PART C – CITY OF KALAMUNDA

1. Declarations of Due Consideration

2. Disclosure of Interests

3. Form 1 DAP Applications

3.1 Lot No. 192 (326) Hale Road, Wattle Grove - Service Station, Motor Vehicle Repairs & Recreation – Private – DAP/25/02890

4. Form 2 DAP Applications

Nil

5. Section 31 SAT Reconsiderations

Nil

Part C – Item 3.1 – LOT No. 192 (326) Hale Rd, Wattle Grove – Service Station, Motor Vehicle Repairs & Recreation – Private.

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Metro Outer Development Assessment Panel	
Local Government Area:	City of Kalamunda	
Applicant:	Hidding Urban Planning	
Owner:	Shirley Quaresimin	
Value of Development:	$8 million	
Responsible Authority:	City of Kalamunda	
Authorising Officer:	Regan Travers - Manager Approval Services Cardia Mariani – Principal Statutory Planner Tracey Cooney Walshe – Senior Statutory Planner	
LG Reference:	DA25/0073	
DAP File No:	DAP/25/02890	
Application Received Date:	1 May 2025	
Report Due Date:	28 November 2025	
Application Statutory Process Timeframe:	90 Days In accordance with cl 75 of the deemed provisions a 90-day timeframe applied. Advertising required in accordance with City's Local Planning Policy 11 - Public Notification – Significant development application. An extension was agreed under cl 75 (c) to provide for an RFI and revised assessment.	
Attachment(s):	1. Development Plans 2. Drainage Plans 3. Environmental Noise Impact 4. Landscaping plan 5. Transport Impact Assessment 6. Submission table 7. Design review panel minutes	
Is the Responsible Authority Recommendation the same as the Officer Recommendation?	☐ Yes ☒ N/A	Complete Responsible Authority Recommendation section
	☐ No	Complete Responsible Authority and Officer Recommendation sections

Responsible Authority Recommendation

That the Metro Outer Development Panel resolves to:

1. **Approve** DAP Application reference DAP/25/02890 and accompanying plans in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of Clause 10.4 of the City of Kalamunda Local Planning Scheme No. 3, subject to the following conditions:

Conditions

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

2. For the duration of the development, the development being carried out in accordance with the plan(s)/drawing(s) and document(s) (including any recommendations made) listed below, including any amendments to those plans as shown in red, to the satisfaction of the City of Kalamunda.

Plan No	Rev.	Title	Date	Prepared by
DA02	F	Proposed Conceptual Site Plan	10.10.25	Hodge Collard Preston Architects
DA02a	F	Proposed Site Plan Structure Plan Overlaid	10.10.25	Hodge Collard Preston Architects
DA03	F	Proposed Site Plan with tracking	10.10.25	Hodge Collard Preston Architects
DA04	F	Proposed Auto Floor Plan	10.10.25	Hodge Collard Preston Architects
DA05	F	Proposed Fuel Station Floor Plan	10.10.25	Hodge Collard Preston Architects
DA06	F	Proposed Gym Floor Plan	10.10.25	Hodge Collard Preston Architects
DA07	F	Proposed Elevation Auto	10.10.25	Hodge Collard Preston Architects
DA08	F	Proposed Elevation Fuel Station	10.10.25	Hodge Collard Preston Architects
DA09	F	Proposed Elevation & Section Gym & Tenancy	10.10.25	Hodge Collard Preston Architects
C1	B	Stormwater Drainage Plan and Details	8.10.25	JCCE
C2	B	Stormwater Drainage Details	8.10.25	JCCE
		Spillceptor (8 pages)		Atlan Stormwater
P191373	2	Environmental Noise Impact	31 August 2025	Reverberate Consulting
t24.265	01a	Transport Impact Assessment	October 2025	Transcore

3. For the duration of development, all stormwater drainage from roofed and paved areas being disposed of to the specification outlined in the approved Drainage Plan and to the satisfaction of the City of Kalamunda.

4. For the duration of works, fill brought to the site must be clean, and solid earth/sand or clean inert material that is free of contaminates, organic material, putrescible or refuse matter, or any other deleterious matter.

5. The approved boundary wall and footings adjacent to the boundary must be constructed wholly within the subject allotment. Prior to occupation of the development, the external surface of the boundary wall must be finished to a professional standard to complement development on the adjoining lot, to the satisfaction of the City of Kalamunda.

6. The Service station, Motor vehicle repair and Recreation – Private (gym) must be constructed with the finished floor level matching the approved plans. Any proposed cut and fill to the site does not form part of this development approval and if required, amended plans must be submitted to the City of Kalamunda for approval.

7. For the duration of development, car parking areas must always be available for their intended purpose and must not be used for any alternative purpose at any time.

8. The applicant must comply with all the recommendations provided in the Environmental Noise Assessment submitted as part of the development application for the duration of the development. The noise mitigation and management measures discussed in the conclusion must be implemented in perpetuity, to the satisfaction of the City of Kalamunda

9. Signs and on-site advertising must not include reflective, flashing, chasing or pulsating lights and must not have such intensity as to cause annoyance to the public or illuminate beyond the extent of the lot boundaries for the duration of the development to the satisfaction of the City of Kalamunda.

10. Prior to the lodgement of a building permit, arrangements being made to the satisfaction of the City of Kalamunda to ensure that a Cost Contribution will be made towards the Infrastructure Cost Sharing Arrangement for Cell 9 pursuant to the City of Kalamunda Local Planning Scheme No. 3.

11. Prior to the lodgement of a building permit, a Construction Management Plan must be prepared by the landowner/applicant and approved, to the satisfaction of the City of Kalamunda. The Construction Management Plan shall detail how the construction of the development will be maintained including the following:
    i. Public safety and security;
    ii. Hours of construction;
    iii. Dust management plan
    iv. Toilet facilities for construction workers;
    v. Protection of public infrastructure;
    vi. How materials and equipment will be delivered, stored and removed from the site;
    vii. Parking arrangements for staff, contractors and visitors;
    viii. Construction Waste disposal strategy and location of waste disposal bins;

ix. Details of cranes, large trucks or similar equipment which may block public thoroughfares during construction, and how they are to be managed;
x. How dust, noise, erosion, lighting and environmental hazards and will be managed during the stages of construction;
xi. Complaint management procedure; and
xii. Other matters likely to impact on surrounding property owners.

The approved Construction Management Plan must be implemented prior to the commencement of works and thereafter maintained for the duration of works, to the satisfaction of the City of Kalamunda.

12. Prior to lodgement of a building permit, the applicant/landowner must submit, and have approved by the City of Kalamunda, detailed information relating to external finishes and colour schemes. Prior to the occupation of the development the approved external finishes and colour schemes must be implemented to the satisfaction of the City of Kalamunda and maintained for the duration of the development.

13. Prior to lodgement of a building permit, a Waste Management Plan must be prepared by the landowner and approved to the satisfaction of the City of Kalamunda. The Waste Management Plan must include the following detail to the satisfaction of the City of Kalamunda:
    (i) The location of the bin storage areas and bin collection areas (all storage and loading areas must be screened from the streetscape).
    (ii) The number, volume and type of bins, and the type of waste to be placed in the bins.
    (iii) Management of the bins and the bin storage areas, including cleaning rotation and moving bins to and from the bin collection areas; and
    (iv) Frequency of bin collections.
    (v) Appropriate traffic management measures to mitigate conflicts between private vehicles and waste collection vehicles.
    (vi) Other matters likely to impact on surrounding property owners.

    The approved Waste Management Plan is to be implemented for the duration of the development by the landowner to the satisfaction of the City of Kalamunda.

14. Prior to lodgement of a building permit, the applicant must submit, and have approved by the City of Kalamunda, an External Lighting Plan, in accordance with the following criteria:
    (i) Detailing lighting to internal driveways, carparks, pathways, areas of open space.
    (ii) All lighting must be designed and installed so that as far as reasonably possible, by way of hooding and orientation, minimal light will be cast onto any adjoining property.
    (iii) Lighting must not cause a nuisance to adjoining residents or the travelling public and must comply at all times with the requirements stipulated under the Australian Standard 4282-1997 (Control of the obtrusive effects of outdoor lighting).
    (iv) Have regard to the WAPC Dark sky and astrotourism Position Statement (January 2022).

(v) Other details as required by the City to mitigate light spill impacts upon surrounding property owners.

Prior to occupation, the approved lighting plan must be implemented and the constructed lighting thereafter maintained for the duration of the development to the satisfaction of the City of Kalamunda.

15. Prior to applying for a building permit, engineering drawings for the modifications of Hale Road are to be submitted to and approved to the satisfaction of the City of Kalamunda. Prior to occupation of the development, all works are to be completed at the cost of the applicant / landowner in accordance with the approved engineering drawings as per advice and recommendation of Transport Impact Assessment and to the specification and satisfaction of the City of Kalamunda.

16. Prior to the lodgement of a Occupancy Permit, the applicant is to submit, and have approved by the City of Kalamunda, a Signage Plan.

    The approved signage plan is to be implemented prior to occupation of the development and thereafter maintained for the duration of the development to the satisfaction of the City of Kalamunda.

17. Prior to occupation of the development, the landowner must locate and screen the following components of the development so that they are not visible from any road to which the site has frontage, adjoining properties or otherwise on display from any public vantage point:
    i. Refuse storage areas.
    ii. Service equipment.
    iii. Mechanical ventilation.
    iv. Refrigeration units.

18. Prior to the lodgement of a Occupancy Permit, the landowner/applicant contributing towards public art, pursuant to City of Kalamunda Local Planning Policy 26.

19. Prior to the lodgement of a Occupancy Permit, all car parking areas must meet the following requirements:

    (i) The provision and maintenance of a minimum of 111 car parking spaces, which are designed, constructed, sealed, kerbed, drained and marked in accordance with Australian/New Zealand Standard AS/NZS 2890.1:2004, Parking facilities, Part 1: Off street car parking;
    (ii) The provision and maintenance car parking space(s) dedicated to people with disabilities, which are designed, constructed, sealed, kerbed, drained and marked in accordance with Australian/New Zealand Standard AS/NZS 2890.6:2009, Parking facilities, Part 6: Off street parking for people with disabilities and which are linked to the main entrance of the development by a continuous accessible path of travel designed and constructed in accordance with Australian Standard AS 1428.1 2009, Design for access and mobility, Part 1: General Requirements for access New building work;

(iii) Vehicle parking, manoeuvring and circulation areas are to be suitably constructed, sealed, kerbed, line marked and drained to the specification and satisfaction of the City of Kalamunda and Australian Standard AS2890; and

(iv) Comply with the above requirements and be maintained to the satisfaction of the City of Kalamunda for the duration of the development.

20. Prior to the lodgement of a Occupancy Permit, all crossovers shall be designed and constructed to the specifications and satisfaction of the City of Kalamunda.

21. Prior to the lodgement of a Occupancy Permit any recommendations of the Transport Impact Assessment must be implemented to the satisfaction of the City of Kalamunda.

22. Prior to the lodgement of a Occupancy Permit for the development, bicycle facilities must be provided in accordance with Australian Standard AS 2890.3 to the satisfaction of the City of Kalamunda. The facilities shall thereafter be retained for the duration of the development.

23. Prior to the lodgement of an Occupancy Permit of each individual facility in the development end of trip facilities must be provided for the benefit of respective facility staff. End of trip facilities are to be designed in accordance with the following criteria:

(i) A locker of functional and suitable size to be provided for every bicycle parking bay provided.

(ii) All required end of trip facilities shall be appropriately located to ensure easy access from bicycle parking areas.

(iii) All end of trip facilities are required to be designed in accordance with the relevant Australian standards and Building Codes including universal access.

24. Prior to the lodgement of a Occupancy Permit, submit to the City of Kalamunda for approval a detailed landscape plan to landscape the subject site in the areas shown on the below listed plans.

Plan No.	**Rev.**	**Title**	**Date**	**Prepared by**
L-1100	03	Landscape Planting Plan	8.10.25	Bella Build and Design

The landscape plan must include the following:

i. Tree species must be a minimum bag size of 90L at the time of planting and include the following mix:

- *Eucalyptus drummondii*
- *Eucalyptus erythrocorys*
- *Eucalyptus laeliae*
- *Eucalyptus lane-poolei*
- *Eucalyptus stricklandii*
- *Corymbia eximia* 'Nana'
- *Pistacia chinensis (*DPIRD SPHB low)

- *Cupaniopsis anacardioides* (Tuckeroo)

ii. Shrub species must be a minimum 175mm pot size at the time of planting.
iii. Ground cover planting should aim for a 4 plants/m².
iv. Planting to drainage areas should include a biofiltration mix.
v. Tree species planted with root zones adjacent to structures must have root control barriers and/or structure strengthening systems installed (soil cells). Full demonstration of these systems is required.

Once approved, all landscaping noted in the approved Landscaping Plan must be plated prior to occupation of the development and maintained thereafter, to the satisfaction of the City of Kalamunda.

Any species which fail to establish within the first two planting seasons following implementation must be replaces at the landowners cost to the satisfaction of the City of Kalamunda.

Advice Notes

1. In regard to condition 11, the Applicant is advised Cell 9 Infrastructure Cost Sharing Arrangement (ICSA) currently attracts a development contribution of $24,565 per residential lot created (November 2024). Where commercial development is proposed, the dwelling yield of the subject site applies. The ICSA currently forecasts a lot yield of 20 lots for the subject site.

2. In regards to Public Art, the City of Kalamunda's Local Planning Policy 26 (Public Art Contributions) provides a concise and documented procedure for public art contributions to provide for consistent management and transparent process by the City.

3. In regards to Public Art, the landowners are advised that a public art contribution of $80,000 applies to this approval, which can be provided through either a public art contribution within the subject site or within a public area within the vicinity of the subject site equal to $80,000, or alternatively the provision of a $80,000 as in lieu payment to the City of Kalamunda's Public Art Fund. The method of contribution is at the discretion of the landowner.

4. A building permit is required prior to the commencement of works on site.

5. In regard to condition 16 Please submit modified pavement marking plans to Main Roads WA for approval and implementation.

6. The operation/development is to comply with the Environmental Protection (Noise) Regulations 1997.

7. This development approval does not authorise the erection of any signage not exempt by Schedule 5 (Exempted advertisements) of the City of Kalamunda Local Planning Scheme No. 3.

8. Prior to occupation any damages to public assets arising during the development activity are to be repaired and restored in accordance with the "Local Government

Guidelines for Restoration and Reinstatement in WA" and to the satisfaction of the City of Kalamunda.

9. The applicant is advised to manage and minimise erosion and sediment loss during the works and after completion in accordance with the Eastern Metropolitan Regional Council's policy 5.1.2 "Erosion and Sediment Control".

10. The applicant is required to manage noise and vibration during the works in accordance with Australian Standard AS 2436 "Guide to Noise and Vibration Control on Construction, Demolition and Maintenance Sites".

11. A Traffic Management Plan (TMP) is required for any works in the road reserve or impacting the road reserve. Submit a TMP in accordance with Main Roads WA's Traffic Management for Works on Roads Code of Practice, to the City. For non-complex TMPs submit the TMP at least 14 calendar days before commencing work, and for complex TMPs a minimum of 21 days before commencing work. The Traffic Management Plan must be approved before work impacting the road reserve can commence.

12. The applicant is reminded of their obligations to comply with the "Land development sites and impacts on air quality: a guideline for the prevention of dust and smoke pollution from land development sites in Western Australia", prepared by the Department of Water and Environment Regulation.

13. This development approval does not authorise the erection of any signage not exempted by Schedule 5 (Exempted advertisements) of the City of Kalamunda Local Planning Scheme No. 3.

14. The landowners required to apply for Registration of a Food Business accompanied with the appropriate registration fee a minimum of two weeks prior to commencing operation. The Application must include floor plans and elevations of the kitchen and bar areas detailing all fixtures, fittings and finishes to the City's Health Service so that assessment may be made against the requirements of the Food Standards Code and advice can be provided before commencing construction. Such advice will aid in preventing expense and delays caused by the possible need to rectify structural non-compliances at the time of completion.

15. The landowner must book a food premises inspection with the City of Kalamunda's Health Service prior to commencing operations. The premise must meet all requirements and pass the inspection without requiring any corrective actions before it will be allowed to trade.

16. The landowners are advised that the food premises must comply with the Food Act 2008 and Food Standards Code. Further advice on these requirements is available from the City of Kalamunda's Health Service on 9257 9813.

17. The applicant is reminded of their obligation to comply with all regulatory and licencing requirements associated with the service station. This includes dangerous goods licencing, safety requirements, and environmental protection requirements such as bunding and stormwater retention and treatment

Reasons for Responsible Authority Recommendation

N/A

Details: outline of development application

Region Scheme	Metropolitan Region Scheme
Region Scheme - Zone/Reserve	Urban
Local Planning Scheme	Local Planning Scheme No. 3
Local Planning Scheme - Zone/Reserve	Urban Development
Structure Plan/Precinct Plan	Cell 9 Wattle Grove Structure Plan (Hale Road, Wattle Grove Revised Local Structure Plan)
Structure Plan/Precinct Plan - Land Use Designation	The Structure Plan allocates a Commercial Zoning to the front portion of the site and a Mixed-Use Zoning to the rear portion of the site.
Use Class and permissibility:	Commercial Zoning (front) Service station "D use" Motor Vehicle Repairs "P use" Mixed-Use Zoning (rear) Recreation – Private "D use"
Lot Size:	9293sqm
Existing Land Use:	"Residential"
State Heritage Register	No
Local Heritage	☒ N/A ☐ Heritage List ☐ Heritage Area
Design Review	☐ N/A ☒ Local Design Review Panel ☐ State Design Review Panel ☐ Other
Bushfire Prone Area	No
Swan River Trust Area	No

Proposal:

Proposed Land Use	Convenience Store, Fast Food Outlet, Health/Fitness Centre and Shop*. *Please see land use discussion below
Proposed Net Lettable Area	2805sqm
Proposed No. Storeys	Single storey commercial development
Proposed No. Dwellings	N/A

Background:

Site Details:

The subject site is described as follows:

1. Zoned 'Urban' under the Metropolitan Region Scheme (MRS) and 'Urban Development' under the City of Kalamunda Local Planning Scheme No.3 (LPS3).

2. Located within the Cell 9 Wattle Grove Structure Plan (Hale Road, Wattle Grove Revised Local Structure Plan) which designates the zoning of the front portion of the subject site as Commercial and the rear portion as Mixed use.

3. The lot is bounded by Hale Road to the south which is an Integrator type B as per Liveable Neighbourhoods.
4. Located within proximity of Perth Airport but does not fall within the Australian Noise Exposure Forecast (ANEF) contours.

The application initially proposed the following land uses across the Commercial and Mixed-use zones of the lot:

- Convenience store,
- Fast food outlet,
- Health/Fitness Centre,
- Shop.

Figure 1 Scheme Map

Figure 2 – excerpt from Cell 9 Wattle Grove Structure Plan (Hale Road, Wattle Grove Revised Local Structure Plan)

Site History:

The subject site currently has a single house and several miscellaneous storage style outbuilding structures which are proposed to be removed to accommodate the development.

Site Context:

Lot 192 (326) Hale Road was the subject of a development application for a Funeral Parlour. The application was refused at the City of Kalamunda Ordinary Council Meeting of 26 March 2024. The adjacent Lots 193 & 194 (310 & 318) Hale Rd were subject to a MODAP approval for a Childcare premises, Medical Centre and Consulting Rooms (DAP/24/02707) and are currently the subject of forward works.

Woodlupine Brook traverses Reserve 48404 & 52542 to the rear of the lot which link to The Promenade Public open space.

The immediate locality surrounding the subject site is zoned Residential with lots being coded R30 and R20.

The subject site is located in the Cell 9 Wattle Grove Structure Plan (Hale Road, Wattle Grove Revised Local Structure Plan) area. As the lot is currently undeveloped the associated cost contribution for the development of infrastructure in the area has not to date been realised. A cost contribution condition will be imposed to address this issue in accordance with the Infrastructure Cost Sharing Agreement review adopted 28 May 2024.

Land use:

The Site context is relevant to understanding the evolution of land use discussions as the application progressed. The Site has two designated zonings with the land uses having differing permissibility's under LPS3 for the respective zones.

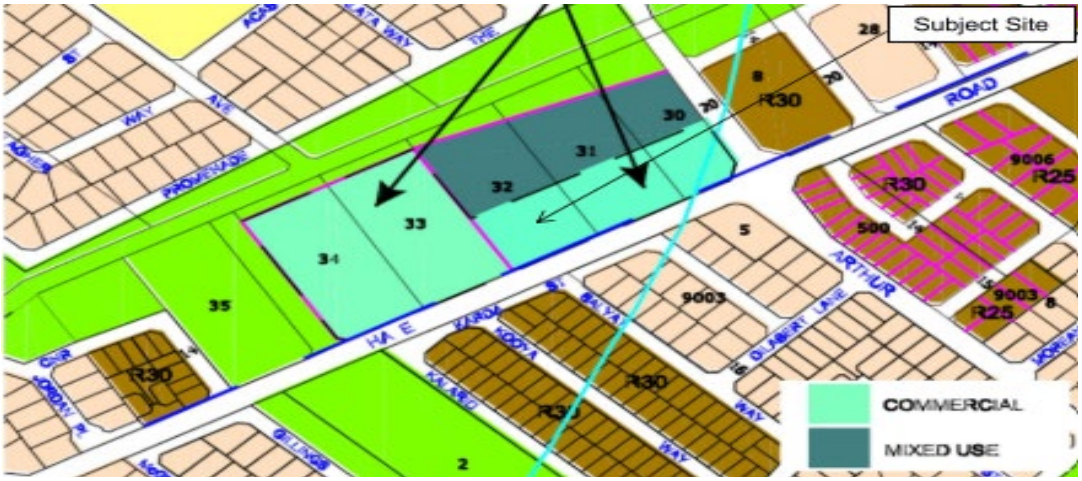


Figure 3 Context Zoning map of the Cell 9 Wattle Grove ODP extracted from planning report

The initial iteration of the application proposed the below listed land uses in the respective zoned areas; the related permissibility is also outlined:

Commercial zone	Permissibility
Convenience store	'D' use
Fast food outlet	'P' use
Mixed use zone	Permissibility
Health/Fitness Centre	'A' use
Shop	'X' use

The City notes that the applicant contends the land use 'convenience store' should be used for the assessment of the retail fuel sales component of the application in lieu of the land use 'Service station' as set out in the City's scheme. It is noted that no tenant has been identified to facilitate an interrogation of the full extent of the offering.

Local Planning Scheme No. 3 (LPS3) sets out:

> **"service station"** means premises used for the retail sale of petroleum products and motor vehicle accessories and goods of an incidental /convenience retail nature, and for carrying out greasing, tyre repairs or minor mechanical repairs to motor vehicles, but does not include a transport depot, panel beating, spray painting, major repairs or wrecking;
>
> **"convenience store"** means premises —
>
> (a) used for the retail sale of convenience goods commonly sold in supermarkets, delicatessens or newsagents, or the retail sale of petrol and those convenience goods;
>
> (b) operated during hours which include, but may extend beyond, normal trading hours;
>
> (c) which provide associated parking; and
>
> (d) the floor area of which does not exceed 300 square metres NLA;

City is satisfied that the Service station land use as set out in the Scheme and in accordance with Clause 1.7 b) (i) of LPS3 is appropriate for assessment in this instance. The land use of 'Service station' is a 'D' use in the commercial zone.

Also proposed in the Commercial zoned area of the subject site was a fast food outlet:

> **"fast food outlet"** means premises used for the preparation, sale and serving of food to customers in a form ready to be eaten without further preparation, primarily off the premises;

This was subsequently removed from consideration and replaced with a commercial element that deals with minor car repairs

> **"motor vehicle repairs"** means premises used for or in connection with electrical and mechanical repairs and overhauls to motor vehicles. The term includes repairs to tyres but does not include recapping or retreading of tyres, panel beating, spray painting or chassis repair;

Motor vehicle repairs is a 'P use' in the zone and capable of consideration.

The rear Mixed use zoned portion of the lot has also had some modifications to the land uses proposed and progressed.

The applicant proposed what is colloquially know as a Gym for the anchor tenant. The land use outlined was a 'health/fitness centre.

> **"health/fitness centre"** means a building designed and equipped for recreation and sporting activities and includes outdoor recreation if specially approved by the local government;

It is noted the supporting documents interchanges Health/fitness centre and Recreation – private. Given the facility will principally open to subscribed members only the City believes the applicable land use is 'recreation-private'

> **"recreation – privat**e" means premises used for indoor and outdoor leisure, recreation and sport which are not usually open to the public without charge;

Recreation – private is a "D" use in the zone.

The 'Shop' component which was identified as an "X use" was removed from consideration.

Progressed land usages:

Commercial zone	Permissibility
~~Convenience store~~ (revised) Service station	~~'D' use~~ 'D' use
~~Fast food outlet~~ (removed) Motor Vehicle repair	~~'P' use~~ 'P' use
Mixed use zone	Permissibility
~~Health/Fitness Centre~~ (revised) Recreation – Private	~~'A' use~~ 'D' use
~~Shop~~ (removed)	~~'X' use~~

The application proposes to develop

- A service station including associated indicative signage
- A motor vehicle repair facility with associated office/reception and staff facilities
- A Gym (recreation – private) centre with adjacent Public open space (park) interface, staff facilities and reception area.
- Parking for the three related uses.
- Bin stores for each tenancy.
- Bike parking and 2 bay dog wash
- Access is proposed from two crossovers from Hale Rd.
- Landscaping is proposed across the entire site.

Legislation and Policy:

Legislation

Planning and Development Act 2005
Planning and Development (Local Planning Schemes) *Regulations 2015 (Regulations)*
Planning and Development (Development Assessment Panel) *Regulations 2011*
Metropolitan Region Scheme (MRS)
City of Kalamunda *Local Planning Scheme No. 3* (LPS3)
Environmental Protection (Noise) Regulations 1997 (WA)

State Government Policies

State Planning Policy 3.7 – Planning in Bushfire Prone Areas
State Planning Policy 5.1 – Land Use Planning in the Vicinity of Perth Airport
State Planning Policy 7.0 – Design of the Built Environment

Planning Strategies

City of Kalamunda Urban Forest Strategy

Structure Plans/Activity Centre Plans

Cell 9 Wattle Grove Structure Plan (Hale Road, Wattle Grove Revised Local Structure Plan)

Local Policies

Local Planning Policy 2 – Advertising Signage (LPP2)
Local Planning Policy 11 – Public Notification of Planning Proposals (LPP11)
Local Planning Policy 16 – Design Review Panels (LPP16)
Local Planning Policy 24 – Development Contribution Arrangements (LPP24)
Local Planning Policy 26 – Public Art Contributions (LPP26)

Consultation:

Public Consultation

The proposal was advertised in accordance with Clause 64 and Clause 87 of the Regulations and Local Planning Policy 11 – Public Notification of Planning Proposals (LPP11). The proposed development was advertised for a period of 28 days via the following methods:

a) Letters were sent to all landowners and occupiers within a 200-metre radius of the subject site;
b) Notice on the City's website; and
c) An advertising sign on site.

A total of 6 submissions were received on the proposal, comprising 2 submissions of comment and 4 submissions of support for the proposal. All the submissions received have been noted to in the submission table (attachment 6).

The key themes received from the consultation relate to traffic, parking, and the impact of noise on the locality. The City's response to the concerns has been addressed in the submission table in accordance with Clause 67(2)(y), of the Regulations. Applicant commentary was not considered necessary in the assessment of the comments.

Issue Raised	**Officer comments**
Traffic - Supported noting the entry/exit will not add to traffic restrictions	The City has sought a condition the implementation of the Traffic Impacts Assessment along with required road modifications to facilitate the entry from Hale Road, subject to Main Roads WA approval.
Parking – Supported development subject to required parking bays being provided	The City has sought to condition the construction of an appropriate level of parking based on the land use requirements set out in the Scheme.
Noise – Supported subject to suitable noise restrictions to minimised impact on surrounding residential areas.	The City has sought to condition Noise management in accordance with the Environment Noise regulations based on the Environmental Noise Impact assessment provided.

It is noted that a previous application for a Funeral Parlour was progressed on the subject site and was refused at the City of Kalamunda Ordinary Council Meeting of 26 March 2024.There was strong community feedback outlining in the main extensive grievances including cultural and religious impacts of the project. A total of 274 submissions were received with 250 stated objections which speaks to the level of community interest. In comparison this application has received a total of 6 submissions, it is important to note a lack of public engagement cannot be perceived as tacit support, but it is noteworthy that this application has not garnered public opposition.

A full assessment of this application has been undertaken to assess the impacts of the proposal and ensure residential amenity can be adequately maintained and managed as required. The concerns raised in the submissions are noted to be typical for this application typology and can be dealt with via standard conditions. To that end conditions in relation to amenity (parking, noise, landscaping etc) have been recommended.

Referrals/consultation with Government/Service Agencies

Water Corporation provide comments in relation to requirements to provide water and wastewater facilities to the development at the applicant's cost. The comments were provided to the applicant for information.

Design Review Panel Advice

The application was presented to the City's Design Review Panel (DRP) in June 2025 and August 2025 post application lodgement.

The initial review noted the lack of permeability of the site, the car dominated land use and associated parking requirements. The applicant incorporated the preliminary comments provided by the DRP and have provided a revised design. The DRP were largely supportive of the revised proposal commending the improved permeability and connection to the adjacent Public Open Space.

The DRP comments are provided in attachment 7.

Internal Departments

The application was referred to relevant internal departments for formal comment as part of the consideration process. All departments are satisfied with the proposal subject to the recommended conditions and advice notes.

Planning Assessment:

The proposal has been assessed against all the relevant legislative requirements of the Scheme, State and Local Planning Policies and the LDP outlined in the Legislation and Policy section of this report.

Land Use Permissibility

The subject site is zoned 'Urban Development' under Local Planning Scheme No. 3 (LPS3) Cell 9 Wattle Grove Structure Plan (Hale Road, Wattle Grove Revised Local Structure Plan) designates a Commercial zoning for the front portion and Mixed-use zoning to the rear portion of the subject site. Clause 6.2.7.2 of LPS3 sets out how the zones identified in the Structure plan area binds the land use permissibility and related provisions to the Scheme.

The application seeks approval for a 'Service station' (D) use, 'Motor Vehicle Repairs' (P) use, and 'Health/Fitness Centre' (A) use in the respective zones and in accordance with Clause 4.3 and Table 1 of LPS3.

> **"Service station"** means premises used for the retail sale of petroleum products and motor vehicle accessories and goods of an incidental /convenience retail nature, and for carrying out greasing, tyre repairs or minor mechanical repairs to motor vehicles, but does not include a transport depot, panel beating, spray painting, major repairs or wrecking;
>
> **"Motor vehicle repairs"** means premises used for or in connection with electrical and mechanical repairs and overhauls to motor vehicles. The term includes repairs to tyres but does not include recapping or retreading of tyres, panel beating, spray painting or chassis repair;
>
> **"Recreation – privat**e" means premises used for indoor and outdoor leisure, recreation and sport which are not usually open to the public without charge;

The development application is consistent with the abovementioned land use definitions and is considered capable of support within the existing planning framework.

Cell 9 Wattle Grove Structure Plan (Hale Road, Wattle Grove Revised Local Structure Plan) has stipulates that *the combined shop-retail floor space for the entire commercial land use designation associated with portions of 30, 31 & 32 Hale Road and adjoining 33 & 34 is not to exceed 6000m2 except where justified through a Retail Sustainability Assessment prepared in accordance with State Planning Policy 4.2 and where it is supported through the determination of an application for development approval.*

- Lot 30 & 31 as annotated on the Structure plan (being Lot 193 & 194) via MODAP approved a 150sqm pharmacy.

- Lot 32 as annotated on the Structure plan (being Lot 192) is the subject site an proposes an additional 243sqm of retail floor area as part of the Service station.

- Lot 33 as annotated on the Structure plan (being Lot 191) received JDAP approval in 2016 for 1819sqm retail area across multiple tenancies. Subsequent applications approved under delegation have modified this overall area (180sqm addition reduced thereafter by 67.4sqm and 211.9sqm respectively) reducing the overall retail floor area to 1719.7sqm.

- Lot 34 as annotated on the structure plan (being Lot 88) has approval for 2442sqm retail floor area.

In considering the current retail element it is noted that the running total is well below the 6000sqm threshold that triggers a retail sustainability assessment and is capable of support.

Built Form and Design

The table below outlines compliance with the built form requirements as stipulated in LPS 3 which are applicable to the subject site. Whilst it is noted that the development is not required to comply with the deemed-to-comply requirements of the R-Codes, the development should have due regard to the existing streetscape and local character.

PROVISION		**REQUIREMENT**	**PROPOSAL**	**COMPLIANCE**
SETBACKS (Table 2 LPS3)	**FRONT – Commercial Zone** (Hale Rd)	15 metres	Service station 16m Bowser canopy 8m Motor vehicle repair 15.7m	Complies Variation Complies

	REAR – Mixed Use zone	**6m Ave**	GYM Nil	Variation
	SIDE Commercial Zone **Mixed use Zone**	Nil As per the R Codes	Service station Nil Motor vehicle Nil Gym Nil	Complies Complies Variation
BUILDING HEIGHT (Clause 5.1.6 of the R-Codes)		7.0 metres (wall height) 10m Pitched roof 8m (concealed roof height) 8m (concealed roof height)	Service station 6.5m Motor Vehicle repair 3.5m Gym 6m Service station 7.3m Motor Vehicle repair 7.3m Gym 6m	Complies Complies Complies Complies Complies Complies
Site Coverage – Commercial Zone **Mixed use zone** (Table 2 Site Requirements LPS3)		60% 50%	20% 36%	Complies Complies
Plot Ratio - Commercial Zone **Mixed use Zone** (Table 2 Site Requirements LPS3)		0.6 0.5	0.1 0.3	Complies Complies
Landscaping Strip – Commercial zone (road frontage) (Table 2 Site Requirements LPS3)		3m to each road frontage	3m	Complies

As noted in the above table, the development proposed variations to the design provisions required under Table 2 of LPS 3 and the Residential Design Codes. Refer to the officer comment section of this report for further discussion.

Hours of Operation:

Pursuant to the LPS 3 Clause 9.2 Hours of Operational are sought as part of the application documentation. It is noted that the 'Service station' and 'Recreation – Private' (Gym) use will be 24hr. Conditions in relation to noise management and light will be imposed to ensure compliance with the Environmental Noise regulations and the Position statement: Dark Sky and Astrotourism.

Landscaping:

The applicant has submitted a landscaping plan in support of the proposed development. It was noted that the DRP were happy that the revised plan has improved the landscaping proposed but still noted the opportunity to improve canopy cover. The City's Arborist has recommended modifications to the landscaping plan to improve representation of native species and canopy trees. Soil cell corridors are also recommended to improve the canopy coverage rates as the development matures. The City is satisfied that a condition requiring a revised landscaping plan improving the species diversity and canopy trees can be conditioned to address the landscaping requirement.

Vehicle Parking:

The development proposes a Service station, motor vehicle repair premises and Recreation – private (gym). The car parking ratio applied by LPS3 for the respective land uses are set out below:

Table 3 – Car Parking Requirements

Land Use	Parking Requirement	Bays required
Service station	5 bays (excl. bowser area).	5
Motor vehicle repair	4 bays to each working bay, plus 1 bay for employee on site. (estimate 6 working bays and 10 employees)	34
Recreation - private	Discretion of the Local Government - 5 bays per 100m2 of GLA.	85
Total		124 bays
Provided bays		111 bays
Shortfall		13 bays

The application proposes a parking shortfall, refer to the officer comment section of this report for further discussion.

Vehicle Access and Circulation:

The applicant has submitted a Traffic Impact Assessment (TIA) prepared by Transcore with the application. The application proposes two vehicle access points from Hale Road. The western crossover to Hale road is a left in movement only. This approach was agreed with the City in consideration of the Main Roads criteria to limit frontage access to Hale Road. The eastern crossover to Hale Road is proposed as a full movement crossover. No specifications in relation to the required Hale Road modifications to facilitate the full movement crossover have been provided. The proposed development is estimated to generate 94 AM peak hour trips, 137 PM peak hour trips and 1553 trips daily. This assessment does not consider any provision for

multi-use trips (a customer utilising both the gym and service station). A condition requiring the modification to accommodate the full movement crossover to be provided and approved by both Main Roads and the City has been imposed.

End of Trip Facilities:

The TIS report details the subject sites connectivity for bus and bike access. The City seeks to assist in encouraging staff to utilise public transport, bicycle and micro-mobility vehicles options where appropriate. To ensure appropriate end of trip facilities to support staff are provided, a condition has been imposed.

Stormwater Drainage:

Geotechnical report and drainage design including hydrocarbon interceptors have been provided to address on site drainage. Conditions are imposed to ensure all stormwater can be disposed of to the satisfaction of the City.

Signage

The application plans detail indicative verandah sign locations for the Service station bowser awning for illustration purposes only. The elevations outline the Gym will have 2 no. internally illuminated logo signs. The indicative and annotated signage is of an appropriate scale and is suitably located to address LPP2 requirements, but it is noted that the future tenant of the Service station and Motor Vehicle Repair facility may require more extensive signage. Exact locations, dimensions, colours and materials can be assessed at occupancy stage based on the individual tenancy requirements. Conditions have been imposed to ensure illumination does not impact adjoining properties and will be in accordance with the Dark Sky and Astrotourism Position Statement.

External Service & Storage Areas:

Bin store facilities for each respective land use (tenancy) component have been annotated. Servicing has been assessed via the TIA and a standard colour and material condition applied to manage any modifications that may be required based on the final occupancy requirements. As the ultimate tenants are yet to be finalised a condition requiring a revised waste management plan is recommended to be provided and approved prior to occupancy.

Public Art

Public art plays an important role throughout the City of Kalamunda's built environment by attracting people to work and live in a space and creating a sense of local identity. The proposed development generates a planning need for public art by virtue of the increase in the staff and visitors to the area which would benefit from the provision of public art. In addition, the location of the proposal is a highly visible lot along Hale Road.

As the proposed works of the development are estimated at $8 million, the provisions of LPP26 are applicable to the development application. Pursuant to LPP26, the provision of public art is required for third party development proposals where the estimated cost of development exceeds $500,000. The provision of public art can be provided by integrating the artwork on site as part of the development component, or within a public area within the locality of the subject site. Recommended conditions

ensures compliance with LPP26 through requiring a public art contribution equal to $80,000.00 within the subject site, or alternatively a cash-in-lieu payment to the City of Kalamunda's Public Art Fund. The application did not provide a Public Art report in accordance with LPP26, but it is noted that only the anchor tenant is at this juncture identified which limits the applicant's capacity to provide a meaningful proposal. Notwithstanding LPP26 does set out the City's expectation for developments to provide an onsite contribution where the public art contribution exceeds $30,000. The Design Review Panel were enthusiastic about the capacity to install on site public art to strengthen the POS linkage to the site.

Officer Comments

The proposed development is generally compliant with all applicable legislation and policies, with the exception of the variations which are supported by the City pursuant to Clause 5.5 of LPS3. An assessment against the variations is provided below:

Built form and design variations - setbacks

Provision	Requirement	Proposal	Assessment
LPS 3 Table 2 – Site requirements - Commercial Front setback	15m	16 Service station 8m bowser 15.7m motor vehicle facility	The Bowser setback is 8m or half the required setback for a building • It is noted that the bowser structure is open which serves to diminish the impact of the variation. • The 8m bowser setback is principally consistent with the setback for the (7 eleven) fuel bowser approved on the adjacent lot (10.4m). • The bowser setback as proposed serves as an interim projection for the commercial lots when viewed form the street scape and is consistent with the expected outcome for this typology of development. • The non-compliance will not have an adverse effect on users of the development or the inhabitants of the locality and future development being it is the balance lot Iin the commercial fronted zone.
LPS 3 Table 2 – Site	6m average	Nil for the length of the boundary	• While It is noted that the proposed setback is a significant variation as a

requirements – Mixed use		wall – the balance of the setback area is undeveloped	numeric value it is applicable to interrogate the POS interface at this location to fully appreciate the impact. The linear POS to the rear of the lot widens as it parallels the rear boundary and as it approaches Winbridge Rd. When viewed from The Promenade the transversely located road the setback variation will be imperceptible relative to the adjacent developed site (Lot 191 322 Hale Rd). • It is noted that both lots provide an interface to the POS which also serves to dimmish the setback variation. • The non-compliance will not have an adverse effect on users of the development as the glazing to the rear elevation provides an interface to the POS. As set out above the inhabitants of the locality will not by virtue of the POS shape will not be aware of the variation. • The precedent set will serve to guide future development outcomes but any development on the Mixed use balance portion of Lot 193 & 194 (318 7 310) Hale Rd will also be subject to assessment by the City's design review panel which affords the City comfort in supporting the variations.
LPS 3 – Mixed use - Side setback variation (as per R Codes)	2.8m	Nil for the length of the boundary wall	• The boundary wall as proposed makes effective is of the lot space for the occupant.

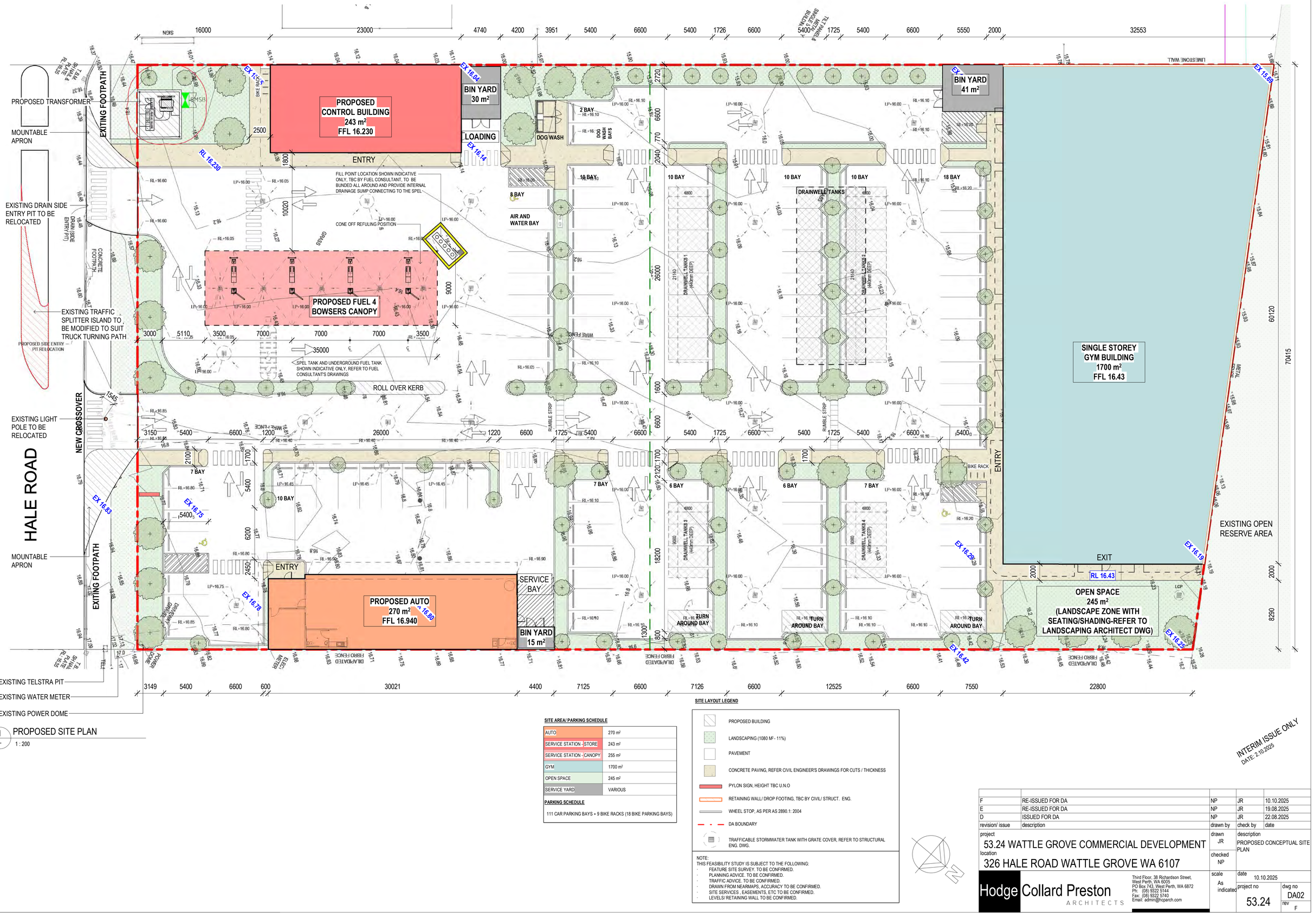
			• The boundary wall serves to provide privacy for both the future users and the users for the adjacent lot (childcare centre). • The building bulk proposed is consistent with the development expectation for a Mixed-Use zone. • The location by virtue of the lot orientation will not impact sunlight and ventilation for the open space on site and to the adjoining sites. • The boundary will will eliminate the opportunity for overlooking safeguard privacy for the adjoining property users (childcare centre). • The design resolves a number of amenity impacts for the adjoining property (safeguards privacy and eliminates any potential overlooking). • Sunlight to the childcare centre is preserved by virtue of lot orientation. • Contributes to the expected context of the Local Planning framework.

Parking variations

The application proposes a 13 bays parking shortfall based on the respective land use assessments in accordance with Table 3 of LPS3. This assessed shortfall fails to consider the reciprocal parking opportunities available to users and the capacity of users to travel to the facilities via public transport or by walking from the adjacent residential areas. The parking assessment presupposes that all users will want to avail of parking at the same time and fails to consider that the respective land uses have varying hours of operation and peak user demand. It is noted that the applicant has worked to provide for a legible design for all visitors (pedestrian and vehicle users alike) and to provide for the segregation of traffic where practical. Shaded walkway and POS linkage has been provided to encourage pedestrian usage. Given these is a logical lesser concurrent need for car parking bay of the intended uses the City is satisfied that in accordance with LPS3 Clause 5.7.2 discretion can be applied to the provisions of carparking.

Reasons for Officer Recommendation

It is considered that the proposed development is compatible with the commercial & mixed-use zoning respectively and appropriately located in the context of the surrounding residential and commercial/Mixed use areas. Whilst the overall development seeks some variations, the assessment demonstrates through the supporting technical documents and associated recommended conditions of approval, the development is unlikely to have an adverse impact on the amenity of the surrounding properties. The City is therefore supportive of the proposed Service Station, Motor vehicle repair and Recreation – Private facility subject to appropriate conditions and advice notes.



1 - PROPOSED SITE PLAN
1 : 200

SITE AREA/ PARKING SCHEDULE

AUTO	270 m²
SERVICE STATION - STORE	243 m²
SERVICE STATION - CANOPY	255 m²
GYM	1700 m²
OPEN SPACE	245 m²
SERVICE YARD	VARIOUS

PARKING SCHEDULE

111 CAR PARKING BAYS + 9 BIKE RACKS (18 BIKE PARKING BAYS)

SITE LAYOUT LEGEND

- PROPOSED BUILDING
- LANDSCAPING (1080 MP - 11%)
- PAVEMENT
- CONCRETE PAVING, REFER CIVIL ENGINEER'S DRAWINGS FOR CUTS / THICKNESS
- PYLON SIGN, HEIGHT TBC U.N.O
- RETAINING WALL/ DROP FOOTING, TBC BY CIVIL/ STRUCT. ENG.
- WHEEL STOP, AS PER AS 2890.1: 2004
- DA BOUNDARY
- TRAFFICABLE STORMWATER TANK WITH GRATE COVER, REFER TO STRUCTURAL ENG. DWG.

NOTE:
THIS FEASIBILITY STUDY IS SUBJECT TO THE FOLLOWING:
- FEATURE SITE SURVEY. TO BE CONFIRMED.
- PLANNING ADVICE. TO BE CONFIRMED.
- TRAFFIC ADVICE. TO BE CONFIRMED.
- DRAWN FROM NEARMAPS, ACCURACY TO BE CONFIRMED.
- SITE SERVICES , EASEMENTS, ETC TO BE CONFIRMED.
- LEVELS/ RETAINING WALL TO BE CONFIRMED.

INTERIM ISSUE ONLY
DATE: 2.10.2025

revision/ issue	description	drawn by	check by	date
F	RE-ISSUED FOR DA	NP	JR	10.10.2025
E	RE-ISSUED FOR DA	NP	JR	19.08.2025
D	ISSUED FOR DA	NP	JR	22.08.2025

project: 53.24 WATTLE GROVE COMMERCIAL DEVELOPMENT
location: 326 HALE ROAD WATTLE GROVE WA 6107
drawn: JR
checked: NP
description: PROPOSED CONCEPTUAL SITE PLAN
scale: As indicated
date: 10.10.2025
project no: 53.24
dwg no: DA02
rev: F

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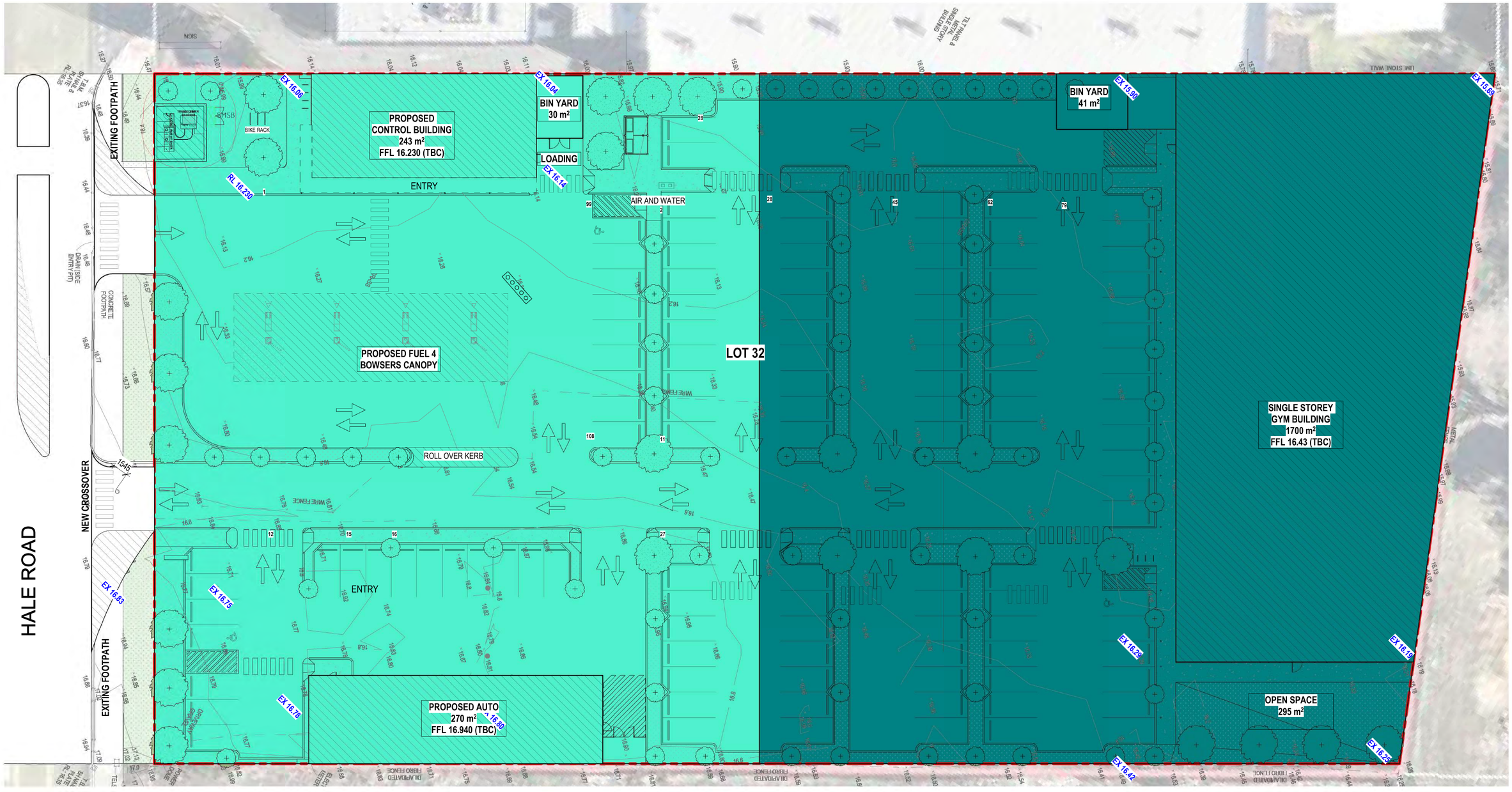

1 / 2 PROPOSED SITE PLAN WITH STRUCTURE PLAN

1 : 200

STRUCTURE PLAN LEGEND

- COMMERCIAL
- MIXED USE

NOTE:

- REFER TO CITY OF KALAMUNDA STRUCTURE PLAN TO FORM PART OF THIS DRAWING
- DRAWINGS WERE TRACED ON TOP OF THE STRUCTURE PLAN (PDF)

revision/ issue	description	drawn by	check by	date
F	RE-ISSUED FOR DA	NP	JR	10.10.2025
E	RE-ISSUED FOR DA	NP	JR	19.08.2025
D	ISSUED FOR DA	NP	JR	22.08.2025

project: 53.24 WATTLE GROVE COMMERCIAL DEVELOPMENT
location: 326 HALE ROAD WATTLE GROVE WA 6107

drawn: JR
checked: NP
description: PROPOSED SITE PLAN - STRUCTURE PLAN OVERLAID
scale: As indicated
date: 10.10.2025
project no: 53.24
dwg no: DA02a
rev: F

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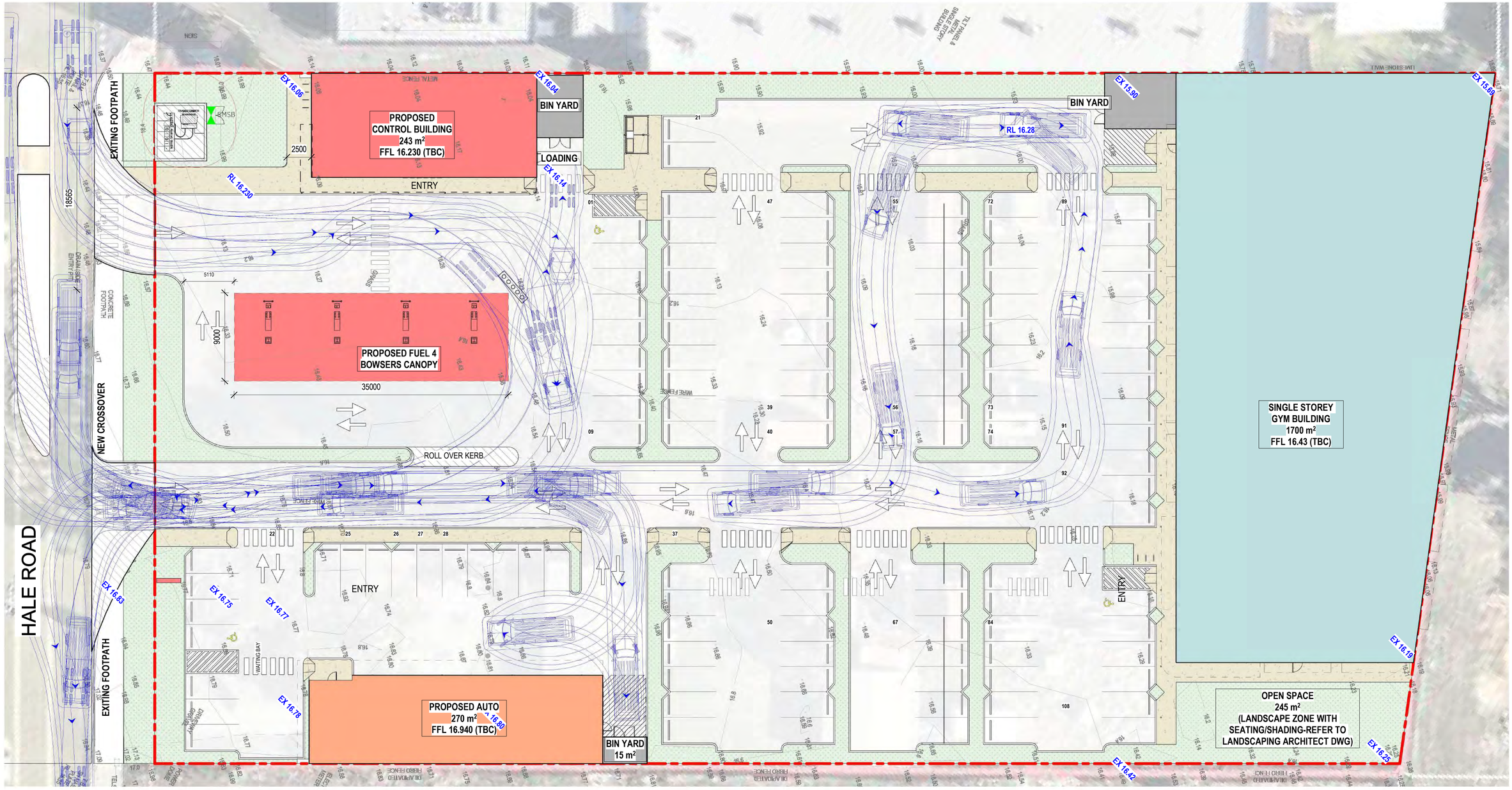

1 - PROPOSED SITE PLAN WITH TRACKING

1 : 200

F	RE-ISSUED FOR DA	NP	JR	10.10.2025
B	DRP ISSUE			20.06.2025
revision/ issue	description	drawn by	check by	date

project: 53.24 WATTLE GROVE COMMERCIAL DEVELOPMENT
location: 326 HALE ROAD WATTLE GROVE WA 6107
drawn: JR
checked: NP
description: PROPOSED SITE PLAN WITH TRACKING
scale: 1 : 200
date: 10.10.2025
project no: 53.24
dwg no: DA03
rev: F

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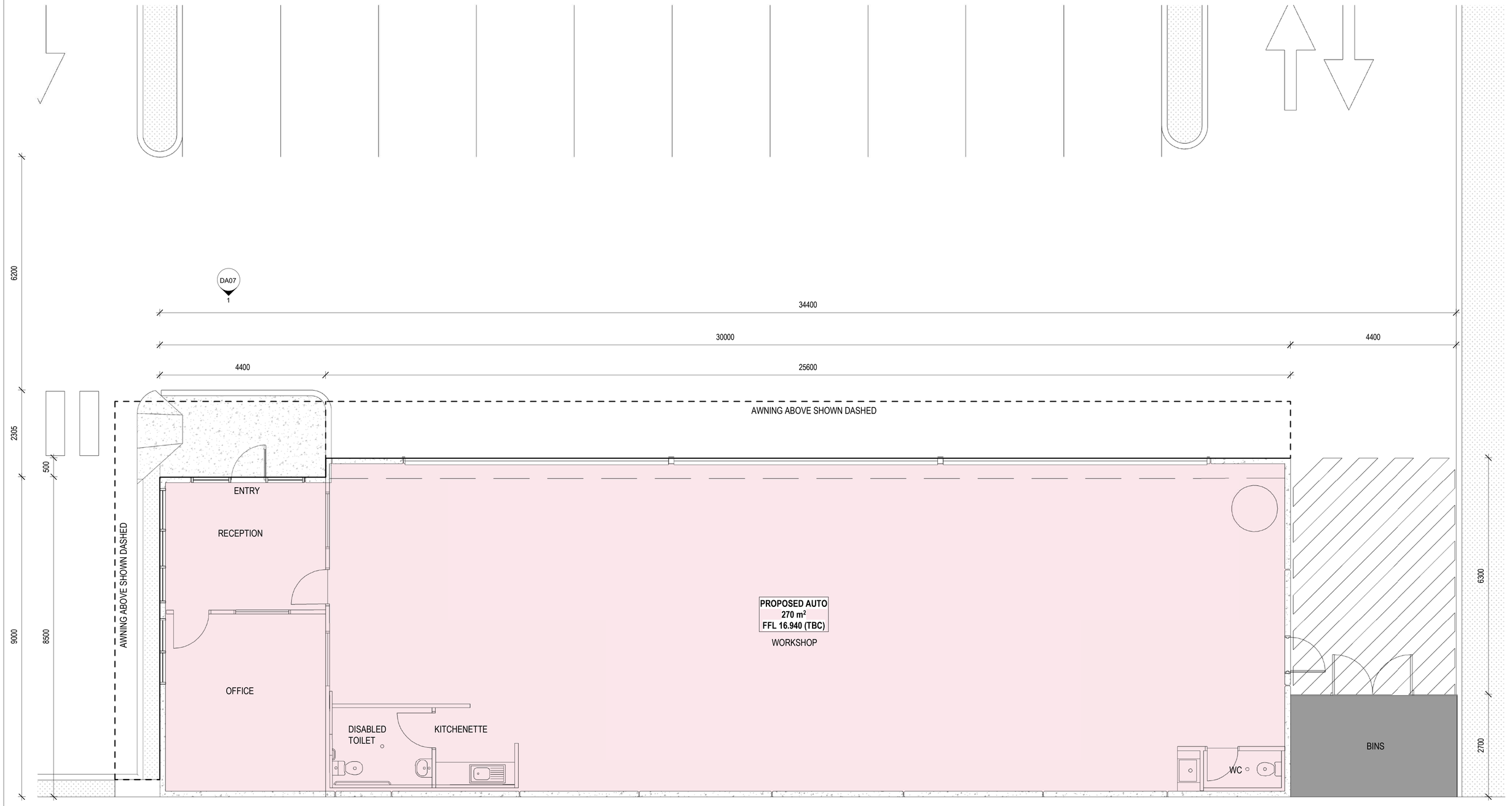

1 PROPOSED AUTO FLOOR PLAN
1 : 50

GENERAL NOTES:

1. DO NOT SCALE FROM DRAWINGS.
2. ALL BOUNDARIES, LEVELS AND DIMENSIONS TO BE CONFIRMED ON SITE.
3. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH ALL CONSULTANTS DRAWINGS.
4. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO COMMENCING ANY WORKS.
5. KERB RAMPS AND TGSIS TO BE IN ACCORDANCE WITH AS 1428.
6. NIL STEP AT ENTRY DOORS TO PROVIDE CONTINUOUS PATH OF TRAVEL IN ACCORDANCE WITH AS 1428.
7. MAX 1 IN 40 CAMBER AND CROSSFALLS TO ALL RAMPS AND WALKWAYS IN ACCORDANCE WITH AS 1428.
8. ALL MATERIALS & FIXTURES TO BE COMPLIANT WITH NCC & AS.
9. GLAZING ASSEMBLIES TO BE ASSEMBLED AND INSTALLED AS2047
10. WET AREAS TO BE WATERPROOFED IN ACCORDANCE WITH BCA PART F1 AND AS3740
11. FIRE HAZARD PROPERTIES OF WALL, FLOOR AND CEILING LININGS WILL COMPLY WITH CLAUSE C1.10 AND SPECIFICATION C1.10 OR C1.10A OF THE BCA.
12. DOOR HARDWARE DETAILS OR EVIDENCE THE REQUIRED EXITS AND DOORS IN PATHS OF TRAVEL WILL BE OPERABLE IN ACCORDANCE WITH BCA-D2.21

revision/ issue	description	drawn by	check by	date
F	RE-ISSUED FOR DA	NP	JR	10.10.2025
E	RE-ISSUED FOR DA	NP	JR	19.08.2025
D	ISSUED FOR DA	NP	JR	22.08.2025

project
53.24 WATTLE GROVE COMMERCIAL DEVELOPMENT
location
326 HALE ROAD WATTLE GROVE WA 6107

drawn JR
checked NP

description
PROPOSED AUTO FLOOR PLAN

scale 1 : 50

date 10.10.2025

project no 53.24

dwg no DA04

rev F

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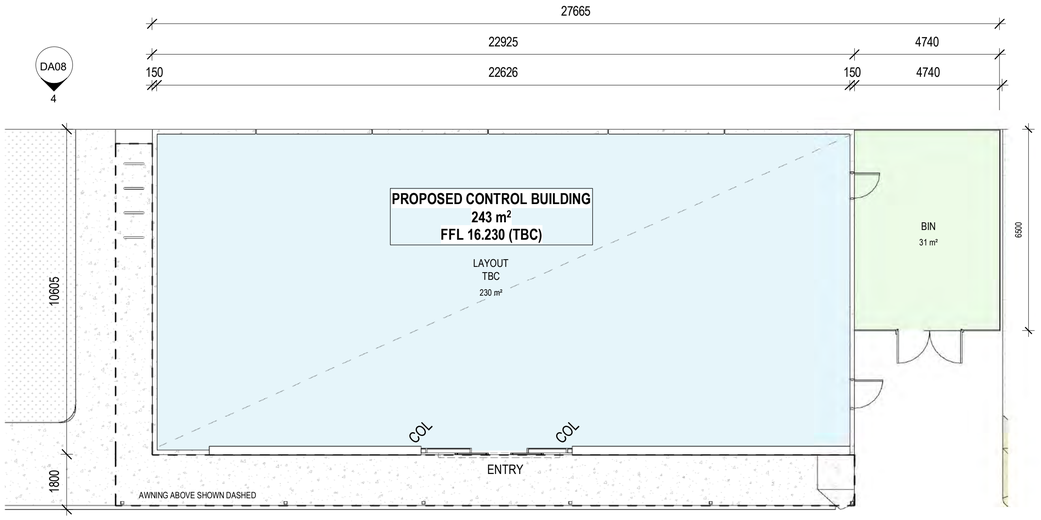
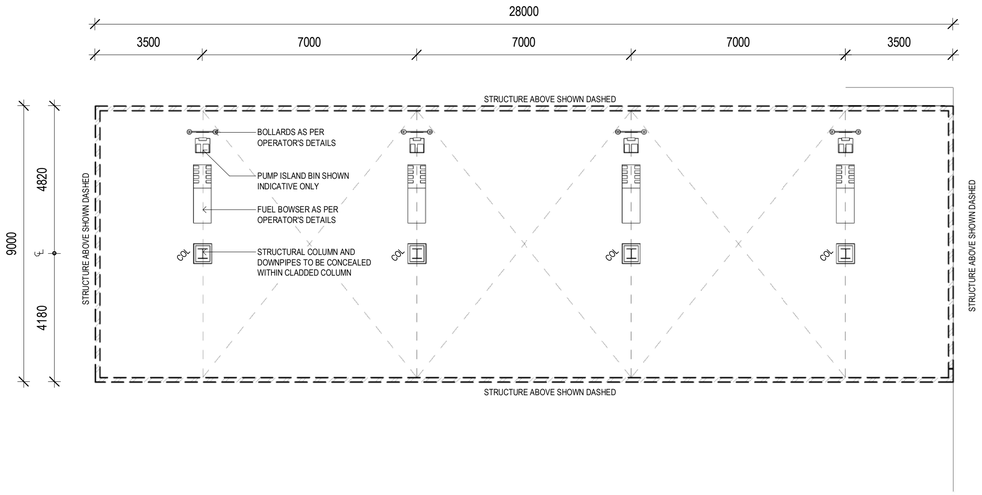


1 PROPOSED CONTROL BUILDING FLOOR PLAN
1 : 100



2 PROPOSED FUEL CANOPY FLOOR PLAN
1 : 100

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5. KERB RAMPS AND TGSIS TO BE IN ACCORDANCE WITH AS 1428.
6. NIL STEP AT ENTRY DOORS TO PROVIDE CONTINUOUS PATH OF TRAVEL IN ACCORDANCE WITH AS 1428.
7. MAX 1 IN 40 CAMBER AND CROSSFALLS TO ALL RAMPS AND WALKWAYS IN ACCORDANCE WITH AS 1428.
8. ALL MATERIALS & FIXTURES TO BE COMPLIANT WITH NCC & AS.
9. GLAZING ASSEMBLIES TO BE ASSEMBLED AND INSTALLED AS2047
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11. FIRE HAZARD PROPERTIES OF WALL, FLOOR AND CEILING LININGS WILL COMPLY WITH CLAUSE C1.10 AND SPECIFICATION C1.10 OR C1.10A OF THE BCA.
12. DOOR HARDWARE DETAILS OR EVIDENCE THE REQUIRED EXITS AND DOORS IN PATHS OF TRAVEL WILL BE OPERABLE IN ACCORDANCE WITH BCA-D2.21

F	RE-ISSUED FOR DA	NP	JR	10.10.2025
D	ISSUED FOR DA	NP	JR	22.08.2025
revision/ issue	description	drawn by	check by	date

project
53.24 WATTLE GROVE COMMERCIAL DEVELOPMENT
location
326 HALE ROAD WATTLE GROVE WA 6107

drawn JR
checked NP

description
PROPOSED FUEL STATION FLOOR PLAN

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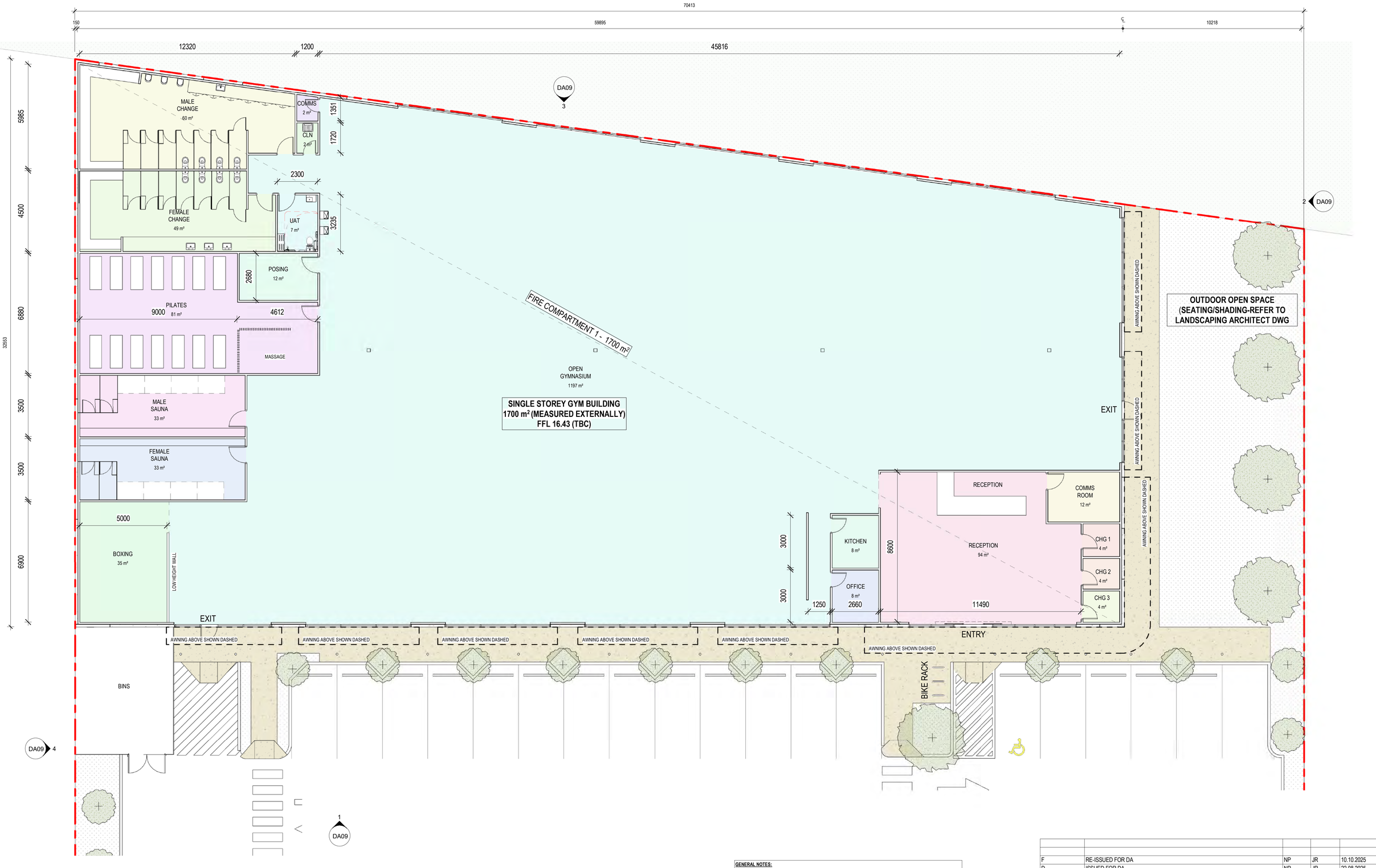
scale 1 : 100
date 10.10.2025
project no 53.24
dwg no DA05
rev F



1 PROPOSED GYM & TENANCY FLOOR PLAN
1 : 100

GENERAL NOTES:

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F	RE-ISSUED FOR DA	NP	JR	10.10.2025
D	ISSUED FOR DA	NP	JR	22.08.2025
revision/ issue	description	drawn by	check by	date

project
53.24 WATTLE GROVE COMMERCIAL DEVELOPMENT
location
326 HALE ROAD WATTLE GROVE WA 6107

drawn JR
checked NP
description PROPOSED GYM FLOOR PLAN

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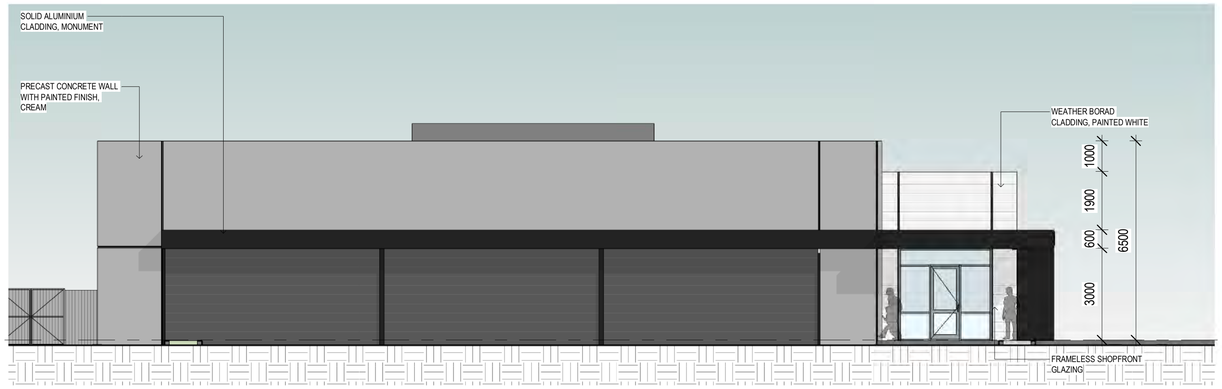
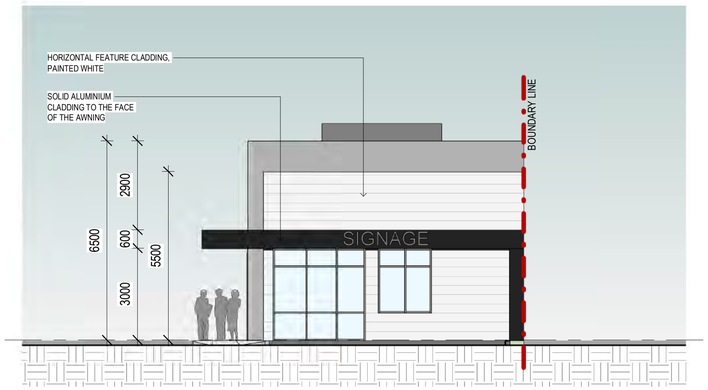
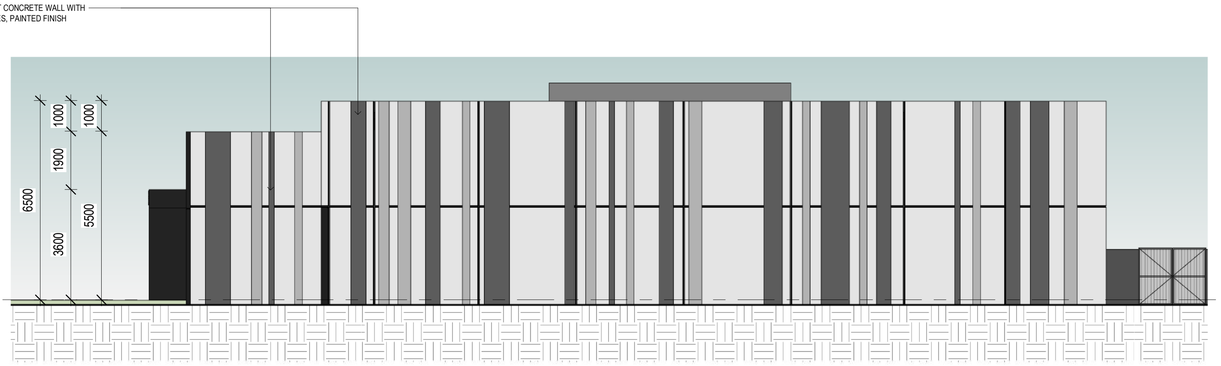
project no 53.24
dwg no DA06
rev F



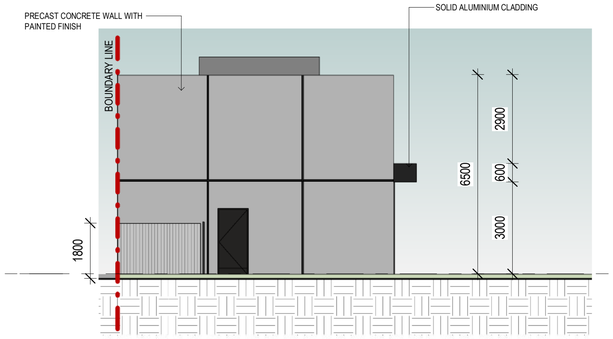
1 DA04 PROPOSED AUTO ELEVATION 1
1 : 100



2 PROPOSED AUTO ELEVATION 2
1 : 100



3 PROPOSED AUTO ELEVATION 3
1 : 100



4 DA04 PROPOSED AUTO ELEVATION 4
1 : 100

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5. KERB RAMPS AND TGSIS TO BE IN ACCORDANCE WITH AS 1428.
6. NIL STEP AT ENTRY DOORS TO PROVIDE CONTINUOUS PATH OF TRAVEL IN ACCORDANCE WITH AS 1428.
7. MAX 1 IN 40 CAMBER AND CROSSFALLS TO ALL RAMPS AND WALKWAYS IN ACCORDANCE WITH AS 1428.
8. ALL MATERIALS & FIXTURES TO BE COMPLIANT WITH NCC & AS.
9. GLAZING ASSEMBLIES TO BE ASSEMBLED AND INSTALLED AS2047
10. WET AREAS TO BE WATERPROOFED IN ACCORDANCE WITH BCA PART F1 AND AS3740
11. FIRE HAZARD PROPERTIES OF WALL, FLOOR AND CEILING LININGS WILL COMPLY WITH CLAUSE C1.10 AND SPECIFICATION C1.10 OR C1.10A OF THE BCA.
12. DOOR HARDWARE DETAILS OR EVIDENCE THE REQUIRED EXITS AND DOORS IN PATHS OF TRAVEL WILL BE OPERABLE IN ACCORDANCE WITH BCA-D2.21

revision/ issue	description	drawn by	check by	date
F	RE-ISSUED FOR DA	NP	JR	10.10.2025
E	RE-ISSUED FOR DA	NP	JR	19.08.2025
D	ISSUED FOR DA	NP	JR	22.08.2025

project: 53.24 WATTLE GROVE COMMERCIAL DEVELOPMENT
location: 326 HALE ROAD WATTLE GROVE WA 6107

drawn: JR
checked: NP
description: PROPOSED ELEVATION AUTO

Hodge Collard Preston ARCHITECTS
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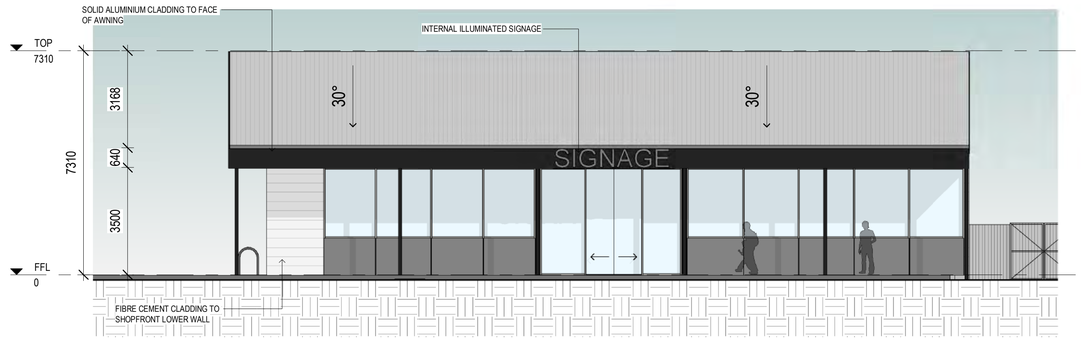
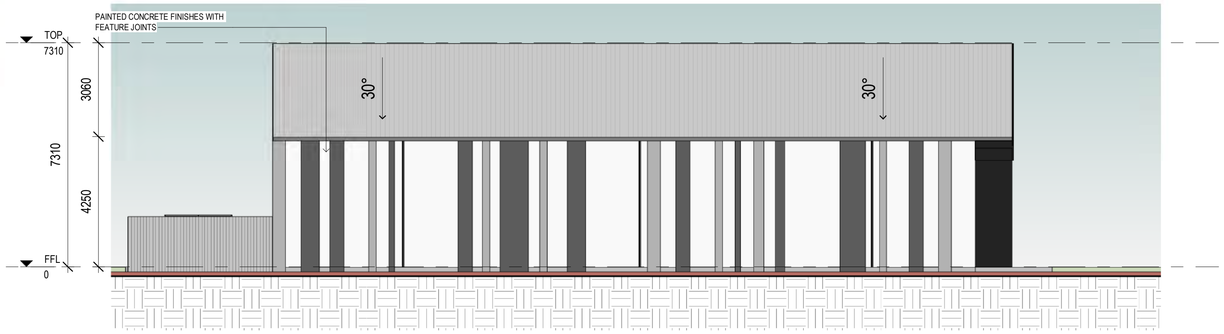
Email: admin@hcparch.com

scale: 1 : 100
date: 10.10.2025
project no: 53.24
dwg no: DA07
rev: F



1 DA05 CONTROL BUILDING ELEVATION 1

1 : 100



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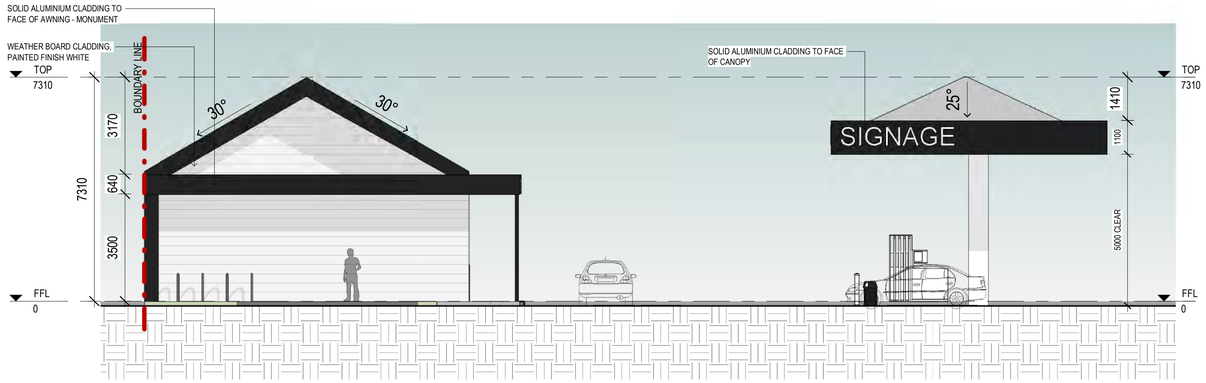

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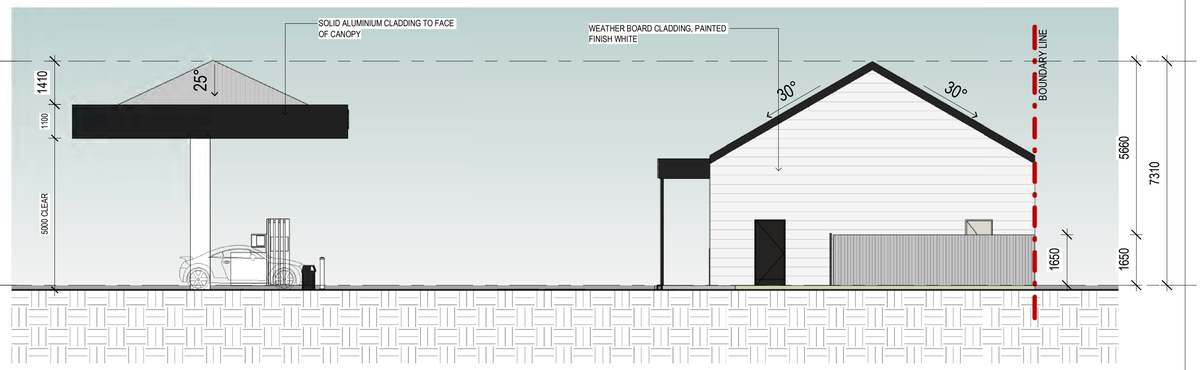

3 - FUEL STATION ELEVATION 3

1 : 100

F	RE-ISSUED FOR DA	NP	JR	10.10.2025
D	ISSUED FOR DA	NP	JR	22.08.2025
revision/ issue	description	drawn by	check by	date

project
53.24 WATTLE GROVE COMMERCIAL DEVELOPMENT
location
326 HALE ROAD WATTLE GROVE WA 6107

drawn JR
checked NP

description
PROPOSED ELEVATION FUEL STATION

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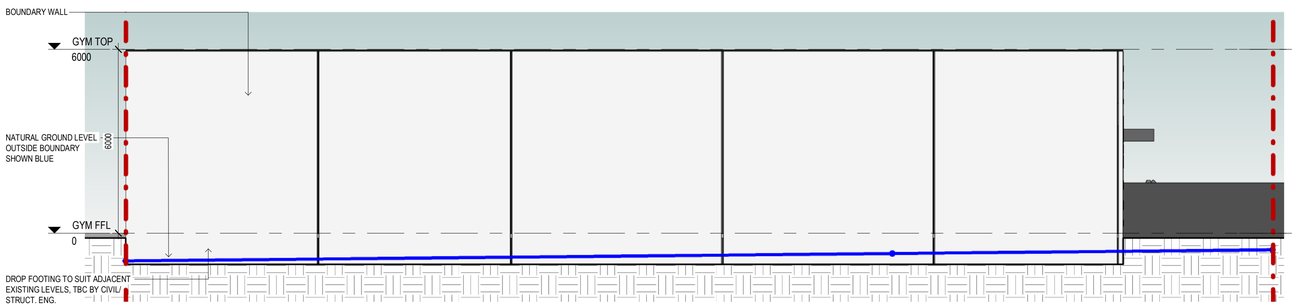
scale 1 : 100
date 10.10.2025
project no 53.24
dwg no DA08
rev F

1 GYM & TENANCY ELEVATION 1
DA06 1 : 100



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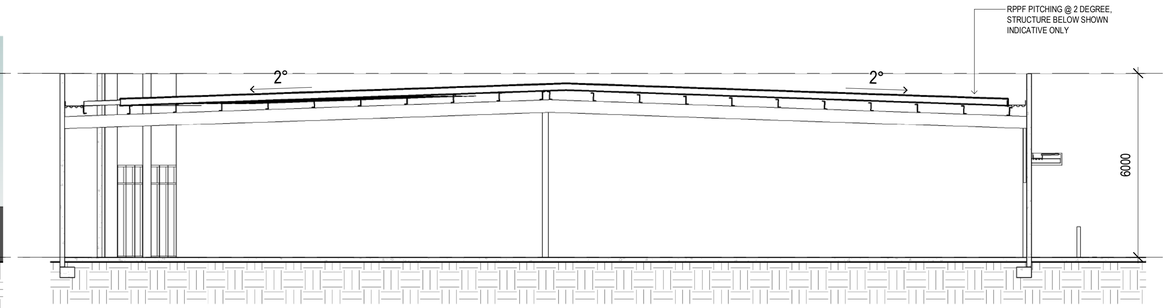
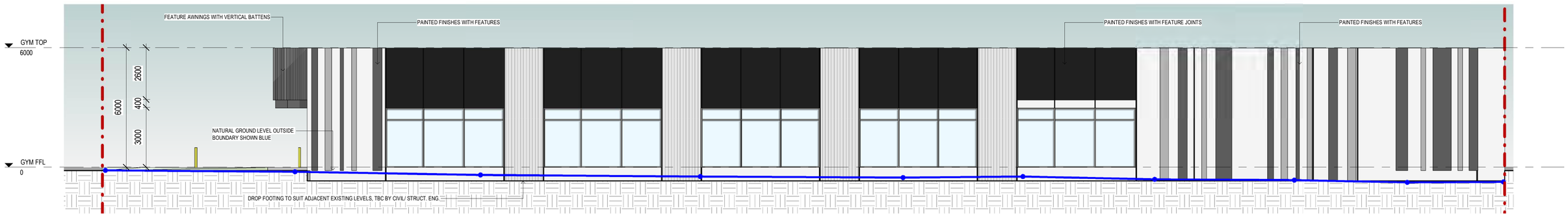
DA06 1 : 100



5 PROPOSED SKETCH GYM SECTION
1 : 100



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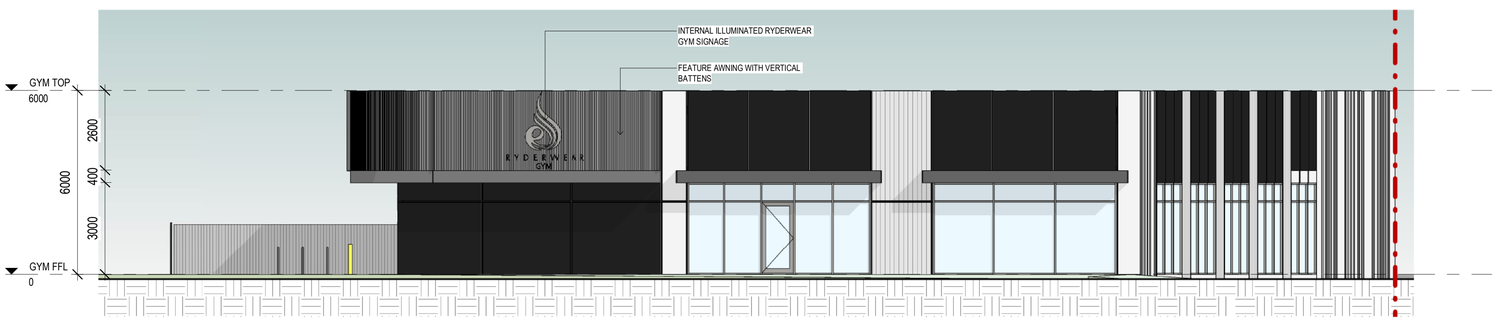

2 GYM & TENANCY ELEVATION 2
DA06 1 : 100

F	RE-ISSUED FOR DA	NP	JR	10.10.2025
D	ISSUED FOR DA	NP	JR	22.08.2025
revision/ issue	description	drawn by	check by	date

project
53.24 WATTLE GROVE COMMERCIAL DEVELOPMENT
location
326 HALE ROAD WATTLE GROVE WA 6107

drawn JR
checked NP

description
PROPOSED ELEVATION & SECTION GYM & TENANCY

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scale 1 : 100
date 10.10.2025
project no 53.24
dwg no DA09
rev F

GENERAL NOTES:

1. DATUM IS LOCAL AND TO BE VERIFIED ON SITE.
2. CHECK ALL DIMENSIONS ON SITE. READ ALL ENGINEERING DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL & SURVEY DRAWINGS. ANY DISCREPANCIES BETWEEN ENGINEERING DRAWINGS AND ARCHITECTURAL DRAWINGS SHALL BE CONFIRMED PRIOR TO COMMENCING CONSTRUCTION. DO NOT SCALE FROM THESE DRAWINGS.
3. ALL WORK TO BE IN ACCORDANCE WITH "AS3500-2003 PLUMBING & DRAINAGE", THE "BUILDING CODE OF AUSTRALIA" AND THE LOCAL AUTHORITY'S STANDARD SPECIFICATIONS.
4. LOT CONNECTION PIT (WHEN APPLICABLE) TO LOCAL AUTHORITY SPECIFICATIONS.
5. WHERE MANHOLES ARE LOCATED IN THE AREAS SUBJECT TO VEHICULAR LOADING, STANDARD TRAFFICABLE LIDS ARE TO BE INSTALLED & BASED TO BUILDER'S DETAIL.
6. ALL DRAINAGE PIPEWORK SHALL BE PVC CLASS HD STORMWATER, UNLESS WHERE LOCATED UNDERNEATH ANY STRUCTURES PIPEWORK SHALL BE PVC SEWER CLASS SN8.
7. ALIGNMENT OF PIPES SHALL BE AS SHOWN ON THE PLAN & SHALL BE TO THE PIPE OR MANHOLE CENTRELINE.
8. BEFORE CONSTRUCTION COMMENCES, THE CONTRACTOR SHALL:
   - A. CHECK ON SITE THE LOCATION OF THE EXISTING SERVICES WITH THE APPROPRIATE AUTHORITY. ENSURE PROPOSED STORMWATER PIPE DOES NOT CLASH WITH ANY EXISTING SERVICES.
   - B. ARRANGE FOR THE LOCATION AND THE LEVEL OF THE CONNECTION POINT TO EXISTING STORMWATER MANHOLE TO BE VERIFIED BY A SURVEYOR.
   - C. CONFIRM THAT BOUNDARY PEGS OR OTHER SURVEY REFERENCE POINTS TO BE USED IN SETTING OUT OF THE PROJECT ARE LOCATED IN THE CORRECT POSITIONS.
   - D. ENSURE A PERMIT & REINSTATEMENT SPECIFICATIONS ARE OBTAINED FROM THE LOCAL AUTHORITY IF EXCAVATION WILL BE IN A ROAD RESERVE OR RIGHT OF WAY.
   - E. ENSURE ALL DETAILS HAVE BEEN CHECKED AND THAT NO DISCREPANCIES EXIST. ALL QUERIES AND DISCREPANCIES ARE TO BE RESOLVED PRIOR TO COMMENCING WORKS.
11. ALL EXCAVATIONS SHALL BE SECURED & MADE SAFE IN ACCORDANCE WITH REQUIREMENTS OF THE OCCUPATIONAL SAFETY & HEALTH ACT OF 1984, THE OCCUPATIONAL SAFETY & HEALTH REGULATION 1996 & OF ANY RELEVANT REGULATORY BODY.
12. PROPERTIES WHICH HAVE BEEN EXCAVATED SHALL BE RETURNED TO AT LEAST A SIMILAR CONDITION TO THAT WHICH EXISTED PRIOR TO CONSTRUCTION.
13. TRENCH BACKFILL SHALL BE CLEAN GRANULAR MATERIAL, COMPACTED TO A LEVEL NOT LESS THAN THAT OF THE SURROUNDING UNDISTURBED GROUND, FOR THE FULL DEPTH OF EXCAVATION. BACKFILL UNDER ROADS SHALL BE COMPACTED TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
14. ALL CONNECTION INTO EXISTING LOCAL AUTHORITY STORMWATER ARE TO BE CARRIED OUT BY THE CONTRACTOR TO LOCAL AUTHORITY SPECIFICATIONS.
15. THIS STORM WATER DESIGN IS TO BE READ IN CONJUNCTION WITH THE BUILDER'S ARCHITECTURAL DRAWINGS (PARTIALLY REPRODUCED HERE).
16. CLIENT IS TO ENSURE LOCAL AUTHORITY HAVE APPROVED THESE DRAWINGS BEFORE BEING ISSUED FOR PRICING, TENDER & CONSTRUCTION.

SITE DATA:
FROM PERTH GROUNDWATER MAP
DEPTH TO MAX GROUNDWATER 1.62 m
SURFACE GEOLOGY GUILDFORD CLAY:
ALLUVIUM (CLAY, LOAM, SAND AND GRAVEL)

NOTE:
SEE SHEET C2 FOR STORMWATER DRAINAGE CALCULATIONS

TANK SCHEDULE

TANK NUMBER	TANK SIZE	TYPE	TOP OF TANK LEVEL	INLET/OUTLET PIPE INVERT LEVEL
ALL GRATED TANKS UNO	1800Ød x 900DEEP	SW	AS NOTED ON PLAN	600mm BELOW TOP OF TANK
LCP	1200Ød x 1200DEEP	SW	TT + 16.40	IL + 15.80
DRAINWELL TANKS	AS NOTED ON PLAN	SW	600mm BELOW PAVEMENT LEVEL	850mm BELOW PAVEMENT LEVEL
S1	600x600x900DEEP	ST	TT + 16.03	IL + 15.40 (TANK BOTTOM)
ATLAN SPILLCEPTOR	P.040.C1.2C			IL + 15.35 (INLET), IL + 15.30 (OUTLET)

SW = SOAKWELL , ST = SEALED TANK

LEGEND:

- 150Ød uPVC CLASS SN8 PIPE
- uPVC PIPE FROM BUILDING DOWNPIPE TO HYDRAULIC CONSULTANTS DESIGN
- DN160 UPP FUEL PIPE OR EQUIVALENT
- TRAFFICABLE STORMWATER TANK WITH GRATE COVER
- TRAFFICABLE PRECAST SUMP PIT WITH REMOVABLE CONCRETE COVER
- TRAFFICABLE PRECAST SUMP PIT WITH GRATE COVER
- TANK OUTLET PIPE
- FALL DIRECTION
- IL+10.00 PIPE INVERT LEVEL
- TT+10.00 TOP OF TANK LEVEL
- RL+10.00 PAVEMENT LEVEL
- HP+10.00 PAVEMENT HIGH POINT
- LP+10.00 PAVEMENT LOW POINT

FILL BOTTOM OF THIS TANK WITH CONCRETE UP TO OUTLET PIPE INVERT LEVEL TO PREVENT STORAGE OF STAGNANT WATER

ABOVE GROUND STORAGE AREA 1
AREA = 580 sqm
AVERAGE STORAGE DEPTH = 25mm
ABOVE GROUND STORAGE CAPACITY = 14.5 cum

FILL SUMP (LOCATION TO BE CONFIRMED) TO BE BUNDED ALL AROUND AND PROVIDED WITH INTERNAL DRAINAGE SUMP CONNECT TO THE SPEL

ABOVE GROUND STORAGE AREA 2
AREA = 2583 sqm
AVERAGE STORAGE DEPTH = 50mm
ABOVE GROUND STORAGE CAPACITY = 129.15 cum

150mm HIGH KERB ALL AROUND PAVEMENTS

PROVIDE AIR VENT TO DRAINWELL TANKS AS PER **SHEET C2 TYPICAL DRAINWELL TANK AIR VENT DETAILS**

PROPOSED CROSSOVER TO COUNCIL SPECIFICATIONS

PROPOSED TRANSFORMER

MOUNTABLE APRON

EXISTING FOOTPATH

EXISTING DRAIN SIDE ENTRY PIT TO BE RELOCATED

EXISTING SIDE ENTRY PIT TO BE RELOCATED

EXISTING TRAFFIC SPLITTER ISLAND TO BE MODIFIED TO SUIT TRUCK TURNING PATH

PROPOSED SIDE ENTRY PIT RELOCATION

ATLAN SPILLCEPTOR P.040.C1.2C

EXISTING LIGHT POLE TO BE RELOCATED

NEW CROSSOVER

HALE ROAD

PROPOSED CROSSOVER TO COUNCIL SPECIFICATIONS

MOUNTABLE APRON

EXITING FOOTPATH

UNDERGROUND FUEL TANKS AND SPEL LOCATION TO BE CONFIRMED

EXISTING TELSTRA PIT

EXISTING WATER METER

EXISTING POWER DOME

PROPOSED CONTROL BUILDING 243 m2 FFL 16.230 (TBC)

BIN YARD 30 m2

BIN YARD 41 m2

BIN YARD 15 m2

LOADING

ENTRY

DOG WASH

2 BAY

DOG WASH BAYS

AIR AND WATER BAY

FILL POINT LOCATION SHOWN INDICATIVE ONLY, TBC BY FUEL CONSULTANT

PROPOSED FUEL BOWSERS CANOPY

S1

ROLL OVER KERB

RUMBLE STRIP

10 BAY

7 BAY

6 BAY

18 BAY

DRAINWELL TANKS 1 (440mm DEEP)

DRAINWELL TANKS 2 (440mm DEEP)

DRAINWELL TANKS 3 (440mm DEEP)

DRAINWELL TANKS 4 (440mm DEEP)

4800

9060

2140

SERVICE BAY

PROPOSED AUTO 270 m2 FFL 16.940 (TBC)

SINGLE STOREY GYM BUILDING 1700 m2 FFL 16.43 (TBC)

BIKE RACK

EXISTING OPEN RESERVE AREA

EXIT

OPEN SPACE 245 m2 (LANDSCAPE ZONE WITH SEATING/SHADING TBC)

LCP

2250 CONCRETE OVERFLOW PIPE TO NEARBY CREEK

BATTER LANDSCAPE AREAS TO SUIT

ALL ROOF DOWNPIPES TO BE CONNECTED TO THE NEAREST DRAINAGE TANK. SHOWN DOWNPIPE LINES ARE DIAGRAMMATIC ONLY FOR DA APPLICATION STAGE. ACTUAL DOWNPIPE LOCATIONS AND QUANTITY WILL BE FINALIZED BY HYDRAULIC CONSULTANTS LATER DURING BUILDING LICENSE DETAILED DESIGN STAGE.

LOT CONNECTION PIT TO COUNCIL SPECIFICATIONS

STORMWATER DRAINAGE PLAN

SCALE 1:200
ONSITE DETENTION SYSTEM

REV.	DESCRIPTION	BY	DATE
B	RE-ISSUE FOR DA APPROVAL	JC	08-OCT-2025
A	ISSUE FOR DA APPROVAL	JC	10-MAR-2025

RE-ISSUE FOR DA APPROVAL

PROJECT:
WATTLE GROVE COMMERCIAL DEVELOPMENT
326 HALE ROAD, WATTLE GROVE, WESTERN AUSTRALIA

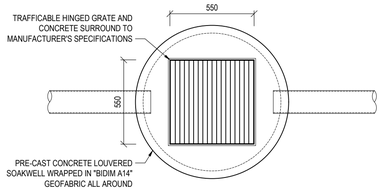
TITLE:
STORMWATER DRAINAGE PLAN AND DETAILS

DRAWING:	SCALE:	PROJECT #:	REVISION:
I. FRANCES	AS NOTED	21658	B
DESIGN: J. CUBONG	PAPER SIZE: A1	DRAWING #: C1	

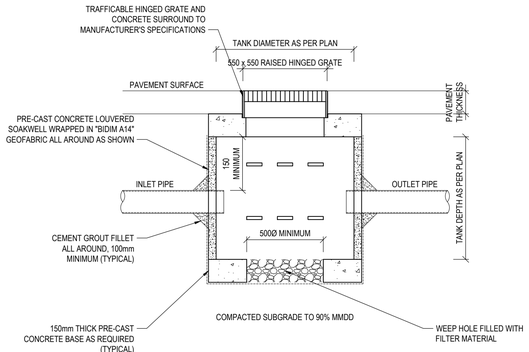
JCCE JC Consulting Engineers

NOTE: ALL UNITS ARE IN MILLIMETERS UNO

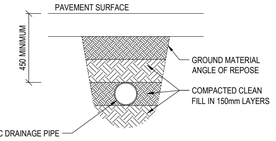
DIAL BEFORE YOU DIG www.1100.com.au



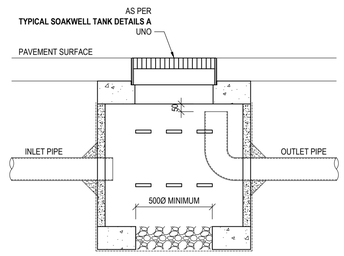
TYPICAL SOAKWELL TANK PLAN
SCALE 1:20



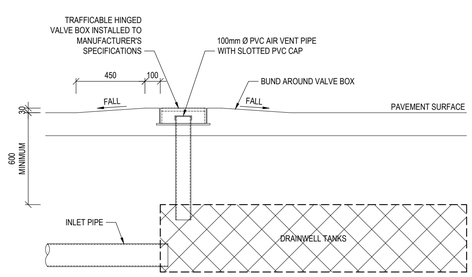
TYPICAL SOAKWELL TANK DETAILS A
SCALE 1:20



TYPICAL PVC DRAINAGE PIPE BEDDING DETAILS
SCALE 1:20



TYPICAL SOAKWELL TANK DETAILS B
SCALE 1:20



TYPICAL DRAINWELL TANK AIR VENT DETAILS
SCALE 1:20

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STORMWATER DRAINAGE CALCULATIONS (ONSITE DETENTION SYSTEM)

L 50 m
n 0.016
S 0.02 m/m

Time of Concentration

Duration (min)	Duration (hr)	Intensity (mm/hr)		tc (min)	
		ARI 1:20	ARI 1:100	ARI 1:20	ARI 1:100
6	0.10	120.00	159.00	2.89	2.58
10	0.17	94.70	126.00	3.18	2.84
15	0.25	76.20	101.00	3.47	3.10
30	0.50	50.10	66.30	4.10	3.67
60	1.00	32.10	42.80	4.90	4.37
120	2.00	20.60	28.10	5.85	5.17
180	3.00	16.00	22.20	6.48	5.68
360	6.00	10.50	14.80	7.66	6.68
720	12.00	6.81	9.67	9.11	7.92
1440	24.00	4.27	5.93	10.98	9.63
2880	48.00	2.57	3.40	13.46	12.03
4320	72.00	1.90	2.43	15.18	13.76
			Maximum	**15.18**	**13.76**

Pre Development
Total Area 9293 sqm
c 0.15

Volume Calculation - Pre Development

Duration (min)	Duration (hr)	Intensity (mm/hr) ARI 1:5	Volume (m3)	Flow (l/s)
6	0.10	88.70	12.36	34.35
10	0.17	70.10	16.29	27.14
15	0.25	56.50	19.69	21.88
30	0.50	37.30	26.00	14.44
60	1.00	23.90	33.32	9.25
120	2.00	15.30	42.65	5.92
180	3.00	11.80	49.35	4.57
360	6.00	7.61	63.65	2.95
720	12.00	4.92	82.30	1.91
1440	24.00	3.14	105.05	1.22
2880	48.00	1.96	131.14	0.76
4320	72.00	1.48	148.54	0.57
			Maximum	**34.35**

Volume Calculation - Post Development
Total Impervious Area 8893 sqm
Runoff Coefficient 0.9

Duration (min)	Duration (hr)	Intensity (mm/hr)		Volume (m3)	
		ARI 1:20	ARI 1:100	ARI 1:20	ARI 1:100
14	0.23		105		196.09
16	0.27	73.40		156.66	

Storage Capacity

Tank		Volume (m3)	Qty	Total (m3)
1.8m Diameter x 0.9m deep		2.29	30	68.67
Length (m)	**Width (m)**	**Depth (m)**		
Drainwell Tanks				
21.140	4.800	0.440	1.00	44.65
21.140	4.800	0.440	1.00	44.65
9.060	4.800	0.440	1.00	19.13
9.060	4.800	0.440	1.00	19.13
		Underground Storage Total		**196.24**
Above Ground Storage 1				14.50
Above Ground Storage 2				129.15
		Total Storage		**339.89**

Orifice Diameter **174** mm

NOTE: ALL UNITS ARE IN MILLIMETERS UNO

REV	DESCRIPTION	BY	DATE
B	RE-ISSUE FOR DA APPROVAL	JC	08-OCT-2025
A	ISSUE FOR DA APPROVAL	JC	10-MAR-2025

RE-ISSUE FOR DA APPROVAL

PROJECT:
WATTLE GROVE COMMERCIAL DEVELOPMENT
326 HALE ROAD, WATTLE GROVE, WESTERN AUSTRALIA

TITLE:
STORMWATER DRAINAGE DETAILS

JCCE JC Consulting Engineers

DRAWING:	SCALE:	PROJECT #:	REVISION:
I. FRANCES	AS NOTED	21658	B
DESIGN:	PAPER SIZE:	DRAWING #:	
J. CUBONG	A1	C2	

Atlan®
STORMWATER

Spillceptor®

Oil water separation & high risk hydrocarbon capture

Efficient Spill Management

Designed to capture and contain hydrocarbons, oil, and grease during spill events, preventing environmental contamination.

Dual-Functionality

Operates as both an oil water separator for everyday runoff and a containment system for emergency spill events.

Automated Closure System

Features an automatic shutoff valve to isolate and contain spills, ensuring maximum safety.

High Contaminant Retention

Effectively traps sediments, oil, and hydrocarbons within the treatment chamber. Complies with European Standard BS EN 858-1 with a water discharge quality of less than 5mg light liquids per litre.

Treatable Flow Rates

Treatment rates range from 2LPS to 200LPS. Pipe sizes range from 100mm to 450mm (larger sizes on request).

100 YEAR FIBREGLASS - DESIGN LIFE

25 YEAR WARRANTY

Robust Construction

Durable materials ensure long-term performance and resistance to harsh environmental conditions.

Easy Maintenance

Accessible design facilitates quick and straightforward cleaning and inspections.

Adaptable Configurations

Suitable for a range of installations, including industrial, commercial, and transportation hubs.

Compliance Assurance

Meets or exceeds statutory guidelines for spill management and stormwater treatment in Australia & New Zealand.

Locally Manufactured

Locally fabricated in our National FRP production facilities to meet ISO9001 Quality Standards.

Stormwater Treatment

Atlan Spillceptor® Class 1 stormwater treatment separators cater for potential hazards to the environment, particularly at sites where there is a risk of oil and fuel spills.

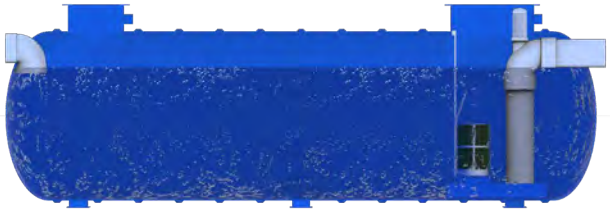
Oils and all petroleum hydrocarbons are treated to the highest discharge quality exceeding EPA standards ensuring it safe for stormwater discharge.

Major oil spills from a petrol tanker or a transformer rupture are captured and contained preventing any stormwater discharge.

- Independently tested (laboratory) and certified to discharge < 1.86ppm petroleum hydrocarbons (TPH), from 5,000ppm ingress
- Independently field tested to discharge 'no detection' from >33,000.0ppm

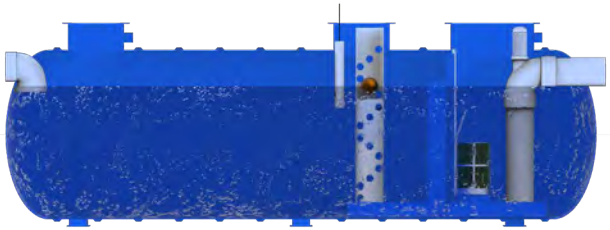
Applications

- Power stations, substations and switchyards
- Mining and heavy vehicle
- Windfarms
- Waste transfer depots
- Service stations and re-fuelling areas
- Asphalt plants



Single Chamber

- Medium risk oil/fuel storage and handling areas.
- Service stations with full canopy protection.
- Commercial vehicle/plant maintenance yards and contaminated industrial areas.



Two Chamber

- High risk oil/fuel storage and handling areas where maximum protection is required.
- Suitable for service stations exposed to rainfall runoff.
- Continues to treat stormwater even after the maximum designed spill has occurred.
- Heavily contaminated industrial areas, power/sub stations, fire training grounds, railway maintenance and fuelling depots.
- The second chamber provides protection to the coalescer foam inserts from silt and fuel/oil contamination, resulting in less frequent maintenance and easier cleaning of the coalescer foam inserts.
- A large silt capacity is incorporated in the first chamber greatly reduces the frequency of tank cleaning on highly polluted sites.

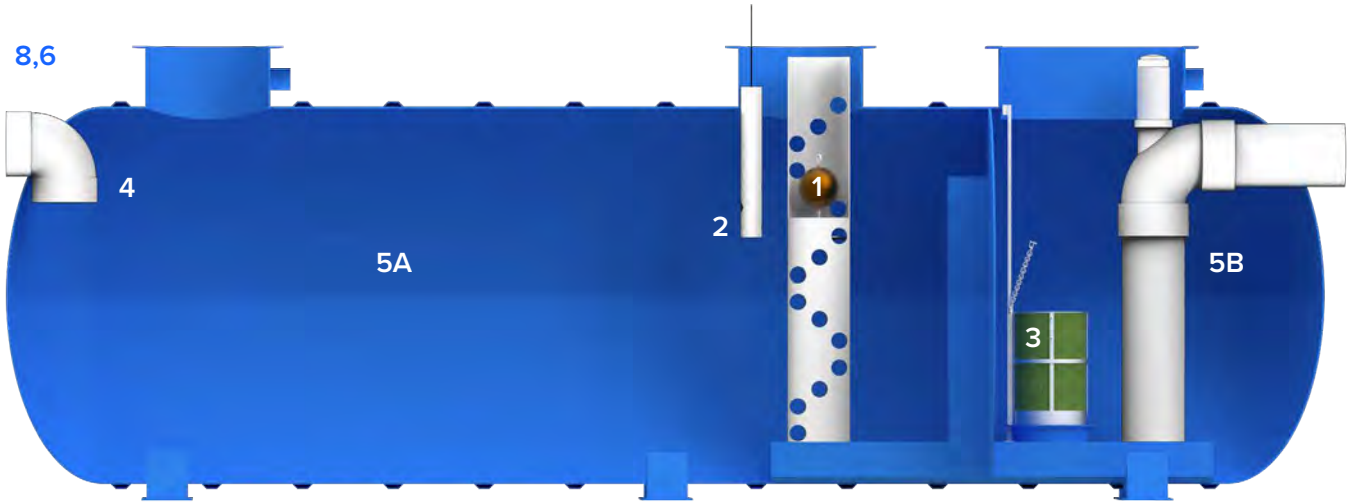
Tested Treatment Efficiencies*

POLLUTANT	EFFICIENCY
Gross Pollutants (GP)	100%
Total Suspended Solids (TSS)	87%
Total Phosphorus (TP)	11%
Total Nitrogen (TN)	23%
Petroleum Hydrocarbon	99.99%
Spill Capture (Site Specific Volume)	100%

*Contact Atlan to confirm approved performance for the project LGA

How it works

Atlan Spillceptor is a full retention separator that treats all flows and is sized to contain more than the anticipated maximum oil spillage enabling it to be fully operational at all times.



1. AUTOMATIC CLOSURE DEVICE
The Automatic Closure Device (ACD) is a precisely engineered device comprising a water-bouyant ball that is sensitive to any change in the water density as a consequence of light liquids build up, thereby automatically activating a process of depressing the ACD to shut off the separator, preventing pollutants from discharging to drains and waterways.

2. OIL PROBE
Detects oil and indicates when the separator's oil storage is full, and monitors excessive rises in liquid level.

3. COALESCER EQUIPPED
Provides a coalescing process for the separation of smaller globular of light liquid pollutants to reduce the light liquid content in the outlet to 5mg/litre or less.

4. INLET DIP PIPE - FLAME TRAP
For minimum turbulence and to prevent fire and inflammable vapours passing through to the drainage system.

5. TWO CHAMBER
A non-turbulant flow through two horizontal treatment chambers, utilising the underflow principle to retain light liquids in all flow conditions.

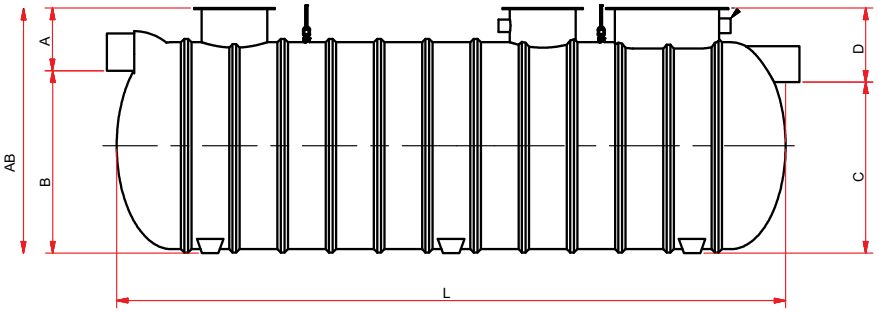
A. CONTAINMENT CHAMBER: Where Total Suspended Solids (TSS) silt, sediments, sludge and gross pollutants are trapped and settle on the chamber floor and where light liquids are contained.

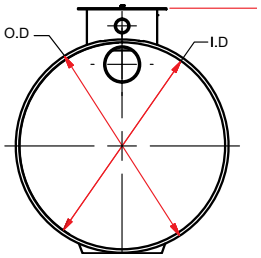
B. COALESCER CHAMBER: Where light liquids separation is enhanced reducing it to 5mg/litre or less prior to discharge.

6. GRAVITY OPERATED
Will function in the event of power failure and fits into existing pipe drainage systems or new sites.

7. MAINTENANCE
Easy and safe with no entering of the tank required.

8. FULL RETENTION
All liquid is treated. There is no by-pass operation.





Models	Treatment Flow Rate	Weight (KG)	Dimensions (mm)								Maximum Inlet & Outlet Pipe Size (mm) Configuration*	Manholes				Max. Spill at Shut Off	Max. Working Capacity
			A	B	A&B	C	D	L	OD	ID		Qty	Size	Qty	Size		
100 Series Tanks - 900 mm Internal Diameter																	
SPI.002.C1.2C	2 LPS	120	400	820	1220	800	420	1700	930	900	100	2	450 ID	-	-	250	800
200 Series Tanks - 1200 mm Internal Diameter																	
SPI.004.C1.2C	4 LPS	330	460	1100	1560	1080	480	2600	1350	1200	150	2	600 ID	-	-	1,000	2,050
SPI.006.C1.2C	6 LPS	400	425	1135	1560	1095	465	3035	1350	1200	150	2	600 ID	-	-	1,300	2,550
SPI.008.C1,2C	8 LPS	450	460	1100	1560	1060	500	3800	1350	1200	150	2	600 ID	-	-	1,900	3,200
SPI.010.C1.2C	10 LPS	500	450	1110	1560	1060	500	4600	1350	1200	150	2	600 ID	-	-	2,500	3,900
SPI.013.C1.2C	13 LPS	550	446	1114	1560	1040	520	5800	1350	1200	150	3	600 ID	-	-	3,000	4,800
SPI.015.L.C1.2C	15 LPS	600	425	1135	1560	1065	495	6500	1350	1200	150	3	600 ID	-	-	3,400	5,400
300 Series Tanks - 1850 mm Internal Diameter																	
SPI.015.S.C1.2C	15 LPS	650	620	1630	2250	1600	650	3000	1950	1850	300	1	600 ID	1	900 x 600	3,500	5,500
SPI.020.C1.2C	20 LPS	850	625	1625	2250	1585	665	4000	1950	1850	300	1	600 ID	1	900 x 600	3,900	7,300
SPI.030.C1.2C	30 LPS	1100	660	1590	2250	1575	675	4860	1950	1850	300	1	600 ID	1	900 x 600	5,500	10,800
SPI.040.8.C1.2C	40 LPS	1180	550	1600	2150	1500	650	5900	1950	1800	300	1	600 ID	1	900 x 600	8,000	13,400
SPI.040.C1.2C	40 LPS	1240	650	1600	2250	1550	700	6540	1950	1850	300	2	600 ID	1	900 x 600	9,000	14,400
SPI.050.L.C1.2C	50 LPS	1400	650	1600	2250	1520	730	8500	1950	1850	300	2	600 ID	1	900 x 600	10,000	18,000
SPI.060.L.C1.2C	60 LPS	1550	650	1600	2250	1500	750	10,000	1950	1850	300	2	600 ID	1	900 x 600	11,200	21,600
SPI.070.L.C1.2C.	70 LPS	1700	650	1600	2250	1500	750	11,600	1950	1850	300	2	600 ID	1	900 x 600	12,400	25,200
400 Series Tanks - 2480 mm Internal Diameter																	
SPI.050.S.C1.2C	50 LPS	1400	720	2230	2950	2150	800	4680	2600	2480	375	1	600 ID	1	900 x 600	9,000	18,000
SPI.060.S.C1.2C	60 LPS	1560	550	2400	2950	2220	730	5500	2600	2480	375	1	600 ID	1	900 x 600	10,700	21,600
SPI.070.S.C1.2C	70 LPS	1710	750	2200	2950	2150	800	6550	2600	2480	375	3	600 ID	1	900 x 600	12,400	25,200
SPI.080.C1.2C	080 LPS	2000	600	2350	2950	2250	700	7500	2600	2480	375	3	600 ID	1	900 x 600	14,900	29,600
SPI.090.C1.2C	090 LPS	2300	715	2235	2950	2150	800	8400	2600	2480	375	3	600 ID	1	1200 x 600	16,200	32,400
SPI.100.C1.2C	100 LPS	2550	710	2240	2950	2150	800	9000	2600	2480	375	3	600 ID	1	1200 x 600	17,700	35,700
SPI.110.C1.2C	110 LPS	2650	700	2250	2950	2150	800	9600	2600	2480	375	3	600 ID	1	1200 x 600	18,300	38,200
SPI.120.C1.2C	120 LPS	2750	570	2400	2970	2300	670	10,230	2600	2480	375	3	600 ID	1	1200 x 600	21,700	43,200
SPI.150.C1.2C	150 LPS	3360	670	2280	2950	2150	800	13,420	2600	2480	375	4	600 ID	1	1200 x 600	27,700	54,000
SPI.180.C1.2C	180 LPS	3580	650	2300	2950	2150	800	15,400	2600	2480	375	5	600 ID	1	1200 x 600	32,500	64,800
SPI.200.C1.2C	200 LPS	4150	555	2395	2950	2230	720	16,500	2600	2480	375	5	600 ID	1	1200 x 600	36,200	72,000

# Key to Main Dimensions & Notes	
A	Invert Level - Depth from top of manhole to base of inlet pipe.
B	Depth from base of inlet pipe to base of tank feet.
A&B	Overall depth of tank, from top of manhole to base of tank feet.
C	Depth from base of outlet pipe to base of tank feet.
D	Invert Level - Depth from top of manhole to base of outlet pipe.
L	Overall length tank.
OD	Overall outside diameter of tank including ribs.
ID	Internal diameter of tank.
S&L	"S" is Short Series Tank & "L" is Long Series Tank.


OUTLET
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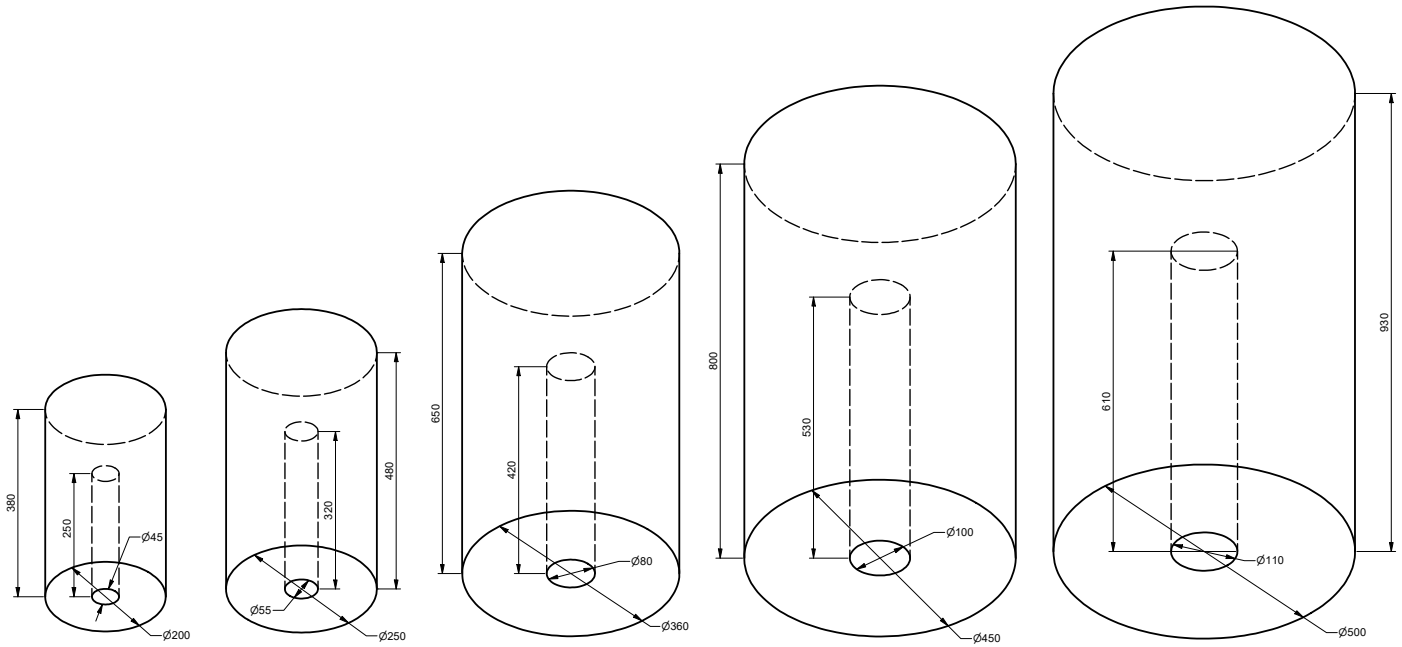
Atlan Coalescer Size and Flow Rates



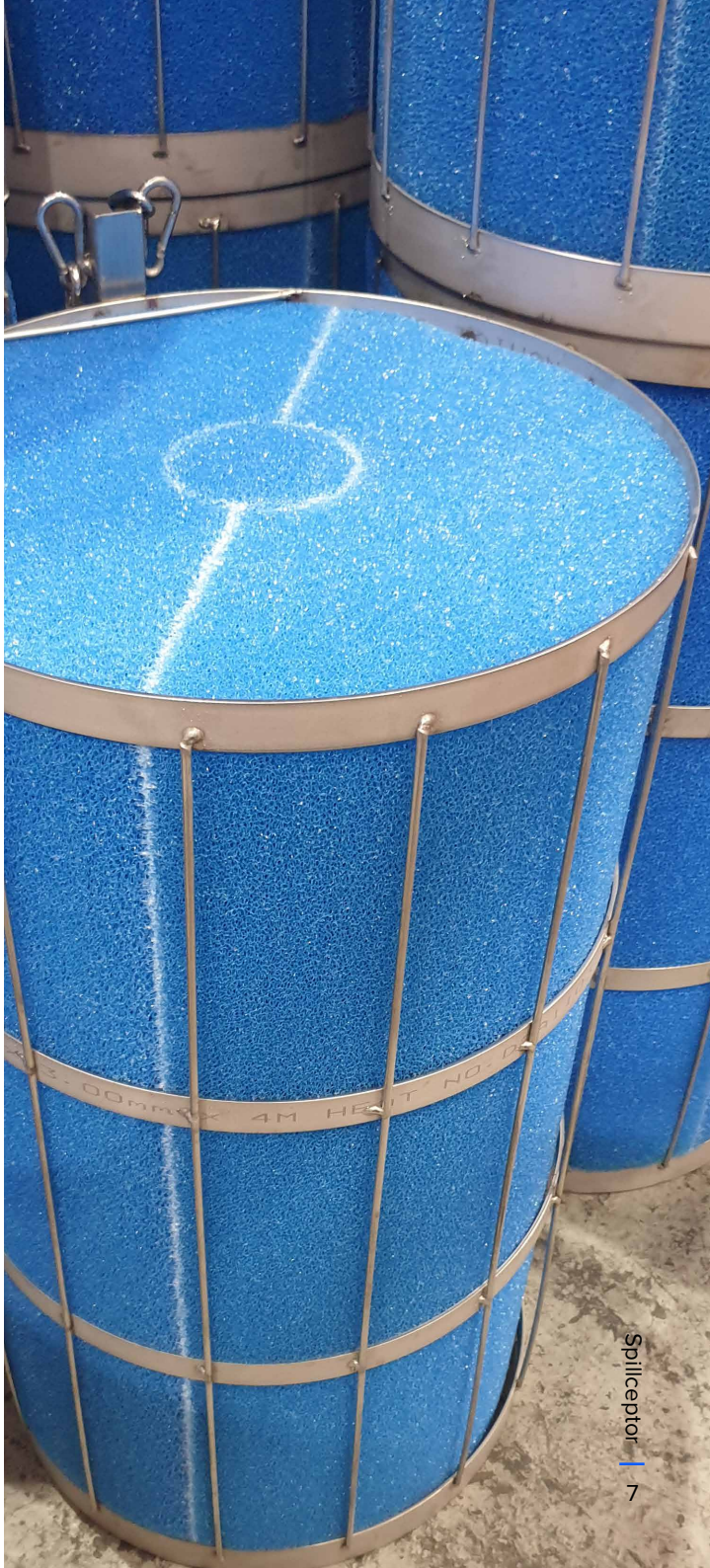
MODEL	NS.08	NS.15	NS.30	NS.60	NS.80
TFR (LPS)	8	15	30	60	80

Atlan Coalescer Part Numbers

FOAM ONLY	FRAME ONLY	FOAM & FRAME
NS.08-F	NS.08.SSF	NS.08
NS.15-F	NS.15.SSF	NS.15
NS.30-F	NS.30.SSF	NS.30
NS.60-F	NS.60.SSF	NS.60
NS.80-F	NS.80.SFF	NS.80

The coalescer is a 10 ppi random woven reticulated polyester foam with controlled porosity. It is not a filter, but the woven style foam enhances gravity, with the smaller hydrocarbon globules joining and floating back to the surface of the water.

Please ensure that the Atlan coalescer foam insert is installed with the hole facing the bottom of the tank.



Joy in water

‘We believe clean waterways are a right, not a privilege and we work to ensure a Joy in Water experience for you, with your family & friends.’

Andy Hornbuckle, CEO

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REVERBERATE
CONSULTING

Wattle Grove Commercial Development
Environmental Noise Impact

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REVERBERATE CONSULTING

Document Information

Project	Wattle Grove Development	
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Revision Table

Report revision	Date	Comments
0	6 December 2024	Draft for client review
1	12 December 2024	Updated hours for deliveries
2	31 August 2025	Updated Site Details

Glossary

A-weighting	A spectrum adaption that is applied to measured noise levels to represent human hearing. A-weighted levels are used as human hearing does not respond equally at all frequencies.
dB	Decibel—a unit of measurement used to express sound level. It is based on a logarithmic scale which means a sound that is 3 dB higher has twice as much energy. We typically perceive a 10 dB increase in sound as a doubling of the loudness of that sound.
Frequency (Hz)	The number of times a vibrating object oscillates (moves back and forth) in one second. Fast movements produce high frequency sound (high pitch/tone), but slow movements mean the frequency (pitch/tone) is low. 1 Hz is equal to 1 cycle per second.
L_{10}	Noise level exceeded for 10 % of the measurement time. The L_{10} level represents the typical upper noise level and is often used to represent traffic or industrial noise emission.
L_{A10}	A-weighted L_{10}
$L_{A10,adj}$	Adjusted L_{A10}. Adjustment based on obvious tonality, impulsive or Modulation characteristics in the audible noise at a receiver point. Based on the adjustment methodology in Environmental Protection (Noise) Regulations 1997 Regulation 9
$L_{A1,adj}$	Adjusted, A-weighted noise level exceeded for 1 % of the measurement time. The $L_{A1,adj}$ level represents mostly short duration, high level sound events.
$L_{Amax,adj}$	Adjusted, A-weighted maximum instantaneous noise level.

REVERBERATE CONSULTING

Table of Contents

1.Introduction

Reverberate Consulting has been engaged by Bella Build and Design WA Pty Ltd to prepare a planning stage Environmental Noise Impact Assessment for the proposed Wattle Grove Commercial Development at 326 Hale Road, Wattle Grove,

This report covers the main types of environmental noise emission from the site as part of the study:

- car park and customer vehicle activity
- delivery and supply trucks
- mechanical plant and equipment at the site

The purpose of this report is to present the findings of potential noise emissions from the site with regard to the planning approval process.

2.Site and Surrounds

The subject site is located on the northern side of Hale Road, Wattle Grove. It has commercial operations on its Eastern and Western sides, vacant land to its North, and Hale Road to the South, refer Site Plan Figure 1. The nearest residences are located on the South side of Hale Road , approx. 33m from the site boundary. Other residences along The Promenade are located approx. 75 m to the North.

The site is planned to consist of the activities and periods of operation outlined in Table 1 below. The general design of the site is to locate major buildings on the North of the site, providing shielding to the neighbours in this direction.

The dominant noisy activity for the development is expected to be caused by vehicular activity, mechanical plant as well as some Auto Service Facility noise.

Table 1 – Planned Activities and Operating Hours

Operation	Time of Day		
	Mon to Fri	Saturday	Sunday & Public Holiday
Service Station	24 h	24 h	24 h
Auto Service Facility	7am – 5pm	7am – 1pm	nil
Gymnasium	24 h	24 h	24 h
General Vehicle deliveries	24 h	24 h	24 h
Fuel Deliveries	7am – 7pm	7am – 7pm	7am – 7pm

Hale Road has historically been measured to carry 6,839 vehicles per day in this area (Mon – Fri average, DMR 2021/22). Due to this high number of vehicle movements, the actual movement of vehicles on site, and the surrounding area is not considered a significant noise source, refer also Section 3.1 below.

Figure 1 - Site Plan – Commercial Development and Surrounds

3.Noise Assessment Criteria

3.1 Environmental Protection Act

The Environmental Protection Act (1986) provides for the prevention, control and abatement of pollution and environmental harm. This Act limits environmental noise in Section 3 (3) as follows:

For the purposes of this Act, noise is taken to be unreasonable if –

> *(a) it is emitted, or the equipment emitting it is used, in contravention of —*
> *(i) this Act; or*
> *(ii) any subsidiary legislation made under this Act; or*
> *(iii) any requirement or permission (by whatever name called) made or given by or under this Act;*
> *or*
>
> *(b) having regard to the nature and duration of the noise emissions, the frequency of similar noise emissions from the same source (or a source under the control of the same person or persons) and the time of day at which the noise is emitted, the noise unreasonably interferes with the health, welfare, convenience, comfort or amenity of any person; or*
>
> *(c) it is prescribed to be unreasonable for the purposes of this Act.*

Reverberate has used the above legislation to assess the noise impact from the site. More particularly, noises which have a distinct character, and are different to the ambient noise environment are assessed under the subsidiary legislation; the Environmental Protection (Noise) Regulations 1997. Such an assessment has been undertaken for noise sources such as vehicle starting, Truck exhaust brakes, vehicle door closing, mechanical plant / air conditioning, and tyre refilling at the development site.

Other types of noises from the site, such as that generated by vehicles driving, or manoeuvring in the carpark and driveway on site, have not been assessed under the Regulation. Reference is drawn to Section 3 (3) (b) of the Act which requires the assessment to have regard to the nature, duration and time of day of such noise emissions and the frequency of similar noise emissions from the same source. The adjoining road, Hale Road already has in excess of 6,800 vehicles per day, of these the night time movements are 50-71 vehicles per hour between 10pm and midnight, and 10 – 17 Vph between midnight and 4am. The site is forecast to fewer than 16 vehicle movements per hour (i.e. 8 vehicles in and 8 vehicles out) before midnight, and fewer than 6 vehicles per hour after midnight.

It is therefore concluded that the movement of vehicles on site, per se, is not characteristically different to that already in the area.

3.2 Environmental Protection (Noise) Regulations 1997

The Environmental Protection (Noise) Regulations 1997 (EPR) provide limits for acceptable noise from operations and activities. The Regulations specify the maximum permissible noise levels (termed Assigned Levels) at noise sensitive premises, caused by excessive nearby noise, during various times of the day.

The Assigned Levels have been calculated for all properties using the method shown in Appendix B. The resultant Assigned Levels are presented below in Table 2.

Due to the proposed hours of operation, the night-time period is the critical assessment period for the 24-hour service station and gymnasium while daytime is the critical period for the Auto Service facility.

Table 2 – Assigned Levels - 8 Karda St

Receiving Premises	Time of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise Sensitive Premises - Highly Sensitive	0700 to 1900 hours Monday to Saturday	47	57	67
	0900 to 1900 hours Sunday and public holidays	42	52	67
	1900 to 2200 hours all days	42	52	57
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays	37	47	57

The Assigned Levels for the properties along The Promenade are 2 dB lower than those in in Table 2.

Note also that adjustments are applied to the noise sources for a variety of characteristics. Where tonality, impulsiveness, modulation, or music is evident in the noise reaching the neighbours then these are additionally adjusted, where they cannot be removed from the noise signature.

The Assigned Levels above have been applied against the environmental noise emission from the sources outlined in Table 3 below.

4.Noise Assessment

4.1 Noise Sources

Noise emission sources and ground contours were used to develop a 3-D SoundPLAN noise model shown below in Figure 2. This figure shows the overall site details and the surrounding buildings. The noise emission levels used for the project noise sources are summarised below in Table 3.

Table 3 Summary of typical/maximum sound power levels

Summary of Sound Power Levels (dB)			
Noise Source	**L_{A10}**	**L_{A1}**	**L_{Amax}**
Delivery Truck: refrigeration plant	-	95	96
Delivery Truck: park brake	-	-	74
Delivery Truck: door close	-	-	93
Delivery Truck: reversing beeper	-	-	95
Hammering in workshop	-	-	126
Air-powered rattle gun in workshop	-	97	99
Grinding in workshop	-	112	115
Passenger car: door close	-	-	84
AC outdoor unit – daytime (ea.)*	80	-	-
Refrigeration outdoor unit	79	-	-
Tyre Refill Beeper	-	-	88
Air compressor (silenced)	-	71	72
3 Exhaust fans (total)	69	-	-
Person Talking (drive thru)	-	72	74
Engine Idling (Drive thru)	-	83	84

Note * night-mode is required on all outdoor AC units for the Service Station and Gymnasium. It is to be a minimum 5 dB quieter than outlined in the Table

The overall activity on the site has not yet been fully defined. Each development would be subject to a detailed design. Nevertheless, the overall indicative site activity has been quantified with the following scenario:

- 3 x General AC units on roof of gymnasium[1]
- 1 x General AC Unit & 1 x refrigeration compressor on the roof of the service station
- A smaller AC unit on the Auto Service Facility
- Delivery vehicles – Loading areas
- Cars parked in the southern perimeter carpark bays

[1] The provisional location of AC/refrigeration plant is on the roof of buildings. Where units are to be placed on the ground these would need to be assessed for noise impact on a case-by-case basis.

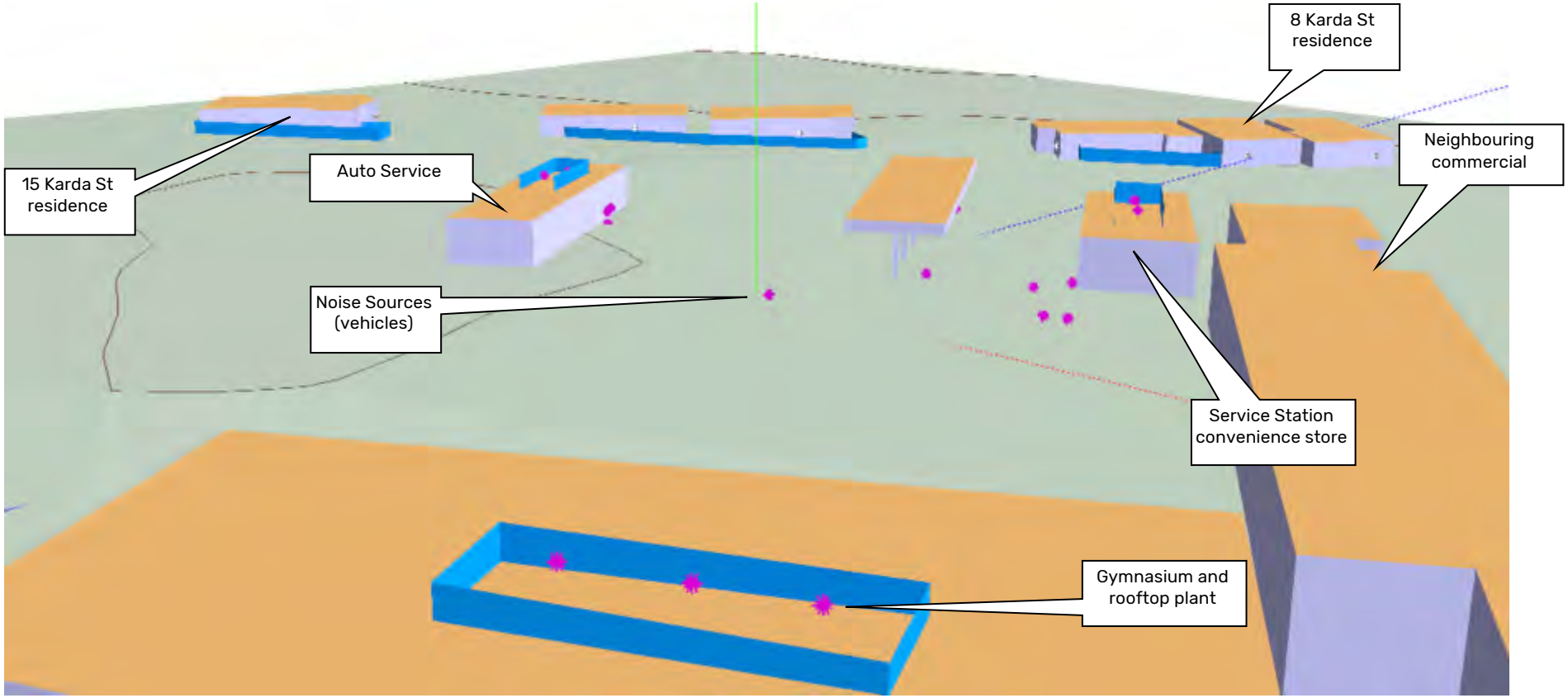


Figure 2 – 3-D SoundPLAN model of Development and Surrounds

4.2 Noise Forecast and Impact

Computer noise modelling was used to forecast the noise impacts to locations around the site. The software used was SoundPLAN Version 9.0, with the ISO9613 algorithms selected. These algorithms have been used as they allow for the influence of wind, atmospheric stability, barriers, building shielding and ground absorption. It is appropriate for the current configuration of noise sources and receiver locations.

The Input data used in modelling includes

- Meteorological Information.
- Topographical data.
- Buildings, barriers, fences, and other features which may shield noise
- Ground Absorption; and
- Source sound levels.

The following parameters were used as required.

- Pasquil Stability Factor F
- Temperature 15 ^{0}C (night)
- Temperature 20 ^{0}C (day)
- Relative Humidity 50%
- Ground Absorption 0.60 in grassed areas
- 0.10 for paved areas such as roads and carparks

Adjustments were applied for the forecast noise reaching receptor locations. Where evident at the receiving locations, the following adjustments were applied:

- +10 dB where the received noise was determined to have impulsive characteristics
- +5 dB where the received noise was determined to have tonal characteristics

The forecast noise levels are shown in noise contour plots in Figure 3 to Figure 7, after successful implementation of the noise management plan in Appendix A . The forecast results are also tabulated in Table 4 through to Table 8. These results show the forecast noise levels comply with their respective criteria with the treatments outlined in Appendix A & C.

The forecasts below correspond to all the items in each Table being simultaneously operational, at 100%. This is considered a conservative assumption, but this has, nevertheless been used as the basis of assessment.

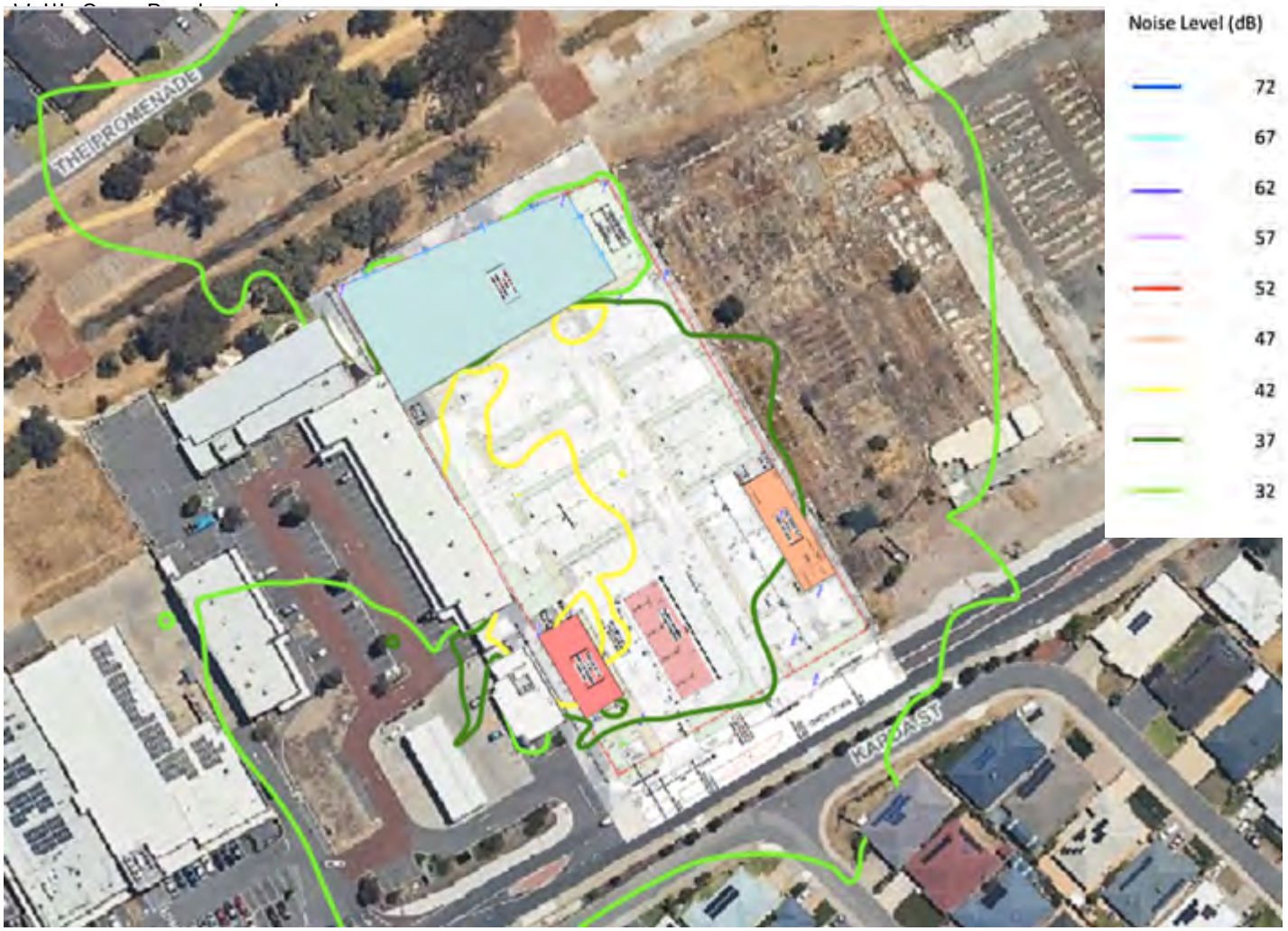


Figure 3 - Forecast L_{A10} Night time noise emission (1.4m above ground level)
(L_{A10} criterion at residences = 35-37 dB)

Figure 4 - Forecast L_{A1} night-time noise emission (1.4m above ground level)

(L_{A1} criterion at residences = 45-47 dB)

Figure 5 Forecast L_{Amax} Night-time noise emission (1.4m above ground level)

(L_{Amax} criterion at residences = 55-57 dB)

Figure 6 Forecast L_{A1} Daytime noise emission (1.4m above ground level)

(L_{A1} criterion at residences = 55-57 dB)

Figure 7 - Forecast L_{Amax} Daytime noise emission (1.4m above ground level)

(L_{Amax} criterion at residences = 65-67 dB)

Table 4 Forecasts LA10 night-time noise level

	Receiver										
Noise Source ***	Kooya 37 Grnd Fl	Karda 6 Grnd Fl	Karda 8 Grnd Fl	Balyat 35 Grnd Fl	Balyat 24 Grnd Fl	Karda 14 Grnd Fl	Karda 15 Grnd Fl	Promenade 43 Grnd Fl	Promenade 47 Grnd Fl	Promenade 53 1st floor	Promenade 55 Grnd Fl
Rooftop Servo Refrig*	32	34	31	31	32	30	29	26	26	25	25
Rooftop Servo fan*	20	15	14	20	18	12	9	15	20	16	17
Rooftop Servo AC*	27	26	26	26	28	26	24	20	21	20	20
Rooftop Gym AC*	22	24	21	31	30	27	25	32	32	31	30
Gym Music**	13	15	17	21	19	18	16	3	3	4	4
Overall	32	34	31	33	33	31	29	33	33	32	31
Assigned Level	**37**	**37**	**37**	**37**	**37**	**37**	**37**	**35**	**35**	**35**	**35**
Assigned Level Compliance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note * Tonality adjustment applied

** Music adjustment applied

*** All AC plant operating on night-mode

Table 5 Forecasts L_{A1} night-time noise level

	Receiver										
Noise Source	Kooya 37 Grnd Fl	Karda 6 Grnd Fl	Karda 8 Grnd Fl	Balyat 35 Grnd Fl	Balyat 24 Grnd Fl	Karda 14 Grnd Fl	Karda 15 Grnd Fl	Promenade 43 Grnd Fl	Promenade 47 Grnd Fl	Promenade 53 1st floor	Promenade 55 Grnd Fl
Auto Service air compressor*	37	38	39	42	37	22	29	25	23	32	31
Delivery Truck refrig*	37	38	38	42	41	39	39	45	43	45	43
Tyre compressor*	16	14	17	14	16	14	13	16	18	20	16
Assigned Level	**47**	**47**	**47**	**47**	**47**	**47**	**47**	**45**	**45**	**45**	**45**
Assigned Level Compliance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note * Tonality adjustment applied

Table 6 Forecasts L_{Amax} night-time noise level

	Receiver										
Noise Source	Kooya 37 Grnd Fl	Karda 6 Grnd Fl	Karda 8 Grnd Fl	Balyat 35 Grnd Fl	Balyat 24 Grnd Fl	Karda 14 Grnd Fl	Karda 15 Grnd Fl	Promenade 43 Grnd Fl	Promenade 47 Grnd Fl	Promenade 53 1st floor	Promenade 55 Grnd Fl
Car 01**	47	51	53	53	45	43	41	20	18	32	31
Car 02**	31	30	37	47	42	41	39	30	33	37	31
Car 11**	38	43	45	48	44	43	38	29	29	36	35
Car bowser 10**	34	39	45	49	45	44	42	29	30	36	33
Car Bowser 01**	46	48	50	53	46	44	42	29	31	33	34
Delivery Truck*	30	32	35	52	46	45	44	38	37	41	38
Delivery Truck reversing beeper*	31	33	40	52	50	49	46	34	34	39	35
tyre refill beeper*	29	25	36	43	40	39	36	25	25	30	23
Assigned Level	**57**	**57**	**57**	**57**	**57**	**57**	**57**	**55**	**55**	**55**	**55**
Assigned Level Compliance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note * Tonality adjustment applied

** Impulsive adjustment applied

Table 7 Forecasts L_{A1} daytime noise level

	Receiver										
Noise Source	Kooya 37 Grnd Fl	Karda 6 Grnd Fl	Karda 8 Grnd Fl	Balyat 35 Grnd Fl	Balyat 24 Grnd Fl	Karda 14 Grnd Fl	Karda 15 Grnd Fl	Promenade 43 Grnd Fl	Promenade 47 Grnd Fl	Promenade 53 1st floor	Promenade 55 Grnd Fl
Workshop Angle Grinder*	45	39	49	52	48	28	25	29	31	33	30
Delivery Truck*	37	38	38	42	41	40	39	45	43	45	43
Workshop Rattle gun*	31	25	34	37	33	13	11	17	18	21	17
Assigned Level	**57**	**57**	**57**	**57**	**57**	**57**	**57**	**55**	**55**	**55**	**55**
Assigned Level Compliance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note * Tonality adjustment applied

Table 8 Forecasts L_{Amax} night-time noise level

	Receiver										
Noise Source	Kooya 37 Grnd Fl	Karda 6 Grnd Fl	Karda 8 Grnd Fl	Balyat 35 Grnd Fl	Balyat 24 Grnd Fl	Karda 14 Grnd Fl	Karda 15 Grnd Fl	Promenade 43 Grnd Fl	Promenade 47 Grnd Fl	Promenade 53 1st floor	Promenade 55 Grnd Fl
Car 01**	47	51	53	53	45	43	41	20	18	32	31
Car 02**	32	30	37	47	42	41	39	30	33	37	31
Car 11**	38	43	45	48	44	43	39	29	29	36	35
Car Bowser 10**	35	39	45	49	45	44	42	29	30	36	33
Car Bowser 01**	46	48	50	53	46	44	42	29	31	33	34
Delivery Truck**	35	37	40	57	51	50	49	43	42	46	43
Delivery Truck reversing beeper*	31	33	40	52	50	49	46	34	34	39	35
hammering **	56	51	59	63	59	37	37	39	40	44	39
tyre refill beeper*	30	25	37	44	41	39	36	26	26	31	24
Assigned Level	**67**	**67**	**67**	**67**	**67**	**67**	**67**	**65**	**65**	**65**	**65**
Assigned Level Compliance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note * Tonality adjustment applied

** Impulsive adjustment applied

5. Discussion

The forecasts in Table 4 through to Table 8 show that the requisite Assigned Levels can be met with treatments outlined in the Noise Management Plan, Appendix C. This is despite the conservative assumptions outlined in this report.

The following specific notes apply:

- The forecast L_{A10} night-time mechanical services noise levels are 2 dB below their corresponding assigned levels (i.e. 33 dB in Table 4 at #43 & 47 The Promenade, with an Assigned Level of 35 dB).

- The forecast L_{A1} night-time site noise levels are at their corresponding Assigned Levels for
    - Service Station refrigerated delivery truck noise of 45 dB reaching #43 & 53 The Promenade in Table 5 with an Assigned Level of 45 dB.

- The forecast L_{Amax} night-time site noise levels are 4 dB below their assigned level (i.e. vehicle door closing noise of 53 dB reaching # 8 Karda and #35 Balyat Way in Table 6, with an Assigned Level also of 57 dB).

- The forecast L_{Amax} daytime site noise levels are 4 dB below their assigned level (i.e. Auto Service hammering noise of 63 dB reaching #35 Balyat Way in Table 8, with an Assigned Level also of 67 dB).

The forecast noises from other noise sources were quieter again than that outlined above.

Based on the noise sources, arrangements, and conservative assumptions outlined in this report, the overall noise emission from the site is considered acceptable throughout the day and night.

6.Conclusions

An assessment of environmental noise emission from the proposed Wattle Grove Commercial Development has been undertaken.

The forecast noise emission levels have been presented. The recommended treatments to control noise emissions are outlined in the Noise Management Plan (Appendix A) and barrier treatments (Appendix C) have been shown to control environmental noise emission from the site so that compliance is achieved with the Environmental Protection Act (1986) and Environmental Protection (Noise) Regulations 1997.

On this basis the noise emissions from the site are considered acceptable and Unreasonable Noise, as defined in the Act is not anticipated from site.

Appendix A: Noise Management Plan

The elements outlined below are recommended as part of a comprehensive Noise Management Plan. They are recommended for compliance with the Environmental Protection Act 1986 and its subsidiary legislation; the Environmental Protection (Noise) Regulations 1997.

Noise Source or Activity	Requirement
General Deliveries	• Deliveries permitted during the hours outlined in Table 1 • Vehicle manoeuvring on site is to be low, preferably up to a maximum of 5-8 km/h, and with low engine revs. • Reversing of trucks to be minimised to avoid the unnecessary activation of the reversing beeper. • "Broad band", or "white noise" reversing beepers are preferred but not essential on all Delivery trucks at the site • Refrigerated Deliveries to the Service Station to be in the designated loading dock areas only. Maximum duration of operation of the refrigeration compressor units is 23 minutes per 4 hour period
Barriers	• Noise barriers are required as shown in Appendix C • Barriers to be constructed and installed gap-free. o Barriers taller than 2.4m to be a minimum 90mm masonry, or acoustic equivalent. o Barriers between 2.0 & 2.4 to be double thickness colorbond; 2 x 0.48 mm BMT, or acoustic equivalent o Barriers equal to or lower than 2.1m are to be a minimum of 0.42mm BMT colourbond, or acoustic equivalent • Barrier sizing is preliminary and is to be finalised during the Detailed Design phase, after specific mechanical plant and equipment has been selected, and the locations of noise sources finalised.
Overall Noise Emissions	• The overall noise emission from site not to exceed the levels outlined in Table 3 • Outdoor air-conditioning units are to operate in night-mode between 10pm and 7am. A minimum noise reduction of 5 dB is required.
Refuse Collection	• Refuse collection is to be carried out in the quietest reasonable and practicable manner; • Equipment used for refuse collection is the quietest reasonably available • Collection to occur between 7 am and 7 pm Mon-Saturday, unless the contractor has a Noise Management Plan approved by Council.

Grilles, grates & other metal covers	• To be installed to be tight fitting. Where this cannot be achieved, hard rubber or other durable materials are to be used for cushioning such grates/covers
Auto Service Centre	• The metal deck roof of Auto Service Centre to be a minimum 0.6 mm BMT corrugated weather resistant steel • An acoustic lining is recommended on the underside of the metal deck roof, exposed to the workshop area. Lining to cover a minimum of 90% of the workshop area roof and have a minimum NRC 0.9 performance • The access doors, including roller doors to the workshop area are to be acoustically rated with a minimum performance of Rw 24, e.g. B&D Enviropanel, or acoustic equivalent. • Personnel access doors to be solid core, Rw 30 acoustically rated • Roller Doors are to be kept closed when noisy activity such as hammering or grinding is active

Appendix B: Determination of Assigned Level

The Environmental Protection (Noise) Regulations 1997 (EPR) provide limits for acceptable noise from operations generating excessive noise. The Regulations specify the maximum permissible noise levels (termed assigned levels) at noise sensitive premises, caused by surrounding noises, during various times of the day. Time of day affects the assigned levels for noise-sensitive premises, as follows –

- Lowest levels at night (10 pm to 7 am any day, or to 9 am Sundays and Public Holidays);
- Higher levels during the evenings (7 pm to 10 pm) and on Sundays and Public Holidays (9 am to 10 pm); and
- Highest levels during the day (7 am to 7 pm Monday to Saturday).

The baseline assigned levels from the Regulations are shown below in Table 9.

Table 9 – Baseline Assigned Levels

Receiving Premises	Time of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise Sensitive Premises - Highly Sensitive	0700 to 1900 hours Monday to Saturday	45+IF	55+IF	65+IF
	0900 to 1900 hours Sunday and public holidays	40+IF	50+IF	65+IF
	1900 to 2200 hours all days	40+IF	50+IF	55+IF
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays	35+IF	45+IF	55+IF
Noise Sensitive Premises – any area other than highly sensitive area	All hours	60	75	80
Commercial	All hours	60	75	80
Industrial	All hours	65	80	90

The Assigned Levels above are then increased using an Influencing Factor (IF) as defined in the Regulations. The Influencing Factor is greater than zero where there are significant areas of land uses, within 100 m and 450 m radii of the receptor, including:

- industrial land use zonings;
- commercial zonings; and
- the presence of roads carrying significant traffic.

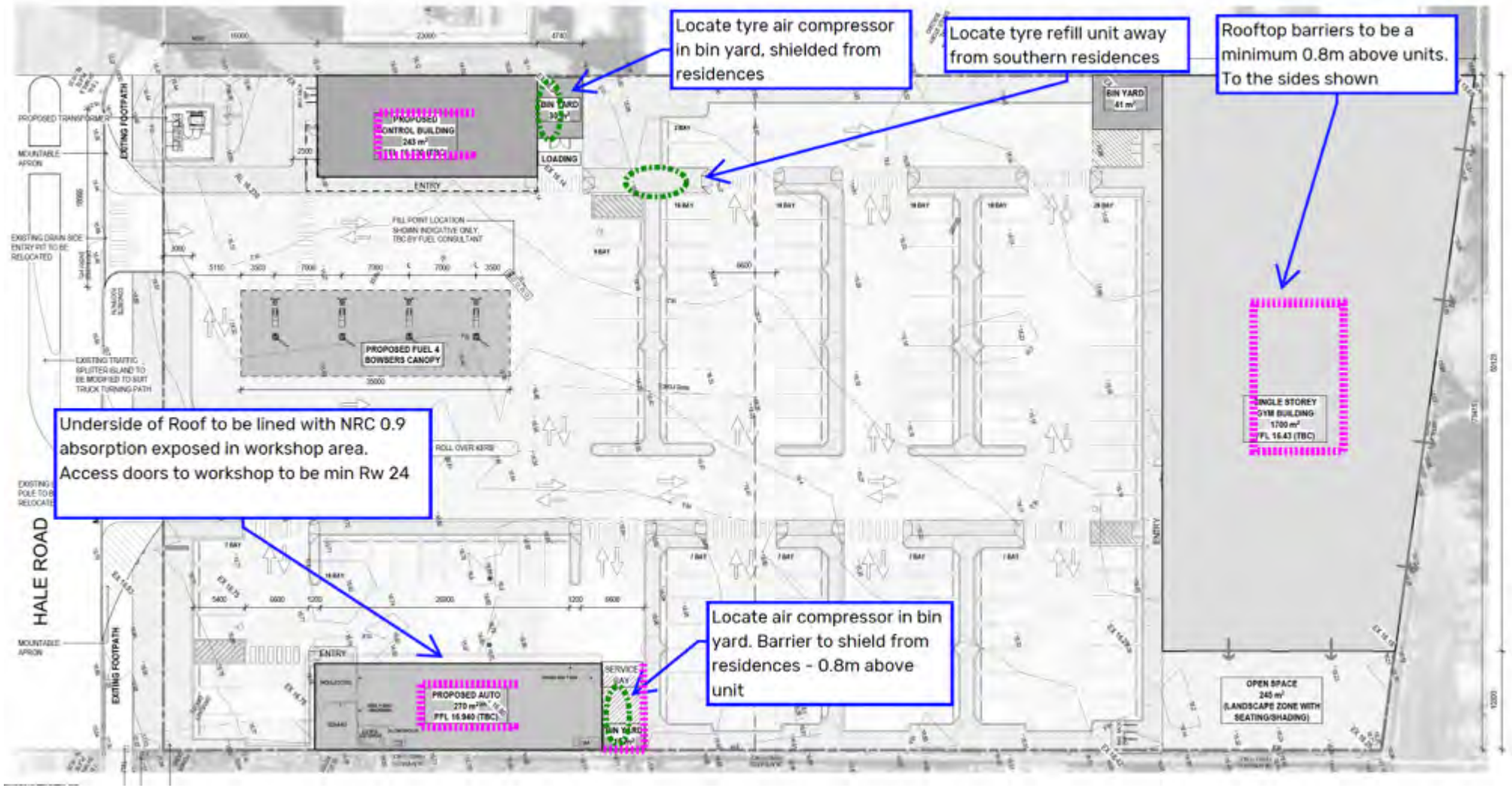
The Influencing Factor IF has been calculated for the applicable noise sensitive receptors in the current study. The percentage of industrial and commercial land within the prescribed circles centred on the noise sensitive premises, and the presence of roads with more than 6000 vehicles per day have been assessed for the properties.

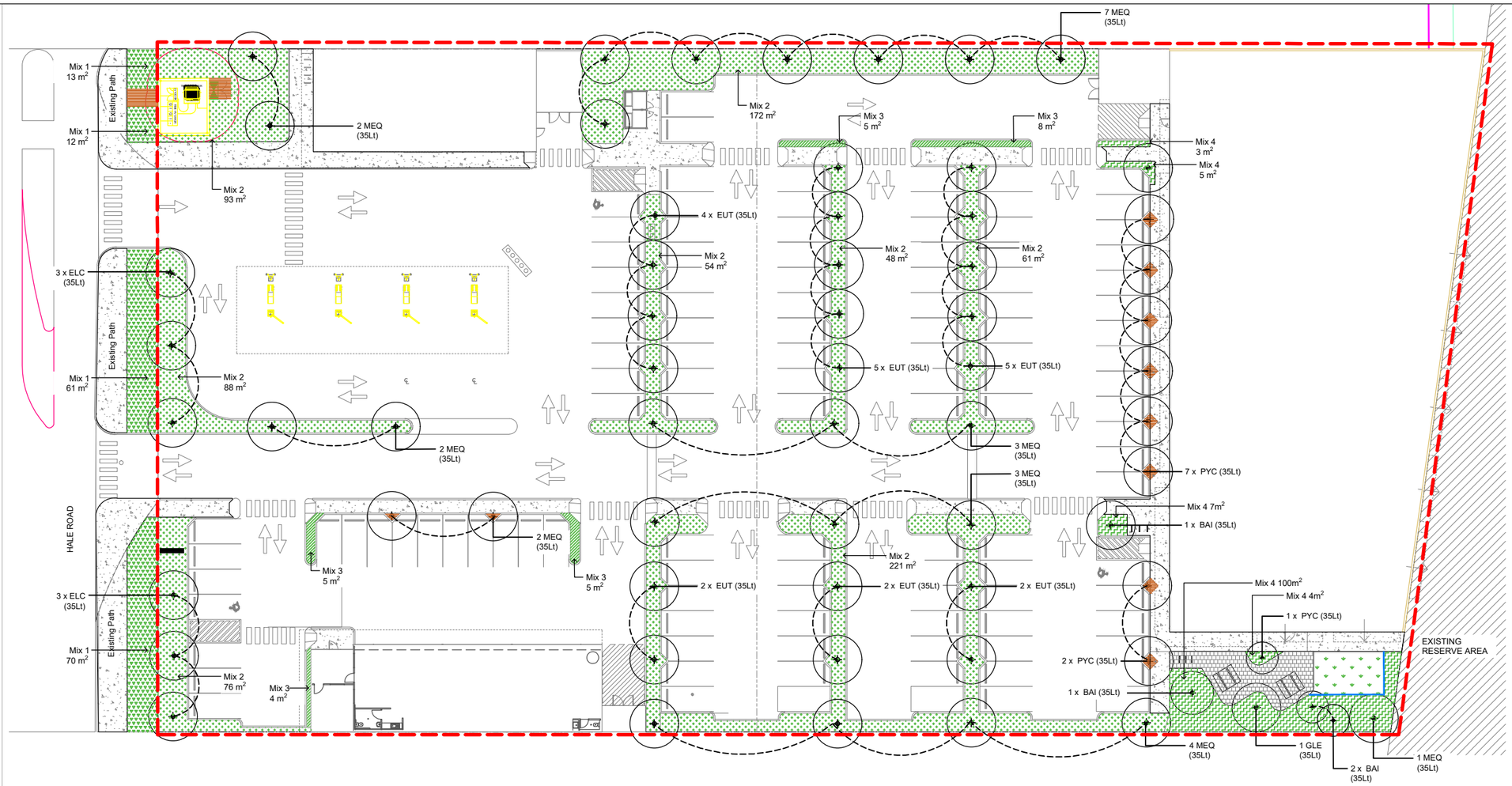
The Influencing Factor calculations are shown below. These factors have been added to the baseline Assigned Levels to produce the Assigned Levels in Section 3.2 above

Representative Property – 8 Karda St

Type of Land	450m Radius	100m radius	Total	
Industrial Land	0%	0%	0	dB
Commercial Land	0%	0%	0	dB
Transportation Factor			2	dB
TOTAL Influencing Factor			**2**	**dB**

Appendix C: Treatments


Locate tyre air compressor in bin yard, shielded from residences
Locate tyre refill unit away from southern residences
Rooftop barriers to be a minimum 0.8m above units. To the sides shown
Underside of Roof to be lined with NRC 0.9 absorption exposed in workshop area. Access doors to workshop to be min Rw 24
Locate air compressor in bin yard. Barrier to shield from residences - 0.8m above unit
HALE ROAD
PROPOSED CONTROL BUILDING 243 m²
BIN YARD 30 m²
LOADING
ENTRY
PROPOSED FUEL 4 BOWSERS CANOPY
ROLL OVER KERB
PROPOSED AUTO
BIN YARD 41 m²
SINGLE STOREY GYM BUILDING 1700 m² FL 16.43 (TBC)
OPEN SPACE 245 m² (LANDSCAPE ZONE WITH SEATING/SHADING)
EXISTING FOOTPATH
MOUNTABLE APRON



LANDSCAPE LEGEND

SURFACE FINISHES PLANS

- MIX 1
- MIX 2
- MIX 3
- MIX 4

Planting areas 75mm mulch to 50mm
Imported topsoil to Garden Bed
Drip line Reticulated 1 x 140mm Pots p/ms

- Roll on turf
- 75mm organic mulch
- Proposed native tree species
- Picnic bench seating
- Timber garden edging

PLANTING NOTES:

1. REMOVE NURSERY STAKES AND LABELS AT THE TIME OF PLANTING. PLANTS ARE TO BE SELF-SUPPORTING.
2. JARRAH WOODCHIP MULCH
3. CONDITIONER @20mm TO ALL PLANTING AREAS
4. PLANTING TO BE OFFSET 300 FROM BACK OF CURB

IRRIGATION NOTES:

- CONTROLLER LOCATION TO BE CONFIRMED ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LAYOUT DESIGN AND INSTALLATION OF IRRIGATION SYSTEM.
- AT TIME OF COMPLETION THE IRRIGATION SYSTEM SHALL BE FULLY AUTOMATED, WORKING EFFICIENTLY AND EFFECTIVELY AND WATERING TIMES PROGRAMMED.
- LOW FLOW DRIP LINE IRRIGATION TO ALL GARDEN BEDS
- WATER SUPPLY VIA SCHEME

TYPICAL IRRIGATION SPECS:

1. MAINLINE: 25MM CLASS 9 PVC WITH 13 CORE 0.5MM MULTICORE CONTROL CABLE.
2. VALVES: RAINBIRD HV WITH 7INCH RAINBIRD VALVE BOXES.
3. LATERAL MANIFOLDS: 25MM LOW DENSITY POLY WITH STAINLESS STEEL COBRA CLIPS ON ALL JOINS.
4. DRIP LINE: NETAFIRM 13MM @ 30CM SPACINGS @ 2 LITERS PER HOUR.

Trees


Melaleuca quinquenervia

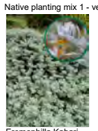

Banksia intergrifolia

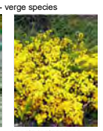

Eucalyptus Torquata


Pyrus calleryana capital


Gleditsia shade master

Native planting mix 1 - verge species


Eremophilla Kabari carpet


Acacia lasioscarpa


Conastylis candicans


Grevillia Crithmofolia


Westringia grey box


leptospermum foreshore

Native planting mix 2


Grevillia gin gin gem


Ficinia nodosa

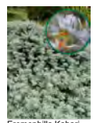

Westringia fruticosa


Hibersia scandens


Myaporum parvifolium

Native planting mix 3


Patersonia occidentalis


Eremophilla Kabari carpet

Native planting mix 4


Acasia hunny bun


Pimelea ferruginea


Callistimon little john


Ficinia nodosa


Myaporum parvifolium


Callistimon little john

Proposed POS paving


Supplier: Midland brick

Proposed POS furniture


Supplier: Mos Urban

	PLANTING SCHEDULE					
GARDEN BED MIX	CODE	BOTANICAL NAME	POT SIZE	QUANTITY	MATURE SIZE (APPROX)	REVISION
MIX 1_156m2	Grc	Grevillia crithmifolia	140mm	31	H 0.5m x W 1m	
	Erk	Eremophila kalbari carper	140mm	31	H 0.4m x W 0.1m	
	Con	Conastylis candicans	140mm	31	H 0.5m x W 0.5m	
	Asl	Acacia lasioscarpa	140mm	31	H 0.3m x W 1m	
	Lep	leptospermum foreshore	140mm	31	H 0.5m x W 1m	
MIX 2_813m2	Ggg	Grevillea gin gin gem	140mm	162	H 0.4m x W 1m	
	Fic	Facinia Nodosa	140mm	162	H 0.5m x W 0.5m	
	Hib	Hibertia scandens	140mm	162	H 0.5m x W 1m	
	Weg	Westringia grey box	140mm	162	H 0.4m x W 1m	
	Myp	Myaporum parvifolium	140mm	162	H 0.5m x W 1m	
MIX 3_30m2	Pat	Patersonia occidentalis	140mm	15	H 0.5m x W 1m	
	Erk	Eremophila kalbari carper	140mm	15	H 0.4m x W 0.1m	
MIX 4_119m2	Awb	Acacia wattle hunny bun	140mm	22	H 1m x W 1m	
	Pim	Pimelea ferruginea	140mm	22	H 0.9m x W 0.5m	
	Ers	Eremophila silver ball	140mm	22	H 0.4m x W 1m	
	Fic	Facinia Nodosa	140mm	22	H 0.5m x W 0.5m	
	Myp	Myaporum parvifolium	140mm	22	H 0.5m x W 1m	
	Caj	Calistimon little john	140mm	22	H 1.5m x W 1m	
TREES						
	MEQ	Melaleuca Quinqenervia	35L	21	H 10m x W 4m	
	BAI	Banksia Intergifolia	35L	5	H 10m x W 4m	
	EUT	Eucalyptus Torquata	35L	20	H 8m x W 5m	
	PYC	Pyrus calleryana capital	35L	9	H 8m x W 3m	
	GLE	Gleditsia shade master	35L	1	H 8m x W 3m	

REV	DATE	DESCRIPTION
0	03/12/2024	ISSUE FOR PERMIT APPROVAL
1	22/08/2025	ISSUE FOR PERMIT APPROVAL
2	06/10/2025	ISSUE FOR PERMIT APPROVAL
3	08/10/2025	ISSUE FOR PERMIT APPROVAL

REV	DATE	DESCRIPTION

PROJECT: WATTLE GROVE COMMERCIAL DEVELOPMENT
326 HALE ROAD WATTLE GROVE WA 6107

CLIENT: **Bella Build and Design**

DRAWING: **LANDSCAPE PLANTING PLAN**

DWG NO: L-1100

DRAWN: EQ | REVIEWED: EQ | PROJECT NUMBER: 2407

SCALE: 1:500 @ A3

DATE: 08/10/2025

REV: 03

NOTE:
1. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN.
2. THIS IS A CAD DRAWING. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS, LEVELS AND ANGLES ON SITE BEFORE PROCEEDING WITH THE WORK. EIISHA QUINTAL STUDIOS SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.
4. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS AND DRAWINGS.

Engineering a better future for over 20 years!

326 Hale Road, Wattle Grove

Proposed Commercial Development

Transport Impact Assessment

PREPARED FOR:
Bella Build and Design

October 2025

Document history and status

Author	Revision	Approved by	Date approved	Revision type
M Rasouli	01	B Bordbar	30/01/2025	Draft
M Rasouli	01a	B Bordbar	06/10/2025	Final

File name: t24.265.mr.r01a

Author: Mohammad Rasouli

Project manager: Mohammad Rasouli

Client: Bella Build and Design

Project: 326 Hale Road, Wattle Grove

Document revision: r01a

Project number: t24.265

TABLE OF CONTENTS

REPORT FIGURES

REPORT TABLES

1 Introduction and Background

This Transport Impact Assessment (TIA) has been prepared by Transcore in relation to the proposed commercial development to be located at 326 Hale Rd, Wattle Grove in City of Kalamunda.

The proposed development is located on the northern side of Hale Rd, west of Wimbridge Rd, and is currently vacant land. The subject site is bound by vacant land to the east, a service station and commercial businesses to the west, and Hale Rd to the south as shown in **Figure 1**.

The proposal involves constructing a service station with four fuel bowsers, a dog wash and auto service and a single-story 24/7 gym on the site. The proposed development will be accessed via two crossovers on Hale Road: A left in only crossover which provides access to the service station and a full movement crossover to the south of the proposed left in only crossover.

Key issues that will be addressed in this report include traffic generation and distribution, access arrangement, capacity analysis and service vehicle movements.

Figure 1: Site location

2 Development Proposal

A copy of the proposed development plan is included in **Appendix A**.

The proposed development includes the construction of a service station with 4 fuel bowsers with a dog wash, an auto service, and a single-storey gym. The development proposal comprises the following elements:

- A service station with 4 fuel bowsers and proposed control building with approximately 243m^2 GFA at the south-west corner of the site.
- A dog wash with 3 bays.
- A single storey 24/7 Gym with approximately 1,700m^2 GFA at the northern corner of the site.
- An auto service with approximately 270m^2 GFA
- A total of 111 parking bays including 3 ACROD bays and 9 bike racks and separate loading bays for auto service, gym and service station.

Access/egress to/from the proposed development is proposed by the following crossovers (refer **Figure 2**):

- A left-in only crossover is proposed on Hale Road at the westernmost part of the site, primarily to facilitate access for the service station and allow fuel tankers and service vehicles to enter the service station area. The left in only crossover will be enforced by the geometry of the crossover and appropriate signage and line marking.

- A full-movement crossover is planned on Hale Road at the easternmost part of the site, designed to provide access to the fast-food restaurant, drive-through, gym, and for fuel tanker exit. Service vehicles for the fast-food restaurant and waste collection trucks for the gym will use this crossover for both entry and exit.

Deliveries and waste collections will be accommodated within the development site. Pedestrians will access the developments via the existing pedestrian paths on Hale Rd.

Turn path analysis has been conducted for a 19m fuel tanker, as well as 12.5m and 8.8m service vehicles servicing the proposed development. The analysis shows that the fuel tanker and service vehicles can enter and exit the development with satisfactory manoeuvrability. The turn path analyses for the proposed development are provided in **Appendix B**.

Figure 2: Location of proposed crossovers

3 Existing Situation

3.1 Existing Land Use

As shown in **Figure 1**, the subject site is currently vacant.

3.2 Existing Road Network

Hale Rd, located immediately south of the subject site, connects Tonkin Hwy to Welshpool Rd East near the site. It is classified as a *Distributor B Road* in the Main Roads WA functional road hierarchy and operates under a 60 km/h speed limit. The road is constructed with a single 3.7m traffic lane in each direction, separated by a 4m-wide raised median in front of the subject site, as shown in **Figure 3**. Hale Road forms a roundabout intersection with Wimbridge Rd/Arthur Rd to the east, and with Sheffield Rd to the west.

Figure 3. West-bound view along Hale Rd

3.3 Existing Traffic Volume on Roads

According to the latest available Main Roads WA traffic count data Hale Rd (west of Tonkin Hwy), carried approximately 6,839vpd on a regular weekday in 2021/22.

Based on the same data, heavy vehicles comprised approximately 6.4% of the total traffic mix. Also, Hale Rd (north of Welshpool Rd E), carried approximately 9,323vpd on a regular weekday in 2021/22 with 7.3% heavy vehicles.

The data obtained from Main Roads WA website are shown in **Figure 4**.

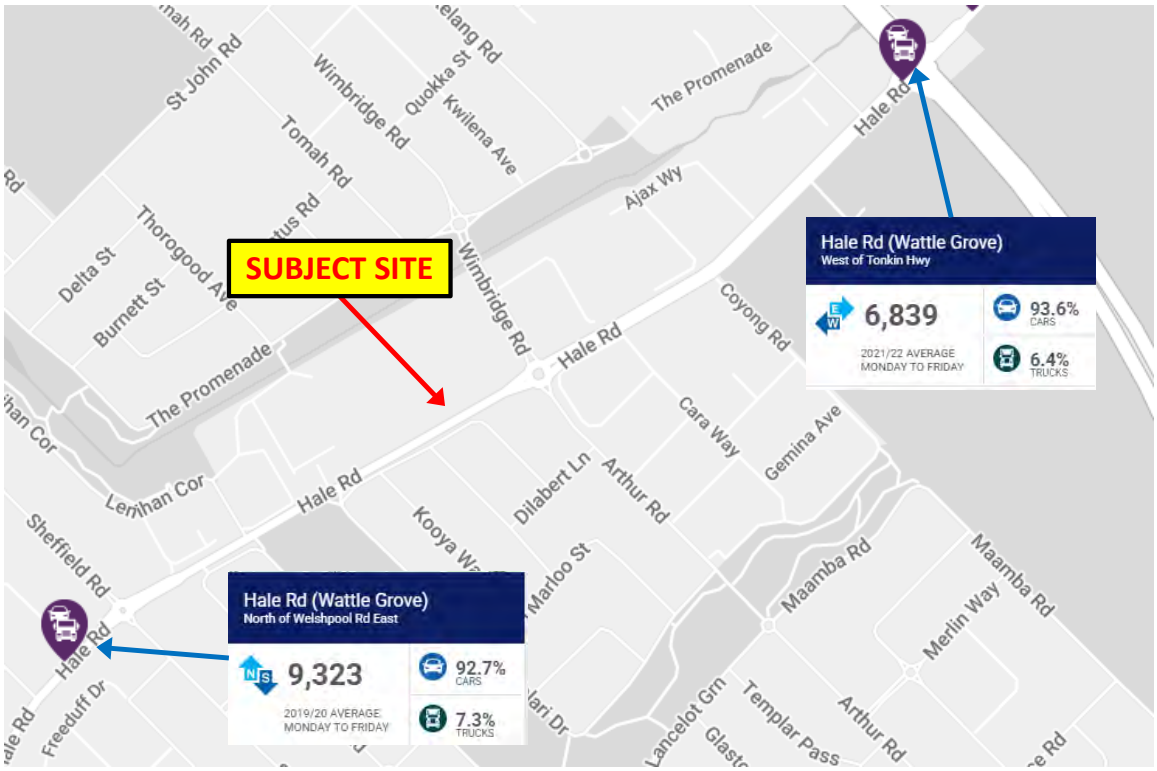


Figure 4: Main Roads WA traffic map data at the vicinity of the site

3.4 Crash Records

Information available on the Main Roads WA website indicates that 22 crashes were recorded on Hale Road and nearby intersections in the vicinity of the subject site during the five-year period ending December 2024.

- Hale Road/ Sheffield Road; and,
- Hale Road/ Wimbridge Road.

Of the 22 crashes, 21 were property damage only (PDO) and one required medical assistance, with 9 being rear-end crashes and 7 being right-angle crashes.

Table 1: Detailed crash history (Source: Main Roads Website)

LOCATION	Total	PDO MAJOR	PDO MINOR	MEDICAL	DAYLIGHT	DARK
Hale Rd / Sheffield Rd	9	9	0	0	5	2
vicinity of the subject site- mid block crashes	4	3	0	1	4	0
Hale Rd/Wimbridge Rd	9	9	0	0	7	2

3.5 Public Transport Access

As shown in **Figure 5**, the closest existing Transperth bus route to the subject site is route 280 which provides connection to Cannington Station and High Wycombe Station. The nearest bus stop is located approximately 40m walking distance from the site and provides general 25-minute interval between services.

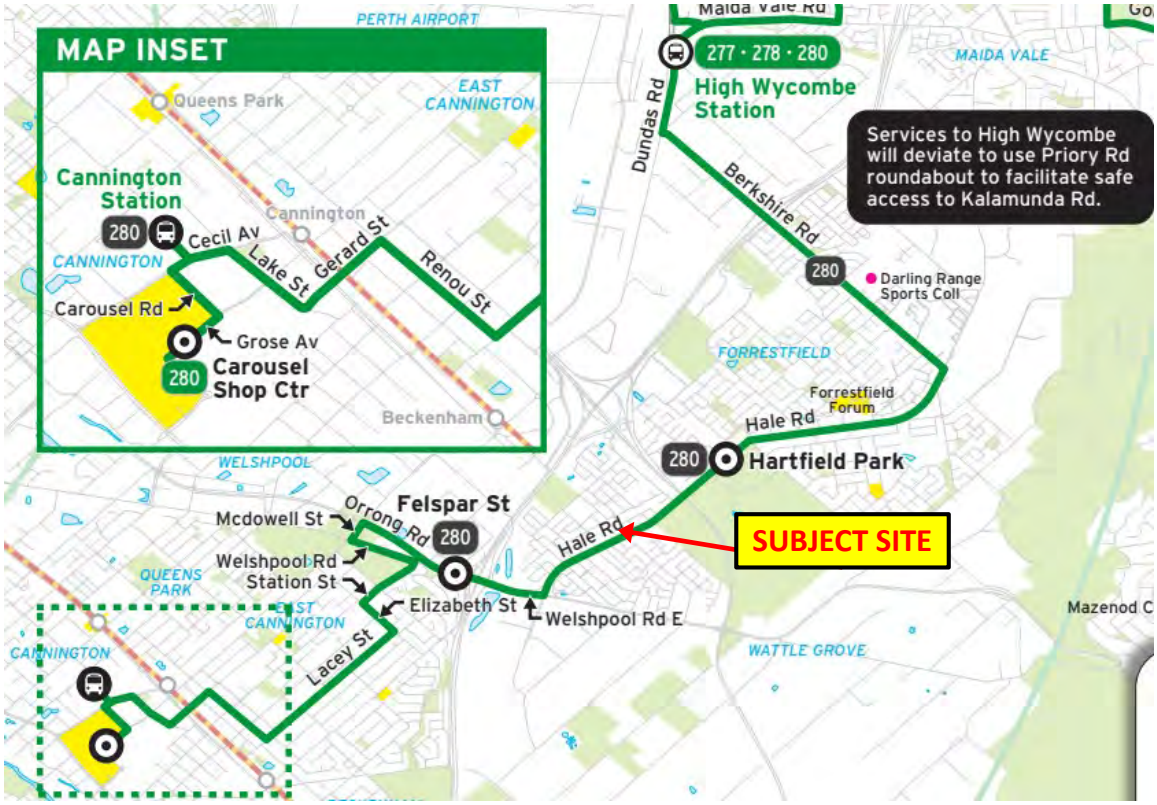


Figure 5: Existing public transport

3.6 Pedestrian and Cyclist Facilities

Pedestrian and cyclist would be able to use the existing 3.0m wide concrete shared path on both sides of Hale Rd.

4 Provision for Service Vehicles

The largest heavy vehicle expected to use the site is a 19.0m Fuel Tanker.

A 19.0m fuel tanker would access the site via the westernmost left in crossover on Hale Road, make a 90-degree right turn, and stop beside the filling points for its operation. The fuel tanker would then exit through the easternmost crossover in forward gear and would be able to turn onto either direction of traffic on Hale Road. It should be noted that during the fuel tanker's operation on-site, the northernmost bowser would be coned off as shown in Sk52 and Sk53 in **Appendix B.**

The proposed Control Building would be serviced by a 12.5m service vehicle, which would enter via the westernmost crossover, reverse into the loading bay in front of the bin yard, and then exit in forward gear through the easternmost crossover, as shown in Sk54 and Sk55 in **Appendix B**.

The proposed auto service would be serviced by an 8.8m service vehicle, which would enter through the easternmost crossover, turn right, reverse into the loading bay, and then exit in forward gear using the same crossover, as illustrated in Sk56 to Sk57 in **Appendix B**.

Sk58 and Sk59, included in **Appendix B**, illustrate satisfactory access and egress of the 8.8m service vehicle to and from the bin yard dedicated for the gym.

5 Traffic Assessment

5.1 Assessment Period

Due to the nature of the development, it is expected that the highest demand on the local road network capacity will be experienced during the combined peak hour business activity of the development and the peak commuter traffic activity during the weekday morning and afternoon peak periods.

The assessment year for post development scenario is assumed to be 2026 (opening year) with 10-years post development is assumed to be 2036.

5.2 Trip Generation

5.2.1 proposed service station

Based on the feedback received from a number of Western Australia service station operators that the trip rates published in the ITE Trip Generation Manual (11th Edition) significantly overestimate the actual patronage numbers, Transcore undertook extensive traffic surveys during 2022. As part of this survey, a total of 15 service stations were surveyed, to establish more accurate local traffic generation rates for this type of land use in Western Australia. All of the sites selected entailed different operators in order to ensure robust data with a high level of confidence. The surveys were undertaken on Mondays, Tuesdays and Wednesdays in order to include trade activity during the discounted fuel days as well and to ensure a conservative approach.

The following sites were surveyed for the purpose of the study:

- 7-Eleven, 194 Great Eastern Hwy, Ascot WA
- Ampol, 204 Great Eastern Hwy, Ascot WA
- BP, 1 Canham Way, Greenwood WA
- BP, 88 Gilbertson Road, Kardinya WA
- BP, 848 Canning Hwy, Applecross WA
- Coles Express, 73A Frobisher Street, Osborne Park WA
- Puma, 58 Montana Crescent, Alkimos WA
- Ampol 3, Morwell Street, Yanchep WA
- Liberty, 2341 Albany Highway, Gosnells WA
- 7-Eleven, 931 Wanneroo Road, Wanneroo WA
- 7-Eleven, 13 Lakes Road, Greenfield WA
- Shell, 582 Stirling Highway, Mosman WA
- Puma, Cnr Johnson Street & Helena Street, Guildford WA
- United, 2 Feilman Drive, Leda WA
- United, 101 Terrier Place, Southern River WA

Accordingly, the trip rates which were used to estimate traffic generation for the service station components of the proposed development are as follows:

- Weekday daily: 162.20vpd per filling point;
- Weekday AM peak hour: 9.49vph per filling point; and,
- Weekday PM peak hour: 11.27vph per filling point.

It is estimated that the proposed service station (**8** filing points) would generate the following total traffic flows:

- Weekday road network AM peak hour: 76 vph;
- Weekday road network PM peak hour: 90 vph;

5.2.2 proposed auto service

The traffic volumes anticipated to be generated by the proposed auto service have been estimated using trip generation rates derived from the ITE *Trip Generation Manual (11th Edition)*. The applicable trip rates which were used to estimate the proposed land uses are:

Auto Service (#943)

- Weekday road network AM peak hour: 0.021 vph per 100m^2 GFA; and
- Weekday road network PM peak hour: 0.022 vph per 100m^2 GFA.

Accordingly, it is estimated that the proposed auto service (270m^2 floor area) would generate the following total traffic flows:

- Weekday road network AM peak hour: 6 vph; and
- Weekday road network PM peak hour: 6 vph.

5.2.3 proposed gym

The traffic volumes likely to be generated by the proposed gym development have been estimated based on the *ITE Trip Generation Manual, 11th Edition* publication (Health/Fitness Club - 492), which provides morning and afternoon peak hour trip rates. The daily trip rate has been calculated as the average peak rate multiplied by a factor of 10. The trip rates which were used to estimate the proposed development traffic generation are as follows:

Health/ Fitness Club (492) – 1000 Sq. Ft. GFA

- Weekday daily: (10 x (1.31+3.45)/2) vpd per 1000sqft GFA/0.929 = 25.62vpd/ 100m2 GFA;
- Weekday AM peak hour: 1.31vph per 1000sqft GFA/ 0.929 = 1.41vph/ 100m2 GFA; and,
- Weekday PM peak hour: 3.45vph per 1000sqft GFA/ 0.929 = 3.71vph/ 100m2 GFA.

Accordingly, it is estimated that the traffic generations for the proposed gym development with an overall GFA of 1,700m^2 are:

- Weekday daily: 436vpd; and,
- Weekday AM peak hour: 24vph; and,
- Weekday PM peak hour: 63vph.

The ITE *Trip Generation Handbook (3rd Edition)* provides additional information on internal trips within a mixed-use development and on pass-by and primary trips for various types of land use. Based on the information provided it is estimated that approximately 20% of the trips visiting the proposed development would be internal trips within proposed development.

5.2.4 proposed dog wash

It is conservatively assumed than one customer would use the dog wash every 20 minutes and therefore six customers would utilise the proposed dog wash. This translated to the below trip generation during the road network peak hour:

- Weekday AM peak hour: 12 trips per hour;
- Weekday PM peak hour: 12 trips per hour; and;
- Weekday: 128 trips per day;

Table 3 summarises the daily and peak hour trip generation of the proposed development. **Table 4** shows the passing and non-passing trade of the trip generation.

Accordingly, it is estimated that the proposed development would generate approximately 1,553 external trips per regular weekday with approximately 94 and 137 trips (both inbound and outbound) during the weekday AM and PM peak hours.

Table 2: Trip generation of the proposed development

Land use	Quantity	Daily Rate	AM peak	PM peak	Cross Trade	Daily Trips	AM Trips	PM Trips	AM		PM	
									IN	OUT	IN	OUT
Service Station	8	162.20	9.49	11.27	0.20	1038	61	72	30	30	36	36
Dog wash	2				0.20	128	10	10	5	5	5	5
Auto service	270	0.18	0.02	0.02	0.20	39	4	5	2	2	2	2
Gym	1700	0.26	0.01	0.04	0.20	348	19	50	10	9	11	8
Total traffic						**1553**	**94**	**137**	**47**	**47**	**54**	**52**

Table 3: Passing trade and non-passing trade component of the trip generation

Passing Trade Component

AM		PM	
IN	OUT	IN	OUT
18	18	22	22
0	0	0	0
1	1	1	1
0	0	0	0
19	**19**	**23**	**23**

Primary Trips Component

AM		PM	
IN	OUT	IN	OUT
12	12	14	14
5	5	5	5
1	1	1	1
10	9	11	8
28	**28**	**32**	**29**

5.3 Trip Distribution

The distribution of trips that will be attracted to the subject site has been estimated based on the distribution of surrounding residential areas and the catchment area of the proposed development.

The resulting modelled traffic distribution of the proposed development is summarised in **Table 5**.

Table 4: Traffic distribution

Route/Approach	Primary Trips	Pass-by Trips
Hale Rd/ South Approach	50%	20%
Hale Rd/ North Approach	50%	80%

The traffic movements generated by the proposed development have been manually assigned on the adjacent road network and the resulting traffic movements generated by this development are shown in **Figure 6**.

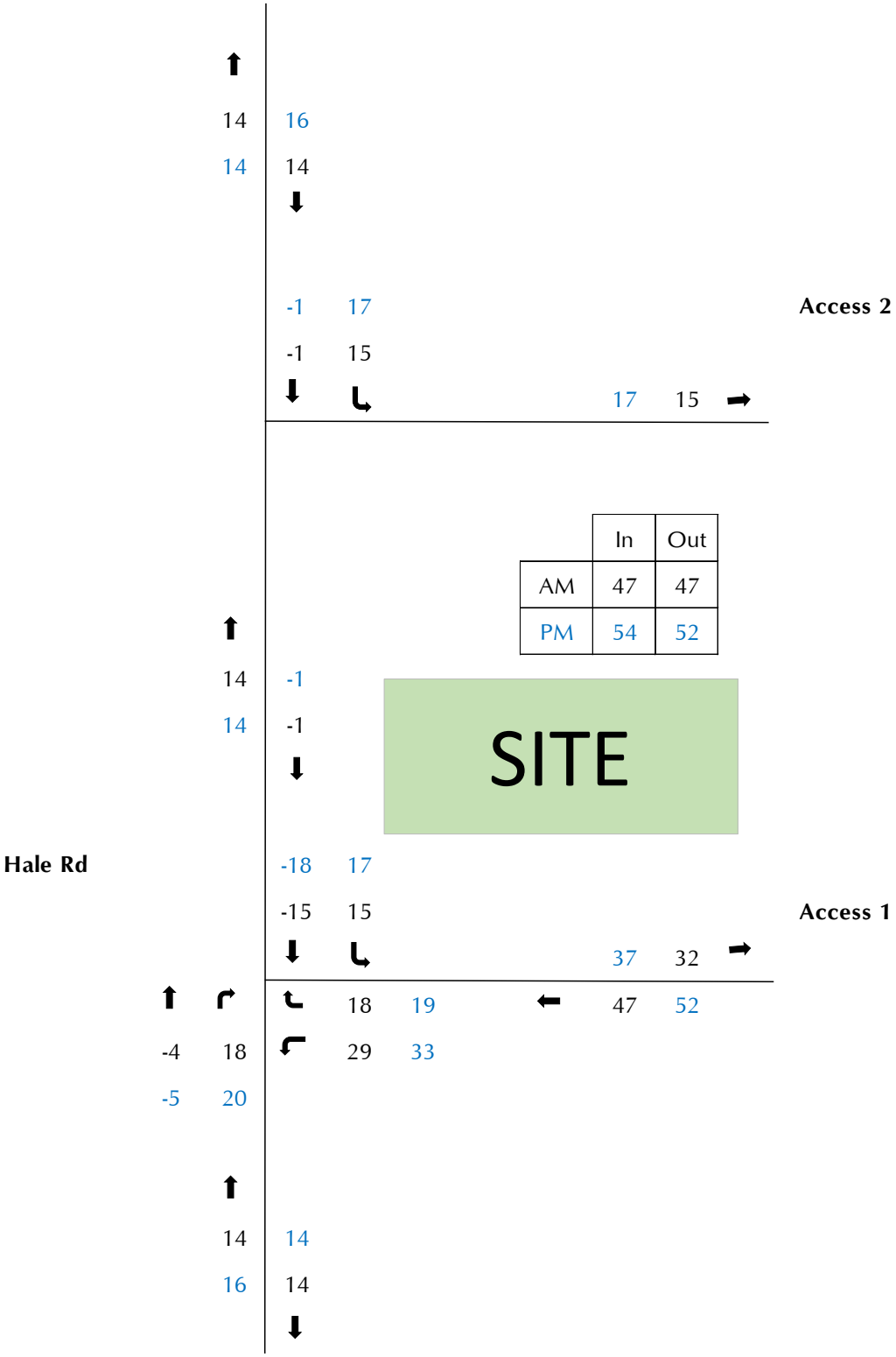


Figure 6: Proposed development traffic (AM/ PM)

5.4 Traffic Flow

Future year base traffic flows on Hale Road have been estimated by factoring up the current through traffic flows on Hale Road and by applying a compound growth rate of 2% per year. **Figure 7** and **Figure 8** illustrate the projected traffic on Hale Road plus development traffic in 2026 and 2036 respectively.

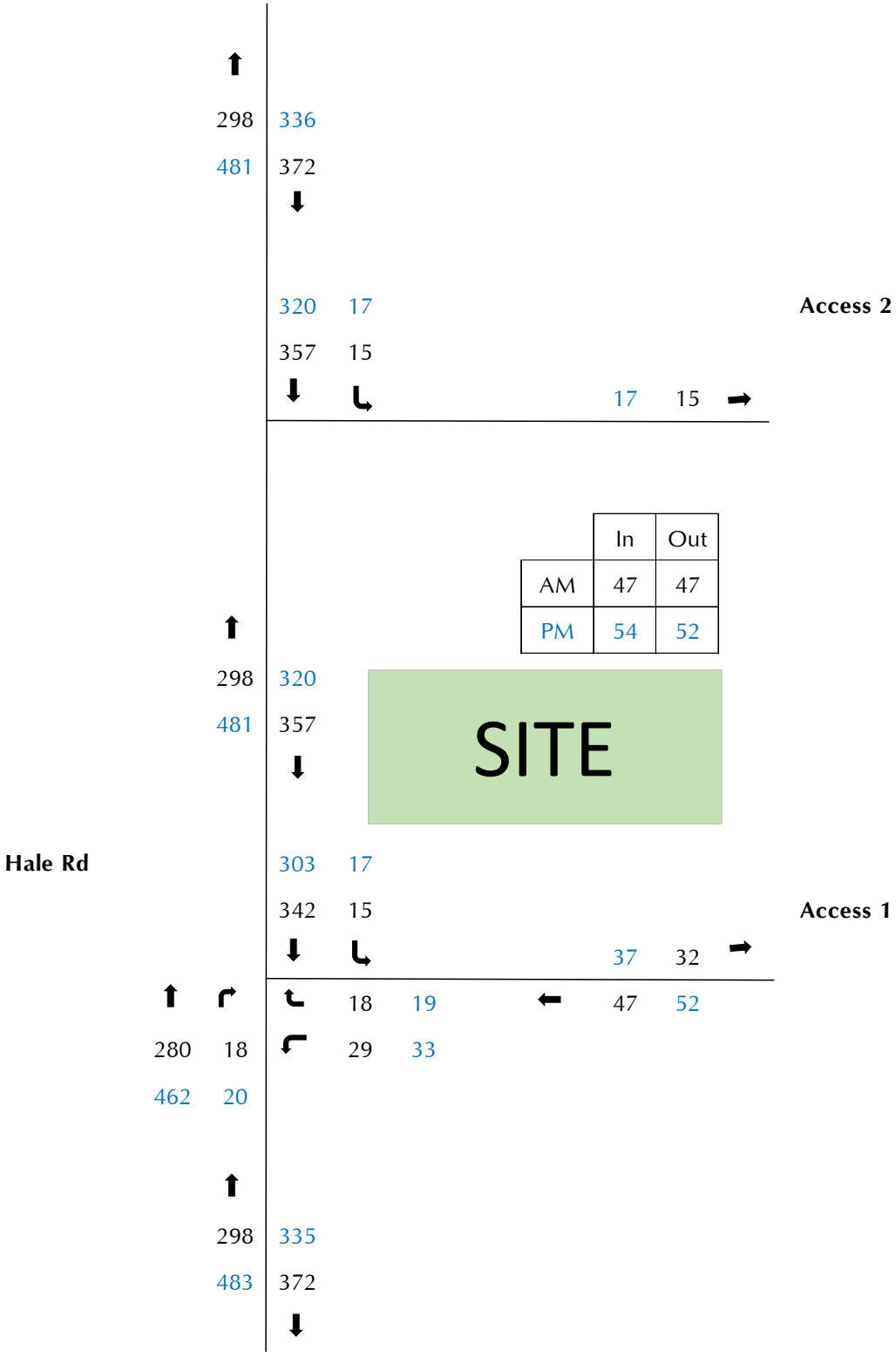


Figure 7: 2026 traffic volumes (AM/ PM)

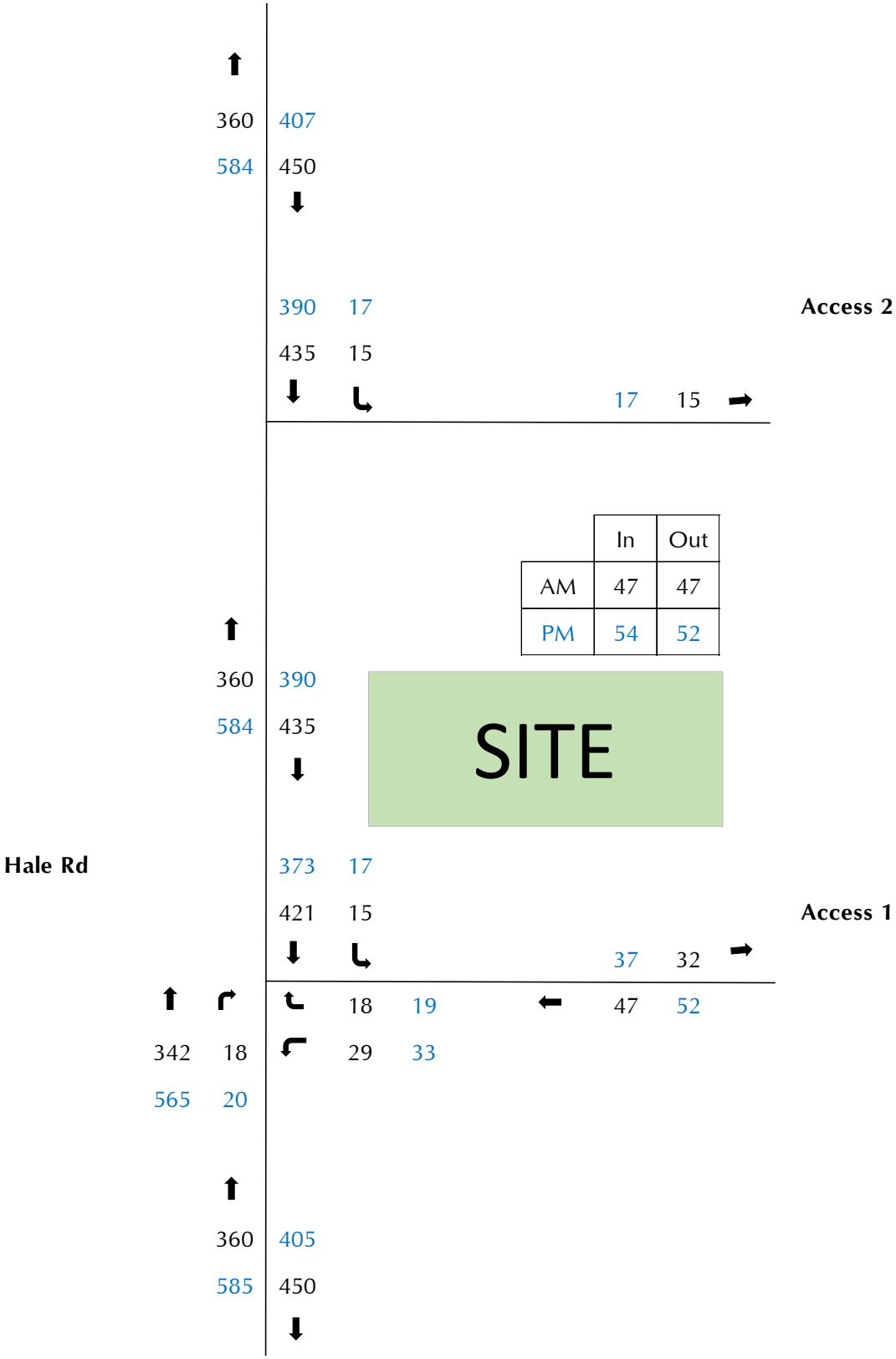


Figure 8: 2036 traffic volumes (AM/ PM)

5.5 Analysis of Local Intersections & Crossovers

The development easternmost full movement crossover on Hale Road shown in **Figure 9** has been analysed in SIDRA computer software package, for 2026 and 2036 peak hours. The development westernmost crossover on Hale Road has not been analysed as it would operate as left in only crossover.

SIDRA is an intersection modelling tool commonly used by traffic engineers for all types of intersections. SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These characteristics are defined as follows:

- Degree of Saturation is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The Degree of Saturation ranges from close to zero for infrequent traffic flow up to one for saturated flow or capacity.
- Level of Service is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. In general, there are 6 levels of service, designated from A to F, with Level of Service A representing the best operating condition (i.e. free flow) and Level of Service F the worst (i.e. forced or breakdown flow).
- Average Delay is the average of all travel time delays for vehicles through the intersection.
- 95% Queue is the queue length below which 95% of all observed queue lengths fall.

Figure 9 illustrates the intersection layout modelled in SIDRA for year 2026 and 2036 with full development of the site.

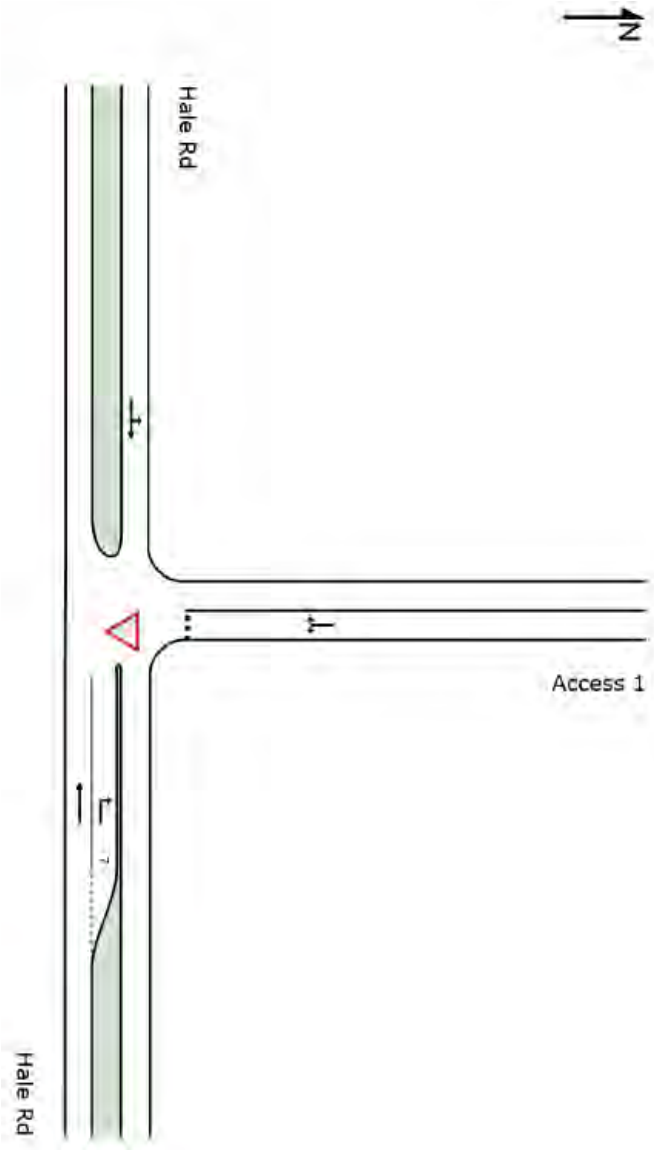


Figure 9: SIDRA layout of the development crossover on Hale Road

The SIDRA analysis has been undertaken in accordance with current MRWA operational modelling guidelines including separate input of different classes of heavy vehicles and the parameters specified by MRWA for those vehicle classes.

The results of the SIDRA analysis are summarised in **Appendix C**.

Hale Road full movement crossover

The SIDRA intersection analysis for the Hale Road full movement crossover indicates that the intersection will operate efficiently in 2026, with all movements achieving Level of Service A and a maximum degree of saturation of approximately 0.27. Delays across all approaches will remain minimal, and the 95th percentile queue will be about 2.3 metres, indicating no congestion or blocking issues.

In 2036, with all movements achieving Level of Service A except for the right-turn from development to Hale Road during the PM peak, which will achieve LOS B, and

a maximum degree of saturation of approximately 0.33. Delays across all approaches will remain minimal, and the 95th percentile queue will be about 2.9 metres, indicating no significant congestion or blocking issues. Overall, the crossover will perform well within capacity throughout both AM and PM peak periods in both 2026 and 2036.

5.6 Impact on Surrounding Roads and Neighbouring Areas

The WAPC Transport Impact Assessment Guidelines (2016) provides the following guidance on the assessment of traffic impacts:

"As a general guide, an increase in traffic of less than 10 percent of capacity would not normally be likely to have a material impact on any particular section of road but increases over 10 percent may. All sections of road with an increase greater than 10 percent of capacity should therefore be included in the analysis. For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 percent of capacity. Therefore, any section of road where development traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis."

The proposed development will not increase traffic on any lanes of the surrounding road network by more than 100 vehicles per hour. Therefore, the development will not elevate traffic flows at or above the WAPC threshold on most surrounding roads, negating the need for further detailed analysis.

5.7 Traffic Noise and Vibration

The WAPC's *State Planning Policy 5.4: Road and Rail Transport Noise and Freight Considerations in Land Use Planning* requires assessment of noise impact on noise-sensitive developments when a road carries more than 20,000vpd in an urban area or 5,000vpd in a rural area.

The traffic generation of the proposed development will be around 3,000vpd and will not increase the traffic flows on any surrounding roads to anywhere near the abovementioned traffic thresholds, so no noise impacts on surrounding areas are anticipated.

5.8 Road Safety

No particular road safety issues have been identified in relation to the proposed development.

6 Parking Assessment

The proposed development will include a total of 111 parking bays including 3 ACROD bays and 9 bike racks. This parking provision is expected to be sufficient to meet the site's parking requirements effectively.

7 Queue Analysis

Queue length analysis model for service station

The stacking capacity of the service station component of the proposed development and detailed queue analysis at the filling points have been assessed in more detail to investigate the impacts of the higher-than-average site patronage during peak weekday operational periods. This analysis was undertaken to investigate the capacity of the service station to operate satisfactory under amplified traffic activity conditions (i.e. "cheap fuel" day).

Based on the estimated peak hour trip generation for the service station outlined in this report, it is estimated that the subject service station would attract up to 45 inbound vehicles during the regular weekday PM peak hour (busiest peak hour). In order to ensure a robust assessment, it is assumed that the trade on "cheap fuel" day would be 50% higher than the typical peak weekday PM hour. Accordingly, it is conservatively assumed that the proposed service station would attract about 68 cars per hour on this occasion.

Experience indicates that, under normal circumstances, the rate of service per fill point (time taken for a vehicle to arrive, park at a fill point, get fuel, pay for fuel and leave the fill point and service station site) is usually between 2-3 minutes. In some circumstances refuelling time may extend to about 5 minutes when window washing or other similar activities are practiced. However, during the "cheap fuel" day periods and due to high turnover of vehicles and "pressure" from the patrons waiting behind the parked vehicle to access the bowser, the refuelling activity is always shortened and typically in order of up to 3min maximum. In this case, and in order to allow for a robust assessment, the service time is assumed to be conservatively 4 minutes. Accordingly, a service rate of 240sec (15 vehicles per hour) was assumed for weekday PM peak "cheap fuel" peak hour.

A queue length analysis was undertaken to assess the provision of storage for vehicles within the drive through lanes. For this purpose, an M/M/1 queuing model was adopted for each COB. The M/M/1 is a single-server queue model that can be used to approximate simple systems.

The queuing model adopts the following assumptions:

- Vehicles arrive randomly following Poisson's probability distribution;
- Service time is exponentially distributed;
- There is one server per queue, i.e., there are two queues, one for each COB, instead of a single queue being served by two COBs;
- The capacity of the queue in which arriving users wait before being served is infinite (for the purposes of identifying queue space requirements);
- The population of users (i.e., the pool of users) available to join the system is infinite; and,
- The queue is serviced on a first come, first served basis.

The results of the queuing analysis are detailed in **Figure 10**.

In summary, critical "cheap fuel" hour queuing analysis of the service station established the following for the worst-case scenario:

- The system utilisation is at 57% during the "cheap fuel" hour;
- The expected number in the system (refuelling) is 5 vehicles;
- The expected time in the queue is 7.4 seconds; and,
- The 95th percentile queue within the whole system is 9 cars (8 cars refuelling and 1 car waiting).

The queue length usually adopted for robust analysis is the 95th percentile queue. Assuming equal queue distribution it is estimated that in the worst-case scenario there will be one vehicle waiting behind one of the refuelling vehicles. The service station layout can accommodate this level of queuing without any queue back to the adjacent crossovers.

M/M/s - Drive Through Queuing Analysis (Poisson Arrival and Service Rates)

M/M/s	vph	vps
Arrival rate	68	0.0188889
Service rate	15	0.0041667
Number of servers	8	8

Utilization	56.67%		56.67%	
P(0), probability that the system is empty	0.0105		0.0105	
Lq, expected queue length	0.1406	(cars)	6.0000	(metres)
L, expected number in system	4.6739	(cars)	30.0000	(metres)
Wq, expected time in queue	0.0021	(hours)	7.4431	(seconds)
W, expected total time in system	0.0687	(hours)	247.4431	(seconds)
Probability that a customer waits	0.1075		0.1075	
95% Queue	9.0000	(cars)	54.0000	(metres)

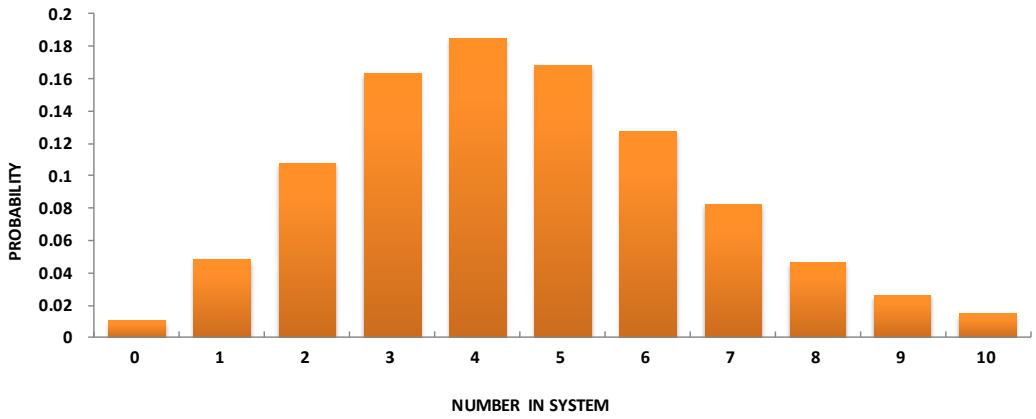


Figure 10: PM peak hour queuing analysis

8 Public Transport Access

The existing bus services in this area have been noted in Section 3.5 of this report and will provide a satisfactory level of public transport accessibility to the site.

9 Pedestrian and Cyclist Access

The existing pedestrian facilities in this area have been noted in Section 3.6 of this report.

The Perth Bicycle Network Map illustrated in **Figure 11** shows the existing cyclist connectivity to the subject site. Hale Rd, south of the proposed development, is shown to have High Quality Shared Paths and Bicycle Boulevard. This provides further links to other bicycle paths.

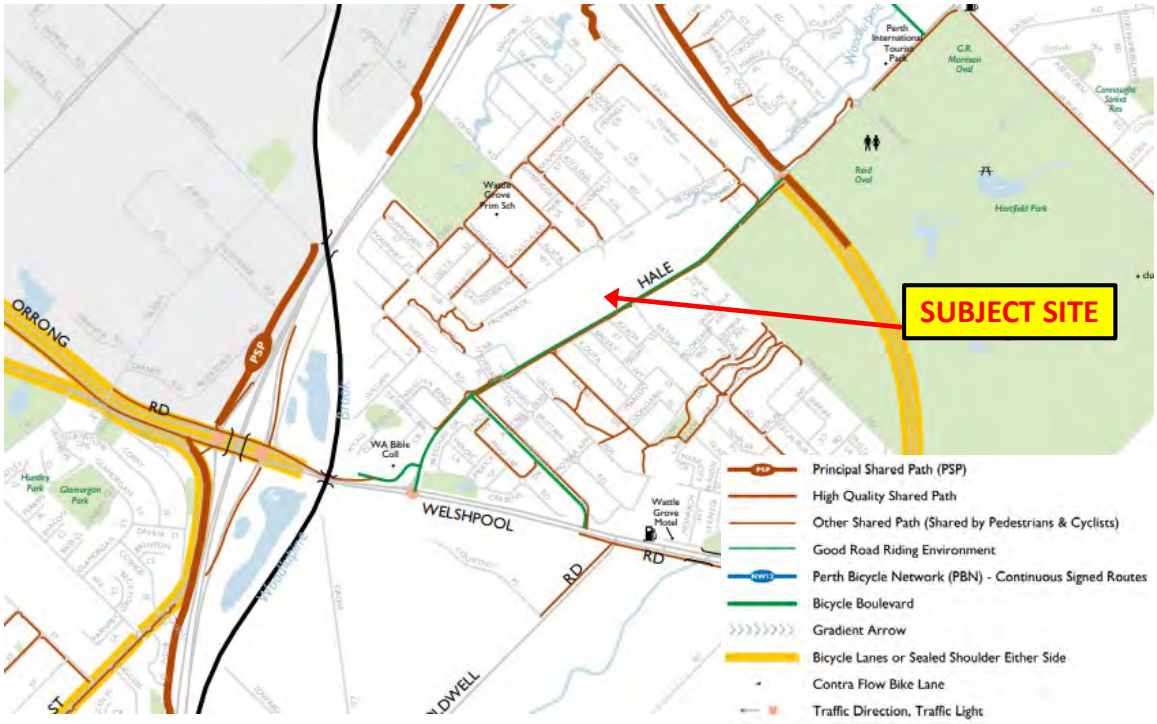


Figure 11: Extract from Canning & Armadale Bicycle Network Map (Department of Transport)

10 Conclusions

This Transport Impact Assessment (TIA) has been prepared by Transcore in relation to the proposed commercial development located at 326 Hale Rd, Wattle Grove in City of Kalamunda.

The proposal is for a service station with 4 bowsers with a dog wash, an auto service and a single-storey gym. Access and egress to the proposed development will be facilitated through a left in only and a full-movement crossover on Hale Road.

The left-in-only crossover will primarily serve access to the proposed service station. This left-in-only movement will be enforced through the geometry of the crossover, along with appropriate signage and line marking.

The largest heavy vehicle expected to use the site is a 19.0m fuel tanker. Turn path analysis undertaken for a 19.0m fuel tanker, a 12.5m service vehicle and an 8.8m service vehicle, demonstrates satisfactory entry, egress, and circulation within the site.

The proposed development will include a total of 111 parking bays, including 3 ACROD bays and 3 loading bays, which is expected to effectively meet the site's parking requirements.

The SIDRA analysis shows that the proposed development crossovers would operate satisfactorily with good level of service and minimum delays and queues during the post development and 10 years post development scenarios.

Queue analysis undertaken for the proposed service station indicated that under typical “cheap fuel day” peak conditions the queuing associated with the service station will be accommodated within the site without impacting the internal driveways and development crossovers.

The subject site has good connectivity to pedestrian footpaths, bicycle paths, and public transport networks in the surrounding area.

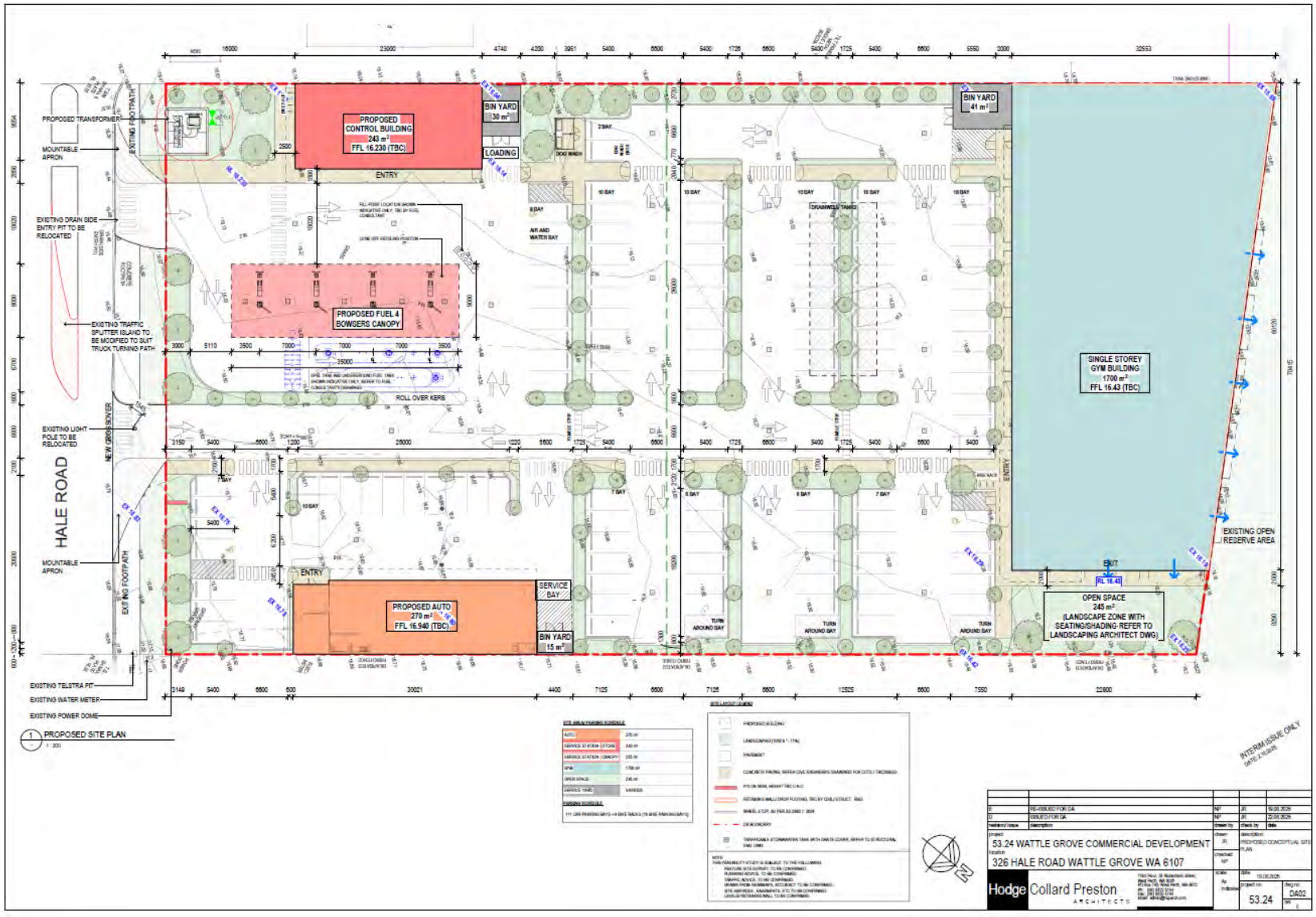
In conclusion, the findings of this Transport Impact Assessment support the proposed development.

Appendix A

PROPOSED DEVELOPMENT PLANS

transcore

Engineering a better future for over 20 years!

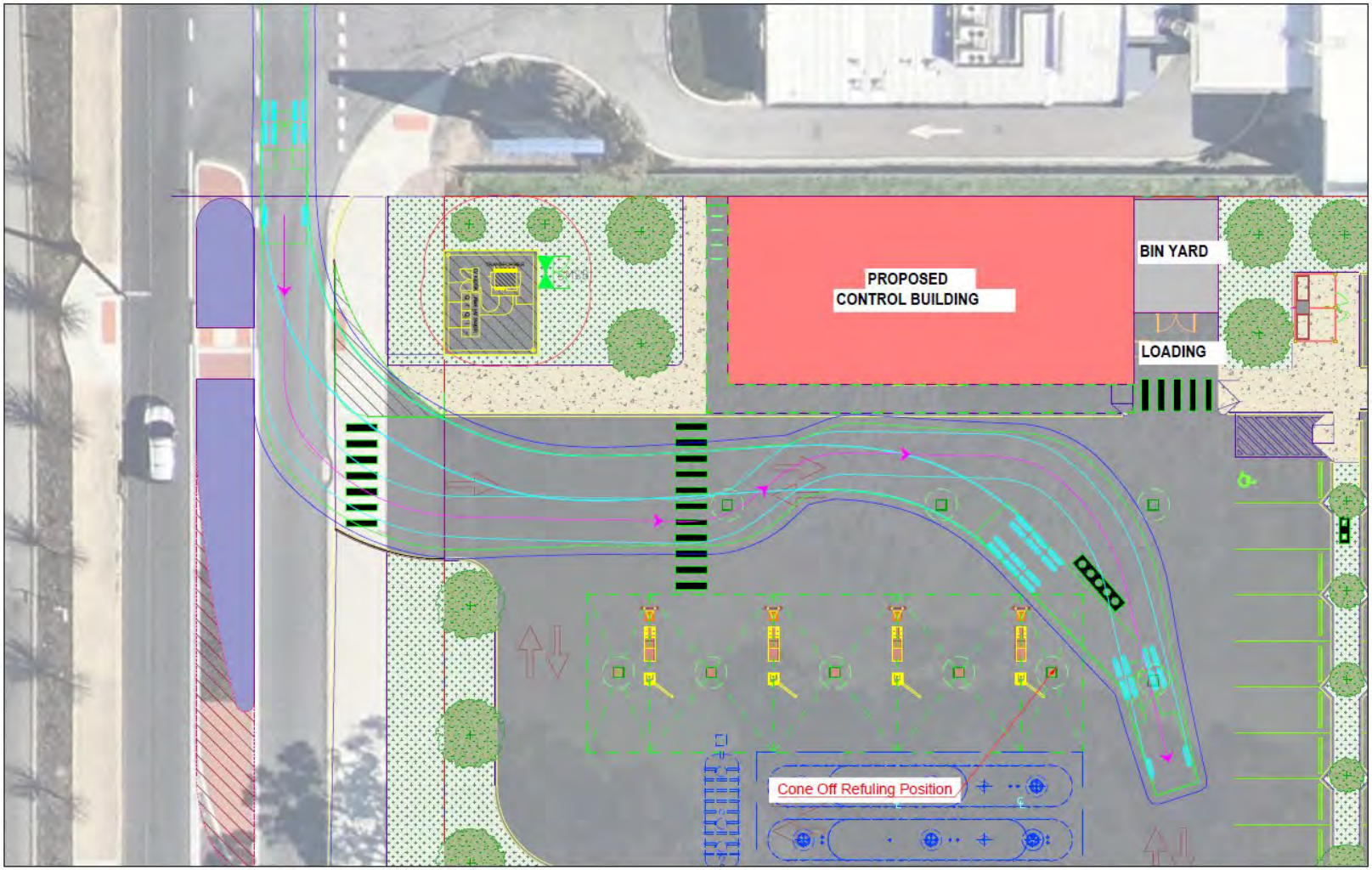

PROPOSED CONTROL BUILDING
243 m²
FFL 16.230 (TBC)
BIN YARD
30 m³
LOADING
ENTRY
PROPOSED TRANSFORMER
MOUNTABLE APRON
EXISTING FOOTPATH
EXISTING DRAIN SIDE ENTRY PIT TO BE RELOCATED
EXISTING TRAFFIC SPLITTER ISLAND TO BE MODIFIED TO SUIT TRUCK TURNING PATH
PROPOSED FUEL 4 BOWSERS CANOPY
ROLL OVER KERB
EXISTING LIGHT POLE TO BE RELOCATED
NEW GROSS SEWER
HALE ROAD
MOUNTABLE APRON
EXISTING FOOTPATH
EXISTING TELSTRA PIT
EXISTING WATER METER
EXISTING POWER DOME
PROPOSED SITE PLAN
PROPOSED AUTO
270 m²
FFL 16.940 (TBC)
SERVICE BAY
BIN YARD
15 m³
BIN YARD
41 m³
SINGLE STOREY GYM BUILDING
1700 m²
FFL 16.43 (TBC)
EXISTING OPEN RESERVE AREA
EXIT
FFL 16.43
OPEN SPACE
245 m²
(LANDSCAPE ZONE WITH SEATING/SHADING-REFER TO LANDSCAPING ARCHITECT DWG)
TURN AROUND BAY
AIR AND WATER BAY
DRAINAGE TANKS
INTERIM ISSUE ONLY
53.24 WATTLE GROVE COMMERCIAL DEVELOPMENT
326 HALE ROAD WATTLE GROVE WA 6107
Hodge Collard Preston
ARCHITECTS
53.24
DA02

Appendix B

TURN PATH ANALYSIS

transcore

Engineering a better future for over 20 years!

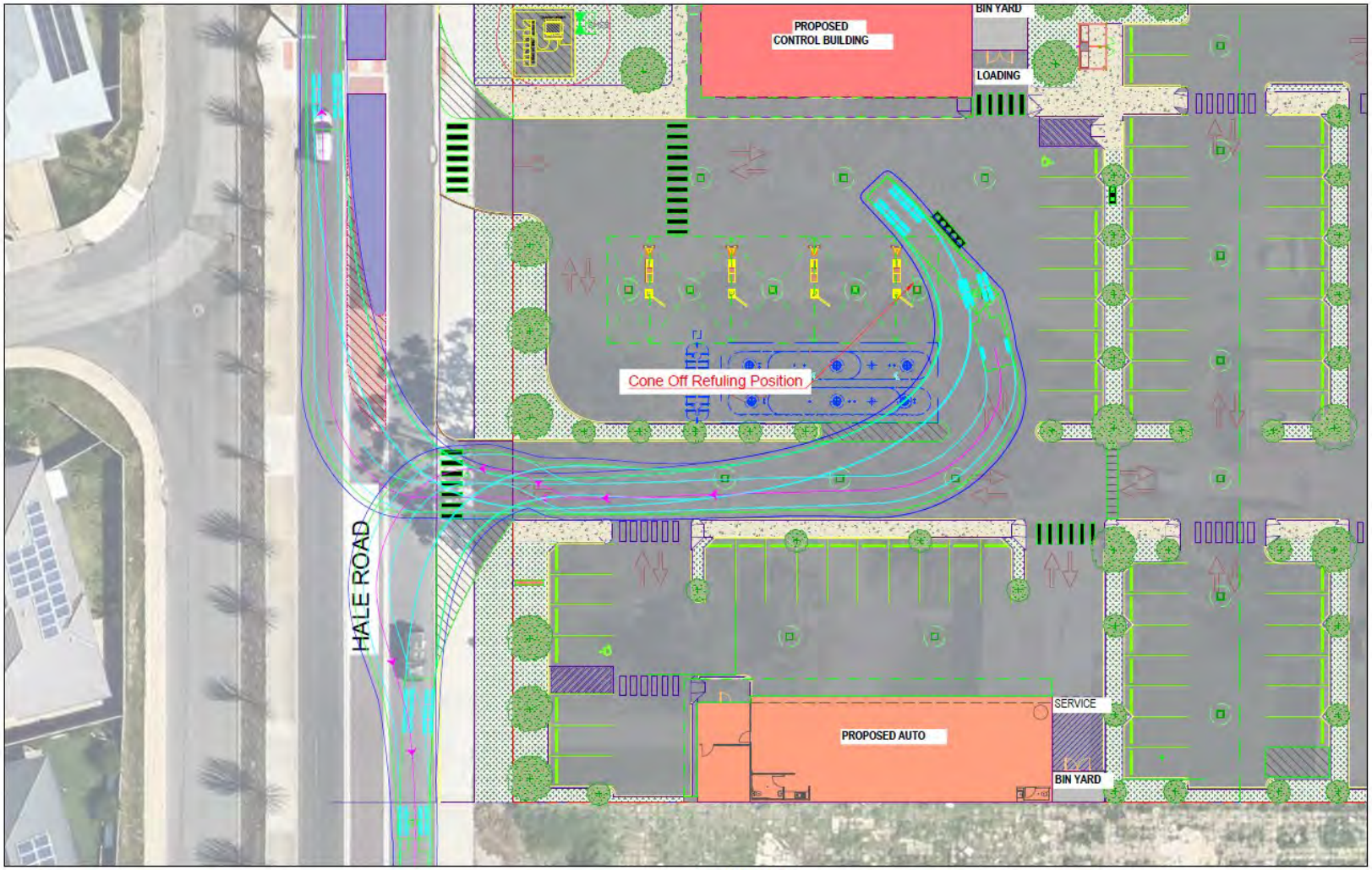


326 Hale Road, Wattle Grove
19.0m Fuel Tanker
Entry From Hale Road

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t24.265.sk52
06/10/2025
Scale: 1:200 @ A3

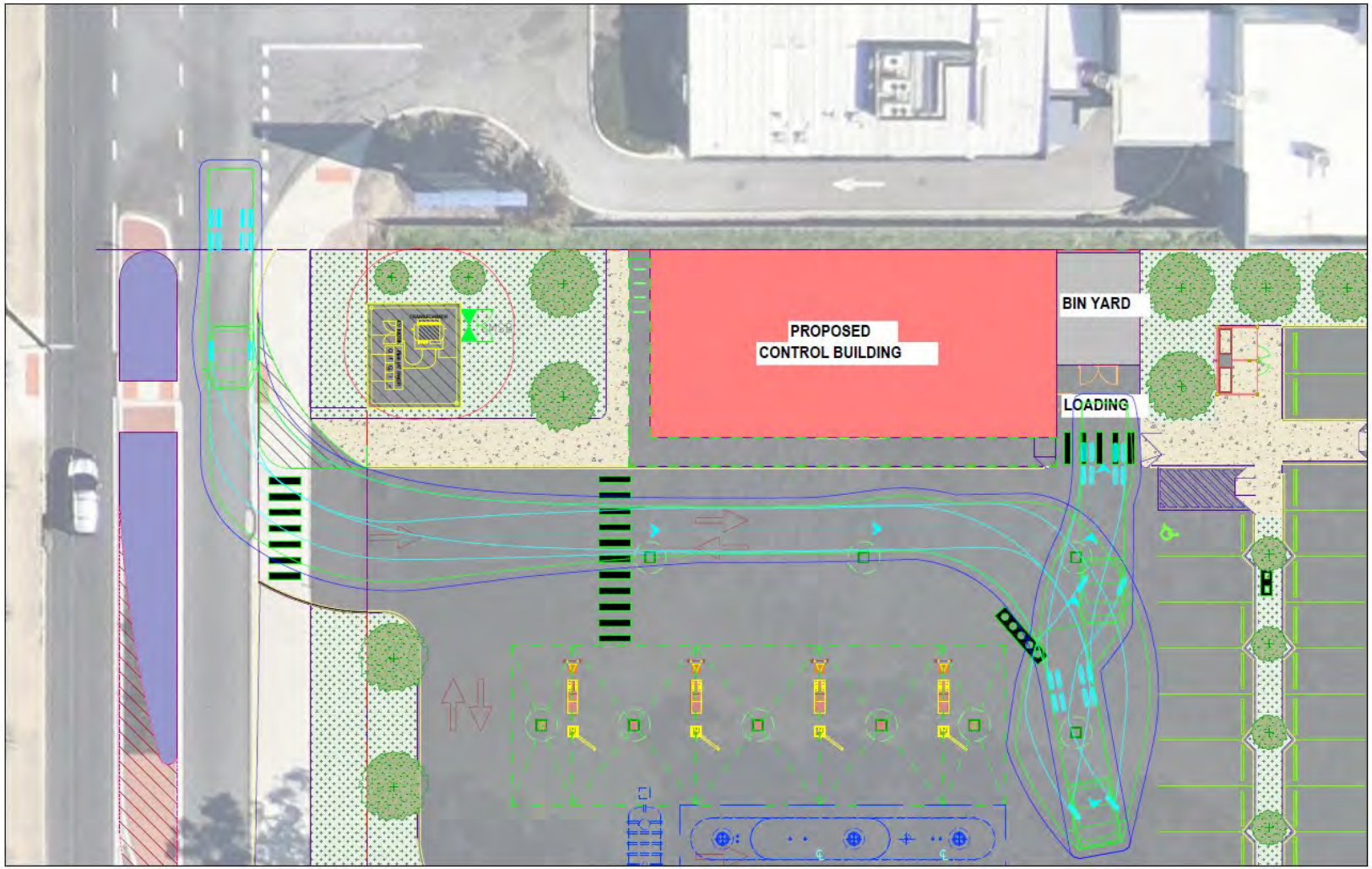
transcore



326 Hale Road, Wattle Grove
19.0m Fuel Tanker
Exit Onto Hale Road

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t24.265.sk53
06/10/2025
Scale: 1:300 @ A3

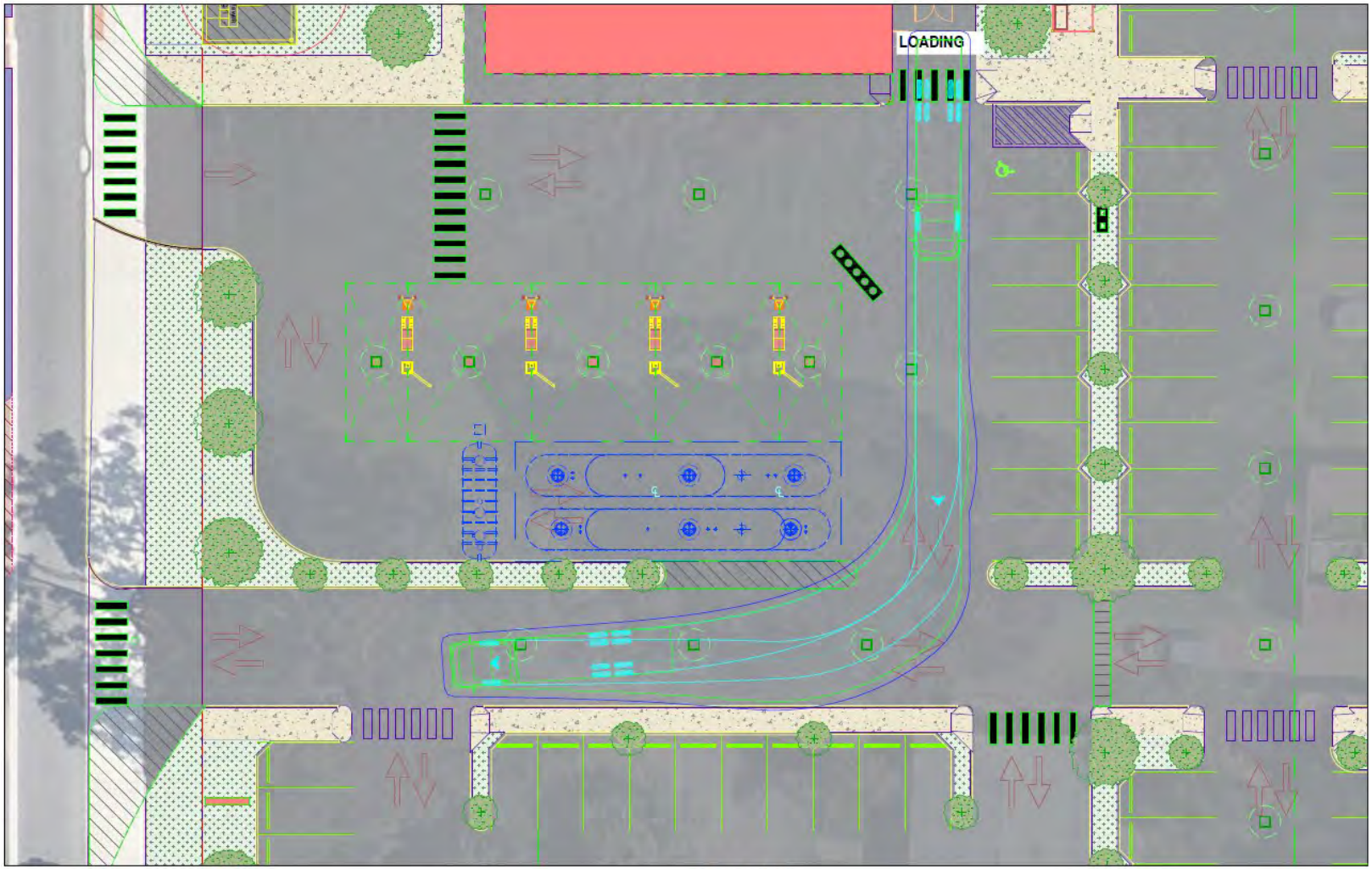


326 Hale Road, Wattle Grove
12.5m Service Vehicle
Bin Yard Access

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t24.265.sk54
06/10/2025
Scale: 1:200 @ A3

transcore

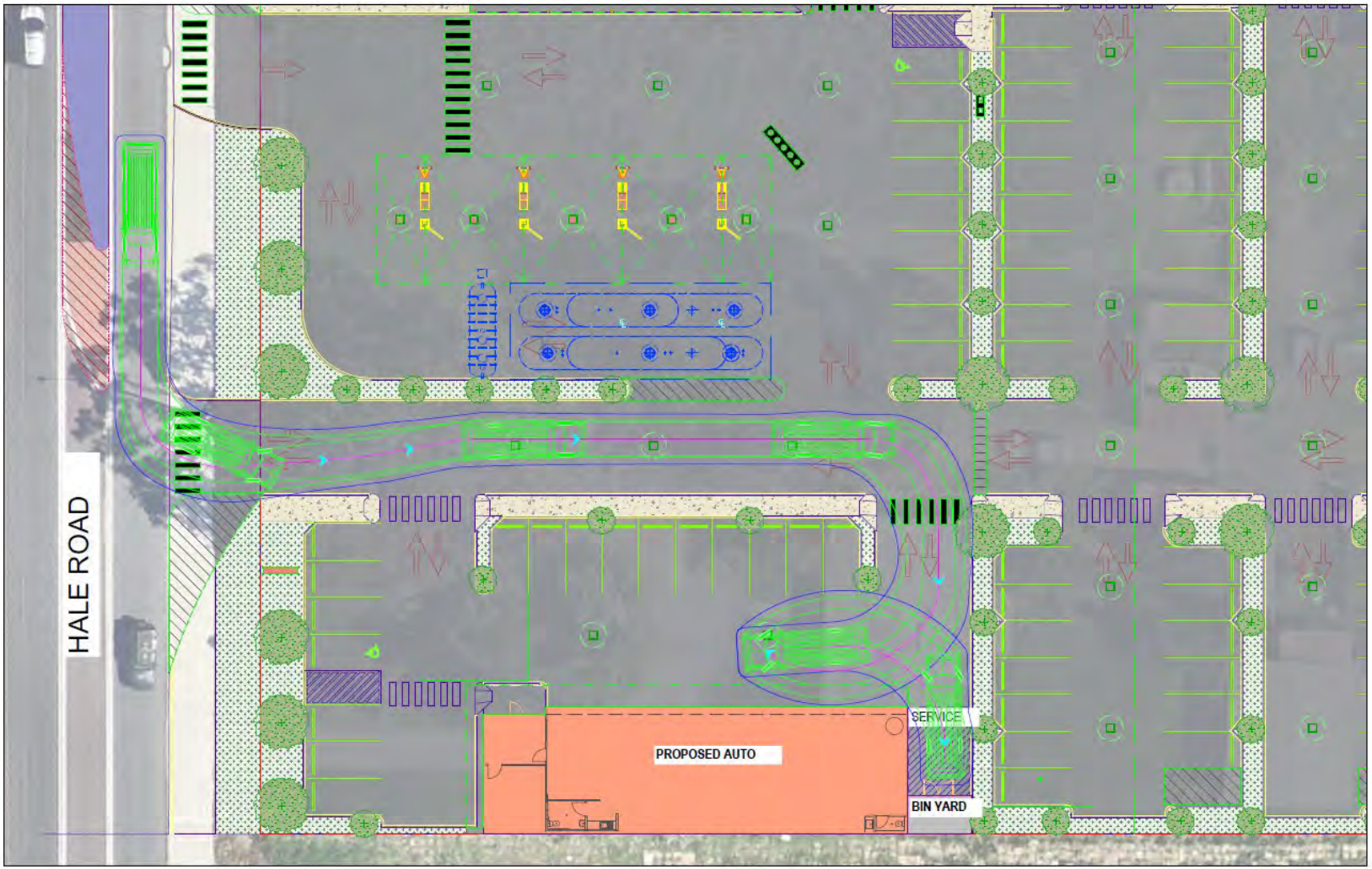


326 Hale Road, Wattle Grove
12.5m Service Vehicle
Bin Yard Egress

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t24.265.sk55
06/10/2025
Scale: 1:200 @ A3

transcore

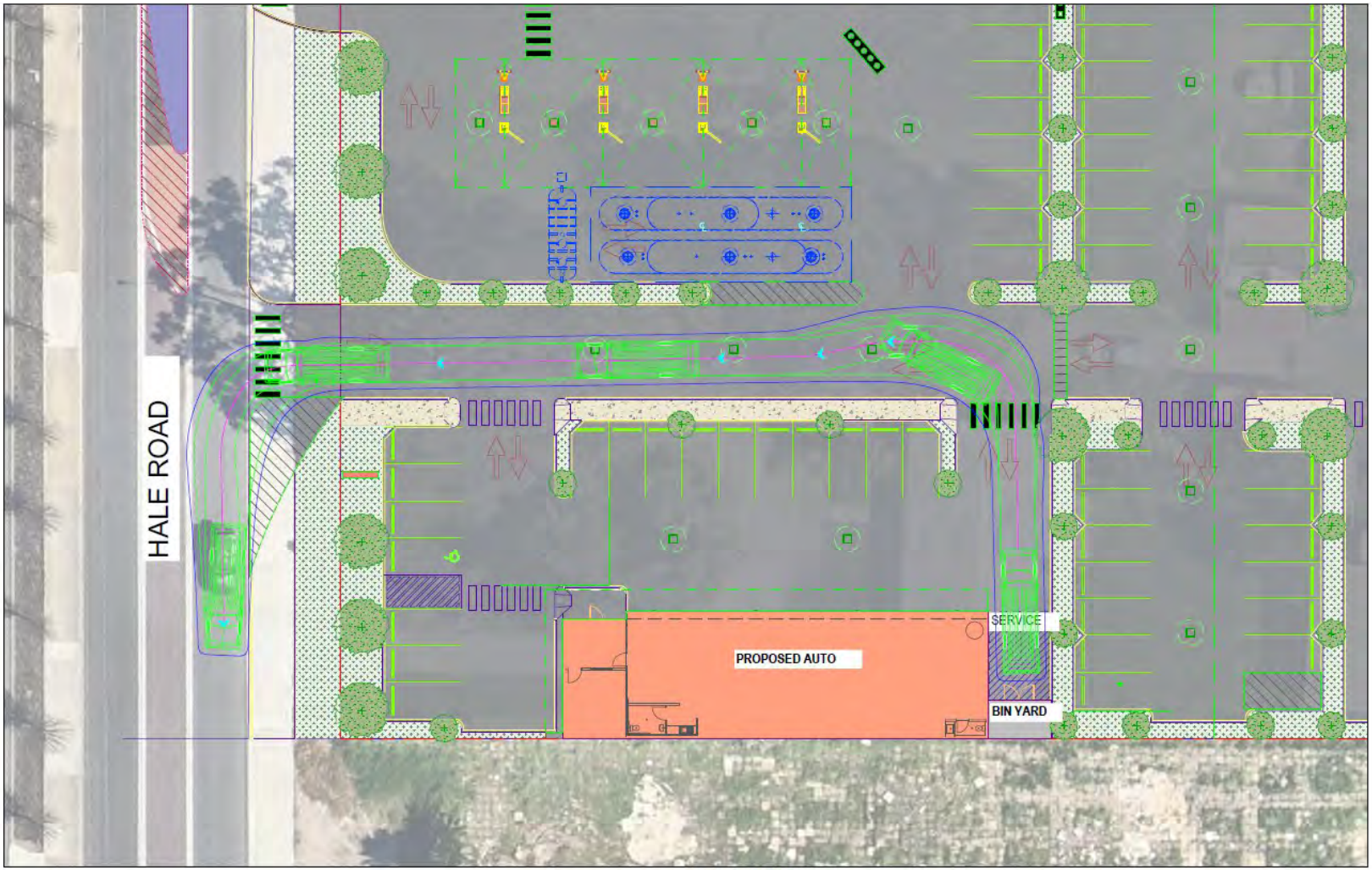


326 Hale Road, Wattle Grove
8.8m Service Vehicle
Proposed Fast Food Bin Area Entry

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t24.265.sk56
06/10/2025
Scale: 1:250 @ A3

transcore

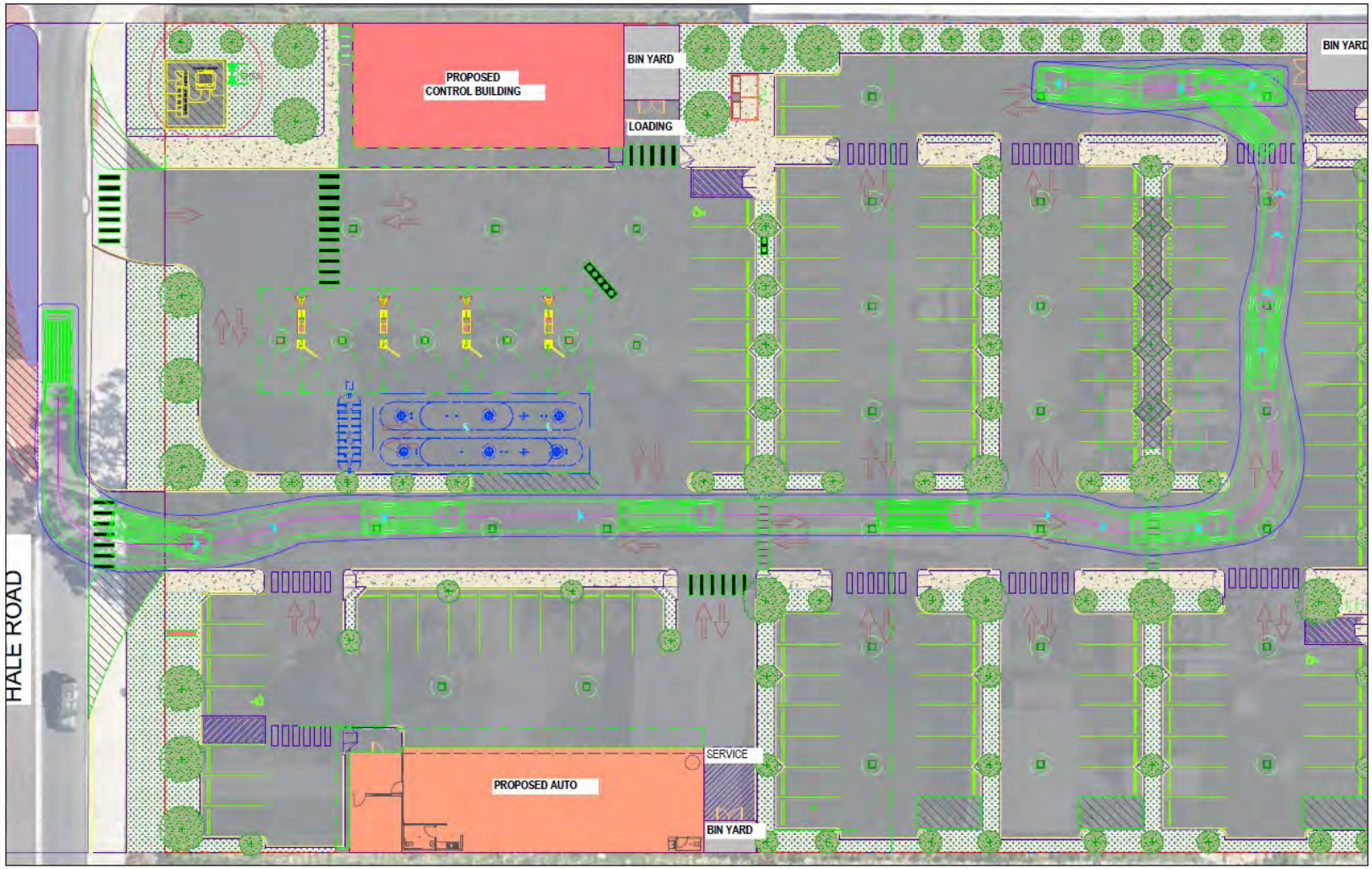


326 Hale Road, Wattle Grove
8.8m Service Vehicle
Proposed Fast Food Bin Area Exit

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

t24.265.sk57
06/10/2025
Scale: 1:250 @ A3

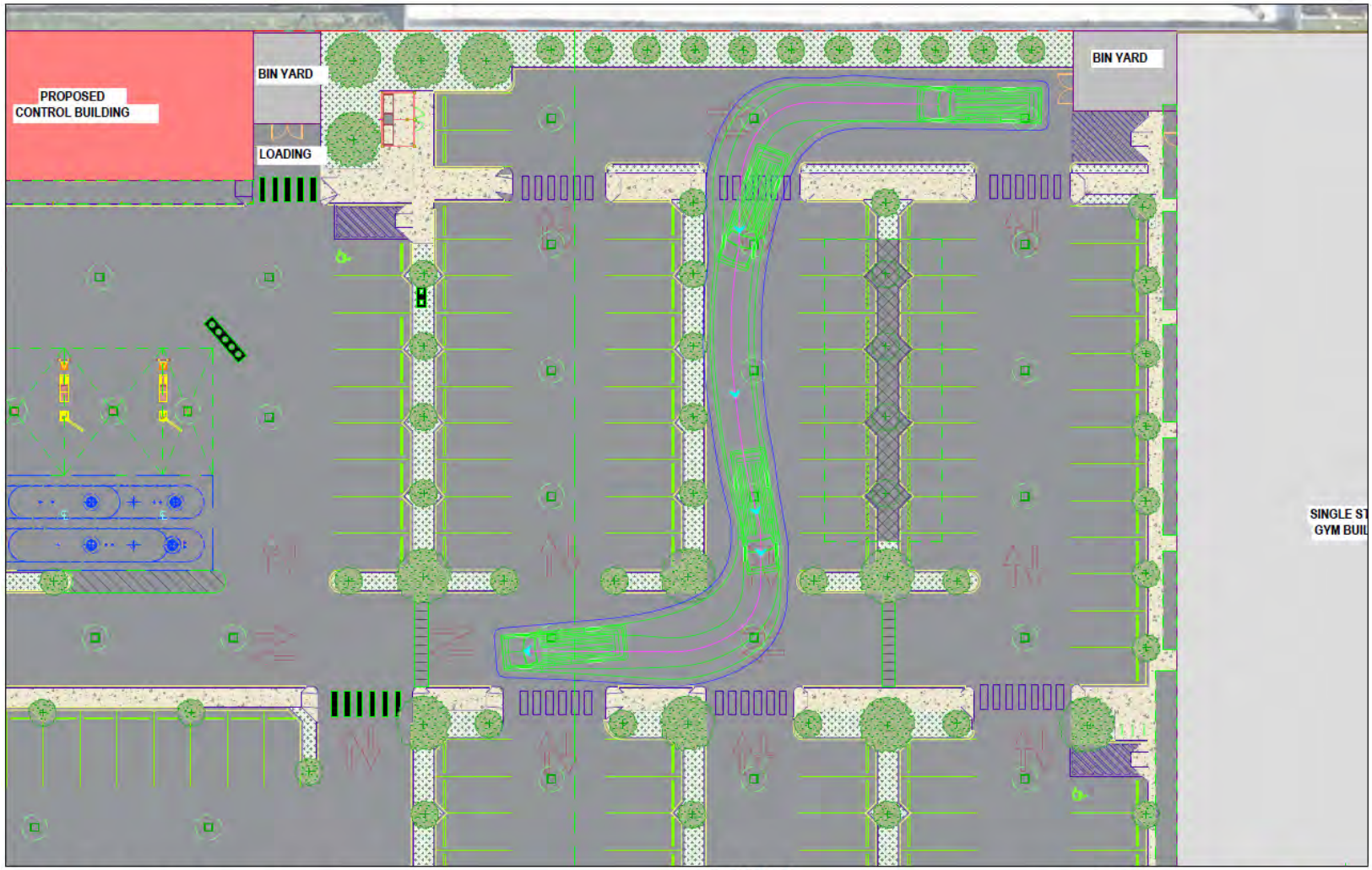
transcore



326 Hale Road, Wattle Grove
8.8m Service Vehicle
Gym Bin Yard Access

LEGEND
Vehicle Body
Wheel Path
500mm Clearance

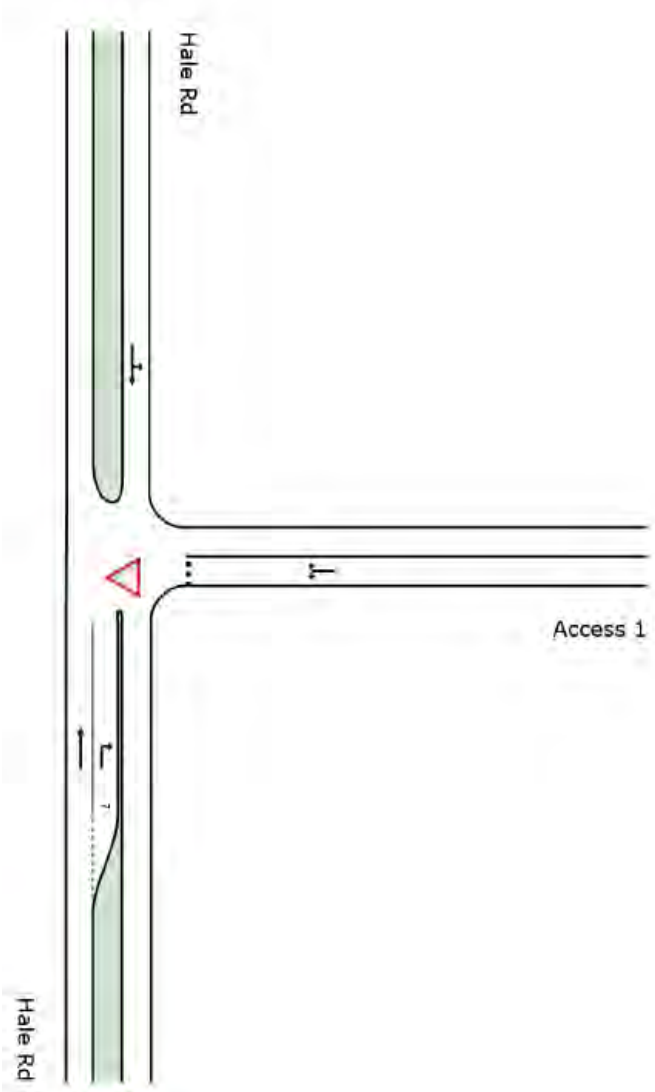
t24.265.sk58
06/10/2025
Scale: 1:300 @ A3


PROPOSED
CONTROL BUILDING
BIN YARD
LOADING
BIN YARD
SINGLE ST
GYM BUIL
326 Hale Road, Wattle Grove
8.8m Service Vehicle
Gym Bin Yard Egress
LEGEND
Vehicle Body
Wheel Path
500mm Clearance
t24.265.sk59
06/10/2025
Scale: 1:250 @ A3
transcore

Appendix C

INTERSECTION ANALYSIS

Engineering a better future for over 20 years!


Hale Rd
Access 1
Hale Rd

MOVEMENT SUMMARY

Site: [1 (2)] Hale Rd & Access 1 - 2026 - AM (2026)
Output produced by SIDRA INTERSECTION Version: 10.0.6.236

NA
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h]	Demand Flows [HV %]	Arrival Flows [Total veh/h]	Arrival Flows [HV %]	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh]	95% Back Of Queue [Dist m]	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Hale Rd															
2	T1	All MCs	295	5.9	295	5.9	0.161	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
3	R2	All MCs	19	2.0	19	2.0	0.016	6.9	LOS A	0.1	0.5	0.44	0.60	0.44	43.2
Approach			314	5.7	314	5.7	0.161	0.5	NA	0.1	0.5	0.03	0.04	0.03	59.1
North: Access 1															
4	L2	All MCs	31	2.0	31	2.0	0.068	1.4	LOS A	0.2	1.9	0.52	0.42	0.52	42.0
6	R2	All MCs	19	2.0	19	2.0	0.068	6.5	LOS A	0.2	1.9	0.52	0.42	0.52	41.9
Approach			49	2.0	49	2.0	0.068	3.3	LOS A	0.2	1.9	0.52	0.42	0.52	41.9
West: Hale Rd															
7	L2	All MCs	16	2.0	16	2.0	0.211	5.7	LOS A	0.0	0.0	0.00	0.03	0.00	30.4
8	T1	All MCs	360	8.5	360	8.5	0.211	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	59.6
Approach			376	8.2	376	8.2	0.211	0.3	NA	0.0	0.0	0.00	0.03	0.00	58.3
All Vehicles			739	6.7	739	6.7	0.211	0.6	NA	0.2	1.9	0.05	0.06	0.05	57.8

MOVEMENT SUMMARY

Site: [2 (2)] Hale Rd & Access 1 - 2026 - PM (2026)
Output produced by SIDRA INTERSECTION Version: 10.0.6.236

NA
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h]	Demand Flows [HV %]	Arrival Flows [Total veh/h]	Arrival Flows [HV %]	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh]	95% Back Of Queue [Dist m]	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Hale Rd															
2	T1	All MCs	486	5.9	486	5.9	0.266	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
3	R2	All MCs	21	2.0	21	2.0	0.017	6.7	LOS A	0.1	0.5	0.41	0.59	0.41	43.3
Approach			507	5.7	507	5.7	0.266	0.4	NA	0.1	0.5	0.02	0.02	0.02	59.3
North: Access 1															
4	L2	All MCs	35	2.0	35	2.0	0.086	1.2	LOS A	0.3	2.3	0.55	0.45	0.55	41.2
6	R2	All MCs	20	2.0	20	2.0	0.086	9.6	LOS A	0.3	2.3	0.55	0.45	0.55	41.1
Approach			55	2.0	55	2.0	0.086	4.3	LOS A	0.3	2.3	0.55	0.45	0.55	41.1
West: Hale Rd															
7	L2	All MCs	18	2.0	18	2.0	0.189	5.7	LOS A	0.0	0.0	0.00	0.03	0.00	30.4
8	T1	All MCs	319	8.5	319	8.5	0.189	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	59.6
Approach			337	8.2	337	8.2	0.189	0.4	NA	0.0	0.0	0.00	0.03	0.00	57.9
All Vehicles			899	6.4	899	6.4	0.266	0.6	NA	0.3	2.3	0.04	0.05	0.04	57.9

MOVEMENT SUMMARY

Site: [1] Hale Rd & Access 1 - 2036 - AM (2036)
Output produced by SIDRA INTERSECTION Version: 10.0.6.236

NA
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Hale Rd															
2	T1	All MCs	360	5.9	360	5.9	0.197	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
3	R2	All MCs	19	2.0	19	2.0	0.018	7.3	LOS A	0.1	0.5	0.48	0.63	0.48	43.0
Approach			379	5.7	379	5.7	0.197	0.4	NA	0.1	0.5	0.02	0.03	0.02	59.2
North: Access 1															
4	L2	All MCs	31	2.0	31	2.0	0.083	1.9	LOS A	0.3	2.2	0.58	0.52	0.58	40.8
6	R2	All MCs	19	2.0	19	2.0	0.083	9.3	LOS A	0.3	2.2	0.58	0.52	0.58	40.7
Approach			49	2.0	49	2.0	0.083	4.7	LOS A	0.3	2.2	0.58	0.52	0.58	40.8
West: Hale Rd															
7	L2	All MCs	16	2.0	16	2.0	0.258	5.7	LOS A	0.0	0.0	0.00	0.02	0.00	30.4
8	T1	All MCs	443	8.5	443	8.5	0.258	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.6
Approach			459	8.3	459	8.3	0.258	0.3	NA	0.0	0.0	0.00	0.02	0.00	58.6
All Vehicles			887	6.8	887	6.8	0.258	0.6	NA	0.3	2.2	0.04	0.05	0.04	58.0

MOVEMENT SUMMARY

Site: [2] Hale Rd & Access 1 - 2036 - PM (2036)
Output produced by SIDRA INTERSECTION Version: 10.0.6.236

NA
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Hale Rd															
2	T1	All MCs	595	5.9	595	5.9	0.326	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
3	R2	All MCs	21	2.0	21	2.0	0.018	7.1	LOS A	0.1	0.6	0.46	0.62	0.46	43.1
Approach			616	5.8	616	5.8	0.326	0.3	NA	0.1	0.6	0.02	0.02	0.02	59.3
North: Access 1															
4	L2	All MCs	35	2.0	35	2.0	0.114	1.6	LOS A	0.4	2.9	0.63	0.57	0.63	39.4
6	R2	All MCs	20	2.0	20	2.0	0.114	14.9	LOS B	0.4	2.9	0.63	0.57	0.63	39.3
Approach			55	2.0	55	2.0	0.114	6.5	LOS A	0.4	2.9	0.63	0.57	0.63	39.4
West: Hale Rd															
7	L2	All MCs	18	2.0	18	2.0	0.230	5.7	LOS A	0.0	0.0	0.00	0.03	0.00	30.4
8	T1	All MCs	393	8.5	393	8.5	0.230	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	59.6
Approach			411	8.2	411	8.2	0.230	0.3	NA	0.0	0.0	0.00	0.03	0.00	58.2
All Vehicles			1081	6.5	1081	6.5	0.326	0.6	NA	0.4	2.9	0.04	0.05	0.04	58.1

Submitter No.	Comment	City Response
1	Support - I support in having a health and fitness centre leisure centre. As a adult, I believe that all individuals should have this space for proper health and as a way to interact with the people in their community allowing them to make new and fun relationships, making out community a better place.	Noted – proposal with disperse land use proposed accords with the objectives of the City Of Kalamunda's Activity Centres Strategy.
2	Comment - Gather the above is a commercial development adjacent to the "Wattle Grove Shopping Centre". As a Wattle Grove resident I am interested to know the progress of this project and also what the tenancies will be. Badly need a "Hungry Jacks" or "McDonalds". Also a "clothing store" would be good.	Noted – updated will be provided in accordance with Regulation 39 of the DAP Regulations
3	Comment - The neighbouring Aldi store is where we regularly shop. So if the development enhances the variety of businesses, I support the application as long as there are the required parking bays. The entrance and exits from Hale Road will not add to any traffic restrictions	Noted – Parking bays assessment has been undertaken in accordance with the land use assessment and Local Planning Scheme No. 3 (LPS3) Table 3 Parking Requirements. A minor variation of just 13 bays was proposed which is capable of support based on the capacity of the uses to avail of reciprocal use, the availability of public transport and pedestrian connectivity and the respective peak demand of the land uses.
4	Support - I support the proposal	Noted
5	Support - I support this project and would love to see this project go through.	Noted
6	Support - Happy with proposal as long noise restrictions are in place during after-hours to minimise impact to surrounding residential areas.	Noted – An Environmental Noise Impact assessment has been provided to support the application and the City has recommended appropriate conditions to manage ongoing amenity impacts for surrounding properties.

City of Kalamunda

City of Kalamunda Design Review Panel

Minutes

ITEM 1 – 326 Hale Road, Wattle Grove – Proposed Convenience Store, Fast Food Outlet, Shop & Recreation – Private

11/06/2025

Meeting Date and Time:	11/06/2025 4pm		
Meeting Number:	DRP2025/3		
Meeting Venue:	City of Kalamunda Administration Centre 2 Railway Road, Kalamunda		
Meeting Items:	Item 1	326 Hale Road, Wattle Grove – Proposed Convenience Store, Fast Food Outlet, Shop & Recreation – Private	
Attendance			
DAC Members:	David Barr	Design Advisory Committee Member (Chair)	
	Jurg Hunziker	Design Advisory Committee Member	
	Walter van der Loo	Design Advisory Committee Member	
Officers in attendance:	Anjali Parmar	Senior Statutory Planner	
	Tracey Cooney-Walshe	A/Senior Statutory Planner	
Apologies	Ross Montgomery	Design Advisory Committee Member	
Declarations of Interest	n/a		
Applicants:	Nik Hidding	Hidding and Associates	
	Nik Preston	Hodge Collard Preston	

Item 5.1 –

DAC Recommendations:	• Recommend upgrades to the façade treatments of the gym – consideration of localization of national branding. • Further information required on sustainability – specifically the commitments to be undertaken. • Further consideration required on CPTED across the site. • No provision for outdoor quality alfresco dining for patrons. • No detailed context and character assessment has been done on a deeper level – regional level, suburb level and then adjacent uses to work out colour, rhythm and tone to inform the development • Opportunities and constraints of the site – how could 1x tree be retained which could be a success • Consideration of the abutting park and creek and the residential area, as the blank wall will be imposing and not an appealing elevation for residents or park users.
General Comments	• Loss of large trees on site is a significant loss to the character and amenity of the locality Not enough effort is made to justify the removal of the trees or offset their loss. • Concerned about the lack of permeability from this site to the public open space. The gym proposed in this application presents a significant barrier to the access from this site to the rear public open space and should consider integration or capitalization of the space. • Car dominated site – rear access to be reconsidered/parking shortfall can be considered where a rationalized/intuitive access arrangement is achieved. • It is noted that all 3 proposed land uses are predicated on car use and therefore require a lot of associated parking. • Concerns with the requirement to drive past the Fast-Food Outlet portion and queueing lanes to access the gym at the rear of the site • Good use of bike racks around the buildings to promote active transport • Scale and built form is consistent with the remainder of the developments on Hale Road • Concerns with the connectivity within the site

ASSESSMENT MATRIX		Supported
		Pending further attention
		Not supported
		Not considered / discussed
		Not addressed as further information required

DESIGN PRINCIPLE	EVALUATION	DRP COMMENT
CONTEXT & CHARACTER		Strengths • Continuation of rhythm to street edge appropriate. Weaknesses • Missed opportunity in design as proposal does not seek to elevate project from adjoining sites simply responds to them. • Lack of consideration of local natives in planting, local materials and local character. Recommendation • To strengthen the character of the buildings, there are opportunities to address this through the landscape, signage and retaining walls rather than only relying on the building themselves. • Revisit the Context & Character principle and conduct analysis that assists in understanding the surrounding site conditions. Consider onsite vegetation, adjacent park & creek as a benefit to enhance the project rather than a constraint. Aim to remove the austere blank walls and enhance through local analysis, colours and materials & landscaping.
LANDSCAPE QUALITY		Strengths • Side property buffers reasonable Landscaping shown in verge Weaknesses • Missed opportunity for significant tree retention and interface to public open space. • Inadequate proposed new tree canopy including lack of large tree species. • Footpath materiality broken up too much by vehicle functions in car park and truck entries at crossovers • Proposed planting densities are very low for nominated species Recommendation

		• Demonstrate 20% canopy cover at maturity as recommended by the Urban Forest Strategy, to include shade trees to parking areas. • Include a landscape designer in site planning to strengthen landscaping proposal. • Consider tree retention of large well established trees on site.
BUILT FORM & SCALE		Strengths • Reasonable buffer treatments for parking area are provided which is a good outcome. Weaknesses • Scale and parking design an issue for site legibility and functionality. Recommendation • Revisit parking requirements with the City to assist in parking provision and overall functionality.
FUNCTIONALITY & BUILD QUALITY		Strengths • Approach to onsite linkages (car/pedestrian) noted. • Overall site safety approach well thought out but fundamental site planning issues still need to be addressed. Weaknesses • Noted it is likely that proposed crossover locations will need to be revised based on resolution of Liveable Neighbourhoods requirements & proximity to adjacent approved developments. • Missed opportunity to capitalize on natural light to gym building. • Part of footpath routes are too convoluted e.g. near convenience store • Path too narrow between gym and parking Recommendation • Adjoining land uses benefit from the access to the public open space to the rear of the site which is not possible with this current design due to the gym landlocking the rear of the site. • Opportunities for gym building to open up to the rear POS. Functionality and connectivity of the gym to the POS could be improved • Investigate linkages for pedestrian and vehicles based on revised crossover design/layout.

SUSTAINABILITY		Strengths • It was noted that report was provided but unfortunately too late for the panel to interrogate. Weaknesses • Concerns about sustainability consultant being engaged late into the project design, which is important for tree retention and the significant trees on the site which define the site. Recommendation • Consider opportunities for sustainability through the bitumen (red colour bitumen is better than black bitumen) • Panel supports inclusion of intended sustainable measures not aspirational intent
AMENITY		Strengths • Pedestiran Links from the street • Pedestrian circulation • Bike racks provided Weaknesses • Lack of EOT facilities • Lack of outdoor dining facilities • Lack of connectivity and interaction with the POS. Recommendation • Consider number of crossovers and location • Provide End of trip facilities for all the buildings • Provide break out spaces / communal external spaces to be used for workers on site • Improve links to the rear of the site for landowner and users.
LEGIBILITY		Strengths • Pedestrian pathways noted, but to be improved upon • Good to see a connection of pedestrian entry to the restaurant • Well defined entry structure to gym entry Weaknesses • Path network approach has some merit, but this does not match the landscaping plan and is not sufficiently legible – needs to be consistent between both plans and easy to use. Improve wayfinding to Gym • Service station access/egress should be self-contained.

		Recommendation • Consider way finding within the site - signage • Consider a direct driveway to the gym rather than passing through the other uses • Signage coordination across the lot. • Improve upon pedestrian access with clear lines of sight
SAFETY		Strengths • CPTED principles have been covered • GYM 24Hr operation activates the space. Weaknesses • Pedestrian and car conflict Recommendation • Consider an overall lighting strategy – consider dark sky requirements • Lighting along the paths for safety • Clarity on the detailing for safety on the large truck movements on the verge and mountable kerbs.
COMMUNITY		Strengths • Services to the benefit of the community. Weaknesses • The site currently has trees worthy of retention, which if removed will be a loss to the community • No community amenities provided on site Recommendation • Revisit tree retention and community facilities to be provided.
AESTHETICS		Strengths • High quality materials for GYM building. Weaknesses • The Ryderwear Building has the main opportunity for design aesthetics, whereas the remainder of the developments on site have a set building design and colours/materials - very generic. • Aesthetic of the fast food outlet, service station are not good outcomes • Rear elevation of the gym needs to be revisited. Recommendation • Opportunity to guide the operator of the uses at the front of the site to create something which is unique to

		Kalamunda, rather than the standard corporate branding. This should be considered in the context and character analysis that should influence the proposal.

Chair Approval:	**DAVID BARR**
Chair Signature:	
City of Kalamunda Contact:	Anjali Parmar Anjali.parmar@kalamunda.wa.gov.au 9257 9999

City of Kalamunda Design Review Panel

Minutes

ITEM 2 – 326 HALE ROAD, WATTLE GROVE

27 AUGUST 2025

Meeting Date and Time:	27 August 2025 5:00pm	
Meeting Number:	DRP2025/4	
Meeting Venue:	City of Kalamunda Administration Centre 2 Railway Road, Kalamunda	
Meeting Items:	Item 2	Lot 192 (326) Hale Rd, Wattle Grove
<u>Attendance</u>		
DRP Members:	David Barr	Design Advisory Committee Member (Chair)
	Jurg Hunziker	Design Advisory Committee Member
	Walter van der Loo	Design Advisory Committee Member
	Suzie Zuber	Design Advisory Committee Member
	Ross Montgomery	Design Advisory Committee Member
Officers in attendance:	Cardia Mariani	Principal Planner
	Tracey Cooney-Walshe	Statutory Planner
Apologies	Nik Hidding	Applicant
Declarations of Interest	Nil	
Applicants:	Nic Preston	Hodge Collard Preston

Item 5.2 –

General Comments	The DRP commends the applicant on the changes from the first review of the proposal and that the changes made are positive. Opportunity to enhance landscaping for lot to be considered and discussed with the shire. DRP identified 7 car bays that if removed could provide large tree planting that will provide significant shade and amenity benefits. Resolve blind bays access/egress and pedestrian safety issue.

ASSESSMENT MATRIX		Supported
		Pending further attention
		Not supported
		Not considered / discussed
		Not addressed as further information required

DESIGN PRINCIPLE	EVALUATION	DRP COMMENT
CONTEXT & CHARACTER		Strengths • The DRP notes that the fast-food outlet has been removed and the new proposed use allows for the design and siting of the layout to be significantly improved. • The interface with the POS is an improvement and the site now gives something back to the broader community. • Creating gym spaces looking out over the POS is highly supported. Weaknesses • The DRP advises that existing trees play a huge role in the character and context of the area and disappointed none have been retained. • The glazed gym-facade along the POS boundary has no shading or screening. Recommendations • Further shading to the glazing/POS should be considered

		• Buffer/privacy screening to the POS to be resolved (will people walk directly abutting the window where people will be working out in the gym). • Additional tree planting is suggested to offset the loss of significant existing trees.
LANDSCAPE QUALITY		Strengths • Increased landscaping is seen as an initial improvement. Weaknesses • Further consideration required for the loss of the existing trees on site and the proposed spacing of the trees seems sparse. • There is minimal tree and shade amenity provided to the pedestrian routes. • The southern elevation/side of the gym building still lacks tree planting. • Lack of detail on green space next to gym. Recommendations • Further details required on the green space, landscaping relationship with the existing POS to be resolved. • Consider strategic tree planting within the POS as a shade opportunity to glazed facade. • The DRP recommends that a minimum of 1 tree per 4 parking bays is proposed. • Consider a street "avenue" along the main carpark access aisle and select large distinctive (preferably native) species to have a clear connection from the street to the depth of the site and the building at the rear. • Consider the loss of a few more parking bays to accommodate further large species tree planting. • Further consideration is required on the tree species to facilitate increased canopy cover.
BUILT FORM & SCALE		Strengths • The proposal is an improvement from the original proposal considered by the DRP. • The suggestion of the pitched roofs is a good addition to the proposal. Weaknesses • Consider opportunities to provide defensible space between Gym/POS • Resolve oblique view of pitched roofs and 'box' mass behind.

		Recommendations • The auto building has a pitched roof into a box – consider having a clearly defined roof style as opposed to a hybrid style subject to the operational needs.
FUNCTIONALITY & BUILD QUALITY		Strengths • Red bitumen and landscaping supported – build on that approach. Weaknesses • The DRP notes that the paint on the concrete tilt up panels may be an affordable option, but recommends consideration of textured paint. • Resolve internal gym layout • ACROD bay conflicts with gym entrance – the bollard lying in the center of the pathway. Recommendations • Consider having a defensible space against the gym windows and the POS and having awnings or shading to stop sun reflecting into the gym. • Consider the removal of some car parking bays to provide for additional shade trees in key locations. • Consider slight realignment of the footpath if possible, to align the pedestrian access through the car park with the building entry. • CPTED principles to be considered for POS connection.
SUSTAINABILITY	WHITE	Strengths • Not enough information provided Weaknesses • Site specific report required with clear actionable items. Recommendations • Consider glazing or canopy over the windows fronting the POS to ensure the sun/heat can be managed.
AMENITY		Strengths • The aesthetic of the proposal is good, however consider further accents to avoid a monotone monochrome outcome (the DRP notes that this may come from branding signage). • The outdoor exercise area and gym outlook over POS are commended.

		Weaknesses • Clearer entry to gym required. • Rumble strips to arterial access roads to be considered. • Inferred boundary to gym/POS area required. • Internal layout could make better use of POS outlook and views from training areas (e.g. location of men's changing and boxing area). Recommendations • Consider a bike path or how bicycle users may access the site. • Consider shading as much of the hardstand as possible with trees to improve the overall amenity and user experience. • Provide details on lighting strategy for 24 hr operation • CPTED considerations for gym users. • Consider repositioning the changing rooms and boxing/Pilates studios.
LEGIBILITY		Strengths • The DRP notes the legibility has improved from the original design review. Weaknesses • Boundaries to the gym/POS area to be resolved to clarify public footpath and any outdoor exercise area. Recommendations • Consider making the pedestrian route a more shaded thoroughfare. • Consider the entry point of the gym to line up with the pedestrian paths to have a more legible entry. • Consider using trees instead of bollards and losing a couple of parking spaces across the site to plant more trees..
SAFETY		Strengths • The passive surveillance from the gym onto the POS with the windows is positive. Weaknesses • The parking areas along the north-east boundary may result in cars needing to reverse back over pedestrian crossings. • Consider lighting and safety (CPTED) for the gym users at the rear of the site which is 24/7 (lighting/cameras etc)

		Recommendations • Consider an aesthetically pleasing rumble strip for pedestrians. • Consider passive surveillance and safety measure in the POS particularly at night time. • Consider night-time screening of glazing to POS.
COMMUNITY		Strengths • The introduction of the POS area against the gym at the rear of the site is a positive aspect of the proposal and allows for a public pathway into the site to the community's benefit. Weaknesses • Unresolved border between POS and Gym outdoor space Recommendations • Public art strategy • Strong landscaping to gym outdoor space and buffer strip to POS.
AESTHETICS		Strengths • The DRP commend the more neutral colour palette that reflects the gym's branding, unifies the development and allows for other brand signage to be applied, but not dominant. • The curved facade of the gym is a successful feature and could be picked up in the other buildings. Weaknesses • Consider softening the monochrome colour palette and hard concrete materials with natural materials and landscaping. • Be clear how signage will be contained on the front buildings to respect the development 'brand'. • Visual weight of canopies to front tenancies. Recommendations • Continue the fine grain design process to ensure the unifying development aesthetic works for all buildings within the site .

Chair Approval:	**David Barr**

Chair Signature:	
City of Kalamunda Contact:	Cardia Mariani Principal Statutory Planner