1.5	3.5	2.5	2.5
Podium floors	2	2	2	2
Tower floors (auto-calc)	1	4	4	4
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 4 and 5 Albany Highway (amalgamated)			
CW1	Base	Bonus	Modified Base	Modified Bonus
Lot area	746.684	746.684	746.684	746.684
Podium area	746.684	746.684	746.684	746.684
Total Allowable Area	1120.026	2613.394	1866.71	1866.71
Gross Usable Podium Area	1194.69	1194.69	1194.69	1194.69
Maximum tower area	-93.34	1773.37	840.02	840.02
Tower floor area	-93.3355	443.343625	210.004875	210.004875

CW2	Base	Bonus	Modified Base	Modified Bonus
Building floors	4	6	6	6
Desired plot ratio	1.5	2.5	2.5	2.5
Podium floors	2	2	2	2
Tower floors (auto-calc)	2	4	4	4
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 293 and Lot 294 Cargill Street (amalgamated)			
CW2	**Base**	**Bonus**	**Modified Base**	**Modified Bonus**
Lot area	1,687	1,687	1,687	1,687
Podium area	1106.13	1106.13	1106.13	1106.13
Total Allowable Area	2530.5	4217.5	4217.5	4217.5
Gross Usable Podium Area	1769.81	1769.81	1769.81	1769.81
Maximum tower area	950.87	3059.62	3059.62	3059.62
Tower floor area	475.4325	764.90375	764.90375	764.90375

Lot Name	Lot 17 Cargill			
CW2	**Base**	**Bonus**	**Modified Base**	**Modified Bonus**
Lot area	596.7	596.7	596.7	596.7
Podium area	242.91	242.91	242.91	242.91
Total Allowable Area	895.05	1491.75	1491.75	1491.75
Gross Usable Podium Area	388.66	388.66	388.66	388.66
Maximum tower area	632.99	1378.87	1378.87	1378.87
Tower floor area	316.49625	344.716875	344.716875	344.716875

CW3	Base	Bonus	Modified Base	Modified Bonus
Building floors	6	8	8	10
Desired plot ratio	2	3	3	3.5
Podium floors	3	3	3	3
Tower floors (auto-calc)	3	5	5	7
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 198 Colombo Street			
CW3	**Base**	**Bonus**	**Modified Base**	**Modified Bonus**
Lot area	1,015	1,015	1,015	1,015
Podium area	852.85	852.85	852.85	852.85
Total Allowable Area	2030.314	3045.471	3045.471	3553.0495
Gross Usable Podium Area	2046.84	2046.84	2046.84	2046.84
Maximum tower area	-20.66	1248.29	1248.29	1882.76
Tower floor area	-6.885833333	249.65775	249.65775	268.9659821

CW4	Base	Bonus	Modified Base	Modified Bonus
Building floors	8	18	12	18
Desired plot ratio	3	3.5	3.5	4.5
Podium floors	3	3	3	3
Tower floors (auto-calc)	5	15	9	15
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	12 Oswald Street			
CW4	Base	Bonus	Modified Base	Modified Bonus
Lot area	2025.00	2025.00	2025.00	2025.00
Podium area	1985.00	1985.00	1985.00	1985.00
Total Allowable Area	6075	7087.5	7087.5	9112.5
Gross Usable Podium Area	4764.00	4764.00	4764.00	4764.00
Maximum tower area	1638.75	2904.38	2904.38	5435.63
Tower floor area	327.75	193.625	322.7083333	362.375

Lot Name	141-165 Albany Highway + Adjacent ROW			
CW4	Base	Bonus	Modified Base	Modified Bonus
Lot area	4262.29	4262.29	4262.29	4262.29
Podium area	4000.00	4000.00	4000.00	4000.00
Total Allowable Area	12786.864	14918.008	14918.008	19180.296
Gross Usable Podium Area	9600.00	9600.00	9600.00	9600.00
Maximum tower area	3983.58	6647.51	6647.51	11975.37
Tower floor area	796.716	443.1673333	738.6122222	798.358

M2	Base	Bonus	Modified Base	Modified Bonus
Building floors	12	32	22	32
Desired plot ratio	3	5.5	5	7.5
Podium floors	4	4	4	4
Tower floors (auto-calc)	8	28	18	28
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	No. 160, No. 162-170 Albany Highway, no. 100 Twickenham and no. 1 shepperton road			
M2	Base	Bonus	Modified Base	Modified Bonus
Lot area	5515.07	5515.07	5515.07	5516.07
Podium area	3721.93	3721.93	3721.93	3721.93
Total Allowable Area	16545.21	30332.885	27575.35	41370.525
Gross Usable Podium Area	11910.18	11910.18	11910.18	11910.18
Maximum tower area	5793.79	23028.39	19581.47	36825.44
Tower floor area	724.2240625	822.4423661	1087.859306	1315.194152

Victoria Park Sub-Precinct

VP1	Base	Bonus	Modified Base	Modified Bonus
Building floors	3	6	6	6
Desired plot ratio	1.5	2.5	2.5	2.5
Podium floors	2	2	2	2
Tower floors (auto-calc)	1	4	4	4
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 708 Albany Highway and Lot 709 McMillan Street, Victoria Park (amalgamated)			
VP1	Base	Bonus	Modified Base	Modified Bonus
Lot area	1355.12	1355.12	1355.12	1355.12
Podium area	1,301.12	1,301.12	1,301.12	1,301.12
Total Allowable Area	2032.68	3387.8	3387.8	3387.8
Gross Usable Podium Area	2081.79	2081.79	2081.79	2081.79
Maximum tower area	-61.39	1632.51	1632.51	1632.51
Tower floor area	-61.39	408.1275	408.1275	408.1275

VP2	Base	Bonus	Modified Base	Modified Bonus
Building floors	3	6	6	6
Desired plot ratio	1	2.5	2.5	2.5
Podium floors	2	2	2	2
Tower floors (auto-calc)	1	4	4	4
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 463 McMaster Street, Victoria Park			
VP2	Base	Bonus	Modified Base	Modified Bonus
Lot area	1014.00	1014.00	1014.00	1014.00
Podium area	574.65	574.65	574.65	574.65
Total Allowable Area	1014	2535	2535	2535
Gross Usable Podium Area	919.44	919.44	919.44	919.44
Maximum tower area	118.20	2019.45	2019.45	2019.45
Tower floor area	118.2	504.8625	504.8625	504.8625

VP3	Base	Bonus	Modified Base	Modified Bonus
Building floors	5	8	8	8
Desired plot ratio	2	3	3	3
Podium floors	2	2	2	2
Tower floors (auto-calc)	3	6	6	6
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 72 McMaster Street, Victoria Park			
VP3	Base	Bonus	Modified Base	Modified Bonus
Lot area	1167	1167	1167	1167
Podium area	693	693	693	693
Total Allowable Area	2334	3501	3501	3501
Gross Usable Podium Area	1108.80	1108.80	1108.80	1108.80
Maximum tower area	1531.50	2990.25	2990.25	2990.25
Tower floor area	510.5	498.375	498.375	498.375

M3	Base	Bonus	Modified Base	Modified Bonus
Building floors	8	22	15	22
Desired plot ratio	2	5	3.5	5
Podium floors	3	3	3	3
Tower floors (auto-calc)	5	19	12	19
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 1, 2 and 3 Harvey Street, Lot 153 Shepperton Road and Lot 5 and 12 Harper Street, Victoria Park (amalgamated)			
M3	**Base**	**Bonus**	**Modified Base**	**Modified Bonus**
Lot area	5,869	5,869	5,869	5,869
Podium area	5,580	5,580	5,580	5,580
Total Allowable Area	11738	29345	20541.5	29345
Gross Usable Podium Area	13392.00	13392.00	13392.00	13392.00
Maximum tower area	-2067.50	19941.25	8936.88	19941.25
Tower floor area	-413.5	1049.539474	744.7395833	1049.539474

M4	Base	Bonus	Modified Base	Modified Bonus
Building floors	8	24	16	24
Desired plot ratio	2	5	3.5	5
Podium floors	3	3	3	3
Tower floors (auto-calc)	5	21	13	21
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 2000 Albany Highway, Victoria Park			
M4	**Base**	**Bonus**	**Modified Base**	**Modified Bonus**
Lot area	13,147	13,147	13,147	13,147
Podium area	11,647	11,647	11,647	11,647
Total Allowable Area	26294	65735	46014.5	65735
Gross Usable Podium Area	27952.80	27952.80	27952.80	27952.80
Maximum tower area	-2073.50	47227.75	22577.13	47227.75
Tower floor area	-414.7	2248.940476	1736.701923	2248.940476

Central Sub-Precinct

CE1	Base	Bonus	Modified Base	Modified Bonus
Building floors	3	5	6	6
Desired plot ratio	1	2	2	2
Podium floors	2	2	2	2
Tower floors (auto-calc)	1	3	4	4
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 301 Shepperton Road, Victoria Park			
CE1	Base	Bonus	Modified Base	Modified Bonus
Lot area	878	878	878	878
Podium area	482.22	482.22	482.22	482.22
Total Allowable Area	878	1756	1756	1756
Gross Usable Podium Area	771.55	771.55	771.55	771.55
Maximum tower area	133.06	1230.56	1230.56	1230.56
Tower floor area	133.06	410.1866667	307.64	307.64

CE2	Base	Bonus	Modified Base	Modified Bonus
Building floors	5	8	8	8
Desired plot ratio	2	2.5	3	3
Podium floors	3	3	3	3
Tower floors (auto-calc)	2	5	5	5
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 9, 10, 11 and 991 Albany Highway and Lot 100 Rathay Street (amalgamated, current SDAU application)			
CE2	Base	Bonus	Modified Base	Modified Bonus
Lot area	3683.98	3683.98	3683.98	3683.98
Podium area	3560.22	3560.22	3560.22	3560.22
Total Allowable Area	7367.96	9209.95	11051.94	11051.94
Gross Usable Podium Area	8544.53	8544.53	8544.53	8544.53
Maximum tower area	-1470.71	831.78	3134.27	3134.27
Tower floor area	-735.355	166.3555	626.853	626.853

Lot Name	Lot 992 and Lot 171 Albany Highway, Victoria Park			
CE2	Base	Bonus	Modified Base	Modified Bonus
Lot area	2121.78	2121.78	2121.78	2121.78
Podium area	1998.02	1998.02	1998.02	1998.02
Total Allowable Area	4243.56	5304.45	6365.34	6365.34
Gross Usable Podium Area	4795.25	4795.25	4795.25	4795.25
Maximum tower area	-689.61	636.50	1962.62	1962.62
Tower floor area	-344.805	127.3005	392.523	392.523

CE3	Base	Bonus	Modified Base	Modified Bonus
Building floors	6	10	8	10
Desired plot ratio	2.5	3	3	3.5
Podium floors	3	3	3	3
Tower floors (auto-calc)	3	7	5	7
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 1, 2,3 and 299 Albany Highway and Lot 4 Gresham Street, Victoria Park (amalgamated)			
CE3	Base	Bonus	Modified Base	Modified Bonus
Lot area	3172.8	3172.8	3172.8	3172.8
Podium area	2846.4	2846.4	2846.4	2846.4
Total Allowable Area	7932	9518.4	9518.4	11104.8
Gross Usable Podium Area	6831.36	6831.36	6831.36	6831.36
Maximum tower area	1375.80	3358.80	3358.80	5341.80
Tower floor area	458.6	479.8285714	671.76	763.1142857

M5	Base	Bonus	Modified Base	Modified Bonus
Building floors	8	16	12	16
Desired plot ratio	2.5	4	3.5	4
Podium floors	4	4	4	4
Tower floors (auto-calc)	4	12	8	12
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 102 Albany Highway, Victoria Park			
M5	**Base**	**Bonus**	**Modified Base**	**Modified Bonus**
Lot area	5,661	5,661	5,661	5,661
Podium area	5,661	5,661	5,661	5,661
Total Allowable Area	14152.5	22644	19813.5	22644
Gross Usable Podium Area	18115.20	18115.20	18115.20	18115.20
Maximum tower area	-4953.38	5661.00	2122.88	5661.00
Tower floor area	-1238.34375	471.75	265.359375	471.75

East Victoria Park Sub-Precinct

EV1	Base	Bonus	Modified Base	Modified Bonus
Building floors	3	4	6	6
Desired plot ratio	1.5	1.5	2.5	2.5
Podium floors	2	2	2	2
Tower floors (auto-calc)	1	2	4	4
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name				
EV1	Base	Bonus	Modified Base	Modified Bonus
Lot area	1441.60	1441.60	1441.60	1441.60
Podium area	1441.60	1441.60	1441.60	1441.60
Total Allowable Area	2162.3955	2162.3955	3603.9925	3603.9925
Gross Usable Podium Area	2306.56	2306.56	2306.56	2306.56
Maximum tower area	-180.20	-180.20	1621.80	1621.80
Tower floor area	-180.199625	-90.0998125	405.4491563	405.4491563

Lot Name	Lot 850 Albany Highway, East Victoria Park			
EV1	Base	Bonus	Modified Base	Modified Bonus
Lot area	1064.00	1064.00	1064.00	1064.00
Podium area	1064.00	1064.00	1064.00	1064.00
Total Allowable Area	1596	1596	2660	2660
Gross Usable Podium Area	1702.40	1702.40	1702.40	1702.40
Maximum tower area	-133.00	-133.00	1197.00	1197.00
Tower floor area	-133	-66.5	299.25	299.25

EV2	Base	Bonus	Modified Base	Modified Bonus
Building floors	3	5	6	6
Desired plot ratio	1	2	2	2
Podium floors	2	2	2	2
Tower floors (auto-calc)	1	3	4	4
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 455 Basinghall Street, East Victoria Park			
EV2	Base	Bonus	Modified Base	Modified Bonus
Lot area	801.72	801.72	801.72	801.72
Podium area	531.44	531.44	531.44	531.44
Total Allowable Area	801.72	1603.44	1603.44	1603.44
Gross Usable Podium Area	850.30	850.30	850.30	850.30
Maximum tower area	-60.73	941.42	941.42	941.42
Tower floor area	-60.73	313.8066667	235.355	235.355

EV3	Base	Bonus	Modified Base	Modified Bonus
Building floors	4	6	6	6
Desired plot ratio	1.5	2.5	2.5	2.5
Podium floors	3	3	3	3
Tower floors (auto-calc)	1	3	3	3
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 56 Albany Highway, East Victoria Park			
EV3	Base	Bonus	Modified Base	Modified Bonus
Lot area	1633	1633	1633	1633
Podium area	1633	1633	1633	1633
Total Allowable Area	2449.5	4082.5	4082.5	4082.5
Gross Usable Podium Area	3919.20	3919.20	3919.20	3919.20
Maximum tower area	-1837.13	204.13	204.13	204.13
Tower floor area	-1837.125	68.04166667	68.04166667	68.04166667

Lot Name	Lot 12 Albany Highway, East Victoria Park			
EV3	Base	Bonus	Modified Base	Modified Bonus
Lot area	1010.904	1010.904	1010.904	1010.904
Podium area	1010.904	1010.904	1010.904	1010.904
Total Allowable Area	1516.356	2527.26	2527.26	2527.26
Gross Usable Podium Area	2426.17	2426.17	2426.17	2426.17
Maximum tower area	-1137.27	126.36	126.36	126.36
Tower floor area	-1137.267	42.121	42.121	42.121

M6	Base	Bonus	Modified Base	Modified Bonus
Building floors	8	10	8	10
Desired plot ratio	3	4	3	4
Podium floors	3	3	3	3
Tower floors (auto-calc)	5	7	5	7
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 4 and 6 Albany Highway, East Victoria Park (amalgamate)			
M6	**Base**	**Bonus**	**Modified Base**	**Modified Bonus**
Lot area	2107.36	2107.36	2107.36	2107.36
Podium area	2107.36	2107.36	2107.36	2107.36
Total Allowable Area	6322.08	8429.44	6322.08	8429.44
Gross Usable Podium Area	5057.66	5057.66	5057.66	5057.66
Maximum tower area	1580.52	4214.72	1580.52	4214.72
Tower floor area	316.104	602.1028571	316.104	602.1028571

M7	Base	Bonus	Modified Base	Modified Bonus
Building floors	10	22	15	22
Desired plot ratio	2	5	3.5	5
Podium floors	3	3	3	3
Tower floors (auto-calc)	7	19	12	19
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 1, 2, 103 and 104 Albany Highway and Lot 50 and 51 Basinghall Street, East Victoria Park			
M7	**Base**	**Bonus**	**Modified Base**	**Modified Bonus**
Lot area	49,392	49,392	49,392	49,392
Podium area	47,392	47,392	47,392	47,392
Total Allowable Area	98784.908	246962.27	172873.589	246962.27
Gross Usable Podium Area	113741.89	113741.89	113741.89	113741.89
Maximum tower area	-18696.23	166525.48	73914.62	166525.48
Tower floor area	-2670.889571	8764.498711	6159.552021	8764.498711

East End Sub-Precinct

EE1	Base	Bonus	Modified Base	Modified Bonus
Building floors	3	5	6	6
Desired plot ratio	1	2	2	2
Podium floors	2	2	2	2
Tower floors (auto-calc)	1	3	4	4
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 582 Hubert Street, East Victoria Park			
EE1	Base	Bonus	Modified Base	Modified Bonus
Lot area	1011.66	1011.66	1011.66	1011.66
Podium area	654.00	654.00	654.00	654.00
Total Allowable Area	1011.661	2023.322	2023.322	2023.322
Gross Usable Podium Area	1046.40	1046.40	1046.40	1046.40
Maximum tower area	-43.42	1221.15	1221.15	1221.15
Tower floor area	-43.42375	407.0508333	305.288125	305.288125

EE2	Base	Bonus	Modified Base	Modified Bonus
Building floors	3	6	6	6
Desired plot ratio	1.5	2	2.5	2.5
Podium floors	2	2	2	2
Tower floors (auto-calc)	1	4	4	4
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 13, 14 and 15 Albany Highway, East Victoria Park (amalgamate)			
EE2	Base	Bonus	Modified Base	Modified Bonus
Lot area	1976.11	1976.11	1976.11	1976.11
Podium area	1881.87	1881.87	1881.87	1881.87
Total Allowable Area	2964.1605	3952.214	4940.2675	4940.2675
Gross Usable Podium Area	3010.99	3010.99	3010.99	3010.99
Maximum tower area	-58.53	1176.53	2411.60	2411.60
Tower floor area	-58.533375	294.133375	602.9000938	602.9000938

Lot Name	Lot 17 Albany Highway, East Victoria Park			
EE2	Base	Bonus	Modified Base	Modified Bonus
Lot area	709.06	709.06	709.06	709.06
Podium area	669.56	669.56	669.56	669.56
Total Allowable Area	1063.593	1418.124	1772.655	1772.655
Gross Usable Podium Area	1071.30	1071.30	1071.30	1071.30
Maximum tower area	-9.63	433.53	876.69	876.69
Tower floor area	-9.63275	108.38275	219.1736875	219.1736875

EE3	Base	Bonus	Modified Base	Modified Bonus
Building floors	5	8	8	8
Desired plot ratio	2	2.5	3	3
Podium floors	3	3	3	3
Tower floors (auto-calc)	2	5	5	5
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 551 Albany Highway, East Victoria Park			
EE3	Base	Bonus	Modified Base	Modified Bonus
Lot area	1186	1186	1186	1186
Podium area	1186	1186	1186	1186
Total Allowable Area	2372	2965	3558	3558
Gross Usable Podium Area	2846.40	2846.40	2846.40	2846.40
Maximum tower area	-593.00	148.25	889.50	889.50
Tower floor area	-296.5	29.65	177.9	177.9

Lot Name	Lot 556 Albany Highway, East Victoria Park			
EE3	Base	Bonus	Modified Base	Modified Bonus
Lot area	1054.143	1054.143	1054.143	1054.143
Podium area	1054.143	1054.143	1054.143	1054.143
Total Allowable Area	2108.286	2635.3575	3162.429	3162.429
Gross Usable Podium Area	2529.94	2529.94	2529.94	2529.94
Maximum tower area	-527.07	131.77	790.61	790.61
Tower floor area	-263.53575	26.353575	158.12145	158.12145

St James Sub-Precinct

SJ1	Base	Bonus	Modified Base	Modified Bonus
Building floors	3	5	6	6
Desired plot ratio	1.5	2	2	2
Podium floors	2	2	2	2
Tower floors (auto-calc)	1	3	4	4
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 56, 1 and 2 Alday Street, St James (amalgamate)			
SJ1	Base	Bonus	Modified Base	Modified Bonus
Lot area	3104.31	3104.31	3104.31	3104.31
Podium area	2286.37	2286.37	2286.37	2286.37
Total Allowable Area	4656.46	6208.62	6208.62	6208.62
Gross Usable Podium Area	3658.19	3658.19	3658.19	3658.19
Maximum tower area	1247.84	3188.03	3188.03	3188.03
Tower floor area	1247.84	1062.68	797.01	797.01

Lot Name	Lot 56 Alday Street, St James			
SJ1	Base	Bonus	Modified Base	Modified Bonus
Lot area	1330.65	1330.65	1330.65	1330.65
Podium area	809.33	809.33	809.33	809.33
Total Allowable Area	1995.98	2661.30	2661.30	2661.30
Gross Usable Podium Area	1294.93	1294.93	1294.93	1294.93
Maximum tower area	876.31	1707.97	1707.97	1707.97
Tower floor area	876.31	569.32	426.99	426.99

SJ2	Base	Bonus	Modified Base	Modified Bonus
Building floors	5	8	8	8
Desired plot ratio	2	3	3	3
Podium floors	3	3	3	3
Tower floors (auto-calc)	2	5	5	5
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 6 Albany Highway, East Victoria Park			
SJ2	Base	Bonus	Modified Base	Modified Bonus
Lot area	685.15	685.15	685.15	685.15
Podium area	685.15	685.15	685.15	685.15
Total Allowable Area	1370.31	2055.46	2055.46	2055.46
Gross Usable Podium Area	1644.37	1644.37	1644.37	1644.37
Maximum tower area	-342.58	513.87	513.87	513.87
Tower floor area	-171.29	102.77	102.77	102.77

Lot Name	Lot 15 Albany Highway, East Victoria Park			
SJ2	Base	Bonus	Modified Base	Modified Bonus
Lot area	2393.84	2393.84	2393.84	2393.84
Podium area	2393.84	2393.84	2393.84	2393.84
Total Allowable Area	4787.69	7181.53	7181.53	7181.53
Gross Usable Podium Area	5745.23	5745.23	5745.23	5745.23
Maximum tower area	-1196.92	1795.38	1795.38	1795.38
Tower floor area	-598.46	359.08	359.08	359.08

SJ3	Base	Bonus	Modified Base	Modified Bonus
Building floors	8	12	8	12
Desired plot ratio	3	3.5	3	3.5
Podium floors	3	3	3	3
Tower floors (auto-calc)	5	9	5	9
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 25 Albany Highway, St James			
SJ3	Base	Bonus	Modified Base	Modified Bonus
Lot area	2700.00	2700.00	2700.00	2700.00
Podium area	2583.00	2583.00	2583.00	2583.00
Total Allowable Area	8100.00	9450.00	8100.00	9450.00
Gross Usable Podium Area	6199.20	6199.20	6199.20	6199.20
Maximum tower area	2376.00	4063.50	2376.00	4063.50
Tower floor area	475.20	451.50	475.20	451.50

M8	Base	Bonus	Modified Base	Modified Bonus
Building floors	8	16	12	16
Desired plot ratio	3	4	3.5	4
Podium floors	3	3	3	3
Tower floors (auto-calc)	5	13	9	13
Useable floorspace coefficient	0.8	0.8	0.8	0.8

Lot Name	Lot 30, 131, 132 and 488 Shepperton Road and Lot 1, 480, 481 and 8 Albany Highway, East Victoria Park			
M8	**Base**	**Bonus**	**Modified Base**	**Modified Bonus**
Lot area	7642.55	7642.55	7642.55	7642.55
Podium area	7142.55	7142.55	7142.55	7142.55
Total Allowable Area	22927.65	30570.20	26748.93	30570.20
Gross Usable Podium Area	17142.12	17142.12	17142.12	17142.12
Maximum tower area	7231.91	16785.10	12008.51	16785.10
Tower floor area	1446.38	1291.16	1334.28	1291.16

Causeway - 18 Oswald Street (CW3)

		Base Scenario	Bonus Scenario
Basis of Comparison			
Unimproved Land Value (ULV)	$	$5,042,538	$5,042,538
Product Mix Assumptions			
Commercial	sqm, NSA	604.8	604.8
1 bed	#	9	14
2 bed	#	17	25
3 bed	#	5	7
Gross Realisation Assumptions			
Commercial		$3,825,360	$3,825,360
1 bed		$4,851,000	$7,546,000
2 bed		$12,117,600	$17,820,000
3 bed		$4,675,000	$6,545,000
Gross Realisation		$25,468,960	$35,736,360
$ per apartment		$698,181	$693,717
$ per sqm GFA		$6,314	$5,906
$ per sqm NSA		$7,356	$6,903
Less Selling Costs		$720,007	$1,010,267
Net Sales Revenue		$24,748,953	$34,726,093
Less GST Paid on Revenue		$2,315,360	$3,248,760
Total Revenues after GST		**$22,433,593**	**$31,477,333**
Development Cost Assumptions			
Professional Fees (10%) (exc GST)		$1,553,933	$2,071,829
Estimated CAP-EX (exc GST)		$15,539,331	$20,718,285
Contigencies (10%) (exc GST)		$1,709,326	$2,279,011
Cost per GFA		$4,661	$4,143
Community Benefit Contribution (exc GST)		$0	$155,369
Land Holding Costs		$370,200	$407,220
Finance Charges (exc GST)		$50,000	$50,000
Interest Expense		$755,112	$1,121,569
Total Costs after GST		$19,977,902	$26,803,283
Net		$2,455,690	$4,674,050
Performance Indicators			
Developer Margin Target		0%	0%
Residual Land Value		$2,455,690	$4,829,419
Resultant Site Rate		$1,217	$2,394
Resultant Yeld Rate		$79,216	$104,987
RLV vs Market Vaue		-51%	-4%

Victoria Park - 11 King George Street (VP3)

		Base Scenario	Bonus Scenario
Basis of Comparison			
Unimproved Land Value (ULV)		$3,987,675	$3,987,675
Product Mix Assumptions			
Commercial	sqm, NSA	0	0
1 bed	#	9	12
2 bed	#	16	23
3 bed	#	4	6
Commercial		$0	$0
1 bed		$4,851,000	$6,468,000
2 bed		$11,404,800	$16,394,400
3 bed		$3,740,000	$5,610,000
Gross Realisation		$19,995,800	$28,472,400
$ per apartment		$689,510	$694,449
$ per sqm GFA		$6,268	$5,950
$ per sqm NSA		$7,374	$7,000
Less Selling Costs		$565,281	$804,915
Net Sales Revenue		$19,430,519	$27,667,485
Less GST Paid on Revenue		$1,817,800	$2,588,400
Total Revenues after GST		**$17,612,719**	**$25,079,085**
Development Cost Assumptions			
Professional Fees (10%) (exc GST)		$1,214,356	$1,624,241
Estimated CAP-EX (exc GST)		$12,143,560	$16,242,408
Contigencies (10%) (exc GST)		$1,335,792	$1,786,665
Cost per GFA		$4,606	$4,107
Community Benefit Contribution (exc GST)		$0.00	$122,965
Land Holding Costs		$267,700	$294,470
Finance Charges (exc GST)		$50,000	$50,000
Interest Expense		$589,287	$878,275
Total Costs after GST		$15,600,694	$20,999,024
Net		$2,012,025	$4,080,061
Performance Indicators			
Developer Margin Target		0%	0%
Residual Land Value		$2,012,025	$4,203,027
Resultant Site Rate		$1,261	$2,635
Resultant Yield Rate		$69,380	$102,513
RLV vs Market Vaue		-50%	5%

Central - L300, L301 Albany Hwy (CE3)

		Base Scenario	Bonus Scenario
Basis of Comparison			
Unimproved Land Value (ULV)		$3,700,000	$3,700,000
Product Mix Assumptions			
Commercial	sqm, NSA	443.7	443.7
1 bed	#	9	11
2 bed	#	17	20
3 bed	#	5	5
Commercial		$2,806,403	$2,806,403
1 bed		$4,851,000	$5,929,000
2 bed		$12,117,600	$14,256,000
3 bed		$4,675,000	$4,675,000
Gross Realisation		$24,450,003	$27,666,403
$ per apartment		$698,181	$690,556
$ per sqm GFA		$6,608	$6,231
$ per sqm NSA		$7,714	$7,283
Less Selling Costs		$691,202	$782,129
Net Sales Revenue		$23,758,801	$26,884,273
Less GST Paid on Revenue		$2,222,728	$2,515,128
Total Revenues after GST		**$21,536,073**	**$24,369,146**
Development Cost Assumptions			
Professional Fees (10%) (exc GST)		$1,458,357	$1,648,362
Estimated CAP-EX (exc GST)		$14,583,575	$16,483,624
Contigencies (10%) (exc GST)		$1,604,193	$1,813,199
Cost per GFA		$4,769	$4,492
Community Benefit Contribution (exc GST)		$0.00	$57,001
Land Holding Costs		$239,550	$263,505
Finance Charges (exc GST)		$50,000	$50,000
Interest Expense		$704,436	$886,821
Total Costs after GST		$18,640,112	$21,202,512
Net		$2,895,962	$3,166,634
Performance Indicators			
Developer Margin Target		0%	0%
Residual Land Value		$2,895,962	$3,223,636
Resultant Site Rate		$1,957	$2,178
Resultant Yield Rate		$93,418	$89,545
RLV vs Market Vaue		-22%	-13%

East Vic Park - 779 Albany Hwy (Park Centre) (M7)

		Base Scenario	Bonus Scenario
Basis of Comparison			
Unimproved Land Value (ULV)		$126,171,875	$126,171,875
Product Mix Assumptions			
Commercial	sqm, NSA	20187.9	50,468.4
1 bed	#	212	385
2 bed	#	388	705
3 bed	#	106	192
Gross Realisation Assumptions			
Commercial		$127,688,468	$319,212,630
1 bed		$114,268,000	$207,515,000
2 bed		$276,566,400	$502,524,000
3 bed		$99,110,000	$179,520,000
Gross Realisation		$617,632,868	$1,208,771,630
$ per apartment		$693,972	$693,884
$ per sqm GFA		$6,119	$4,790
$ per sqm NSA		$7,106	$5,563
Less Selling Costs		$17,460,481	$34,171,974
Net Sales Revenue		$600,172,386	$1,174,599,656
Less GST Paid on Revenue		$56,148,443	$109,888,330
Total Revenues after GST		**$544,023,944**	**$1,064,711,326**
Development Cost Assumptions			
Professional Fees (10%) (exc GST)		$40,036,097	$74,482,755
Estimated CAP-EX (exc GST)		$400,360,972	$744,827,549
Contigencies (10%) (exc GST)		$44,039,707	$81,931,030
Cost per GFA		$4,799	$3,571
Community Benefit Contribution (exc GST)		$0.00	$10,333,997
Land Holding Costs		$18,908,230	$20,627,160
Finance Charges (exc GST)		$50,000	$50,000
Interest Expense		$22,021,554	$44,862,417
Total Costs after GST		$525,416,560	$977,114,908
Net		$18,607,384	$87,596,418
Performance Indicators			
Developer Margin Target		0%	0%
Residual Land Value		$18,607,384	$97,930,415
Resultant Site Rate		$369	$1,940
Resultant Yield Rate		$26,356	$76,389
RLV vs Market Vaue		-85%	-22%

East End - 135 Hubert St (EE1)

		Base Scenario	Bonus Scenario
Basis of Comparison			
Unimproved Land Value (ULV)		$2,539,648	$2,539,648
Product Mix Assumptions			
Commercial	sqm, NSA	0	0
1 bed	#	4	6
2 bed	#	6	10
3 bed	#	2	3
Gross Realisation Assumptions			
Commercial		$0	$0
1 bed		$2,156,000	$3,234,000
2 bed		$4,276,800	$7,128,000
3 bed		$1,870,000	$2,805,000
Gross Realisation		$8,302,800	$13,167,000
$ per apartment		$691,900	$693,000
$ per sqm GFA		$8,173	$6,481
$ per sqm NSA		$9,615	$7,624
Less Selling Costs		$234,720	$372,231
Net Sales Revenue		$8,068,080	$12,794,769
Less GST Paid on Revenue		$754,800	$1,197,000
Total Revenues after GST		**$7,313,280**	**$11,597,769**
Development Cost Assumptions			
Professional Fees (10%) (exc GST)		$511,423	$772,314
Estimated CAP-EX (exc GST)		$5,114,228	$7,723,136
Contigencies (10%) (exc GST)		$562,565	$849,545
Cost per GFA		$6,092	$4,600
Community Benefit Contribution (exc GST)		$0.00	$78,267
Land Holding Costs		$76,200	$88,900
Finance Charges (exc GST)		$50,000	$50,000
Interest Expense		$137,167	$249,815
Total Costs after GST		$6,451,584	$9,811,976
Net		$861,696	$1,785,793
Performance Indicators			
Developer Margin Target		0%	0%
Residual Land Value		$861,696	$1,864,060
Resultant Site Rate		$848	$1,835
Resultant Yield Rate		$71,808	$98,108
RLV vs Market Vaue		-66%	-27%

St James - 1037 Albany Hwy (SJ3)

		Base Scenario	Bonus Scenario
Basis of Comparison			
Unimproved Land Value (ULV)		$12,367,500	$12,367,500
Product Mix Assumptions			
Commercial	sqm, NSA	1979.1	1,979.1
1 bed	#	32	38
2 bed	#	59	69
3 bed	#	16	19
Gross Realisation Assumptions			
Commercial		$12,517,808	$12,517,808
1 bed		$17,248,000	$20,482,000
2 bed		$42,055,200	$49,183,200
3 bed		$14,960,000	$17,765,000
Gross Realisation		$86,781,008	$99,948,008
$ per apartment		$694,049	$693,890
$ per sqm GFA		$5,847	$5,773
$ per sqm NSA		$6,820	$6,741
Less Selling Costs		$2,453,299	$2,825,530
Net Sales Revenue		$84,327,708	$97,122,477
Less GST Paid on Revenue		$7,889,183	$9,086,183
Total Revenues after GST		**$76,438,526**	**$88,036,295**
Development Cost Assumptions			
Professional Fees (10%) (exc GST)		$5,372,687	$6,007,791
Estimated CAP-EX (exc GST)		$53,726,871	$60,077,912
Contigencies (10%) (exc GST)		$5,909,956	$6,608,570
Cost per GFA		$4,380	$4,198
Community Benefit Contribution (exc GST)		$0	$190,531
Land Holding Costs		$1,200,000	$1,320,000
Finance Charges (exc GST)		$50,000	$50,000
Interest Expense		$2,607,172	$3,246,644
Total Costs		$68,866,686	$77,501,449
Net		$7,571,840	$10,534,846
Performance Indicators			
Developer Margin Target		0%	0%
Residual Land Value		$7,571,840	$10,725,377
Resultant Site Rate		$1,531	$2,168
Resultant Yield Rate		$70,765	$85,122
RLV vs Market Vaue		-39%	-13%

WAPC Western Australian Planning Commission

REPORT TO	Statutory Planning Committee		
Meeting date	23 September 2026	**File number**	202723 & DR86/2026
Title	Section 31 Reconsideration - Reconsideration of Subdivision Conditions – Lot 818 Larwood Crescent, High Wycombe		
Purpose	For decision		
Head of power	Section 284, *Planning and Development Act 2005* and Section 31, *State Administrative Tribunal Act 2004*		
Delegation	Item 2.7 of DEL 2024/02 Powers of Committees		
Confidentiality	Non-confidential		
Responsible officer	Ryan Shaw – Director, Planning Appeals	**Responsible Officer Conflict of Interest**: Nil	
SITE DETAILS			
Region	Metropolitan (North East)		
Local government	City of Kalamunda		
Region Scheme / Zoning	Metropolitan (MRS) Urban		
Local Scheme / Zoning	City of Kalamunda Local Planning Scheme No.3 – Residential R30		
Property address	Lot 818 Larwood Crescent, High Wycombe		
Site area	7369m^2		
Existing land use	Single House		
Landowner	Veda Estates WA Pty Ltd		
Applicant/s Consultant/s	As above		
Local Government recommendation	Affirm previous decision and retain condition 21		
ATTACHMENTS			
A1 – Location Plan A2 – Subdivision Approval dated 25 May 2026 and Subdivision Plan A3 – Applicant's section 31 Reconsideration Request A4 – Zoning Plan			

EXECUTIVE SUMMARY

On 9 June 2026, the applicant applied to the State Administrative Tribunal (SAT) for a review of a delegated decision of the Western Australian Planning Commission (WAPC) dated 25 May 2026 to impose a condition requiring a cash-in-lieu contribution for public open space (POS) on an approval to subdivide Lot 818 Larwood Crescent, High Wycombe (the site) to create 19 residential lots and a road reserve (refer **A1 and A2**).

In disputing the need for Condition 21, the applicant's case generally centres on the WAPC's *Position Statement: Public Open Space* (POS Position Statement), which outlines that POS contributions for infill development may be reduced to zero during the two-year deferral period ending 18 December 2027 (refer to **A3**).

The key consideration in assessing this proposal is whether Condition 21 (i) serves a proper planning purpose, (ii) has a nexus and (iii) is reasonable, having regard to factors such as the demand for POS within the locality, the type of development proposed, and the recent POS Position Statement, with the latter considered fundamental to whether the condition is retained, modified or deleted.

Competing interpretations of the POS Position Statement have been raised by the applicant and the City of Kalamunda on whether the proposed subdivision constitutes *infill* or *greenfield* development under this framework. Having consideration for both the policy intent and the broader planning context, it is recommended that the proposal be treated as an *infill* development as the site is located within an established area where there is existing POS.

Placing weight on the requirement for conditions to be 'reasonable', on balance, pursuant to section 31 of the *State Administrative Tribunal Act 2004*, it is recommended that the Statutory Planning Committee varies its decision of 25 May 2026 by deleting Condition 21.

RECOMMENDATION

That the Statutory Planning Committee resolves, under Section 31 of the State Administrative Tribunal Act 2004 to VARY its decision dated 25 May 2026 and APPROVE the proposed subdivision of Lot 818 Larwood Crescent, High Wycombe, subject to Condition 21 being deleted.

PROPOSAL DETAILS

On 25 May 2026, the WAPC (under delegation) approved the proposed subdivision to create 19 residential lots and a road reserve at the site, subject to 21 conditions (refer **A2**).

On 9 June 2026, the applicant applied to the SAT seeking a review of Condition 21, which reads as follows.

> *21. The landowner/applicant shall make payment to the local government for the sum equivalent to the value of 10 per cent of the land, being that portion of the land that would otherwise be provided as open space, in accordance with Sections 153 and 155 of the Planning and Development Act 2005. (City of Kalamunda)*

The crux of the applicant's case is that the approved subdivision constitutes an *infill* development under the POS Position Statement which exempts infill subdivisions from making a POS contribution during the deferral period until 18 December 2027 (refer to **A3**).

BACKGROUND

Site Context

The site has an area of 7,969m² and contains a single dwelling and associated outbuildings (refer to **A1**). It is one of the few remaining larger landholdings within the locality. Most of the surrounding land has been progressively subdivided and developed in accordance with structure planning, reflecting a prevailing density code of R20 with residential lots ranging between 450m² and 600m² in size.

The site is located approximately 750 metres north-east of the local shopping centre on Kalamunda Road and approximately 4 kilometres north of High Wycombe Train Station. The area immediately north of Adelaide Street within the Hazelmere suburb and the City of Swan local government area, and is generally developed for industrial purposes, forming part of the broader Perth Airport precinct.

Planning Context and Past Subdivision Approval

The site forms part of an area that was progressively structure planned and developed for residential purposes from the late 1990s onwards. It was rezoned from Rural to Special Rural in 1987 and from Special Rural to Urban Development in 2007. Successive structure plans were prepared under this zone, with varying levels of detail relating to the site. Across all plans, however, the provision of POS for the site was deferred to the subdivision stage.

This framework remained in place until recently, when in February 2026 the site's planning arrangements were 'normalised' to Residential with an R30 density code (**A4**). While much of the surrounding locality has been subdivided, leading to contributions towards local POS, the site itself remained unsubdivided, accommodating only a single house.

In 2018, the WAPC granted subdivision approval (under delegation) for 16 residential lots (WAPC 156847). This approval was not acted on and subsequently lapsed. It included a condition for POS at the time, requiring the typical 10% contribution.

Consultation

The applicant's reconsideration request was referred to the City for comment.

The City's position is that the condition should be retained as is, on the grounds that the proposal is a *greenfield* subdivision. As it follows, because the site has not been developed or contributed to POS previously, the City does not consider that it qualifies for the temporary exemption for *infill* subdivisions under the most-recent policy framework.

Framework and Policy Assessment Overview

Legislation, Policies and Framework	Consistency
Planning and Development Act 2005	Fully consistent
State Planning Policy 3.6 – Infrastructure Contributions	Fully consistent
Position Statement: Public Open Space	Fully consistent
Liveable Neighbourhoods	Some inconsistency, variation warranted

DISCUSSION

Consistent with decisions of the Court, for a planning condition to be valid it must –be for a planning purpose;

a) fairly and reasonably relate to the subdivision, that is the 'nexus';
b) be reasonable, and one that is not so unreasonable that no reasonable planning authority could have imposed it;
c) be certain; and
d) be final.

In this instance, d)-e) are not challenged by the applicant. In this regard, Condition 21 is a model subdivision condition which clearly specifies the requirement for a monetary contribution based on the sum of the equivalent value of 10% of the gross subdivisible area.

What is in dispute is whether the condition serves a planning purpose and whether it fairly and reasonably relates to the subdivision. In turn, this raises broader questions as to the reasonableness of maintaining the condition.

The applicant's latest material generally explores these issues in the context of the WAPC's recent POS Position Statement, drawing reference to the principles outlined in *State Planning Policy 3.6 – Infrastructure Contributions* (SPP 3.6), alongside elements of the local planning framework in respect to local POS supply and demand.

While the applicant's submissions (**A3**) outline a range of contentions in support of waiving the condition, including matters relating to legal interpretation, the discussion below considers the matter from a broader planning perspective, and for different reasons, ultimately supports deletion of the condition.

Planning Purpose

Planning purpose is broken into two interrelated parts, being (i) whether the condition has a relationship to planning theory or policy, and (ii) whether the condition fulfils a proper planning purpose.

At its highest level, the *Planning and Development Act 2005* provides for the ceding of land for POS to the Crown. This legislative framework is then reflected throughout all tiers of the planning framework, as set out below.

SPP 3.6 broadly capture this requirement as a standard development contribution for new and established areas, as follows –

> "*Developers, or landowners, are required to make contributions for new or upgraded infrastructure to support the orderly development of an area. These may relate to requirements of service providers, the State Government or local government… levied through the subdivision and development process. This includes:*
>
> - *land contributions for public open space, foreshore reserves, primary schools and roads..."* (emphasis added)

This principle is then carried forward into *Operational Policy 1.1 – Subdivision of Land – General Principles* (OP 1.1) at clause 3.6, and until more recently, addressed in its own *Development Control Policy 2.3 – Public Open Space in Residential Areas* (DC 2.3).

Like its predecessor, DC 2.3, the POS Position Statement addresses POS through high level objectives aimed at delivering POS through subdivision to meet community objectives. It aims to ensure there is adequate, responsive, well-located and functional open space in all urban areas by applying a consistent approach on contributions.

Liveable Neighbourhoods, an operational policy, also deals with this requirement. While typically applied to more greenfield scenarios, its principles remain relevant to the present case.

Against this framework, a condition which requires a contribution towards the provision of POS, where lots created by the subdivision create a demand, is considered to serve a planning purpose.

Despite this, in the circumstances, the relative weight of each planning instrument is considered key to determining whether discretion is exercised to maintain, modify or waive the condition. In this regard, the POS Position Statement took effect in December 2025 and introduced new policy provisions to differentiate between subdivision types, guiding consideration of their corresponding contribution to POS. These are –

- **Brownfield:** larger scale sites in established areas that are often, but not limited to, land that may have been converted from a former land use to another
- **Greenfield:** undeveloped land that has been identified for future urban use.
- **Infill:** is the redevelopment of existing urban areas at a higher density than currently exists.

For brownfield and greenfield subdivisions, a POS contribution is generally required. By contrast, a subdivision approved during the 2 year 'deferral period' (between 19 December 2025 to 18 December 2027) that meets the *infill* definition attracts a nil contribution.

As outlined in the associated Explanatory Notes, a key reason behind the deferral period is to prioritise infill housing targets. By establishing this temporary pathway, the new POS Position Statement, when read and applied as a whole, is considered to create an exception to the traditional position that the creation of additional lots will contribute towards addressing the increase demand for POS. Greater weight is placed on this point, given the currency of the POS Position Statement, notwithstanding where it lies within the broader State Planning Framework, being a lower-order planning instrument, from say a State Planning Policy such as SPP 3.6.

Condition 21 was initially imposed on the grounds that the subdivision constituted *greenfield* development. However, the applicant contends it should be viewed as *infill* development as it concerns the redevelopment of a single dwelling on a large lot into 19 residential lots within an established suburb.

On the face of the definitions, there is an arguable basis for both positions. This is because the site is a large undeveloped lot that falls within an existing built-up area. It is considered that these characteristics support either interpretation, but for the reasons set out below, an *infill* characterisation is preferred. This is because –

- the site has been zoned Urban under the Metropolitan Region Scheme since 1995 and was rezoned from Urban Development to Residential R30 under LPS 3 earlier this year, meaning structure planning is no longer a prerequisite to inform future subdivision and development.
- the subdivision reflects the redevelopment of an existing single house in an existing urban area at a higher density than currently exists (1 into 19 lots).
- For completeness, changes to the site's planning arrangements do not reflect a dramatic shift in land use so that it would fall within the broader *brownfield* category. The site is also situated within a broader locality where POS has traditionally been required, distinguishing it from other brownfield areas.

Counter to these points, the site could be viewed as representing the 'final' stage, or remainder of a broader greenfield subdivision, in which no contribution for POS have been made. This approach does not fit neatly within the definitions outlined above, but notwithstanding this, would acknowledge the site's history as forming part of a broader structure planned area that provided for further subdivision and triggered the demand for additional POS contributions.

Given planning policy is not intended to be applied inflexibly, it is considered that in exercising discretion, there is scope to consider these matters more broadly and, in a manner consistent with the overarching intent and purpose of the planning framework. This issue would seem to turn on supply and demand, which is explored below.

Nexus

As reflected above, it must also be demonstrated that the creation of additional residential lots will generate the need for POS. While on numbers alone, the creation of 18 additional lots will create an increased demand for POS, the POS Position Statement outlines the need to take into consideration the practical effect on existing local supply.

The City prepared its POS Strategy in 2018 to determine the strategic provision of POS within the local government area, including as assessment of the quality and quantity of existing POS.

Consistent with the POS Position Statement, the Strategy assesses POS provision on a suburb-by-suburb basis, defining the suburb as the relevant locality. The Strategy identifies that:

- the suburb of High Wycombe experiences a POS shortfall at 1.32%, demonstrating that there is a direct need for additional POS within the High Wycombe locality; and
- a need for upgrades and improvements to existing POS to accommodate current and future demand within the High Wycombe locality.

The applicant contends that POS requirements have been previously satisfied as there are several areas of POS in proximity to the site. By way of example, the applicant relies on local POS Reserve 52622, which is located approximately 100m north-east of the site. This POS reserve was provided under a previous structure plan, and while practically speaking, it provides a local park within walking distance from the site, it does not represent the locality's full 10% contribution. As it follows, had the requirement for structure planning remained, the subdivision would have likely triggered additional POS contributions.

Furthermore, the normalisation process which occurred earlier this year does not remove the requirement to contribute towards POS where there is a demonstrated demand generated by the subdivision.

It is considered that on nexus alone, the condition should be maintained, having regard to (i) the shortfall identified in the POS Strategy, (ii) the absence of a 10% provision within the immediate area and (iii) the demand generated by the subdivision through the creation of additional 18 lots. Taken together, these factors establish a clear nexus.

Reasonableness

The last point relates to reasonableness. In this regard, a condition should not be found to be so unreasonable that a reasonable decision maker could not have made the decision. This 'test' typically hinges on planning purpose and nexus, as set out above.

In this case, it is considered that Condition 21 should be waived based on the temporary deferral pathway that applies to *infill* subdivision. An overriding factor in recommending this approach is the 'reasonableness' factor. This approach recognises the POS Position Statement's currency, having been approved in December 2025, alongside the way it differentiates between different forms of subdivision based on context. In the circumstances it is considered that this point is directly relevant to the proposal, warranting an *infill* characterisation, and accordingly a nil contribution.

An alternative approach would be to maintain the *status quo* or reducing the contribution amount to reflect the local supply of POS. Regarding the latter approach, a reduced contribution of 1-2% (reflecting the shortfall as identified in the POS Strategy as opposed to the full 10%) may be considered reasonable, in balancing all issues. However, this is not recommended given the arbitrary nature of contributions and overall methodology.

CONCLUSION

On balance, as set out above, the subdivision is considered to reflect an *infill* development within an established urban area, therefore qualifying for the temporary exemption pathway under the WAPC's recent POS Position Statement.

While the subdivision will increase demand for POS and no previous POS contribution has been made by the site, weight is given to this instrument from a practical and 'reasonableness' perspective.

Accordingly, it is recommended that the condition be deleted.



Department of **Planning, Lands and Heritage**

GOVERNMENT OF WESTERN AUSTRALIA

Legend

- Cadastre (View 1)
- Roads
  - National Highway
  - Main
  - Minor
  - Not Applicable
- **Subject Site**

Attachment 1 - Location Plan

DPLH BUSINESS USE ONLY

Internal Spatial Viewer

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0 0.17 0.34 Kilometres

1: 7,851 at A4

Projection: WGS 1984 Web Mercator Auxiliary Sphere

Graticules (if visible): GDA 1994 Latitude/Longitude

Notes:

* The data that appears on the map may be out of date, not intended to be used at the scale displayed, or subject to license agreements. The map should only be used in matters related to Department of Planning, Lands and Heritage business.

* This map is not intended for measurement purposes.

Map was produced using DPLH's InQuiry.

Date produced: 17-Aug-2026

WAPC ref: 202723
Date: 25 May 2026
Enquiries: Jason Bouwhuis 6551 9434

Riannon lee Crabbe,
Harley Dykstra
15/2 Hensbrook Loop
Forrestdale WA 6112

Transmitted via email only to: metro@harleydykstra.com.au

Dear Riannon lee

APPROVAL OF APPLICATION WAPC REF: 202723

Thank you for your application to subdivide Lot 818 Larwood Crescent, High Wycombe.

The Western Australian Planning Commission (WAPC) has approved application WAPC Ref: 202723 and, once the attached conditions of approval are fulfilled, is prepared to endorse a Deposited plan in accordance with the plan date-stamped 12 January 2026.

This decision is valid for four (4) years from the date of this letter. In order to implement this letter and have the new titles created, a request for the endorsement of a Deposited plan (Form 1C) must be submitted to the WAPC within the term of the approval, that is by the close of business on 25 May 2030 or this approval will no longer be valid.

The Form 1C and a schedule of fees can be found on Planning Online: https://planningonline.dplh.wa.gov.au.

CONDITION(S):

1. The plan of subdivision is to be modified in accordance with the attached plan (Attachment A) dated 30 March 2026.

   (Western Australian Planning Commission)

2. Arrangements being made with the Water Corporation so that provision of a sewerage service to the lot(s) shown on the approved plan of subdivision.

   (Water Corporation)

3. Arrangements being made with a licensed water provider for the provision of a suitable water supply service to the lots(s) shown on the approved plan of subdivision.

   (Water Corporation)

4. The provision of easements for existing or planned future water, sewerage and/or drainage infrastructure as may be required by Water Corporation being granted free of cost to that body.

   (Water Corporation)

5. Arrangements being made with a licensed electricity network operator for the provision of an underground electricity distribution system that can supply electricity to each lot shown on the approved plan of subdivision.

   (Western Power)

6. The transfer of land as a Crown reserve free of cost to Western Power for the provision of electricity supply infrastructure.

   (Western Power)

7. The landowner/applicant making a pro-rata contribution, in monetary form, to the Department of Education towards the provision of land for a public primary school site(s) and/or expansion of existing public primary school site(s) to serve the broader locality in accordance with the contribution methodology outlined in the Western Australian Planning Commission's Operational Policy 2.4.

   (Department of Education)

8. Engineering drawings and specifications are to be submitted, approved, and subdivisional works undertaken in accordance with the approved plan of subdivision, engineering drawings and specifications, to ensure that those lots not fronting an existing road are provided with frontage to a constructed road(s) connected by a constructed road(s) to the local road system and such road(s) are constructed and drained at the landowner/applicant's cost.

   As an alternative, and subject to the agreement of the Local Government the Western Australian Planning Commission (WAPC) is prepared to accept the landowner/applicant paying to the local government the cost of such road works as estimated by the local government and the local government providing formal assurance to the WAPC confirming that the works will be completed within a reasonable period as agreed by the WAPC.

   (City of Kalamunda)

9. Engineering drawings and specifications are to be submitted and approved, and subdivisional works undertaken for construction of roads in accordance with the approved plan of subdivision, engineering drawings and specifications to ensure that:
   a) street lighting in accordance with dark sky principles is installed on all new subdivisional roads to the standards of the relevant licensed service provider; and
   (b) roads that have been designed to connect with existing or proposed roads abutting the subject land are coordinated so the road reserve location and width connect seamlessly.

   (City of Kalamunda)

10. Engineering drawings and specifications are to be submitted, approved, and subdivisional works undertaken in accordance with the approved plan of subdivision, engineering drawings and specifications, for the provision of shared paths through and connecting to the application area to the satisfaction of the Western Australian Planning Commission.

    (City of Kalamunda)

11. The land being filled, stabilised, drained and/or graded as required to ensure that:
    a) lots can accommodate their intended development;
    b) finished ground levels at the boundaries of the lot(s) the subject of this approval match or otherwise coordinate with the existing and/or proposed finished ground levels of the land abutting; and
    c) stormwater is contained on-site, or appropriately treated and connected to the local drainage system.

    (City of Kalamunda)

12. Other than buildings, outbuildings and/or structures shown on the approved plan for retention, all buildings, outbuildings and/or structures present on proposed Lots 1 to 19 and the road reserve at the time of subdivision approval being demolished and materials removed from the lot(s).

    (City of Kalamunda)

13. All septic sewer systems including all tanks and pipes and associated drainage systems (soak wells or leach drains) and any stormwater disposal systems are to be decommissioned, in accordance with the Health (Treatment of Sewerage and Disposal of Effluent and Liquid Waste) Regulations 1974, removed, filled with clean sand and compacted. Proof of decommissioning is to be provided in the form of either certification from a licensed plumber or a statutory declaration from the landowner/applicant, confirming that the site has been inspected and all septic tanks, soak wells, leach drains and any associated pipework have been removed.

    (City of Kalamunda)

14. Local Development Plan(s) being prepared and approved for lots shown on the modified plan of subdivision for proposed Lots 7 to 14 dated 30 March 2026 (attached) that address the following:

    a) vehicular access; and
    b) garage/carport location.

    (City of Kalamunda)

15. The landowner/applicant shall make arrangements to ensure that prospective purchasers of lots subject of a Local Development Plan are advised in writing that Local Development Plan provisions apply.

    (City of Kalamunda)

16. Prior to the commencement of subdivisional works, the landowner/applicant is to provide a pre-works geotechnical report certifying that the land is physically capable of development or advising how the land is to be remediated and compacted to ensure it is capable of development; and in the event that remediation works are required, the landowner/applicant is to provide a post geotechnical report certifying that all subdivisional works have been carried out in accordance with the pre-works geotechnical report.

    (City of Kalamunda)

17. Information is to be provided to demonstrate that the measures contained in Section 6 titled Responsibilities for Implementation and Management of Bushfire Measures within the Bushfire Logic Bushfire Management Plan dated 9 December 2025 (Version 1.1) have been implemented during subdivisional works. This information should include a completed 'Compliance Certificate' prepared by the bushfire planning practitioner.

    (City of Kalamunda)

18. A notification, pursuant to Section 165 of the *Planning and Development Act 2005*, is to be placed on the certificate(s) of title of the proposed lot(s) with a Bushfire Attack Level (BAL) rating of 12.5 or above, advising of the existence of a hazard or other factor. Notice of this notification is to be included on the diagram or plan of survey (deposited plan). The notification is to state as follows:

    "*This land is within a bushfire prone area as designated by an order made by the Fire and Emergency Services Commissioner and is subject to a Bushfire Management Plan. Additional planning and building requirements may apply to development on this land.*"

    (Western Australian Planning Commission)

19. Prior to the commencement of subdivisional works, measures being undertaken to identify any vegetation on the site worthy of retention, including any potential habitat or foraging trees for threatened fauna species, and protection measures implemented to ensure such vegetation is not impacted by subdivisional works.

    (City of Kalamunda)

20. Engineering drawings and specifications are to be submitted, approved, and works undertaken in accordance with the approved engineering drawings, specifications and approved plan of subdivision, for grading and/or stabilisation of the site to ensure that:
    a) lots can accommodate their intended use; and
    b) finished ground levels at the boundaries of the lot(s) the subject of this approval match or otherwise coordinate with the existing and/or proposed finished ground levels of the land abutting.

    (City of Kalamunda)

21. The landowner/applicant shall make payment to the local government for the sum equivalent to the value of 10 per cent of the land, being that portion of the land that

would otherwise be provided as open space, in accordance with Sections 153 and 155 of the *Planning and Development Act 2005*.

(City of Kalamunda)

ADVICE:

1. In regard to Conditions 2 and 3, the landowner/applicant shall make arrangements with the Water Corporation for the provision of the necessary services. On receipt of a request from the landowner/ applicant, a Land Development Agreement under Section 83 of the *Water Services Act 2012* will be prepared by the Water Corporation to document the specific requirements for the proposed subdivision.

2. In regard to Condition 5, Western Power provides only one underground point of electricity supply per freehold lot.

3. In regard to Condition 7, the landowner/applicant is responsible for undertaking a per hectare valuation for the land subject of the subdivision application within the six (6) months prior to seeking clearance of the condition from the Department of Education. The per hectare value will be used by the Department of Education to inform the pro-rata contribution (1/1500th per applicable lot created) payable to the Department of Education in accordance with the WAPC's Operational Policy 2.4. Alternatively, the landowner/applicant may elect to pay the maximum contribution amount in accordance with Operational Policy 2.4, per lot created.

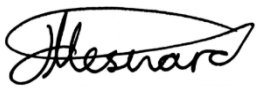
4. In regard to Condition 12, a demolition permit may be required to be obtained from the local government prior to the commencement of demolition works.

5. The landowner/applicant is advised that the Department of Water and Environmental Regulation has prepared dust control guidelines for development sites, which, outline the procedures for the preparation of dust management plans. The dust management plans are generally approved, and their implementation overseen, by the Local Government. Further information on the guidelines can be obtained from the Department of Water and Environmental Regulation's website www.dwer.wa.gov.au under air quality publications.

6. The landowner/applicant is advised that pursuant to the Commonwealth *Telecommunications Act 1997* there will generally be a requirement for the installation of fibre-ready telecommunications infrastructure. Exemptions can be sought for certain types of development. Further information is available from the Australian Government website at Department of Infrastructure, Transport, Regional Development, Communications and the Arts www.infrastructure.gov.au

If further clarification is required, please review the attached information about your approval, or

contact the planning officer listed at the top of this letter



Jonathan Mesnard
Secretary

25 May 2026

APPLICATION DETAILS

Applicant	Riannon lee Crabbe, Harley Dykstra 15/2 Hensbrook Loop Forrestdale 6112
Owner	1. Richard Bryant Fullerton
Application Receipt	09 December 2025
Lot Number	818
Diagram / Plan	Plan 411026 / Diagram 411026
Location	
C/T Volume/Folio	2937/284
Street Address	Lot 818 Larwood Crescent, High Wycombe
Local Government	City of Kalamunda

What are conditions and how are they fulfilled?

Conditions and associated advice notes are an essential tool used by the WAPC to ensure compliance with its statutory responsibilities.

Condition(s) must be fulfilled before a request for endorsement of a deposited plan (Form 1C) can be lodged. This provides the basis to create the new land titles.

Each condition has a nominated clearing authority, noted at the end of each condition, and the landowner/applicant needs to liaise with that authority in order to fulfil the condition. Typically, conditions need to be addressed before any site works are commenced.

When the written advice of each clearing authority has been obtained, this advice is to be submitted to the WAPC with a Form 1C and a copy of the deposited plan (that has been lodged with Landgate). The Form 1C and schedule of fees are available on the WAPC website: https://planningonline.dplh.wa.gov.au

Can I request reconsideration/review of a condition or a decision?

There are two ways in which an applicant/owner may request reconsideration or review of a condition or a decision:

1. Seeking WAPC reconsideration - Sections 144 and 151(1) of the *Planning and Development Act 2005* provide for the landowner/applicant, within 28 days from the date of the decision, to make a written request to the WAPC to reconsider the decision, or conditions imposed. Such an application can be made via the Form 3A, which can be found, together with a schedule of fees, online from: https://planningonline.dplh.wa.gov.au

In seeking a reconsideration the applicant/landowner needs to provide new information or evidence that would warrant the WAPC making a different decision.

An application for reconsideration may be submitted to the WAPC prior to submission of an application for review of a decision through the State Administrative Tribunal.

2. Seeking a review by the State Administrative Tribunal – An applicant/landowner may also apply to the State Administrative Tribunal for review of a decision under Section 251 of the *Planning and Development Act 2005*.

An application should be lodged within 28 days of the date of the decision. Further details can be obtained at www.sat.justice.wa.gov.au

What if the clearing authority does not provide written confirmation?

The applicant/owner should make reasonable endeavour with the clearing authority to fulfil conditions. This may include the provision of supplementary information. If the clearing authority will not provide its written confirmation following reasonable endeavour, the applicant/owner should seek advice from the WAPC.

There is scope for the WAPC to clear conditions of subdivision through the Form 1C process; however, it is best to seek pre-lodgement advice so that the WAPC can advise if the clearing of conditions would be a minor administrative matter, or whether it will require the WAPC to seek further advice or investigate the matter with the clearing authority.

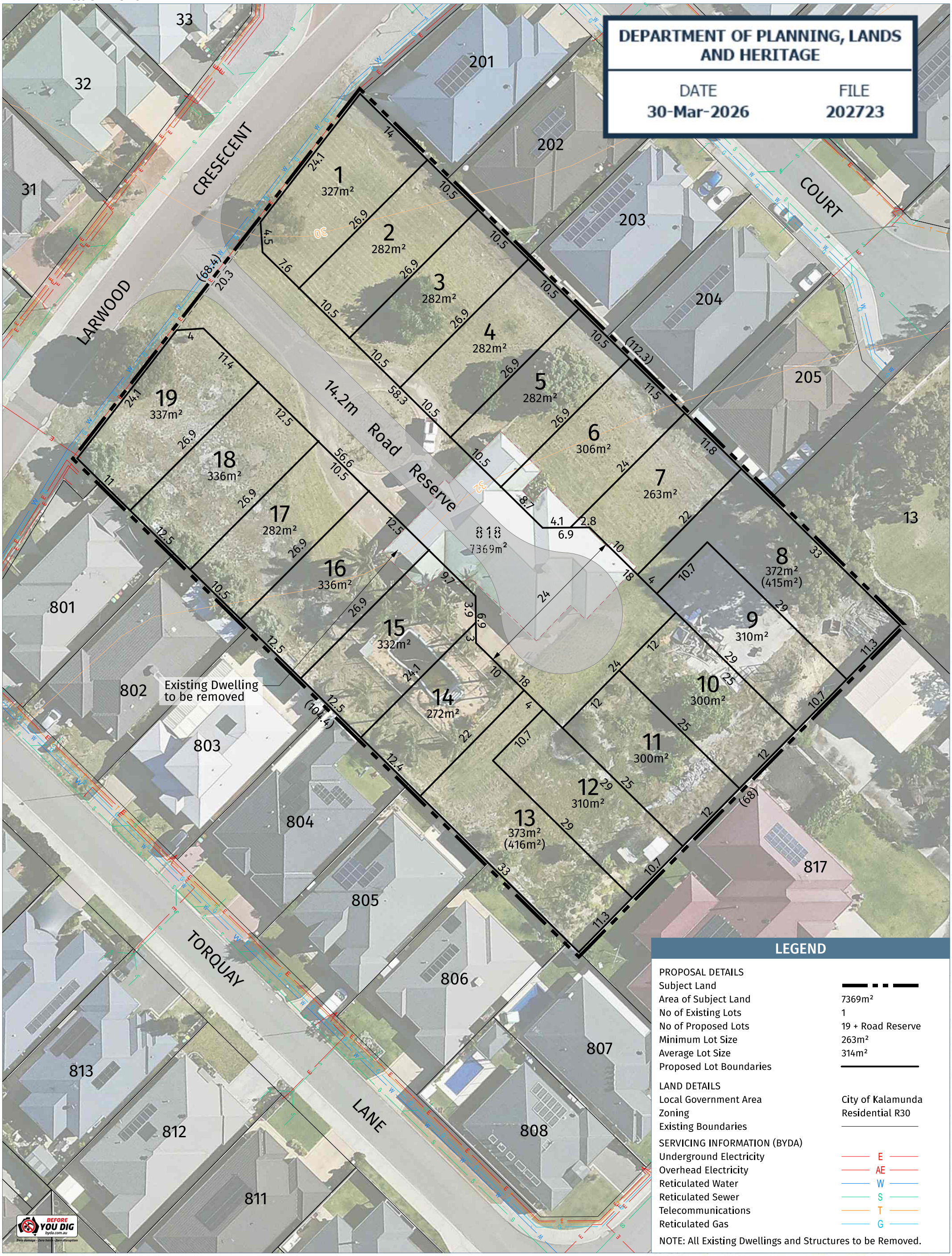
Lodgement of deposited plans with the Western Australian Land Information Authority

The deposited plan is to be submitted to the Western Australian Land Information Authority (Landgate) for certification. Once certified, Landgate will forward it to the WAPC. A copy of the Deposited Plan should also be provided to the WAPC when the Form 1C is lodged.

Applying for new certificates of title

Once the WAPC has endorsed the Deposited Plan, then, under Section 146 the *Planning and Development Act 2005*, the landowner/applicant has two years to apply to Landgate for new certificates of title to be issued.

Attachment 2



LEGEND

PROPOSAL DETAILS	
Subject Land	
Area of Subject Land	7369m²
No of Existing Lots	1
No of Proposed Lots	19 + Road Reserve
Minimum Lot Size	263m²
Average Lot Size	314m²
Proposed Lot Boundaries	
LAND DETAILS	
Local Government Area	City of Kalamunda
Zoning	Residential R30
Existing Boundaries	
SERVICING INFORMATION (BYDA)	
Underground Electricity	E
Overhead Electricity	AE
Reticulated Water	W
Reticulated Sewer	S
Telecommunications	T
Reticulated Gas	G

NOTE: All Existing Dwellings and Structures to be Removed.

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NOTE: This plan has been prepared for planning purposes. Areas, contours and dimensions shown are subject to survey.

FREEHOLD SUBDIVISION

Lot 818 (No. 15) Larwood Crescent,
HIGH WYCOMBE

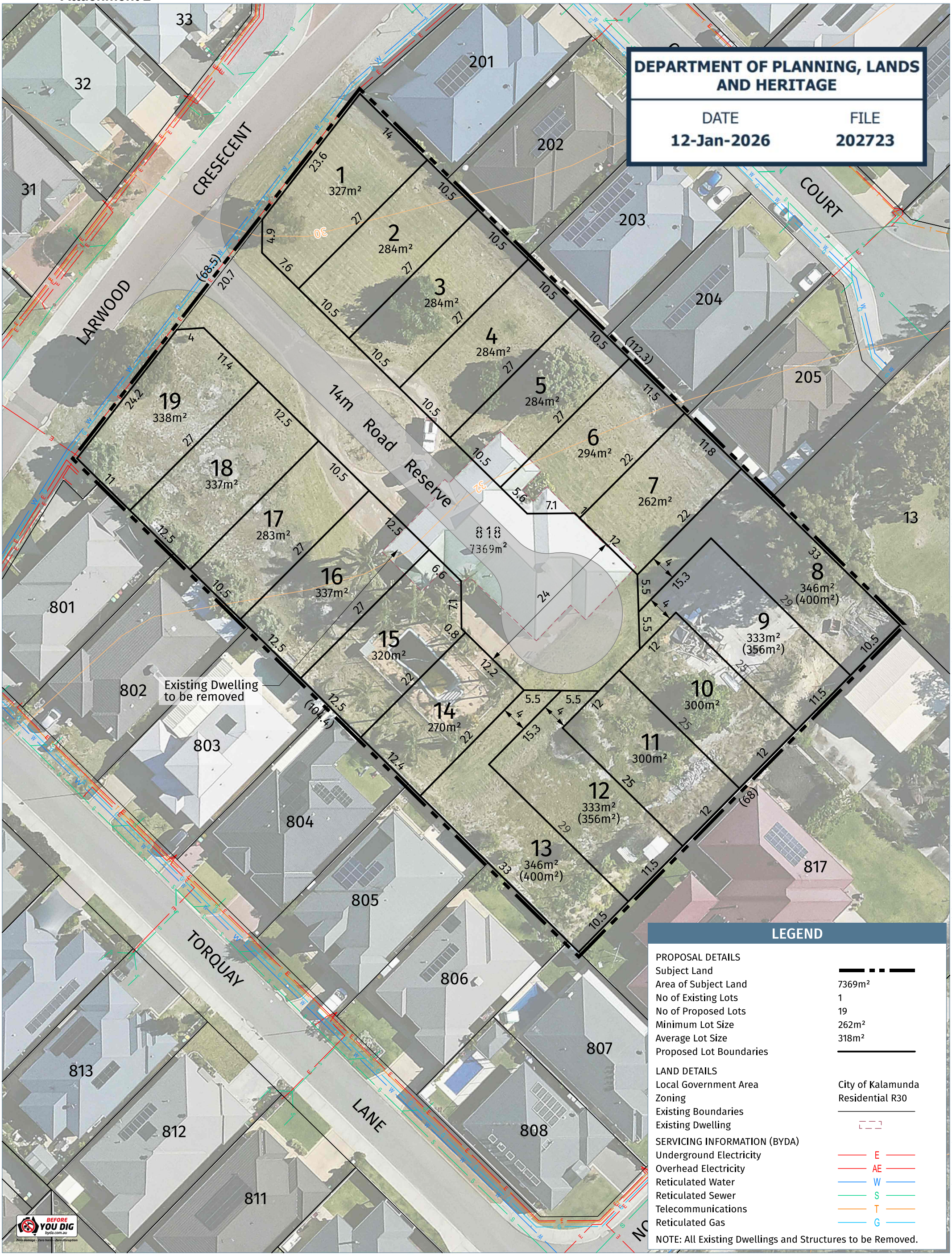
Date	30/03/26
Drawn	NB
Checked	MD
Base Data	Landgate Oct 25
Projection	MGA2020 Z50
Plan No.	24955-01
Rev.	F

Scale: 1:500 @A3
0 5m 10m 15m

N

Harley Dykstra
SURVEYING | TOWN PLANNING | PROJECT MANAGEMENT
PERTH - PEEL 9495 1947
SOUTH WEST 9791 1900
GREAT SOUTHERN
info@harleydykstra.com.au www.harleydykstra.com.au

Attachment 2



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FREEHOLD SUBDIVISION

Lot 818 (No. 15) Larwood Crescent,
HIGH WYCOMBE

Date | 5/12/25
Drawn | TJ
Checked | MD
Base Data | Landgate Oct 25
Projection | MGA2020 Z50

Plan No. 24955-01
Rev. E

Scale: 1:500 @A3
0 5m 10m 15m

N

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VEDA ESTATES WA PTY LTD

ACN 692 284 129, as trustee for the Veda Estates WA Unit Trust

7 August 2026

Western Australian Planning Commission

c/o - Department of Planning, Lands and Heritage

Attention: Ms June Liaw

By email: planningappeals@dplh.wa.gov.au

Dear Commission,

SUBMISSION IN SUPPORT OF RECONSIDERATION UNDER SECTION 31(1) OF THE STATE ADMINISTRATIVE TRIBUNAL ACT 2004 (WA)

SAT Matter DR 86/2026 - Veda Estates WA Pty Ltd (as trustee) v Western Australian Planning Commission

WAPC Reference 202723 - Lot 818 (No. 15) Larwood Crescent, High Wycombe WA 6057 - Condition 21

For the consideration of the Western Australian Planning Commission, and onward provision to the State Planning Commission at its meeting of 23 September 2026

A. INTRODUCTION AND PURPOSE

1. This submission is provided by Veda Estates WA Pty Ltd (ACN 692 284 129) as trustee for the Veda Estates WA Unit Trust (Veda Estates), further to the orders of the State Administrative Tribunal (the Tribunal) made on 15 July 2026 in SAT Matter DR 86/2026 (the Order).

2. By Order 2, the Tribunal recorded that, pursuant to section 31(1) of the State Administrative Tribunal Act 2004 (WA) (the SAT Act), the Western Australian Planning Commission (WAPC or the Commission) is invited to reconsider its decision of 25 May 2026 to impose Condition 21 on subdivision approval WAPC Reference 202723, on or before 9 October 2026.

3. Veda Estates understands that the WAPC intends to place this matter before the State Planning Commission (SPC) at its meeting scheduled for 23 September 2026, and that the WAPC has requested this submission for that purpose. This submission is provided accordingly, for the WAPC's consideration and onward provision to the SPC.

4. The purpose of this submission is fourfold: first, to situate the applicable question within the correct policy hierarchy, in which State Planning Policies occupy the apex position and the Position Statement operates as a subordinate, interim instrument to be construed consistently with that framework; second, to demonstrate that Condition 21 cannot be sustained when tested against the eight principles governing infrastructure contributions under State Planning Policy 3.6 (Development Contributions for Infrastructure), from which the Position Statement's own contribution framework is expressly drawn; third, to address the proper construction of the word “may” in Table 1 of the Position Statement; and fourth - which Veda Estates identifies as the central issue for the SPC's consideration - to demonstrate conclusively that the Subject Land is properly characterised as infill, and infill alone, and is not staged-infill, brownfield, or greenfield.

B. PROCEDURAL CONTEXT AND TIMELINE

5. The relevant procedural history and forthcoming dates are summarised below.

Date	Event
15 July 2026	Mediation conducted; Tribunal orders made
7 August 2026	This submission provided to the WAPC for its consideration and onward transmission to the SPC
11 August 2026	Applicant to provide additional information to the Respondent, as directed by Order 1
23 September 2026	Matter to be considered by the State Planning Commission
9 October 2026	Date by which the WAPC is invited, under Order 2 and s 31(1) of the SAT Act, to reconsider its decision
16 October 2026	Directions hearing listed before the Tribunal, at 9.30am, 565 Hay Street, Perth

6. Veda Estates respectfully requests that this submission be provided to the SPC sufficiently in advance of its 23 September 2026 meeting to allow proper consideration, and notes that the WAPC's response to the Tribunal's invitation under s 31(1) falls due shortly afterwards, on 9 October 2026.

C. STATE PLANNING POLICY AS THE APEX INSTRUMENT

7. State Planning Policies (SPPs) are made under Part 3, Division 2 of the Planning and Development Act 2005 (WA) (the Act), following Ministerial approval and formal gazettal, and are binding statutory instruments that inform and constrain the exercise of all planning discretion in Western Australia, including the preparation and assessment of local planning schemes, structure plans and subdivision decisions.

8. The Position Statement, by contrast, is issued by the WAPC under Part 14 of the Act as a non-scheme policy instrument. It is expressly designed as an interim and flexible tool: it replaces the former Development Control Policy 2.3 and the former cash-in-lieu position statement, and introduces a time-limited, two-year deferral period (19 December 2025 to 18 December 2027) as a deliberate, transitional measure to support the State's housing supply objectives.

9. The Explanatory Note itself confirms that the Position Statement does not sit outside, or above, the established State Planning Policy hierarchy. Question 17 of the Explanatory Note states:

   "In accordance with State Planning Policy 1 (SPP 1), where there are any conflicting policy provisions, the more recent policy should be used."

10. This confirms two things relevant to the present reconsideration. First, the Position Statement is to be read and applied within the framework established by SPP 1, not as a freestanding or unconstrained source of discretion that displaces it. Second, SPP 1's conflict rule exists precisely because ambiguity between planning instruments is to be resolved by settled, objective rules of

precedence - recency and specificity - rather than by an ad hoc exercise of discretion by the decision-maker in any individual case.

11. It follows that where any provision of the Position Statement or Explanatory Note is said to be ambiguous, the correct approach is to resolve that ambiguity by reference to the stated policy intent of the instrument, read consistently with the SPP hierarchy, and not by preferring a construction that maximises residual WAPC discretion. Veda Estates addresses the specific ambiguity raised by the WAPC - the proper construction of "may" in Table 1 - on that basis below.

D. SPP 3.6: THE EIGHT PRINCIPLES OF DEVELOPMENT CONTRIBUTIONS, AND VEDA ESTATES' COMPLIANCE

12. The Explanatory Note confirms that POS contributions generally, including under Table 1, are "based on the 'need and nexus' principles embedded within State Planning Policy 3.6 Development Contributions" (SPP 3.6). SPP 3.6 is therefore not a distant or unrelated instrument - it is the source policy from which the Position Statement's own contribution framework is expressly drawn. Clause 6.1 of SPP 3.6 provides that "contributions for all infrastructure must be levied in accordance with the following principles," and sets out eight such principles. Condition 21 must be assessed against, and must be consistent with, each of them.

13. The eight principles, and Veda Estates' position on each as it applies to Condition 21, are addressed in turn below.

a. *Need and the nexus*

14. The need for infrastructure must be clearly demonstrated, and a clear connection established between the development and the demand it creates. Veda Estates has already demonstrated, in its Written Submissions dated 9 June 2026, that the existing POS network serving the Subject Land's locality is fully embellished and sufficient: the City of Kalamunda's own Local Planning Scheme Amendment No. 117 Initiation Report confirms that Larwood Crescent POS has been embellished to its required standard and that Reserve R52622 has been ceded and is under City management. No additional POS demand attributable to this subdivision, beyond what the existing embellished network already accommodates, has been identified or established by the WAPC. The need and nexus principle is not satisfied.

b. Transparency

15. Both the method of calculating a contribution and the manner in which it is applied should be clear, transparent and simple to understand. Condition 21 was calculated and imposed by reference to the former DCP 2.3 cash-in-lieu framework, notwithstanding that the Position Statement had already superseded DCP 2.3 and become the operative policy nearly five months before the WAPC's decision of 25 May 2026. Applying a superseded methodology to determine a contribution under a decision made after the operative policy changed is

inconsistent with the transparency principle, and has produced precisely the confusion this reconsideration now seeks to resolve.

c. Equity

16. Infrastructure contributions should be levied equitably from identified stakeholders, based on their relative contribution to need. Under Conditions 2 to 15 of the current approval (WAPC Reference 202723), Veda Estates is already required, at its own cost, to deliver or fund a substantial suite of development infrastructure consistent with Schedule 1 of SPP 3.6 - including sewerage and water servicing arrangements, an underground electricity distribution system and associated land transfer to Western Power, maximum applicable monetary contribution to the Department of Education for primary school land, construction and drainage of new subdivisional roads, street lighting, shared paths, and comprehensive site filling, drainage and stormwater works. These are precisely the categories of development infrastructure contribution contemplated by SPP 3.6 Schedule 1. Layering an additional, freestanding 10 per cent POS cash-in-lieu contribution on top of this suite - in a policy environment where the Position Statement itself defaults that rate to 0 per cent for infill during the deferral period - does not reflect an equitable apportionment of cost relative to need. It asks Veda Estates to contribute twice over for the one subdivision: once across the full range of Schedule 1 development infrastructure categories already conditioned, and again for POS specifically, notwithstanding that the very policy governing POS contributions sets that additional contribution at zero.

d. Certainty

17. The scope, timing and cost of infrastructure contributions should be clearly identified in advance. Table 1's zero % default for infill subdivision during the deferral period exists for exactly this purpose - to give applicants certainty as to their POS contribution liability while the deferral period operates. Imposing a 10 per cent contribution in the face of that default removes the very certainty the principle, and the deferral period itself, is designed to protect.

e. Efficiency

18. Contributions should be justified on a whole-of-life capital cost basis, precluding over-recovery. Where, as here, the locality's POS network is independently confirmed as fully embellished and adequately serviced - the Larwood Crescent Reserve is rated ‘C’ (reasonable quality, no action required) and confirmed embellished in Amendment 117 - a further cash-in-lieu contribution is not calibrated to any demonstrated capital cost need and risks over-recovery beyond what the locality requires.

f. Consistency

19. The system for infrastructure contributions should be applied consistently across comparable infill subdivisions. Veda Estates has lodged a Freedom of Information application with the Department of Planning, Lands and Heritage seeking WAPC subdivision decisions across the Perth metropolitan region since 19 December 2025 (Position statement and explanatory note effective date), precisely to understand whether Condition 21 reflects a consistent approach to

comparable infill subdivisions, or an isolated departure from the Position Statement's default. Consistency requires that the same default apply to this application as to comparable infill subdivisions determined during the deferral period.

20. Veda Estates reserves the right to provide the WAPC and the SPC with supplementary submissions upon receipt of the outcome of the Freedom of Information application referred to in paragraph 20 above, to the extent the material obtained bears on the consistency principle addressed there.

21. Independent corroboration of consistent application is already available, without waiting on that FOI outcome. On 22 July 2026, the City of Gosnells confirmed, in response to a routine written planning enquiry concerning an unrelated R60-coded infill subdivision at 29 Percy Street, Gosnells, that "cash in lieu of Public Open Space contributions will not be payable within the moratorium period, in line with the Western Australian Planning Commission's Position Statement", and that any POS contribution imposed as a condition of approval will not be collected provided the developer obtains full clearance before the moratorium period expires. Veda Estates acknowledges a difference in mechanism: the City of Gosnells frames this as deferred collection of a contribution otherwise conditioned, whereas Table 1 of the Position Statement fixes the contribution rate itself at a 0 per cent default for qualifying infill subdivision. On either mechanism, however, the practical outcome for a subdivision proceeding to full clearance within the moratorium period is the same - no POS cash-in-lieu is, in substance, collected. This is a contemporaneous, unprompted statement by another responsible authority, made in the ordinary course and entirely unconnected with this proceeding, confirming the same underlying policy position that Veda Estates advances in this submission. It is a real and presently available example of the consistency the Position Statement is intended to deliver, and stands in contrast to the WAPC's imposition of Condition 21 in the present case.

g. Accountability

22. There should be accountability in the manner in which contributions are determined, collected and expended. The WAPC's own internal reasoning for Condition 21, as set out in their senior planning officer's email correspondence of 15 May 2026 , rests on the proposition that the Subject Land cannot be infill because it is already zoned R30. That reasoning does not engage with the Position Statement's actual definition of infill, which turns on density realised on the ground rather than zoned capacity - a discrepancy that itself illustrates why an accountable, transparent process requires fresh reconsideration against the operative policy, on the correct construction of its terms.

h. Right of consultation and review

23. Landowners and developers have the right to be consulted on the determination of a contribution and to seek independent review. Veda Estates has exercised, and continues to exercise, that right through its application in DR 86/2026 and through this submission, made at the WAPC's invitation for the SPC's consideration. This submission is itself the proper mechanism by which that principle operates in practice.

Conclusion on SPP 3.6

24. Assessed against each of the eight principles that SPP 3.6 itself establishes - and upon which the Position Statement's own contribution framework is expressly built - Condition 21 cannot be sustained. It fails need and nexus; it was calculated under a transparency-compromising, superseded framework; it offends equity by stacking an additional POS contribution on top of the substantial Schedule 1 development infrastructure already required of Veda Estates; it undermines the certainty the deferral period exists to provide; it is not justified on an efficiency basis given the locality's already-embellished POS network; it cannot be shown to be consistent with the WAPC's treatment of comparable infill subdivisions; it was reached through a process that raises accountability concerns; and it is now properly before the WAPC and the SPC pursuant to Veda Estates' exercise of its right of consultation and review.

25. These policy-based objections are reinforced by the general law governing the validity of subdivision conditions. It is well established, following Newbury District Council v Secretary of State for the Environment [1981] AC 578 and as adopted by the High Court in Western Australian Planning Commission v Temwood Holdings Pty Ltd [2004] HCA 63, that a condition imposed on a subdivision approval is valid only if: (a) it is imposed for a planning purpose and not for any ulterior purpose; (b) it fairly and reasonably relates to the development for which approval is given; and (c) it is not so unreasonable that no reasonable planning authority could have imposed it. Condition 21 is, for the reasons given above, difficult to reconcile with the second limb of that test in particular: absent any demonstrated need for additional POS attributable to this subdivision (paragraph 15 above), and given the already-embellished state of the local POS network (paragraph 19 above), the necessary nexus between the development permitted and the contribution imposed is not established. Veda Estates raises this as a further and independent basis on which Condition 21 is properly reconsidered and removed, in addition to its inconsistency with SPP 3.6 and the Position Statement.

E. THE PROPER CONSTRUCTION OF "MAY" IN TABLE 1

26. Table 1 of the Position Statement (Infill Contributions) provides, for the deferral period:

> *"Infill subdivision comprising any number of lots may reduce the POS contribution to a default 0 per cent of the gross subdivisible area unless already required under the local planning scheme."*

27. The WAPC's position, as previously communicated, is that this is not "a blanket statement awarding 0% POS contribution for any subdivision development occurring from 19 December 2025 for 2 years", and that the word "may" confers a discretion on the WAPC to impose a contribution above 0% even where a subdivision is properly characterised as infill. Veda Estates addresses this construction directly.

i. *The natural subject of "may" is the contribution rate, not WAPC discretion*

28. On its face, "may reduce the POS contribution to a default 0 per cent" describes what happens to the rate of contribution for infill subdivision during the deferral period - it is permissive of the outcome (a reduction to 0%), not permissive of whether the reduction applies at all. The

clause identifies a single, express qualification on that outcome: "unless already required under the local planning scheme." Where a provision identifies one express exception to a stated default, the ordinary inference is that no further, unstated exception was intended (*expressio unius est exclusio alterius*). Had the drafters intended to preserve a general WAPC discretion to impose a contribution above 0% for infill subdivision, that discretion would ordinarily have been stated in the same express terms as the local planning scheme carve-out - not left to inference from the word "may" alone.

29. This is reinforced by the WAPC's own correspondence. In his email of 15 May 2026 , the senior planning officer confirmed that the Subject Land was excluded from the 1997 Outline Development Plan (ODP) for the High Wycombe Country Estate, and that the areas excluded from that ODP - including the Subject Land - were, in the WAPC's own words, "excluded from POS contributions." The senior planning officer further confirmed that the 1997 ODP "no longer applies" to the Subject Land. In substance, the WAPC has itself confirmed, in that same email, that the relevant local planning policy and the earlier ODPs are indeterminate as to any POS contribution requirement in Veda Estates' case: no structure planning instrument has ever fixed a POS requirement for the Subject Land, and the one instrument that once governed it has since ceased to apply. An instrument that never assessed a POS requirement for this land, and that no longer applies in any event, cannot supply the clear, affirmative local planning scheme requirement that the Table 1 carve-out demands. This is consistent with, and reinforces, Veda Estates' position in its Written Submissions dated 9 June 2026 that the City of Kalamunda's Local Planning Policy on Public Open Space (LPP 30/32) is, in any event, a local planning policy rather than a scheme provision, and has no statutory equivalence sufficient to displace the Table 1 default.

30. For completeness, Veda Estates confirms that the City of Kalamunda's Local Planning Scheme itself contains no operative provision requiring a POS contribution in respect of the Subject Land. The only instruments said to bear on the question - LPP 30/32 and the lapsed 1997 ODP - are, for the reasons given above, neither of them a "local planning scheme" for the purposes of the Table 1 carve-out. There is accordingly no basis, in the scheme itself, for treating a POS contribution as "already required" so as to displace the Table 1 default.

ii. The Position Statement expressly preserves discretion elsewhere, in different and narrower terms

31. This reading is confirmed by comparison with clause 6.5 of the Position Statement (Staging), which expressly and specifically preserves a WAPC discretion in a defined circumstance:

> *"If an infill residential subdivision is not formally identified as being staged but an application is made that results in a lower yield than is possible within the gross subdivisible area, and it is likely that further subdivision could occur in subsequent stages, the WAPC may use its discretion to determine a POS contribution. In such cases, a POS contribution may be required for applications of 5 lots or less."*

32. Clause 6.5 demonstrates that where the Position Statement intends to preserve a discretion for the WAPC to depart from the Table 1 default, it says so in express and narrowly defined terms - confined to staged subdivisions and applications of five lots or fewer. The absence of any

equivalent express discretion-preserving language in Table 1 itself, applicable to a straightforward, non-staged, 19-lot infill subdivision, confirms that no such discretion was intended there. The maxim of consistent usage supports this: where the same instrument uses different words in different places, the drafters are taken to have intended a different meaning or a different scope.

iii. A discretionary reading would render the deferral period otiose for its intended purpose

33. The Position Statement's stated policy intent (clause 2) is to "ensure all communities have well-planned POS that adequately provides for evolving community needs in a predictable and equitable manner" and to "establish a consistent minimum standard for contributions." The deferral period was a deliberate, time-limited transitional tool introduced to provide certainty and to support housing supply during the two years to 18 December 2027. A construction of "may" that preserves an unconstrained WAPC discretion to impose a full contribution on any infill subdivision, notwithstanding the deferral period, would render that transitional protection illusory for every applicant, and cannot be the intended construction. An interpretation that empties a provision of practical effect is disfavoured wherever an alternative, textually available construction gives it work to do - and here, the natural reading set out above does exactly that, while still leaving the local planning scheme carve-out and the clause 6.5 staging discretion fully intact and operative.

iv. Conclusion on construction of "may"

34. For these reasons, "may" in Table 1 is properly construed as confirming that the contribution rate for qualifying infill subdivision defaults to 0 per cent during the deferral period, subject only to the express local planning scheme carve-out. It does not import a general, unstated WAPC discretion to impose a contribution above 0 per cent on infill subdivision merely because the instrument uses a permissive rather than a mandatory verb.

35. Veda Estates is not presently aware of any published SAT or WAPC reconsideration decision addressing the construction of "may" in Table 1 of the Position Statement. Should any such decision come to light, Veda Estates reserves the right to draw it to the attention of the WAPC and the SPC in support of the construction set out above.

F. THE SUBJECT LAND IS INFILL - AND ONLY INFILL

36. The Position Statement recognises only three categories of development for POS contribution purposes: greenfield, brownfield, and infill. Each is mutually exclusive and attracts a different contribution treatment. The Subject Land can only fall within one of these three categories. Veda Estates addresses each in turn, and in particular refutes, comprehensively and on the correct construction of the Position Statement's own terms, the suggestion that the Subject Land be treated as a form of "staged" subdivision falling outside the infill category.

i. *The infill definition is satisfied*

37. Section 7 of the Position Statement defines infill as "the redevelopment of existing urban areas at a higher density than currently exists." The density that currently exists, and has existed

continuously since before 1997, is one dwelling on a 7,369m² lot. The proposed redevelopment creates 19 residential lots. That is, on any view, redevelopment at a materially higher density than currently exists. Adjacent streets (Olney Crescent and Torquay Lane) have been developed at R20 Zoning compared to R30 Zoning development of the subject land.

Zoning capacity (the R30 code) is not existing density; it is a ceiling on future development, not a description of what is presently on the ground. The Subject Land squarely meets the infill definition on its face.

ii. The Subject Land is not "staged-infill": the two-limb test is not met

38. The Position Statement addresses when an apparent redevelopment is nonetheless to be treated as staging, rather than infill, in the following terms:

"In cases where a subdivision or re-subdivision is proposed at the same density as when the locality's 10 per cent POS requirement was initially assessed and contributed to, it is not considered 'infill' and would not typically be expected to contribute again. This scenario is akin to staging of subdivision."

39. This is a conjunctive test with two limbs, both of which must be satisfied before a proposal can be treated as staged rather than infill: (a) the proposed density must be the same as the density when the locality's POS requirement was initially assessed; and (b) that assessed requirement must actually have been contributed to - that is, physically delivered, whether as ceded land or paid cash-in-lieu. Neither limb is satisfied here, and the failure of either is independently fatal to a staged characterisation.

a. No contribution was ever made. The only prior approval over the Subject Land, WAPC Ref 156487 (2018), imposed Condition 14 requiring 736.9m² to be ceded as a Recreation Reserve, with Advice Note 5 recording the WAPC's agreement to accept cash-in-lieu instead. That approval lapsed on 19 June 2022. No land was ceded. No cash-in-lieu was paid. No deposited plan was ever lodged. The staging provision requires an assessed requirement that was "contributed to" - an obligation once imposed on a since-lapsed instrument, and never fulfilled, is not a contribution. It is the absence of one.

b. No "same density" baseline was ever established. The staging provision presupposes an antecedent stage that actually proceeded, fixing a density against which the present proposal can be compared. Because the 2018 approval lapsed without any development being carried out, no redevelopment at any higher density was ever realised on the ground. The density that "currently exist[ed]" immediately before the current application, exactly as it had existed since before 1997, was one dwelling on 7,369m². The current proposal (19 lots) is not "the same density" as that baseline - it is a substantial increase from it. There is, in truth, no prior realised stage for the current proposal to be "staged" against; there is only a single, unrealised approval that expired without effect, followed by the present, first-ever subdivision of this land.

40. The purpose of the staging provision reinforces this conclusion. It exists to prevent a locality from being asked to contribute twice for the same increment of density - once when an earlier stage of the same development delivered its POS, and again when a later stage merely completes what was already planned and paid for. That concern has no application where, as here, nothing was ever delivered. Treating an unfulfilled, lapsed condition as if it were a completed contribution would not prevent double-dipping; it would instead convert the staging provision into a mechanism for reviving a stale, unmet 2018 obligation as a 2026 debt - a result the Position Statement's own language does not support and its purpose does not require.

41. For completeness, Veda Estates notes that even the WAPC's own account of the position confirms the absence of a genuine staged scenario: the subject land "has not been subdivided yet," and "no development was carried out" under the 2018 approval. Those facts describe a site that has never progressed through any stage of subdivision - not a site midway through a staged development where an earlier increment has already been assessed and delivered.

iii. The Subject Land is not brownfield

42. Section 7 of the Position Statement defines brownfield as "larger scale sites in established areas that are often, but not limited to, land that may have been converted from a former land use to another." The Subject Land does not meet this definition: it is a standard single urban residential lot of 7,369m², not a larger-scale renewal or conversion site, and there has been no conversion from any commercial, industrial, agricultural or other non-residential use.

iv. The Subject Land is not greenfield

43. Section 7 of the Position Statement defines greenfield as "undeveloped land that has been identified for future urban use." The Subject Land is the opposite of undeveloped: it has carried a dwelling continuously since before 1997, sits within the established, fully-serviced City of Kalamunda residential area, and has never formed part of any yet-to-be-urbanised release area. No characterisation of the Subject Land as greenfield has been advanced by any party, and none is available on the facts.

v. Conclusion: infill, and infill alone

44. By process of elimination as much as by direct application of the Position Statement's own definitions, the Subject Land is infill. It is not brownfield, for the reasons given above. It is not greenfield, for the reasons given above. And it is not staged-infill, because neither limb of the staging test - same density, and an actual completed contribution - is satisfied on the facts. The characterisation exercise required by the Position Statement admits of only one answer, and that answer is infill. It follows, applying the construction of Table 1 set out in Part E above, that the Subject Land attracts the default 0 per cent POS contribution rate for the duration of the deferral period.

G. RELIEF SOUGHT

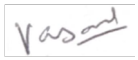
45. Veda Estates respectfully requests that the WAPC recommend to the State Planning Commission, and that the SPC resolve, that Condition 21 of the conditional approval dated 25 May 2026 (WAPC Reference 202723) be reconsidered and varied to remove the 10 per cent cash-in-lieu contribution, consistent with the 0 per cent default rate mandated by Table 1 of the Position Statement for urban residential infill subdivision determined during the deferral period.

46. Veda Estates further requests that, in light of the timeline set out in Part B above, this submission be placed before the SPC at its meeting of 23 September 2026, so as to allow the WAPC to respond to the Tribunal's invitation under s 31(1) of the SAT Act by 9 October 2026.

47. Should the WAPC, upon reconsideration, set aside Condition 21 in the terms sought above, Veda Estates will promptly notify the Tribunal and will consent to the directions hearing presently listed for 16 October 2026 being vacated, on the basis that the matter will have been resolved and no further review will be required.

48. Should the outcome of that reconsideration not resolve the matter, Veda Estates notes that DR 86/2026 will remain listed for a directions hearing before the Tribunal at 9.30am on 16 October 2026, and reserves all rights in the substantive review.

Yours faithfully,



Vasant Rajaram
Director, Veda Estates WA Pty Ltd
as trustee for the Veda Estates WA Unit Trust



Rajagopal Ramanathan
Director, Veda Estates WA Pty Ltd
as trustee for the Veda Estates WA Unit Trust



Sitaraman Sridharan
Director, Veda Estates WA Pty Ltd
as trustee for the Veda Estates WA Unit Trust

STATE ADMINISTRATIVE TRIBUNAL OF WESTERN AUSTRALIA
PLANNING AND DEVELOPMENT DIVISION

IN THE MATTER OF AN APPLICATION FOR REVIEW

under Section 251 of the
Planning and Development Act 2005

VEDA ESTATES WA PTY LTD (ACN 692 284 129)	**Applicant**
v	
WESTERN AUSTRALIAN PLANNING COMMISSION	**Respondent**

APPLICANT'S WRITTEN SUBMISSIONS

Review of Condition 21 - Public Open Space Cash-in-Lieu

WAPC Reference:	202723
SAT Application:	TBC
Decision under Review:	WAPC conditional subdivision approval dated 25 May 2026
Condition under Review:	Condition 21 - Public Open Space Cash-in-Lieu
Property:	Lot 818 (No. 15) Larwood Crescent, High Wycombe WA 6057
Proposal:	19-Lot Freehold Urban Residential Subdivision
Applicant:	Veda Estates WA Pty Ltd (ACN 692 284 129)
Respondent:	Western Australian Planning Commission
Date of Submissions:	9 June 2026

A. JURISDICTION AND STANDING

1. These submissions are filed in support of an application for review lodged pursuant to Section 251 of the *Planning and Development Act 2005* (WA) (the Act). The Applicant seeks review of Condition 21 imposed by the Western Australian Planning Commission (WAPC or the Commission) on its conditional approval of subdivision application WAPC Ref 202723, issued on 25 May 2026.

2. The Applicant, Veda Estates WA Pty Ltd (ACN 692 284 129) (Veda Estates), is the registered proprietor of Lot 818 (No. 15) Larwood Crescent, High Wycombe WA 6057, having acquired the property from the previous registered proprietor. Veda Estates subsequently lodged the subdivision application through its appointed planning consultants, Harley Dykstra, and is accordingly the applicant for subdivision approval with standing under Section 251 of the Act.
3. This application for review is lodged within 28 days of the WAPC's decision dated 25 May 2026, in accordance with Section 251(3) of the Act and Rule 10 of the *State Administrative Tribunal Rules 2004*.
4. Prior to lodging this application, Veda Estates engaged in direct informal discussions with the WAPC decision-maker regarding Condition 21. The WAPC indicated that the POS contribution condition would remain and that further reconsideration through the WAPC process would not be productive. The Applicant accordingly seeks relief directly from this Tribunal, which has full merits review jurisdiction under Section 251 of the Act.

B. BACKGROUND FACTS

5. On 25 May 2026, the WAPC granted conditional approval for a 19-lot freehold urban residential subdivision of Lot 818 (No. 15) Larwood Crescent, High Wycombe (the Subject Land), in accordance with a plan date-stamped 12 January 2026, as modified by the plan dated 30 March 2026.
6. The Subject Land is a single lot of 7,369m² situated within an established urban residential suburb in the City of Kalamunda. At the time of the subdivision application and until present day, the lot contained a single dwelling. The proposed subdivision creates 19 urban residential lots with an average area of 314m² and a minimum area of 263m², under an R30 urban residential coding.
7. The WAPC imposed 21 conditions on the approval. The Applicant challenges only Condition 21, which states:

> *"The landowner/applicant shall make payment to the local government for the sum equivalent to the value of 10% of the land, being that portion of the land that would otherwise be provided as open space, in accordance with Sections 153 and 155 of the Planning and Development Act 2005."*

8. The quantum of the contribution will be determined by formal valuation under Section 155 of the Act and will represent a material financial obligation for the Applicant.
9. The Applicant draws the Tribunal's attention to a prior subdivision application over the Subject Land. WAPC Ref 156487 was lodged by Harley Dykstra on behalf of the then-owner, Richard Bryant Fullerton, on 3 April 2018, and was approved by the WAPC on 19 June 2018. That approval was for a 16-lot freehold urban residential subdivision of the same Lot 818 subject to 18 conditions.

Condition 14 required 736.9m² (being 10% of 7,369m²) to be ceded as a Recreation Reserve, with Advice Note 5 recording the WAPC's agreement to accept cash-in-lieu under Section 153 of the Act. The 2018 approval was valid for four years and lapsed on 19 June 2022. No development was carried out, no conditions were fulfilled, no deposited plan was lodged, no POS land was ceded and no cash-in-lieu payment was made. The Subject Land was subsequently acquired by Veda Estates, which lodged the current subdivision application (WAPC Ref 202723) on 9 December 2025. The significance of the 2018 lapsed approval is addressed in Section F below.

10. The Applicant also draws the Tribunal's attention to the WAPC's own contemporaneous correspondence that reveals the reasoning behind Condition 21. In an email dated 15 May 2026 (Exhibit C), Senior Planning Officer Mr Jason Bouwhuis set out the WAPC's internal reasoning for why it considered a POS contribution was required. The WAPC's position rested on four propositions:

    (a) The 2018 approval (WAPC Ref 156487) had already imposed a POS condition (Condition 14 requiring 736.9m²), which in the WAPC's view meant this application, 202723, was not a "standard residential redevelopment";

    (b) The Subject Land was deliberately excluded from the 1997 ODP for the High Wycombe Country Estate. The ODP proposed 526 R20 lots and excluded this parcel, with only an indicative subdivision layout. In the WAPC's view, the excluded land had not had its POS obligations resolved through the ODP process;

    (c) **Most critically:** the WAPC argued that because the Subject Land is already zoned R30, and the application proposes to subdivide at that same R30 code, the development is not at a "higher density than currently exists" - and therefore does not qualify as infill under Section 7 of the Position Statement; and

    (d) In 2011, the WAPC endorsed the Stage 2 modification for the Lot 9 Larwood Crescent ODP, which sanctioned the current R30 density code.

11. The Applicant submits that each of these arguments fails for the reasons set out in Section F. The WAPC's core argument - that subdividing at an existing R30 zoning code cannot constitute infill because the R30 density "currently exists" - fundamentally misreads the Position Statement's infill definition. That definition turns on actual existing density, not theoretical maximum zoning capacity. This critical distinction is addressed directly in Section F.

C. GROUNDS OF REVIEW

12. The Applicant submits that the correct or preferable decision is to remove Condition 21, or in the alternative to amend it to impose a 0% POS contribution, on the following grounds:

(a) Condition 21 is inconsistent with the operative policy framework governing POS contributions at the date of the WAPC's decision, being the *Position Statement: Public Open Space* (operative 19 December 2025) (the Position Statement);

(b) The Subject Land constitutes urban residential infill subdivision within the meaning of the Position Statement, and is neither a greenfield nor a brownfield development;

(c) Table 1 of the Position Statement mandates a default 0% POS contribution for urban residential infill subdivisions processed during the two-year deferral period from 19 December 2025 to 18 December 2027, and no overriding local planning scheme provision displaces that default rate;

(d) Condition 21 fails the Newbury Test for validity of subdivision conditions, as confirmed by the Court of Appeal in *Reid v Western Australian Planning Commission* [2016] WASCA 181 and the High Court in *Western Australian Planning Commission v Temwood Holdings Pty Ltd* (2004) 221 CLR 30, in that it does not fairly and reasonably relate to this particular development and cannot be characterised as a decision a reasonable planning authority, properly advised, would make; and

(e) The need and nexus for an additional POS contribution cannot be established in respect of this urban residential infill subdivision in an established metropolitan suburb with an existing POS network.

D. APPLICABLE LEGAL FRAMEWORK

The SAT's Merits Review Function

13. The SAT's function, in the exercise of its review jurisdiction under Section 251 of the Act, is to make the correct or preferable decision on the merits of the matter. This is expressly provided by Section 27(b) of the *State Administrative Tribunal Act 2004* (WA) (the SAT Act), which requires the Tribunal to produce the correct or preferable decision. The Tribunal stands in the shoes of the original decision-maker and is not limited to the material that was before the WAPC at the date of its decision. It may consider all relevant planning considerations and the operative policy framework as at the date of the hearing.

The Newbury Test

14. The validity of a condition imposed on subdivision approval is governed by the Newbury Test, adopted in Western Australia by the High Court in *Western Australian Planning Commission v Temwood Holdings Pty Ltd* (2004) 221 CLR 30 and clarified by the Court of Appeal in *Reid v Western Australian Planning Commission* [2016] WASCA 181. The three limbs require that a condition:

(a) be imposed for a planning purpose and not for an ulterior purpose;

(b) fairly and reasonably relate to the proposed development - there must be a *direct connection* between the planning purpose served and the likely or possible consequences of the specific subdivision; and

(c) be reasonable in the sense that a reasonable planning authority, properly advised, might impose it.

15. In *Reid*, Martin CJ held that the second limb "requires more than that the condition be imposed in the furtherance of a proper planning purpose - the condition and the purpose which it serves must reasonably and fairly relate to the *particular* development proposed" (at [40]). It is not sufficient to justify a condition by reference to a broader societal aim without establishing a direct factual nexus to the specific development.

16. The SAT in *Bestry v Western Australian Planning Commission* [2019] WASAT (3 April 2019) applied the need and nexus test in the context of POS conditions on infill subdivision in an established metropolitan suburb, confirming that the sufficiency of existing POS in the locality is a central factual consideration. The Applicant notes that *Bestry* was decided under the former DCP 2.3 framework, which has since been superseded by the Position Statement. Under the new framework, the default contribution rate for urban residential infill during the deferral period is affirmatively set at 0% by the Position Statement itself.

E. THE GOVERNING POLICY: POSITION STATEMENT: PUBLIC OPEN SPACE (19 DECEMBER 2025)

17. On 19 December 2025, the WAPC published and brought into operation the *Position Statement: Public Open Space* (the Position Statement) under Part 14 of the Act. The Position Statement expressly supersedes and replaces DCP 2.3 and the previous cash-in-lieu position statement.

18. Under State Planning Policy 1 (SPP 1), the most recently published state-level policy takes precedence where conflict exists. As the operative policy at the date of the WAPC's decision (25 May 2026), the Position Statement governed the determination of any POS contribution. Imposition of Condition 21 under the former DCP 2.3 framework is inconsistent with the current operative policy.

19. The Position Statement and explanatory note establish three categories of development for POS contribution purposes: (i) greenfield; (ii) brownfield; and (iii) infill. Each category attracts different contribution obligations. The central question for this review is whether the Subject Land falls within the "infill" category.

F. THE SUBJECT LAND IS URBAN RESIDENTIAL INFILL

Definition of Infill

20. Section 7 of the Position Statement defines **Infill** as: *"the redevelopment of existing urban areas at a higher density than currently exists."*

21. The Subject Land meets this definition on the following objective grounds:

    (a) **Demonstrable density uplift - zoning code is not the same as existing density.** The Subject Land is a single urban residential lot of 7,369m² containing one dwelling. The WAPC has argued in its internal correspondence (Exhibit C) that because the lot is already zoned R30, subdividing at R30 is not redevelopment at a higher density "than currently exists", and therefore cannot be infill.

(i) **This argument confuses zoning capacity with actual existing density.** The infill definition in Section 7 of the Position Statement asks what density "currently exists" - not what density is theoretically permitted under the zoning. The density that currently exists on Lot 818 is one dwelling on 7,369m². That is the actual, existing density. The R30 zoning is a planning instrument that sets a maximum permissible density - it does not create dwellings.

(ii) **The WAPC's interpretation would destroy the infill provisions entirely.** If the WAPC's reading were correct, no single large lot in an established suburb could ever qualify as infill - because every such lot already has a residential density code, and subdividing to that code would always be "at the density that currently exists." That interpretation would render Table 1's deferral period meaningless for precisely the class of development it was designed to assist: large single-dwelling lots in established suburbs being subdivided at their coded density. The correct reading is the one that gives effect to the policy's purpose: actual dwelling density on the ground is what matters, not the zoning designation.

(iii) **The ODP history confirms density uplift, not equivalence.** Mr Bouwhuis' own email (Exhibit C) confirms that the Subject Land was excluded from the 1997 ODP for the High Wycombe Country Estate, which proposed R20 and R30 lots throughout the broader area. The existing dwelling predates that ODP and was constructed before 1997. The fact that the R30 code was subsequently "sanctioned" by a 2011 WAPC modification does not mean that R30 density was "currently existing" on the ground - it means the maximum permissible density was confirmed at R30. The actual density that existed was, and remains, one dwelling on a 7,369m² lot. The proposed 19-lot subdivision is an increase from that actual density of approximately 23-fold.

(b) **Existing urban area.** High Wycombe is an established metropolitan suburb within the City of Kalamunda and within the Perth metropolitan region's existing urban footprint and is part of Transit-Oriented Development (TOD) program.. The development does not involve extension of urban infrastructure into previously non-urban land.

(c) **The staging scenario carve-out does not apply - LPS3 contains no mandatory scheme provision.** Section 6.4.3 of the Position Statement provides that where a re-subdivision is proposed at the same density as when the locality's original POS requirement was assessed, it may not be considered infill. However, this carve-out has two requirements, neither of which is satisfied here.

(i) **First: the 2018 approval lapsed entirely - it created no surviving obligation.** WAPC Ref 156487 was approved on 19 June 2018, with

Condition 14 requiring 736.9m² to be ceded as a Recreation Reserve, and Advice Note 5 recording the WAPC's agreement to accept cash-in-lieu under Section 153 of the Act. That approval was valid for four years. No development was carried out further to the approval which lapsed on 19 June 2022.

(ii) **The WAPC's counter-argument: 'the obligation was determined - it just wasn't paid.'** The WAPC contends that because Condition 14 determined a POS contribution was required in 2018, that obligation survives and shall now be met. The Applicant respectfully submits that this argument misunderstands how subdivision approvals operate under the *Planning and Development Act 2005* (the Act) and not heeding to current framework (position statement and explanatory notes, 19 Dec 2025) are not being into account.

(iii) **A lapsed approval is a dead instrument.** Under the Act, a subdivision approval is a time-limited instrument. Once it lapses, it ceases to have any legal force or effect whatsoever. It does not create a debt. It does not create a charge on the title. It does not bind future owners of the land. When WAPC Ref 156487 lapsed on 19 June 2022, it expired completely - leaving no condition, no obligation, and no legal trace. To treat a condition from a lapsed approval as a continuing obligation carried forward into a fresh application would require express statutory authority and no such authority exists in the Act.

(iv) **Applicant purchased land free of any POS obligation.** Applicant was not the owner in 2018 and had no involvement in the application 156487. Lot 818 was subsequently purchased as clean freehold title. There was no POS obligation registered on title, no caveat, and no surviving condition at the time of purchase.

(v) **The 2026 approval is a fresh decision under a new policy framework.** WAPC Ref 202723 is an entirely new subdivision application, assessed afresh and determined by the WAPC on 25 May 2026. It is not a continuation, revival or extension of the 2018 approval. The WAPC assessed it as a new application and issued new conditions under its current decision-making framework. The governing policy at the date of the 2026 decision is the *Position Statement and explanatory note: Public Open Space* (operative 19 December 2025) - not DCP 2.3, under which the 2018 conditions were set. DCP 2.3 has been expressly superseded. Conditions from a dead approval made under a dead policy cannot be imported into a fresh decision made under a new operative framework.

(vi) **The analogy is straightforward.** If a landowner obtains a building permit in 2018 with conditions, never builds, and the permit lapses in

2022, no one would argue that a fresh building permit obtained in 2026 by a new owner must carry forward the old conditions from the lapsed 2018 permit. The new permit is assessed on its merits under current law. That is precisely the position here: the 2026 subdivision approval must be assessed under the Position Statement operative at the date of its determination, not under conditions inherited from a lapsed approval made under a superseded policy.

(vii) **Second: LPS3 contains no independent scheme provision mandating POS for R30 residential subdivision.** The Applicant has reviewed the full text of the City of Kalamunda Local Planning Scheme No. 3 (LPS3) as gazetted and as amended to Amendment No. 117. LPS3 contains no independent provision mandating a public open space contribution for standard R30 urban residential infill subdivision. There is no clause anywhere in LPS3 that independently mandates a 10% POS contribution for R30 urban residential infill subdivision. The Table 1 carve-out ('unless already required under the local planning scheme') therefore has no operation, and the 0% default rate under the Position Statement applies without qualification.

Exclusion from Brownfield Classification

22. Section 7 of the Position Statement defines **Brownfield** as: *"larger scale sites in established areas that are often, but not limited to, land that may have been converted from a former land use to another."*

23. The Subject Land does not meet the brownfield definition:

(a) **No former use conversion.** The Subject Land has been continuously used as urban residential land. There is no conversion from a commercial, industrial, agricultural, or other non-residential use.

(b) **Not a larger-scale site.** At 7,369m², the Subject Land is a standard single urban residential lot. The brownfield classification contemplates larger-scale urban renewal or conversion sites, not a single suburban dwelling lot.

(c) **Policy intent.** Classifying a standard single urban residential lot as brownfield would nullify the Position Statement's infill provisions for all standard suburban subdivision activity - directly contrary to the State Government's housing supply agenda and the Position Statement's stated objectives.

G. TABLE 1: MANDATORY 0% DEFAULT RATE DURING THE DEFERRAL PERIOD

24. Table 1 of the Position Statement (Infill Contributions) is the operative provision. For the deferral period 19 December 2025 to 18 December 2027, Table 1 provides:

> *"Infill subdivision comprising any number of lots may reduce the POS contribution to a default 0% of the gross subdivisible area unless already required under the local planning scheme."*

25. Three elements of this provision directly engage the present application:

    (a) **Any number of lots.** The provision is expressly unlimited by lot yield. The 19-lot urban residential subdivision falls squarely within its scope.

    (b) **Within the deferral window.** The subdivision application 202723 was accepted by WAPC on 12 January 2026 and the decision on the application was made on 25 May 2026, the outcome of which falls within the operative deferral period.

    (c) **No overriding local planning scheme provision.** The Applicant has reviewed the City of Kalamunda Local Planning Scheme No. 3 (LPS3) and confirms there is no independent scheme provision mandating a POS contribution for standard R30 urban residential infill that would override the state-level 0% default. The City of Kalamunda's Local Planning Policy on Public Open Space (LPP 30/32) is a local planning *policy*, not a scheme *provision*. A planning policy has no statutory equivalence to a scheme provision and cannot satisfy the carve-out in Table 1, nor override a WAPC Position Statement (supported by explanatory note) published under Part 14 of the Act.

26. Accordingly, Table 1 mandates a default 0% POS contribution for this urban residential infill subdivision. Condition 21's imposition of a 10% cash-in-lieu obligation is directly inconsistent with this operative requirement (WAPCs position statement).

H. FAILURE OF THE NEWBURY TEST: NEED, NEXUS AND REASONABLENESS

27. The Applicant submits that Condition 21 independently fails the second and third limbs of the Newbury Test.

Second Limb: No Direct Nexus to This Development

28. As confirmed in *Reid*, the second limb requires a direct factual connection between the planning purpose served by the condition and the likely or possible consequences of this specific subdivision. It is insufficient to impose a condition merely because it furthers a planning purpose in general terms.

29. High Wycombe is an established metropolitan suburb with an existing network of local parks, sporting reserves, and public open space infrastructure fully embellished. The City of Kalamunda's own Public Open Space Strategy (2018)

documents the distribution and functionality of existing POS across the City's suburbs.

30. Of particular significance, the City of Kalamunda's Local Planning Scheme Amendment No. 117 Initiation Report (April 2025), prepared for the Ordinary Council Meeting of 22 April 2025, contains two directly relevant formal findings by the City regarding the POS status of the Larwood Crescent precinct in which the Subject Land is located:

    (a) **Larwood Crescent POS fully embellished.** Section 6.3 of the Amendment 117 Initiation Report, addressing the High Wycombe Urban Area U2 ODP (WAPC Reference 808-2-24-4PI), which covers the immediate precinct surrounding Larwood Crescent, states: "Subdivision and development have been completed in accordance with the LSP. Larwood Crescent POS has been embellished to its required standard and is managed by the City."

    (b) **Reserve R52622 ceded and under City management.** Section 6.6 of the Amendment 117 Initiation Report, addressing the High Wycombe Urban Area U2 – Larwood Crescent ODP U2 (the structure plan directly governing Lots 13, 818 and 817 - being the Subject Land and its immediate neighbours), states: "Subdivision has been substantially completed in accordance with the LSP. Reserve R52622 has been ceded and is managed by the City."

31. These are formal findings by the City of Kalamunda in its own planning governance documents, adopted at a Council meeting in April 2025 - less than 14 months before the WAPC's decision of 25 May 2026. They constitute authoritative, contemporaneous evidence by the responsible local government that the public open space reserve directly serving the Subject Land's precinct has been fully provided, embellished to the required standard, ceded to the Crown as Reserve R52622, and is under active City management. This is precisely the category of 'local evidence' that the Position Statement's Explanatory Note identifies as the basis upon which a POS contribution rate may properly be adjusted. The Amendment 117 Initiation Report was prepared for the purpose of rationalising structure plans that have been substantially implemented - the City's own planning assessment is that the POS obligations of the Larwood Crescent precinct have been met. That formal administrative finding goes directly to the absence of any need or nexus for a further POS contribution from this subdivision.

32. The Amendment 117 Initiation Report also confirms that the structure plans covering the Larwood Crescent precinct are being rationalised into LPS3 precisely because subdivision and development in the area have been substantially completed in accordance with those plans. This is further corroboration that the urban residential development of the locality - including its POS obligations - has been fulfilled under the applicable planning framework. This demonstrates that existing POS within the relevant walkable catchments

around the Subject Land is sufficient to serve the population generated by the proposed 19-lot urban residential subdivision, such that no direct need or nexus for an additional POS contribution arises from this development.

33. This is consistent with the Position Statement's Explanatory Note, which states that where a locality already contains sufficient POS of adequate functionality and accessibility, the contribution rate may be adjusted accordingly. Any contribution must be "transparent, fair, and based on local evidence" - a standard that cannot be met during a period when the WAPC's own operative policy mandates a 0% rate for this class of development.

Third Limb: Not a Decision a Reasonable Planning Authority Would Make

34. The Position Statement's two-year deferral period was a deliberate policy decision by the WAPC and the State Government to advance infill housing supply targets and provide economic predictability for urban residential infill projects in progress. This is consistent with the Minister for Planning's stated position (June 2023) that the Government would not support changes to the POS policy that add regulatory burden and cost to infill development.

35. The imposition of Condition 21 in the face of an operative policy expressly providing for a 0% contribution is not a decision a reasonable decision-maker would make and fails the third limb of the Newbury Test.

I. RELIEF SOUGHT

36. The Applicant respectfully submits that the correct or preferable decision is for the Tribunal to:

    (a) set aside Condition 21 of the WAPC's conditional approval dated 25 May 2026 in its entirety; or alternatively,

    (b) vary Condition 21 by substituting a 0% POS contribution in accordance with Table 1 (Infill Contributions) of the *Position Statement: Public Open Space* (operative 19 December 2025), on the basis that this application constitutes urban residential infill subdivision determined during the designated two-year deferral period.

37. The Applicant reserves the right to rely on further evidence and submissions, including expert planning evidence, at any hearing of this matter.

J. SUMMARY OF KEY PROPOSITIONS

38. The Applicant's case rests on the following propositions:

(a) The Position Statement is the operative POS policy framework as at 25 May 2026, superseding DCP 2.3.

(b) The Subject Land is urban residential infill: a single-dwelling urban residential lot of 7,369m² being redeveloped at substantially higher density under R30 coding into 19 lots. A prior subdivision approval (WAPC Ref 156487, 2018) lapsed because development was not undertaken.

(c) The Subject Land is not brownfield: it is a standard single urban residential lot with no former non-residential use.

(d) Table 1 of the Position Statement expressly mandates a 0% default POS contribution for urban residential infill subdivision of any lot yield during the deferral period 19 December 2025 to 18 December 2027.

(e) No LPS3 scheme provision mandates a POS contribution overriding the state-level 0% default; a local planning policy does not constitute a "local planning scheme" for this purpose.

(f) Condition 21 independently fails the Newbury Test: there is no demonstrated direct factual nexus between the condition and the consequences of this specific urban residential infill subdivision, and no reasonable planning authority properly advised of the operative policy would impose a 10% contribution during the deferral window.

K. LIST OF EXHIBITS

39. The following documents are filed as exhibits to these submissions:

(A) **WAPC Ref 156487 - Conditional Subdivision Approval dated 19 June 2018.** The lapsed 2018 WAPC approval for a 16-lot subdivision of Lot 818 Larwood Crescent, High Wycombe, including Condition 14 (POS Recreation Reserve) and Advice Note 5 (cash-in-lieu agreement). Confirms the prior approval lapsed on 19 June 2022 with no conditions fulfilled as no development was carried out.

(B) **City of Kalamunda Local Planning Scheme Amendment No. 117 Initiation Report (April 2025).** Adopted at the Ordinary Council Meeting of 22 April 2025. Sections 6.3 and 6.6 confirm that Larwood Crescent POS has been embellished to the required standard and Reserve R52622 has been ceded and is managed by the City.

(C) **Email correspondence from Mr Jason Bouwhuis, Senior Planning Officer, DPLH, dated 15 May 2026.** Sets out the WAPC's internal reasoning for imposing Condition 21, including the WAPC's argument that the Subject Land does not qualify as infill because it is already zoned R30. Constitutes admissions by the decision-maker as to the basis for Condition 21.

(D) **Current Application WAPC Ref 202723 - Conditional 19 Lots**

Subdivision Approval dated 25 May 2026. The decision under review, including all 21 conditions. Condition 21 is the subject of this application for review.

Dated: 9 June 2026



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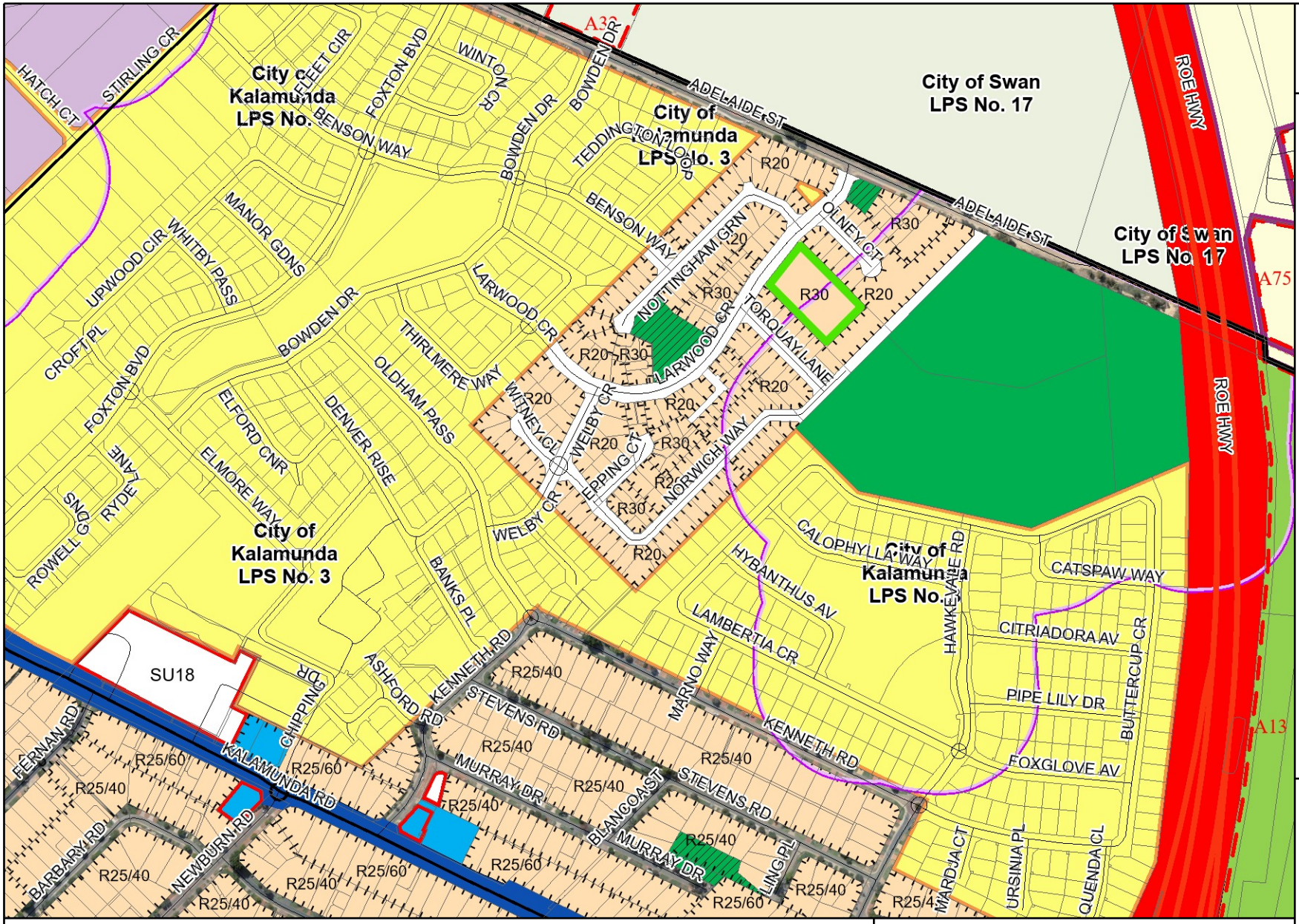
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ACN 692 284 129
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Department of Planning, Lands and Heritage

GOVERNMENT OF WESTERN AUSTRALIA

Legend

- Cadastre (View 1)
- Roads
  - National Highway
  - Main
  - Minor
  - Not Applicable
  - **Subject Site**
- LPS Boundary
- LPS Restricted and Additional Use
- LPS Other Categories - Areas (SCA, DCA, DA etc)
- LPS R-Code Boundary
- Region Scheme Reserves
  - Other regional roads
  - Primary regional roads
  - Regional open space
- LPS Zones and Reserves
  - Commercial
  - General rural
  - Industrial development
  - Light industry
  - Local open space

Notes:

* The data that appears on the map may be out of date, not intended to be used at the scale displayed, or subject to license agreements. The map should only be used in matters related to Department of Planning, Lands and Heritage business.

* This map is not intended for measurement purposes.

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Attachment 4 - Zoning Plan

DPLH BUSINESS USE ONLY

Internal Spatial Viewer

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N

0 0.17 0.34 Kilometres

1: 7,851 at A4

Projection: WGS 1984 Web Mercator Auxiliary Sphere

Graticules (if visible): GDA 1994 Latitude/Longitude

Date produced: 17-Aug-2026