



PART C – CITY OF KALAMUNDA

1. Declarations of Due Consideration

2. Disclosure of Interests

3. Form 1 DAP Applications

- 3.1 Lot 17 (No. 581) Welshpool Road East, Wattle Grove - Proposed Warehouse/Storage and Incidental Office – DAP/25/03012

4. Form 2 DAP Applications

Nil

5. Section 31 SAT Reconsiderations

Nil

**Part C – Item 3.1 – LOT 17 (No. 581) WELSHPOOL ROAD
EAST, WATTLE GROVE – PROPOSED
WAREHOUSE/STORAGE & INCIDENTAL OFFICE**

**Form 1 – Responsible Authority Report
(Regulation 12)**

DAP Name:	Metro Outer Development Assessment Panel
Local Government Area:	City of Kalamunda
Applicant:	MW Urban
Owner:	SDA HOLDINGS
Value of Development:	\$10.9 million
Responsible Authority:	City of Kalamunda
Authorising Officer:	Regan Travers, Manager Statutory Approvals Cardia Mariani, Principal Statutory Planner
LG Reference:	DA25/0453
DAP File No:	DAP/25/03012
Application Received Date:	20 October 2025
Report Due Date:	6 March 2026
Application Statutory Process Timeframe:	90 Days with an additional 21 days agreed.
Attachment(s):	1. Development Plans 2. Stormwater Drainage Management Plan 3. Traffic Impact Statement 4. BAL Certificate and Assessment 5. Planning Report 6. MRWA Referral Response 7. DPLH Road Planning Referral Response 8. City of Gosnells Letter of Support

Responsible Authority Recommendation

That the Metro Outer Development Assessment Panel resolves to:

1. **Accept** that the DAP Application reference DAP/25/03012 is appropriate for consideration as a “Warehouse/Storage” land use and compatible with the objectives of the zoning table in accordance with Clause 4.2.4 of the City of Kalamunda Local Planning Scheme No. 3;
2. **Approve** DAP Application reference DAP/25/03012 and accompanying development 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. 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.

Plan No.	Rev.	Title	Date	Prepared by
A100	B	Site Plan	19.01.26	ParsonsGroup
A101	A	Ground Floor	12.09.25	ParsonsGroup
A102	A	First Floor	12.09.25	ParsonsGroup
A103	A	Elevations	12.09.25	ParsonsGroup
C155/01	1	Landscape Plan	26.09.25	Naturesque
6	0	Stormwater Drainage Management Plan	05.02.26	Development Engineering Consultants
7	2	Traffic Impact Statement	Jan. 26	MW Urban
250647	1	Bushfire Attack Level & Planning Report	25.09.25	Bushfire Prone Planning

3. For the duration of the development, all stormwater must be contained on site and connected to the local drainage system in accordance with the approved Stormwater Drainage Management Plan and the Maddington Kenwick Strategic Employment Area Urban Water Management Plan to the specification and satisfaction of the City of Kalamunda
4. The Stormwater Drainage Management Plan is to be implemented, and all required drainage infrastructure thereafter maintained, to the satisfaction of the City of Kalamunda.
5. A post geotechnical report is to be submitted in accordance with Australian Standards, certifying that the land is physically capable of development and detailing site conditions with respect to soil, groundwater and stormwater disposal to the satisfaction of the City of Kalamunda.
6. Prior to occupation of the development, the applicant/landowner must enter into an agreement (Deed) to the satisfaction of the City of Kalamunda and the applicant/landowner to enable the City of Kalamunda to acquire a portion of Lot 17 (No. 581) Welshpool Road East, Wattle Grove as a road reserve at no cost to facilitate a road realignment at the intersection of Welshpool Road East and Coldwell Road. The Deed must be prepared by the City's solicitors and costs associated with the preparation and execution of the deed of agreement are to be borne by the applicant/landowner.

7. Prior to occupation permit being granted of the development, an Interim Development Contribution Arrangement (IDCA) being prepared by the landowner in accordance with City of Kalamunda' Local Planning Policy 25 (Interim Development Contribution Arrangements) and executed by all parties, for the applicant to contribute towards the cost of providing common infrastructure as established through Local Planning Scheme Amendment No. 101, to the City of Kalamunda Local Planning Scheme No.3 when gazetted. Such arrangements are to be at the cost of the applicant and to the satisfaction of the City of Kalamunda.
8. Prior to an occupation permit being granted for the development, all crossovers shall be designed and constructed to the specifications and satisfaction of the City of Kalamunda.
9. Redundant vehicle crossover(s) to be removed and the kerbing, verge, and footpath (where relevant) reinstated with grass or landscaping to the satisfaction of the City of Kalamunda.
10. Prior to an occupation permit being granted for the development, all hardstand areas shall be paved, sealed and drained to the satisfaction of the City of Kalamunda.
11. For the duration of development, the incidental use of office shall be restricted to use by the occupier of the warehouse and must not be made available for public use.
12. Prior to an occupation permit being granted of the development, the landowner/applicant contributing towards public art, pursuant to City of Kalamunda Local Planning Policy 26 by providing art on-site to the satisfaction of the City of Kalamunda.
13. Prior to applying for a building permit, a Construction Management Plan must be prepared by the landowner/applicant and approved by 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. Traffic management plans during construction, including any proposed road closures;
 - 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.

14. All landscaping noted in the approved Landscape Plan shall be planted in the first available planting season after the initial 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 shall be replaced at the landowners cost to the satisfaction of the City of Kalamunda.
15. The applicant is required to engage an appropriately qualified acoustic consultant (such as a member of the Australian Acoustical Society or the Association of Australian Acoustical Consultants) to undertake a detailed noise assessment in relation to the Environmental Protection (Noise) Regulations 1997 to the satisfaction of the City of Kalamunda prior to commencing the development. Where such an assessment finds the proposal fails to meet the legislative limits the proponent must submit a noise mitigation plan for approval of the City of Kalamunda prior to commencing the development.
16. Lighting for the proposed development is to comply with AS 4282-1997 – Control of the obtrusive effects of outdoor lighting.
17. All existing septic sewer systems including all tanks, pipes and associated drainage systems (soak wells or leach drains) are to be decommissioned, removed, filled with clean sand and compacted. The applicant must provide a statutory declaration to the City of Kalamunda stating that the site has been inspected and all effluent disposal systems have been removed. A pro-forma for this declaration is available from the City of Kalamunda.
18. Prior to occupation of the development, all boundary fencing must be visually permeable and no greater than 2.1 metres in height to demonstrate compliance with the City of Kalamunda's Local Planning Policy 19 (Kalamunda Wedge Industrial Area – Precinct 3A Design Guidelines) to the satisfaction of the City of Kalamunda.
19. Prior to occupation of the development, bicycle facilities shall 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.
20. Prior to an occupation permit being granted for the development, all car parking areas must meet the following requirements:
 - i. The provision and maintenance of a minimum of 32 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.
21. Prior to occupation of the development, a notification is to be placed on the certificate(s) of title of the proposed lot(s) with a Bushfire Attack Level (BAL) rating of 12.5 or above, advising of the existence of a hazard or other factor. Notice of this notification is to be included on the diagram or plan of survey (deposited plan).

The notification is to state as follows:

“This land is within a bushfire prone area as designated by an Order made by the Fire and Emergency Services Commissioner and is subject to a Bushfire Management Plan. Additional planning and building requirements may apply to the development on this land.”

22. No development other than landscaping is to be located within the land requirement for the future upgrade of Welshpool Road East / Coldwell Road intersection as shown on the Site Plan prepared by Parsons Group, Dwg No.A100 (Rev B) dated 19 January 2026.
23. Landscaping of the verge shall be completed in accordance with City’s “Verge Development Guidelines” and the verge swale needs to be protected at all times.
24. No vegetation within the Welshpool Road East road reservation is approved to be removed and instead must be retained and protected for the duration of the development.
25. No earthworks are to encroach onto the Welshpool Road East Road Reserve.
26. Stormwater discharge shall not exceed pre-development discharge to Welshpool Road East Road Reserve.
27. Illumination of signage must not exceed 300 cd/m² (candela per square metre) during the daytime, and 150 cd/m² during the night-time, and not flash, pulsate or chase during all hours for the duration of development.
28. 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.

Advice Notes

1. A new effluent disposal system that complies with the *Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulation 1974* must be installed.

2. The applicant is advised that an application for a Secondary Treatment System with nutrient retention is required.
3. All material known or suspected to contain asbestos is to be removed and disposed of in accordance with the Environmental protection (Controlled Waste) Regulations 2004 and the Health (Asbestos) Regulations 1992. Please note an Asbestos Management Plan may be required prior to issue of a demolition licence.
4. The applicant is advised that an “Application to Construct or Install an Apparatus for the Treatment of Sewage” must be submitted and approved before a building licence will be issued. The application form can be found at: <https://www.kalamunda.wa.gov.au/building-development/health/effluent-disposal>
5. 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.
6. 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”
7. Any damage to public assets arising during the course of the development activity must 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.
8. With regard to Development Contributions, Amendment No. 101 to City of Kalamunda Local Planning Scheme No.3 is viewed by the City to be a seriously entertained planning proposal, which will provide for developer contributions for community infrastructure.
9. 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.
10. With regard to verge vegetation within the Welshpool Road East Road Reserve, no vegetation is permitted to be modified for the purpose of improving visibility and legibility of advertising signage.
11. The applicant is required to submit an application form to undertake works within the road reserve prior to undertaking any works within the road reserve. Application forms and supporting information about the procedure can be found on the Main Roads website.
12. 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.

13. In regards to Public Art, the landowners are advised that a public art contribution of \$109,000 applies to this approval, which has been conditioned to be provided on-site.

Details: outline of development application

Region Scheme	Metropolitan Region Scheme
Region Scheme - Zone/Reserve	Industrial
Local Planning Scheme	City of Kalamunda Local Planning Scheme No. 3
Local Planning Scheme - Zone/Reserve	Light Industry
Structure Plan/Precinct Plan	N/A
Structure Plan/Precinct Plan - Land Use Designation	N/A
Use Class and permissibility:	"Warehouse/Storage" – 'P' (Permitted) Use "Office" – 'D' (Discretionary) Use
Lot Size:	10024m ²
Existing Land Use:	Residential
State Heritage Register	No
Local Heritage	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Heritage List <input type="checkbox"/> Heritage Area
Design Review	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Local Design Review Panel <input type="checkbox"/> State Design Review Panel <input type="checkbox"/> Other
Bushfire Prone Area	Yes
Swan River Trust Area	No

Proposal:

The development application seeks approval for a Warehouse/Storage and Incidental Office land use at Lot 17 (581) Welshpool Road East, Wattle Grove. The key components of the development can be seen at Attachment 1 and are summarised as follows:

Proposed Land Use	Warehouse/storage
Proposed Net Lettable Area	7634m ²
Proposed No. Storeys	2
Proposed No. Dwellings	N/A

- Two (2) warehouse buildings (7634m²)
- One (1) incidental office (140m²)
- Thirty-four (34) total car parking bays
- One (1) crossover for access and egress from Coldwell Road

Background:

Site Description

The subject site is located within the Maddington Kenwick Strategic Employment Area (MKSEA). The site is located within Special Control Area 6.8 – Kalamunda Wedge Precinct 3A under the City of Kalamunda Local Planning Scheme No.3 (LPS3) and is subject to Local Planning Policy 19 - Maddington Kenwick Strategic Employment Area (MKSEA) Design Guidelines (LPP19)

Under LPP 19, the site is subject to planned road widening along Coldwell Road and the intersection between Coldwell Road and Welshpool Road East as depicted in Figure 7 of LPP19 (Excerpt provided below). This road land is required to facilitate intersection upgrades and is to be vested to the Crown. Vehicle access to the site is obtained via Coldwell Road. With future road widening taken into account, the site has a practical lot area of 8,817sqm.

In summary, the subject site is described as follows:

1. Zoned 'Industrial' under the Metropolitan Region Scheme (MRS) and 'Light Industry' under the LPS3
2. Bounded by Welshpool Road East to the north and Coldwell Road to the east. The adjoining lot to the west is also zoned 'Light Industry' under LPS3. The lots across Coldwell Road to the east are zoned 'Special Rural' and the lots across Welshpool Road East to the north are zoned 'Residential'.
3. Identified on the Department of Fire and Emergency Services (DFES) OBRM mapping as being located within a Bushfire Prone Area (BPA) under the Fire and Emergency Services Act 1998 (as amended).
4. Located within Special Control Area (SCA) No. 6 to LPS3 which imposes specific development conditions over future developments (refer to Planning Framework section of this report for further information in this regard).
5. The immediate locality surrounding the subject site forms part of the MKSEA precinct.
6. Located within a Draft Development Contribution Area (DCA) / Development Contribution Plan (DCP) which imposes Developer Contributions over the subject site.

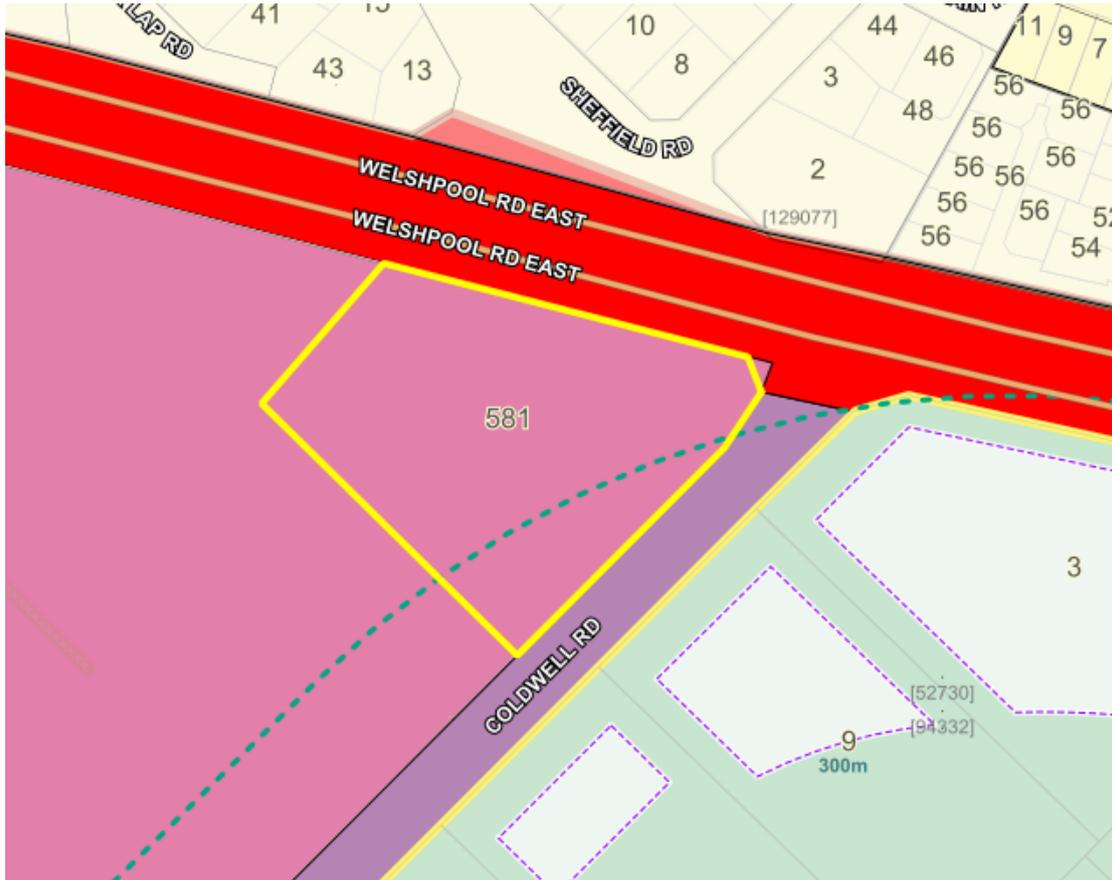


Figure 1 Scheme Map

The Maddington Kenwick Strategic Employment Area

The subject site is located within the Maddington Kenwick Strategic Employment Area (MKSEA). The MKSEA precinct is located predominately within the City of Gosnells (CoG) with only 13% of the land within the City of Kalamunda (the City). The MKSEA is bounded by Bickley Road, Tonkin Highway, Welshpool Road East, and Roe Highway.

The MKSEA was rezoned from ‘Rural’ to ‘Industry’ under the Metropolitan Region Scheme (MRS) in accordance with MRS Amendments 1300/57 (the City) and 1301/57 (CoG) which were approved and published in the Government Gazette in October 2016. The portion of MKSEA to which the subject site forms part of is known as precinct 3A and was rezoned from ‘Special Rural’ to ‘General Industry’ and ‘Light Industry’ through Amendment 89 to Local Planning Scheme No. 3 which was approved by the Minister and published in the Government Gazette in June 2017.

Site History

Table 1 – Site History

October 2016	MRS rezoning MKSEA area rezoned from ‘Rural’ to ‘Industry’ under the MRS in accordance with MRS Amendment 1300/57 (the City) and 1301/57 (CoG).
June 2017	LPS3 rezoning

	MKSEA area rezoned from 'Special Rural' to 'General Industry' and 'Light Industry' through Amendment No. 89 to Local Planning Scheme No. 3. The site subject to this application was rezoned to 'Light Industry' through Amendment No. 89.
2 February 2017	Local Water Management Strategy (LWMS) approved by Department of Water (now Department of Water and Environmental Regulation)
18 December 2018	Initiation of Amendment No. 101 to LPS3 (MKSEA DCP) Council initiated Amendment No. 101 to LSP3 for public advertising. The Amendment was required to introduce a Development Contribution Area (DCA) and Development Contribution Plan (DCP) for the MKSEA industrial area which this site forms part.
March 2019 to May 2019	Public Notification of Amendment No. 101 to LPS3 (MKSEA DCP) Amendment No. 101 was advertised which enabled the City of Kalamunda to commence imposing conditions pertaining to development contributions on subdivision and development approvals.

Legislation and Policy:

The development assessment has been undertaken in accordance with the below mentioned legislation and policies. The proposed development and use complies with the requirements of all applicable legislation and policies subject to conditional development approval.

Legislation

Planning and Development Act 2005
 Planning and Development (Local Planning Schemes) Regulations 2015
 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

State Government Policies

State Planning Policy 2.9 – Water
 State Planning Policy 3.6 – Development Contributions for Infrastructure
 State Planning Policy 3.7 – Planning in Bushfire Prone Areas
 State Planning Policy 4.1 – Industrial Interface
 State Planning Policy 7.0 – Design of the Built Environment

Structure Plans/Activity Centre Plans

N/A

Local Policies

Local Planning Policy 2 – Advertising Signage (LPP2)
Local Planning Policy 14 – Car Parking (LPP14)
Local Planning Policy 19 – MKSEA Design Guidelines (LPP19)
Local Planning Policy 25 – Interim Development Contribution Arrangements (LPP25)
Local Planning Policy 26 – Public Art Contributions (LPP26)

Consultation:

Public Consultation

The application did not require public consultation. Under the LPS3 Table 1, the proposed Warehouse/Storage land use is classified as a permitted 'P' use in Light Industry zonings. As the development is largely consistent with the LPS3 and development expected within Light Industry zones, the City did not undertake public advertising in accordance with the City of Kalamunda Local Planning Policy 11 – Public Notification of Planning Proposals (LPP11).

Referrals/consultation with Government/Service Agencies

1. *Main Roads Western Australia (MRWA)*
2. *Department of Planning, Lands and Heritage (DPLH)*

Table 2 – Main Roads Referral

MRWA comments	City Response
<p>The Traffic Impact Statement (TIS) is unable to be supported as the impact of the development upon the road network is uncertain.</p> <p>MRWA has requested an amended TIS that addresses the following:</p> <ol style="list-style-type: none">1. Clarification on whether the proposed crossover to Coldwell Road will impact the future road realignment and upgrade to the Welshpool Road East and Coldwell Road intersection.2. Provide a crash analysis to provide justification to the statement that, "<i>the use and development proposed on the subject land do not present any safety issues</i>".	<p>The City acknowledges MRWA comments and is in agreement. An amended TIS has since been received by the City (refer attachment 3).</p> <p>A crossover and intersection overlay has been received to support the location of the crossover.</p> <p>The TIS has been updated and expanded to include additional information viz a viz road user safety.</p>
<p>Main Roads supports the development proposal and has recommended conditions and advice notes if the City seeks to recommend approval of the development.</p>	<p>The City acknowledges MRWA conditional support for the proposed application and is in agreement with regard to their stance of the amended TIS (refer attachment 3).</p>

Notwithstanding the above comments, the development does not propose access from Welshpool Road East. The City is satisfied the MRWA concerns have been addressed and is in agreement with MRWA final support of the application.

Table 3 – DPLH Referral

DPLH comments	City Response
At this point, the Road Planning Team from DPLH does not have any comments to provide on the abovementioned application, nor concerns regarding surrounding Other Regional Roads.	The City acknowledges DPLH Road Plannings response and no further action should be taken.

Design Review Panel Advice

The subject site and proposed development are within a largely developed modern industrial area which is subject to Design Guidelines to manage the build form.

The Administration considers the overall built form to be appropriate in the context of the surrounding locality, including recently approved developments for warehouses and incidental offices within MKSEA. The proposal is also largely consistent with Local Planning Policy 19 – MKSEA Design Guidelines. As such, the proposal was not considered to benefit from referral and assessment of the City’s Design Review Panel.

Internal Departments

The application was referred to relevant internal departments for formal comment as part of the assessment 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 outlined in the Legislation and Policy section of this report. The following matters have been identified as key considerations for the determination of this application:

1. Built Form Design (LPP19 – MKSEA Design Guidelines)
2. Car Parking (Table 3 of LPS3)
3. Parking and Access (LPP19 – MKSEA Design Guidelines)
4. On-site Landscaping (LPP19 – MKSEA Design Guidelines)

Land Use Permissibility

The subject site is zoned “Light Industry” under LSP3 with the proposal seeking approval for “Warehouse/Storage”, which is a (P) permitted land use in accordance with Clause 4.3 and Table 1 of LPS3.

The “Warehouse/Storage” use is defined in Schedule 1, Part 2 of LPS3 as:

“Warehouse/storage” means premises including indoor or outdoor facilities used for –
(a) the storage of goods, equipment, plant, or materials; or

(b) the display or sale by wholesale of goods;

The proposed development also seeks approval for 'incidental uses' (Office) which is defined by Schedule 1, Part 1 of LPS3 as:

“Incidental use” means a use of premises which is ancillary and subordinate to the predominant or primary use.

A related definition of LPS3 is the definition of “predominant use”, which is defined by Schedule 1, Part 1 of LPS3 as follows:

“Predominant use” means the primary use of premises to which all other uses carried out of the premises are subordinate, incidental or ancillary.

When considering incidental uses, it is necessary to determine whether the uses are incidental to the predominant use of land or constitute an independent use. Pursuant to Clause 4.3.3 of LPS3, incidental uses are permitted if the change of use does not change the predominant use of the land. The City is satisfied the use of office does not change the predominant use of the land; being ancillary and subordinate to the predominant use of 'warehouse/storage'. Therefore, approval of the incidental use for an office is supported as the City is satisfied that the use meets the definition of an incidental use, subject to a recommended condition.

Built Form

The City provides a framework to guide the assessment of the built form developments within the MKSEA industrial area through relevant LPS3 provisions which are further supplemented through the design parameters set by State Planning Policy 7.0 (SPP 7.0) and the MKSEA Design Guidelines (LPP19).

The below table outlines the proposals compliance with the built form requirements applicable to the subject site.

Table 4 – Built Form Assessment

PROVISION		REQUIREMENT	PROPOSAL	CONSISTENT
Setbacks (Table 2, LPS3 & CI 2.3.3, 2.4, LPP19)	Front	15m	15m	Yes
	Secondary Street (Welshpool Road East)	15m	10m	No
	Side	nil	nil	Yes
	Rear	nil	nil	Yes
Site Coverage (Table 2, LPS3)		60%	60.8%	No

Plot Ratio Area (Table 2, LPS3)	0.5	0.6	No
Building Orientation (CI 2.3.2, LPP19)	Orientation to all street frontages	Oriented to Coldwell Road and Welshpool Road East	Yes
End of Trip Facilities (CI 2.3.4 LPP19)	Minimum of 2 unisex shower and change rooms	2x unisex shower and UAT, 2.5m x 3m bike store	Yes

Development does not achieve full compliance with design criteria to achieve 15m setback to Welshpool Road East. 8m setback area is not fully landscaped in accordance with Section 2.5 LPP19.

Building Design and Quality

The City provides a framework to guide the assessment of the overall built form throughout the MKSEA industrial area through the provisions of LPP19. With an emphasis on providing high quality industrial buildings that incorporate articulation, present to primary streets, and utilise a diversity of materials to break up facades. The development has incorporated the following built form and design features which address the design and quality of the buildings:

- The development is designed to incorporate vertical articulation through façade fins to break up building mass.
- The façade of the proposed development utilises a variation of colours and materials consisting of painted concrete and metal wall cladding to promote high quality industrial design.
- Along the Coldwell Road elevation, the office façade incorporates a higher roof line to the main entry as an architectural feature to visually establish the pedestrian access points via the primary street.
- Along the Coldwell Road elevation (east) and Welshpool Road East elevation (north), glazing is provided to promote surveillance to the street.

The proposal has demonstrated general compliance with the requirements of LPP19 in relation to building design and quality, noting that the proposed plot ratio is not in compliance with the LPS3. Despite this note, the City is satisfied that the proposal satisfies the building design and quality requirements applicable to the site.

Building Orientation

The City provides a framework to guide the assessment of the overall precinct layout and building orientation throughout the MKSEA industrial area through the provisions of LPP19. An emphasis is placed on having the buildings orientated to the primary street.

As the development is located on a site abutting Welshpool Road East, the development is oriented east and has a secondary street frontage as direct access to Welshpool Road East is not permitted. Through building design, the development addresses both Coldwell Road and Welshpool Road East.

Landscaping

Table 5 – Landscaping Requirements

PROVISION	REQUIREMENT	PROPOSAL	CONSISTENT
LANDSCAPING STRIP (Figure 7, LPP19)	4m to Welshpool Road East	3.5m to Welshpool Road East	NO
	3m to Coldwell Road	3m to Coldwell Road	
AREA OF LANDSCAPING (CI 2.5.1, LPP19)	5% of the total lot area to be allocated for landscaping	9% (800m ²)	YES
TREE REQUIREMENT (CI 2.5.1, LPP19)	1 tree per 4 uncovered car parking bays (minimum 50L)	1 Tree per 4 spaces of external parking. No trees proposed within internal uncovered parking spaces	NO
	1 tree per every 10 metres of site frontage (minimum 100L)	1x 90L tree per 10 metres of site frontage	

As noted in the above table, the development seeks a variation to the 4m landscape strip requirement along Welshpool Road East and tree requirements per LPP19. This landscaping variation is discussed in the Officer Comment Section of this report.

Carparking

The below table outlines the City's parking requirements in accordance with Table 3 of LPS3

LAND USE	LPS STANDARD	LPS REQUIREMENT	PROVIDED	SHORTFALL
Warehouse/ Storage	3 bays for up to the first 200m ² of floor area and thereafter 1 bay for every 100m ² of NLA or part thereof.	NLA – 7,634sqm = 77 bays	32 bays	45 bay

The development proposes a 45-bay shortfall in car parking across the development site with a total 32 bays provided (including one accessibility bay) in lieu of the 77 bays required under LPS3. The car parking variation is discussed in the Officer Comment section of this report.

Traffic and Access

The development proposed one (1) crossover which proposes entry and exit for both light and heavy vehicles via Coldwell Road.

The proposed crossover is a maximum width of 8m at the lot boundary which is consistent with the development controls outlines under LPP19. The development was referred to MRWA as it abuts Welshpool Road East. The City and MRWA are satisfied that the proposed crossover location will not impact Welshpool Road East nor the planned intersection upgrade of Coldwell Road and Welshpool Road East. A condition has been recommended to ensure that all crossovers shall be designed and constructed to the specifications and satisfaction of the City of Kalamunda.

Fencing

Boundary fencing plays a role in providing security for businesses whilst maintaining a high-quality streetscape. LPP19 prescribes the requirements for boundary fencing within the MKSEA Industrial Area. The development proposes garrison style fencing to Courtney Place and Welshpool Road East. The City has recommended a condition to ensure the fencing is constructed to a maximum height of 2.1m which is in keeping with the style of development proposed and the remainder of the fencing within the MKSEA Industrial Area.

End of Trip Facilities

Pursuant to Clause 2.3.4 of LPP19, the proposed development is required to provide end of trip facilities to encourage users to travel by active transport methods. To ensure that end of trip facilities are provided, a condition for the provision of bicycle facilities has been recommended.

Bushfire

The subject site is identified on the Department of Fire and Emergency Services (DFES) mapping as being located within a Bushfire Prone Area (BPA) under the Fire and Emergency Services Act 1998 (as amended). Designation of an area as being bushfire prone reflects the potential of bushfire to affect this site and acts as a mechanism for initiating further assessment in the planning and building processes.

A Bushfire Attack Level & Planning Report (BAL Report) has been submitted with the application which provided a BAL Contour Map. This assessment notes that a majority of the vegetation within the 150m assessment area has been excluded. The BAL Contour Map indicates the BAL rating for the site is BAL-12.5. As the pre-development radiant heat impact does not exceed 29kW/m², the provisions of SPP3.7 are not applicable.

Acoustic Requirements

While Precinct 3A of the MKSEA is zoned industrial under the MRS and General Industry and Light Industry under the LPS3, the City acknowledges that there are residential uses across Welshpool Road East and Coldwell Road which may be impacted by noise.

The applicant has nominated the hours of operation to be anticipated from 5:00AM to 9:00PM. As these hours of operation have potential to impact the surrounding residential land uses, a condition has been recommended to ensure the proposals compliance with the Environmental (Noise) Regulations 1997.

Effluent Disposal

The development site is not currently connected to reticulated sewerage and is therefore required to be serviced by on-site effluent disposal in accordance with the Health (Treatment of Sewerage and Disposal of Effluent and Liquid Waste) Regulations 1974 and the Government Sewerage Policy 2019. A condition has been recommended to ensure the development is serviced with an adequate effluent disposal system.

Special Control Area 6 Requirements

LPS3 REQUIREMENT		CITY COMMENT
6.8.1	<i>Subdivision and/or development proposals within the Special Control Area shall be supported by:</i>	
	a) <i>A BAL assessment or Contour Map, prepared in accordance with the Guidelines of Planning in Bushfire Prone Areas (as amended), demonstrating how any bushfire hazards identified can be appropriately managed within the context of the proposal to the satisfaction of the Shire of Kalamunda</i>	COMPLIES – a BAL report and Contour Map demonstrating an indicative BAL rating of BAL-12.5 for the site.
	b) <i>A Local Water Management Strategy, prepared in accordance with Better Urban Water Management on the advice of the Shire of Kalamunda, to be satisfaction of the Department of Water.</i>	COMPLIES – achieved at structure plan stage
	c) <i>Investigations to determine if any significant vegetation, flora or fauna habitat occurs within the proposal area. Where relevant to a subdivision area or development application, detailed management plans shall be prepared and implemented to the satisfaction of the Shire of Kalamunda</i>	COMPLIES – a number of trees are being retained on the lot within the portion of the site reserved for the planner future intersection upgrade of Coldwell Road and Welshpool Road East
	d) <i>Design guidelines adopted by the local government under Part 2 of the deemed provisions for development of land on Lots directly fronting Welshpool Road East.</i>	COMPLIES – refer to the planning assessment section of this report

Public Art

Public art plays an important role throughout the City of Kalamunda's built environment and the proposed development will generate an increase in staff and visitors to the area which would benefit from the provision of public art.

As the proposed works of the development are estimated to be \$10.9 million, the provisions of LPP 26 are applicable to this development application. Pursuant to LPP 26, 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 has been conditioned to be provided on-site.

The City has considered the individual merits of the proposed development and concluded that it generates a planning need for public art to be provided on site for the following reasons:

1. The subject site is a prominent site within the MKSEA area and will be visible from both Welshpool Road East and Coldwell Road. As such, the provision of public art work will provide a benefit to the whole development area.
2. The subject site abuts Welshpool Road East which forms part of the heavy vehicle freight network and is subject to high volumes of traffic. There would be a benefit to passing motorists for the development to incorporate a form of artwork on site.
3. The development proposes a variation to the 15m Welshpool Road East road frontage setback requirement for buildings under LPP19. Whilst the development proposes additional landscaping along the lot boundaries, the area will not be fully screened. As such, the development will benefit from public artwork being installed on-site.

A recommended condition and associated advice notes ensures compliance with LPP 26 through requiring a public art contribution equal to \$109,000 within the subject site.

Development Contributions

The subject site is located within the boundaries of a Draft Development Contribution Area (DCA) which was established to facilitate and coordinate the progressive upgrade of public roads and drainage infrastructure within the MKSEA industrial area.

In December 2018, the City of Kalamunda progressed the initiation of Amendments to their Local Planning Schemes which enables the introduction of a Special Control Area to establish a DCA over MKSEA. The City of Kalamunda Local Planning Scheme Amendment is referred to as Amendment 101 to LPS3.

Amendment 101 proposes to include Schedule 12 to LPS3, which establishes the DCP for the MKSEA area. Amendment 101 was adopted by Council for the purposes of public advertising in December 2018 and was subsequently advertised for a period of 75 days, concluding in May 2019.

Regulation 73(1) of the Planning and Development (Local Planning Schemes) Regulations 2015 (Regulations) states that a local government must not levy a contribution for the provision of infrastructure unless there is a DCP in place over the area. Conversely, the Regulations also state under Regulation 73(3) that a local government must not refuse to grant development approval on the grounds that a DCP is being prepared, unless the plan has already been advertised. The reasoning is that the City may not contemplate refusal of a proposal where an advertised DCP has not yet been finalised through a gazetted Scheme Amendment and in situations where the payment of contributions cannot be determined.

Deemed Provision 69(1) precludes a local government from refusing an application for development approval solely on the basis that a DCP in relation to the development has not been gazetted.

To account for the progress of development within the MKSEA precinct, LPP19 designates a portion of the subject lot for road realignment at the intersection of Coldwell Road and Welshpool Road East. To facilitate this realignment, a condition has been recommended for the landowner/applicant to enter to an agreement (Deed) with the City of Kalamunda to allow the City to acquire this portion of the lot. The portion of the lot has been noted on the proposed site plan as reserved for this purpose. A letter of support signed by the City of Gosnells (refer attachment 8) has been provided in support of this recommended condition.

Signage

The application proposes signage that abuts Welshpool Road East. Per LPP19 CI 2.3.7, signage abutting Welshpool Road East will be assessed against the relevant Main Roads WA Policy. The application was externally referred to MRWA with conditions and advice notes recommended in this report. An advice note has been recommended for vegetation within the verge to not be modified to improve signage visibility to maintain an attractive and safe streetscape.

The signage design and schedule of colours is consistent with the National Storage brand and is similar in size and scale to the established surrounding properties. The advertising signage is proposed to be mounted to the building façade so as to not distract road users of Welshpool Road East and Coldwell Road.

Planning and Development (Local Planning Schemes) Regulations 2015

The City is to have due regard to the matters contained under Clause 67 of the *Planning and Development (Local Planning Schemes) Regulations 2015* when exercising its discretion and the following matters are considered most relevant against this application:

- (a) *the aims and provisions of this Scheme (including any planning codes that are read, with or without modifications, into this Scheme) and any other local planning scheme operating within the Scheme area;*
- (b) *re read, with or without modifications, into this Scheme) and any other local planning scheme operating within the Scheme area;*
- (c) *any approved State planning policy;*
- (g) *any local planning policy for the Scheme area;*
- (m) *the compatibility of the development with its setting, including —*
 - i. *the compatibility of the development with the desired future character of its setting; and*
 - ii. *the relationship of the development to development on adjoining land or on other land in the locality including, but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the development;*
- (n) *the amenity of the locality including the following —*
 - i. *environmental impacts of the development;*

- ii. *the character of the locality;*
- iii. *social impacts of the development;*
- (p) *whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved;*
- (s) *the adequacy of —*
 - i. *the proposed means of access to and egress from the site; and*
 - ii. *arrangements for the loading, unloading, manoeuvring and parking of vehicles;*
- (t) *the amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety;*
- (u) *the availability and adequacy for the development of the following —*
 - i. *public transport services;*
 - ii. *public utility services;*
 - iii. *storage, management and collection of waste;*
 - iv. *access for pedestrians and cyclists (including end of trip storage, toilet and shower facilities);*
 - v. *access by older people and people with disability;*

The City is satisfied through the RAR assessment that the development proposed is capable of achieving the above considerations subject to the necessary conditions and advice notes.

Officer Comments:

Landscaping Variation

The development proposes a minimum 3.5m landscaping strip to the Welshpool Road East street frontage in lieu of the 4m required under LPP19. The provided landscape plan proposes extensive landscaping within the Welshpool Road East frontage. Trees along the Coldwell Road and Welshpool Road East frontage are proposed with a maximum pot size of 90L in lieu of the 100L minimum required. The variation is considered acceptable for the following reasons:

- the landscaping plan proposes an increase in vegetation density across the western portion of the Welshpool Road East lot frontage.
- A total number of twenty (20) 90L pot size trees are proposed within the development street frontages.

Having regard to the total landscaping proposed within the development, the City is supportive of the variation.

Car Parking Variation

The car parking proposes a 45-bay shortfall over the development site with a total of 32 car parking bays (including one accessible bay) in lieu of 77 required under LPS3. Given the variation proposed, the City refers to the Regulations, noting that clause 77D of the deemed provisions affords the City the opportunity to vary the minimum on-site parking requirements in relation to the development where the City is satisfied that reasonable efforts have been made to comply without adversely affecting the

development. The City must consider whether provision of the additional bays would adversely affect the access arrangements, safety of pedestrians or persons in vehicles, open space, street trees or service infrastructure.

The City must also consider the if the lower number is adequate for the development and will not create parking issues. Noting the proposed use of the site as a self-storage facility, with the majority of parking spaces being provided behind a security gate to be utilised by users of the on-site storage containers, the City is satisfied that the proposed parking shortfall is appropriate for the site. A ratio of one (1) parking bay/235m² is proposed. A similar National Storage facility was approved in South Fremantle with a parking ratio of one (1) bay/283m² of storage area. Any further increase in parking provided would detrimentally affect the landscaping, vehicle manoeuvrability and intended use of the site.

Discretion is also afforded through the City's LPS3, Clause 5.7.2 with due regard to be given to the proposals parking demand, the scale and nature of the intended use. The City is satisfied that the parking shortfall is sufficient to accommodate the use of the site and its tenants without sacrificing the amenity of the area.

To ensure that a minimum of 32 parking spaces are constructed and in accordance with the Australian Standards, a condition has been recommended.

Built Form Variation

The development proposes a 10m setback to the Welshpool Road East road reserve in lieu of 15m prescribed by LPP19. In addition, minor variations to plot ratio and site coverage are also proposed. In the context of this application, the variations proposed are considered to be an acceptable outcome for the following reasons:

- The development fronting Welshpool Road East satisfies the building orientation, design and quality standards of LPP19.
- The Welshpool Road East interface is sufficiently landscaped with verge and on-site vegetation. Landscaping density has been increased to offset the variation in building setback.
- Public art has been conditioned to be provided on-site to generate a more attractive design for road users.
- MRWA has provided support for the application despite the variation. Their support is provided subject to the recommended conditions and advice notes.
- The proposed development is significantly lower in total height to the surrounding buildings within the MKSEA precinct with a maximum height of 8.1m proposed. Surrounding land uses within the light industry zone feature buildings in excess of 12m.

While the building setback variation to the Welshpool Road East lot boundary is the first instance within the MKSEA precinct, the City is satisfied that the proposed development achieves the development objectives identified in LPP19 so as to not detrimentally impact upon the streetscape of Welshpool Road East.

LPP19 permits a minimum 8m setback to the Welshpool Road East boundary where this area is fully landscaped. Achieving this would detrimentally impact the function of the development by not allowing for full vehicle manoeuvrability within the site.

Welshpool Road East user safety has been considered through recommended conditions. A condition and advice note of approval have been recommended to ensure that illuminated signage does not chase or flash and that verge vegetation is not altered to increase signage visibility or legibility.

Road Realignment at intersection of Coldwell Road and Welshpool Road East

LPP19 identifies an eastern portion of the subject lot as subject to a future road alignment at the intersection of Coldwell Road and Welshpool Road East. To demonstrate consistency with LPP19, the applicant has designed the development to preserve the space reserved for the future road realignment.

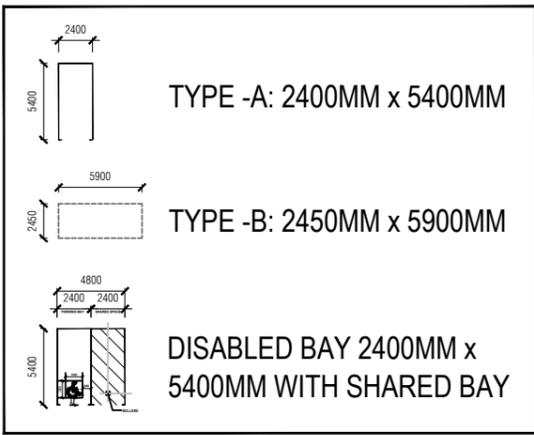
The City is satisfied that the development design appropriately addresses the planned intersection upgrade. A condition has been recommended for the applicant/landowner to enter to an agreement (Deed) to allow the City of Kalamunda to obtain this portion of the lot. A similar condition in the absence of a DCP was recommended and approved in DAP/25/02903 within the City of Kalamunda locality. In support of this recommended condition, a letter signed by the City of Gosnells (refer Attachment 8) has been provided. Removal of this condition would prejudice future planning of the area and jeopardise the continued industrial development for the remainder of the MKSEA precinct.

Conclusion:

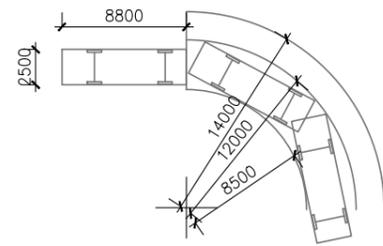
The proposed development is largely consistent with the application development controls and standards for a warehouse/storage land use within the Light Industry zone with proposed variations being capable of support subject to conditions. The orientation, design and façade of the proposed buildings have considered the Welshpool Road East interface through retention of lot boundary vegetation, additional landscaping and through the provision of sufficient setbacks so as to not impact the amenity of adjoining land uses.

The proposed development demonstrates general compliance with the development controls of LPP19, with the variations being proposed being considered to not prejudice the intended design of the precinct. The proposal sets aside a portion of the lot area for the future road realignment at the intersection of Coldwell Road and Welshpool Road East in accordance with LPP19. Whilst there is no DCP currently in place for this precinct, the City notes that the removal of the condition would be a significant challenge to the consistency of the development and would prejudice the future planning of the area.

The assessment of this application against the relevant planning framework demonstrates that the proposed development will not cause adverse amenity impacts to adjoining properties and land uses. On balance and subject to the recommended conditions and advice notes – the proposal is capable of being considered for approval.



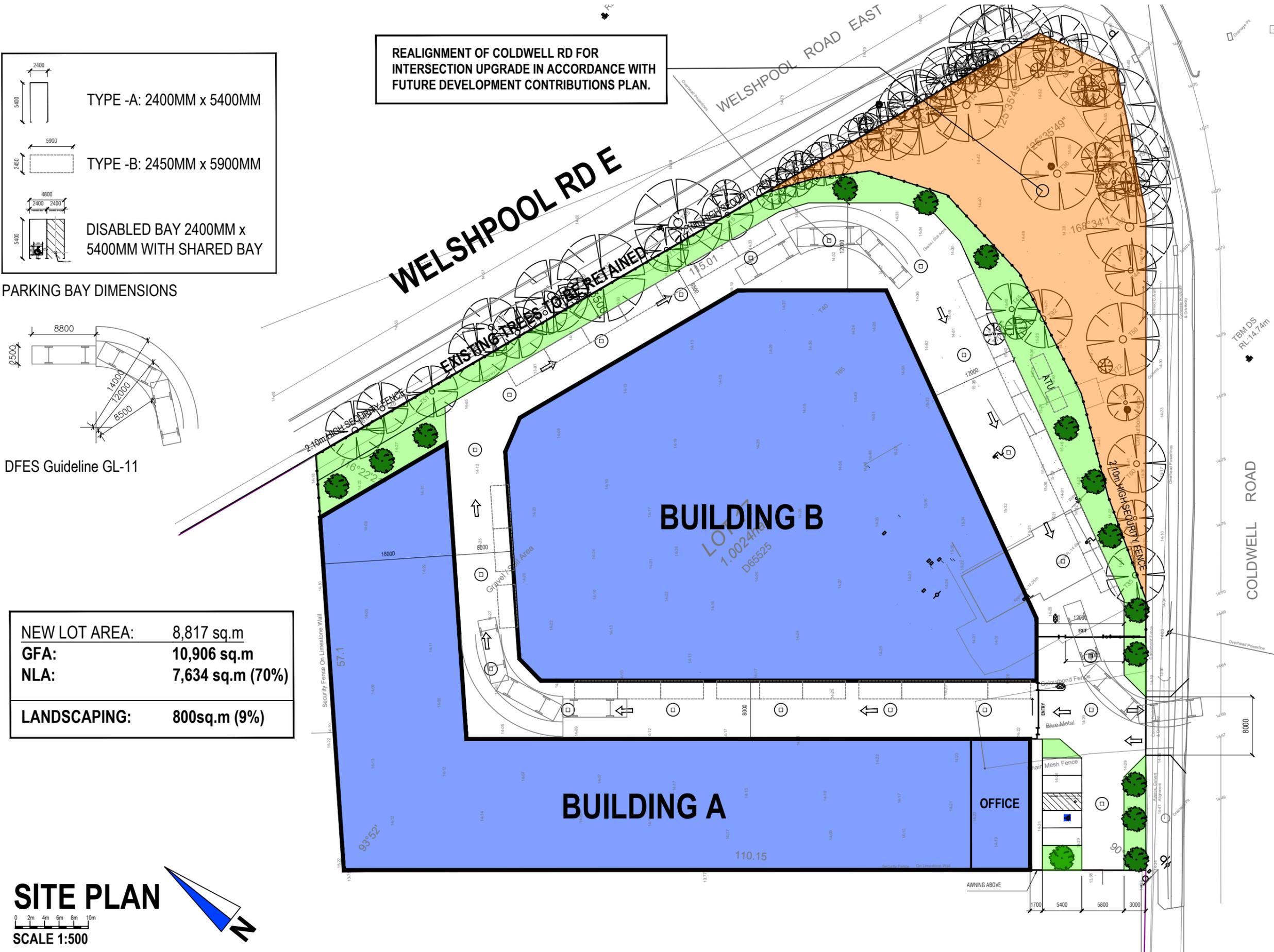
PARKING BAY DIMENSIONS



DFES Guideline GL-11

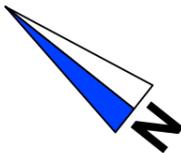
NEW LOT AREA:	8,817 sq.m
GFA:	10,906 sq.m
NLA:	7,634 sq.m (70%)
LANDSCAPING:	800sq.m (9%)

REALIGNMENT OF COLDWELL RD FOR INTERSECTION UPGRADE IN ACCORDANCE WITH FUTURE DEVELOPMENT CONTRIBUTIONS PLAN.



SITE PLAN

0 2m 4m 6m 8m 10m
SCALE 1:500



NOTE:
 (1) THIS DRAWING IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PARSONS GROUP OF COMPANIES LOCATED AT PO BOX 189 SOUTH FREMANTLE WA 6162. IT IS NOT ALLOWED TO REPRODUCE ITS CONTENTS IN ANY FORM EXCEPT FOR THE PURPOSE FOR WHICH IT IS INTENDED.
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 (4) SIGNAGE IS INDICATIVE AND SUBJECT TO SEPARATE APPLICATION.

NO.	DATE	DESCRIPTION
△		
△		
△	19.01.25	AMENDED CROSSOVER AS PER MRWA
△	12.09.25	DA DRAWINGS

REVISIONS

PROPOSED SELF-STORAGE WATTLE GROVE
 581 WELSHPOOL RD. EAST
 WATTLE GROVE WA

Parsons Group

REV NO: **B** DRAWING NO: **A100**



WATTLE GROVE SELF-STORAGE FACILITY

FIRST FLOOR

0 2m 4m 6m 8m 10m

SCALE 1:500

NOTE:

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- (3) SIGNAGE IS INDICATIVE AND SUBJECT TO SEPARATE APPLICATION.

△		
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△	12.09.25	DA DRAWINGS

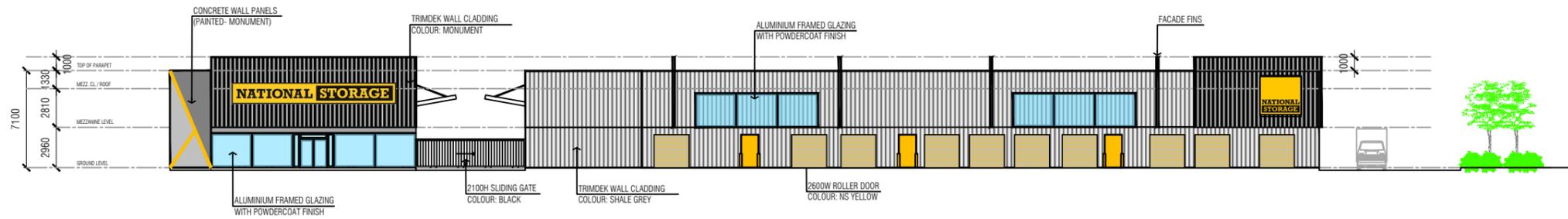
NO.	DATE	DESCRIPTION
REVISIONS		

PROPOSED SELF-STORAGE WATTLE GROVE
581 WELSHPOOL RD. EAST
WATTLE GROVE WA

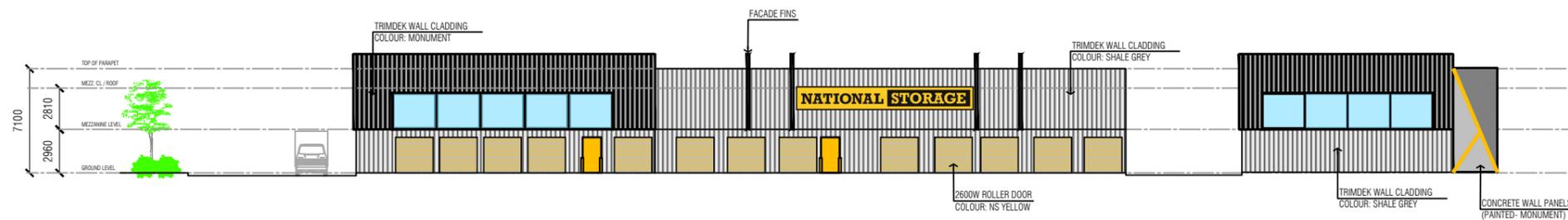


Parsons Group

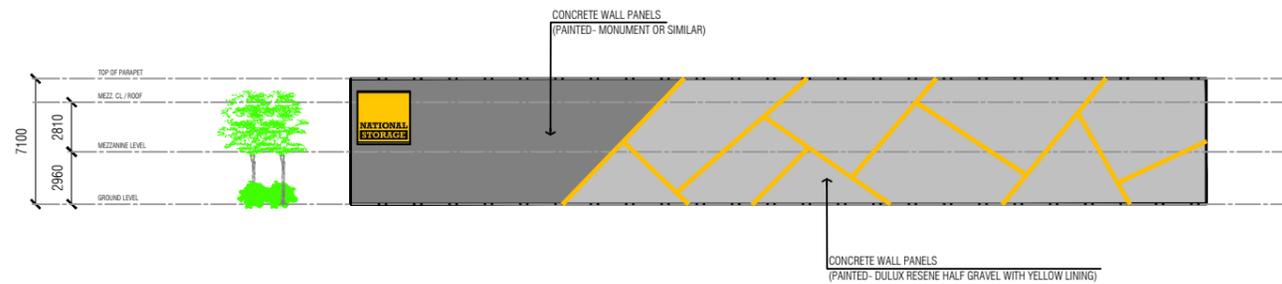
REV NO.:	A	DRAWING NO.:	A102
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COLDWELL ROAD ELEVATION



WELSHPOOL ROAD EAST ELEVATION



NORTH-WEST ELEVATION



EXTERIOR CLADDING

Colorbond
Shale Grey



EXTERIOR CLADDING

Colorbond
Monument



PAINTED CONCRETE PANEL

Dulux Resene Half Gravel



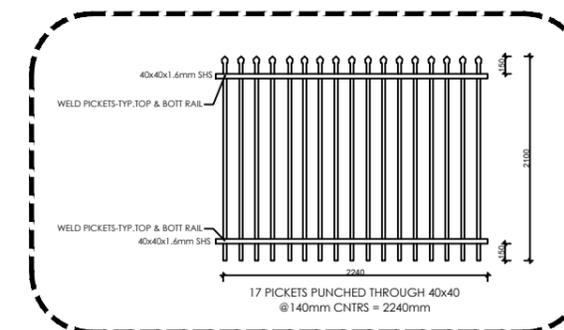
EXT. FEATURE

Colorbond
Monument or similar



ROLLER DOORS

Colorbond (Special Order)
Aztec Yellow



NOTE:

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- (4) SIGNAGE IS INDICATIVE AND SUBJECT TO SEPARATE APPLICATION.

NO.	DATE	DESCRIPTION
12.09.25		DA DRAWINGS

REVISIONS

PROPOSED SELF-STORAGE WATTLE GROVE
581 WELSHPOOL RD. EAST
WATTLE GROVE WA

ParsonsGroup

REV NO.: **A** DRAWING NO.: **A103**

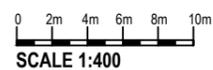


Image	ID	Qty	Botanical Name	Common Name	Scheduled Size
	Acia sa	100	Acacia saligna 'Prostrate'	Wattle	1.0m
	Ani cu	50	Anigozanthos cuneatus	Coastal Lightbulb	1.0m
	Ani am	148	Anigozanthos Amber velvet	Amber kangaroo paw	1.0m
	Ani go	171	Anigozanthos Gold velvet	Yellow kangaroo paw	1.0m
	Ani ru	154	Anigozanthos Ruby velvet	Red kangaroo paw	1.0m
	Ban as	12	Banksia ashbyi dwarf	Ashby's banksia	1.0m
	Ban me da	12	Banksia menziesii Dwarf	Menzies banksia	1.0
	Cor co	410	Corymbia cordata	Grey cottonbush	1.0m
	Cor fi su	7	Corymbia ficifolia 'Summer red'	Red flowering gum	1.0
	Dia re re	200	Dianella revoluta 'Revelation'	Spreading flag iris	1.0m
	Eri gl	80	Eremophila glabra 'Blue horizon'	Ear bush	1.0m
	Euc an	6	Eucalyptus angustifolium	Shiraz	1.0
	Euc gl	2	Eucalyptus globulus 'Blue horizon'	Ear bush	1.0m
	Euc gl	2	Eucalyptus globulus	Shiraz	1.0
	Hak la	7	Hakea laurina	Pin-cushion hakea	1.0
	Har vi	80	Hardenbergia violacea 'Meema'	False clematis	1.0m
	Hem pu	110	Hemidra purgens	Shake bush	1.0m
	Hyp an	18	Hypocalymma angustifolium	Sham near myrtle	1.0m
	Hyp ro	18	Hypocalymma robustum	Sham near myrtle	1.0m

LANDSCAPE LEGEND

Landscape Works

- All areas are to be fine graded evenly to match kerb levels and surrounding finishes.
- Surfaces must be free from depressions, irregularities, and noticeable changes in grade. Levels should not deviate more than 20mm over one linear metre.

Soil Preparation

- All planting areas to be spread with a minimum of 30mm of approved standard soil conditioner, ripped into existing soil to a depth of 100mm.
- Turf areas to be evenly spread with 30mm of approved standard soil conditioner, ripped into the existing site soil to a depth of 100mm.

Planting

- All planted areas to be mulched with organic coarse bark chip mulch to a minimum depth of 100mm, unless otherwise specified.
- Advanced trees to be staked with 50 x 50mm hardwood posts, painted black, and installed to a minimum depth of 500mm. Trees to be secured with rubber ties in a figure-eight configuration.
- Trees planted within 1000mm of boundary walls or parking areas to be installed with 600mm deep Nylax root barrier membrane, as per manufacturer's specifications.
- Planting setout to be verified by the superintendent before installation begins.
- All existing site trees to be retained as shown.

Irrigation

- All planting and turf areas to be irrigated via a fully automatic system from mains supply.
- All shrubs and groundcovers to be irrigated via subsurface drip irrigation.
- All trees to be irrigated via bubblers, with one to three bubblers per tree depending on size.
- Turf to be irrigated via articulated risers.
- Sleeves beneath paved surfaces to be provided by others.
- Irrigation controller to be located in store room unless otherwise noted.
- System to operate via dual program, allowing separate schedules for turf and planted areas.
- Hydrozoning principles to be applied, with stations calibrated to plant water demand.
- Smart irrigation system to include soil moisture and rain sensors, with automatic response to moisture levels and weather.
- Passive irrigation principles to be incorporated, directing stormwater to gardens before drainage.
- Watering schedules to be programmed in accordance with council guidelines.

General

- All dimensions are in millimetres unless otherwise noted.
- Scales as noted and based on A1 sheet size.
- Drawings to be read in conjunction with all relevant schedules, reports, specifications, and project documentation.
- Refer to associated documentation (by others) for finished levels, planter heights, drainage design, and water connection points.

PLANT IMAGES



Acacia saligna 'Prostrate'



Anigozanthos cuneatus



Anigozanthos Amber velvet



Anigozanthos Gold velvet



Anigozanthos Ruby velvet



Banksia ashbyi dwarf



Banksia menziesii dwarf



Conostylis candidans



Corymbia ficifolia 'Summer red'



Dianella revoluta 'Revelation'



Eremophila glabra 'Blue horizon'



Eucalyptus erythrococys



Hakea laurina



Hardenbergia violacea 'Meema'



Hemidra purgens



Hypocalymma angustifolium



Hypocalymma robustum



NOTES:
 1. All dimensions are in millimetres unless otherwise noted.
 2. All dimensions are to be based on the plan to scale.
 3. All dimensions are to be based on the plan to scale.
 4. All dimensions are to be based on the plan to scale.
 5. All dimensions are to be based on the plan to scale.
 6. All dimensions are to be based on the plan to scale.
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 8. All dimensions are to be based on the plan to scale.
 9. All dimensions are to be based on the plan to scale.
 10. All dimensions are to be based on the plan to scale.

REPORT

**PARSONS MANAGEMENT GROUP
LOT 17 WELSHPOOL ROAD EAST, WATTLE GROVE**

STORMWATER DRAINAGE MANAGEMENT PLAN

FEBRUARY 2026

Revision History:

Revision	Description	Checked	Approved	Date
0	Original Issue	SRA	SRA	5 th Feb 2026

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- Soakwell and Below ground storage Calculations (1% AEP Calcs)	
Appendix D – Geotechnical Report	
- Structerre – January 2026	

LOT 17 WELSHPOOL ROAD, WATTLE GROVE

STORMWATER DRAINAGE MANAGEMENT PLAN

Executive Summary

- The stormwater management plan is prepared to provide sufficient information to support the structure plan across the subject land.
- The site consists of a thin layer of sand overlying Guildford Formation.
- Peak groundwater levels are some 2.0m below existing surface levels.
- It is proposed to install storage equivalent to 350 cubic metres per hectare in accord with the drainage planning requirements for the area. A subsoil outflow control is proposed to be connected to the existing street drainage system.

1 Introduction

1.1 General

The subject site is approximately 0.88 hectares in size and is located on the south western corner of the intersection between Coldwell Road and Welshpool Road East, as outlined in the Locality Plan (DrawingL-01) in Appendix A and the land area with Drawing L-02 showing the site with the aerial photo also shown.

It is proposed to be developed into a self-lock storage facility of some 0.8ha consisting of buildings and accessways.

The purpose of this document is to provide the drainage concept for the development of the land to support the development application approval.

1.2 Drainage / Water Management Principles and Design Objectives

The following water sensitive design criteria, principles and objectives are to be pursued and/or implemented as part of the proposed development:

- *Water Quantity Management*

Principle: To ensure that post development discharge peak flow rates match required pre-development rates.

Objective: All finished floors to be a minimum of 0.3m above the 1% AEP flood level of the urban drainage system and at least 0.5m above the 1% AEP level of waterways and major drainage systems.

Objective: Detention storage to be provided to ensure that relevant storm outflows do not exceed predevelopment flow rates.

- *Water Quality Management*

Principle: To improve the overall surface water quality of the water leaving the development.

Objective: Ensure that surface water is contained on site and infiltrated up to and including the 10% AEP storm.

Objective: All water for the 63.2% – 1 hour storm (15mm) to be contained on-site prior to outflow.

1.3 Planning Background

This site consists as part of Precinct 3A within the Maddington Kenwick Strategic Employment Area (MKSEA) and has been subject of a series of drainage studies across the area.

In essence the outcome of those drainage studies recognised the need to allow outflow to control perched groundwater rise but required the provision of below ground storage of 350 cubic metres per hectare as part of the development works.

2 Proposed Development

2.1 Key Elements of the Development

The development proposal consists of around 0.8ha of road and buildings and around 800sqm of landscaping abutting the peripheral roads.

2.2 Previous Land Use

The land contains an existing residential house which appears to have been used for commercial purposes such as container and vehicle storage since around 2007. The house was constructed in the early 1970's.

2.3 Finished Lot Level

The land is generally flat with a gentle grade between around 14.5m AHD to 14.10m AHD from north to south.

It is proposed that the building level will be set at around RL14.80m AHD, being slightly above the existing levels, approximately level with the existing path on Coldwell Road.

3 Design Criteria

The drainage requirements for developments within this area are controlled by the general requirements of the Council and geotechnical parameter of the soil.

Item	Description	Requirement	Source/Comment
1	Water quality	1EY – 1 hour storm (15mm) to be retained on-site	DWER Policy
2	Detention storage design	350 cubic metres per hectare storage required.	Council MKSEA requirements
3	Min. FFL freeboard	0.3m flood level of urban drainage system	City of Cockburn requirements
6	Runoff coefficients	0.90 for Paved Areas	Per AR and R 2016

4 Predevelopment Environment

4.1 Topography and Landform

The land falls gently from north to south, being relatively flat.

4.2 Soil Characteristics/Geotechnical

The Perth Environmental Geology Mapping (Gozzard JR 1986 Part Sheets 2033 I and 2133 IV)1 indicates that the site consists of:

Sand (S10): white to pale grey at surface, yellow at depth, fine to medium-grained, moderately well sorted, sub-angular to sub-rounded quartz, of eolian origin (Thin Bassendean Sand over Guildford Formation Qpb/Qpa), underlain by: -

Clayey sand (Sc): silty in part, pale grey-brown, medium to coarse, poorly sorted, sub-angular to rounded, frequent heavy minerals, rare feldspar, of alluvial origin (Guildford Formation Qpa)

A geotechnical investigation was carried out by Structerre in January 2026 which indicated that the top 1.5m of the site was sandy/gravelly fill, which in turn overlaid gravelly sand and clayey sand.

Perched water was encountered around 1.4-1.5m below surface levels which was higher than expected based on the regional levels, but in general accord with the soil conditions. Insitu permeability results indicated permeabilities of existing materials ranging from 0.4 to 0.6m/day which again is consistent with the soils encountered.

The recommendation for drainage is that the site is not suitable for disposal of water using shallow soakwells. Instead, it has been recommended to install detention

storage with outflow connection which is consistent with the drainage reporting for the MKSEA area.

4.3 Groundwater Aspects

The maximum groundwater level generally flows from north to south and is around RL12.2 to 12.5mAHD being around 1.5-2.0m below existing surface levels.

The underground storage is proposed to be installed at a depth of around 1.8m to the base in conjunction with subsoil systems to control subsurface water perching.

4.4 Surface Water Aspects

The existing area is generally pervious at the surface but becomes less permeable with depth. As a result, storage systems are proposed to be limited to 1.8m depth to ensure some soakage can occur.

5 Stormwater Management Strategy

5.1 Pre-Development Hydrology

As outlined in Section 4, the site consists of permeable surface with clay substrate.

The proposal is to capture all events up to and including the 1% AEP storm and dispose of this by soakage with an overflow connection to the Council drainage system. An equivalent storage of some 350 cubic metres per hectare is proposed to be installed which means an overflow of 13.75l/s for the 1% AEP storm, 1.6l/s for the 10% AEP Storm and no overflow for storms less than the 20% AEP storm.

5.2 Pre- & Post- Development Hydrology

A conservative allowance of 0.40m/day has been allowed for infiltration and a total storage of some 309 cubic metres of storage has been provided over the site which equates to 1 cubic metre of storage per 28 square metres of paved area.

A summary of the storages and average water depths in the soakwells is outlined in Table 1 below:

Table 1: Summary of Required Storm Volumes and Average Depths for Various AEP Storms

Storm AEP	Storage Volume required (m³)	Required Outflow (l/s)
1%	309	13.8
10%	309	1.6
20%	304	0
1EY	168	0

The site is proposed to be divided into a series of small catchments such that soakwells will capture water from the roadways. Roof areas will be connected into the same soakwell system. Further underground storage will be installed to supplement the soakwell/inlet pits.

5.3 1EY event/10% AEP Event

The 1EY event is typically seen as the storm where most nutrients and particulate matter is generated from and this event and all other rainfall events up to the 1% AEP storm will be detained on site with subsoil outflow.

It is proposed that all storms will be retained on site within the below ground storage/ which will be controlled by a subsoil connection.

5.4 1% AEP ARI event

All carpark areas will be graded and shaped to Coldwell Road such that in the event of a major storm, stormwater will surcharge and be directed to the street system which grades south to a large basin system.

5.5 Finished Floor Levels (Relative to the 1% AEP flood levels)

As outlined in Section 2.3, the site is proposed to be set similar to the level of the existing path on Coldwell Road.

6 Groundwater Management Strategy

6.1 Groundwater Level Management

Subsoil controls are proposed to be installed to limit the rise of perched water across the site.

6.2 Specifications for Imported Fill

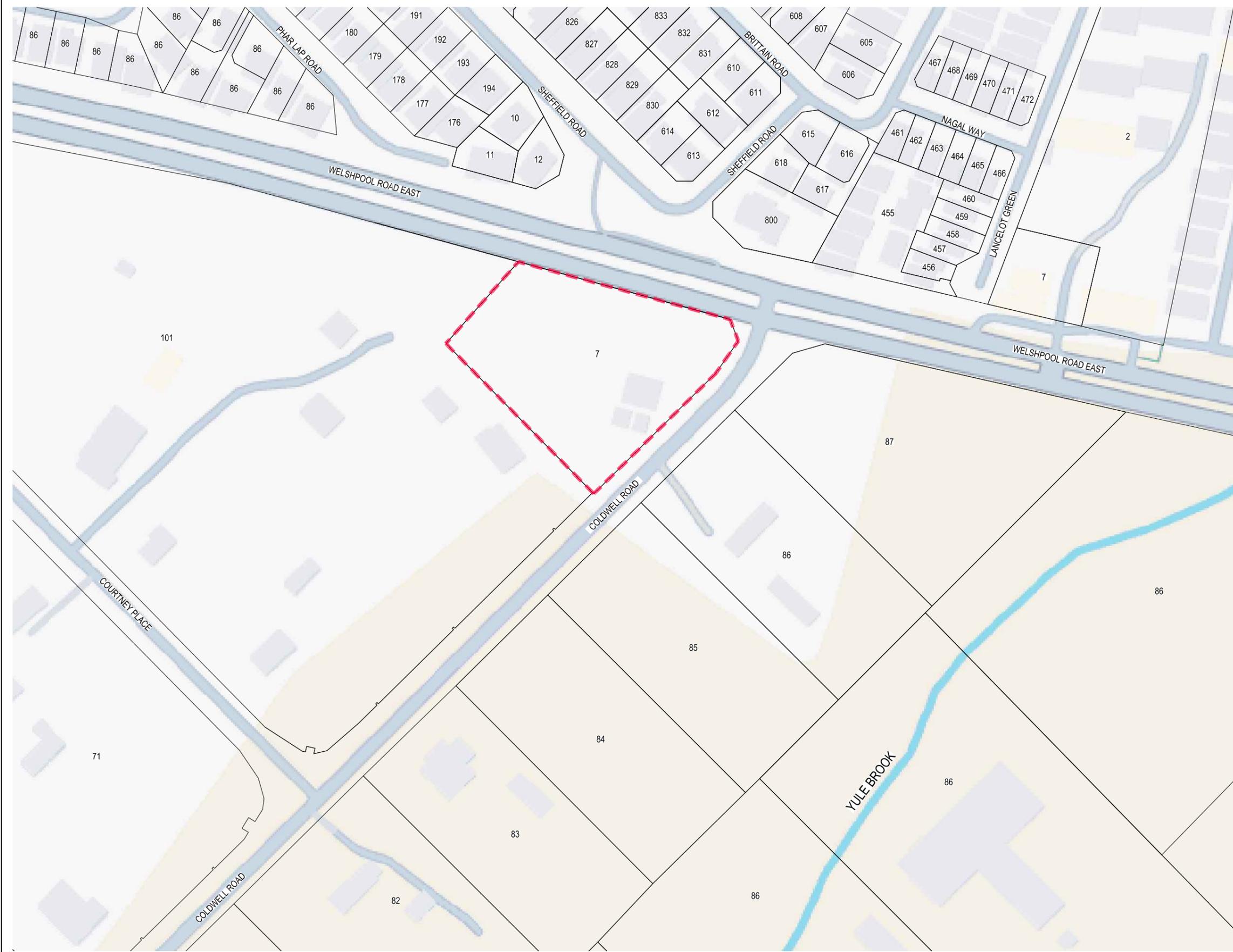
Any fill material to be used on the site, inclusive of drainage backfill will consist of free draining material with a maximum of 7% passing the 75-micron sieve to ensure free drainage.

7 References:

1. Environmental Geology Mapping - Gozzard JR 1986 Part Sheets 2033 I and 2133 IV.

APPENDIX A – LOCALITY PLANS

- - **Locality Plan (L01)**
- - **Aerial Photo (L02)**
- **Proposed Development Plan**



LEGEND

--- SUBJECT SITE



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PROJECT:
LOT 17 WELSHPOOL ROAD EAST WATTLE GROVE
W.A.P.C. No. -

DRAWING:
LOCAL WATER MANAGEMENT PLAN LOCALITY PLAN

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PROJECT NUMBER PRO1647		DRAWING NUMBER L01	

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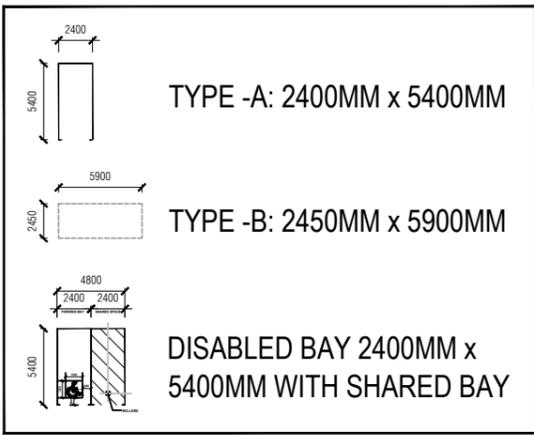
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W.A.P.C. No. -

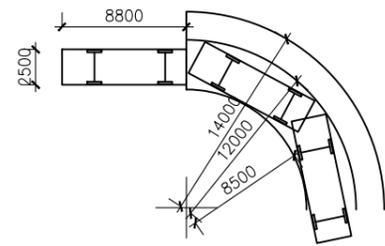
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LOCAL WATER MANAGEMENT PLAN AERIAL PHOTO

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PROJECT NUMBER PRO1647		DRAWING NUMBER L02	

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PARKING BAY DIMENSIONS

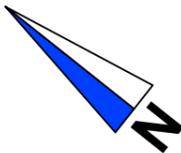


DFES Guideline GL-11

NEW LOT AREA:	8,817 sq.m
GFA:	10,906 sq.m
NLA:	7,634 sq.m (70%)
LANDSCAPING:	800sq.m (9%)

SITE PLAN

0 2m 4m 6m 8m 10m
SCALE 1:500



REALIGNMENT OF COLDWELL RD FOR INTERSECTION UPGRADE IN ACCORDANCE WITH FUTURE DEVELOPMENT CONTRIBUTIONS PLAN.

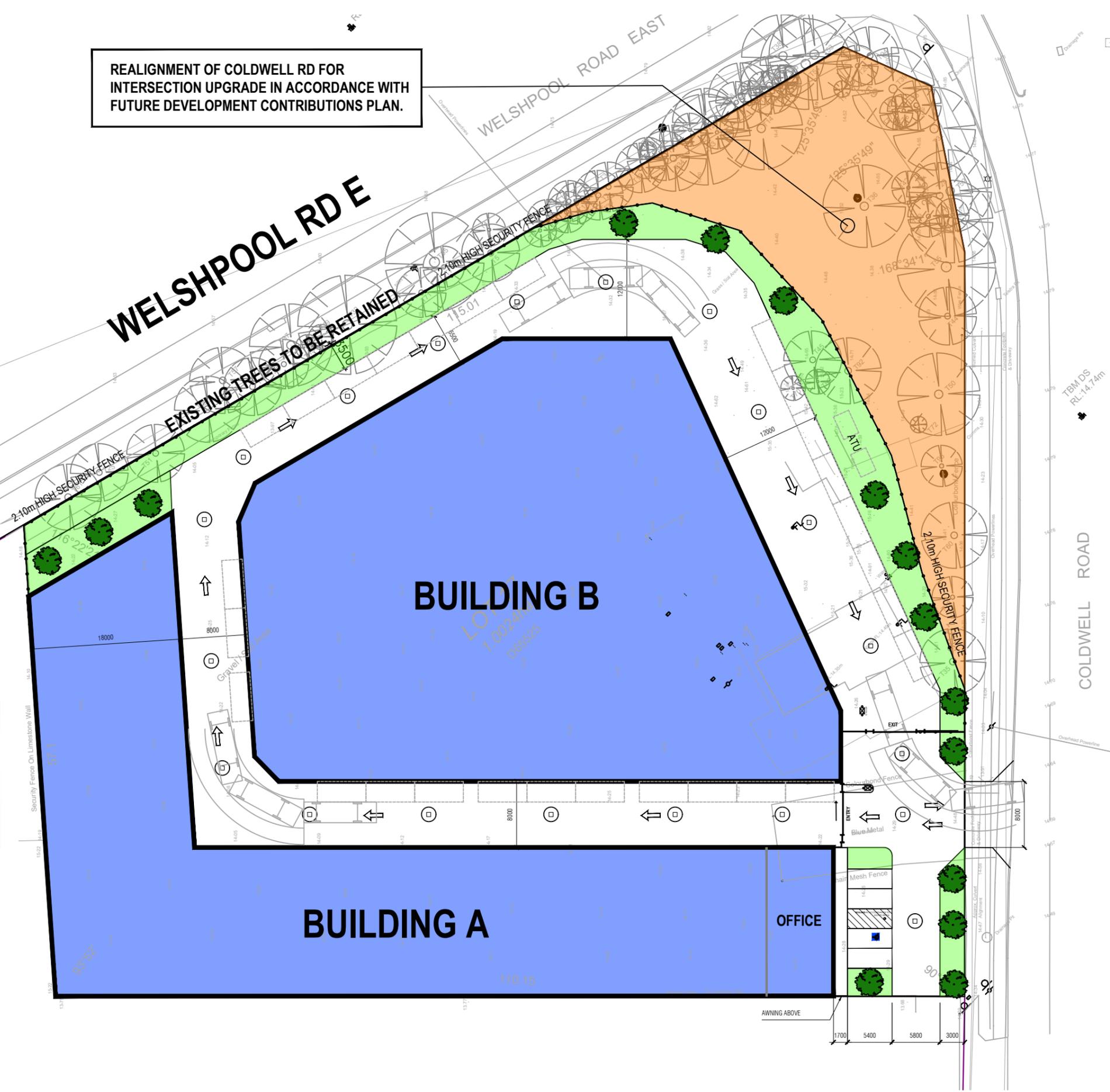
WELSHPOOL RD E

EXISTING TREES TO BE RETAINED

BUILDING B

BUILDING A

OFFICE



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NO.	DATE	DESCRIPTION

PROPOSED SELF-STORAGE WATTLE GROVE
 581 WELSHPOOL RD. EAST
 WATTLE GROVE WA

Parsons Group

REV NO: **A** DRAWING NO.: **A100**

APPENDIX B – DRAINAGE CATCHMENT PLANS

- - **Proposed Drainage Layout (L03)**
- - **Drainage Standard Details (L04)**

DRAINAGE LEGEND

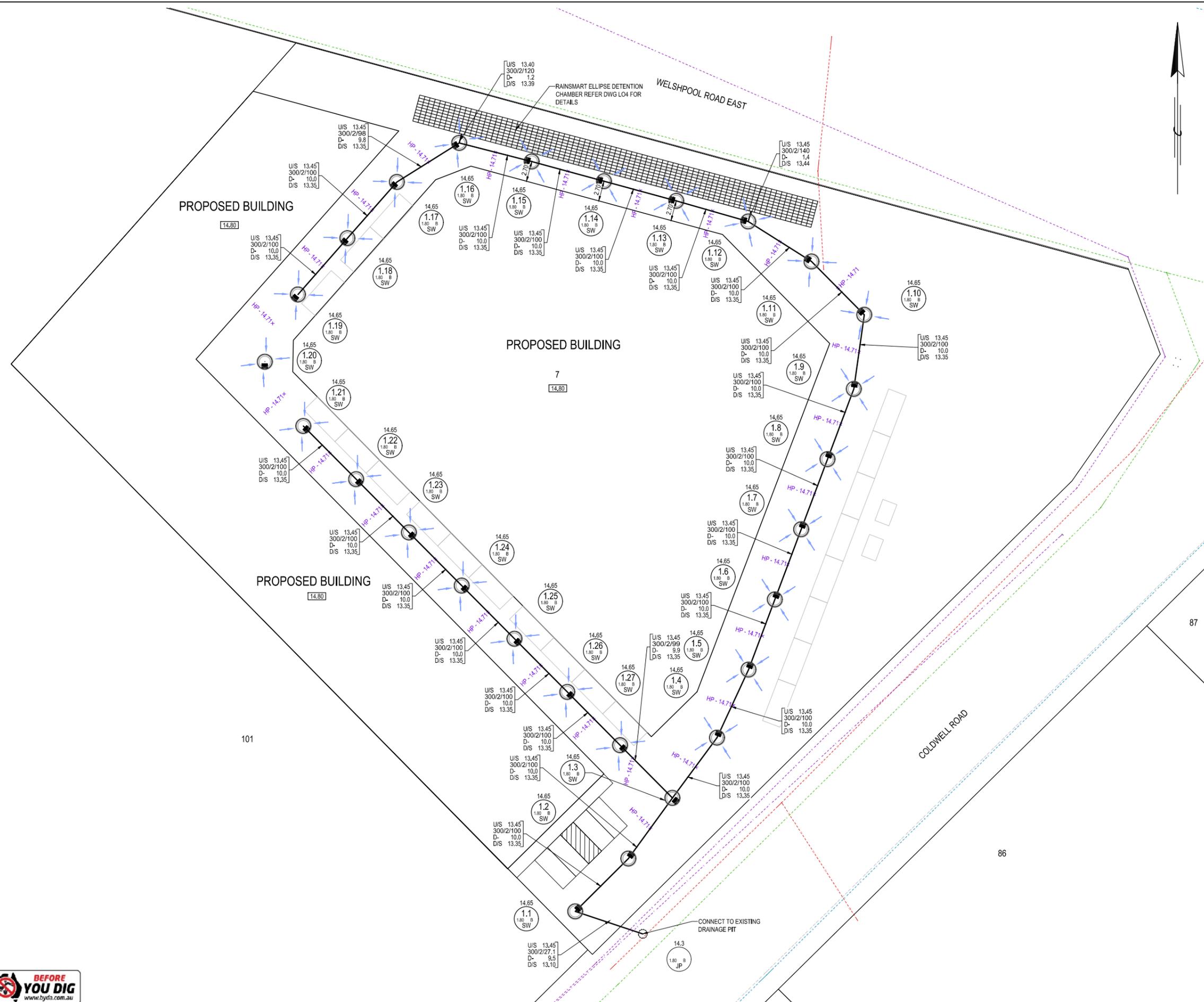
- W --- EXISTING WATER
- W --- PROPOSED WATER
- T --- EXISTING TELSTRA
- T --- PROPOSED NBN
- B --- EXISTING OPTIC FIBRE
- B --- PROPOSED OPTIC FIBRE
- G --- EXISTING GAS
- G --- PROPOSED GAS
- U --- EXISTING UNDERGROUND POWER
- U --- PROPOSED UNDERGROUND POWER
- S --- EXISTING SEWER
- S --- PROPOSED SEWER
- I --- IRRIGATION DUCT Ø225mm (U.O.N)
- I --- Ø100mm DUCTS INTO LOTS
- D --- PROPOSED DRAINAGE PIPE
- D --- PROPOSED SUB-SOIL DRAINAGE PIPE
- D --- EXISTING DRAINAGE PIPE
- D --- FUTURE DRAINAGE PIPE

- [U/S 00.00] UPSTREAM INVERT LEVEL
- [300/2/200] PIPE DIA CLASS/ GRADE
- [D- 00.0] PIPE LENGTH
- [D/S 00.00] DOWNSTREAM INVERT LEVEL
- SS INDICATES SUBSOIL DRAINAGE
- * INDICATES BEDDING TO BE TYPE 1 (TYP.)

- 34.03 ← LEVEL OF PIT LID/GRATE
- C12 ← PIT NUMBER
- 1000 ← LINER DIAMETER, BASE TYPE
- JP ← PIT TYPE
- CH.18.26 ← CHAINAGE
- xHP57.95 PROPOSED HIGH POINT LEVEL
- ← OVERLAND FLOW DIRECTION
- RAINSMART ELLIPSE SYSTEM

- DRAINAGE STRUCTURES**
- (GP) GULLY PIT
 - (CGP) CIRCULAR GULLY PIT
 - (SGP) SPECIAL GULLY PIT
 - (JP) JUNCTION PIT (CIRCULAR U.O.)
 - (SEP) SIDE ENTRY PIT
 - (DSEP) DOUBLE SIDE ENTRY PIT
 - (SSEP) SPECIAL SIDE ENTRY PIT
 - (SEPS) SIDE ENTRY PIT/GULLY COMBINATION
 - ▶ (HW) HEADWALL
 - (LCP) LOT CONNECTION PIT
 - (SW) SOAKWELL
 - (BU) BUBBLE UP PIT
- BASE TYPE**
- A - BENCH
 - B - TRAPPED
 - C - TRAPPED WITH BAFFLE
 - X - SPECIAL REFER DETAIL

- NOTES:**
- LEVEL DATUM - AUSTRALIAN HEIGHT DATUM
 - THE CONTRACTOR SHALL CO-ORDINATE THE LOCATION OF ALL EXISTING AND PROPOSED SERVICES PRIOR TO COMMENCEMENT OF WORK. ANY CONFLICTS ARE TO BE REPORTED TO THE SUPERINTENDENT IMMEDIATELY
 - THE CONTRACTOR SHALL LOCATE ALL LEVELS FROM EXISTING BENCH MARKS
 - ALL BENCH MARKS ARE TO BE PROTECTED
 - SERVICES, SUCH AS WATER, GAS, TELEPHONE, ELECTRICITY, AND DRAINAGE MAY BE ENCOUNTERED DURING CONSTRUCTION OF THE WORKS. SERVICES INFORMATION SHOWN ON DRAWINGS IS INDICATIVE ONLY AND MAY NOT BE COMPLETE. BEFORE EXCAVATION COMMENCES THE LOCATION OF ALL SUCH SERVICES SHALL BE OBTAINED FROM THE RELEVANT AUTHORITIES
 - CLEARING SHALL BE KEPT TO AN ABSOLUTE MINIMUM
 - DRAINAGE PIPE LENGTHS ARE INDICATIVE ONLY, MANHOLES & GULLIES TO BE LOCATED AS SHOWN
 - CONTRACTOR TO CHECK INVERT LEVELS OF ALL EXISTING STORMWATER PRIOR TO COMMENCEMENT OF WORK
 - DRAINAGE OUTLETS FINAL LOCATION TO BE DETERMINED ON SITE BY SUPERINTENDENT
 - ALL PIPES SHALL BE CLASS 2 AND LAID WITH TYPE 2 BEDDING U.N.O.
 - ALL PITS TO HAVE TRAPPED (TYPE B) U.N.O.



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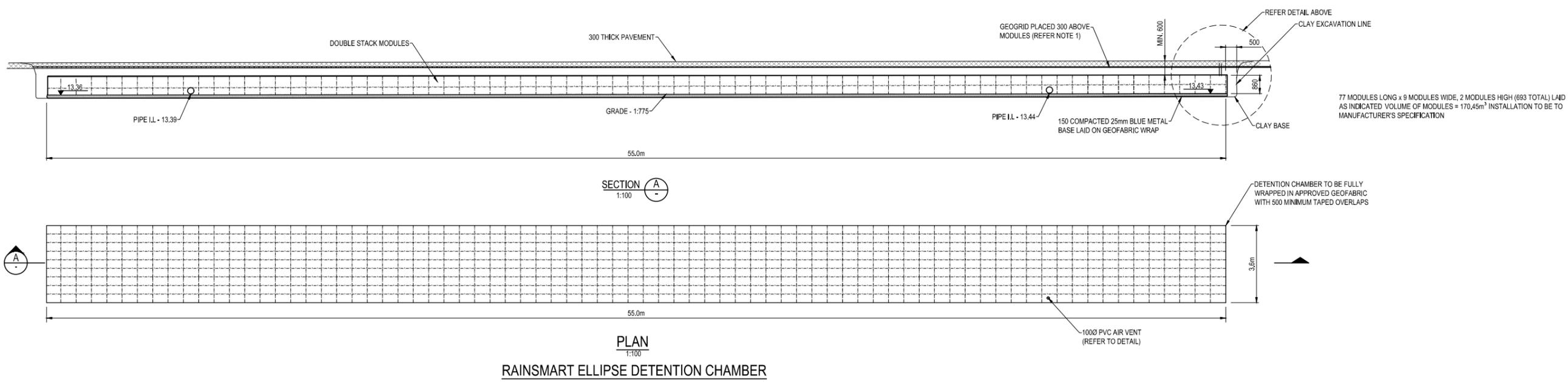
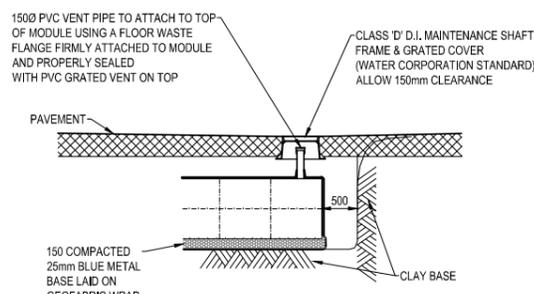
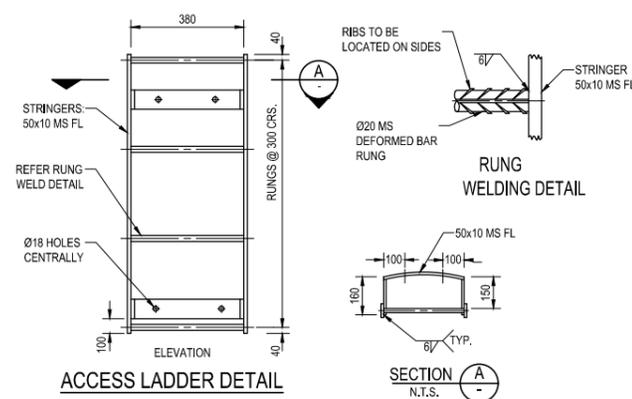
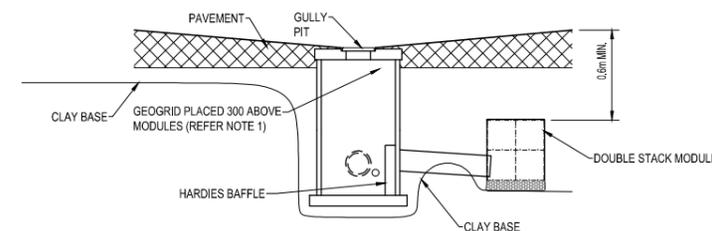
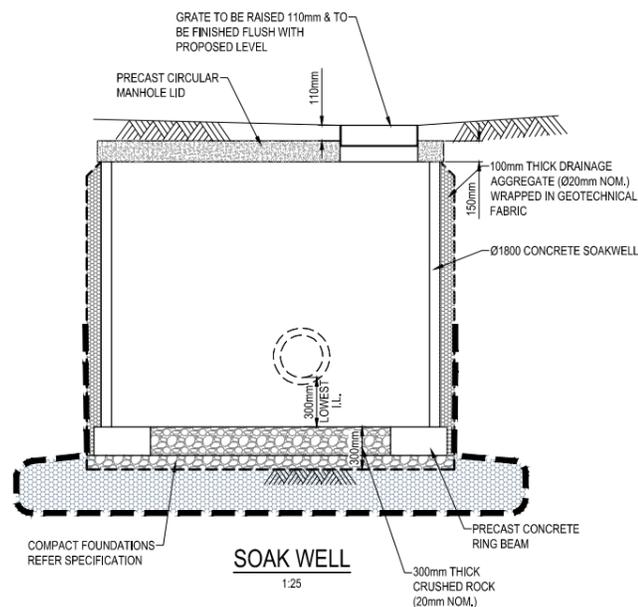
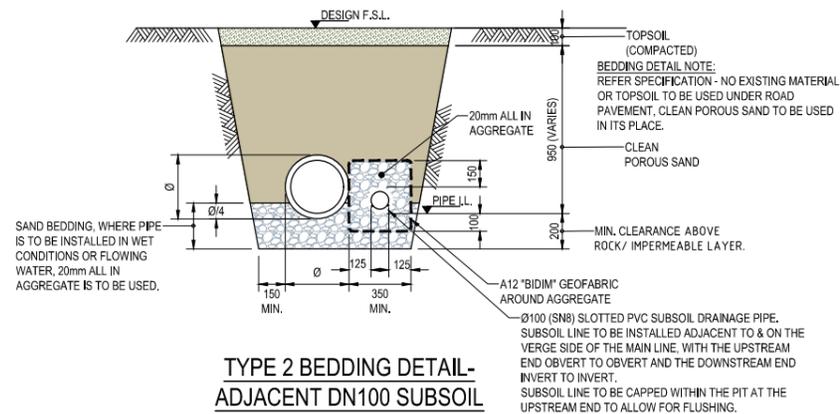
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NOTES

- GEOGRID TO BE BIAXIAL PLASTIC WITH A STRENGTH OF 18kN/m @ 2% ELONGATION ANY OVERLAP TO BE MIN. 1.0m



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PROJECT:
LOT 17 WELSHPOOL ROAD EAST WATTLE GROVE
W.A.P.C. No. -

DRAWING:
LOCAL WATER MANAGEMENT PLAN STANDARD DETAILS

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PRO1647		L04	



APPENDIX C – DRAINAGE CALCULATIONS

- **- Soakwell and Below ground storage Calculations (1% AEP Calcs)**

Development Engineering Consultants - Drainage Basin Spreadsheet

Project: Wattle Grove Self Storage - 581 Welshpool Road, Wattle Grove WA
Client: Parsons Management Group
Location: Required Ellipse/Soakwell Storage
Designer: SRA



Location:	Wattle Grove			
Nearest grid cell:	Latitude	32.0125 (S)	Longitude	115.9875 (E)

Data to be Input

Rainfall AEP (Percentage)		1		ARI	v Descriptor v
1EY Impervious Catchment (Ha)		0.724		100	Infrequent
Required Storage (1EY - 1hr) (m ³)		111.432			
AllowOutflow (l/s) (63.2%AEP)	1.92		l/s/ha		1.39
AllowOutflow (l/s) (20%AEP)	11.60		l/s/ha		8.39
AllowOutflow (l/s) (10 %AEP)	11.60		l/s/ha		8.39
AllowOutflow (l/s) (1%AEP)	19.00		l/s/ha		13.75 (Based on 350 Cubic Metres per hectare as per LWMS and UWMP)

Catchment Details	Paved Area	Unpaved area	Total
Lot Area (SQM)			8835.00
Proportion Paved	91%	9%	100%
Area Paved (Ha)	0.804	0.080	0.884
Run-Off Co-efficient(C10)	0.90	0.00	
ARI Multiplier	1.00	1.20	
Run-Off Co-efficient(Cy)	0.90	0.00	
Impervious Area(Ha)	0.724	0.000	0.724

Effective C
0.82

Volume and Dimensions of Available Storage

Area above ground inundated to 0.05m deep				
(Max Above Soakwells) (m ³)		28.00	1	28.00
Storage provided manholes/pipe (m ³)		18.378		
Number of Soakwells		28.00		
Diameter of soakwells (m)		1.80		
Depth of each soakwell (m)		1.50		
Storage Provided soakwells (m ³)		106.88		
Storage provided (m ³)		348.06		348.06
Soakage rate (l/s/m ²)		0.005		0.40 m/day

Allowable Outflow
13.75
Actual Outflow
 10.99

Volume of storage required is 1m³ per 25.38 m² of total lot area

Development Engineering Consultants - Drainage Basin Spreadsheet

Client: **Parsons Management Group**
 Location: **Required Ellipse/Soakwell Storage**



T _C (mins)	T _C (hrs)	I (mm/hr)	Q _{IN} (l/s)	Total V _{IN} (m ³)	Q _{OUT} (soakage) (l/s)	V _{OUT} (soakage) (m ³)	Net storage (after soakage) (m ³)	Time of water in basin (hr)	V _{OUT} required (m ³)	Q _{OUT} (l/s)	Effective runoff C
10	0.17	126.00	253.3	151.95	3.37	2.02	149.93	14.8	0.00	0.00	0.00
15	0.25	101.00	203.0	182.71	3.37	3.03	179.68	11.9	0.00	0.00	0.00
20	0.33	85.60	172.1	206.46	3.37	4.04	202.42	10.1	0.00	0.00	0.00
30	0.50	66.60	133.9	240.95	3.37	6.06	234.90	7.8	0.00	0.00	0.00
45	0.75	51.60	103.7	280.03	3.37	9.09	270.94	6.1	0.00	0.00	0.00
60	1.00	43.10	86.6	311.87	3.37	12.12	299.75	5.1	0.00	0.00	0.00
90	1.50	33.60	67.5	364.69	3.37	18.18	346.51	3.9	0.00	0.00	0.00
120	2.00	28.30	56.9	409.55	3.37	24.23	385.31	3.3	37.26	5.18	0.07
150	2.50	25.30	50.9	457.67	3.37	30.29	427.37	3.0	79.32	8.81	0.14
180	3.00	22.30	44.8	484.08	3.37	36.35	447.73	2.6	99.67	9.23	0.17
240	4.00	19.17	38.5	554.75	3.37	48.47	506.28	2.3	158.22	10.99	0.23
300	5.00	16.70	33.6	604.19	3.37	60.59	543.61	2.0	195.55	10.87	0.27
360	6.00	14.90	29.9	646.89	3.37	72.70	574.18	1.7	226.13	10.47	0.29
480	8.00	12.77	25.7	739.02	3.37	96.94	642.08	1.5	294.03	10.21	0.33
720	12.00	9.71	19.5	843.12	3.37	145.41	697.71	1.1	349.66	8.10	0.34
960	16.00	8.14	16.4	942.78	3.37	193.88	748.90	1.0	400.85	6.96	0.35
1440	24.00	5.96	12.0	1035.02	3.37	290.82	744.20	0.7	396.14	4.59	0.31
2880	48.00	3.42	6.9	1187.84	3.37	581.64	606.20	0.4	258.14	1.49	0.18
4320	72.00	2.44	4.9	1271.20	3.37	872.46	398.74	0.3	50.68	0.20	0.03

Volume and Dimensions of Below-Ground Storage Based on Rainsmart Ellipse Modules

Width	400 mm	0.4 m					
Height	440 mm	0.44 m					
Length	715 mm	0.715 m					
Storage Required	192.73 m ³		Width Provided	3.60 m	Depth Provided	0.88	
No. of Cells Wide	12		Length Provided	61.49 m			
No. of Cells Deep	2		Storage Provided	194.80 m ³	1% AEP storage	No. of cells Required	1548 cells

APPENDIX D – GEOTECHNICAL REPORT

- - Structerre – January 2026

-

Geotechnical Investigation Report



Job No: J502152

Parsons Management Group Pty Ltd

#581 Welshpool Road East, Wattle Grove, WA.

Tuesday 13 January 2026

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Appendix C – Borelogs & Terminology
Appendix D – Laboratory Test Results

Privacy & Confidentiality Notice

This report, the information herein and any attachment are intended solely for the named client. The 'client' is defined as the person or persons named in this report, or the purchaser of the services. If you are not a named client, please delete the report and any attachments. Any use or disclosure of the contents of either is unauthorised and may be unlawful.

Disclaimer

This report is for Structerre only to use in design. Any design by anyone else for any structure must be specifically approved by Structerre. If used by anyone else for anything other than a Structerre design or structure, Structerre takes no responsibility.

1. Project Details

1.1 Introduction

At the request of Parsons Management Group Pty Ltd (The Client), Structerre Consulting (Structerre) have conducted a Geotechnical Investigation at #581 Welshpool Road East, Wattle Grove, WA. The purpose of the investigation was to provide the following for a proposed commercial development:

- desktop study summarising the geology, groundwater, site history (obtained from historical photographs) and potential presence of Acid Sulphate Soils (ASS)
- summary of encountered ground and groundwater conditions
- site classification in accordance with AS2870
- recommendations for stormwater drainage design
- site preparation requirements for earthworks, including site traffic, excavation, reuse of materials and batter slopes
- ground bearing capacity and estimated settlements for pad and strip footings founded at 0.3 m and 0.5 m
- preliminary pavement design parameter, indicative California Bearing Ratio (CBR) values determined from penetrometer results and ground conditions encountered.

Structerre were provided with a site plan prepared by The Client showing spot levels, dimensions of the proposed lot and the proposed development locations in relation to the site boundaries.

Terms of reference for this investigation were presented in a Structerre Consulting proposal reference Q117844 (dated 9 December 2025), which was submitted to and accepted by The Client.

1.2 Site Description

The site is located at #581 Welshpool Road East, Wattle Grove, City of Kalamunda, WA. The site is located on the west side of the junction of Welshpool Road East and Coldwell Road, neighbouring rural development to the southeast, and an industrial development to the west.

The site is generally flat and level with its surrounding topography. At the time of the field investigation there were two existing warehouses occupied the site on the southeast quadrant. The boundaries are covered with small to medium sized trees with a few larger trees dotted on the site.

1.3 Field Investigation – Scope of Works

The field investigation was carried out on 16 December 2025 and comprised:

- eight (8) Sample Retrieval Probes (SRP) to a depth of 2.5m over the site for material assessment and soil profiling
- four (4) In situ percolation tests to determine the permeability of the materials within the upper 1.0 m
- eight (8) Dynamic Cone Penetrometer (DCP) tests in accordance with AS 1289.6.3.2 (1997) to a depth of 1.0 m for evaluation of relative densities of the upper layers.

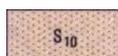
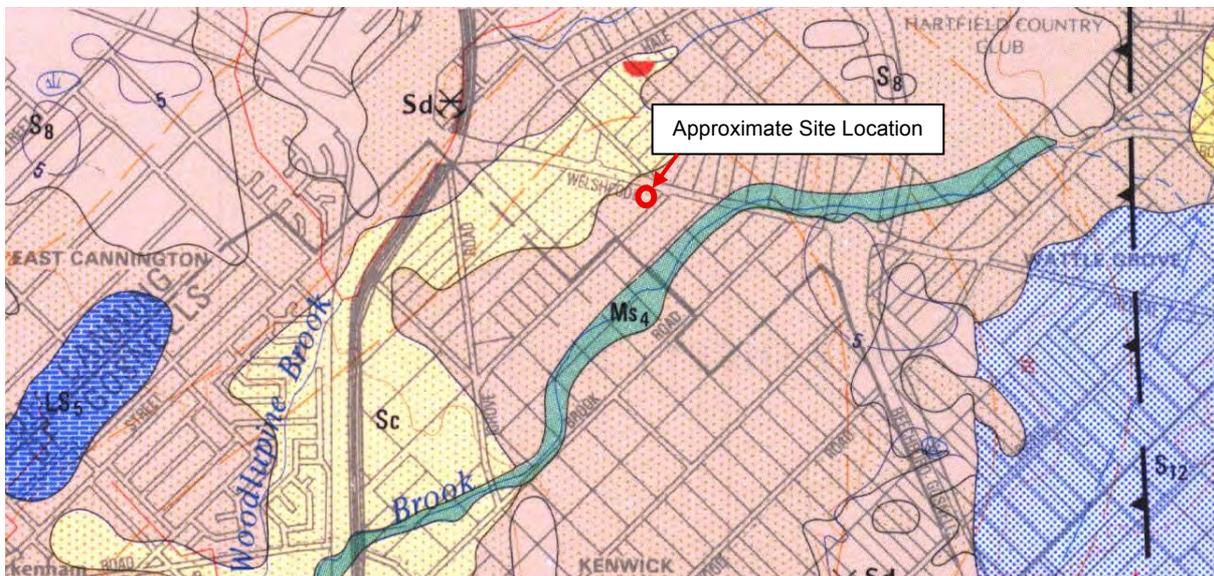
The test locations are shown on the attached site plan in Appendix A.

A geotechnical representative from Structerre supervised all the fieldwork, interpretation and terminology used in this report are in accordance with the guidelines presented in ASI726-2017, “Geotechnical Site Investigations”.

2. Desk Study

2.1 Geological Setting

The Armadale sheet 1: 50,000 Environmental Geology Series (Part Sheets 2033 I and 2133 IV, 1986) prepared by the Geological Survey of Western Australia indicates that the following geological layers underlie the site:



SAND (S₁₀) – white to pale grey at surface, yellow at depth, fine to medium grained, moderately sorted, subangular to subrounded, minor heavy minerals of eolian origin over sandy clay to clayey sand of the Guildford Formation, of eolian origin (Thin Bassendean Sand over Guildford Formation Qpb/Qpa).

2.2 Ground Surface and Groundwater Level

Publicly available Perth Groundwater Map indicates the ground surface level at this site was approximately 14.5 m Australian Height Datum (AHD).

According to the Perth Groundwater Map, groundwater is expected to be intersected with the range of 12.5 m (maximum) and 12.2 m (minimum) AHD. It should be noted that the groundwater levels can vary significantly due to seasonal variation and the data from the recorded range should be used only as a guide.

2.3 Acid Sulphate Soils

Information from publicly available Landgate website indicates that the site lies within a zone of moderate to low risk of ASS occurring within the natural surface.

2.4 Site History

Historical aerial photographs dating back to 1953 are publicly available through Landgate Map Viewer were assessed and a summary is presented in Table 1.

Table 1 - Historical Site Information

Date	Description
1953	The site is cleared revegetated bushland
1961	Coldwell Road was built to the east of the site
1974	A warehouse was built close to the eastern boundary in the site
1981	Rural development built to the west and south of the site
2012	Part of the site being used for containers storage
2019	Rural development built to the west and south of the site have been demolished
2022	The demolished rural development is being cleared
2023	Large warehouse constructed on the southwest boundary of the site
2025	The site and surrounds remain unchanged till the current day

3. Results of the Investigation

3.1 Subsurface Soil Profile

The subsurface soil profile presented below was determined from the ground conditions encountered during the investigation and laboratory test results:

Table 2 - Subsurface Soil Profile

Depth to Base of Strata (m)	Geological Setting	Material Description
0.1 – 0.4	FILL	Sand GRAVEL/Gravelly SAND: fine to medium gravel/sand, poorly graded, trace clay, grey/brown, very dense, moist to dry (BH02 & BH07 Only)
0.8 – 1.5		SAND: fine to medium grained, poorly graded, trace clay, grey/brown, very loose to very dense, moist to dry
1.5	NATURAL	Gravelly SAND: medium grained, poorly graded, pale brown/brown, medium dense, moist to dry (BH07)
Not Penetrated (>2.5)		Clayey SAND/Sandy CLAY: medium grained, medium plasticity, poorly graded, brown to brown mottled grey, medium dense/firm

The soils encountered are consistent with the expected site conditions as predicted from the Environmental Geology Map. It is important to note that there may be pockets of fill on site that are deeper than that encountered by the investigation boreholes.

The subsurface soil conditions encountered are presented in the bore logs within Appendix C following this report.

3.2 Groundwater

Groundwater was encountered during the investigation at a depth of 1.4 m (BH01) and 1.5 m (BH07) below ground level. This is not consistent with the Perth Groundwater Map. It should be noted these water levels are recorded just above the cohesive material which may suggest that this water may be perched. Groundwater levels can vary significantly due to seasonal variation, and any published data should be used only as a guide.

3.3 Percolation Testing

Percolation testing of the in-situ soils was undertaken in two locations. Results of the testing are summarised below:

Table 3 - In Situ Percolation Test Results

Test Location	Testing Depth (m)	Soil Type	Permeability (m/day)
BH02	1.2	SAND with silt	0.5
BH04		Clayey SAND	0.6
BH06			0.4
BH08			0.6

3.4 Laboratory Test Results

Samples were tested by Structerre’s in-house NATA accredited laboratory for Particle Size Distribution as per AS1289.3.6.1, Plasticity Index / Linear Shrinkage as per AS1289.3.1.2 – 3.4.1, soil compaction via Modified Maximum Dry Density (MMDD) as per AS 1289 5.2.1-2003 and California Bearing Ratio (CBR) as per AS 1289.6.1.1-2017. All test certificates are presented in Appendix D.

3.4.1 Particle Size Distribution

Results of the testing are summarised below:

Table 4 - Particle Size Distribution Test Results

Test Hole	Depth (m)	Soil Description	Gravel Component (%)	Sand Component (%)	Clay & Silt Component (%)
BH02	1.5 – 2.2	Clayey SAND with gravel	16	57	27
BH04	0.8 – 1.6	Silty SAND	2	77	21

3.4.2 Atterberg Limits

Results of the testing are summarised below:

Table 5 - Atterberg Limit Results

Sample Identification	BH02 @ 1.5 m – 2.2 m	BH04 @ 0.8 m – 1.8 m
Liquid Limit (%)	32	Not Obtainable
Plastic Limit (%)	9	Not Obtainable
Plasticity Index (%)	23	Non-Plastic
Linear Shrinkage (%)	8	Not Obtainable

Test results indicate that the natural clayey SAND has a low shrink swell capacity or degree of expansion.

3.4.3 Modified Maximum Dry Density (MMDD) Compaction Test and California Bearing Ratio (CBR)

The test results are summarised in Table below.

Table 6 - CBR Test Results

Test Hole	Depth (m)	Soil Description	Optimum Moisture Content (%)	Maximum Dry Density (t/m ³)	2.5 mm Penetration (%)	5 mm Penetration (%)
BH09	0.1 – 0.5	SAND trace gravel	11.5	1.91	50	-
SAND (Imported Fill) @ 95% MMDD*					12	

* Implies the maximum dry density ratio using Modified compaction in accordance with AS 1289 5.2.1-2003.

Based on the above results a conservative soaked CBR of 20% would be recommended for the natural subgrade materials.

A subgrade value of 12 % can be considered with the placement and compaction of 0.5 m import sand cover above the existing materials encountered on site for design purposes.

4. Geotechnical Construction Considerations

4.1 Site Classification

AS 2870-2011 Residential Slabs and Footings provides guidance on site classification for residential slabs and footing design based on the expected ground surface movement and depth of expected moisture changes.

Although the proposed development falls outside the scope of AS 2870, site classification can be used to assist in the design of foundations. The foundation design should be undertaken by a Structural Engineer, taking into consideration ground bearing capacity and the acceptable total and differential settlements of the proposed foundation system.

Based on results of this investigation the site can be classified as Class “S” provided that all unsuitable materials are removed and replaced with engineer-controlled sand fill materials in accordance with earthwork recommendations outlined in Section 4.3 in this report. The site in its current (undeveloped) condition is classified as Class “P” due to the uncontrolled fill.

In accordance with AS3798-2007 Guidelines on Earthworks for Commercial and Residential Developments, the site could be improved as follows:

- A minimum of 0.6 m sand cover is to be placed / maintained above the reactive material to achieve a Class “S” site with characteristic surface movement, $y_s < 20$ mm.

4.2 Drainage

The existing ground conditions are not suitable for on-site disposal of stormwater runoff using shallow soak wells. It is recommended that all stormwater from roofed, paved and driveway areas be collected and detained to reduce peak flow rates prior to discharging off site as per council requirements.

Alternative (onsite) options may include the design and installation of detention basins and or compensating swales, however these will be required to be designed and constructed in accordance with local council requirements for onsite stormwater drainage management.

4.3 Earthworks

All earthworks shall be undertaken in accordance with AS 3798-2007 Guidelines on earthworks for commercial and residential developments and are to include the following:

- All unsuitable materials to be stripped and removed from the site. Unsuitable materials include vegetation, topsoils, uncontrolled filling, and any deleterious and organic materials.
- Due to the uncontrolled fill material encountered on site (and site classification of Class “P”), it is considered that the near surface materials require improvement to achieve Class “S”. It is proposed to excavate and stockpile the materials for reuse, provided it is dry, free from clay/silt (i.e., <5%), organic and deleterious materials. The

depth of excavation may vary depending on conditions encountered (i.e. groundwater) and is subject to assessment. However, it is envisaged that an average depth of excavation would be approximately 0.6 m.

- Excavations should not exceed 1.2 m without adequate temporary shoring and/or safe excavation practices (e.g., benching, and / or batters) or undermine any surrounding structures. A 1V:2H slope should be maintained for temporary excavations. If excavation is required closer than the 1V:2H slope would allow, it is recommended that this office be contacted for retaining design.
- Proof compact the exposed base. The compaction requirements are set out in the extract below, as per AS 3798-2007:

Minimum Relative Compaction Extracted from AS 3798 – 2007 Table 5.1

Item	Application	Minimum relative compaction %	
		Minimum density ratio (Standard Compaction Effort) (Cohesive soils)	Minimum density index (Cohesionless soils)
1	Commercial – fills to support minor loadings, including floor loading of up to 20kPa and isolated pad or strip footings to 100kPa	98	75
2	Fill to support pavements	95	70
	General Fill Subgrade (to a depth of 0.3 m)	98	75

- After excavation, raking and proof compaction, it is recommended the exposed base is to be assessed and approved by an authorised representative from this office prior to backfilling. At this stage it can be assessed whether any further materials need to be removed or whether further compaction of the base is required.
- The ground level should be built up to design levels with the stockpiled sand materials and imported fill. If required, the imported fill should consist of free draining sand with not more than 5% passing a 75 µm sieve and be free of organic matter and other deleterious materials.
- The fill sand materials should be placed in layers not exceeding 300 mm loose thickness and compacted to achieve the values stated in the table above. As a guide a minimum of 8 PSP blows over the interval 150 – 450 mm, 9 PSP blows over the interval 450 – 750 mm and 11 PSP blows over the interval 750 – 1050 mm should be achieved, however it is recommended that this be verified with appropriate laboratory testing.

- For design loadings above 100 kPa additional compactive effort may be required over the base. Bearing capacities as outlined in Section 0 of this report can be achieved with compaction of the base of foundation to a minimum of 95% modified maximum dry density as determined by AS1289 5.2.1 and 5.4.1, to a minimum depth of 0.5 m below the base of foundation.
- After remedial earthworks have been completed, it is recommended the earthworks be assessed and approved by an authorised qualified representative from this office.

It is considered that standard small to medium sized earthmoving equipment would be appropriate for the proposed earthworks. The near surface ground is competent and should not pose an issue to site traffic movements.

The material encountered on site can be deemed as ‘easy’ to excavate with medium sized earthwork equipment (i.e., a 20t excavator). Should excavations encounter groundwater, dewatering will be necessary.

4.4 Geotechnical Design Parameters

Based on the field investigation and test results, the interpreted geotechnical soil parameters of the encountered materials are presented in the below table.

Table 7 - Geotechnical Design Parameters

Soil Type	Depths (m)	Friction Angle ϕ (°)	Cohesion C (kPa)	Density γ (t/m ³)	Elastic Modulus E (MPa)
FILL: SAND/ Gravelly SAND/Sandy Gravel	0 – 1.5	33	0	1.80	20
Clayey SAND/Sandy Clay	1.5 – 2.5 +	30	5	1.85	40

4.5 Shallow Footings – Allowable Soil Bearing Capacities

Based on the findings of the current preliminary geotechnical investigation, shallow pad and strip footings may be considered appropriate for the proposed development by limiting the bearing capacity to 200 kPa. Allowable bearing capacities for shallow footings at the site have been calculated under the following assumptions:

- The site preparation procedures specified in Section 4.3 have been carried out.
- The specified level of compaction has been achieved below the base of each footing.
- Loads are vertical and not eccentric.
- Isolated footings (i.e., interaction of foundations has not been considered).
- The foundations are flexible.
- A factor of safety (FoS) of 3.0 against bearing capacity failure.
- Maximum characteristic surface movement, $y_s < 20$ mm.
- Embedment depth between 0.3 m and 0.5 m.

The recommended allowable bearing capacities are dependent on the site being dry and well drained, so that the foundation material does not become saturated.

The actual allowable bearing capacity of a particular foundation will be dependent on its location, geometry and founding depth, as well as the founding horizon. Therefore, once specific foundation geometries have been determined and the earthworks completed, it is recommended that the allowable bearing capacity and associated settlements be verified.

Additionally, should undermining issue prevent the excavation of the near surface loose materials, it is recommended that the allowable bearing capacity be reviewed. However, this will likely result in lower allowable bearing capacities.

5. Conclusions

A site investigation was carried out at the proposed commercial development site to assess the geotechnical conditions. Parameter and design recommendations are incorporated in the body of the report. The following conclusions have been drawn from the site investigation:

- The subsurface soil profile encountered comprised very loose to very dense sand/gravelly sand/sandy gravel fill from the surface to 1.5 m, underlain by medium dense/firm clayey sand to the investigated depth of 2.5 m.
- The water table was encountered at the depth of 1.4 m (BH01) and 1.5 m (BH07) below the existing ground level, above the cohesive material which may suggest that the water may be perched.
- The site classification is currently classified as Class "P", however can be upgraded to Class "S" in accordance with AS 2870-2011 provided the recommended earthworks are undertaken provided in section 4.3.
- It is considered that the site is not suitable for on-site drainage in its current condition.
- Recommended earthworks include stripping of fill and unsuitable materials, excavation of loose materials, proof compaction of the base, placement of engineered fill and compaction of final level.
- The bearing capacity for pad footings and strip footings shall be limited to 200 kPa with an estimation of settlement of the footings limited to <20 mm.

6. Limitation of Field Investigations

This report has been prepared in accordance with general accepted consulting practice for The Client using information supplied at the time and for the project specific requirements as understood by Structerre. To the best of our knowledge the information contained in this report is accurate at the date of issue, however it should be emphasised that any changes to ground conditions and/or the proposed structures may invalidate the recommendations given herein.

The conclusions and recommendations in this report are based on the site conditions revealed through selective point sampling, representing the conditions of the site in total, although the area investigated represents only a small portion of the site. The actual characteristics may vary significantly between successive test locations and sample intervals other than where observations, explorations and investigations have been made.

The materials and their geotechnical properties presented in this report may not represent the full range of materials and strengths that exist on this site, and the recommendations should be regarded as preliminary in nature. Allowances should be made for variability in ground conditions and any consequent impact on the development. Structerre accepts no responsibility and shall not be liable for any consequence of variations in ground conditions. If ground conditions encountered during construction are different to that described in this report, this office should be notified immediately.

Should you require further information or clarification of any of the recommendations provided within this report, please contact the undersigned.

For and on behalf of **Structerre Consulting**.



Eddie Ng
Senior Geotechnical Engineer

(08) 9205 4500
wageotechengineering@structerre.com.au



Luke Young
Geotechnical Assistant Manager

13 January 2026

Job #	Revision	Authored	Checked	Authorised
J502152	0	ENG	LYG	MEC

7. References

Department of Water – Perth Groundwater Map

Landgate Map Viewer

The Armadale sheet 1: 50,000 Environmental Geology Series (Part Sheets 2033 I and 2133 IV, 1986) prepared by the Geological Survey of Western Australia

AS 1726-2017 Geotechnical Site Investigation

AS 2870-2011 Residential Slabs and Footings

AS 3798-2007 Guidelines on Earthworks for Commercial and Residential Developments

AS 1289.6.7.2-2016 In-situ Percolation Test (Falling Head)

AS 1289.6.3.2-1997 Methods of testing soils for engineering purposes – Soil strength and consolidation tests – Determination of the penetration resistance of a soil – 9kg dynamic cone penetrometer test

AS 1289.6.3.1-2009 Soil classification tests – Determination of the particle size distribution of a soil – Standard method of analysis by sieving

AS 1289.3.1.2-2009 Methods of testing soils for engineering purposes – Soil classification tests – Determination of the liquid limit of a soil

AS 1289.3.2.1-2009 Methods of testing soils for engineering purposes – Soil classification tests – Determination of the plastic limit of a soil

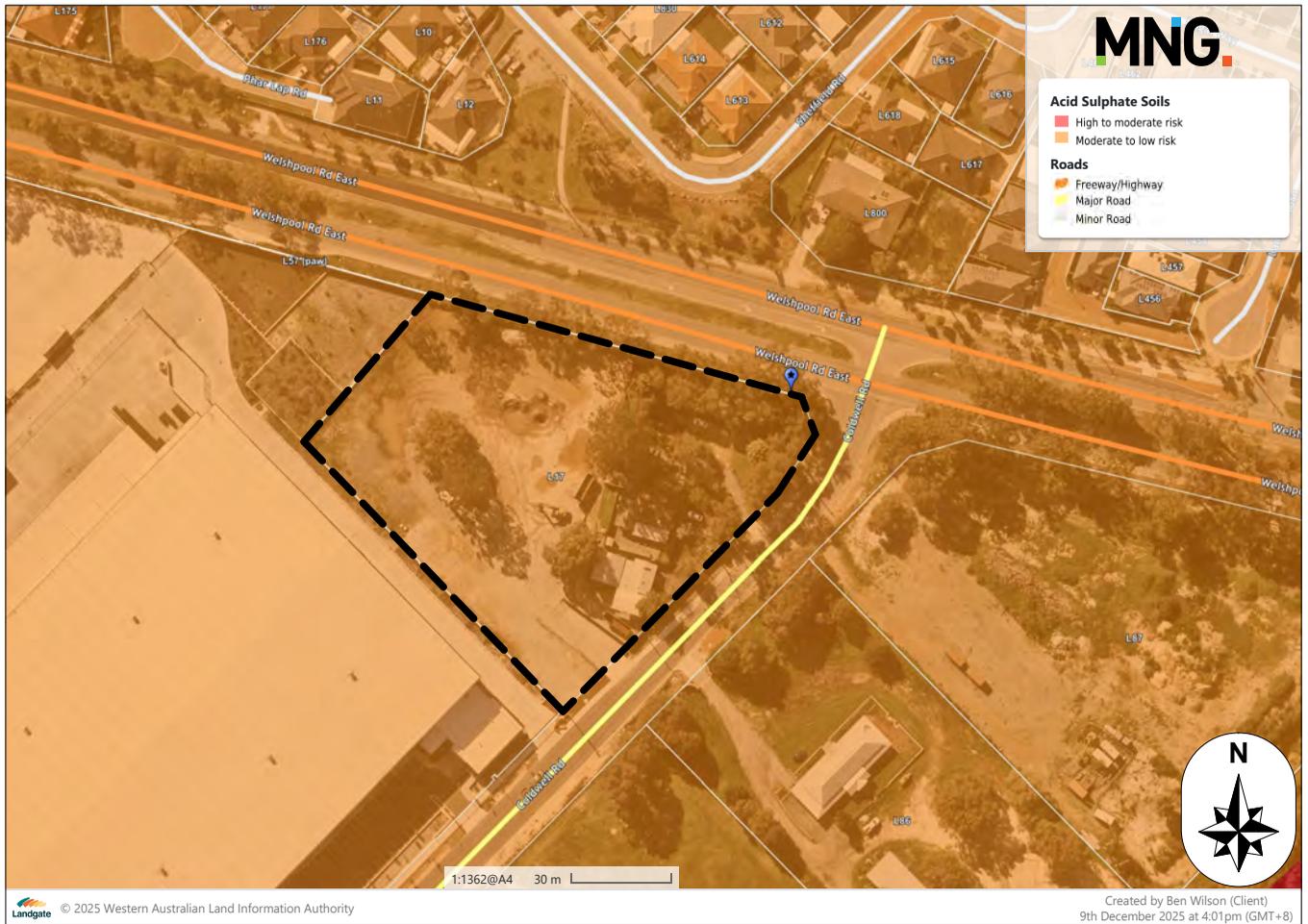
AS 1289.3.3.1-2009 Methods of testing soils for engineering purposes – Soil classification tests – Calculation of the plasticity index of a soil

AS 1289.3.4.1-2009 Methods of testing soils for engineering purposes – Soil classification tests – Determination of the linear shrinkage of a soil

AS 1289.5.2.1- 2017 Methods of testing soils for engineering purposes – Soil compaction and density tests – Determination of the dry density / moisture content relation of a soil using modified compactive effort.

AS 1289.6.1.1-2014 Methods of testing soils for engineering purposes – Soil strength and consolidation tests – Determination of the California Bearing Ratio of a soil – Standard laboratory method for a remoulded specimen

Appendix A – Site Plan



LEGEND:

--- Site Boundary



PROJECT:		#581 Welshpool Road East, Wattle Grove	
PROJECT #:	D380594	CLIENT:	
JOB #:	J502152	Parsons Management Group Pty Ltd	
SCALE:	NTS	TITLE:	
		Geotechnical - Acid Sulphate Soils	
DATE:	16 Dec '25	DRAWN BY:	CHECKED BY:
		MAI	ENG

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TEL 9205 4500 FAX 9205 4501 EMAIL: wageotecheng@strucTerre.com.au



Note: Showing approximate test locations only

LEGEND

-  Borehole
-  Depths to Reactive Material
-  Site Boundary



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PROJECT:		#581 Welshpool Road East, Wattle Grove	
PROJECT #:	D380594	CLIENT:	Parsons Management Group Pty Ltd
JOB #:	J502152	TITLE:	Geotechnical - Site Plan
SCALE:	NTS	DRAWN BY:	MAI
DATE:	16 Dec '25	CHECKED BY:	ENG

Appendix B – Site Photos



PHOTO 1 - Facing southeast from BH1 location



PHOTO 2 - Facing northeast from BH3 location



PROJECT:

#581 Welshpool Road East, Wattle Grove

PROJECT #: D380594

CLIENT:

Parsons Management Group Pty Ltd

JOB #: J502152

SCALE: NTS

TITLE:

Site Photographs

DATE: 16 Dec '25

DRAWN BY:

MAI

CHECKED BY:

ENG

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PHOTO 3 - Facing southeast from BH4 location



PHOTO 4 - Facing west from BH8 location



PROJECT:		#581 Welshpool Road East, Wattle Grove	
PROJECT #:	D380594	CLIENT:	
JOB #:	J502152	Parsons Management Group Pty Ltd	
SCALE:	NTS	TITLE:	
DATE:	16 Dec '25	DRAWN BY:	CHECKED BY:
		MAI	ENG

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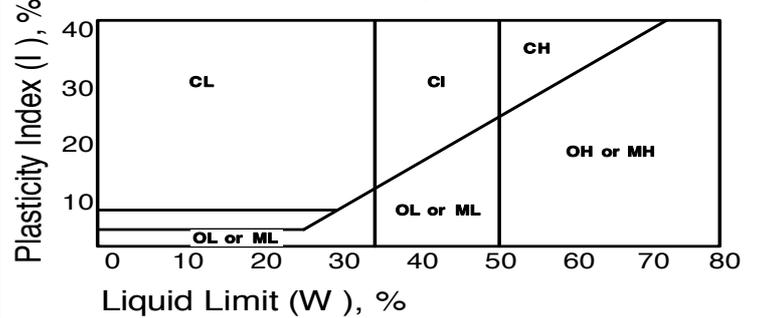
Appendix C – Borelogs & Terminology

BORELOG TERMINOLOGY

Particle Size Distribution

Major Division	Subdivision	Size
Boulders		>200mm
Cobbles		200 - 63mm
Gravel	Coarse	63 - 20mm
	Medium	20- 6mm
	Fine	6 - 2.36mm
Sand	Coarse	2.36 - 0.6mm
	Medium	0.6 - 0.2mm
	Fine	0.2 - 0.075mm

Plasticity



Consistency of Cohesive Soils

Term	Undrained Strength Su (kPa)	Field Guide
Very Soft	< 12	Exudes between the fingers when squeezed in hand
Soft	12 - 25	Can be moulded by light finger pressure
Firm	25 - 50	Can be moulded by strong finger pressure
Stiff	50 - 100	Cannot be moulded by Fingers. Can be indented by thumb.
Very Stiff	100 - 200	Can be indented by thumb nail
Hard	> 200	Can be indented with difficulty by thumb nail.
Friable	-	Crumbles or powders when scraped by thumbnail

Consistency/Density of Non-Cohesive Soils

Term	Density Index (%)	SPT "N" Value Comparison	Moisture Content
Very Loose	< 15	0 - 4	D Dry
Loose	15 - 35	4 - 10	M Moist
Medium Dense	35 - 65	10 - 30	W Wet
Dense	65 - 85	30 - 50	S Saturated
Very Dense	> 85	> 50	

Minor Components

Term	Assessment Guide	Proportion of Minor Component In:
Trace	Presence just detectable by feel or eye, but soil properties little or no different to general properties of primary component	Coarse grained soils: < 5 % Fine grained soils: <15%
With	Presence easily detected by feel or eye, soil properties little different to general properties of primary component	Coarse grained soils: 5 - 12 % Fine grained soils: 15 - 30%

Soil Legend

FILL	CLAY	GRAVEL	CONCRETE
TOPSOIL	SILT	LIMESTONE	COMBINATIONS
PEAT	SAND	BEDROCK	eg: Clay, Silty, Sandy

USCS

GW Well graded gravel	SC Clayey sand	OL Organic low plasticity silt	CL Low plasticity clay
GP Poorly graded gravel	SM Silty sand	ML Low plasticity silt	CI Intermediate plasticity clay
SW Well graded sand		MH High plasticity silt	CH High plasticity clay
SP Poorly graded sand		OH Organic high plasticity silt	PT Peat

DOC:GE:3.003

WA | QLD | NSW | VIC

Borehole Record: BH01

Project: Proposed Commercial Development	Position: Easting: 404254.00 Northing: 6458363.00	Date Drilled: 16/12/2025
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia	Elevation: Not Surveyed	Drill Rig: SRP - 11AY
Loc Comment:	Inclination:	Drill Supplier: Structerre Consulting
Job No: D380594 J502152		Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP	Percolation (m/day)	Samples
		Fill		SP	Sand (SP): loose to very dense, poorly graded, brown, traceclay, dry to moist.	M-D	L-VD	3		
				SP	Sand (SP): medium dense, poorly graded, medium grained, pale grey and grey, moist.	M	MD	9		
	1.0	Natural		SC	Clayey Sand (SC): medium dense, poorly graded, medium grained, low plasticity clay, pale brown, moist.	M	MD	15		
				SC	Clayey Sand (SC): medium dense, poorly graded, pale brown.		MD			
	2.0			CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F			
					BH01 Terminated at 2.5 m					



Depth: 2.5 m - BH1

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.

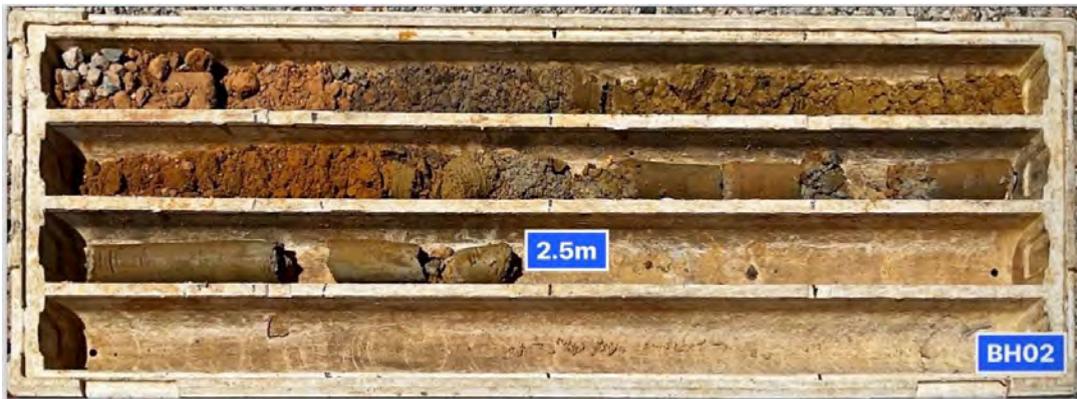
Borehole Record: BH02

Project: Proposed Commercial Development
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia
Loc Comment:
Job No: D380594 J502152

Position: Easting: 404250.00
 Northing: 6458335.00
Elevation: Not Surveyed
Inclination:

Date Drilled: 16/12/2025
Drill Rig: SRP - 1IAY
Drill Supplier: Structerre Consulting
Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP					Percolation (m/day)	Samples	
								0	5	10	15	20			
	1.0	Fill		GP	Sandy Gravel (GP): very dense, poorly graded, fine to medium sized, grey, moist.	M	VD								
				SP	Sand (SP): dense, poorly graded, brown, trace clay, dry to moist.	M-D	D								
				SP	Sand (SP): medium dense, poorly graded, medium grained, pale grey and grey, moist.	M	MD								
				SP	Sand (SP): loose, poorly graded, fine to medium grained, dark brown, with silt, moist.	M	L								
	2.0	Natural		CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F								
					BH02 Terminated at 2.5 m (Target Depth)										



Depth: 2.5 m - BH2

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Borehole Record: BH03

Project: Proposed Commercial Development
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia
Loc Comment:
Job No: D380594 J502152

Position: Easting: 404232.00
 Northing: 6458364.00
Elevation: Not Surveyed
Inclination:

Date Drilled: 16/12/2025
Drill Rig: SRP - 1IAY
Drill Supplier: Structerre Consulting
Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP	Percolation (m/day)	Samples
	1.0	Fill		SP	Sand (SP): medium dense to dense, poorly graded, brown, traceclay, dry to moist.	M-D	MD-D	5, 6, 8, 9		
	1.0 - 2.0	Fill		SM	Silty Sand (SM): medium dense to dense, poorly graded, medium grained, pale brown and yellow, moist.	M	MD-D	5, 6, 7		
	2.0	Natural		SC	Clayey Sand (SC): medium dense, poorly graded, pale brown.		MD			
	2.0	Natural		CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F			
					BH03 Terminated at 2.5 m					



Depth: 2.5 m - BH3

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.

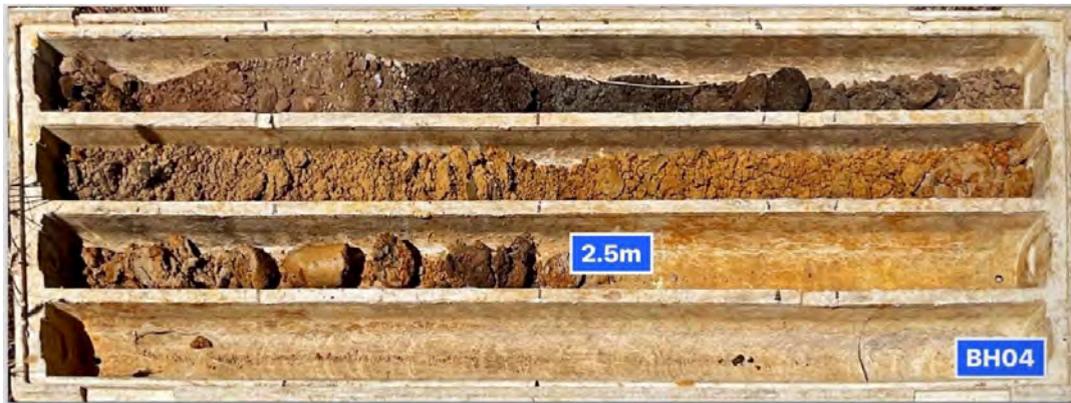
Borehole Record: BH04

Project: Proposed Commercial Development
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia
Loc Comment:
Job No: D380594 J502152

Position: Easting: 404231.00
 Northing: 6458417.00
Elevation: Not Surveyed
Inclination:

Date Drilled: 16/12/2025
Drill Rig: SRP - 1IAY
Drill Supplier: Structerre Consulting
Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP		Percolation (m/day)	Samples
								0	5 10 15 20		
		Fill		SP	Sand (SP): very dense, poorly graded, brown, traceclay, dry to moist.	M-D	VD				
				SP	Sand (SP): medium dense, poorly graded, medium grained, grey, moist.	M	MD				
	1.0	Natural		SC	Clayey Sand (SC): medium dense, poorly graded, pale brown.		MD				
	2.0			CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F				
					BH04 Terminated at 2.5 m (Target Depth)						



Depth: 2.5 m - BH4

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.

Borehole Record: BH05

Project: Proposed Commercial Development
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia
Loc Comment:
Job No: D380594 J502152

Position: Easting: 404245.00
 Northing: 6458387.00
Elevation: Not Surveyed
Inclination:

Date Drilled: 16/12/2025
Drill Rig: SRP - 1IAY
Drill Supplier: Structerre Consulting
Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP	Percolation (m/day)	Samples
		Fill		SP	Sand (SP): dense to very dense, poorly graded, fine to medium grained, brown, traceclay, with fine to medium gravel, dry to moist.	M-D	D-VD			
				SP	Sand (SP): medium dense, poorly graded, medium grained, pale grey and grey, moist.	M	MD			
	1.0	Natural		SC	Clayey Sand (SC): medium dense, poorly graded, pale brown.		MD			
	2.0			CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F			
					BH05 Terminated at 2.5 m (Target Depth)					



Depth: 2.5 m - BH5

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Borehole Record: BH06

Project: Proposed Commercial Development
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia
Loc Comment:
Job No: D380594 J502152

Position: Easting: 404256.00
 Northing: 6458367.00
Elevation: Not Surveyed
Inclination:

Date Drilled: 16/12/2025
Drill Rig: SRP - 1IAY
Drill Supplier: Structerre Consulting
Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP	Percolation (m/day)	Samples
	1.0	Fill		SP	Sand (SP): very dense, poorly graded, brown, with medium gravel, dry to moist.	M-D	VD			
				SP	Sand (SP): medium dense, poorly graded, medium grained, pale brown, moist.	M	MD			
	2.0	Natural		SC	Clayey Sand (SC): medium dense, poorly graded, pale brown.		MD			
				CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F			
					BH06 Terminated at 2.5 m					



Depth: 2.5 m - BH6

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.

Borehole Record: BH07

Project: Proposed Commercial Development
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia
Loc Comment:
Job No: D380594 J502152

Position: Easting: 404246.00
 Northing: 6458400.00
Elevation: Not Surveyed
Inclination:

Date Drilled: 16/12/2025
Drill Rig: SRP - 1IAY
Drill Supplier: Structerre Consulting
Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP	Percolation (m/day)	Samples
		Fill		SP	Gravelly Sand (SP): very dense, poorly graded, brown, traceclay, dry to moist.	M-D	VD			
				SP	Sand (SP): medium dense, poorly graded, medium grained, pale grey and grey, moist.	M	MD			
	1.0	Natural	SP	Gravelly Sand (SP): medium dense, poorly graded, medium grained, pale brown and brown, dry to moist.	M-D	MD				
			SC	Clayey Sand (SC): medium dense, poorly graded, pale brown.		MD				
	2.0		CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F				
				BH07 Terminated at 2.5 m						



Depth: 2.5 m - BH7

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.

Borehole Record: BH08

Project: Proposed Commercial Development
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia
Loc Comment:
Job No: D380594 J502152

Position: Easting: 404277.00
 Northing: 645840.00
Elevation: Not Surveyed
Inclination:

Date Drilled: 16/12/2025
Drill Rig: SRP - 1IAY
Drill Supplier: Structerre Consulting
Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP	Percolation (m/day)	Samples
	0.0 - 1.0	Fill		SP	Sand (SP): medium dense to dense, poorly graded, brown, trace clay, dry to moist.	M-D	MD-D	7		
	1.0 - 1.5			SP	Sand (SP): dense to very dense, poorly graded, medium grained, pale grey and grey, trace moist.	M	D-VD	8		
	1.5 - 2.0	Natural		SC	Clayey Sand (SC): medium dense, poorly graded, pale brown.		MD	12		
	2.0 - 2.5			CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F	9		
	BH08 Terminated at 2.5 m									



Depth: 2.5 m - BH8

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Borehole Record: BH01

Project: Proposed Commercial Development	Position: Easting: 404254.00 Northing: 6458363.00	Date Drilled: 16/12/2025
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia	Elevation: Not Surveyed	Drill Rig: SRP - 11AY
Loc Comment:	Inclination:	Drill Supplier: Structerre Consulting
Job No: D380594 J502152		Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP	Percolation (m/day)	Samples
 GWL	1.0 2.0	Fill		SP	Sand (SP): loose to very dense, poorly graded, brown, trace clay, dry to moist.	M-D	L-VD			
				SP	Sand (SP): medium dense, poorly graded, medium grained, pale grey and grey, moist.	M	MD			
		Natural		SC	Clayey Sand (SC): medium dense, poorly graded, medium grained, low plasticity clay, pale brown, moist.	M	MD			
				SC	Clayey Sand (SC): medium dense, poorly graded, pale brown.		MD			
				CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F			
					BH01 Terminated at 2.5 m					



Depth: 2.5 m - BH1

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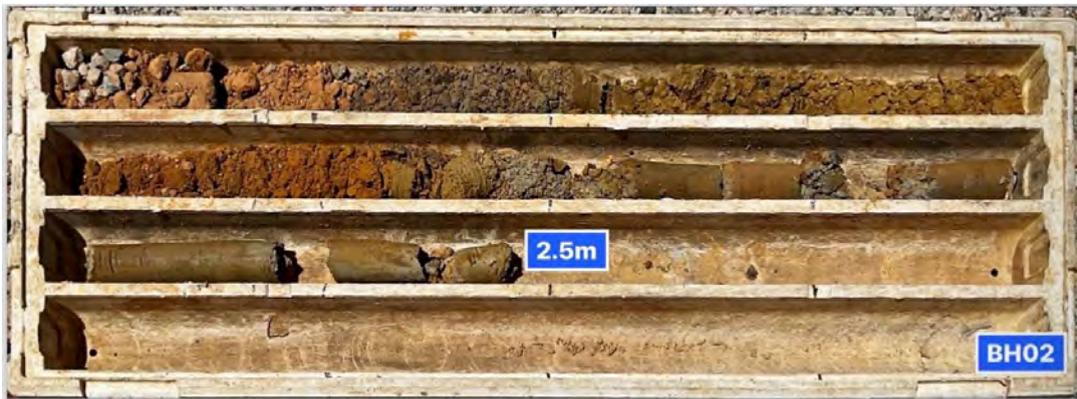
Borehole Record: BH02

Project: Proposed Commercial Development
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia
Loc Comment:
Job No: D380594 J502152

Position: Easting: 404250.00
 Northing: 6458335.00
Elevation: Not Surveyed
Inclination:

Date Drilled: 16/12/2025
Drill Rig: SRP - 1IAY
Drill Supplier: Structerre Consulting
Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP	Percolation (m/day)	Samples
	1.0	Fill		GP	Sandy Gravel (GP): very dense, poorly graded, fine to medium sized, grey, moist.	M	VD	15		
				SP	Sand (SP): dense, poorly graded, brown, trace clay, dry to moist.	M-D	D			
				SP	Sand (SP): medium dense, poorly graded, medium grained, pale grey and grey, moist.	M	MD			
				SM	Silty Sand (SM): loose, poorly graded, fine to medium grained, dark brown, trace fine to medium gravel, moist.	M	L			
	2.0	Natural		SC	Clayey Sand (SC): medium dense, poorly graded, fine to medium grained, low plasticity clay, pale brown and brown mottled grey, with fine to medium gravel.		MD			
					BH02 Terminated at 2.5 m (Target Depth)					



Depth: 2.5 m - BH2

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Borehole Record: BH03

Project: Proposed Commercial Development
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia
Loc Comment:
Job No: D380594 J502152

Position: Easting: 404232.00
 Northing: 6458364.00
Elevation: Not Surveyed
Inclination:

Date Drilled: 16/12/2025
Drill Rig: SRP - 1IAY
Drill Supplier: Structerre Consulting
Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP	Percolation (m/day)	Samples
	1.0	Fill		SP	Sand (SP): medium dense to dense, poorly graded, brown, trace clay, dry to moist.	M-D	MD-D	5, 6, 8, 9		
	1.0 - 2.0	Fill		SM	Silty Sand (SM): medium dense to dense, poorly graded, medium grained, pale brown and yellow, moist.	M	MD-D	5, 6, 7		
	2.0	Natural		SC	Clayey Sand (SC): medium dense, poorly graded, pale brown.		MD			
	2.0	Natural		CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F			
					BH03 Terminated at 2.5 m					



Depth: 2.5 m - BH3

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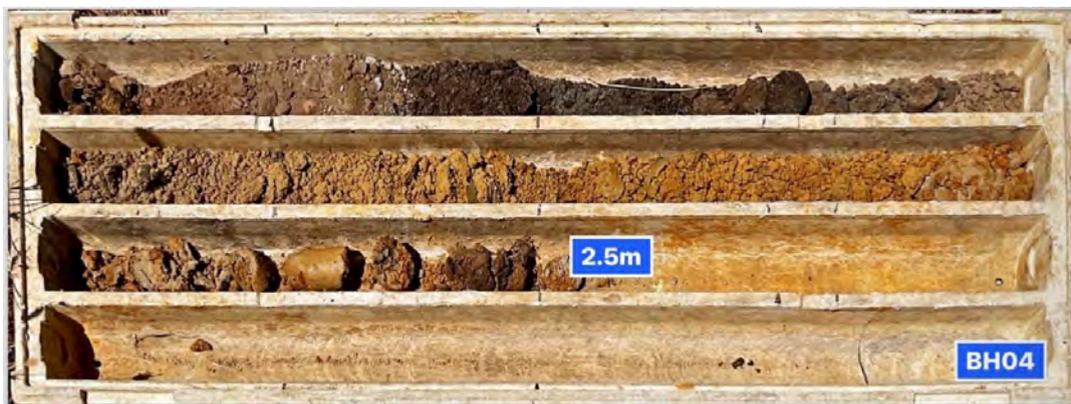
Borehole Record: BH04

Project: Proposed Commercial Development
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia
Loc Comment:
Job No: D380594 J502152

Position: Easting: 404231.00
 Northing: 6458417.00
Elevation: Not Surveyed
Inclination:

Date Drilled: 16/12/2025
Drill Rig: SRP - 1IAY
Drill Supplier: Structerre Consulting
Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP		Percolation (m/day)	Samples
								0	5 10 15 20		
		Fill		SP	Sand (SP): very dense, poorly graded, brown, trace clay, dry to moist.	M-D	VD				
				SP	Sand (SP): medium dense, poorly graded, medium grained, grey, moist.	M	MD				
	1.0	Natural		SM	Silty Sand (SM): medium dense, poorly graded, pale brown, trace fine gravel.		MD				
	2.0			CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F				
					BH04 Terminated at 2.5 m (Target Depth)						



Depth: 2.5 m - BH4

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.

Borehole Record: BH05

Project: Proposed Commercial Development Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia Loc Comment: Job No: D380594 J502152	Position: Easting: 404245.00 Northing: 6458387.00 Elevation: Not Surveyed Inclination:	Date Drilled: 16/12/2025 Drill Rig: SRP - 1IAY Drill Supplier: Structerre Consulting Logged/Checked: Emmanuel Normans/TB
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Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP		Percolation (m/day)	Samples
								0	5 10 15 20		
		Fill		SP	Sand (SP): dense to very dense, poorly graded, fine to medium grained, brown, trace clay, with fine to medium gravel, dry to moist.	M-D	D-VD	9	15		
				SP	Sand (SP): medium dense, poorly graded, medium grained, pale grey and grey, moist.	M	MD				
	1.0	Natural		SC	Clayey Sand (SC): medium dense, poorly graded, pale brown.		MD				
	2.0			CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F				
					BH05 Terminated at 2.5 m (Target Depth)						



Depth: 2.5 m - BH5

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Borehole Record: BH06

Project: Proposed Commercial Development
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia
Loc Comment:
Job No: D380594 J502152

Position: Easting: 404256.00
 Northing: 6458367.00
Elevation: Not Surveyed
Inclination:

Date Drilled: 16/12/2025
Drill Rig: SRP - 1IAY
Drill Supplier: Structerre Consulting
Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP	Percolation (m/day)	Samples
	1.0	Fill		SP	Sand (SP): very dense, poorly graded, brown, with medium gravel, dry to moist.	M-D	VD	15		
				SP	Sand (SP): medium dense, poorly graded, medium grained, pale brown, moist.	M	MD			
		Natural		SC	Clayey Sand (SC): medium dense, poorly graded, pale brown.		MD			
	2.0			CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F			
					BH06 Terminated at 2.5 m					



Depth: 2.5 m - BH6

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.

Borehole Record: BH07

Project: Proposed Commercial Development
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia
Loc Comment:
Job No: D380594 J502152

Position: Easting: 404246.00
 Northing: 6458400.00
Elevation: Not Surveyed
Inclination:

Date Drilled: 16/12/2025
Drill Rig: SRP - 1IAY
Drill Supplier: Structerre Consulting
Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP	Percolation (m/day)	Samples
		Fill		SP	Gravelly Sand (SP): very dense, poorly graded, brown, trace clay, dry to moist.	M-D	VD			
				SP	Sand (SP): medium dense, poorly graded, medium grained, pale grey and grey, moist.	M	MD			
	1.0	Natural		SP	Gravelly Sand (SP): medium dense, poorly graded, medium grained, pale brown and brown, dry to moist.	M-D	MD			
				SC	Clayey Sand (SC): medium dense, poorly graded, pale brown.		MD			
	2.0			CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F			
					BH07 Terminated at 2.5 m					



Depth: 2.5 m - BH7

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for geotechnical purposes only, without attempt to assess possible contamination. Any references to potential contamination are for information only and do not necessarily indicate the presence or absence of soil or groundwater contamination.

Borehole Record: BH08

Project: Proposed Commercial Development
Location: 581 Welshpool Rd E, Wattle Grove WA 6107, Australia
Loc Comment:
Job No: D380594 J502152

Position: Easting: 404277.00
 Northing: 645840.00
Elevation: Not Surveyed
Inclination:

Date Drilled: 16/12/2025
Drill Rig: SRP - 1IAY
Drill Supplier: Structerre Consulting
Logged/Checked: Emmanuel Normans/TB

Water	Depth (m)	Soil Origin	Graphic Log	USCS	Material Description	Moisture	Consistency	DCP	Percolation (m/day)	Samples
	0.0 - 1.0	Fill		SP	Sand (SP): medium dense to dense, poorly graded, brown, trace clay, dry to moist.	M-D	MD-D	7		
	1.0 - 1.5			SP	Sand (SP): dense to very dense, poorly graded, medium grained, pale grey and grey, trace moist.	M	D-VD	8		
	1.5 - 2.0	Natural		SC	Clayey Sand (SC): medium dense, poorly graded, pale brown.		MD	12		
	2.0 - 2.5			CI	Sandy Clay (CI): firm, medium plasticity, pale brown and brown mottled grey.		F	7		
	BH08 Terminated at 2.5 m									



Depth: 2.5 m - BH8

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Appendix D – Laboratory Test Results

Sample No. 41593 **Client** Geotechnical
Job No. J502152 **Project** #581 Welshpool Rd, Wattle Grove

Laboratory testing carried out at Malaga Laboratory 44 Crocker Dr Malaga WA 6090

SAMPLE DETAILS

BH No. / Depth BH4 0.8-1.6m **Sampling Method** Client
 Sample History 50°C Oven Dried **Sample Preparation** AS 1289 1.1

ATTERBERG LIMITS

Description	Method	Result (%)
Liquid Limit	AS 1289.3.1.2	NP
Plastic Limit	AS 1289.3.2.1	NP
Plasticity Index	AS 1289.3.3.1	NP
Linear Shrinkage	AS 1289.3.4.1	Not Applicable
Nature of Shrinkage		

PARTICLE SIZE DISTRIBUTION

Method: AS 1289.3.6.1
Description: Particle size distribution by sieve analysis

Sieve Size (mm)	% Passing
19.0	100
2.36	98
0.425	76
0.075	21

AS 1726:2017 Clause 6.1

Material Description: Silty SAND trace gravel

AS Group Symbol: SM



Accreditation Number 18742

Soils Analysis Workbook V 4.07 06-Oct-25

Jonty Sargent 
 Authorized Signatory Laboratory Supervisor

Date: 06-Jan-26

AS 1289.3.6.1 Report Feb 18

WA | QLD | NSW | VIC

Sample No. 41594 **Client** Geotechnical
Job No. J502152 **Project** #581 Welshpool Rd, Wattle Grove

Laboratory testing carried out at Malaga Laboratory 44 Crocker Dr Malaga WA 6090

SAMPLE DETAILS

BH No. / Depth BH2 1.5-2.2m Sampling Method Client
 Sample History 50°C Oven Dried Sample Preparation AS 1289 1.1

ATTERBERG LIMITS

Description	Method	Result (%)
Liquid Limit	AS 1289.3.1.2	32
Plastic Limit	AS 1289.3.2.1	9
Plasticity Index	AS 1289.3.3.1	23
Linear Shrinkage	AS 1289.3.4.1	8
Nature of Shrinkage		Flat

PARTICLE SIZE DISTRIBUTION

Method: AS 1289.3.6.1
Description: Particle size distribution by sieve analysis

Sieve Size (mm)	% Passing
19.0	100
2.36	84
0.425	64
0.075	27

AS 1726:2017 Clause 6.1

Material Description: Clayey SAND with gravel

AS Group Symbol: SC



Accreditation Number 18742

Soils Analysis Workbook V 4.07 06-Oct-25

Jonty Sargent 
 Authorized Signatory Laboratory Supervisor

Date: 06-Jan-26

AS 1289.3.6.1 Report Feb 18

WA | QLD | NSW | VIC

Report Number: CBR:25S-16334
Date of Issue: 07/01/2026
Issue Number: 1

California Bearing Ratio Test Report

Client: Parsons Management Group
Client Address: 7 Orion Rd Jandakot WA 6164
Project: #581 WELSHPOOL RD WATTLE GROVE
Project No: D380594

Accreditation Number 18742



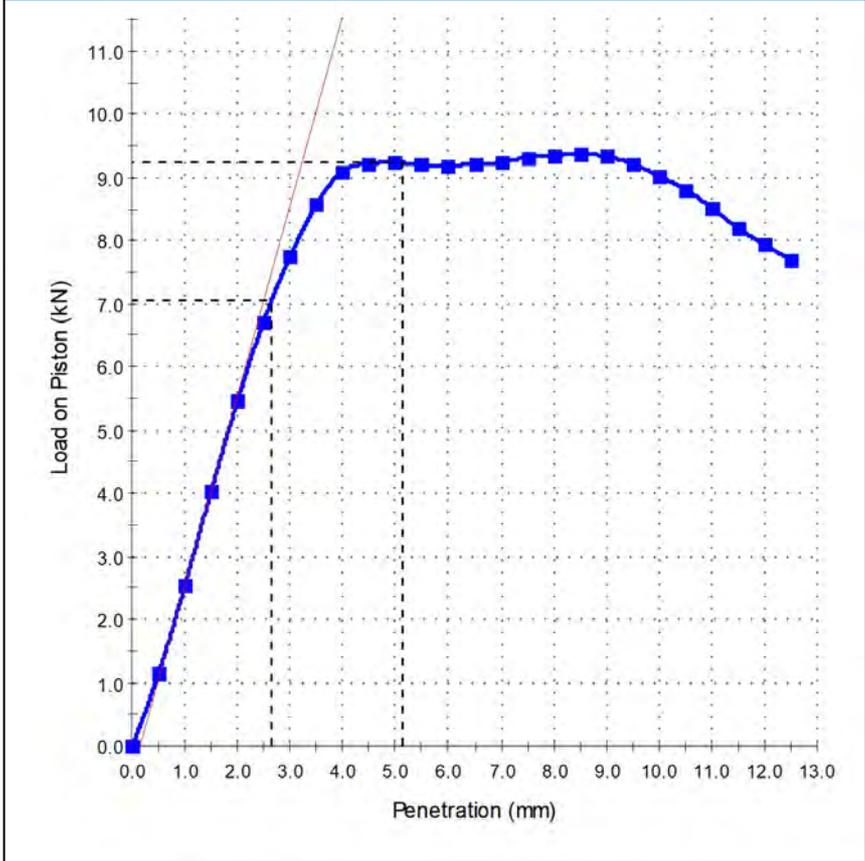

Approved Signatory: Jonty Sargent

Accredited for compliance with ISO/IEC 17025

Sample Details

Sample ID: Material Assessment	Field Sample ID: BH09
Date Tested: 02/01/2026	Date Sampled: 19/12/2025
Soil Description: Sand trace gravel	Proposed Use: Fill
Depth of Test: 100 - 500	Depth of Layer:
Sampling Method: Sample submitted by client	TRN: -
Work Order ID: W25-06748	

Load vs Penetration



Test Results

AS 1289.6.1.1

CBR at 2.5mm (%): 50

Dry Density before Soaking (t/m³):	1.83
Density Ratio before Soaking (%):	96.0
Moisture Content before Soaking (%):	11.2
Moisture Ratio before Soaking (%):	99.5
Dry Density after Soaking (t/m³):	1.84
Density Ratio after Soaking (%):	96.5
Swell (%):	-0.5
Moisture Content of Top 30mm (%):	13.5
Moisture Content of Remaining Depth (%):	12.0
Compaction Hammer Used:	Modified
	AS 1289.5.2.1
Surcharge Mass (kg):	4.50
Period of Soaking (Days):	4
Retained on 19 mm Sieve (%):	5
CBR Moisture Content Method:	AS 1289.2.1.1
Sample Curing Time (h):	48
Plasticity Determination Method:	Visual/Tactile

Comments

Report Number: MDD:25S-16334
Date of Issue: 07/01/2026
Issue Number: 1

Maximum Dry Density Report

Client: Parsons Management Group
Client Address: 7 Orion Rd Jandakot WA 6164
Project: #581 WELSHPOOL RD WATTLE GROVE
Project No: D380594

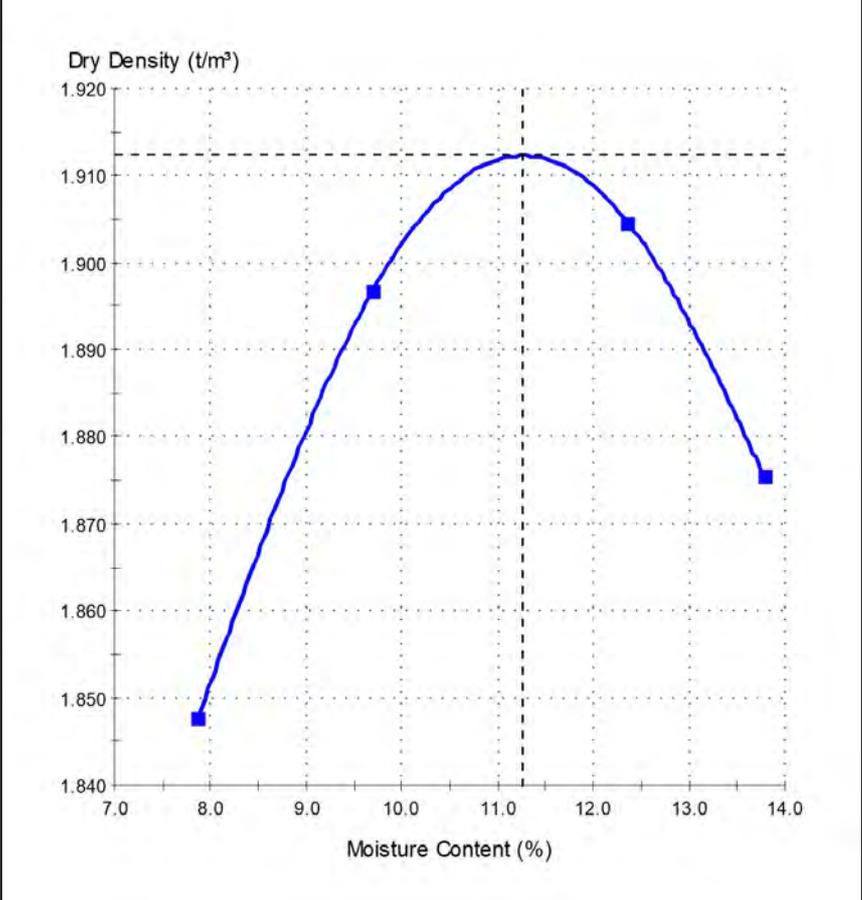
Accreditation Number 18742


 Approved Signatory: Jonty Sargent
 Accredited for compliance with ISO/IEC 17025

Sample Details

Sample ID: Material Assessment	Field Sample ID: BH09
Date Tested: 29/12/2025	Date Sampled: 19/12/2025
Soil Description: Sand trace gravel	Proposed Use: Fill
Depth of Test: 100 - 500	Depth of Layer:
Sampling Method: Sample submitted by client	TRN: -
Work Order ID: W25-06748	

Dry Density - Moisture Content Relationship



Test Results

AS 1289.5.2.1
Modified MDD (t/m³): 1.91
Modified OMC (%): 11.5
 Retained Sieve (mm): 19.0
 Oversize Material (%): 4
 Curing Time (h): 2
 LL Method: Visual / Tactile

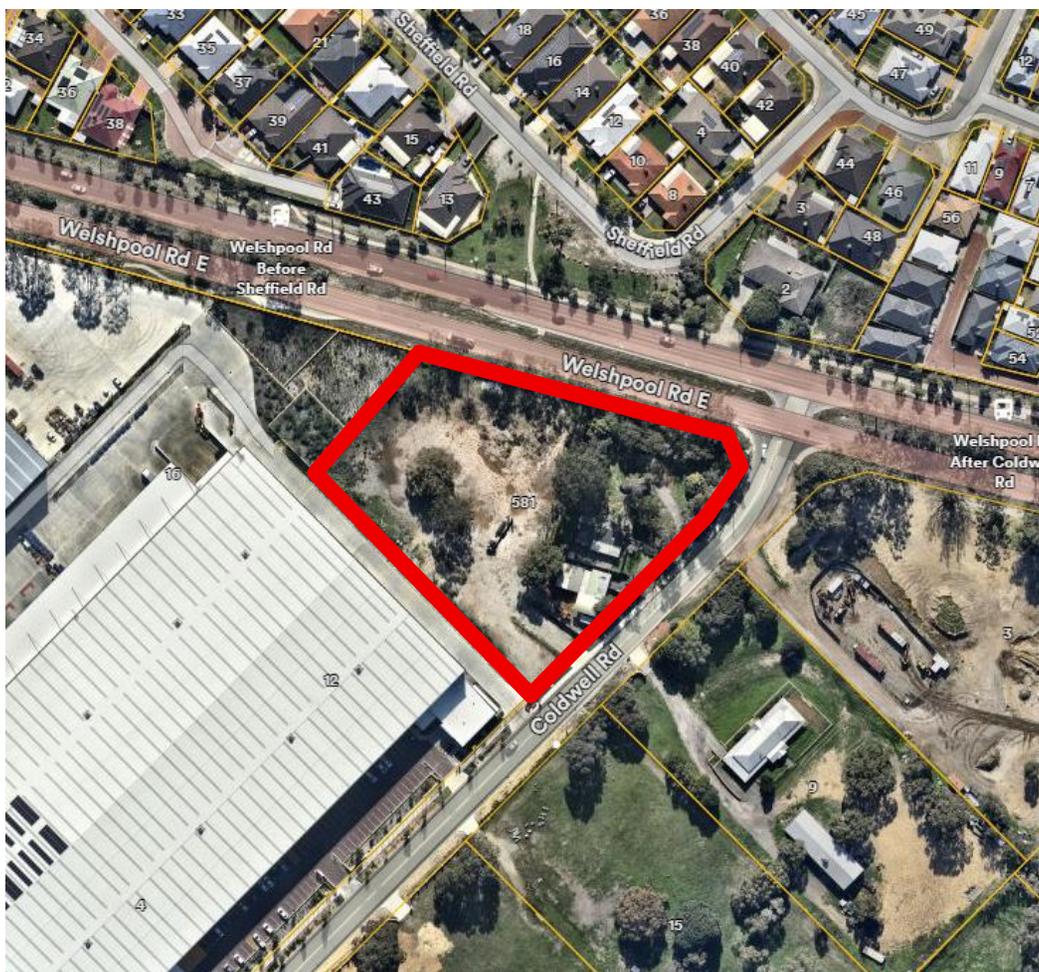
Comments

TRAFFIC IMPACT STATEMENT

WAREHOUSE/STORAGE DEVELOPMENT – NATIONAL STORAGE FACILITY

LOT 17 (NO.581) WELSHPOOL ROAD EAST, WATTLE GROVE

JANUARY 2026



(SOURCE: NEARMAPS)

TRAFFIC IMPACT STATEMENT (TIS)

LOT 17 (NO.581) WELSHPOOL ROAD EAST, WATTLE GROVE

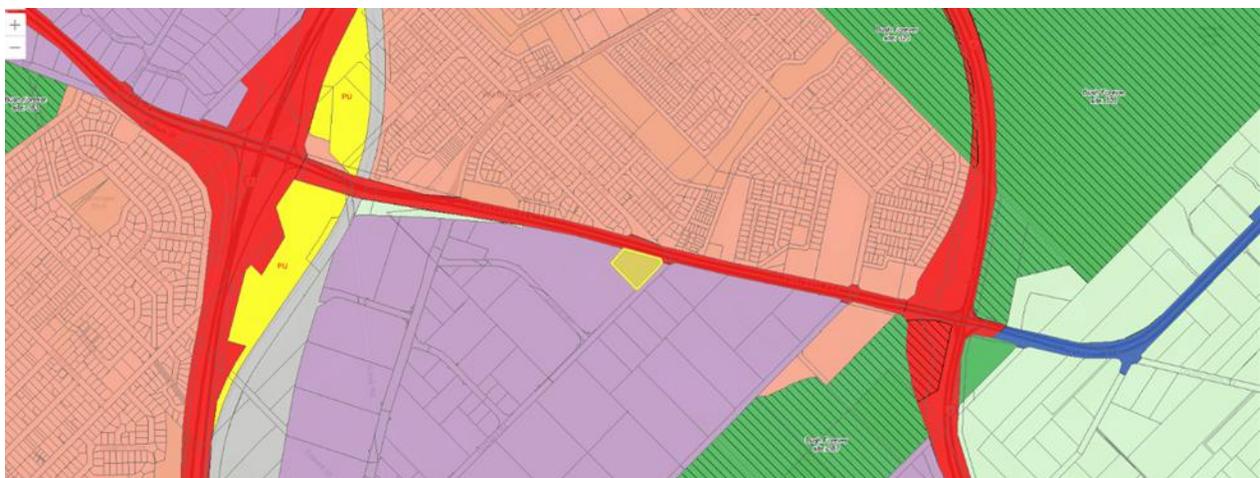
This TIS has been prepared for consideration by the City of Kalamunda in accordance with the Western Australian Planning Commission's *Transport Impact Assessment Guidelines Volume 4* dealing with 'Individual Developments'.

As stated in the Guidelines, A *transport impact statement* is a brief statement outlining the transport aspects of the proposed development. The intent of the statement is to provide the approving authority with sufficient transport information to confirm that the proponent has adequately considered the transport aspects of the development and that it would not have an adverse transport impact on the surrounding area.

The use and development to take place is for self-storage (warehouse/storage), permissible under the zoning of the location. A TIS is ordinarily required for industrial or warehouse development having a gross floor area of between 1,000-10,000m².

1.0 PLANNING FRAMEWORK

The land is zoned 'Industrial' under the *Metropolitan Region Scheme*.



MRS (SOURCE: WAPC)

The land is zoned 'Light Industry' under the City of Kalamunda's *Local Planning Scheme No.3 (LPS3)*.



LPS3 (SOURCE: CITY OF KALAMUNDA)

Under the Light Industry zoning applicable to the land, warehouse/storage is classified as a 'P' use meaning, *the use is permitted by the Scheme providing the use complies with the relevant development standards and requirements of the Scheme.*

Where the Scheme objectives for the Light Industry zone are concerned, the use aligns, with the proposed development also aligning with the City's planning framework where development requirements are concerned.

2.0 EXISTING SITUATION AND CONTEXT

The subject land is described as Lot 17 on Diagram 65525, held in Certificate of Title Volume 1657, Folio 613. It is known as 581 Welshpool Road East, Wattle Grove.

At present the site is occupied by an old single house and associated outbuildings.

Positioned on the south-western corner of Welshpool Road East and Coldwell Road, the immediate location consists of residential development on the north side of Welshpool Road, special rural land to the east i.e. the adjacent side of Coldwell Road, and a large warehouse adjoining to the south.

The broader context is characterised by the same residential area to the north, being the suburb of Wattle Grove, the special rural area/s of Wattle Grove east of Tonkin Highway, the commercial/industrial development of Roe Highway Logistics Park, and the suburb of Kenwick.

The Welshpool/Kewdale industrial areas are also positioned north-west of Welshpool Road where it intersects with Roe Highway.



IMMEDIATE CONTEXT (SOURCE: NEARMAPS)



BROADER CONTEXT (SOURCE: NEARMAPS)

The extent of the catchment to be served by the proposed self-storage facility is sizeable, including Wattle Grove, the northern part of Gosnells, Kenwick in the City of Canning, Welshpool and Kewdale.

Where access is concerned, the facility will be highly accessible via higher-order roads including Welshpool Road East, Tonkin and Roe Highways.

3.0 PROPOSED USE AND DEVELOPMENT

Land Use

The land use proposed is warehouse (self-storage units) under the National Storage brand.

The development of National Storage facilities is based on the demand for the service (being self-storage units).

Demand comes from the community, both residential and business. Where demand is increasing, the basis for this involves several factors including changing lifestyles and business practices:-

- Smaller dwelling typologies providing for down-sizing and a shift towards 'urban living' give rise to an increase in demand for 'off-site' personal storage;
- Local businesses with space limitations take up storage space, a more viable and appealing alternative to shifting premises; and
- On-line shopping (e-commerce), which has led to an increase in longer-term storage and warehousing needs by business, particularly small business.

In addition to the above, COVID19 resulted in increased demand for storage space:-

- The pandemic resulted in the decluttering of households, with more people working from home needing extra space; with
- Supply chain issues resulting in demand for more storage for longer periods.

With respect to the points above, the demand generated by such remains based on the experiences of the last 3-4 years (and the take-up of units in the type of facility proposed).

Development

It is proposed to develop the following on the subject land:-

- Self-storage units in two (2) two (2) storey buildings comprising 7,634m² of storage space; and

- An office serving the facility, at the front of the premises adjacent to Coldwell Road.

Parking in association with the development will total 32 bays (consisting of 4 external and at the front of the premises, and 28 internal).

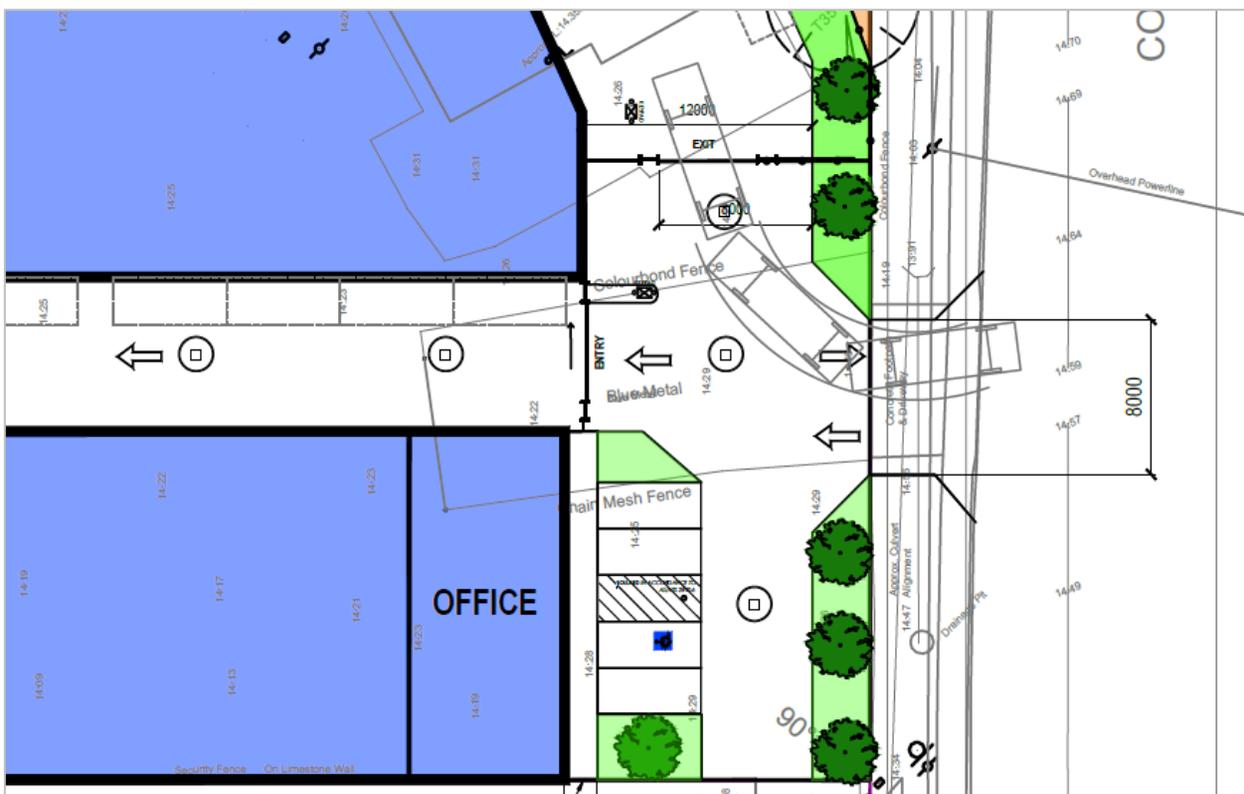
Access and egress to the facility will take place via one (1) crossover on Coldwell Road.

4.0 VEHICLE ACCESS AND PARKING

4.1 Access Arrangements

The subject land and proposed facility has a high level of accessibility via higher-order roads including Welshpool Road East, Tonkin and Roe Highways.

Direct access and egress to and from the land will be via Coldwell Road via one (1) crossover. In the proposed location, convenient and safe at-grade access will be achieved.



DEDICATED ACCESS/EGRESS VIA ONE (1) CROSSOVER ON COLDWELL ROAD

4.2 Public/Private/Disabled Parking Set Down/Pick Up

32 parking bays are to be provided in association with the proposed use and development, including one (1) disabled bay. Of these:-

- Four (4) parking bays are proposed at the front of the property in the vicinity of the office/entrance to the facility (including the disabled bay); with
- The remaining 28 parking bays proposed inside the facility.

The bays proposed at the front of the property are for customer and staff use and are used in the day-to-day operation and management of the facility.

The bays internal to the premises are positioned for convenient use by customers, providing high levels of accessibility to storage units.

The City of Kalamunda's *Local Planning Scheme No.3* requires parking for a warehouse to be provided at the rate of 3 bays for up to the first 200m² of floor area and thereafter 1 bay for every 100m² of NLA or part thereof.

The application of the Scheme requirement to this aspect of the development would necessitate a significant number of on-site parking bays. This approach, however, has little recognition for the way self-storage facilities work.

Self-storage facilities are designed to achieve functional circulation and easy access to storage units. To this end, a performance-based approach to determining an acceptable level of parking is required.

With respect to subject proposal viz a viz that previously approved by the City of Kalamunda for Courtney Place, a ratio of one (1) parking bay/235m² is proposed v one (1) parking bay/246m².

The amount of parking proposed is to be provided on the basis only a small amount is required, the same situation applying generally to self-storage facilities across the Perth metropolitan area. In many instances, parking provided exceeds that required by demand.

Where National Storage facilities are concerned, recent approvals provide parking at the following rates:-

- National Storage South Fremantle (rear 229 Hampton Road), approved by the Metro Inner-South JDAP with parking provided at the rate of approximately 1 bay/283m² of storage area;
- National Storage Port Kennedy (14 Saltaire Way), approved by the City of Rockingham with parking provided at the rate of approximately 1 bay/252m² of storage area; and
- National Storage Butler (14 Sunderland Crescent), approved by the City of Wanneroo with parking provided at the rate of approximately 1 bay/238m² of storage area.

The rate proposed for National Storage Wattle Grove is greater.

Further supporting the amount of parking proposed is a study completed by Stantec in 2022/2023.

Titled '*Parking and Traffic Study Supporting the self storage industry of Australia and New Zealand*', the study provides a comparison of parking rates obtained from previous parking and traffic studies, including Aurecon's 2009 study titled '*Study Results and Findings, Self Storage Facility Traffic and Parking Study Prepared for the Self Storage Association of Australasia*'.

Specifically, the 2022/2023 study suggests that a decrease in parking demand has occurred since the last study (being Aurecon's 2009 study, and a 2016 addendum to this study).

For facilities greater in size than 6,000m², 11 parking bays were recommended in 2009 (this clearly acknowledging the number of trips to, and car parking required for self-storage businesses, as low), increasing to 13 bays in 2016, and reducing to seven (7) in 2022/2023. In the case of the subject proposal, 32 bays are proposed (more than the number recommended).

All parking will be designed and built in accordance with relevant Australian Standards.

5.0 SERVICE VEHICLES

5.1 Access Arrangements

Service vehicles will not be accessing the facility given the nature of the use. Rather, it will be National Storage customers.

Customers will access the site via the crossover on Coldwell Road, providing for direct access to the secured interior of the facility.

Circulation will be clockwise with aisle widths (5.55m) providing for passenger and service vehicles ranging in size (length) from 5.2m – 8.8m. At 8.8m, moving vans 4.2m, 6.4m and 7.3m are catered to. Larger vehicles do not access National facilities.

Sweep paths shown on the development application plans are as per Austroads Design Vehicles and Turning Path Templates.

5.2 On/Off-Site Loading Facilities

28 on-site loading bays will be evenly positioned within the development for customer use, providing high levels of accessibility to storage units.

These bays will be 2.45m wide by 5.9m long, with the circulation aisle adjoining (5.55m as mentioned).

6.0 HOURS OF OPERATION

Access hours to the proposed Wattle Grove National Storage facility will be: Monday to Friday: 5am - 9pm; Saturday 5am - 9pm and Sunday 5am - 9pm.

7.0 TRAFFIC VOLUMES

7.1 Daily or Peak Traffic Volumes

Storage facilities like the National Storage facility proposed for the subject land do not have peak a.m. or p.m. traffic volumes. Rather, there is an even spread of traffic movements across facility open times.

Expected traffic volumes for the proposed facility are 27.57 (28) entries and 27.57 (28) exits per day. These volumes are based on a first-hand review of a like facility, being National Storage North Fremantle. They are based on 'Keypad Entries' by date for the month of February (2022). Where empirical evidence is concerned, it is first-hand, recent and relevant.

When compared with the typical trip generation rates contained in Table 1 of the WAPC's *Transport Impact Assessment Guidelines* (revised August 2016), the expected volumes are low.

Based on the rates contained in Table 1, 75.16 (76) entries and exits would apply to respective a.m. and p.m. peak hours. These numbers are far greater than the expected number of daily movements for the facility and therefore, much greater than average peak hourly movements.

With respect to the above, the calculation is based on the facility's Net Lettable Area rather than the GLA referred to in the *Guidelines*. If the GLA were applied, trip generation rates under the WAPC's Guidelines would be even higher.

In addition to the expected daily volumes, the following is noted:-

- Average peak hour traffic volumes will be 4.98 (entries and exits); with
- Total daily movements across a month will be approximately 1,654.

This TIS is produced in the knowledge the proposed use and development will have no impact on the functionality of the local traffic network, noting the storage facility will generate an average movement per open hour of 1.96 (2.0) entries and 1.96 (2.0) exits (4.0 movements in total/hour).

7.2 Types of Vehicles

Vehicles that will access the site via Coldwell Road will be primarily cars, utilities and moving vans.

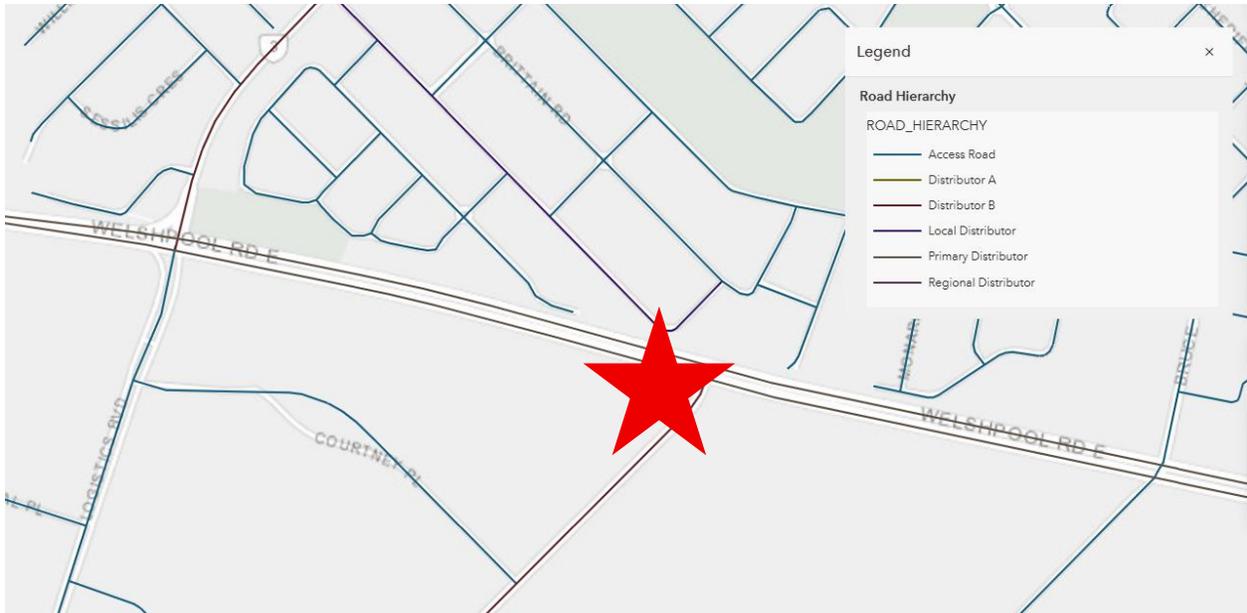
8.0 TRAFFIC MANAGEMENT ON FRONTAGE STREETS

Coldwell Road is a 'Distributor B' road on Main Roads Western Australia (MRWA) *Road Information Mapping System*. The predominant purpose of a Distributor B road is:-

- *Reduced capacity but high traffic volumes travelling between industrial, commercial and residential areas.*

Welshpool Road East is a 'Primary Distributor'. The predominant purpose of a Primary Distributor is:-

- *Movement of inter regional and/or cross town/city traffic, e.g. freeways, highways and main roads.*



ROAD HIERARCHY (SOURCE: MRWA)

Tonkin and Roe Highways are also Primary Distributors.

9.0 PUBLIC TRANSPORT ACCESS

9.1 Nearest Bus/Train Routes

The closest TransPerth bus routes are the 282 and 283 services.



BUS STOP 13698 WEST OF SUBJECT LAND ON WELSHPOOL ROAD EAST

The 282 and 283 bus services travel between Oats Street train station and Kalamunda bus station, with the Oats Street train station on TransPerth's Armadale line.



OATS STREET TRAIN STATION, ARMADALE LINE, TRANSPERTH'S RAIL SYSTEM (SOURCE: TRANSPERTH)

9.2 Nearest Bus Stops/Train Stations

The nearest bus stops are on the north side of Welshpool Road East after Coldwell Road, and 13698 on Welshpool Road East (south side) to the west of the subject land. Both stops are within a 400m walkable distance (Source: Nearmaps).



As mentioned above, the accessible train station is Oats Street in Carlisle/East Victoria Park.

9.3 Pedestrian/Cycle Links to Bus Stops/Train Stations

Pedestrian and cycle access to the abovementioned bus and train services is available via the local movement network within Wattle Grove.

10.0 PEDESTRIAN ACCESS/FACILITIES

10.1 Proposed Pedestrian Facilities Within the Development

Pedestrian movement will consist of persons moving to and from their vehicles and the office at the front of the development and/or their respective storage unit within the facility.

Pedestrian entry points to storage units internal to the facility are easily identifiable, with 'KEEP CLEAR' signage ensuring access is not blocked.



SIGNAGE PROVIDING FOR USER SAFETY (NATIONAL STORAGE NORTH FREMANTLE)

10.2 Existing Pedestrian Facilities on Surrounding Roads

Pedestrians are not expected to access this self-storage facility i.e. from the public realm given the nature of the use.

Notwithstanding, there is a footpath that extends across the front of the property on Coldwell Road.



PEDESTRIAN FOOTPATH EXTENDING ACROSS THE FRONT, COLDWELL ROAD (SOURCE: NEARMAPS)

10.3 Proposals to Improve Pedestrian Access

The City of Kalamunda is committed to pedestrian movement and access via several planning and strategic documents.

11.0 CYCLE ACCESS/FACILITIES

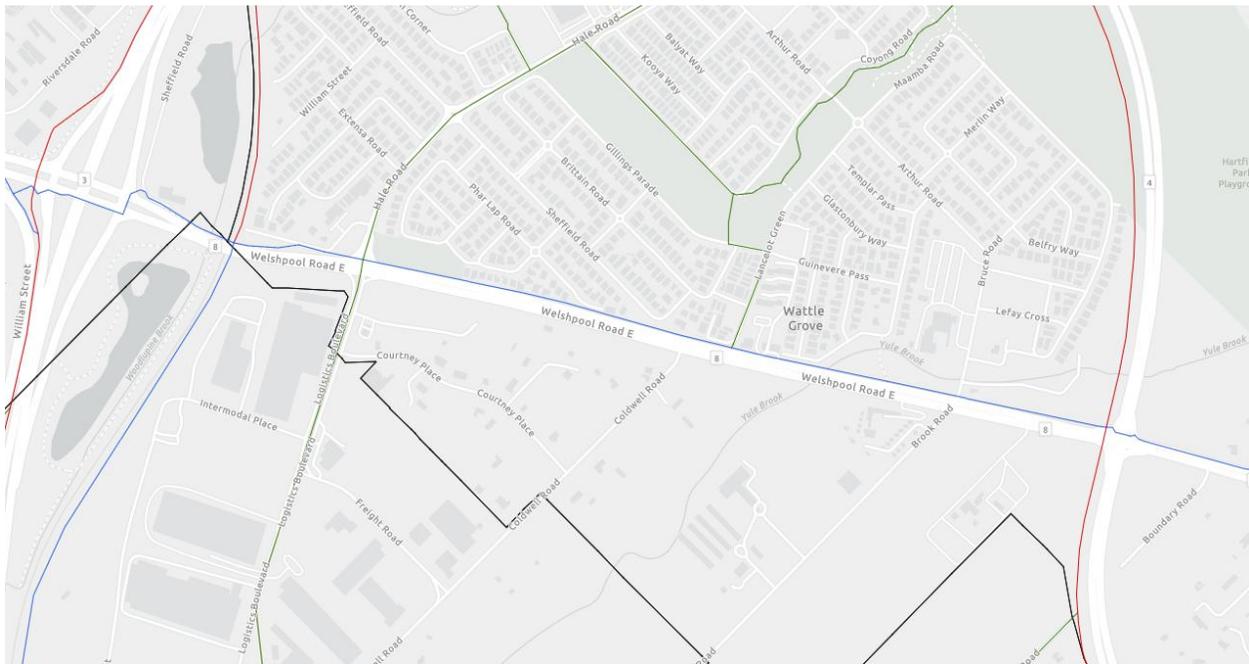
11.1 Proposed Cycle Facilities Within the Development

Cyclists are not expected to access this self-storage facility given the nature of the use. Notwithstanding, storage of bicycles is to be provided within the development, along with end of trip facilities (shower and lockers) in close proximity to the front office.

The approach is consistent with that at all National Storage facilities.

11.2 Existing Cycle Facilities on Surrounding Roads

The Department of Transport's *Long Term Cycling Network* (LTCN) identifies one (1) 'Secondary Route' for cyclists in the vicinity of 581 Welshpool Road East.



PERTH & PEEL LONG TERM CYCLE NETWORK (SOURCE: DEPARTMENT OF TRANSPORT)

11.3 Proposals to Improve Cycle Access

The City of Kalamunda is committed to improving cycle access via its Bicycle Plan 2017, adopted by its Council June 2018. As explained in the 'Vision' under Executive Summary ... *One of the key aspects of the vision story is for the City to be "easily accessible to and from Perth City, and around the City" – this Bike Plan supports this vision by setting out a clear way forward for investment in the active transport network.*

12. SITE SPECIFIC ISSUES

There are no site-specific issues with the proposed use and development.

13. SAFETY ISSUES

The use and development proposed on the subject land do not present any safety issues. In this regard, the following should be noted:-

- A warehouse/storage facility is a benign land use, this confirmed by the minimal daily and peak traffic volumes detailed in Section 7 above;
- Where traffic associated with a warehouse/storage facility is considered viz a viz that generated by other land uses permitted by the planning framework as it applies to the land and locality, a warehouse/storage facility is much more favourable; and
- With respect to the above point, the following alternate land uses are permissible where the development of the land is concerned, confirming the use proposed will not – by comparison - present with safety issues:-
 - Bulky Goods Showroom;
 - Club Premises;
 - Fuel Depot;
 - Motor Vehicle Repairs;
 - Motor Vehicle Wash;
 - Place of Worship;
 - Reception Centre;
 - Service Station; and
 - Transport Depot.

CONCLUSION

The use and development will not impact on the surrounding road network. The road network will accommodate traffic to and from the development without difficulty based on the road types serving the site, traffic flows and volumes expected in association with the proposal.

Local Government Use



Bushfire Attack Level & Planning Report



Produced Applying AS 3959:2018 Bushfire Attack Level Determination Methodology

581 Welshpool Road East, Wattle Grove

City of Kalamunda

Report Date: 25 September 2025

Job Reference No: 250647

COMPANY AND BUSHFIRE CONSULTANT DETAILS

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I hereby declare that I am a BPAD accredited bushfire practitioner. 

Accreditation No. BPAD 42204

Signature 

Date 25 September 2025

Authorised Practitioner Stamp

Author:

ASSESSMENT AND REPORT DETAILS

Version	Details	Site Assessment Date	Report Date
1.0	Original	7 July 2025 24 September 2025	25 September 2025
-	-		

Report Preparation: This report has been prepared by an accredited BPAD practitioner using the simplified BAL determination procedure (Method 1) as detailed in section 2 of AS 3959:2018.

Warranty of the Accrediting Body: FPA Australia makes no warranties as to the accuracy of the information provided in the report. All enquiries related to the information and conclusions presented in this report must be made to the BPAD Accredited Practitioner.

Period of Validity: Reliance on the assessment and determination of the Bushfire Attack Level contained in this report should not extend beyond a period of 12 months from the date of issue of the report. If this report was issued more than 12 months ago, it is recommended that the validity of the determination be confirmed with the accredited practitioner and where required an updated report and/or BAL certificate issued.

Limitations: The protection measures that will be implemented based on information presented in this report are minimum requirements and they do not guarantee that buildings or infrastructure will not be damaged in a bushfire, persons injured, or fatalities occur either on the subject site or off the site while evacuating.

This is substantially due to the unpredictable nature and behaviour of fire and fire weather conditions. Additionally, the correct implementation of the required protection measures (including bushfire resistant construction) and any other required or recommended measures, will depend upon, among other things, the ongoing actions of the landowners and/or operators over which Bushfire Prone Planning has no control.

All surveys, forecasts, projections and recommendations made in this report associated with the proposed development or use are made in good faith based on information available to Bushfire Prone Planning at the time. All maps included herein are indicative in nature and are not to be used for accurate calculations.

Notwithstanding anything contained therein, Bushfire Prone Planning will not, except as the law may require, be liable for any loss or other consequences whether or not due to the negligence of their consultants, their servants or agents, arising out of the services provided by their consultants.

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1 SUMMARY OUTCOME

The Bushfire Attack Level (BAL) Contour Map is a scaled map of the Proposed National Storage Facility located at 581 Welshpool Road East, Wattle Grove, in the City of Kalamunda. It uses the principles of AS 3959 to illustrate the potential radiant heat impacts and associated indicative BAL ratings in reference to any classified vegetation remaining within 150m metres of the subject site.

2 PROPERTY DETAILS AND DESCRIPTION OF BUILDING WORKS OR USE

PROPERTY DETAILS	
Address Details	581 Welshpool Road East, Wattle Grove
Applicable Local Government	City of Kalamunda
Total Area of Subject Lot	1.0024 Hectares
REPORT PURPOSE	
This report is to accompany a Development Application to be submitted to Local Government.	
DESCRIPTION OF THE RELEVANT BUILDING(S) AND/OR PROPOSED WORKS AND/OR USE	
EXPLANATORY INFORMATION	
<p>Note: A habitable building is defined in the <i>Planning and Development (LPS) Regulations 2015</i> to mean: A permanent or temporary structure on land that:</p> <ul style="list-style-type: none"> (a) Is fully or partially enclosed; and (b) Has at least one wall of solid material and a roof of solid material; and (c) Is used for a purpose that involves the use of the interior of the structure by people for living, working, studying or being entertained. 	
Existing Habitable Building(s)	N/A
Change of Use:	N/A
Primary Construction Works	Construction of a habitable building other than a single house or ancillary dwelling
Associated Construction Works	N/A
BCA Classification(s)	National Storage Facility - Class 7b (warehouse/storage/wholesale)
Additional Description Details:	
This BAL Contour Report has been prepared to accompany a Development Application for the construction of a Storage Facility, located at 581 Welshpool Road East, Wattle Grove in the City of Kalamunda.	
Is a Bushfire Management Plan required?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<p><u>Assessment Supporting Details:</u> Part 10A of the <i>Planning and Development (Local Planning Schemes) Regulations 2015</i>, specify that where a proposal, is within the gazetted Bushfire Prone Area and includes a habitable building, that a planning approval is only required under Part 10A when a BAL contour identifies the site as BAL40 or above. The proposal is exposed to BAL below BAL29 and therefore does not trigger an application for planning under Part 10A.</p>	

Notwithstanding this, BPP accepts that there are other planning provisions that trigger the requirement for a planning application in this instance.

In regard to the level of bushfire documentation required to support the planning application, the new Guidelines (2024) state that where a *“a development application for the construction of, or addition to a habitable building for commercial or industrial uses in an area subject to pre-development radiant heat impact exceeding 29kW/m² and designated as Area 1 or 2, should address the requirements within this section [i.e. Part 7 – Development – Commercial and Industrial]”*.

As the BAL Contour in Figure 3 demonstrates, this proposal is not subject to a pre-development radiant heat impact exceeding 29kW/m² and therefore a Bushfire Management Plan is not required to address the SPP3.7 / Guidelines.

REALIGNMENT OF COLDWELL RD FOR INTERSECTION UPGRADE IN ACCORDANCE WITH FUTURE DEVELOPMENT CONTRIBUTIONS PLAN.

WELSHPOOL RD E

WELSHPOOL ROAD EAST

COLDWELL ROAD

EXISTING TREES TO BE RETAINED

BUILDING B

BUILDING A

OFFICE

NEW LOT AREA: 8,817 sq.m
 GFA: 10,740 sq.m
 NLA: 7,518 sq.m (70%)

NOTE :
 (1) THIS DRAWING IS AN INSTRUMENT OF SERVICE AND SHALL REMAIN THE PROPERTY OF PARSONS GROUP OF COMPANIES LOCATED AT PO BOX 189 SOUTH FREMANTLE WA 6162. IT IS NOT ALLOWED TO REPRODUCE ITS CONTENTS IN ANY FORM EXCEPT FOR THE PURPOSE FOR WHICH IT IS INTENDED.
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 (3) ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND RESOLVED BEFORE COMMENCEMENT OF ANY WORK.
 (4) SIGNAGE IS INDICATIVE AND SUBJECT TO SEPARATE APPLICATION.

NO.	DATE	DESCRIPTION
△		
△		
△		
△	15.11.24	CONCEPT DRAWINGS

REVISIONS

581 Welshpool Road,
 Wattle Grove WA


PARSONS MANAGEMENT GROUP
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 SOUTH FREMANTLE WA 6162
 9430 4344
 9430 4455

REV NO: **A** DRAWING NO.:

WATTLE GROVE - NATIONAL STORAGE FACILITY
SITE PLAN

3 INFORMATION FOR LOCAL GOVERNMENT BUILDING SERVICES (& THE LANDOWNER)

BUSHFIRE ATTACK LEVELS (BAL) - UNDERSTANDING THE RESULTS

The potential transfer (flux/flow) of radiant heat from the bushfire to a receiving object is measured in kW/m². The AS 3959:2018 BAL determination methodology establishes the ranges of radiant heat flux that correspond to each bushfire attack level. These are identified as BAL-LOW, BAL-12.5, BAL-19, BAL-29, BAL-40 and BAL-FZ.

The bushfire performance requirements for certain classes of buildings are established by the Building Code of Australia (Vol. 1 & 2 of the NCC). The BAL will establish the bushfire resistant construction requirements that are to apply in accordance with AS 3959:2018 - Construction of *buildings in bushfire prone areas* and the NASH Standard – *Steel framed construction in bushfire areas (NS 300 2021)*, whose solutions are deemed to satisfy the NCC bushfire performance requirements.

DETERMINED BAL RATINGS

A BAL Certificate can be issued for a determined BAL. A BAL can only be classed as 'determined' for an existing or future building/structure when:

1. It's final design and position on the lot are known and the stated separation distance from classified bushfire prone vegetation exists and can justifiably be expected to remain in perpetuity; or
2. It will always remain subject to the same BAL regardless of its design or position on the lot after accounting for any regulatory or enforceable building setbacks from lot boundaries as relevant and necessary (e.g., R-codes, restrictive covenants, defined building envelopes) or the retention of any existing classified vegetation either onsite or offsite.

INDICATIVE BAL RATINGS

A BAL Certificate cannot be issued for an indicative BAL. A BAL will be classed as 'indicative' for an existing or future building/structure when the required conditions to derive a determined BAL are not met.

This class of BAL rating indicates what BAL(s) could be achieved and the conditions that need to be met are stated.

Converting the indicative BAL into a determined BAL is conditional upon the currently unconfirmed variable(s) being confirmed by a subsequent assessment and evidential documentation. These variables will include the future building(s) location(s) being established (or changed) and/or classified vegetation being modified or removed to establish the necessary vegetation separation distance. This may also be dependent on receiving approval from the relevant authority for that modification/removal.

3.1 BAL Assessment Summary (Contour Map Format)

INTERPRETATION OF THE BAL CONTOUR MAP

The BAL contour map is a diagrammatic representation of the results of the bushfire attack level assessment.

The map presents different coloured contours extending out from the areas of classified vegetation. Each contour represents a set range of radiant heat flux that potentially will transfer to an exposed element (building, person or other defined element), when it is located within that contour.

Each of the set ranges of radiant heat flux corresponds to a different BAL rating as defined by the AS 3959:2018 BAL determination methodology.

The width of each shaded BAL contour will vary dependant on both the BAL rating and the relevant parameters (calculation inputs) for the subject site. Their width represents the minimum and maximum vegetation separation distances that correspond to each BAL rating (refer to the relevant table below for these distances).

The areas of classified vegetation to be considered in developing the BAL contours, are those that will remain at the intended end state of the subject development once earthworks, clearing and/or landscaping and re-vegetation have been completed. Variations to this statement that may apply include:

- Both pre and post development BAL contour maps are produced; and/or
- Each stage of a development is assessed independently.

3.1.1 BAL Determination Method(s) Applied and the Location of Data and Results

Procedure Method (AS 3959:2018)	Applied to the BAL Assessment	Location of the Site Assessment Data			Location of the Results
		Site Assessment Map	Calculation Input Variables		Assessed Bushfire Attack Levels and/or Radiant Heat Levels
			Summary Data	Detailed Data with Explanatory and Supporting Information	
Method 1 (Simplified)	Yes	Figure 2	Table 1	Appendix A1	Section 3.1.3 Table 2 BAL Contour Map
Method 2 (Detailed)	No	N/A	N/A	N/A	N/A

3.1.3 BAL Ratings Derived from the Contour Map

Indicative and determined BAL(s) for future buildings/structures on the proposed lots.

BUSHFIRE ATTACK LEVEL FOR FUTURE BUILDINGS / STRUCTURES ON STATED LOT ¹		
Lot No.	Future Buildings / Structure	
	Indicative BAL ²	Determined BAL ²
Building A	BAL-12.5	N/A
Building B	BAL-12.5	N/A
Office	BAL-12.5	N/A

¹ The assessment data used to derive the BAL ratings is sourced from Table 1 and Figure 2.
² Refer to the start of Section 3 for an explanation of indicative versus determined BAL ratings.

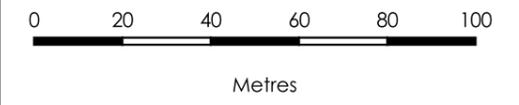
Figure 2

Classified Vegetation & Topography Map

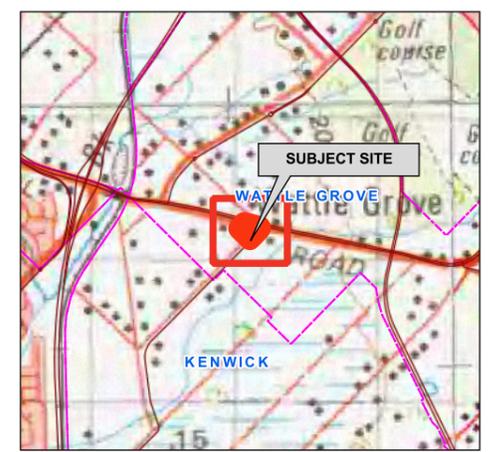
Lot 17 on Plan / Diagram: D065525
581 Welshpool Road East
Wattle Grove
City of Kalamunda

----- LEGEND -----

- Photo and Direction
- Hydrants
- Elevation (m)
- Subject Site
- Cadastral
- Buildings**
 - Building A
 - Building B
 - Office
- Assessment Area**
 - 150m Assessment Area
- Classified Vegetation**
 - Grassland
 - Excluded 2,2,3,2 (f)



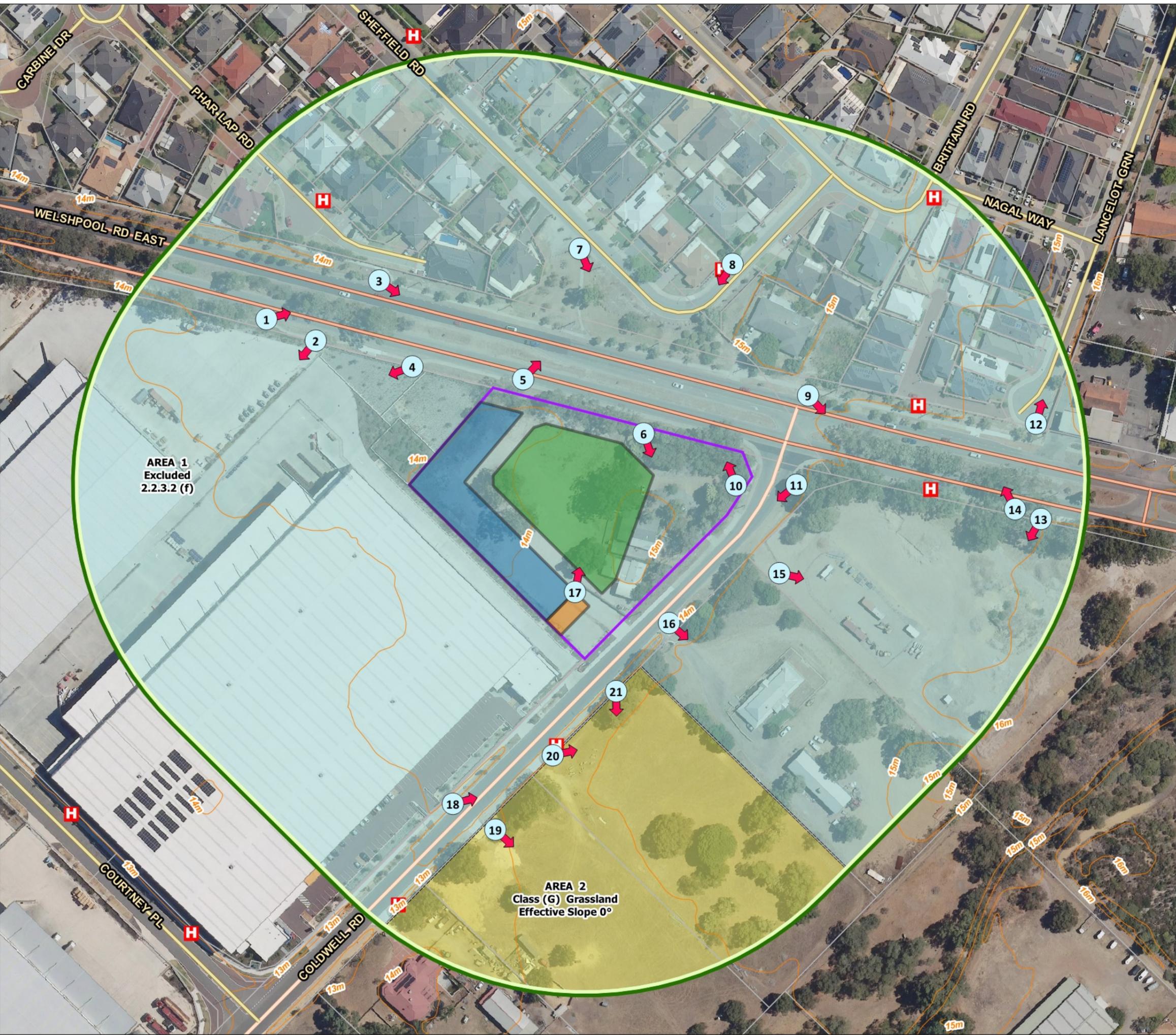
----- LOCALITY -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50
Projection: Universal Transverse Mercator Units: Metre
Map by: 25-09-2025
SCALE (A3): 1 : 1600



Disclaimer and Limitation: This map has been prepared for bushfire management planning purposes only. All depicted areas, contours and any dimensions shown are subject to survey. Bushfire Prone Planning does not guarantee that this map is without flaw of any kind and disclaims all liability for any errors, loss or other consequence which may arise from relying on any information depicted.

Figure 3
BAL Contour Map

Lot 17 on Plan / Diagram: D065525
 581 Welshpool Road East
 Wattle Grove
 City of Kalamunda

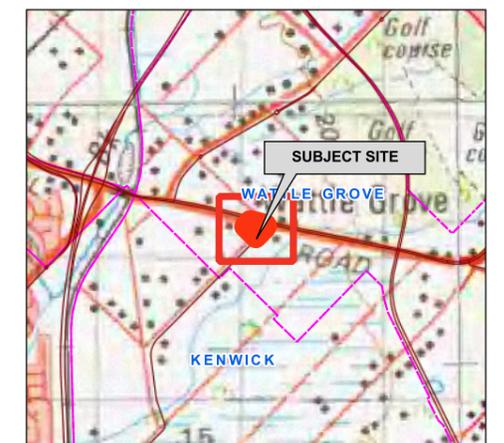
----- LEGEND -----

- H Hydrants
- Subject Site
- Cadastral
- Buildings**
- Building A
- Building B
- Office
- Assessment Area**
- 100m Assessment Area
- 150m Assessment Area
- Bushfire Attack Levels**
- BAL-FZ
- BAL-40
- BAL-29
- BAL-19
- BAL-12.5
- BAL-LOW



Metres

----- LOCALITY -----



AERIAL IMAGERY: Landgate/SLIP



Coordinate System: GDA 1994 MGA Zone 50
 Projection: Universal Transverse Mercator Units: Metre
 Map by: 25-09-2025
 SCALE (A3): 1 : 1600



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3.1.6 Site Assessment Data Applied to Construction of the BAL Contour Map(s)

RELEVANT CLASSIFIED VEGETATION	
Identification of Classified Vegetation that is Relevant to the Production of the BAL Contour Map(s)	Relevant Map
All identified areas of classified vegetation that exist at the time of the site assessment – both within the subject site (onsite) and external to the subject site (offsite) will be the relevant vegetation.	Figure 2
The areas of classified vegetation that will remain at the intended end state of the subject development once earthworks, any clearing and/or landscaping and re-vegetation have been completed, will be the relevant vegetation for the post-development BAL contour map.	Figure 3
Supporting Assessment Details: None required.	

Table 1: Calculation inputs applied to deriving the vegetation separation distances corresponding to different levels of potential radiant heat transfer.

DATA APPLIED TO CALCULATE THE SITE SPECIFIC VEGETATION SEPARATION DISTANCES CORRESPONDING TO POTENTIAL RADIANT HEAT TRANSFER LEVELS ¹												
Applied BAL Determination Method		METHOD 1 - SIMPLIFIED PROCEDURE (AS 3959:2018 CLAUSE 2.2)										
The Calculation Input Variables - Corresponding to the Applied BAL Determination Method ²												
Methods 1 and 2		Method 1			Method 2							
Vegetation Classification		FDI	Effective Slope		Site Slope	FFDI or GFDI	Flame Temp.	Elevation of Receiver	Flame Width	Fireline Intensity	Flame Length	Modified View Factor
			Applied Range	Measured								
Area	Class		degree range	degrees	degrees		K	metres	metres	kW/m	metres	% Reduction
1	Excluded cl 2.2.3.2(f)	N/A	N/A	N/A								
2	(G) Grassland	80	Upslope or flat 0	flat 0								

Note 1: The values used to indicate levels of potential radiant heat transfer (from fire in bushfire prone vegetation to exposed elements at risk), will be stated in subsequent tables as either as a bushfire attack level (BAL) and/or as kilowatts per square metre (kW/m²), as relevant to the application of the value and the type and use of the element at risk.

Note 2: All data and information supporting the determination of the classifications and values stated in this table is presented in Appendix A. Where the values are stated as 'default' these are either the values stated in AS 3959:2018, Table B1 or the values calculated as intermediate or final outputs through application of the equations of the AS 3959:2018 BAL determination methodology. They are not values derived by the assessor.

Table 2: Vegetation separation distances corresponding to the stated levels of potential radiant heat transfer.

THE CALCULATED (SITE SPECIFIC) VEGETATION SEPARATION DISTANCES CORRESPONDING TO THE STATED LEVEL OF POTENTIAL RADIANT HEAT TRANSFER (METRES) ¹									
Vegetation Classification		Maximum Radiant Heat Transfer (Flux)						10 kW/m ²	2 kW/m ²
		>40 kW/m ²	40 kW/m ²	29 kW/m ²	19 kW/m ²	12.5 kW/m ²	N/A ²		
		Bushfire Attack Levels							
Area	Class	BAL-FZ	BAL-40	BAL-29	BAL-19	BAL12.5	BAL-LOW		
1	Excluded cl 2.2.3.2(f)	N/A	N/A	N/A	N/A	N/A	N/A		
2	(G) Grassland	<6	6-<8	8-<12	12-<17	17-<50	>50		

Note 1: The calculated results are illustrated in Figure 3 as a BAL Contour Map and/or additional defining lines as necessary. All applied calculation input variables are presented in Table 1. A copy of the radiant heat calculator output for each area of classified vegetation is presented in Appendix A3.

Note 2: The BAL-LOW rating does not represent a maximum level of radiant heat transfer. The rating is applied when the separation distance is at least 100m from all classified vegetation except Grassland, for which 50m applies.

APPENDIX A: BAL ASSESSMENT DATA (DETAILED) AND SUPPORTING INFORMATION

A1: Assessed Site Inputs Common to the Method 1 and Method 2 Procedures

A1.1: FIRE DANGER INDICES (FDI/ FDI/GFDI)

When using Method 1 the relevant FDI value required to be applied for each state and region is established by AS 3959:2018, Table 2.1. Each FDI value applied in Tables 2.4 – 2.7 represents both the Forest Fire Danger Index (FFDI) and a deemed equivalent for the Grassland Fire Danger Index (GFDI), as per Table B2 in Appendix B. When using Method 2, the relevant FFDI and GFDI are applied.

The values may be able to be refined within a jurisdiction, where sufficient climatological data is available and in consultation with the relevant authority.

Relevant Jurisdiction:	WA	Region:	Whole State	Method 1	Applied FDI:	80
				Method 2	Applied FFDI:	N/A
					Applied GFDI:	N/A

A1.2: VEGETATION ASSESSMENT AND CLASSIFICATION

Vegetation Types and Classification

In accordance with AS 3959:2018 clauses 2.2.3 and C2.2.3.1, all vegetation types within 100 metres of the 'site' (defined as "the part of the allotment of land on which a building stands or is to be erected"), are identified and classified. Any vegetation more than 100 metres from the site that has influenced the classification of vegetation within 100 metres of the site, is identified and noted. The maximum excess distance is established by AS 3959: 2018 cl 2.2.3.2 and is an additional 100 metres.

Classification is also guided by the Visual Guide for Bushfire Risk Assessment in WA (WA Department of Planning February 2016) and any relevant FPA Australia practice notes.

Modified Vegetation

The vegetation types have been assessed as they will be in their natural mature states, rather than what might be observed on the day. Vegetation destroyed or damaged by a bushfire or other natural disaster has been assessed on its expected re-generated mature state. Modified areas of vegetation can be excluded from classification if they consist of low threat vegetation (refer to Appendix B) and that any required active management can be expected to continue in perpetuity, and this can be adequately justified.

The Influence of Ground Slope

Where significant variation in effective slope exists under a consistent vegetation type, these will be delineated as separate vegetation areas to account for the difference in potential bushfire behaviour, in accordance with AS 3959:2018 clauses 2.2.5 and C2.2.5.

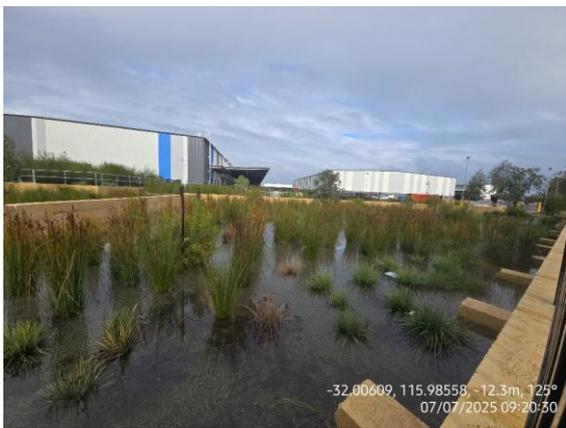
THE INFLUENCE OF VEGETATION GREATER THAN 100 METRES FROM THE SUBJECT SITE

Vegetation area(s) within 100m of the site whose classification has been influenced by the existence of bushfire prone vegetation from 100m – 200m from the site:

None

Assessment Statement:

No vegetation types exist close enough, or to a sufficient extent, within the relevant area to influence classification of vegetation within 100 metres of the subject site.

VEGETATION AREA 1							
Classification	N/A						
Types Identified	N/A						
Exclusion Clause	2.2.3.2 (f) Low threat vegetation - minimal fuel condition.						
Effective Slope	Measured	N/A		Applied Range (Method 1)	N/A		
Foliage Cover (all layers)	N/A		Shrub/Heath Height	N/A		Tree Height	N/A
Description/Justification:	<p>A combination of established and developing residential / commercial area. Managed private gardens, street frontages and median strips/road verges. Trees under-pruned to a minimum of two (2) metres above the ground. Grasses slashed and maintained to less than 50mm in accordance with the City of Kalamunda Fire Hazard Reduction Notice. Mulch used to suppress weed growth. Footpaths/hardstand areas cleared of unmanaged vegetation.</p> <p>Note – Photo ID 4 illustrates an existing drainage area – Due to the high moisture content, the grasses present will not support a running fire. The area is not conducive to a broad landscape scale fire.</p> <p>Note – Some sparse grasses (winter growth) present. This will not support a running fire.</p>						
Post Development Assumptions:	Not Applicable.						
							
PHOTO ID: 1			PHOTO ID: 2				
							
PHOTO ID: 3			PHOTO ID: 4				

VEGETATION AREA 1

Classification	N/A				
Types Identified	N/A				
Exclusion Clause	2.2.3.2 (f) Low threat vegetation - minimal fuel condition.				
Effective Slope	Measured	N/A	Applied Range (Method 1)	N/A	
Foliage Cover (all layers)	N/A	Shrub/Heath Height	N/A	Tree Height	N/A
Description/Justification:	As above.				
Post Development Assumptions:	As above.				



PHOTO ID: 5



PHOTO ID: 6



PHOTO ID: 7



PHOTO ID: 8



PHOTO ID: 9



PHOTO ID: 10

VEGETATION AREA 1							
Classification	N/A						
Types Identified	N/A						
Exclusion Clause	2.2.3.2 (f) Low threat vegetation - minimal fuel condition.						
Effective Slope	Measured	N/A		Applied Range (Method 1)	N/A		
Foliage Cover (all layers)	N/A		Shrub/Heath Height	N/A		Tree Height	N/A
Description/Justification:	As above.						
Post Development Assumptions:	As above.						
 <p>-32.00658, 115.98738, -13.2m, 268° 07/07/2025 09:05:51</p>			 <p>-32.00634, 115.98852, -11.2m, 16° 07/07/2025 09:09:32</p>				
PHOTO ID: 11			PHOTO ID: 12				
 <p>-32.00673, 115.98854, -11.9m, 155° 07/07/2025 09:08:13</p>			 <p>-32.0067, 115.98856, -10.4m, 333° 07/07/2025 09:08:02</p>				
PHOTO ID: 13			PHOTO ID: 14				
 <p>-32.00694, 115.9873, -10.8m, 103° 07/07/2025 09:33:55</p>			 <p>-32.00713, 115.98679, -10.6m, 131° 07/07/2025 09:32:52</p>				
PHOTO ID: 15			PHOTO ID: 16				

VEGETATION AREA 1							
Classification	N/A						
Types Identified	N/A						
Exclusion Clause	2.2.3.2 (f) Low threat vegetation - minimal fuel condition.						
Effective Slope	Measured	N/A		Applied Range (Method 1)	N/A		
Foliage Cover (all layers)	N/A		Shrub/Heath Height	N/A		Tree Height	N/A
Description/Justification:	As above.						
Post Development Assumptions:	As above.						
							
PHOTO ID: 17			PHOTO ID: 18				

VEGETATION AREA 2				
Classification	G. GRASSLAND			
Types Identified	Sown pasture G-26			
Exclusion Clause	N/A			
Effective Slope	Measured	flat 0 degrees	Applied Range (Method 1)	Upslope or flat 0 degrees
Description/Justification:	Assessed as Grassland due to areas of grasses present in paddock/open areas. Whilst it is recognised that some sections appear to be in a managed state, there are sections that are currently unmanaged. As such, the entire area/s has been classified in accordance with AS3959-2018 as a precautionary measure. Foliage cover less than 10%.			
Post Development Assumptions:	Not applicable.			
				
PHOTO ID: 19		PHOTO ID: 20		
				
PHOTO ID: 21				

A1.3: EFFECTIVE SLOPE

EXPLAINING THE ASSESSMENT METHODOLOGY APPLIED BY BUSHFIRE PRONE PLANNING

DEFINITION: Effective slope is “the slope under that classified vegetation which most influences the bushfire attack” (AS 3959:2018, Clause 1.5.11).

“The effective slope under the classified vegetation is not the same as the average slope for the land surrounding the site of the proposed building. The effective slope is that slope which most significantly influences bushfire behaviour” (AS 3959:2018, Clause CB4).

The slope is described as upslope, flat or downslope when viewed from an exposed element (e.g., building) and looking towards the vegetation. It is measured in degrees.

[Note: Additional relevant guidance provided by AS 3959:2018 and NSW RFS, Planning for Bushfire Protection (2019) is incorporated into the applied assessment methodology and is presented at the end of this explanation.]

COMPOUND SLOPES UNDER VEGETATION AND DETERMINING SLOPE SIGNIFICANCE

Non-Linear Slopes: When the slope of ground under the vegetation out to the distance to be assessed (100 m or further if necessary), is not a straight line or nearly straight line slope, then it is made up of several different slopes i.e., it is a compound slope. The different slope angles and lengths must be factored into the determination of the effective slope value to be applied. Different slopes will potentially influence the bushfire rate of spread and intensity, both increasing and decreasing it.

Significant Slope: The AS 3959:2018 bushfire attack level determination methodology, with default inputs, models a fully developed bushfire. Therefore, a 'significant' slope is one that will significantly influence bushfire behaviour. To be 'significant' the length of the slope must be 'sufficient' to support a fully developed fire on that slope. The angle of a significant slope could be the determined effective slope for the area of classified vegetation if it is the one that 'most influences the bushfire attack'.

Sufficient Slope Length: Is a slope that will, as a minimum, allow the entire flame depth (flaming zone) of a fully developed fire (100m flame width) to exist on that slope.

The expected flame depth of a fully developed bushfire is a function of the length of time the flaming phase will exist on a section of the fuel bed (the 'residence time') and the bushfire's 'rate of spread'. For a given rate of spread, longer residence times result in greater flame depths. Greater flame depths are correlated with greater flame temperatures and greater flows of radiant heat.

The primary factors that will increase the residence time are:

- Heavier fine fuel loads of grass, leaf litter, twigs, bark etc less than 6mm in width and existing within the surface and near surface layers (and elevated fuel layers when contiguous with the base layers); and
- A greater percentage of larger fine fuels within the fuel load.

The primary factors that increase the rate of spread (apart from fire weather factors), include finer fuels, drier fuels, horizontal continuity of fuel and steeper upward ground slope in the direction of fire travel.

Example values:

- Residence Time: Grassfire 5 – 15 seconds, Forest fire 25 -50 seconds.
- Rate of Spread: Grassfires of a few km/hr are considered fast moving, 5-10 km/hr is common and fastest in the order of 25km/hr. Forest fire typically recorded in metres/hour with 1-1.5 km/hr being considered fast moving and fastest in the order of 3–4 km/hr.
- Flame Depth: More typically, a few metres for grasses to tens of metres for forest fires.

An Isolated Slope: For scenarios where there is a single significant slope (based on the above criteria) additional consideration would need to be given to the time and distance consumed by a bushfire still in its 'developing' phase. This will require due consideration be given to how it is potentially ignited i.e., from a single or multiple points, as this will influence the time and distance required to fully develop. For such scenarios, a normally significant slope may not be sufficiently long. It may be necessary to determine the potential bushfire impact more accurately by

justifying the application of a lesser effective slope, or a lower threat vegetation classification, or calculating a reduced head fire width (using short fire run modelling).

Determined Effective Slope: Only a 'significant' slope can potentially be the effective slope by itself. In which case, for a defined area of classified vegetation area, the worst significant slope under that vegetation is to apply.

The table below presents Bushfire Prone Planning's considerations applied to assessing short and/or compound slopes in determining the effective slope.

Slope Length (m)	Considered a Significant Slope	Considerations in Determining the Effective Slope
< 5	No	Where these short slopes exist as part of a compound slope under an area of classified vegetation, they can be ignored as they will not influence the fire behaviour in that vegetation.
5-20	No	These slopes will have a range of influence on fire behaviour from very little to a degree of influence that must be accounted for to some extent by the determined effective slope that is applied (i.e., with a greater length apply to a greater extent). But the actual slope of these shorter slopes is likely not to be applied as it is not a 'significant' length.
20-30	Maybe	<p>The same considerations applied to the 5-20m slope lengths should be applied here. However, more justification would need to be presented to support their assessment as not being 'significant' slopes.</p> <p>For these slope lengths, consideration must be given more broadly to the potential level of risks associated with a bushfire event in this location. The risk level will be a function of the bushfire hazard threat levels (direct attack mechanisms) within the immediate and broader assessment area as influenced by local topography, vegetation extents and types and the exposure and vulnerability of persons and/or buildings/structures to these threats. Higher risk levels require greater precaution meaning these slopes should be considered 'significant', and vice versa.</p> <p>Consider the potential for a bushfire on adjoining or nearby land be a source of ignition and/or pre-heating to vegetation on the subject slope.</p> <p>Consider if vegetation on the slope is likely be ignited by a single ignition point or is multipoint ignition possible from bushfire an adjoining slopes or the surrounding area. Single point ignition will require a fire to travel further before being fully developed (DFES considers less than 100m fire runs may be considered a short fire run for forest, woodland and scrub vegetation classifications, RFS NSW applies 150m).</p> <p>Isolated slopes of this length are less likely to be considered significant as compared to when part of a compound slope.</p>
>30	Yes	Likely to always be a significant slope unless isolated (i.e., exists alone) – in which case, justifying the application of a lesser effective slope, or a lower threat vegetation classification, or calculating a reduced head fire width, are approaches that may need to be applied.

BPP Approach - Slope Variation Within Areas of Vegetation

When multiple 'significant' slope lengths with large differences in degrees of effective slope (or different applicable slope ranges when AS 3959:2018 Method 1 is applied), exists under a single vegetation classification, these will be delineated as separate vegetation areas of classified vegetation to account for the difference in potential bushfire behaviour and impact, in accordance with AS 3959:2018 clauses 2.2.5 and C2.2.5.

Effective Slope Variation Due to Multiple Development Sites

When the effective slope, under a single area of bushfire prone vegetation, will vary significantly relative to multiple proposed development sites (exposed elements), then the effective slopes corresponding to each of the different

locations, are separately identified. The relevant (worst case) effective slope is determined in the direction corresponding to the potential directions of fire spread towards the subject building(s).

AS 3959:2018 EFFECTIVE SLOPE DETERMINATION - GUIDANCE

The Standard presents a broad set of guidance statements that indicate the intent of deriving an effective slope value for use in calculations, rather than detailing the 'in the field' determination process. These include:

- Highlighting the importance of the value by stating "The slope of the land under the classified vegetation has a direct influence on the rate of fire spread, the severity of the fire and the ultimate level of radiant heat flux" (Clause C2.2.5). [Note: A common rule of thumb is that for every 10 degrees of upslope, a fire will double its rate of spread if moving in the direction of the prevailing wind].
- It may be necessary to consider the slope under the classified vegetation for distances greater than 100 m in order to determine the effective slope for that vegetation classification.
- "Where there is more than one slope within the classified vegetation, each slope shall be individually assessed, and the worst case Bushfire Attack Level shall apply" (Clause 2.2.5).

NSW RFS 2019, PLANNING FOR BUSHFIRE PROTECTION - APPENDIX A1.5 - ADDITIONAL DETERMINATION GUIDANCE

- "In identifying the effective slope - it may be found that there are a variety of slopes covering different distances within the vegetation. The effective slope is considered to be the slope under the vegetation which will most significantly influence the bushfire behaviour for each aspect. This is usually the steepest slope. In situations where this is not the case, the proposed approach must be justified".
- "Vegetation located closest to an asset may not necessarily be located on the effective slope".

SITE ASSESSMENT DETAILS - EXPLANATION & JUSTIFICATION

The effective slopes determined from the site assessment are recorded in Table 1 of this BAL Contour Report.

When their derivation requires additional explanation and justification, this is provided below.

For the subject site additional information is not required.

A1.4: SEPARATION DISTANCE

Measuring

The separation distance is the distance in the horizontal plane between the receiver (building/structure or area of land being considered) and the edge of the classified vegetation (AS 3959:2018, clause 2.2.4)

The relevant parts of a building/structure from which the measurement is taken is the nearest part of an external wall or where a wall does not exist, the supporting posts or columns. Certain parts of buildings are excluded including eaves and roof overhangs.

The edge of the vegetation, for forests and woodlands, will be determined by the unmanaged understorey rather than either the canopy (drip line) or the trunk (AS 3959:2018, clause C2.2.5).

Measured Separation Distance as a Calculation Input

If a separation distance can be measured because the location of the building/structure relative to the edge of the relevant classified vegetation is known, this figure can be entered into the BAL calculation. The result is a determined BAL rating.

Assumed Separation Distance as a Calculation Input

When the building/structure location within the lot is not known, an assumed building location may be applied that would establish the closest positioning of the building/structure relative to the relevant area of vegetation.

The assumed location would be based on a factor that puts a restriction on a building location such as:

- An established setback from the boundary of a lot, such as a residential design code setback or a restrictive covenant; or
- Within an established building envelope.

The resultant BAL rating would be indicative and require later confirmation (via a Compliance Report) of the building/structure actual location relative to the vegetation to establish the determined BAL rating.

SITE ASSESSMENT DETAILS - EXPLANATION & JUSTIFICATION

Measured and assumed separation distances determined from the site assessment are recorded in Table 1 of this report and illustrated in Figure 3.

When their derivation requires additional explanation and justification, including when the relevant R-Code or other regulated building setbacks are being applied, this is provided below.

For the subject site additional information is not required.

APPENDIX B: GUIDANCE – ASSET PROTECTION ZONES AND BUSHFIRE ATTACK LEVELS

B1: The Asset Protection Zone (APZ)

THE APZ – DESCRIPTION, DIMENSION AND TECHNICAL REQUIREMENTS

DESCRIPTION AND PURPOSE

An asset protection zone (APZ) is an area surrounding a habitable or specified building that is not vegetated and/or supports retained or planted vegetation that can be considered to present a low bushfire threat as a result of flammability and/or moisture content characteristics and/or minimal fuel loads (either naturally or as a result of continual maintenance).

The primary objectives of establishing an APZ are to ensure:

- A reduction in the exposure of the building/structure to bushfire direct attack mechanisms (threats) of flame contact, radiant heat transfer and ember attack, by establishing appropriate separation from each area of classified vegetation. [The required APZ dimensions will be dependent on site specific conditions and the use of the site and are measured from the nearest part of an external wall and/or supporting posts of building parts without external walls]; and
- A reduction in the exposure of the building/structure to bushfire indirect attack mechanisms (threats) by:
 - Preventing surface fire spreading to the building/structure;
 - Minimising the potential for tree strike; and
 - Limiting the potential for consequential fire to impact the building/structure by eliminating, reducing and/or shielding consequential fire fuels. These fuels include accumulated debris, stored combustible/flammable items and constructed combustible items. Consequential fire, typically ignited by embers, is the primary cause of building loss in a bushfire event; and
- To provide a defensible space for firefighting activities.

DIMENSIONS

Established by the Guidelines

No APZ dimensions are established by the Planning for Bushfire Guidelines, DPLH/WAPC (as amended). The Guidelines are intended to inform the application of State bushfire planning policy. For planning approval purposes, it only needs to be demonstrated that a BAL-29 dimensioned APZ can be appropriately established, surrounding a building/structure for the specific development site conditions.

For certain vulnerable land uses, evidence of the ability to implement a larger APZ may be required to inform planning decisions. These include dimensions corresponding to radiant heat impact levels of 10 kW/m² and/or 2 kW/m² and calculated using a flame temperature of 1200 K rather than 1090 K.

Established by the 'Determined' BAL Rating

The dimensions of the APZ that will be the responsibility of a landowner to implement and maintain around a habitable or specified building - to align the building's bushfire resistance construction level, to its level of exposure to flames, radiant heat and embers - will be those corresponding to the building's 'determined' BAL rating.

This rating will account for the relevant physical characteristics of a specific site and the applicable building's separation distance from classified vegetation, the type of vegetation it is exposed to and the slope of the ground supporting that vegetation.

Variations to these dimensions (i.e. vegetation separation distances) will only exist as the result of either:

- A requirement presented within an associated Bushfire Management Plan to increase the size of the APZ as part of a required additional protection measure; or
- A directive of the relevant Local Government through their annual notice, issued under s.33 of the Bushfires Act 1954 (see below), that results in a larger dimension.

Established by the Relevant Local Government

To satisfy the local governments requirements, a required APZ dimension may be stated in the notice issued annually by the relevant local government under s.33 of the Bushfires Act 1954 (e.g. Bushfire Risk Reduction Notice or Firebreak and Hazard Reduction Notice etc).

For certain vegetation/sites, based on environmental considerations, a maximum allowable dimension may be established, typically that corresponding to a BAL-29 rating for the relevant building – which will vary in response to the site specific conditions.

The existence of any such restrictions is information that would need to be sought from the relevant local government planning department.

TECHNICAL REQUIREMENTS

Established by the Guidelines

The relevant technical requirements for an APZ are established in the Planning for Bushfire Guidelines (DPLH/WAPC) (as amended), Appendix B2: Siting and design and available online at [Planning WA - SPP 3.7 Bushfire](#)

Established by the Relevant Local Government

Refer to the notice issued annually by the relevant local government under s33 of the Bushfires Act 1954 (e.g. Bushfire Risk Reduction Notice or Firebreak and Hazard Reduction Notice etc) . It may state technical requirements that vary from and/or are additional to those established by the Guidelines to be complied with. Refer to the ratepayer notice and/or the local government's website for the current version.

The local government's technical requirements may be established by their gazetted local planning scheme.

B2: Vegetation Excluded from Classification – Ensure Continued Low Threat Status

MAINTAINING THE LOW THREAT STATUS OF EXCLUDED VEGETATION

When applying AS 3959:2018 BAL determination methodology, vegetation adjoining or adjacent to the subject site can be excluded from classification based on being a 'low bushfire threat'. To maintain this status, certain requirements must continue to be met in accordance with the below extract from AS3959:2018. Refer to the 'Classified Vegetation and Topography Map' for the relevant low threat areas associated with the subject site.

Determination of 'low threat' vegetation is based on factors such as - proximity to the subject site / small areas of vegetation / low flammability / higher moisture content / low fuel load.

Aside from a naturally occurring low fuel load, vegetation maintained in a minimal fuel condition through active management can be excluded. The associated key requisite is that the active management can be expected to continue in perpetuity, and this can be adequately justified.

Acceptable forms of justification typically involve supportable evidence or the existence of an enforceable mechanism. Examples of enforceable mechanisms include:

- Requirements established by a Section 33 (Bush Fires Act 1954) notice issued by a local government;
- An appropriate and enforceable agreement between relevant parties (which may involve additions to land titles); and
- For public open space or crown land, written evidence that the land manager e.g. local government or a State Government department, agrees to maintain the designated area of land in a low threat state in perpetuity.

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AS 3959:2018

2.2.3.2 Exclusions—Low threat vegetation and non-vegetated areas

The following vegetation shall be excluded from a BAL assessment:

- (a) Vegetation of any type that is more than 100 m from the site.
- (b) Single areas of vegetation less than 1 ha in area and not within 100 m of other areas of vegetation being classified vegetation.
- (c) Multiple areas of vegetation less than 0.25 ha in area and not within 20 m of the site, or each other or of other areas of vegetation being classified vegetation.
- (d) Strips of vegetation less than 20 m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20 m of the site or each other, or other areas of vegetation being classified vegetation.
- (e) Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.
- (f) Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition, mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and windbreaks.

NOTES:

- 1 Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognizable as short-cropped grass for example, to a nominal height of 100 mm).
- 2 A windbreak is considered a single row of trees used as a screen or to reduce the effect of wind on the leeward side of the trees.

B3: BAL Ratings – Corresponding Threats and Construction References

BAL ¹	DESCRIPTION OF PREDICTED BUSHFIRE DIRECT ATTACK MECHANISMS (THREATS) AND LEVELS OF EXPOSURE	REFERENCES FOR CONSTRUCTION REQUIREMENTS	
		AS 3959:2018 Construction of Buildings in Bushfire Prone Areas	The NASH Standard (2021) – Steel Framed Construction in Bushfire Areas
		Referenced by the Building Code of Australia for Building Classes 1, 2, 3 & 10a	Referenced by the Building Code of Australia for Building Classes 1 & 10a
BAL – LOW	There is insufficient risk to warrant specific construction requirements but there is still some risk. <i>(Note: DFES recommend that ember attack protection features be incorporated into the design where practicable).</i>	Section 4. No Requirements	No Requirements
BAL – 12.5	There is a risk of ember attack. Construction elements are expected to be exposed to heat flux not greater than 12.5 kW/m ²	Sections 3 & 5.	All construction requirements for BAL-12.5 to BAL-40 are the same except for windows and external doors, which must comply with AS 3959. The construction requirements are set out as essentially non-combustible construction systems for each of the following building elements: Section 1.4: General Requirements Section 2: Roof and Ceiling System Section 3: External Wall System Section 4: Floor System Section 5: Carports Verandahs and Decks.
BAL – 19	There is a risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to radiant heat. The construction elements are expected to be exposed to a heat flux not greater than 19 kW/m ² .	Sections 3 & 6	
BAL – 29	There is an increased risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to an increased level radiant heat. The construction elements are expected to be exposed to heat flux not greater than 29 kW/m ² .	Sections 3 & 7.	
BAL – 40	There is a much-increased risk of ember attack and burning debris ignited by windborne embers, a likelihood of exposure to a high level of radiant heat and some likelihood of direct exposure to flames from the fire front. The construction elements are expected to be exposed to a heat flux not greater than 40kW/m ² .	Sections 3 & 8.	
BAL – FZ (Flame Zone)	There is an extremely high risk of ember attack and burning debris ignited by windborne embers, and a likelihood of exposure to an extreme level of radiant heat and direct exposure to flames from the fire front. The construction elements are expected to be exposed to a heat flux greater than 40 kW/m ² .	Sections 3 & 9.	The construction requirements are set out in Sections 1-5 and differ from the requirements for all other BAL ratings.

¹ AS 3959:2018 *Construction of buildings in bushfire prone areas*, defines a Bushfire Attack Level (BAL) as a “means of measuring the severity of a building’s potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat flux expressed in kW/m², and is the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire.”

B4: BAL Contour Map Interpretation

THE BAL CONTOUR MAP

Caution! Future building works require a 'determined' BAL rating for building permit applications. When a BAL contour map is being used for planning assessment purposes, (as opposed to a building assessment purpose), the required 'determined' BAL rating typically is not able to be derived from the map (there are only limited scenarios where this is possible).

The BAL ratings identified from the map will more likely be only 'indicative' of what can be achieved – with planning compliance for this factor being achieved when BAL-29 is indicated.

Otherwise, an additional assessment of the site data for building application purposes is required, and potentially approval will need to be obtained for native vegetation modification and/or removal from the relevant authority.

The Bushfire Attack Level (BAL) contour map, when used, is a diagrammatic representation of the results of the bushfire attack level assessment that has been conducted. It presents different coloured contours extending out from the different areas of classified vegetation.

Each contour represents a set range of radiant heat, corresponding to the BAL rating as defined by the AS 3959:2018 BAL determination methodology. When an exposed element (building, person or other defined element), is fully or partly located within a specific contour, it is potentially subject to the corresponding level of radiant heat transfer.

The width of each coloured BAL contour is dependent on both the BAL rating it represents, and the relevant site specific calculation inputs and will vary. It represents the minimum and maximum vegetation separation distances that correspond to each BAL rating for that site.

For post development BAL contour maps, the areas of classified vegetation applied to the production of the BAL contours, are those that will remain at the intended end state of the subject development once earthworks, clearing and/or landscaping and/or re-vegetation have been completed.

Our Ref: PMG-78(3)

24 August 2025

City of Kalamunda
2 Railway Road
KALAMUNDA WA 6076

Attention: Cardia Mariani, Principal Statutory Planner

PROPOSED DEVELOPMENT – LOT 17 (NO.581) WELSHPOOL ROAD EAST, WATTLE GROVE – WAREHOUSE/STORAGE (SELF-STORAGE UNITS)

This submission supports the application seeking approval to develop a self-storage facility (warehouse/storage) on the subject land. The application is presented on behalf of eventual occupants of the development, being National Storage.

The following is presented to assist in the assessment and determination of the development application:-

- Previous approval and pre-lodgement communications;
- An appreciation of the site and location;
- The applicable statutory planning framework;
- Details of the proposed use and development; and
- How the proposal amounts to an acceptable use and development having regard for the objectives and requirements applicable to the land and location.

PREVIOUS APPROVAL AND PRE-LODGE MENT COMMUNICATIONS

In September 2020, the City of Kalamunda granted development approval to a similar project west of the subject land. The property involved was similar to the subject land, fronting the south side of Welshpool Road East.

More recently, communications have taken place with the City for the purposes of advancing the intentions for the subject land to a development application. These communications have included meetings at the City's offices:-

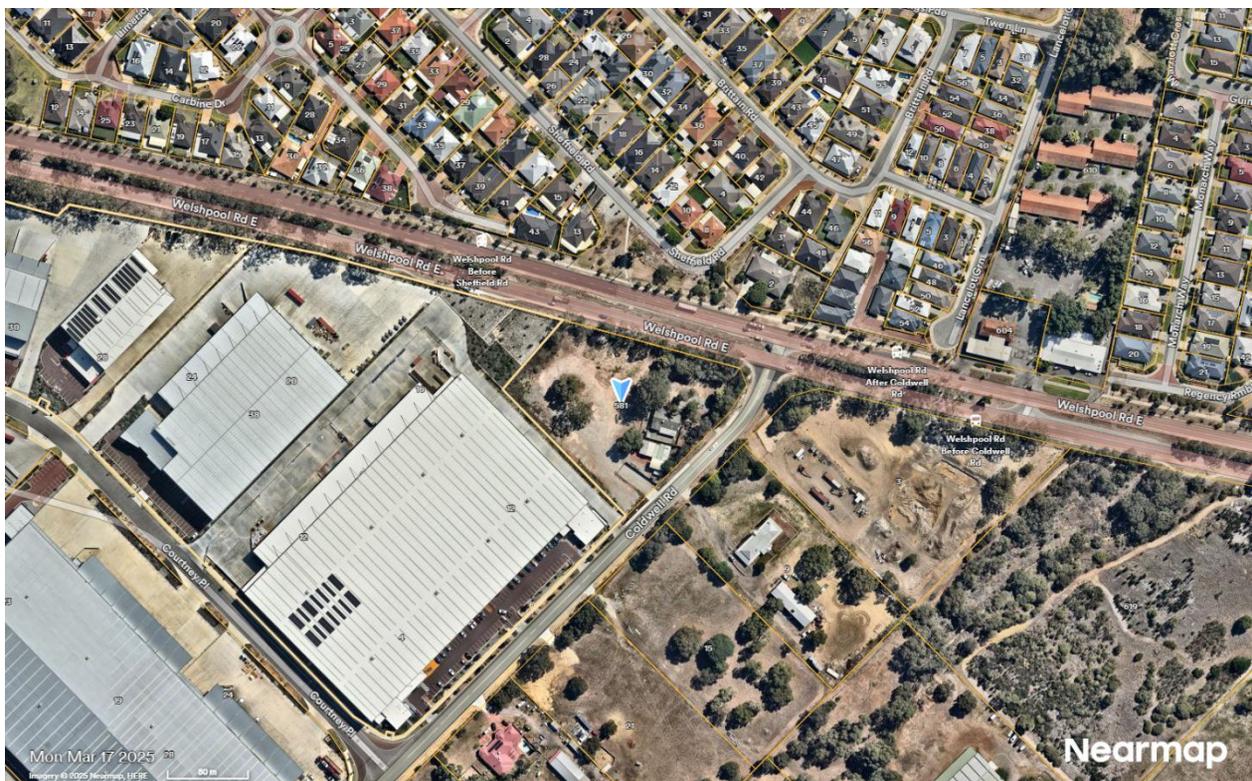
- Tuesday 3rd December 2024; and
- Thursday 22nd May 2025.

SUBJECT SITE AND LOCATION

The subject land is described as Lot 17 on Diagram 65525, held in Certificate of Title Volume 1657, Folio 613. It is known as 581 Welshpool Road East, Wattle Grove.

At present, the site is occupied by an old single house and associated outbuildings.

Positioned on the south-western corner of Welshpool Road East and Coldwell Road, the immediate location consists of residential development on the north side of Welshpool Road, special rural land to the east i.e. the adjacent side of Coldwell Road, and a large warehouse adjoining to the south.



IMMEDIATE CONTEXT (SOURCE: NEARMAPS)

The broader context is characterised by the same residential area to the north, being the suburb of Wattle Grove, the special rural area/s of Wattle Grove east of Tonkin Highway, the commercial/industrial development of Roe Highway Logistics Park, and the suburb of Kenwick.

The Welshpool/Kewdale industrial areas are also positioned north-west of Welshpool Road where it intersects with Roe Highway.



BROADER CONTEXT (SOURCE: NEARMAPS)

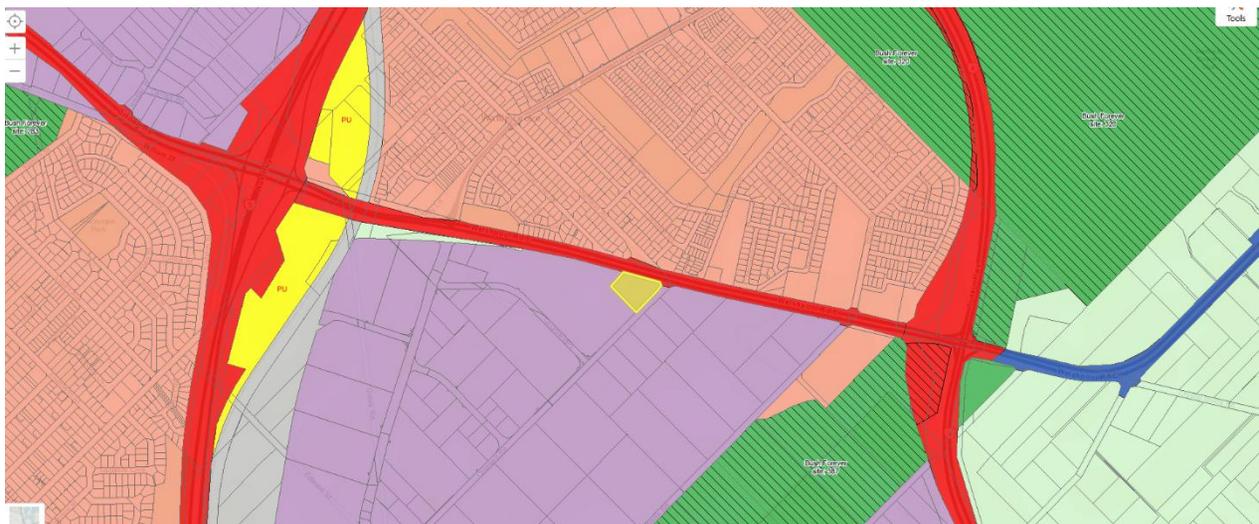
The extent of the catchment to be served by the proposed self-storage facility is sizeable, including Wattle Grove, the northern part of Gosnells, Kenwick in the City of Canning, Welshpool and Kewdale.

Where access is concerned, the facility will be highly accessible via higher-order roads including Welshpool Road East, Tonkin and Roe Highways.

PLANNING FRAMEWORK

Metropolitan Region Scheme

The land is zoned 'Industrial' under the Metropolitan Region Scheme.



SUBJECT LAND INDUSTRIAL UNDER THE MRS (SOURCE: WAPC)

City of Kalamunda Local Planning Scheme No.3

The land is zoned 'Light Industry' under the City of Kalamunda's *Local Planning Scheme No.3* (LPS3).



SUBJECT LAND LIGHT INDUSTRY UNDER LPS3 (SOURCE: CITY OF KALAMUNDA)

Local Planning Policy 19 – MKSEA Design Guidelines

In advice received from the City, the *MKSEA Design Guidelines* were identified to be given particular emphasis.

The subject land is positioned in the Light Industrial Precinct in the Kalamunda Wedge Industrial Area (Precinct 3A) within the Maddington Kenwick Strategic Employment Area (MKSEA).



SUBJECT LAND, LIGHT INDUSTRIAL PRECINCT IN MKSEA (SOURCE: CITY OF KALAMUNDA)

Other Local Planning Policies

In addition to LPP19, the following City of Kalamunda Policies have been considered in the preparation of the development application:-

- *Local Planning Policy 2 – Advertising Signage; and*
- *Local Planning Policy 25 – Interim Development Contribution Arrangements.*

With respect to *Local Planning Policy 16 – Design Review Panels*, it was advised at the meeting held Thursday 22nd May, the proposal would be referred to the Panel chair for review.

PROPOSAL

Land Use

The land use proposed is warehouse/storage (self-storage units) under the National Storage brand.

The development of National Storage facilities is based on the demand for the service (being self-storage units).

Demand comes from the community, both residential and business. Where demand is increasing, the basis for this involves several factors including changing lifestyles and business practices:-

- Smaller dwelling typologies providing for down-sizing and a shift towards 'urban living' give rise to an increase in demand for 'off-site' personal storage;
- Local businesses with space limitations take up storage space, a more viable and appealing alternative to shifting premises; and
- On-line shopping (e-commerce), which has led to an increase in longer-term storage and warehousing needs by business, particularly small business.

In addition to the above, COVID19 resulted in increased demand for storage space:-

- The pandemic resulted in the decluttering of households, with more people working from home needing extra space; with

- Supply chain issues resulting in demand for more storage for longer periods.

With respect to the above points, the demand generated by such remains based on the experiences of the last 3-4 years (and the take-up of units in the type of facility proposed).

National Storage

As stated on it's website ...

National Storage is Australasia's largest self-storage provider, tailoring self-storage solutions to residential and commercial customers at over 230 storage centres across Australia and New Zealand.

In relation to it's services ...

Each National Storage centre is committed to offering our customers high-quality, convenient solutions paired with outstanding service. At National Storage, you can expect secure, clean and modern premises and a wide range of packaging materials on offer, together with a team of professionals trained in the exacting task of efficient and cost-effective storage.

National Storage's offerings include (as stated on it's website):-

- Self-storage units;
- Business and commercial storage;
- Climate controlled units for wine storage;
- Storage space/s for cars, motorbikes and other vehicles;
- Trailer and truck hire;
- Packaging supplies and boxes; and
- Storage insurance.

Across Perth, National Storage has over 30 establishments, many in similar locations to that proposed.

Development

It is proposed to develop the following on the subject land:-

- Self-storage units in two (2) two (2) storey buildings comprising 7,634m² of storage space; and

- An office serving the facility, at the front of the premises adjacent to Coldwell Road.

Parking in association with the development will total 32 bays (consisting of 4 external and at the front of the premises, and 28 internal).

Access and egress to the facility will take place via one (1) crossover on Coldwell Road.

Materials, colours and finishes will present as a complementary mix, these aligned with the National Storage brand. Similarly, signage applied to the facades of the building will be uniform (as depicted), minimal and consistent with the National Storage brand.

Landscaping is also proposed, the accompanying landscape plan prepared by landscape architect Fran Thevessen of Naturesque. The landscaping proposed will ensure the development sits appropriately in the location.

To ensure the facility is secure (given the nature of the use), fencing proposed at the front of the development and on boundaries will consist of black powder-coated palisade style fencing 2.1m in height.

In addition to the office and consistent with other National Storage projects, internal waste and bike storage areas are proposed (near the office) along with end of trip facilities in one of the toilets.

As an ASX listed company and nationally recognised brand, the use and development will be managed to the high standard associated with all National Storage facilities. Access hours to the proposed facility will be: Monday to Friday: 5am - 9pm; Saturday 5am - 9pm and Sunday 5am - 9pm.

PLANNING SUPPORT

Land Use

City of Kalamunda Local Planning Scheme No.3

Under the Light Industry zoning applicable to the land, warehouse/storage is classified as a 'P' use meaning, *the use is permitted by the Scheme providing the use complies with the relevant development standards and requirements of the Scheme.*

Where the Scheme objectives for the Light Industry zone are concerned, the use aligns.

Local Planning Policy 19 – MKSEA Design Guidelines

The proposed use also aligns with:-

- The PRECINCT VISION for the location which states ... *The precinct will be developed in a manner which creates an attractive, functional and sustainable industrial area which attracts a range of businesses eager to locate within the area, offering ease of access to both customers and suppliers;*
 - Most notably, the location of the proposed warehouse/storage facility will offer ease of access to customers; and
- The intentions for the Light Industrial Precinct, which read ... *This precinct will provide an immediate transition between the established suburban area of Wattle Grove and the tree lined Welshpool Road East with the more traditional industrial activities to the south-west, and is anticipated to accommodate smaller industrial and commercial activities including warehousing, transport and logistics operations and service commercial uses; noting*
 - The subject land is positioned in the intermediary zone between the residential area on the north side of Welshpool Road East and the general industrial precinct south of Courtney Place, with warehousing in the form of storage proposed.

Development

Local Planning Policy 19 – MKSEA Design Guidelines

As stated at the commencement of Section 2.1 in the Design Guidelines, they ... *are intended to control all subdivision and development applications within the precinct.*

The table on the following pages provides an account of the proposal viz a viz the **Built Form** 'Development Controls' contained in the Design Guidelines.

Development Controls	Compliant	Comment
<p>Building Design and Quality</p> <p>Portions of a building which are visible from the primary or secondary streets are to incorporate:</p> <ul style="list-style-type: none"> • Horizontal and vertical articulation to assist in breaking up the building mass through the use of recesses, columns, blades and other architectural features; • Variation in colours and materials with a minimum of two different colours and two different materials to be used; • Glazing to the street frontage, where practical, to promote surveillance of the street and/or open space; 	<p>✓</p> <p>✓</p> <p>✓</p>	<p>Elevations visible to both Welshpool Road East and Coldwell Road to appear ...</p> <p>Suitably articulated via horizontal layering (different finishes ground v first floors in key locations), with vertical blades breaking the extent of the (overall) rectilinear form;</p> <p>With a mix of materials and colours proposed, including masonry and clad walls (Lysaght Trimdek), and five (5) complementary colours (as depicted);</p> <p>With glazing (encased windows) providing for activation at street level on Coldwell Road (office), and at the first floor on Coldwell Road, corner truncation and Welshpool Road East.</p>  <p>NATIONAL STORAGE SOUTH FREMANTLE – ENCASED WINDOWS AT GROUND AND FIRST FLOOR LEVELS, PROVIDING FOR ACTIVATION</p> <p>It is noted accessible storage units at the ground floor adjacent to Coldwell Road and Welshpool Road East will contribute further to activation (and surveillance of the street/public realm).</p>

<ul style="list-style-type: none"> • Areas of prefabricated concrete panels for external wall systems, i.e. 'tilt-up' visible from the primary street or secondary street frontage shall be detailed with expressed joints with a rendered and painted finish, or clad to the satisfaction of the City; and • Building form shall use architectural features to establish visually distinct pedestrian access points. This includes the provision of legible pedestrian access points from the rear car parking areas to the rear entrance points of the building and distinctive entry doors and canopies to the street elevations. • Plot Ratio is to be in accordance with the Local Planning Scheme No. 3. 	<p>✓</p> <p>✓</p>	<p>North-west facing wall suitably detailed with expressed feature/patterned cladding.</p> <p>The office and entrance to the self-storage facility will be clearly visible from Coldwell Road. Internally, storage units will be externally accessible at ground level, or via internal corridors. Entries to internal corridors will be clearly identifiable via canopies above (providing weather protection).</p> <p>Plot ratio was not an issue in the determination of the previous National Storage proposal (Courtney Place, west of the subject land).</p>
<p>Building Orientation</p> <ul style="list-style-type: none"> • The primary building entrance and façade shall orient to the primary street. • For lots with multiple street frontages, the building must address both adjoining streets through orientation, design detail, materials and major opening(s). • Where possible based on lot configuration and site design constraints, buildings shall be orientated and designed to be 	<p>✓</p> <p>✓</p> <p>✓</p>	<p>As mentioned, the primary (only) building entrance will be adjacent to the property entrance off Coldwell Road (the primary street).</p> <p>As mentioned, the proposed built form will address/orientate to both street frontages with accessible storage units at the ground floor and glazing at the first floor (active frontage/s).</p> <p>Additional height is also proposed at the buildings' corners, being above the office adjacent to Coldwell Road, the corner truncation, and the western end of the Welshpool Road East elevation.</p> <p>A National Storage facility represents an energy efficient use and development. Except for the office, National Storage facilities are non-habitable buildings, that is, they are not</p>

<p>energy efficient through passive solar design.</p>		<p>mechanically ventilated. Where glazing is proposed across the buildings' outward facing elevations, solar gain and natural light will take place/occur.</p>
<p>Building Setbacks</p> <p>Buildings shall have a minimum setback of 15m to the primary street and 3m to the secondary street in accordance with the Scheme. Variations to the setback may be acceptable to the City where:</p> <ul style="list-style-type: none"> • The variation is not considered to be detrimental to the broader streetscape; • The built form design for the portion of a building within the setback area is demonstrated to be of a high design quality; and • Additional landscaping is provided within the setback areas to mitigate the visual impact of the reduced building setback. <ul style="list-style-type: none"> • Additional building setback requirements for Welshpool Road East are addressed in Section 2.4. 	<p>✓x</p>	<p>The primary setback i.e. to Coldwell Road is 14.2m (+ awning).</p> <p>Whilst 15.0m is the prescribed distance, the reduced distance is presented as supportable based on the following:-</p> <ul style="list-style-type: none"> • The reduced setback to the office on the adjoining property, being 12 Coldwell Road (see aerial below); • The reduced setback is primarily to the office, to present with a high quality of design and engagement; and • With the required amount of landscaping across the Coldwell Street frontage.  <p>REDUCED OFFICE SETBACK, 12 COLDWELL ROAD</p> <p>See separate section below.</p>

<ul style="list-style-type: none"> • Front setback areas are to be used for the purpose of access, car parking and landscaping. Other uses including stormwater drainage and storage of refuse may be undertaken in the front setback area where they are demonstrated to not be detrimental to the streetscape. • Buildings shall have a minimum setback consistent with the Building Code of Australia for side and rear boundaries (except for buildings adjacent the Welshpool Road East boundary). 	<p>✓</p> <p>✓</p>	<p>As required (access, car parking, landscaping, stormwater drainage and on-site effluent disposal).</p> <p>As required.</p>
<p>End of Trip Facilities</p>	<p>N/A</p>	<p>Note: despite there being limited demand for such, these facilities are proposed, including a shower within the externally accessible toilet and space for the storage of bicycles. The approach is consistent with that at all National Storage facilities.</p>
<p>Parking and Access</p> <ul style="list-style-type: none"> • Vehicle access locations and circulation pattern shall minimize conflict with pedestrians and bicycles. • Car parking shall be provided generally in accordance with Table 1 of the City's Local Planning Scheme No. 3. • The car park area is to consist of a sealed finish such as asphalt, paving material or concrete. • All vehicular access ways, service areas and parking areas shall be designed to enable vehicles to enter and leave in forward gear. 	<p>✓</p> <p>✓*</p> <p>✓</p> <p>✓</p>	<p>To be read in conjunction with TIS</p> <p>Secured vehicular access proposed off Coldwell Road, north side of the office. Circulation and signage employed to inform safe driving behaviours.</p> <p>See separate section below re: parking (and accompanying TIS).</p> <p>Accessways and parking to be atop a sealed asphalt finish.</p> <p>As required. Access and circulation to take place in a clockwise direction, with all vehicles entering and leaving the property in a forward gear.</p>

<p>Loading Areas</p> <ul style="list-style-type: none"> • Loading areas shall be designed to accommodate vehicular manoeuvring on site, including allowances for reversing so that vehicles can leave in forward gear, and shall not prohibit on-site vehicular circulation. • Loading areas are to be screened from view of the primary and secondary streets. As an alternative the loading area should include design features to maintain a high quality presentation to the streetscape, including the use of colours and materials consistent with the broader building design to the satisfaction of the City. • Loading and storage areas are to be screened from Welshpool Road East in accordance with Part 2.4. 	<p>✓</p> <p>✓</p> <p>✓</p>	<p>Self-storage facilities are designed to achieve functional circulation and easy access to storage units. Suitable sized internal parking bays positioned around central building catering to legible and safe vehicular movement.</p> <p>Parking bays external to the circulation aisle between the buildings on-site will appear as parking established in street setbacks (provided for under <i>Building Setbacks</i>). These bays will be screened from public view by landscaping inside the boundary (and that external to the property boundary in the case of Welshpool Road East, photo below).</p>  <p>As described above.</p>
<p>Signage</p> <ul style="list-style-type: none"> • Signage shall be of a size and scale that reflects the surrounding environment and the need for exposure to passing trade based on the subject development. 	<p>✓</p>	<p>Signage proposed will be consistent with that exhibited on other projects by National Storage. It will be uniform to the brand and limited in its extent (depicted on Coldwell Road, corner truncation and Welshpool Road East).</p> <p>Signage positioning will:-</p>

<ul style="list-style-type: none"> • Signage may be internally or externally lit provided that this does not have a detrimental impact on abutting sites or on the safety of the abutting road network. 	<p style="text-align: center;">✓</p>	<ul style="list-style-type: none"> • Appear integrated into the design and built form in a manner that is complementary to the appearance of the development; and • Positioned to identify the use in the locality and activities taking place on-site. <p>It is noted some signage will be externally lit but will not have a detrimental impact on the locality, nor the safety of the abutting road network.</p> <p>Note: to assist customers, smaller instructional and 'way-finding' signage will be positioned at the entrance to the facility off Coldwell Road.</p> 
<p>External Lighting</p> <ul style="list-style-type: none"> • Beacons, search lights, blinking lights, flashing or changing intensity lights will not be permitted. • Lighting must be directed away from adjacent buildings and any public roads. • Security lighting must be confined to entrances and pedestrian areas and must not project onto any public road. • All car parking areas, pedestrian routes and entrances are to be well lit. Parking area lighting shall have a greater height than 	<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>	<p>Not proposed (N/A).</p> <p>Noted. External lighting to be 'down-lit' at night time (i.e. no light-spill to take place).</p> <p>As required.</p> <p>As required. Public access doors providing access to the self-storage buildings to be lit at night. Doors at ground level, internal to the proposed development (i.e. with lighting above</p>

<p>pedestrian area lighting, and be focussed downwards. Bollard lighting and pavement inset lighting is encouraged for pedestrian pathways.</p>		<p>access, parking, pedestrian areas and entry points).</p>  <p>ENTRIES AND PARKING DOWN-LIT</p>
<p>Crossovers</p> <p>Each site will be permitted to have a maximum of two (2) crossovers. Additional crossovers may also be permitted subject to City approval where the additional crossover:</p> <ul style="list-style-type: none"> • Is considered to facilitate the safe movement of vehicles to and from the public road; • Is accompanied by additional verge landscaping to mitigate the impact on the streetscape. <p>Crossovers are to be constructed of either concrete or block paving to the dimensions, line and level as outlined in City's specifications.</p> <p>Crossovers are to be constructed with the following dimensions:</p> <ul style="list-style-type: none"> • Minimum width at property line – 6.0 metres; • Maximum width at property line – 10.0 metres or as approved; and 	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<p>One (1) crossover proposed.</p> <p>N/A</p> <p>N/A</p> <p>As required (concrete).</p> <p>8.0m proposed.</p> <p>8.0m proposed.</p>

<ul style="list-style-type: none"> Wing dimension – To match 6.0m curve radius of crossover wing. 	✓	As required.
<p>Fencing</p> <ul style="list-style-type: none"> Fencing located along the front lot boundary is to be black powder coated Garrison or Palisade fencing to a maximum height of 1800mm. Fencing shall be visually permeable to ensure passive surveillance opportunities. <p>Fencing located behind the building line is to:</p> <ul style="list-style-type: none"> Be generally consistent with the front boundary fencing (black powder coated Garrison or Palisade fencing); or Be designed to a minimum standard of 1800mm rail-less chain link or steel mesh incorporating black coloured PVC coating with black gates, posts and fittings. Barbed wire is generally permissible but must not be installed along a street boundary. 	<p>✓*</p> <p>✓</p>	<p>Fencing to be black powder coated Garrison style fencing (as required). Height of fencing to be 2.1m. Height standard for the type of facility proposed i.e. for security and public safety reasons.</p> <p>Note: height previously approved by the City of Kalamunda i.e. for Courtney Place west of the subject land, 2.1m.</p> <p>Fencing to be visually permeable.</p> <p>Noted.</p> <p>N/A</p> <p>N/A</p>
<p>Stormwater Management</p> <ul style="list-style-type: none"> Design of stormwater management on site is to be in accordance with the approved Local Water Management Strategy (LWMS). 	✓	An indicative stormwater plan is presented with the application plans.

<ul style="list-style-type: none"> As per the LWMS, the lot detention areas will be required to detain flows up to the 100 year ARI event at a rate of 36 L/s/ha. A detention storage of 30m³ /ha is required within lots. Stormwater quality treatment for the first 15mm runoff needs to be addressed using WSUD treatment train approach providing bio-retention areas or suitable alternative retention measures as appropriate for the site geotechnical conditions and individual lot use. Onsite landscaping and potentially car park areas or other open spaces within lots can be used for the detention of stormwater with an average ponding depth of 50mm. 		<p>Noted.</p> <p>Noted.</p> <p>Noted.</p> <p>Noted.</p>
<p>Waste Management</p> <ul style="list-style-type: none"> Outdoor storage of goods is not permitted forward of the building line, and outdoor storage areas are to be delineated in accordance with the approval of the City and are to be screened from view of the primary or secondary street in the manner approved. Bin storage may be undertaken internal to a building where sufficient space is identified as a component of a development application. A bin wash down facility shall be provided in a suitable location on site. 	<p>✓</p> <p>✓</p>	<p>Outdoor storage will not be taking place.</p> <p>Internal bin storage proposed.</p> <p>Note: on-site rubbish (associated with the office only, no wash down required) will be stored in bins inside a dedicated bin store close to the office. Waste (rubbish) collection will take place via kerbside presentation and the City's waste service vehicles. Number of bins on-site to be two (2), general rubbish and recycling.</p>

<ul style="list-style-type: none"> Waste and recycling storage points are to be screened by solid fencing or landscaping to ensure they are not visible from public streets. External bin storage areas are to have a minimum site area of 10m² where located external to a building, and may be designed as a single enclosure or multiple smaller enclosures. Where visible from the primary or secondary street an external bin enclosure must include screening to a minimum 1.5m in height sufficient that the bins are not visible from the primary or secondary street. 	✓	<p>As above, internal to building, close to office.</p> <p>N/A</p> <p>N/A</p>
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Welshpool Road Interface (Local Planning Policy 16 – MKSEA Design Guidelines)

Development Controls	Proposed/Comment
<p>Development of land abutting Welshpool Road East is to include landscaping adjacent the lot boundary to Welshpool Road East to achieve an appropriate development interface with this road as outlined in Figure 7 and in accordance with the landscaping standards outlined in Section 2.5.</p>	<p>Landscaping proposed as required. Also proposed per the increased density recommendation (particularly along the western portion of the subject land to achieve an appropriate development interface to Welshpool Road East and reduced building setback/s).</p>
<p>Buildings are to be setback a minimum of 15m from the Welshpool Road East boundary. The setback requirement may be reduced to a minimum of 8m where:</p> <ul style="list-style-type: none"> The built form design for the portion of a building visible from Welshpool Road East is demonstrated to be of a high design quality; and The 8m setback area is fully landscaped in accordance with the requirements of Section 2.5. 	<p>As previously described under 'Building Design and Quality', the Welshpool Road East frontage of future built form will be suitably articulated (as required) and activated.</p> <p>Having regard for the landscaping proposed (increased density), primary building setback to Welshpool Road East proposed at 10m, being less than 15m but greater than 8m. Proposed based on the recommended approach to landscaping being implemented (described above).</p>
<p>Any proposed fencing or development to this road boundary shall not impact the existing tree line and vegetation located within the road reserve.</p>	<p>Fencing to be erected to ensure no impact on the existing tree line/vegetation.</p>

<p>Existing trees located in the Welshpool Road East verges are to be retained and protected during development of the adjacent property, except where specific authority has been achieved through the City for their removal or pruning.</p>	<p>Retention and protection of trees in Welshpool Road East noted. On-site landscaping i.e. inside the boundary line to be implemented as recommended, with increased density of landscaping across the western portion of Welshpool Road East.</p>
<p>Direct access to Welshpool Road East is not permissible unless otherwise approved by the City and Main Roads WA.</p>	<p>Not proposed.</p>
<p>The design of development must ensure that all service yards and storage areas are suitably screened from Welshpool Road East to ensure that a high level of visual amenity is maintained while travelling along this road. Screening measures shall include:</p> <ul style="list-style-type: none"> • Landscaping to a sufficient density that will screen the materials to be stored; or • Fencing shall be constructed of materials consistent with the adjacent approved building and in accordance with Part 2.3.10 (Fencing). 	<p>Not proposed.</p> <p>Landscaping density increased, fencing as proposed (covered above).</p>
<p>Portions of buildings facing Welshpool Road East must be designed in a manner which makes a positive contribution to the streetscape, and shall include variations in colour and materials, architectural features and cladding of prefabricated concrete panels (in accordance with Design Guideline Criteria 2.3.1).</p>	<p>As previously advised ... buildings to be ...</p> <ul style="list-style-type: none"> • Suitably articulated via horizontal layering (different finishes ground v first floors in key locations), with vertical blades breaking the extent of the (overall) rectilinear form. • With a mix of materials and colours proposed, including masonry and clad walls (Lysaght Trimdek), and five (5) complementary colours (as depicted). • With glazing (encased windows) providing for activation at street level on Coldwell Road (office), and at the first floor on Coldwell Road, corner truncation and Welshpool Road East. <p>Additionally ...</p> <ul style="list-style-type: none"> • It is noted accessible storage units at the ground floor adjacent to Coldwell Road and Welshpool Road East will contribute further to activation (and surveillance of the street/public realm).

Landscaping

Development Controls	Proposed/Comment
A minimum of 5% of the total lot area is to be allocated for landscaping purposes, which includes the minimum landscaping strip provided along all street frontages outlined in Figure 7.	9% (800m ²) proposed and compliant.
The landscaping strip abutting street frontages is to be planted with large trees that have a minimum bag size of 100L at a spacing of 1 tree for every 10m of frontage, in addition to a variety of shrubs, as outlined in Figure 18.	90L trees proposed (x20).
Trees are to be planted within uncovered car parking areas at the rate of 1 per 4 car parking spaces, as outlined in Figure 18.	Given the nature of the use and the need for on-site parking that is not obstructed, trees amongst parking bays is not proposed. Rather, 31 trees are proposed around the property, these including 20 new trees, along with 11 existing trees inside and/or on the property boundary i.e. along the Coldwell Road and Welshpool Road East frontages.
There are no more than 6 adjoining car bays without the area being punctuated by a tree.	See above.

Local Planning Policy 2 – Advertising Signage

As mentioned above ... Signage proposed will be consistent with that exhibited on other projects by National Storage. It will be uniform to the brand and limited in its extent (depicted on Coldwell Road, corner truncation and Welshpool Road East).

The approach to signage is consistent with the 'Purpose' of the Policy which states ...

The purposed (sic) of this Policy is to ensure that the display of advertisements on private property within the City of Kalamunda does not adversely impact on the amenity of surrounding land while providing appropriate exposure for businesses, actives or services.

The approach to signage is also consistent with the signage approved as part of the Courtney Place National Storage proposal (west of the subject land).



SIGNAGE, PREVIOUS NATIONAL STORAGE APPROVAL, COURTNEY PLACE (WEST OF SUBJECT LAND)

Local Planning Policy 16 - Design Review Panels

At the pre-lodgement meeting held with the City 22nd May 2025 it was advised the application would be reviewed by the Design Review Panel chair given the nature of the use and associated development typology (with this approach recently confirmed).

Local Planning Policy 25 – Interim Development Contribution Arrangements

Imposing conditions in accordance with this Policy is noted in relation to several approvals in the Courtney Place/Coldwell Road locality.

The conditions refer to Amendment No.101 to the City of Kalamunda's *Local Planning Scheme No.3* (when gazetted).

In a letter received from the City dated 24 January 2025, it was advised ...

The developer contribution for the subject site is not currently known.

Further ...

At the time of this correspondence, the Development Contribution Plan (DCP) is in draft format and is not sufficiently advanced. Should the DCP proceed, the contribution rate would be determined based off the net contribution area. This means that any area not compatible for development (i.e. the road reservation) would not be included in the rate.

Subsequent to January 2025, the Council at its 27 May 2025 meeting noted the quarterly report for the *Kalamunda Achieving: Corporate Business Plan 2023-2027*, within which the following was stated ...

Maddington, Kenwick Strategic Employment Area (MKSEA) - Scheme Amendment No. 101 is on hold until appropriate administrative arrangements are agreed to either progress or cease the Development Contribution Plan.

With respect to contributions and the intersection of Welshpool Road East and Coldwell Road i.e. as covered in *Local Planning Policy 16 – MKSEA Design Guidelines*, the City has previously referred to ...

Figure 4, Figure 7, Figure 8, and 'Development Guidance dot point three' which states "Coldwell Road intersection with Welshpool Road East, which requires realignment of Coldwell Road and upgrade of the intersection in accordance with a future Development Contributions Plan".

In the draft Development Contribution Plan Report (DCP Report) considered by the Council at its 18 December 2018 meeting, the subject land is identified to fall within Development Contribution Area 2 (DCA2) i.e. within the Kalamunda Wedge in the City of Kalamunda and the MKSEA.

Within DCA2, the subject land is identified within Precinct H.

Point 19 in the Council report on Amendment 101 says ... *The DCP Report details the infrastructure and other items that make up the contribution rate. In summary the below listed items should be noted.*

Land within the DCA that is proposed to be excluded from the NCA includes areas of wetland, the Yule Brook floodplain, existing and proposed road reserves, drainage basins and land that is otherwise constrained due to its shape, size or access limitation. (Point 20)

The NCA is expected to provide the contributions necessary to account for all CIWs noted in the DCP Report. (Point 21)

Common Infrastructure Works

The DCP administers six CIWs within the DCA. (Point 23)

The following infrastructure and administration items are proposed to be funded by the DCP:

c) Upgrade the intersection of Coldwell Road and Welshpool Road East; (Point 24)

With respect to the extent of land required to facilitate the upgrade of the intersection, the site plan presented with the development application is based on that prepared by McGregor Surveyors, appointed by the City of Kalamunda.

Where deductions from the Net Contribution Area in the DCP Report initially amounted to just under 2,500m² for the intersection upgrade, the McGregor Surveys plan prepared for the City required an area amounting to approximately 1,200m².

Where Main Roads WA (MRWA) is a key stakeholder in the upgrade of the intersection, the owner of the land was informed by MRWA in November 2024 ... *there is likely to be an upgrade to the intersection ...* . At the same time, however, MRWA provided the following advice ...

The project for the upgrade of the subject intersection is not in Main Roads 4 year forward estimated construction program and all projects not listed are considered long term.

Bushfire Planning

Bushfire Prone Planning have completed a BAL assessment and prepared a planning report in support of the proposed development. As stated ...

The Bushfire Attack Level (BAL) Contour Map is a scaled map of the Proposed National Storage Facility located at 581 Welshpool Road East, Wattle Grove, in the City of Kalamunda. It uses the principles of AS 3959 to illustrate the potential radiant heat impacts and associated indicative BAL ratings in reference to any classified vegetation remaining within 150m metres of the subject site.

The indicative BAL's for the development based on the completed assessment are 12.5 (with no requirement for a Bushfire Management Plan).

SUMMARY

National Storage Wattle Grove will expand the availability of self-storage units, a service in demand, to the City of Kalamunda's residents and business communities. The use represents a 'good-fit' on the land and in the location.

Where development is concerned, the design of the built form proposed has been informed by the corner location, and the need to be responsive to the land's respective street frontages.

Importantly, and with the emphasis placed on such pre-lodgement, the project will be suitably landscaped, with the consolidation of such along Welshpool Road East (ensuring the project sits appropriately in the locality).

Further to the above, the use and development will be executed to a high standard, this representative of National Storage's prominence and reputation as a provider of self-storage.

To conclude, therefore, and regarding the application before it:-

- The City of Kalamunda's support is sought, including the exercise of discretion and support for the small number of variations proposed; with
- The City respectfully asked to assess and recommend via an RAR the application be approved by the Metro Outer DAP.

In the event you wish to discuss the proposal or require further information, please contact the undersigned on 0400382445. Alternatively, contact can be made via the following email address tonyw@mwurban.com.au

Yours sincerely

MW URBAN



Tony Watson



mainroads
WESTERN AUSTRALIA

Enquiries: Daniel Tuchyna on (08) 9323 4822
Our Ref: 18/368 (D25#1444184)
Your Ref: DA25/0453
DAP Ref: DAP/25/03012

19 December 2025

Chief Executive Officer
City of Kalamunda
PO Box 42
KALAMUNDA WA 6926

Email: enquiries@kalamunda.wa.gov.au (via email)

Dear Sir/Madam,

INFORMATION REQUEST – PROPOSED STORAGE / WAREHOUSE FACILITY – LOT 17 (NO. 581) WELSHPOOL ROAD EAST, WATTLE GROVE – REF DA25/0453 AND DAP/25/03012

In response to correspondence received on 26 November 2025 Main Roads has reviewed the application and is unable to provide comments and recommendations until the following further information has been provided:

1. Transport Impact Statement

The Transport Impact Statement (TIS) prepared by MW Urban and dated September 2025 as presented is unable to be supported at this point in time as the impact of the development upon the road network is uncertain. An updated TIS is to be submitted to Main Roads addressing the following, but not limited to:

- a) The upgrading of Welshpool Road East / Coldwell Road intersection is expected to be signalised in the future. Applicant is to confirm the proposed southern crossover onto Coldwell Road is located outside the functional area of the upgraded intersection and does not conflict with the current design for the intersection upgrades progressed by the City of Kalamunda. Provide an overlay of the Site Plan and current design of the intersection upgrades to confirm whether relocation of the proposed crossover approximately 8m south is required.

Relocation of the proposed crossover ensures it is located as far as possible from the intersection to minimise points of conflict and confusion in accordance with Section 2.4.4 of Main Roads *Driveways Policy*. Crossover relocation will still maintain clear separation with the adjoining southern property crossover and avoids the drainage pit.

- b) 'Section 13 Safety Issues' identifies *"the use and development proposed on the subject land do not present any safety issues"*. Provide justification to support the above statement. Furthermore, undertake a crash analysis at Welshpool Road East / Coldwell Road intersection to address any potential safety concerns within proximity of the site and recommend any mitigation measures if required.



Please provide the above information at your earliest convenience, noting that Main Roads will require 30 days to review this information once received.

As stated above, Main Roads is unable to provide comments and recommendations on the development application until the above information has been received and assessed

Please forward all emails, including the requested information relating to the proposal to planninginfo@mainroads.wa.gov.au. If you have any further queries, please do not hesitate to contact Daniel Tuchyna on (08) 9323 4822.

Yours sincerely

A handwritten signature in black ink, appearing to read "Isabel Huston".

Isabel Huston
A/Planning Assessment Coordinator



mainroads
WESTERN AUSTRALIA

Enquiries: Daniel Tuchyna on (08) 9323 4822
Our Ref: 13/368 (D26#168904)
Your Ref: DA25/0453
DAP Ref: DAP/25/03012

13 February 2026
Chief Executive Officer
City of Kalamunda
PO Box 42
KALAMUNDA WA 6926

Email: enquiries@kalamunda.wa.gov.au (via email)

Dear Sir/Madam,

DEVELOPMENT ASSESSMENT PANEL – PROPOSED STORAGE / WAREHOUSE FACILITY – LOT 17 (NO.581) WELSHPOOL ROAD EAST, WATTLE GROVE – DA25/0453 & DAP/25/03012

In response to correspondence received on 20 January 2026, please be advised Main Roads supports the development proposal and recommends that if development approval is granted, the following conditions are imposed:

Conditions

1. No development other than landscaping is to be located within the land requirement for the future upgrade of Welshpool Road East / Coldwell Road intersection as shown on the Site Plan prepared by Parsons Group, Dwg No.A100 (Rev B) dated 19 January 2026.

Justification for Condition

To prevent development which may prejudice future road upgrades.

2. Any proposed illumination of the sign must not exceed 300 cd/m² (candela per square metre) during the daytime, and 150 cd/m² during the night-time.
3. The signs must not contain fluorescent, reflective or retro-reflective colours or materials.
4. Vegetation within the Welshpool Road East Road Reserve shall not be removed or trimmed to improve the visibility of the proposed advertising signs.
5. No earthworks are to encroach onto the Welshpool Road East Road Reserve.
6. Stormwater discharge shall not exceed pre-development discharge to Welshpool Road East Road Reserve.

Justification for Condition

To ensure there is sufficient capacity in the Welshpool Road East stormwater network to accommodate its requirements. This is a standard requirement for development adjacent to a State Road.



7. Prior to the issue of a building permit, the redundant vehicle crossover onto Coldwell Road is to be removed and kerbing, verge, and footpath (where relevant) reinstated with grass or landscaping to the satisfaction of the City of Kalamunda and to the specifications of the local government.

Justification for Condition

Public safety and protection of the road network.

Advice

- a) The upgrading/widening of Welshpool Road East is not in Main Roads current 4-year forward estimated construction program and all projects not listed are subject to change without notice, and Main Roads assumes no liability for the information provided.
- b) In regard to Condition 1, land is required for the future upgrade to Welshpool Road East / Coldwell Road intersection, as identified in the City of Kalamunda's Local Planning Policy 19 – MKSEA Design Guidelines, Section 2.2.
- c) Prior to undertaking works within the Welshpool Road East Road Reserve, a Working on Roads Permit must be obtained from Main Roads.
- d) The applicant is required to submit an application form to undertake works within the road reserve prior to undertaking any works within the road reserve. Application forms and supporting information about the procedure can be found on the Main Roads website > Technical & Commercial > Working on Roads.

Main Roads encourages local government in liaising with applicants to promote and capitalise on our pre-lodgement consultation service, prior to lodgement of planning proposals, especially where development plans involve land adjacent to or have the potential to impact on the state road network.

Further information on the pre-lodgement consultation process can be found on Main Roads website at mainroads.wa.gov.au > Technical & Commercial > Planning & Development

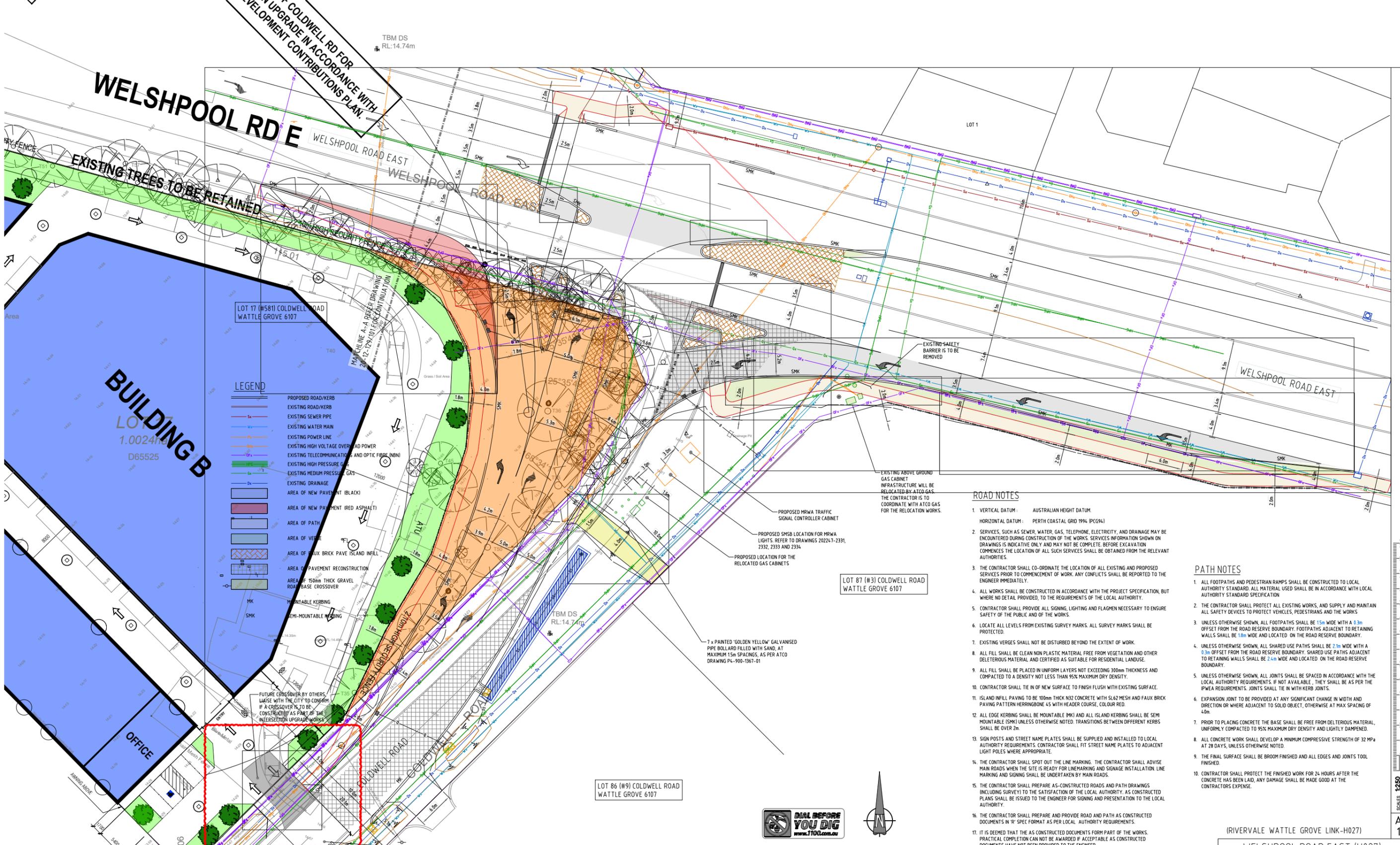
Should the City disagree with the above conditions or require further information please do not hesitate to contact Isabel Huston (08) 9323 6232 prior to the submission of the City's Responsible Authority Report.

Please ensure a copy of the JDAP's final determination is sent to planninginfo@mainroads.wa.gov.au.

Yours sincerely

CFudge

Chris Fudge
A/Road Access and Planning Manager



LEGEND

[Symbol]	PROPOSED ROAD/KERB
[Symbol]	EXISTING ROAD/KERB
[Symbol]	EXISTING SEWER PIPE
[Symbol]	EXISTING WATER MAIN
[Symbol]	EXISTING POWER LINE
[Symbol]	EXISTING HIGH VOLTAGE OVERHEAD POWER
[Symbol]	EXISTING TELECOMMUNICATIONS AND OPTIC FIBRE (NBN)
[Symbol]	EXISTING HIGH PRESSURE GAS
[Symbol]	EXISTING MEDIUM PRESSURE GAS
[Symbol]	EXISTING DRAINAGE
[Symbol]	AREA OF NEW PAVEMENT (BLACK)
[Symbol]	AREA OF NEW PAVEMENT (RED ASPHALT)
[Symbol]	AREA OF PATH
[Symbol]	AREA OF VERGE
[Symbol]	AREA OF BRICK PAVE INFILL
[Symbol]	AREA OF PAVEMENT RECONSTRUCTION
[Symbol]	AREA OF 150mm THICK GRAVEL ROAD BASE CROSSOVER
[Symbol]	MOUNTABLE KERBING
[Symbol]	SEMI-MOUNTABLE KERBING

ROAD NOTES

- VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: PERTH COASTAL GRID 1994 (PCG94)
- SERVICES, SUCH AS SEWER, WATER, GAS, TELEPHONE, ELECTRICITY, AND DRAINAGE MAY BE ENCOUNTERED DURING CONSTRUCTION OF THE WORKS. SERVICES INFORMATION SHOWN ON DRAWINGS IS INDICATIVE ONLY AND MAY NOT BE COMPLETE. BEFORE EXCAVATION COMMENCES THE LOCATION OF ALL SUCH SERVICES SHALL BE OBTAINED FROM THE RELEVANT AUTHORITIES.
- THE CONTRACTOR SHALL CO-ORDINATE THE LOCATION OF ALL EXISTING AND PROPOSED SERVICES PRIOR TO COMMENCEMENT OF WORK. ANY CONFLICTS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATION, BUT WHERE NO DETAIL PROVIDED, TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
- CONTRACTOR SHALL PROVIDE ALL SIGNING, LIGHTING AND FLAGMEN NECESSARY TO ENSURE SAFETY OF THE PUBLIC AND OF THE WORKS.
- LOCATE ALL LEVELS FROM EXISTING SURVEY MARKS. ALL SURVEY MARKS SHALL BE PROTECTED.
- EXISTING VERGES SHALL NOT BE DISTURBED BEYOND THE EXTENT OF WORK.
- ALL FILL SHALL BE CLEAN NON-PLASTIC MATERIAL FREE FROM VEGETATION AND OTHER DELETERIOUS MATERIAL AND CERTIFIED AS SUITABLE FOR RESIDENTIAL LANDUSE.
- ALL FILL SHALL BE PLACED IN UNIFORM LAYERS NOT EXCEEDING 300mm THICKNESS AND COMPACTED TO A DENSITY NOT LESS THAN 95% MAXIMUM DRY DENSITY.
- CONTRACTOR SHALL TIE IN OF NEW SURFACE TO FINISH FLUSH WITH EXISTING SURFACE.
- ISLAND INFILL PAVING TO BE 100mm THICK N32 CONCRETE WITH S62 MESH AND FAUX BRICK PAVING PATTERN HERRINGBONE 45 WITH HEADER COURSE, COLOUR RED.
- ALL EDGE KERBING SHALL BE MOUNTABLE (MK) AND ALL ISLAND KERBING SHALL BE SEMI-MOUNTABLE (SMK) UNLESS OTHERWISE NOTED. TRANSITIONS BETWEEN DIFFERENT KERBS SHALL BE OVER 2m.
- SIGN POSTS AND STREET NAME PLATES SHALL BE SUPPLIED AND INSTALLED TO LOCAL AUTHORITY REQUIREMENTS. CONTRACTOR SHALL FIT STREET NAME PLATES TO ADJACENT LIGHT POLES WHERE APPROPRIATE.
- THE CONTRACTOR SHALL SPOT OUT THE LINE MARKING. THE CONTRACTOR SHALL ADVISE MAIN ROADS WHEN THE SITE IS READY FOR LINE MARKING AND SIGNAGE INSTALLATION. LINE MARKING AND SIGNING SHALL BE UNDERTAKEN BY MAIN ROADS.
- THE CONTRACTOR SHALL PREPARE AS-CONSTRUCTED ROADS AND PATH DRAWINGS (INCLUDING SURVEY) TO THE SATISFACTION OF THE LOCAL AUTHORITY. AS CONSTRUCTED PLANS SHALL BE ISSUED TO THE ENGINEER FOR SIGNING AND PRESENTATION TO THE LOCAL AUTHORITY.
- THE CONTRACTOR SHALL PREPARE AND PROVIDE ROAD AND PATH AS CONSTRUCTED DOCUMENTS IN 'R' SPEC FORMAT AS PER LOCAL AUTHORITY REQUIREMENTS.
- IT IS DEEMED THAT THE AS CONSTRUCTED DOCUMENTS FORM PART OF THE WORKS. PRACTICAL COMPLETION CAN NOT BE AWARDED IF ACCEPTABLE AS CONSTRUCTED DOCUMENTS HAVE NOT BEEN PROVIDED TO THE ENGINEER.

PATH NOTES

- ALL FOOTPATHS AND PEDESTRIAN RAMPS SHALL BE CONSTRUCTED TO LOCAL AUTHORITY STANDARD. ALL MATERIAL USED SHALL BE IN ACCORDANCE WITH LOCAL AUTHORITY STANDARD SPECIFICATION.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING WORKS, AND SUPPLY AND MAINTAIN ALL SAFETY DEVICES TO PROTECT VEHICLES, PEDESTRIANS AND THE WORKS.
- UNLESS OTHERWISE SHOWN, ALL FOOTPATHS SHALL BE 1.5m WIDE WITH A 0.3m OFFSET FROM THE ROAD RESERVE BOUNDARY. FOOTPATHS ADJACENT TO RETAINING WALLS SHALL BE 1.8m WIDE AND LOCATED ON THE ROAD RESERVE BOUNDARY.
- UNLESS OTHERWISE SHOWN, ALL SHARED USE PATHS SHALL BE 2.1m WIDE WITH A 0.3m OFFSET FROM THE ROAD RESERVE BOUNDARY. SHARED USE PATHS ADJACENT TO RETAINING WALLS SHALL BE 2.4m WIDE AND LOCATED ON THE ROAD RESERVE BOUNDARY.
- UNLESS OTHERWISE SHOWN, ALL JOINTS SHALL BE SPACED IN ACCORDANCE WITH THE LOCAL AUTHORITY REQUIREMENTS. IF NOT AVAILABLE, THEY SHALL BE AS PER THE IPWEA REQUIREMENTS. JOINTS SHALL TIE IN WITH KERB JOINTS.
- EXPANSION JOINT TO BE PROVIDED AT ANY SIGNIFICANT CHANGE IN WIDTH AND DIRECTION OR WHERE ADJACENT TO SOLID OBJECT, OTHERWISE AT MAX SPACING OF 40m.
- PRIOR TO PLACING CONCRETE THE BASE SHALL BE FREE FROM DELETERIOUS MATERIAL, UNIFORMLY COMPACTED TO 95% MAXIMUM DRY DENSITY AND LIGHTLY DAMPENED.
- ALL CONCRETE WORK SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 32 MPa AT 28 DAYS, UNLESS OTHERWISE NOTED.
- THE FINAL SURFACE SHALL BE BROOM FINISHED AND ALL EDGES AND JOINTS TOOL FINISHED.
- CONTRACTOR SHALL PROTECT THE FINISHED WORK FOR 24 HOURS AFTER THE CONCRETE HAS BEEN LAID. ANY DAMAGE SHALL BE MADE GOOD AT THE CONTRACTORS EXPENSE.

METADATA

GROUND SURVEY STANDARD:	67-08-43
DATE OF CAPTURE:	5-2-2021
MAPPING SURVEY STANDARD:	67-08-43
DATE OF CAPTURE:	5-2-2021
MAIN ROADS PROJECT ZONE:	67-08-43
HEIGHT DATUM:	AHD

Porter Consulting Engineers

Level 2 Kalamunda Court
58 Kalamunda Road
Kalamunda WA 6076
PO Box 1026
Canberra Bridge WA 6055
Tel: (08) 9353 4111
Fax: (08) 9323 4430
Email: info@portereng.com.au
www.portereng.com.au

PORTER CONSULTING PROJECT NUMBER: 20-02-16

DRAWN:	MJV
DESIGNED:	MC
VERIFIED:	
DIRECTOR:	

mainroads WESTERN AUSTRALIA

METROPOLITAN AND SOUTHERN REGIONS DIRECTORATE
METROPOLITAN REGION

Waterloo Crescent
Telephone: (08) 9323 4111

East Perth 6004
Fax: (08) 9323 4430

CLIENT FILE No.:	
RECOMMENDED:	
APPROVED:	

(RIVERVALE WATTLE GROVE LINK-H027)

WELSHPOOL ROAD EAST (H027)

COLDWELL ROAD (1020056)
SLK 9.15 TO 9.30, SLK 0.0 TO 0.14

ROAD LAYOUT PLAN SHEET 1

CH.0 TO 14.0 WELSHPOOL ROAD
LOCAL AUTHORITY: CITY OF KALAMUNDA (102)

MRWA DRAWING NUMBER
202248-2304-B

AMENDMENTS

No.	DESCRIPTION	APPROVED & DATE
1
2
3

REVISIONS

No.	DATE	DESCRIPTION
1
2

SCALE: 1:250
A 1

Our Ref: PMG-78(4)

20 January 2026

Main Roads Western Australia
Don Aitken Centre, Waterloo Crescent
EAST PERTH WA 6892

Attention: Daneil Tuchyna & Isabel Huston

**RESPONSE TO INFORMATION REQUEST – LOT 17 (NO.581) WELSHPOOL ROAD EAST,
WATTLE GROVE – WAREHOUSE/STORAGE (SELF-STORAGE UNITS)**

This letter has been prepared in response to MRWA's letter dated 19 December 2025, and referred to/received by MW Urban i.e. from the City of Kalamunda 15 January 2026.

Point a) in MRWA's Letter

As follows:-

- Can confirm the crossover location will be outside the functional area of the intersection of Welshpool Road East and Coldwell Road when upgraded;
- With respect to the above point and as requested, an overlay has been prepared, with the crossover location aligning with that identified as FUTURE CROSSOVER BY OTHERS; and
- To ensure the crossover aligns, some minor modifications have been made to the development application Site Plan.

Attached to this letter is:-

- A copy of the overlay requested, with the crossover alignment inside the red clouded area; and
- The amended development application Site Plan.

The Traffic Impact Statement (TIS) has also been amended (page 6) to include the modified crossover location i.e. to match that depicted in the overlay.

Point b) in MRWA's Letter

The Safety Issues section in the TIS has been expanded (pages 15 and 16) to include the following ...

- The use and development proposed on the subject land do not present any safety issues. *In this regard, the following should be noted:-*
- *A warehouse/storage facility is a benign land use, this confirmed by the minimal daily and peak traffic volumes detailed in Section 7 above;*
- *Where traffic associated with a warehouse/storage facility is considered viz a viz that generated by other land uses permitted by the planning framework as it applies to the land and locality, a warehouse/storage facility is much more favourable; and*
- *With respect to the above point, the following alternate land uses are permissible where the development of the land is concerned, confirming the use proposed will not – by comparison - present with safety issues:-*
 - *Bulky Goods Showroom;*
 - *Club Premises;*
 - *Fuel Depot;*
 - *Motor Vehicle Repairs;*
 - *Motor Vehicle Wash;*
 - *Place of Worship;*
 - *Reception Centre;*
 - *Service Station; and*
 - *Transport Depot.*

In addition to the above, the following is noted:-

- A previous proposal being contemplated for the subject land included a service station, bulky goods showroom, medical centre and two (2) fast food outlets. Again, the warehouse/storage facility by comparison is considered much more favourable.

With respect to the requirement for a crash analysis, the following is noted:-

- The proposed use and development will generate far less traffic than alternate land uses and forms of development permissible on the land;
- The proposed access/crossover location will be 52.5m further away from the intersection of Welshpool Road East and Coldwell Road i.e. compared to the location of the existing crossover serving the subject land; with

- The above two (2) points and the proposed use and development amounting to a scenario that does not present with safety concerns.

If there is any further information required to assist Main Roads, or you would like to discuss the content of this letter and/or the attachments, please contact the undersigned on 0400382445. Alternatively, contact can be made via the following email address tonyw@mwurban.com.au

Yours sincerely

MW URBAN



Tony Watson

Ronan Marsh

From: Lina Restrepo <Lina.Restrepo@dplh.wa.gov.au>
Sent: Thursday, 5 March 2026 8:24 AM
To: Ronan Marsh
Subject: RE: External Referral - DAP Application - DAP/25/03012 - DA25/0453 - Lot 17 (No. 581) Welshpool Road East, Wattle Grove - Warehouse/Storage Facility

OFFICIAL

Hi Ronan,

At this point, the Road Planning Team from DPLH does not have any comments to provide on the abovementioned application, nor concerns regarding surrounding Other Regional Roads.

Regards,

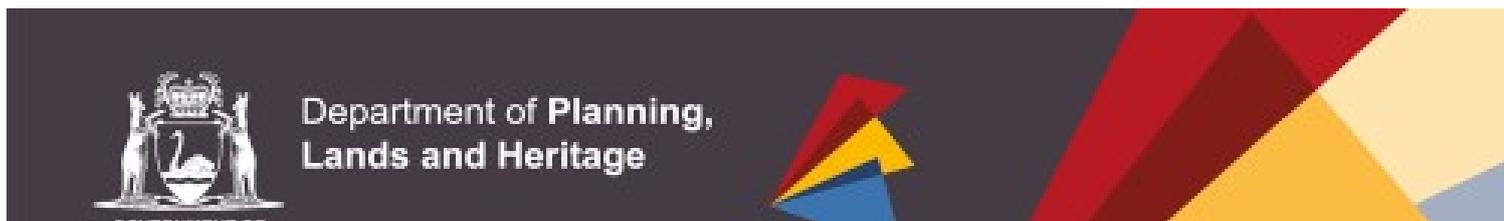
Lina Restrepo

Senior Planning and Engineering Officer | Strategy and Engagement

Department of Planning, Lands and Heritage

140 William Street, Perth WA 6000

W: dplh.wa.gov.au | P: 6551 8090



The Department of Planning, Lands and Heritage acknowledges Aboriginal people as the traditional custodians of Western Australia. We pay our respects to the Ancestors and Elders, both past and present, and the ongoing connection between people, land, water and community. We acknowledge those who continue to share knowledge, their traditions and culture to support our journey for reconciliation. In particular, we recognise land and cultural heritage as places that hold great significance for Aboriginal people. Learn more about our [Stretch Reconciliation Action Plan](#).

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From: Ronan Marsh <Ronan.Marsh@kalamunda.wa.gov.au>
Sent: Wednesday, 4 March 2026 3:23 PM
To: Lina Restrepo <Lina.Restrepo@dplh.wa.gov.au>
Subject: FW: External Referral - DAP Application - DAP/25/03012 - DA25/0453 - Lot 17 (No. 581) Welshpool Road East, Wattle Grove - Warehouse/Storage Facility

You don't often get email from ronan.marsh@kalamunda.wa.gov.au. [Learn why this is important](#)

Good afternoon Lina,

Please see an email below in response to an external referral sent by the City in relation to the abovementioned application.

Please note that the application was referred to DPLH despite the lot abutting a Primary Regional Road to confirm if there were any concerns regarding any surrounding Regional Roads.

Kind Regards,



Ronan Marsh Statutory Planner

City of Kalamunda | 2 Railway Road Kalamunda WA 6076 | PO Box 42 Kalamunda WA 6926

T 08 9257 9667 | kalamunda.wa.gov.au

We acknowledge the Whadjuk people of the Noongar nation, and pay our respects to leaders past, present and emerging.

Please consider the environment before you print this e-mail.

From: Road Planning <roadplanning@dplh.wa.gov.au>

Sent: Tuesday, 2 December 2025 1:50 PM

To: Ronan Marsh <Ronan.Marsh@kalamunda.wa.gov.au>

Subject: RE: External Referral - DAP Application - DAP/25/03012 - DA25/0453 - Lot 17 (No. 581) Welshpool Road East, Wattle Grove - Warehouse/Storage Facility

OFFICIAL

Dear Ronan,

The Road Planning Team has received the application DAP/25/03012 – DA25/0453 for the proposed warehouse/storage facility at Lot 17 (No. 581) Welshpool Road East, Wattle Grove.

The site abuts Welshpool Road East, which is classified as a Primary Regional Road (Red Road) in the subject location under the MRS. In accordance with Schedule 2 of the Planning and Development Act 2005, Main Roads WA is the appropriate authority to provide comments on this application.

Please let us know if there are any specific aspects you would like us to review or if you require any input from our team regarding this proposal.

Regards,

Lina Restrepo

Senior Planning and Engineering Officer | Strategy and Engagement

Department of Planning, Lands and Heritage

140 William Street, Perth WA 6000

W: dplh.wa.gov.au | P: 6551 8090



Department of Planning,
Lands and Heritage



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From: Ronan Marsh <Ronan.Marsh@kalamunda.wa.gov.au>
Sent: Thursday, 27 November 2025 8:17 AM
To: Road Planning <roadplanning@dplh.wa.gov.au>
Subject: External Referral - DAP Application - DAP/25/03012 - DA25/0453 - Lot 17 (No. 581) Welshpool Road East, Wattle Grove - Warehouse/Storage Facility

You don't often get email from ronan.marsh@kalamunda.wa.gov.au. [Learn why this is important](#)

Good afternoon,

The City of Kalamunda has received a Development Assessment Panel (DAP) Application for a proposed warehouse/storage facility at the abovementioned address and is referring it to your agency for comments.

All development plans and technical documents are available in the attached zip file.

Please provide comments by 42 days from the date of this email being 14 January 2026 in accordance with the *Planning and Development (Local Planning Schemes) Regulations 2015*.

If you have any trouble accessing the attachment please let me know as soon as possible.

Should you have any queries, please don't hesitate to contact me.

Kind Regards,

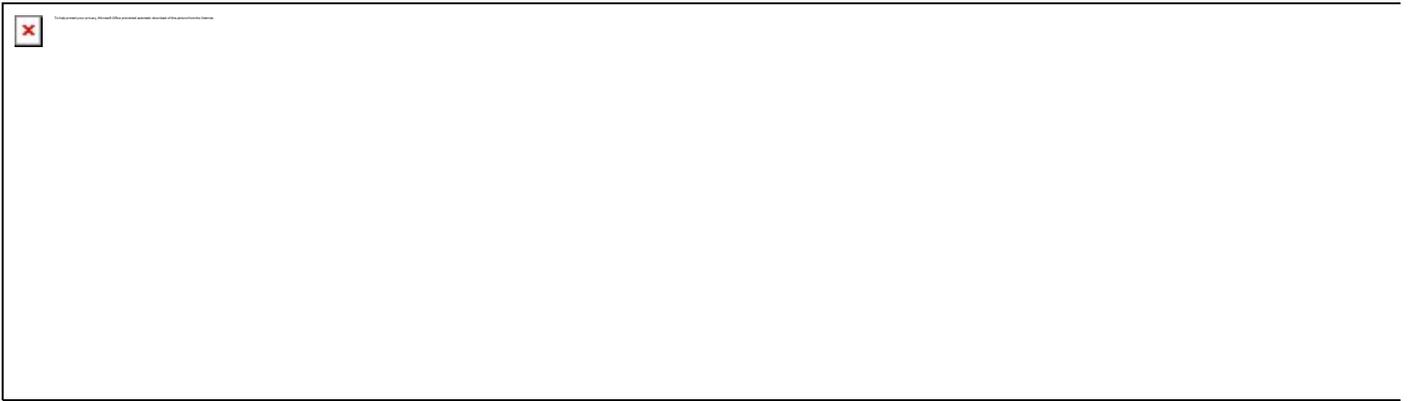


Ronan Marsh Statutory Planner

City of Kalamunda | 2 Railway Road Kalamunda WA 6076 | PO Box 42 Kalamunda WA 6926

T 08 9257 9667 | kalamunda.wa.gov.au

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2120 Albany Highway Gosnells WA 6110
Mail to: PO Box 662 Gosnells WA 6990

T 08 9397 3000
E info@gosnells.wa.gov.au
W www.gosnells.wa.gov.au
ABN 18 374 412 891

City of Kalamunda
PO Box 42
KALAMUNDA WA 6926

Our Reference:
Application No: DAP/25/03012
Enquiries: Development Services
9397 3000

Attention: Cody Gates

Dear Cody,

DAP Application DAP/25/03012 – Proposed Warehouse Storage Facility – Lot 17 (581) Welshpool Road, Wattle Grove

Further to your email of 9 February 2026, requesting the City of Gosnells support regarding the required road widening and upgrade requirements to facilitate the ongoing development of the Maddington Kenwick Strategic Employment Area (MKSEA) Precinct 3A area, the City provides the following advice.

To date the development of the MKSEA Precinct 3A area has substantially progressed with only a small number of lots remaining undeveloped. In this regard, Coldwell Road has been upgraded to an industrial standard with the last remaining portion of road requiring upgrading being located adjacent to Lot 17 (581) Welshpool Road (subject land). As such it is critical that the land required to be ceded for road widening and the required road upgrades are provided and undertaken as part of the proposed development of the subject land.

If the land required to be ceded for road widening and the road road upgrades are not undertaken as part of the development of the subject land, it is likely that the road network would not be of a sufficient design and capacity to facilitate the industrial development of the area. Therefore, jeopardising the continued industrial development of the remainder of the MKSEA Precinct 3A area.

I trust the above information provides the City of Gosnells position regarding the significance of the required road widening and upgrades within the MKSEA Precinct 3A area.

Yours faithfully

Andrew Lefort
Director Planning and Development