Regional Development Assessment Panel Agenda

Meeting Date and Time: Wednesday, 30 October 2024; 1:00pm
Meeting Number: RDAP/26
Meeting Venue: 140 William Street, Perth

A live stream will be available at the time of the meeting, via the following link:
RDAP/26 - 30 October 2024 - City of Albany

PART A – INTRODUCTION

1. Opening of Meeting, Welcome and Acknowledgement
2. Apologies
3. Members on Leave of Absence
4. Noting of Minutes

PART B – CITY OF ALBANY

1. Declarations of Due Consideration
2. Disclosure of Interests
3. Form 1 DAP Applications
   - 3.1 Lot 869, 177 Chester Pass Road, Milpara - Industry - Light (Expansion of Existing Warehouse) – DAP/24/02732
4. Form 2 DAP Applications
5. Section 31 SAT Reconsiderations

PART C – OTHER BUSINESS

1. State Administrative Tribunal Applications and Supreme Court Appeals
2. General Business
3. Meeting Closure

Please note, presentations for each item will be invited prior to the items noted on the agenda and the presentation details will be contained within the related information documentation

ATTENDANCE

DAP Members

Dale Page (Presiding Member)
Clayton Higham (Deputy Presiding Member)
Robert Karelse (Specialist Member)

Part B – City of Albany
Mayor Greg Stocks (Local Government DAP Member, City of Albany)
Deputy Mayor Paul Terry (Local Government DAP Member, City of Albany)

Minute Secretary

Kristen Parker (DAP Secretariat)

Officers in Attendance

Ashlee Kelly (DAP Secretariat)

PART A – INTRODUCTION

1. **Opening of Meeting, Welcome and Acknowledgement**
2. **Apologies**
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4. **Noting of Minutes**

PART B – CITY OF ALBANY

1. Declarations of Due Consideration

2. Disclosure of Interests

3. Form 1 DAP Applications

3.1 Lot 869, 177 Chester Pass Road, Milpara - Industry - Light (Expansion of Existing Warehouse) – DAP/24/02732

4. Form 2 DAP Applications

Nil.

5. Section 31 SAT Reconsiderations

Nil.

Item 3.1 - LOT 869, 177 CHESTER PASS ROAD, MILPARA - INDUSTRY - LIGHT (EXPANSION OF EXISTING WAREHOUSE ADDITIONS)

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Regional DAP
Local Government Area:	City of Albany
Applicant:	Urbis
Owner:	Osborne Metroof
Value of Development:	$2 million
Responsible Authority:	City of Albany
Authorising Officer:	Paul Camins, Executive Director Infrastructure, Development and Environment.
LG Reference:	P2240206
DAP File No:	DAP/24/02732
Application Received Date:	7 July 2024
Report Due Date:	28 November 2024
Application Statutory Process Timeframe:	90 Days
Attachment(s):	1. Location Map (Aerial) 2. Development Plans 3. Internal department conditions – City of Albany. 4. Traffic and Car Parking Assessment Report 5. Main Roads Response 6. Request for Information 7. BAL Report 8. Flora Assessment 9. Landscape Report

Responsible Authority Recommendation

That the Regional DAP resolves to:

1. **Accept** that the DAP Application reference DAP/24/02732 is appropriate for consideration as a "Industry - Light (Additions)" land use and compatible with the objectives of the zone in accordance with Part 3 Table 2 of the City of Albany Local Planning Scheme No.2.

2. **Approve** DAP Application reference DAP/23/02732 and accompanying plans dated 24 June 2024 being - Proposed Estate Plan, Proposed Site Plan and proposed Elevations and attached supporting documentation, in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the City of Albany Local Planning Scheme No.2, 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. All development shall occur in accordance with the stamped, approved plans, unless varied by a condition of approval or a minor amendment, to the satisfaction of the City of Albany.

Prior to commencement of development

3. A Construction Management Plan is to be prepared by the applicant and submitted to the City of Albany for approval at least 14 days prior to the commencement of works. Any changes proposed to the approved Construction Management Plan shall be submitted to the City for approval in writing, prior to implementation of any changes. Once approved, the development is to be constructed in accordance with the Construction Management Plan to the satisfaction of the City of Albany

4. Prior to commencement of development, a Stormwater Management Plan shall be submitted for approval to the City of Albany. Prior to occupation of development, the approved Stormwater Management Plan shall be implemented, completed and maintained thereafter to the satisfaction of the City of Albany.

5. Prior to commencement of development a fencing plan detailing the size, location, and materials of all fencing is to be submitted for approval to the satisfaction of the City of Albany.

6. Prior to the commencement of development, a Waste Management Plan shall be submitted for approval and implemented thereafter to the satisfaction of the City of Albany.

7. Prior to commencement of the development, a public art proposal to the value of 1% of the estimated cost of development (or payment of cash-in-lieu) in accordance with the City of Albany Public Art Policy, shall be submitted to the City of Albany for approval. Prior to occupancy of the development, the details approved for the public art proposal shall be implemented, completed and thereafter maintained, to the satisfaction of the City of Albany.

Prior to occupation

8. Prior to occupation, new crossover/s shall be constructed to the specifications, levels and satisfaction of the City of Albany.

9. Prior to occupation, car parking spaces and manoeuvring areas shall be designed, constructed and maintained in perpetuity in accordance with Australian Standard 2890, to the satisfaction of the City of Albany.

10. Prior to occupation, landscaping shall be provided in accordance with the approved Landscape DA Report dated June 2024 by Emerge Associates and maintained thereafter to the satisfaction of the City of Albany.

11. Prior to occupancy, the premises shall be connected to the Water Corporation sewerage system.

General conditions

12. No person shall install or cause or permit the installation of outdoor lighting otherwise than in accordance with the requirements of Australian Standard AS 4282 - 2019 Control of the Obtrusive Effects of Outdoor Lighting.

13. The development hereby approved shall not prejudicially affect the amenity of the neighbourhood by, but not limited to, the emission of noise, vibration, smell, smoke or dust.

14. The loading and unloading of goods shall occur entirely within the site and be undertaken in a manner so as to cause minimum interference with other vehicular traffic.

15. No goods or materials shall be stored, either temporarily or permanently, in the parking or landscape areas or in access driveways, unless otherwise agreed in writing by the City of Albany.

16. The existing access to Chester Pass Road shall remain as an Exit Only option for the current business operations at all times.

17. The premises shall be connected to a Water

Advice Notes

1. With respect to the construction Management Plan:
   The Construction Management Plan shall detail how the construction of development will be managed including the following:

   a. Public safety and site security.
   b. Hours of operation.
   c. Noise and vibration controls.
   d. Air and dust management.
   e. Stormwater, groundwater and sediment control; • Waste and material disposal.
   f. Traffic Management Plans prepared by accredited personnel for the various phases of the construction, including any proposed road closures.
   g. Parking Management Plan prepared by an accredited personnel.
   h. The parking arrangements for contractors and sub-contractors.
   i. On-site delivery times and access arrangements;
   j. The storage of materials and equipment on site (no storage of materials on the verge will be permitted);
   k. Manage potential impacts on the adjacent heritage buildings in the adjacent Stirling Terrace Precinct and
   l. Any other matters likely to impact upon the surrounding properties or road reserve.

2. With respect to the Stormwater Management Plan:

    a. The Stormwater Management Plan is to be designed in accordance with the 'City of Albany's Subdivision and Development Guidelines', with information provided as part of the Stormwater Management Plan to include relevant details and calculations.
    b. The stormwater management system is to be designed and certified by a practicing Civil Engineer to the satisfaction of the City of Albany.
    c. The Stormwater Management Plan is to include relevant details from the Vehicular Parking and Access Plan and the Landscape Plan approved for the development.
    d. No stormwater drainage is to be discharged onto the road reserve.

3. With respect to the Waste Management Plan:
   The Waste Mangement Plan shall include the following details:

    a. Separation of:
        i. Scrap steel for recycling
        ii. Comingled recyclables
        iii. Hazardous waste
    b. Clearly marked indoor and outdoor bins to encourage correct separation of waste types.
    c. Waste containment (e.g. covered bins) and litter management plan for the area.

4. With respect to the Percent for Art contribution:

    a. The commissioning and implementation of the public art proposal shall be undertaken in accordance with City of Albany Council Policy Art in the Public Domain and the City of Albany City Guideline – Art in the Public Domain.

5. With respect to the vehicle crossover:

    a. A 'Permit for Vehicle Crossover Construction' from the City of Albany is required prior to any work being carried out within the road reserve, which shall be in accordance with drawing nos. STD-05-01 – STD-05- 03 (refer to the City of Albany's Subdivision and Development Guidelines).

6. The City of Albany advises that the development the subject of this development approval must comply with the Environmental Protection Act 1986 and the Environmental Protection (Noise) Regulations 1997 in relation to noise emissions and the Environmental Protection (Unauthorised Discharge) Regulations 2004 in relation to discharges into the environment.

7. No earthworks are to encroach onto the road reserve.

8. The landowner shall make good any damage to the existing verge and vegetation within the road reserve.

9. It is recommended that the Department of Water and Environmental Regulation is contacted in relation to clearing permit requirements. Please contact the Department's Native Vegetation Regulation section by email (admin.nvp@dwer.wa.gov.au) or by telephone (6364 7098). (Department of Water and Environmental Regulation.

Details: outline of development application

Region Scheme	N/A
Region Scheme - Zone/Reserve	N/A
Local Planning Scheme	City of Albany Local Planning Scheme 2
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:	Industry – Light (Additions) P
Lot Size:	28,442m^2
Existing Land Use:	Light Industry
State Heritage Register	No
Local Heritage	☒ N/A ☐ Heritage List ☐ Heritage Area
Design Review	☒ N/A ☐ Local Design Review Panel ☐ State Design Review Panel ☐ Other
Bushfire Prone Area	Yes
Swan River Trust Area	No

Proposal:

Development approval is being sought for the extension of an existing warehouse as a part of an existing light industry use. The proposed development comprises of a 1,607m^2 addition to the existing warehouse, which is currently 4,014m^2. The proposal also includes a revised layout of the vehicle manoeuvring area and a relocated stormwater pond to accommodate the warehouse addition. All vehicle crossovers will remain unchanged as a part of this development.

The proposed extension is to accommodate the growth of the existing tenant and will result in two (2) extra staff on site with subsequent additional parking requirements for staff and visitors.

Proposed Land Use	Industry - Light
Proposed Net Lettable Area	5,621m^2
Proposed No. Storeys	1
Proposed No. Dwellings	N/A

A locational plan (aerial), and the proposed development plans are provided as attachments 1 and 2 respectively.

Background:

Lot 869 (#177) Chester Pass Road is 28,442m^2 and currently accommodates a single large warehouse with 4,014m^2 of NLA. Existing development is primarily located to the eastern end of the site fronting Chester Pass Road, with the primary access to the site coming from John Street. The remainder of the site is undeveloped with substantial vegetation across the western portion of the site that ranges in quality.

The development site is zoned Light industry and has several previous approvals for extensions to the existing light industry use. These started in 1993 with "Additional Industrial Workshop", then in 2003 with an extension to the existing use, retaining walls were proposed in 2004, further additions in 2007, and a Trade Display and Garage in 2008. The proposed development is a logical next step for the growth of the site and the associated businesses.

Legislation and Policy:

Legislation

- *Planning and Development Act 2005;*
- *Planning and Development Act (Development Assessment Panels) Regulations 2011;*
- *Planning and Development (Local Planning Schemes) Regulations 2015*
- *City of Albany Local Planning Scheme 2 (LPS2 or the Scheme).*

State Government Policies

- *State Planning Policy 3.7 – Planning in bushfire prone areas*

Other Policy

- *Local Planning Policy 1.10 – Percent for Art*

Consultation:

Public Consultation

Due to the size of the development site, and the current impact of existing business on the area, the proposed variation to the parking requirements of Local Planning Scheme 2 was not deemed necessary for public consultation. An assessment of the parking impacts has been included in the planning assessment below.

Referrals/consultation with Government/Service Agencies

The proposed development was referred Main Roads due to the existing crossover to Chester Pass Road. Main Roads have advised of the following.

There is no objection to the proposed development. The applicant is advised that:

i. The existing access to Chester Pass Rd may remain as an Exit Only option for the current business operations.
ii. The existing heavy vehicle access from John St is poorly located in relation to its proximity to the intersection of Chester Pass Rd and would benefit traffic operations if located further to the West.
iii. No earthworks are to encroach onto the road reserve.
iv. No stormwater drainage is to be discharged onto the road reserve; and
v. The landowner/applicant shall make good any damage to the existing verge and vegetation within the road reserve.

The comments provided by Main Roads do not alter the outcome of this application and the advice provided can be addressed through either appropriate conditions or advice notes on the final decision notice.

Planning Assessment:

The proposed development generally complies with the requirements of LPS2 except for the following areas that are discussed below:

Provision	Requirement	Proposal	Assessment
LPS2 - Table 15	1 bay per 50m^2 NLA (minimum 4 bays per tenancy) for Industry – Light 113 Bays required	25 bays	The proposed variation is considered to be acceptable and is justified below.
LPS 2 - Schedule 5 – Table 12	Setbacks 9m Primary Street Nil side and rear	Proposed addition does not address the primary street. Closest side setback proposed is 19m.	Complies
	10% Landscaping	Existing landscaped verge and unmanaged vegetation on western side of lot	Due to the large amount of the lot that has not been developed the proposal comfortably meets the minimum requirement of 10%
	Buffer areas in accordance with the EPA's *Guidance Statement No. 3*	Extension of existing development towards the west by 22m	The proposed extension is not considered to change the amenity impacts on the area. Therefore, the proposal is considered acceptable for buffer requirements.
LPS 2 - Schedule 6 – Table 13	Private proposals with a value of $1,500,000 or above (including GST) are required to allocate up to 1% of the determined project cost for the development of public artwork to reflect or enhance local cultural identity.	The proposal did not include details to address policy requirements.	The development has an estimated development cost of $3.5M, therefore it is recommended that a condition of approval is imposed requiring allocation of 1% estimated cost of development for the provision of public art (or cash in lieu contribution) for the Chester Pass Road site.

Parking

The proposed extension will intensify the existing use of the site, triggering the consideration of the impact on parking. When considered as an “Industry – Light” use Table 15 of LPS 2 requires a development of this size to provide 113 parking bays. However, notwithstanding the existing approved land use, for the purpose of a parking assessment the requirements of a “Warehouse/Storage” land use may be more applicable in his instance. In this case, 58 parking spaces are required, resulting in a shortfall of 33 bays for the development.

A Traffic & Car Parking Assessment was provided with the application as justification for the parking variation. In assessing the necessity for a compliant number of bays, it is noted that the proposed development only results in an increase in on site staff from 18 to 20, and visitor numbers to the site is not expected to be high. The development will also formalise parking arrangements on site through a new parking area that will expand on the existing gravel car park. Given the relatively small intensification of staff numbers and the overall improvement in the onsite parking arrangements the proposed parking variation is considered to be acceptable. It is also noted that should there be issue with the parking in the future the site is large enough to accommodate additional parking spaces.

Traffic Impacts

The Traffic & Car Parking Assessment has also provided a traffic impact assessment demonstrating the movement of vehicles to and from the site. The assessment states that the level of traffic anticipated to be generated at the development access points will be minimal and will not have an adverse impact on the surrounding area and road network. This assessment is consistent with the comments from Main Roads who had no objection to the proposed development.

As a part of the comments received from Main Roads it is noted that the heavy vehicle access from John Street is poorly located in relation to its proximity with the intersection of Chester Pass Road. The viability of moving the heavy vehicle crossover further to west was considered by the City’s development engineer in the assessment of this application. While moving the crossover further away from Chester Pass Road would be beneficial, the impact of a new crossover further to the west would be detrimental to the intersection of John Street and Anthony Road. As the application is proposing to use the existing crossover the City considers the impact of the development to be largely unchanged from the existing use of the site.

Waste Management

Through a request for information, the applicant has provided details on the management of waste on site (Attachment 5). The waste map identifies one commercial skip bin for general waste in the northwest corner of the development, which will remain in a similar location after the extension. However, to ensure effective waste management when waste reaches the City’s waste facility, further information is required on how waste will be sorted and managed on site.

The submitted waste management plan lacks detail on the separation of materials to reduce landfill contributions and prevent hazardous waste from being sent to landfill. A more comprehensive plan should be provided, including clear evidence of waste sorting practices. At a minimum, the plan should include:

- The separation of scrap steel for recycling.
- The separation of comingled recyclables.
- A plan for managing materials not suitable for general or recycling bins, such as hazardous waste (e.g., batteries, paint, computers, light globes), and how these will be stored, collected, and transported to appropriate facilities.
- The installation of clearly marked indoor and outdoor bins to encourage correct waste separation on site.
- A litter management plan, including the use of covered bins to contain waste, and measures to address litter accumulation in the surrounding area, especially in the nearby drains, which collect litter from passing vehicles and businesses.

The information required in the waste management plan is not considered to have a significant impact on the overall outcome of this application. Therefore, it is recommended that a condition is applied requiring the submission of a waste management plan to the satisfaction of the City of Albany prior to commencement of the development.

Fencing

The application proposes new fencing as outlined in the further information provided by Urbis. As a part of this application only the location of fencing has been provided, with no details of specifications. The City is largely satisfied that the location of fencing is suitable, except for the section of fencing proposed adjacent to Chester Pass Road where fencing is proposed within a section of Crown Land. The City does not have the ability to support development outside of the development site and therefore cannot support the layout of fencing as proposed. Therefore, the City recommends that the fencing component of this proposal be removed from the application with a condition requiring specifications of fencing and a revised layout being provided to the satisfaction of the City prior to commencement of the development.

Public Art

Due to the cost of development, a condition is recommended to be imposed requiring contribution of 1% of the estimated cost of development towards provision of public art on site or payment of cash in lieu. This requirements is set out under the City of Albany Local Planning Scheme No.2 (LPS2) and Local Planning Policy 1.10 - Percent for Art (LPP1.10). Given the development site fronts a primary distributor and a major township approach corridor, the contribution of public art will provide a positive outcome for the streetscape, particularly given its prominent location. Therefore, the City considers the provision of public art appropriate in this instance.

Conclusion:

The key considerations of this application pertain to parking, traffic impacts, and fencing. While the proposed development results in a shortfall of 33 parking bays, the Traffic & Car Parking Assessment demonstrates that the modest increase in staff, alongside the formalization of on-site parking, effectively mitigates this issue. Given the proposed improvements and the flexibility to accommodate additional parking in the future if required, the variation is considered acceptable. In contrast, the proposed fencing layout needs further refinement, particularly due to the section proposed within Crown Land. However, this issue should not impede the overall development, and it is recommended that revised fencing plans be submitted prior to commencement.

In summary, the proposal aligns with the objectives of the zone and is consistent with the existing development on site. The extension is not expected to significantly alter the amenity impacts on the surrounding area and, as such, is recommended for approval subject to conditions.

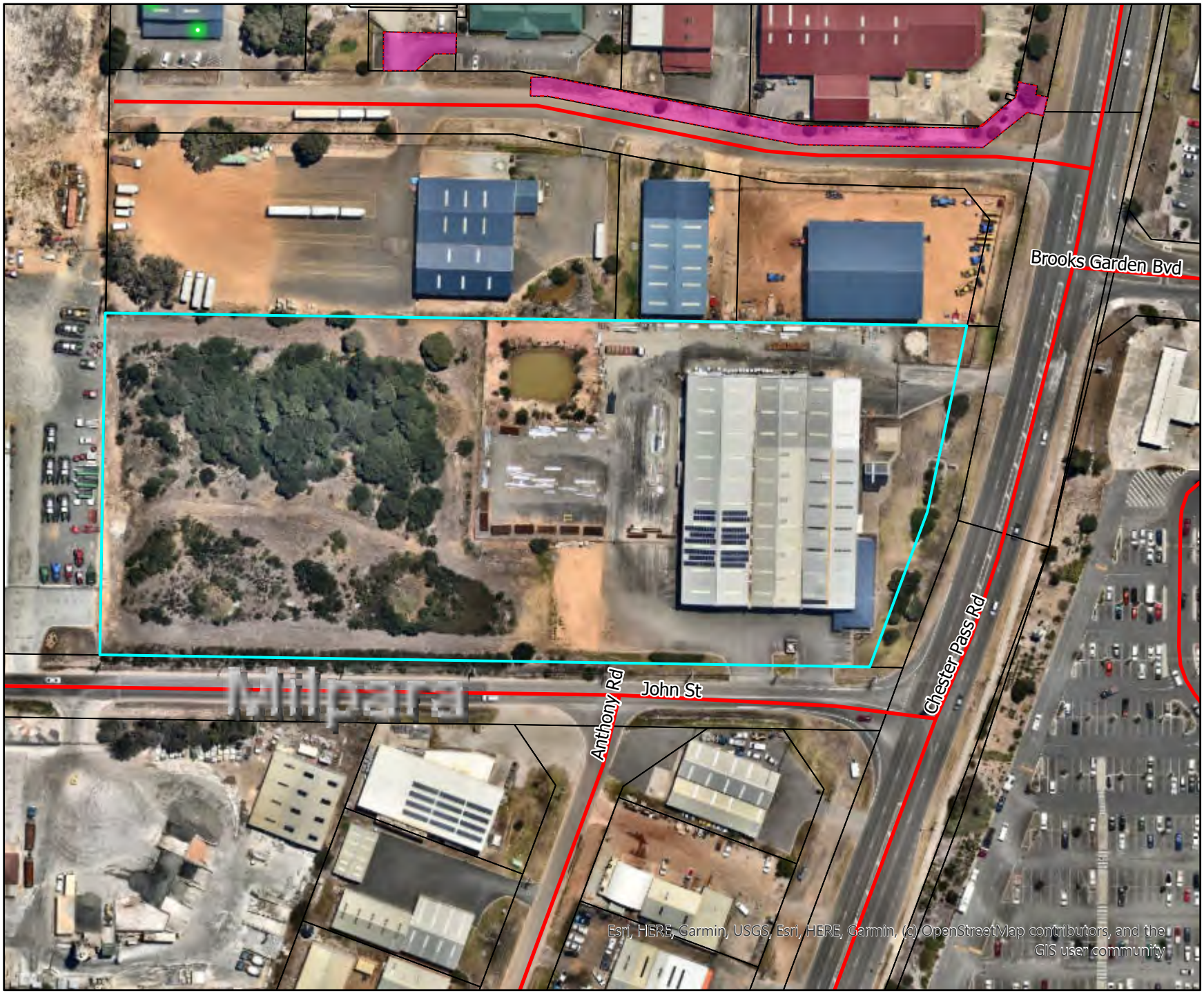
ArcGIS Web Map

Legend

- Enquiries

Simplified Roads

- Sealed
- Easements
- Cadastre
- Tenure



Author: City of Albany

Spatial Reference
Name: GDA 1994 MGA Zone 50
Datum: GDA 1994
Projection: Transverse Mercator

N

Albany

Date Printed: 14/10/2024 10:33 AM

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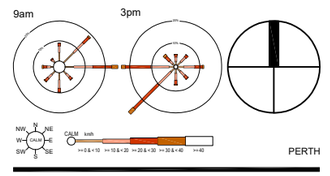
0 0.03 0.06 0.12 km

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REVISIONS

A	PRELIMINARY	21.11.23
B	REVISION – SURVEY OVERLAY	29.01.24
C	REVISION – SURVEY OVERLAY	09.02.24
D	REVISION – REMOVED WALL, RSD & CARPARK UPDATE	06.03.24
E	REVISION – FENCE & GATE UPDATE	20.03.24
F	REVISION – FOR APPROVAL	27.03.24
G	REVISION – RSD AND DRIVEWAY WIDENING	20.06.24
H	REVISION – RSD	24.06.24





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DEP0003111 | PDP0001062

PROJECT

EXPANSION

177 CHESTER PASS ROAD
MILPARA, WA

DRAWING TITLE

PROPOSED ESTATE PLAN

0 25 50 75 100 125m

SCALE: 1 : 2500 @ A3

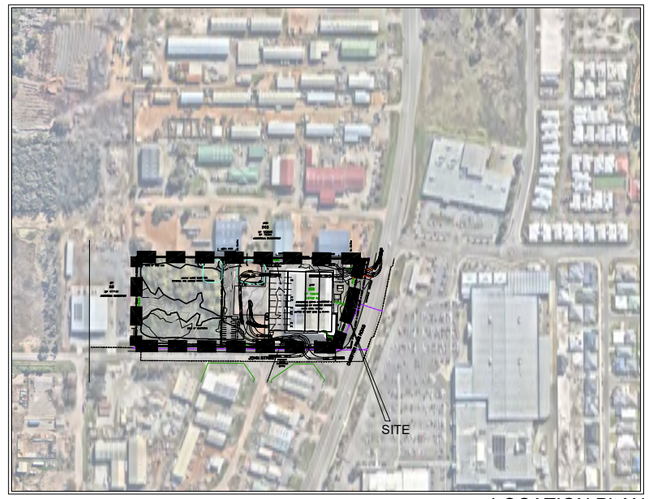
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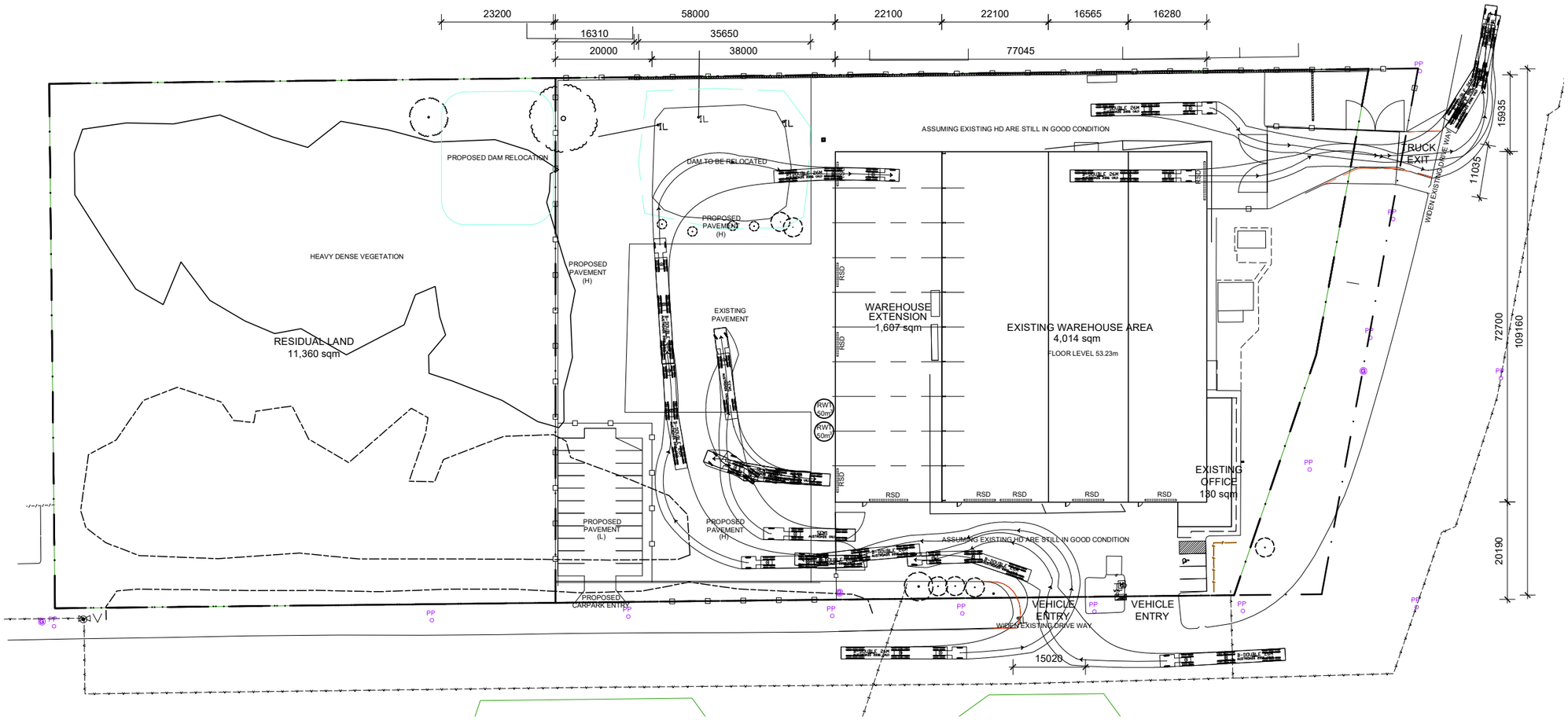
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REVISIONS

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B	REVISION – CIVIL – BASIN	09.02.24
C	REVISION – REMOVED WALL, RSD & CARPARK UPDATE	06.03.24
D	REVISION – FENCE& GATE UPDATE	20.03.24
E	REVISION – FOR APPROVAL	27.03.24
F	REVISION – RSD AND DRIVEWAY WIDENING	20.06.24
G	REVISION – RSD	24.06.24

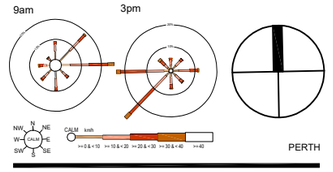


LOCATION PLAN



DEVELOPMENT SUMMARY

SITE AREA	17,066 sqm
EXISTING WAREHOUSE AREA	4,014 sqm
EXISTING OFFICE	130 sqm
WAREHOUSE EXTENSION	1,607 sqm
TOTAL BUILDING AREA	5,751 sqm
EFFICIENCY	33.70 %
CARPARKING PROVIDED	24 spaces
ADDITIONAL HD PAVEMENT (H)	3,506 sqm
ADDITIONAL LD PAVEMENT (L)	565 sqm



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DEP0003111 | PDP0001062

PROJECT

EXPANSION

177 CHESTER PASS ROAD
MILPARA, WA

DRAWING TITLE

PROPOSED SITE PLAN

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SCALE: 1 : 1000 @ A3

CREATE DATE : 24.06.2024 PLOT DATE : 24.06.2024

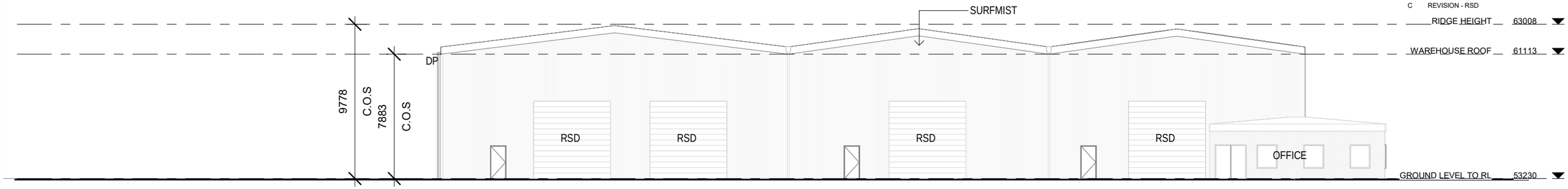
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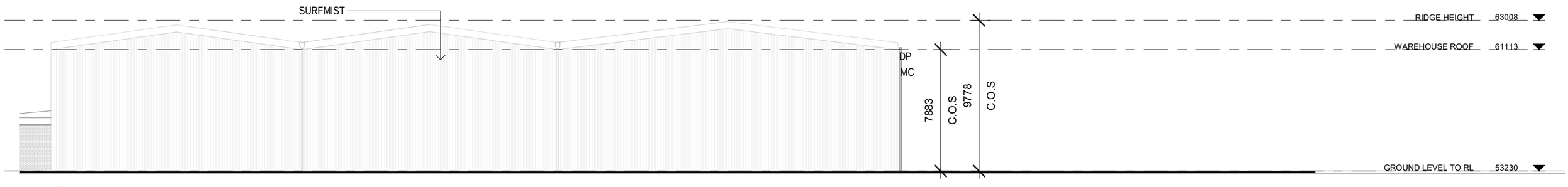
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REVISIONS

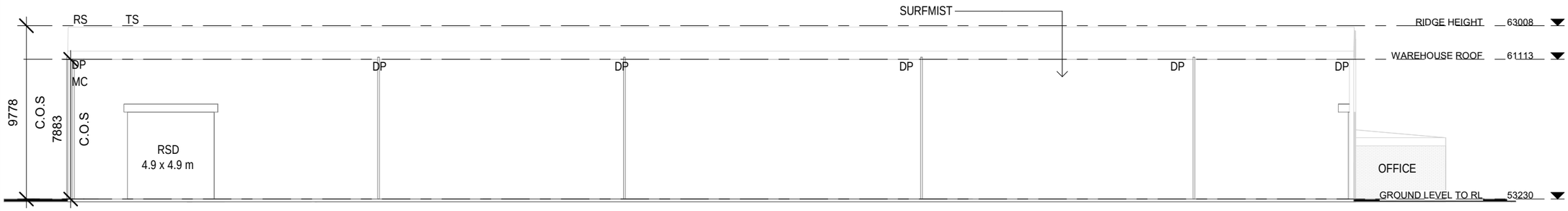
A	PRELIMINARY	27.03.24
B	REVISION - RSD	20.06.24
C	REVISION - RSD	24.06.24



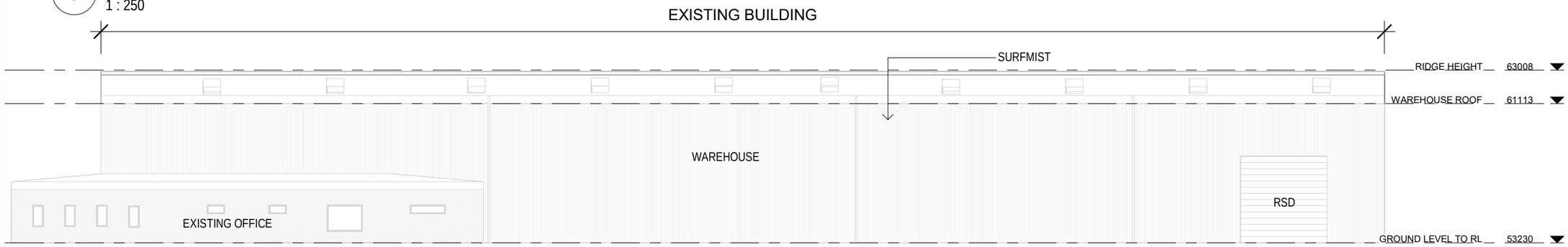
1 EXISTING SOUTH ELEVATION
1 : 250



2 EXISTING NORTH ELEVATION
1 : 250



3 EXISTING WEST ELEVATION
1 : 250



4 EXISTING EAST ELEVATION
1 : 250

LEGEND:

AL	ALUMINIUM CLADDING
COL	COLUMN
DP	DOWN PIPE
CFC	COMPRESSED FIBRE CEMENT
GL	GLASS
MC	METAL CLADDING
PC	PRECAST CONCRETE
PIR	POLYISOCYANURATE INSULATED PANEL
RSD	ROLLER SHUTTER DOOR
RS	ROOF SHEETING
TS	TRANSLUCENT SHEETING

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EXPANSION

177 CHESTER PASS ROAD
MILPARA, WA

DRAWING TITLE

EXISTING ELEVATIONS

2 0 2 4 6 8

SCALE 1: 250 @A3

DATE 24.06.24

DRAWN BY AAIMUN TARIQ

COLOUR LEGEND (C.O.S)

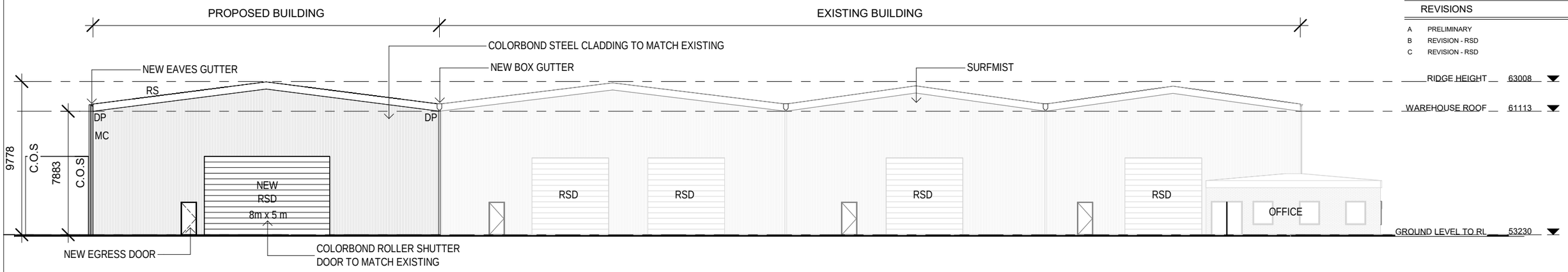
COLORBOND SURFMIST
COLORBOND DEEP OCEAN BLUE

NOTE:
- ALL MATERIALS AND COLORS SHOULD MATCH EXISTING

100450 DA01 020 C

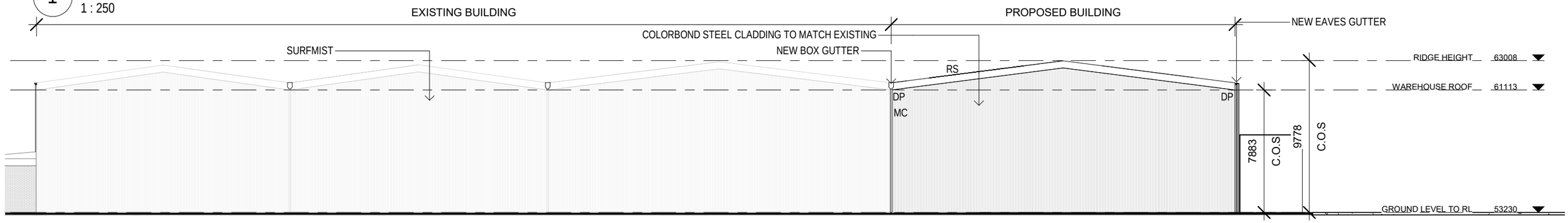
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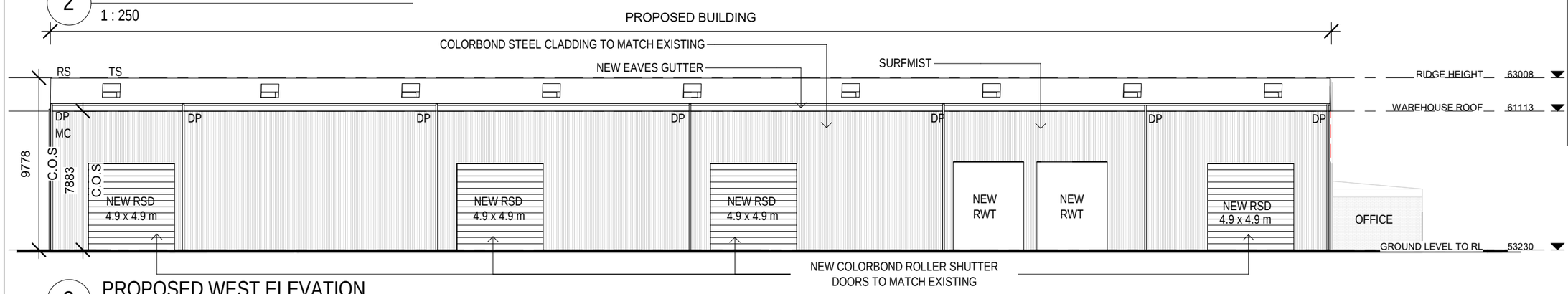
1 PROPOSED SOUTH ELEVATION

1 : 250



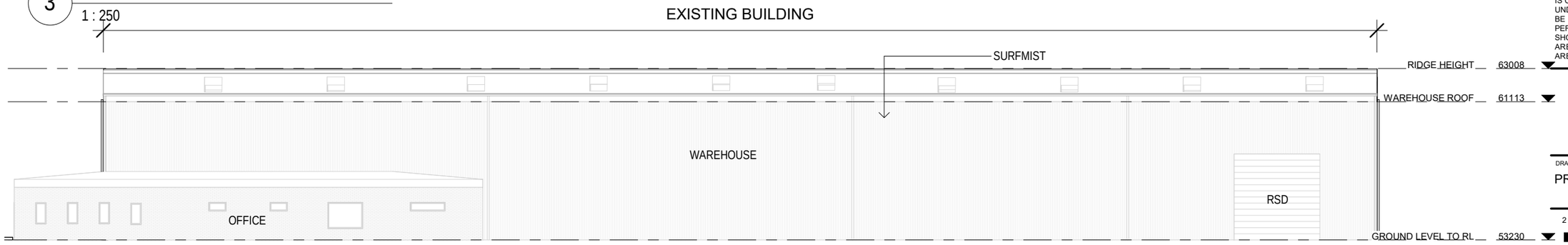
2 PROPOSED NORTH ELEVATION

1 : 250



3 PROPOSED WEST ELEVATION

1 : 250



4 PROPOSED EAST ELEVATION

1 : 250

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REVISIONS

A	PRELIMINARY	27.03.24
B	REVISION - RSD	20.06.24
C	REVISION - RSD	24.06.24

LEGEND:

AL	ALUMINIUM CLADDING
COL	COLUMN
DP	DOWN PIPE
CFC	COMPRESSED FIBRE CEMENT
GL	GLASS
MC	METAL CLADDING
PC	PRECAST CONCRETE
PIR	POLYISOCYANURATE INSULATED PANEL
RSD	ROLLER SHUTTER DOOR
RS	ROOF SHEETING
TS	TRANSLUCENT SHEETING

EMKC³ development | cubed

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ARBV 17867 | NSW ARB 10125 | BOAQ 5835

EXPANSION

177 CHESTER PASS ROAD
MILPARA, WA

DRAWING TITLE

PROPOSED ELEVATIONS

2 0 2 4 6 8

SCALE 1: 250 @A3

DATE 20.06.24

DRAWN BY AAIMUN TARIQ

100450 DA01 200 C

COLOUR LEGEND (C.O.S)

COLORBOND SURFMIST
COLORBOND DEEP OCEAN BLUE

NOTE:
- ALL MATERIALS AND COLORS SHOULD MATCH EXISTING

PRINTED: 24/06/2024 11:08:35 AM

177 CHESTER PASS ROAD
MILPARA, ALBANY

LANDSCAPE DA REPORT

JUNE 2024

emerge ASSOCIATES



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REVISION	DATE	ISSUE OR AMENDMENT	BY	REVIEWED
A	15/05/2024	DA ISSUE	CW	NM
B	07/06/2024	DA ISSUE	CW	NM
C	21/06/2024	DA ISSUE	CW	NM

2.0 Landscape Quality

1.1 Landscape Response

Emerge Associates have been engaged to prepare a landscape concept design for the site. Going beyond ensuring species selection, soil depths and maintenance of structure planting areas, Emerge Associates' proposal works with the architecture to create multiple functional, considered and beautiful landscapes.

Generally

1. The proposal achieves **1045m2** of deep soil, all of which being true deep soil at the ground level. Deep soil provision allows for 10x Large trees.
2. The integration of landscape has been considered as part of the overall building strategy.
3. Landscaped areas can be easily maintained to ensure they remain in perpetuity.
4. Increased green infrastructure reduces urban heat island effect.

1.2 Overall Landscape Strategy and Character

- Provide an integrated landscape design which provides a low maintenance, soft edge to the industrial built form.
- Reduce heat island effect of urban development through landscape provision & proposed tree planting.
- Provide an integrated landscape design which integrates with & enhances the surrounding architecture and streetscape
- The landscape proposal will allow for mostly native plant species to provide a large green space to celebrate native Australian & West Australian landscapes. Flowering plant selections will assist in attracting birds, insects & local fauna.

1.3 Water Efficient Landscape Design

- Plant selections will be selected in consultation with Emerge Associates' in-house Botanist, with resilient & low maintenance plant species to be selected.
- The landscape design will feature some exotic species which provide contrasts in flower and texture, and deciduous trees which provide more varied shade qualities. Exotic species selected will have a low water requirement.
- Proposed irrigation will be dripline irrigation installed under the mulch layer. The water supply will be mains water & part stormwater capture.
- Gravel mulch will be used for wind affected areas to ensure the mulch layer is retained in high wind environments which will provide an ongoing cover to reduce water evaporation.
- Where achievable, the garden beds will be arranged according to water requirements, allowing the reticulation to the native planting to be controlled separately & water usage reduced following establishment until the garden beds are self-sufficient.

3.0 Landscape Design

3.1 Existing Conditions

LEGEND

- LOT BOUNDARY
- 01 EXISTING GARDEN BEDS
- 02 EXISTING DAM LOCATION
- 03 TREES TO BE RETAINED
- 04 DENSE NATIVE VEGETATION
- 05 DENSE VERGE PLANTING
- 06 SIGN
- 07 VEHICLE ACCESS GATES
- 08 BOLLARDS



4.0 Proposed Site Adjustments

3.2 Existing Conditions

LEGEND

- LOT BOUNDARY
- EXTENT OF PROPOSED WORKS
- GRASS REMOVAL
- VEGETATION REMOVAL
- 01 EXISTING DAM TO BE DECOMISSIONED
- 02 EXISTING TREE RETENTION



4.2 Proposed Design

TREE LEGEND

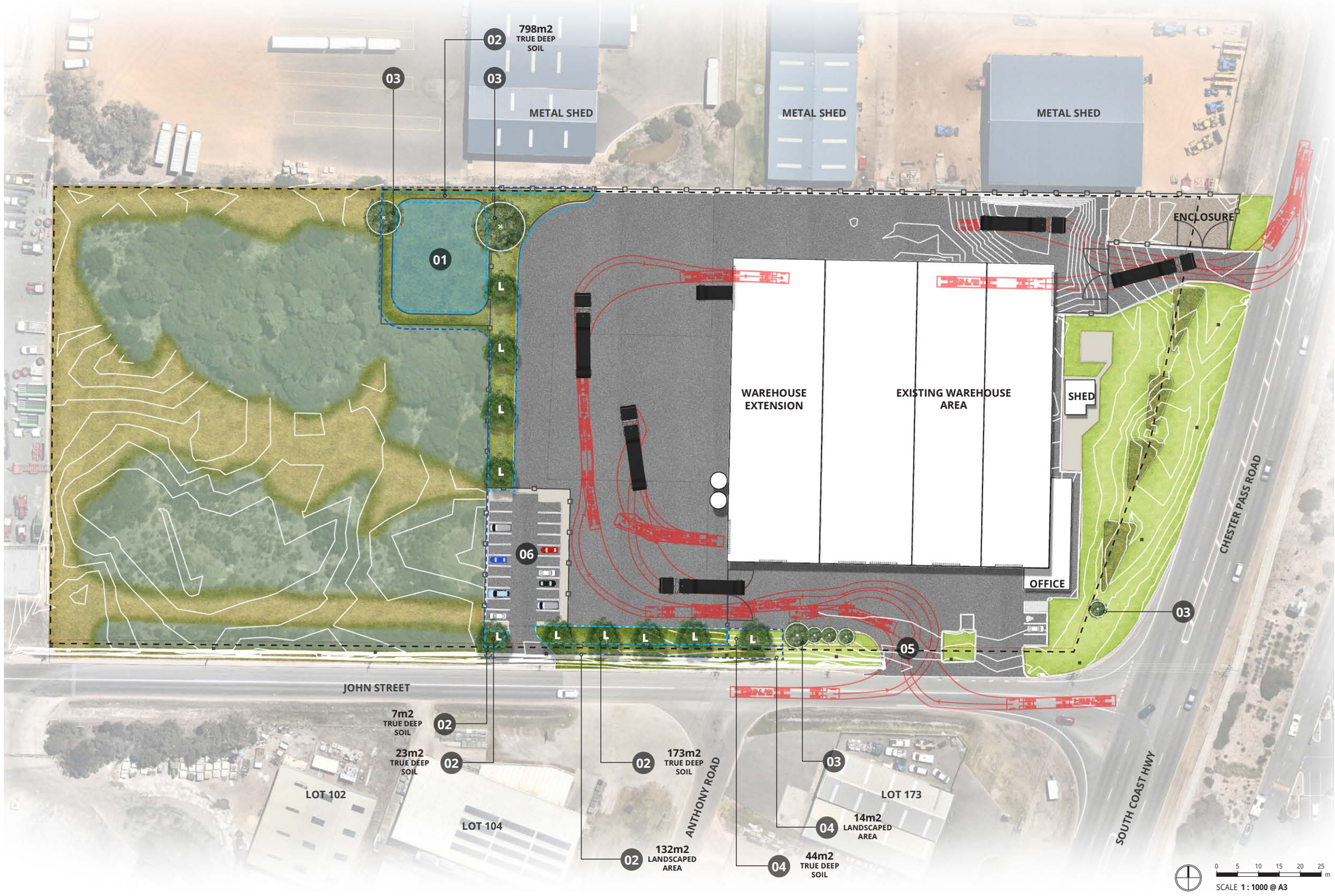
L LARGE TREES

LEGEND

01 PROPOSED DAM LOCATION
02 NATIVE PLANTING
03 RETAINED TREES
04 LAWN
05 PROPOSED VEHICLE ENTRY GATES WITH FENCING
06 FORMALISED CARPARK

DEEP SOIL ZONES	
LANDSCAPED AREA (<1M SOIL DEPTH)	146m2
DEEP SOIL AREA (TRUE)	1045m2
DEEP SOIL AREA (ON STRUCTURE, >1M)	0m2
TREE SUMMARY	
LARGE TREES (>12m HIGH)	10

NOTE:
VERGE AREAS EXCLUDED FROM DEEP SOIL CALCULATIONS.

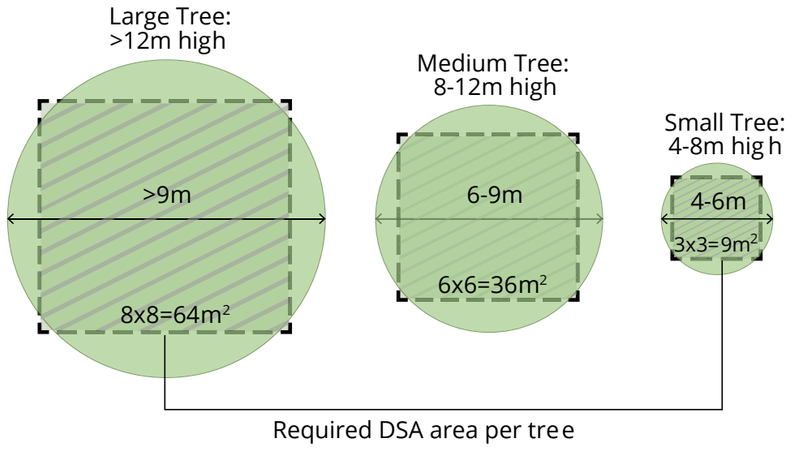


4.3 Deep Soil Zones

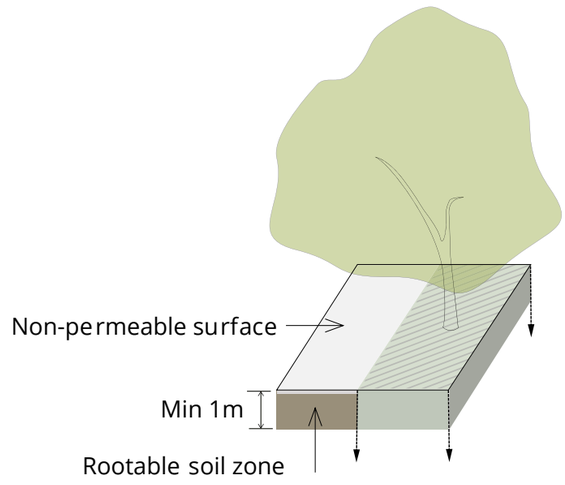
1. The current proposal achieves the required area of deep soil planting required as per the DesignWA guidelines.
2. The minimum deep soil area requirement is 7% or 670m2.
3. The proposal is required to provide 10 Large trees as per the DesignWA guidelines. The current proposal provides **10 x large trees**, with overall tree numbers providing those required according to DesignWA guidelines.

PROPOSED LANDSCAPE SUMMARY

Site Area	Minimum deep soil area required (7%)	Proposed deep soil area	Minimum requirement for trees	Proposed Trees
9,572 m2	**670m2**	**1045m2**	1 large tree and 1 medium tree for each additional 400m2 in excess of 1000m2 OR 1 large tree for each additional 900m2 in excess of 1000m2 and small trees to suit area	**10 Large Trees**



Tree size definitions when mature for deep soil areas.



Rootable soil zone.

Tree size	Indicative canopy diameter at maturity	Nominal height at maturity	Required DSA per tree	Recommended minimum DSA width	Minimum DSA width where additional rootable soil zone (RSZ) width provided[1] (min 1m depth)	Indicative pot size at planting
Small	4-6m	4-8m	9m²	2m	1m (DSA) + 1m (RSZ)	100L
Medium	6-9m	8-12m	36m²	3m	2m (DSA) + 1m (RSZ)	200L
Large	›9m	›12m	64m²	6m	4.5m (DSA) + 1.5m (RSZ)	500L

[1] Rootable areas are for the purposes of determining minimum width only and do not have the effect of reducing the required DSA.

Site Area	Minimum deep soil area	Minimum requirement for trees [1]
Less than 700m²	10% **OR** 7% if existing tree(s) retained on site (% site area)	1 medium tree and small trees to suit area
700 – 1,000m²		2 medium trees **OR** 1 large tree and small trees to suit area
› 1,000m²		1 large tree and 1 medium tree for each additional 400m² in excess of 1000m² **OR** 1 large tree for each additional 900m² in excess of 1000m² and small trees to suit area

[1] Minimum requirement for trees includes retained or new trees
Refer Table 3.3b for tree sizes

5.0 Native Planting Palette

Indicative Plant Schedule

Large Trees

Corymbia calophylla	Marri
Eucalyptus laeliae	Darling Range Ghost Gum
Eucalyptus lane-poolei	Salmon Ghost Gum

Feature Trees

Allocasuarina huegeliana	Rock Sheaok
Corymbia ficifolia grafted	Red Flowering Gum
Eucalyptus torquata	Coral Gum
Hakea petiolaris	Sea Urchin Hakea
Macozamia riedlei	Zamia Palm
Melaleuca rhaphiophylla	Swamp Paperbark
Melaleuca viminea	Mohan
Xanthorrhoea preissii	Grass Tree

Shrubs

Acacia saligna	Golden Wreath Wattle
Acacia drumondii	Drummonds Wattle
Banksia nivea	Couch Honeypot
Calothamnus sanguineus	Silky Leaved Blood Flower
Chorizema cordatum	Heart Leaf Flame Pea
Conostylis candicans	Grey Cottonhead
Hypocalymma angustifolium	White Myrtle
Melaleuca incana	Grey Honeymyrtle
Melaleuca trichophylla	
Philotheca spiccata	Salt & Pepper

Grasses and Strappy Leaves

Anigozanthos manglesii	Red & Green Kangaroo Paw
Dianella revoluta	Blueberry Lily
Baumea juncea	Bare Twig Rush
Lomandra Katrinus Deluxe	Katrinus Mat Rush
Lepidosperma gladiatum	Coast Sword-sedge
Patersonia occidentalis	Western Patersonia

Groundcovers

Burchardia multifora	Dwarf Burchardia
Calothamnus quadrifidus	Clean & Green Calothamnus
Clean & Green	
Hemiandra pungens	Snake Bush
Hibbertia scandens	Golden Guinea Vine
Myoporum parvifolium	Creeping Boobialla
Eremophila glabra 'Kalbarri Carpet'	Kalbarri Carpet
Kennedia coccinea	Coral Vine

Trees



Eucalyptus lane-poolei
Salmon Ghost Gum



Hakea petiolaris
Sea Urchin Hakea



Eucalyptus marginata
Jarrah



Allocasuarina huegeliana
Rock Sheaok

Embankment



Melaleuca rhaphiophylla
Swamp Paperbark



Eucalyptus occidentalis
Swamp Yate

Shrubs



Darwinia citriadora
Lemon-scented Darwinia



Chorizema cordatum
Heart-leaf Flame Pea



Conostylis candicans
Grey Cottonhead



Banksia nivea
Couch Honeypot

Groundcovers



Grevillea obtusifolia Gin Gin Gem
Gin Gin Gem



Eremophila glabra Kalbarri Carpet
Kalbarri Carpet



Hemiandra pungens
Snake Bush



Trachelospermum jasminoides
Chinese Star Jasmine

Grasses



Anigozanthos manglesii
Red Green Kangaroo Paw



Dianella revoluta
Blueberry Lily



Baumea juncea
Bare Twig Rush



Lomandra 'Katrinus Deluxe'
Katrinus Mat Rush

PRELIMINARY BUILDING ASSESSMENT

PROPOSAL:	Industry - Light (Expansion of Existing Warehouse) **waiting on fees- requested an invoice**
ADDRESS OF DEVELOPMENT:	177 CHESTER PASS ROAD MILPARA WA 6330
ASSESSED BY:	Madeline Winton
DATE ASSESSED:	29/07/2024

GENERAL REQUIREMENTS

Uncertified or Certified Application for a Building Permit is required.	
Certified Application for a Building Permit (BA1) is required Class 7b/8 Additions to existing Warehouse building.	✓
Certified Application for Re-Classification is required.	
No objection to proposal.	✓
The proponent should contact the DFES – Built Environment Branch with the details of the project to get advice from 'DFES - Operational requirements' perspective.	✓
An Occupancy Permit shall be obtained from the City of Albany prior to occupying the building.	✓
Upgrades to the existing building (including sanitary facilities, fire safety and accessibility) may be required. Refer to the Australian Building Codes Board *Handbook: Upgrading existing buildings v2.0* for guidance.	✓

BUILDING APPLICATION REQUIRED TO COMPLY WITH:

BUILDING ACT 2011	✓
BUILDING REGULATIONS 2012	✓
BUILDING CODE OF AUSTRALIA	✓
HEALTH (PUBLIC BUILDINGS) REGULATIONS 1992	
DISABILITY (ACCESS TO PREMISES – BUILDINGS) STANDARDS 2010	
AUSTRALIAN STANDARD 1428 – DESIGN FOR ACCESS AND MOBILITY	✓

Application No. P2240206 **Date:** **1 August 2024**

Proposal: **Industry - Light (Expansion of Existing Warehouse)**

Assess No. A37631

(Lot) 869 **(Loc)** **(Property) 177 CHESTER PASS ROAD MILPARA WA 6330**

Recommendation

Approve – No Conditions ☐
Approve – With Conditions ☑
Refuse ☐
Deferral – Pending more information ☐

HEALTH

WASTEWATER MANAGEMENT

WW9 The premises shall be connected to the Water Corporation sewerage system.

WASTE DISPOSAL & MANAGEMENT

WD1 Rubbish receptacles are kept clean and tightly sealed at all times except when refuse is being deposited or emptied, so as to avoid nuisance from smells or attracting pests / rodents.

WD3 An enclosure for refuse receptacles shall be provided and be of sufficient size to accommodate all receptacles used on the premises

ENVIRONMENTAL

E1 Where petrol, benzene or other inflammable or explosive substances or grease, oil or greasy/oily matter is likely to be discharged to sewer, it shall be disposed of in a method approved by the Water Corporation of WA.
Please contact the Water Corporation of WA Trade Waste division directly for advice, and to ascertain whether you require an oil-water separator system or a solids arrestor

Water Corporations Trade Waste contact details are:
Phone: 131 395
Email: tradewaste@watercorporation.com.au

E2 Prevention of dust and sand blowing causing a nuisance to adjoining landowners, by the installation of sprinklers (only with Water Corporation approval), utilisation of water tankers, mulching, hydro-mulching (Spray on Lawns) or by the adoption and implementation of any other suitable land management system in accordance with the Department of Environmental Protection's Dust Control Guidelines and the City of Albany *Prevention and Abatement of Sand Drift Local Law* 2009.

E3 Management of the property being undertaken in such a manner as to prevent denudation, erosion or pollution of the environment.

E4 Submission of the application to the Department of Water and Environmental Regulation for comments/registration of premises pursuant to the Environmental Protection Act. **if required**

E6 No processes being conducted in the approved structure or machinery, installed, that may cause a detriment to the amenity of that area by reason of noise, vibration, smell, fumes, smoke, soot, ash, dust or grit.

NOISE

N1 The level of noise emanating from the premises not exceeding that prescribed in the Environmental Protection Act 1986, and the *Environmental Protection (Noise) Regulations* 1997.

N2 The level of noise emanating from the site must comply with good construction noise control practises as per the *Environmental Protection (Noise) Regulations* 1997.

N3 The location of external fans, compressors, pumps, air conditioning apparatus, motors and the like being installed to prevent loss of amenity to the area by its noise, emission or otherwise and in accordance with the *Environmental Protection Act* 1986, and *Environmental Protection (Noise) Regulations* 1997.

Roald van Wyk
Senior Environmental Health Officer

***** DISCLAIMER *****
This information contained in this document is a guide only. It is the applicant's responsibility to refer to City of Albany Local Laws as well as relevant Acts & Regulations, Planning Schemes, and other relevant documents for detailed information relevant to this application. The City of Albany accepts no responsibility for errors or omissions.

177 Chester Road, Milpara (WA)

Traffic & Car Parking Assessment Report

Client: Roofmart Pty Ltd

Prepared by

Evan Boloutis
Director
EB Traffic Solutions Pty Ltd
B.Eng (Civil), MEng Sc (Traffic), MBA

Email: evan@ebtraffic.com.au
Web: www.ebtraffic.com.au
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20 June 2024

1. INTRODUCTION

1.1 Purpose of this report

This report sets out an assessment of the traffic and parking implications of the proposed development, with specific consideration of the following:

- description of the proposal;
- assessment of the development's car parking requirements;
- adequacy of the on-site car parking supply to accommodate the proposal's car and bicycle parking requirements;
- assessment of the ability for trucks to safely enter the site, manoeuvre around the site and depart from the site in a forward manner; and
- traffic impact of the proposal.

1.2 Referenced documents

This report has been based upon a number of sources and references. These include:

- Nearmap, Google maps and Melways online;
- Discussions with and information provided by the applicant;
- Albany Council's web site, City of Albany Local Planning Scheme No.2;
- Australian Standards AS 2890.1 (2004), AS 2890.6 (2009), AS 2890.2 (2018) and AutoTURN computer software for the swept path analysis; and
- Layout plans prepared by EMKC, Job 100450 DA01, Sheet 002, (rev F), sheets 020 and 200 (Rev B) dated 20 June 2024.

2. THE PROPOSAL

It is proposed to extend an existing warehouse and ancillary office with a net floor area of 4,144 sqm by an additional 1,607 sqm of net floor area.

A total of 25 spaces, inclusive of an accessible space will be provided on the site. Access to/from the on-site car parking spaces will be provided via two access points along John Street.

Information provided by the applicant indicate that the proposed extension will result in an increase in the maximum number of staff on site from 18 staff to 20 staff at any one time, that is an increase of two staff.

It is understood that there are a minimum number of visitors which are generated by the site and the allowance of two spaces for visitors is considered to adequately accommodate any visitor parking demands which may be generated during the weekday daytime periods.

Access for commercial vehicles will be provided via a central entry access located on John Street and a separate exit access located adjacent to the site's northern boundary along Chester Pass Road.

The layout of the proposed development is shown in Attachment A.

3. CAR PARKING CONSIDERATIONS

3.1 Car Parking Requirements

The car parking requirements for the proposed development are set out in *the City of Albany Local Planning Scheme No.2,* specifically Table 14 which states, amongst other things, the car parking requirement for a warehouse/storage facility is *1 space per 100 sqm Net Lettable Floor Area.*

Further, reference to the Building Code of Australia indicates that there is a requirement for one of the parking spaces to be an accessible parking bay, which has been provided.

Application of the car parking requirements to the proposed development results in a requirement of 58 spaces, one of which is required to be an accessible parking bay.

Whilst the development's proposed parking provision is technically less than the development's parking requirements, the proposed parking provision of 25 spaces, inclusive of an accessible space, is able to practically accommodate the development's anticipated staff and visitor parking demands during the peak weekday daytime periods.

3.2 Bicycle Parking Requirements

The *City of Albany Local Planning Scheme No.2,* specifically Table 14 indicates that there are no bicycle parking requirements for a warehouse use.

Notwithstanding the above, it is recognised that there are ample opportunities for an employee to safely store a bicycle, if required.

3.3 Car Park Layout

3.3.1 Dimensions of spaces

To comply with AS 2890.1:2004 and ASS 2890.6:22009, it is recommended that the parking spaces be provided with the dimensions of 2.6 m in width and 5.4 m in length with a minimum aisle width of 6.2 m and that the accessible space be provided at a width of 2.4 m and a length of 5.4 m with an adjacent shared space provided at a

width of 2.4 m and a length of 5.4 m with a bollard located centrally within the shared space offset by 800 mm from the edge of the accessway.

Further, the blind aisle extension has been provided at a width in excess of 1 m which satisfies AS 2890.1:29004.

Further, signage be installed to indicate visitor parking adjacent to the disabled bay and 'staff car park only' at the entrance to the staff car park.

3.3.2 Width of access

The width of the accessway is in excess of 6 m which complies with AS 2890.1:2004.

3.3.3 Access to/from car accommodation spaces

The swept paths of vehicles entering and exiting the on-site car spaces have been assessed with the use of the AutoTURN computer software for a B85 motor car.

The swept path analysis undertaken on the layout plan shows that the staff and visitors are able to safely enter the car park, access all spaces to then exit from the car park in a forward manner.

3.3.4 Sight lines for exiting motorists

Figure 3.3 of the Australian Standard for off-street car parking, AS 2890.1:2004 specifies that the minimum sight lines for pedestrian safety along a circulation driveway or domestic driveway.

The minimum sight lines are specified as clear sight line triangles which extend 2 m along the frontage road from the edge of an exit lane and 2.5 metres along the exit lane from the frontage. The sight line triangles are required to be clear of visual obstructions to provide the exiting motorist with a clear view of pedestrians on the footpath of the frontage road (and vice versa).

Reference to the layout plans indicate that sight line triangles are able to be provided on either side of the accessway at the title boundary which accords with Figure 3.3 of the Australian Standard for off-street car parking, AS 2890.1:2004.

It is further noted that there is no footpath along the site's frontages and therefore pedestrians are unlikely to be walking along the edge of the roadways.

4. COMMERCIAL VEHICLES

Information provided by the applicant indicates that the largest truck accessing the warehouse extension will be a 20 m Articulated Vehicle.

4.1 Headroom clearance

Information provided by the applicant indicates that there is a height clearance of 4.9 m beneath the loading bay roller doors which satisfies the headroom clearance requirements stipulated in Australian Standard AS 2890.2:2018, for an articulated vehicle.

4.2 Width of accessways

The width of the entry and exit accesses are in excess of 6 m which accords with that specified in Australian Standard AS 2890.2:2018.

4.3 Accessibility

The swept paths of a vehicle entering and exiting the proposed development site have been assessed with the use of the AutoTURN swept path computer software for a 20 m Articulated Vehicle and a 26 m B-Double.

Reference to the swept path analysis indicates that a 20 m Articulated Vehicle and a 26 m B-Double can safely enter the entry access, circulate around the warehouse to then exit from the development site in a forward manner, as shown in Attachment B.

5. TRAFFIC IMPACT

The level of traffic anticipated to be generated at the development access points is considered minimal and will not represent any adverse impact upon the operation of the surrounding road network or the amenity of the adjacent precinct.

6. CONCLUSIONS AND RECOMMENDATION

Having regard to the above, it is concluded that:

- The development's car parking requirements correspond to 53 spaces, inclusive of an accessible space, which is in excess of the development's provision of 25 spaces, inclusive of an accessible space;
- Whilst the development's proposed parking provision is technically less than the development's parking requirements, the proposed parking provision of 25 spaces, inclusive of an accessible space, is able to practically accommodate the development's anticipated staff and visitor parking demands during the peak weekday daytime periods; and
- Traffic generated by the proposal will be minimal and is not expected to adversely impact upon the safety or operation of the surrounding road network.

Further, it is recommended that signage be installed to indicate visitor parking adjacent to the disabled bay and 'staff car park only' at the entrance to the staff car park.



Evan Boloutis
Director
EB Traffic Solutions Pty Ltd

B.Eng (Civil), MEng Sc (Traffic), MBA

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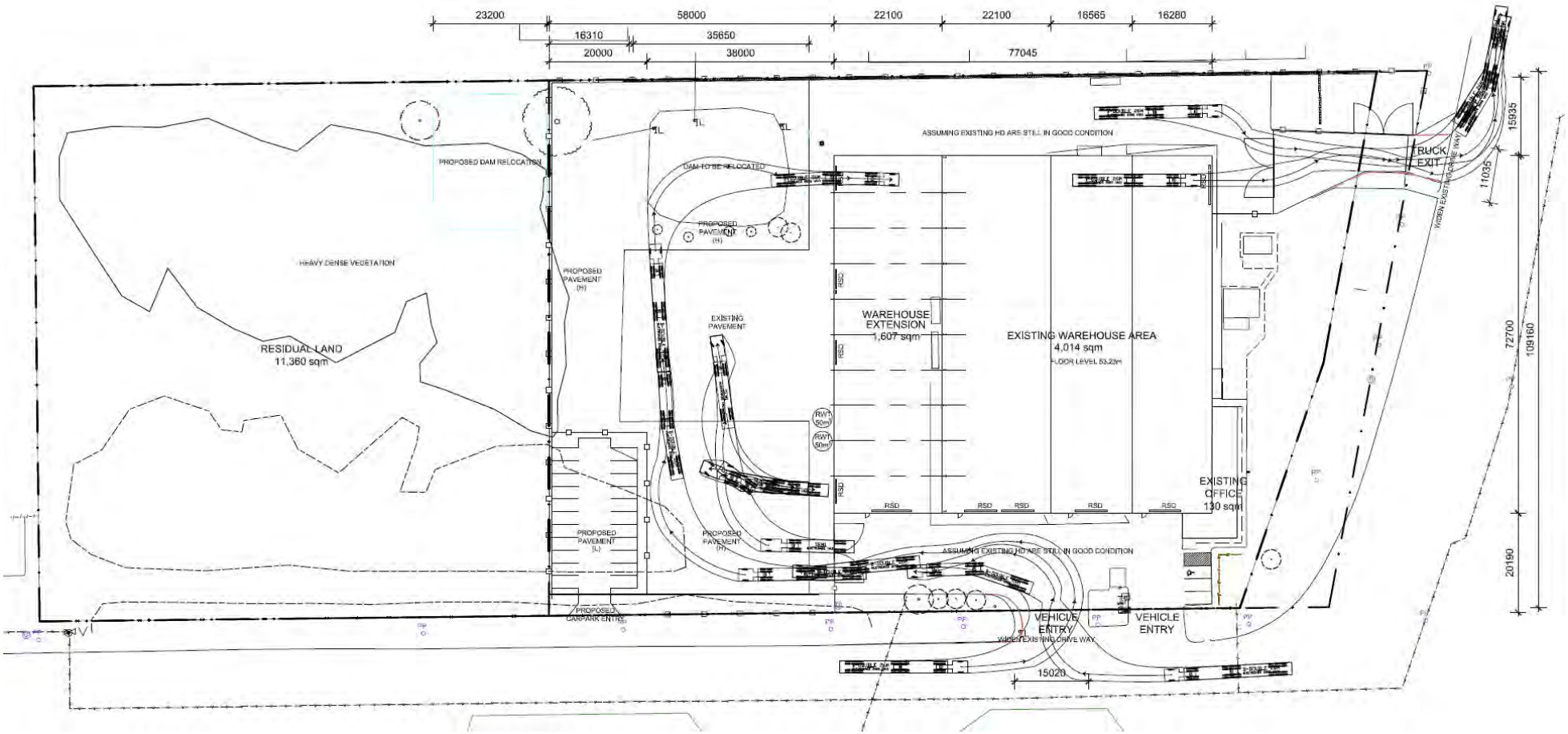
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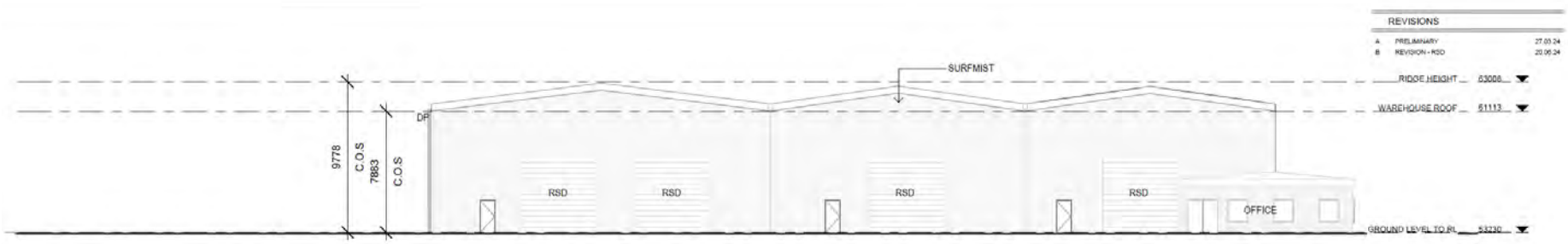
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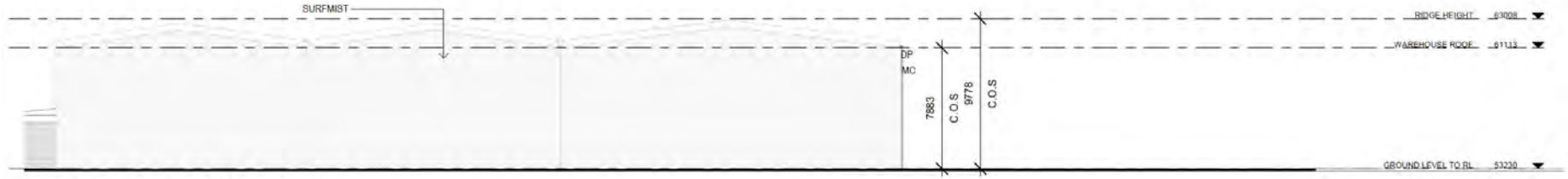
ATTACHMENT A

LAYOUT OF PROPOSED DEVELOPMENT


23200
58000
22100
22100
16565
16280
16310
35650
20000
38000
77045
ASSUMING EXISTING HD ARE STILL IN GOOD CONDITION
PROPOSED DAM RELOCATION
DAM TO BE RELOCATED
PROPOSED PAVEMENT (H)
HEAVY DENSE VEGETATION
PROPOSED PAVEMENT (H)
RESIDUAL LAND
11,360 sqm
EXISTING PAVEMENT
WAREHOUSE EXTENSION
1,607 sqm
EXISTING WAREHOUSE AREA
4,014 sqm
FLOOR LEVEL 53.23m
RWT 50m³
RWT 50m³
RSD
EXISTING OFFICE
130 sqm
PROPOSED PAVEMENT (L)
PROPOSED PAVEMENT (H)
ASSUMING EXISTING HD ARE STILL IN GOOD CONDITION
PROPOSED CARPARK ENTRY
VEHICLE ENTRY
WIDEN EXISTING DRIVE WAY
VEHICLE ENTRY
15020
BUCK EXIT
WIDEN EXISTING DRIVE WAY
15935
11035
72700
109160
20190



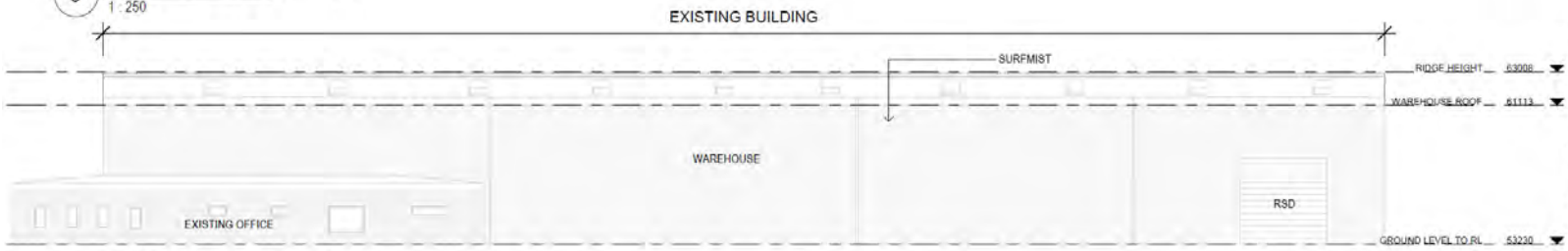
1 EXISTING SOUTH ELEVATION
1 : 250



2 EXISTING NORTH ELEVATION
1 : 250



3 EXISTING WEST ELEVATION
1 : 250



4 EXISTING EAST ELEVATION
1 : 250

X:\Projects\100450 - Albany Factory Extension, WA\Drawings\Architectural\2. Town Planning Drawings\Revit\100450 DA02.rvt

LEGEND:

AL	ALUMINIUM CLADDING
COL	COLUMN
DP	DOWN PIPE
CFC	COMPRESSED FIBRE CEMENT
GL	GLASS
MC	METAL CLADDING
PC	PRECAST CONCRETE
PIR	POLYISOCYANURATE INSULATED PANEL
RSD	ROLLER SHUTTER DOOR
RS	ROOF SHEETING
TS	TRANSLUCENT SHEETING

COLOUR LEGEND (C.O.S)
COLORBOND SURFMIST
COLORBOND DEEP OCEAN BLUE

NOTE:
- ALL MATERIALS AND COLORS SHOULD MATCH EXISTING

EMKC³ development | cubed

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ARBV 17867 | NSW ARB 10125 | BOAQ 5835

EXPANSION

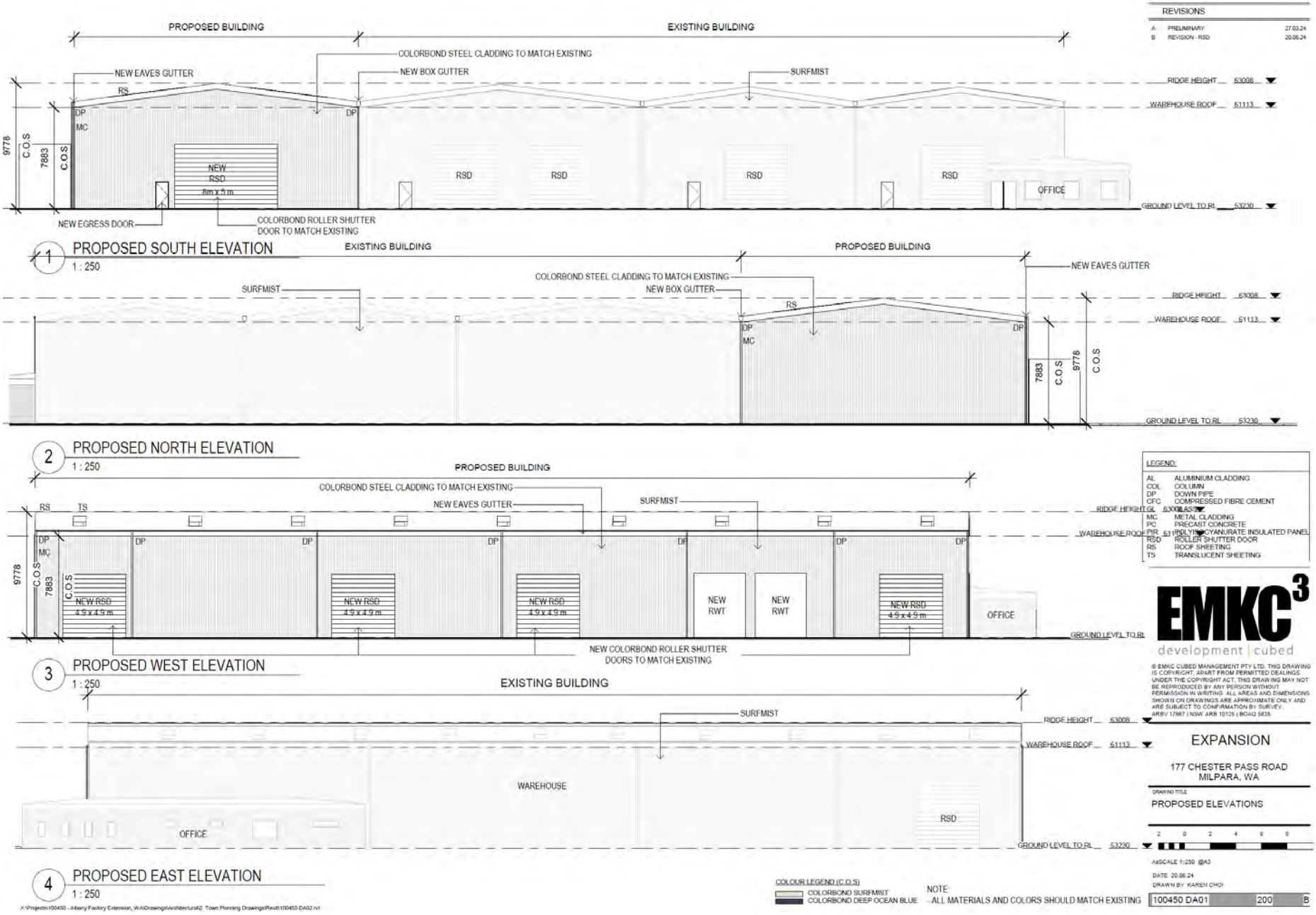
177 CHESTER PASS ROAD
MILPARA, WA

DRAWING TITLE
EXISTING ELEVATIONS

SCALE 1:250 @A3

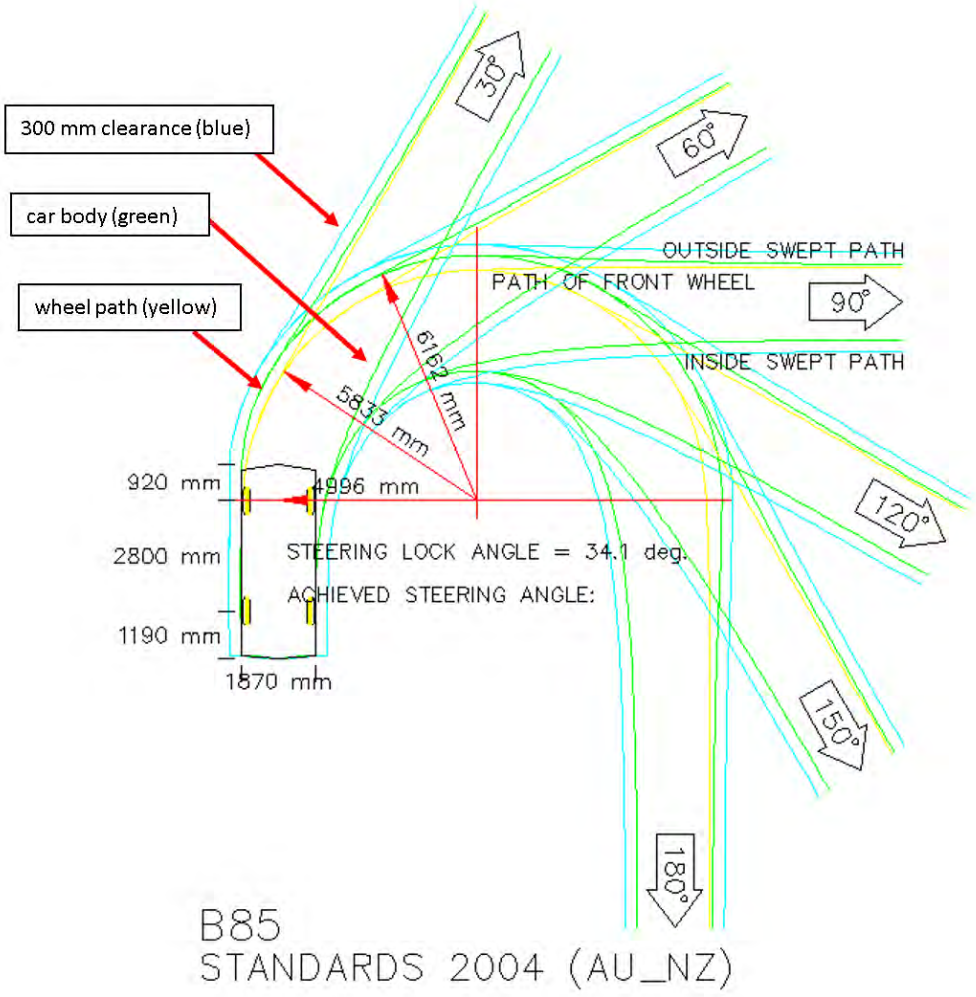
DATE 20.06.24
DRAWN BY KAREN CHOI

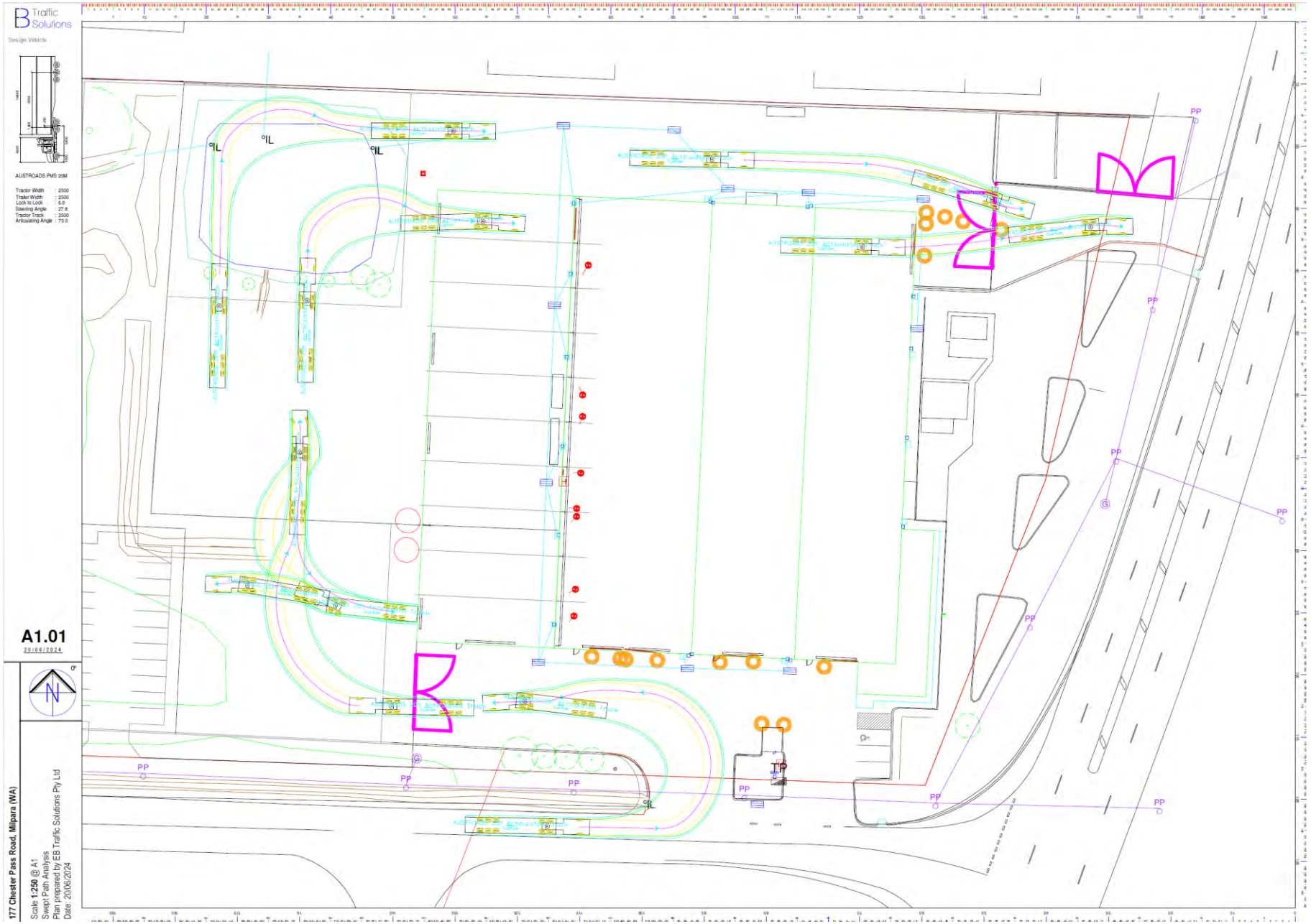
100450 DA01 020 B

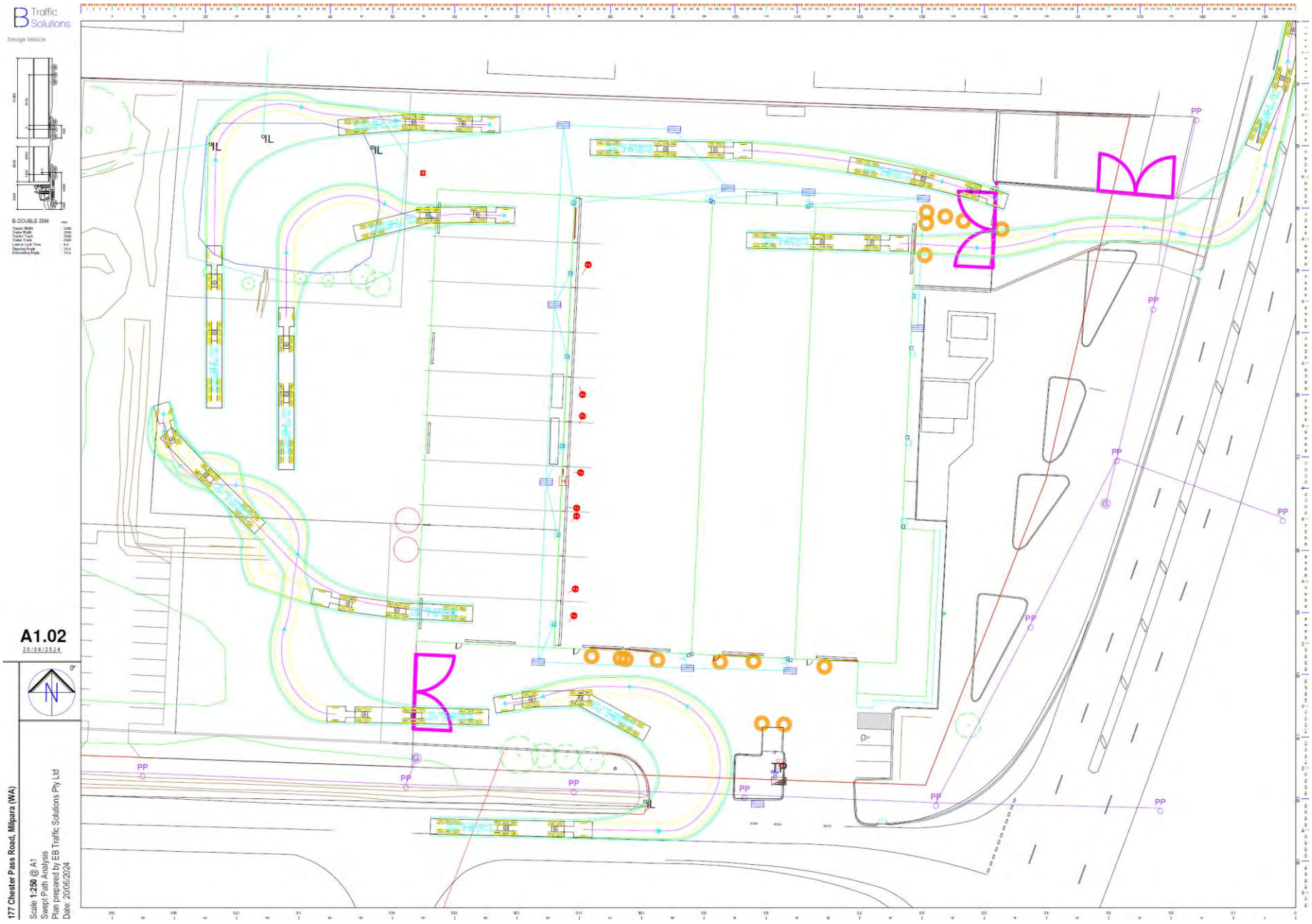

REVISIONS
A PRELIMINARY 27.03.24
B REVISION - RSD 20.06.24
PROPOSED BUILDING
EXISTING BUILDING
COLORBOND STEEL CLADDING TO MATCH EXISTING
NEW EAVES GUTTER
NEW BOX GUTTER
SURFMIST
RS
DP
MC
RIDGE HEIGHT 63008
WAREHOUSE ROOF 61113
9778
C.O.S
7883
C.O.S
NEW RSD 8m x 5m
RSD
RSD
RSD
RSD
OFFICE
GROUND LEVEL TO RL 53230
NEW EGRESS DOOR
COLORBOND ROLLER SHUTTER DOOR TO MATCH EXISTING
1 PROPOSED SOUTH ELEVATION
1 : 250
EXISTING BUILDING
PROPOSED BUILDING
SURFMIST
COLORBOND STEEL CLADDING TO MATCH EXISTING
NEW BOX GUTTER
NEW EAVES GUTTER
RS
DP
MC
RIDGE HEIGHT 63008
WAREHOUSE ROOF 61113
7883
C.O.S
9778
C.O.S
GROUND LEVEL TO RL 53230
2 PROPOSED NORTH ELEVATION
1 : 250
PROPOSED BUILDING
COLORBOND STEEL CLADDING TO MATCH EXISTING
NEW EAVES GUTTER
SURFMIST
RS
TS
DP
MC
9778
C.O.S
7883
C.O.S
NEW RSD 4.9 x 4.9 m
NEW RWT
NEW RWT
OFFICE
RIDGE HEIGHT GL 63008
WAREHOUSE ROOF PIR 61113
GROUND LEVEL TO RL
NEW COLORBOND ROLLER SHUTTER DOORS TO MATCH EXISTING
3 PROPOSED WEST ELEVATION
1 : 250
EXISTING BUILDING
SURFMIST
RIDGE HEIGHT 63008
WAREHOUSE ROOF 61113
WAREHOUSE
OFFICE
RSD
GROUND LEVEL TO RL 53230
4 PROPOSED EAST ELEVATION
1 : 250
LEGEND:
AL ALUMINIUM CLADDING
COL COLUMN
DP DOWN PIPE
CFC COMPRESSED FIBRE CEMENT
GL GLASS
MC METAL CLADDING
PC PRECAST CONCRETE
PIR POLYISOCYANURATE INSULATED PANEL
RSD ROLLER SHUTTER DOOR
RS ROOF SHEETING
TS TRANSLUCENT SHEETING
EMKC3
development | cubed
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ARBV 17967 | NSW ARB 10125 | BOAQ 5835
EXPANSION
177 CHESTER PASS ROAD
MILPARA, WA
DRAWING TITLE
PROPOSED ELEVATIONS
2 0 2 4 6 8
AaSCALE 1:250 @A3
DATE 20.06.24
DRAWN BY KAREN CHOI
100450 DA01 200 B
COLOUR LEGEND (C.O.S)
COLORBOND SURFMIST
COLORBOND DEEP OCEAN BLUE
NOTE:
ALL MATERIALS AND COLORS SHOULD MATCH EXISTING
X:\Projects\100450 - Albany Factory Extension, WA\Drawings\Architectural\2. Town Planning Drawings\Rev8\100450 DA02.rvt

ATTACHMENT B

SWEPT PATH ANALYSIS




Traffic Solutions
Design Vehicle
AUSTROADS PMS 20M
Tractor Width : 2500
Trailer Width : 2500
Lock to Lock : 6.0
Steering Angle : 27.8
Tractor Track : 2500
Articulating Angle : 75.0
A1.01
20/06/2024
177 Chester Pass Road, Milpara (WA)
Scale 1:250 @ A1
Swept Path Analysis
Plan prepared by EB Traffic Solutions Pty Ltd
Date: 20/06/2024


Traffic Solutions
Design Vehicle
B-DOUBLE 26M
A1.02
20/06/2024
177 Chester Pass Road, Milpara (WA)
Scale 1:250 @ A1
Swept Path Analysis
Plan prepared by EB Traffic Solutions Pty Ltd
Date: 20/06/2024

Josh Dallimore

From: WEB Great Southern Region <gsreg@mainroads.wa.gov.au>
Sent: Monday, 5 August 2024 10:04 AM
To: Josh Dallimore
Subject: Main Roads Reply Application for Development Approval - Industry Light P2240206 Lot 177 Chester Pass Rd - John St - Milpara H008 - 05 August 2024
Attachments: PA121028.pdf; P2240206 - For advertising_compressed.pdf

OFFICIAL

OFFICIAL

Hello Josh

Thank you for seeking Main Roads comment on the proposed expansion of the existing warehouse at 177 Chester Pass Rd.

Main Roads has no current objection to the proposed development as described PA121028.

Main Roads advises the Applicant with regard to:-

i) the existing access to Chester Pass Rd may remain as an Exit Only option for the current business operations.
ii) the existing heavy vehicle access from John St is poorly located in relation to its proximity to the intersection of Chester Pass Rd and would benefit traffic operations if located further to the West.
iii) no earthworks are to encroach onto the road reserve.
iv) no stormwater drainage is to be discharged onto the road reserve; and
v) the landowner/applicant shall make good any damage to the existing verge and vegetation within the road reserve.

Regards

Steven Pickin
Acting Network Operations Manager
Great Southern Region
Regional Management & Operations Directorate
Tel: +61 8 9892 0555

URBIS

LEVEL 8
1 WILLIAM STREET
PERTH WA 6000

URBIS.COM.AU
Urbis Ltd
ABN 50 105 256 228

3 September 2024

City of Albany
PO Box 484,
Albany WA 6331

Dear Joshua,

REQUEST FOR FURTHER INFORMATION – LOT 869 (NO. 177) CHESTER PASS ROAD, MILPARA (DAP/24/02732)

Urbis on behalf of our client EMKC³, who is the consultant for Roofmart, is pleased to provide further information regarding the Development Assessment Panel application (DAP/24/02732) for Lot 869 (no.177) Chester Pass Road, Milpara.

Please refer to the table below for responses to the request.

Request	Response
Stormwater management *Could you please advise how stormwater is currently managed on site, including the location of any pipes, pits, and what is connected to the existing pond. Could you also please advise if there is any overflow for the existing pit and where this is directed. If there is an existing stormwater management plan available that would be very helpful.*	Please refer to the current site drainage plan located in **Appendix A**. As noted on the plan, there is an existing network of stormwater drains, pits, and gully traps around the site that connect to the existing dam. Overflow from this pit is currently directed into the undeveloped portion of the lot 869.
Waste Management *Has consideration been given to the management of waste on site and how any additional waste generated from the expansion is managed? Can you also where bins are proposed to be stored on site? I have attached our waste management policy for more*	Please refer to waste map located in **Appendix B**. There will be no significant additional waste from the storage and handling of steel, with the current skip bin adequate. The proposed location of the commercial skip bin will be located externally at the northwest

Request	Response
information of the detail we require on the management of waste on site.	corner of the proposed extension. This is a similar location to where the commercial skip bin is currently located. This proposed location is setback and visually obscured from all street boundaries and poses minimal risk to safety.
Fencing *Can you please provide details of any new fencing?*	Please refer to the fencing plan in **Appendix C**. The location of the proposed fencing can be observed along the perimeter of the developed areas of the lot, posing minimal impact to the movement of fauna. The details and specifications of the fencing is subject to further detailed design and will be in accordance with the *City of Albany Fencing Local Law 2010*. It is requested that this is imposed as a condition subject to development approval.
Noise *Can you please provide a simple noise management plan for the site?*	It has been confirmed that the physical storage of steel will not generate any more noise that what the development currently produces. Associated heavy vehicle movements will primarily occur during regular weekday daytime working periods. This will be consistent with the development's current operation.
Could you please advise what the existing structures on the eastern elevation of the warehouse are for?	These structures are currently utilised for storage purposes. a. Bay 1 roll forming rainwater products b. Bay 2 storage of steel c. Bay 3 roll forming decking and slitting and bending flashings (this bay will be split into bay 2 and 3 once bay 4 up and running)

We hope the enclosed information is adequate to enable the City of Albany to complete its responsible authority report of the proposed warehouse extension and provide a favourable recommendation. If there are any further questions, please feel free to reach out to Karen Wright on kwright@urbis.com.au, +61 417 990 133, or myself on the undersigned.

Kindest regards,



For Luke Mifsud
Consultant
+61 8 9346 0502
lmifsud@urbis.com.au

APPENDIX A EXISTING DRAINAGE PLAN

NOTES:

- THE TITLE BOUNDARIES AS SHOWN HEREON WERE NOT MARKED AT THE TIME OF SURVEY. BOUNDARIES SHOWN ARE BASED ON PLAN DIMENSIONS ONLY PLACED OVER OCCUPATIONS AND EVIDENCE. THESE BOUNDARY LOCATIONS SHOULD BE VERIFIED BY A BOUNDARY RE ESTABLISHMENT SURVEY PRIOR TO DEMOLITION, EXCAVATION OR CONSTRUCTION.
- IT SHOULD BE NOTED THAT UNDERGROUND SERVICES WERE LOCATED BY FIELD INSPECTION OR WERE SHOWN ON A BEFORE YOU DIG AUSTRALIA (BYDA) SEARCH OF THE AREA. ALL SERVICE LOCATIONS SHOULD BE VERIFIED BY ALL RELEVANT AUTHORITIES PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION, THEREFORE, NO RESPONSIBILITY IS TAKEN FOR SERVICE LOCATIONS.
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- ONLY THE TREES SHOWN HEREON HAVE BEEN LOCATED.
- AERIAL IMAGE OBTAINED FROM NEARMAPS DATABASE. CAPTURED 04/02/23, ACCESSED 26/06/23.

A3

SCALE 1:500 (A1)

0 10 20 30 40 50

SCALE 1:1000 (A3)

0 10 20 30 40 50

All distances are in metres unless stated otherwise.

SERVICE RECORD	LOCATED	AVAILABLE	NO SERVICE	TO CONFIRM
WATER	✓	✓		
SEWERAGE		✓		
LEACH DRAINS			✓	
GAS			✓	
TEL/COMMS	✓	✓		
POWER U/G			✓	
POWER O/H	✓	✓		

SERVICES MARKED "TO CONFIRM" REQUIRE BUILDER / CLIENT TO CONFIRM AVAILABILITY AND / OR POSITION ON SITE.

#189
868
DP 102545
SP 78350
INDUSTRIAL WAREHOUSES

#91
88
DP 417181
INDUSTRIAL WAREHOUSE

#177
869
DP 102545
2.8442 ha
INDUSTRIAL METAL WAREHOUSE & VEGETATION ON WESTERN PORTION
FLOOR LEVEL: 53.23m
BOTTOM OF WEST BEAM RL: 58.62m

METAL SHED
T.O.W. RL: 52.80m
METAL SHED
LIMESTONE RETAINING WALL
METAL SHED
T.O.W. RL: 53.16m
T.O.W. RL: 52.78m
DECK SPIKE IN BITUMEN
TBM RL: 52.86m
DAM
POTENTIAL PIPE INACCESSIBLE
HEAVILY DENSE VEGETATION
POTENTIAL DAM LOCATED WITHIN VEGETATION
EDGE OF TREE LINE
EDGE OF VEGETATION
EDGE OF VEGETATION
273.66
108.84
244.53
90°
SIGN
KERB
CONCRETE
MOUNTABLE
ABOVE GROUND HYDRANT
JOHN STREET
CHESTER PASS ROAD
PROPERTY SEWER CONNECTION (BYDA)
MGA2020 - Zone 50
N

EXISTING CADASTRAL / PROPOSED SUBDIVISION BOUNDARIES	TOP / BOTTOM / TOP TOE BOTH SIDES OF BANK
BUILDING ENVELOPE / EASEMENT / SPOT HEIGHTS	EDGE OF BUSHLINE / TREE CANOPY / ROCK OUTLINES
METAL / CYCLONE WIRE / SUPER SIX FENCE LINES	BUILDING / EAVE / DOOR (D) / WINDOW (W) OUTLINE
POST & WIRE / PANEL FENCES / RETAINING WALL	FOOTPATH / EDGE OF CONCRETE / ROOF RIDGE
SEWER / MANHOLES ROUND & SQUARE / CONNECTION	TELECOM LINE / PIT / CONNECTION
WATER / METER / CONN. / TAP / HYDRANT / VALVE	GAS LINE / CONNECTION / VALVE
POWER UG / POWER DOME / ELEC. PIT / LIGHT POLE / SITE MAIN SWITCH BOARD	STORMWATER / GULLY TRAP / SIDE ENTRY PIT / MANHOLE
POWER AG / P. POLE / TRANS. / CONS. POLE / GUY WIRE ANCHOR	TBM / DECK SPIKE / NAIL / PEG / STAKE

LPD SURVEYS

LICENSED LAND SURVEYORS
ENGINEERING & CONSTRUCTION
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CLIENT: EMKC3

TITLE: FEATURE SURVEY PLAN OF LOT 869 ON DEPOSITED PLAN 102545 #177 CHESTER PASS ROAD, MILPARA

LOCAL AUTHORITY: CITY OF ALBANY

12d FILE: CHESTER N177 – PLAN

JOB No.	PLAN TYPE	DWG#	REV
23-1222	FS	001	C

HORIZONTAL DATUM MGA2020 – Zone 50 (SSM ALBANY 53A)
VERTICAL DATUM AHD (SSM ALBANY 53A)

CONTOUR INT	SHEET #
0.1m	1 OF 3

REV.	DESCRIPTION	SURVEY BY/DATE	DRAWN BY/DATE	CHECK
C	ADDED ADDITIONAL DRAINAGE INFORMATION FROM SERVICE LOCATOR	N/A	CM 25/01/2024	JL
B	ADDED ADDITIONAL SHEET WITH DRAINAGE INFORMATION ONLY	N/A	BC 29/11/2023	SK
A	INITIAL ISSUE	EF/CM 20/06/23	EF/CM 30/06/23	SK

NOTES:

- THE TITLE BOUNDARIES AS SHOWN HEREON WERE NOT MARKED AT THE TIME OF SURVEY. BOUNDARIES SHOWN ARE BASED ON PLAN DIMENSIONS ONLY PLACED OVER OCCUPATIONS AND EVIDENCE. THESE BOUNDARY LOCATIONS SHOULD BE VERIFIED BY A BOUNDARY RE ESTABLISHMENT SURVEY PRIOR TO DEMOLITION, EXCAVATION OR CONSTRUCTION.
- IT SHOULD BE NOTED THAT UNDERGROUND SERVICES WERE LOCATED BY FIELD INSPECTION OR WERE SHOWN ON A BEFORE YOU DIG AUSTRALIA (BYDA) SEARCH OF THE AREA. ALL SERVICE LOCATIONS SHOULD BE VERIFIED BY ALL RELEVANT AUTHORITIES PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION, THEREFORE, NO RESPONSIBILITY IS TAKEN FOR SERVICE LOCATIONS.
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- ONLY THE TREES SHOWN HEREON HAVE BEEN LOCATED.
- AERIAL IMAGE OBTAINED FROM NEARMAPS DATABASE. CAPTURED 04/02/23, ACCESSED 26/06/23.

A3

SCALE 1:500 (A1)

0 10 20 30 40 50

SCALE 1:1000 (A3)

0 10 20 30 40 50

All distances are in metres unless stated otherwise.

SERVICE RECORD	LOCATED	AVAILABLE	NO SERVICE	TO CONFIRM
WATER	✓	✓		
SEWERAGE		✓		
LEACH DRAINS			✓	
GAS			✓	
TEL/COMMS	✓	✓		
POWER U/G			✓	
POWER O/H	✓	✓		

SERVICES MARKED "TO CONFIRM" REQUIRE BUILDER / CLIENT TO CONFIRM AVAILABILITY AND / OR POSITION ON SITE.

#189
868
DP 102545
SP 78350
INDUSTRIAL WAREHOUSES

#91
88
DP 417181
INDUSTRIAL WAREHOUSE

#177
869
DP 102545
2.8442 ha
INDUSTRIAL METAL WAREHOUSE & VEGETATION ON WESTERN PORTION

METAL SHED
METAL SHED
METAL SHED
T.O.W. RL: 52.80m
T.O.W. RL: 53.16m
T.O.W. RL: 52.78m
LIMESTONE RETAINING WALL
DECK SPIKE IN BITUMEN
TBM RL: 52.86m
DAM
POTENTIAL PIPE INACCESSIBLE
HEAVILY DENSE VEGETATION
POTENTIAL DAM LOCATED WITHIN VEGETATION
EDGE OF TREE LINE
EDGE OF VEGETATION
EDGE OF VEGETATION
FLOOR LEVEL: 53.23m
BOTTOM OF WEST BEAM RL: 58.62m
P1 P2 P3 P4 P5 P6 P7 P8
ABOVE GROUND HYDRANT
SIGN
KERB
CONCRETE
MOUNTABLE
273.66
244.53
108.84
60.29
51.99
90°
78° 57' 45"
171° 32' 50"
100° 02' 10"
90°
JOHN STREET
CHESTER PASS ROAD
PROPERTY SEWER CONNECTION (BYDA)
MGA2020 - Zone 50
N

EXISTING CADASTRAL / PROPOSED SUBDIVISION BOUNDARIES	TOP / BOTTOM / TOP TOE BOTH SIDES OF BANK
BUILDING ENVELOPE / EASEMENT / SPOT HEIGHTS	EDGE OF BUSHLINE / TREE CANOPY / ROCK OUTLINES
METAL / CYCLONE WIRE / SUPER SIX FENCE LINES	BUILDING / EAVE / DOOR (D) / WINDOW (W) OUTLINE
POST & WIRE / PANEL FENCES / RETAINING WALL	FOOTPATH / EDGE OF CONCRETE / ROOF RIDGE
SEWER / MANHOLES ROUND & SQUARE / CONNECTION	TELECOM LINE / PIT / CONNECTION
WATER / METER / CONN. / TAP / HYDRANT / VALVE	GAS LINE / CONNECTION / VALVE
POWER UG / POWER DOME / ELEC. PIT / LIGHT POLE / SITE MAIN SWITCH BOARD	STORMWATER / GULLY TRAP / SIDE ENTRY PIT / MANHOLE
POWER AG / P. POLE / TRANS. / CONS. POLE / GUY WIRE ANCHOR	TBM / DECK SPIKE / NAIL / PEG / STAKE

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CLIENT: EMKC3

TITLE: FEATURE SURVEY PLAN OF LOT 869 ON DEPOSITED PLAN 102545 #177 CHESTER PASS ROAD, MILPARA

LOCAL AUTHORITY: CITY OF ALBANY

12d FILE: CHESTER N177 – PLAN

JOB No.	PLAN TYPE	DWG#	REV
23-1222	FS	001	C

HORIZONTAL DATUM MGA2020 – Zone 50 (SSM ALBANY 53A)
VERTICAL DATUM AHD (SSM ALBANY 53A)

CONTOUR INT	SHEET #
0.1m	2 OF 3

REV.	DESCRIPTION	SURVEY BY/DATE	DRAWN BY/DATE	CHECK
C	ADDED ADDITIONAL DRAINAGE INFORMATION FROM SERVICE LOCATOR	N/A	CM 25/01/2024	JL
B	ADDED ADDITIONAL SHEET WITH DRAINAGE INFORMATION ONLY	N/A	BC 29/11/2023	SK
A	INITIAL ISSUE	EF/CM 20/06/23	EF/CM 30/06/23	SK

A3

0 6 12 18 24 30 36 42

0 6 12 18 24 30 36 42

SCALE 1:750 (A3)

All distances are in metres unless stated otherwise.

MGA2020 Zone 50

N

#189

868

DP 102545
SP 78350

INDUSTRIAL WAREHOUSES

#91

88

DP 417181

HEAVILY DENSE VEGETATION

POTENTIAL DAM LOCATED WITHIN VEGETATION

100mm Ø CONC

250mm Ø CONC

51.605

51.280

51.680

525mm Ø CONC

DAM

#177

869

DP 102545

2.8442 ha

INDUSTRIAL METAL WAREHOUSE &

VEGETATION ON WESTERN PORTION

FLOOR LEVEL: 53.23m

450mm Ø CONC.

51.825 51.830 51.905 51.925 52.010 52.080 52.090 52.180

450mm Ø

450mm Ø

375mm Ø

375mm Ø

450mm Ø CONC

51.835 51.980 51.955 52.140 52.130

375mm Ø CONC

52.270

D.P.

150mm Ø PVC FROM DOWNPIPES (D.P.)
TO DRAINAGE PITS

XX.XXX = INVERT LEVEL OF PIPE

52.270 53.030 53.030 53.025

250mm Ø PVC 250mm Ø PVC

CHESTER PASS ROAD

IL

JOHN STREET

EXISTING CADASTRAL / PROPOSED SUBDIVISION BOUNDARIES

BUILDING ENVELOPE / EASEMENT / SPOT HEIGHTS

METAL / CYCLONE WIRE / SUPER SIX FENCE LINES

POST & WIRE / PANEL FENCES / RETAINING WALL

TOP / BOTTOM / TOP TOE BOTH SIDES OF BANK

EDGE OF BUSHLINE / TREE CANOPY / ROCK OUTLINES

BUILDING / EAVE / DOOR (D) / WINDOW (W) OUTLINE

FOOTPATH / EDGE OF CONCRETE / ROOF RIDGE

SEWER / MANHOLES ROUND & SQUARE / CONNECTION

WATER / METER / CONN. / TAP / HYDRANT / VALVE

POWER UG / POWER DOME / ELEC. PIT / LIGHT POLE / SITE MAIN SWITCH BOARD

POWER AG / P. POLE / TRANS. / CONS. POLE / GUY WIRE ANCHOR

TELECOM LINE / PIT / CONNECTION

GAS LINE / CONNECTION / VALVE

STORMWATER / GULLY TRAP / SIDE ENTRY PIT / MANHOLE

TBM / DECK SPIKE / NAIL / PEG / STAKE

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CLIENT: EMKC3

TITLE: DRAINAGE PLAN OF
LOT 869 ON DEPOSITED PLAN 102545
#177 CHESTER PASS ROAD, MILPARA

LOCAL AUTHORITY: CITY OF ALBANY

12d FILE: CHESTER N177 – DRAINAGE

JOB No.	PLAN TYPE	DWG#	REV
23:1222	FS	001	C

HORIZONTAL DATUM
MGA2020 – Zone 50
(SSM ALBANY 53A)
VERTICAL DATUM
AHD
(SSM ALBANY 53A)

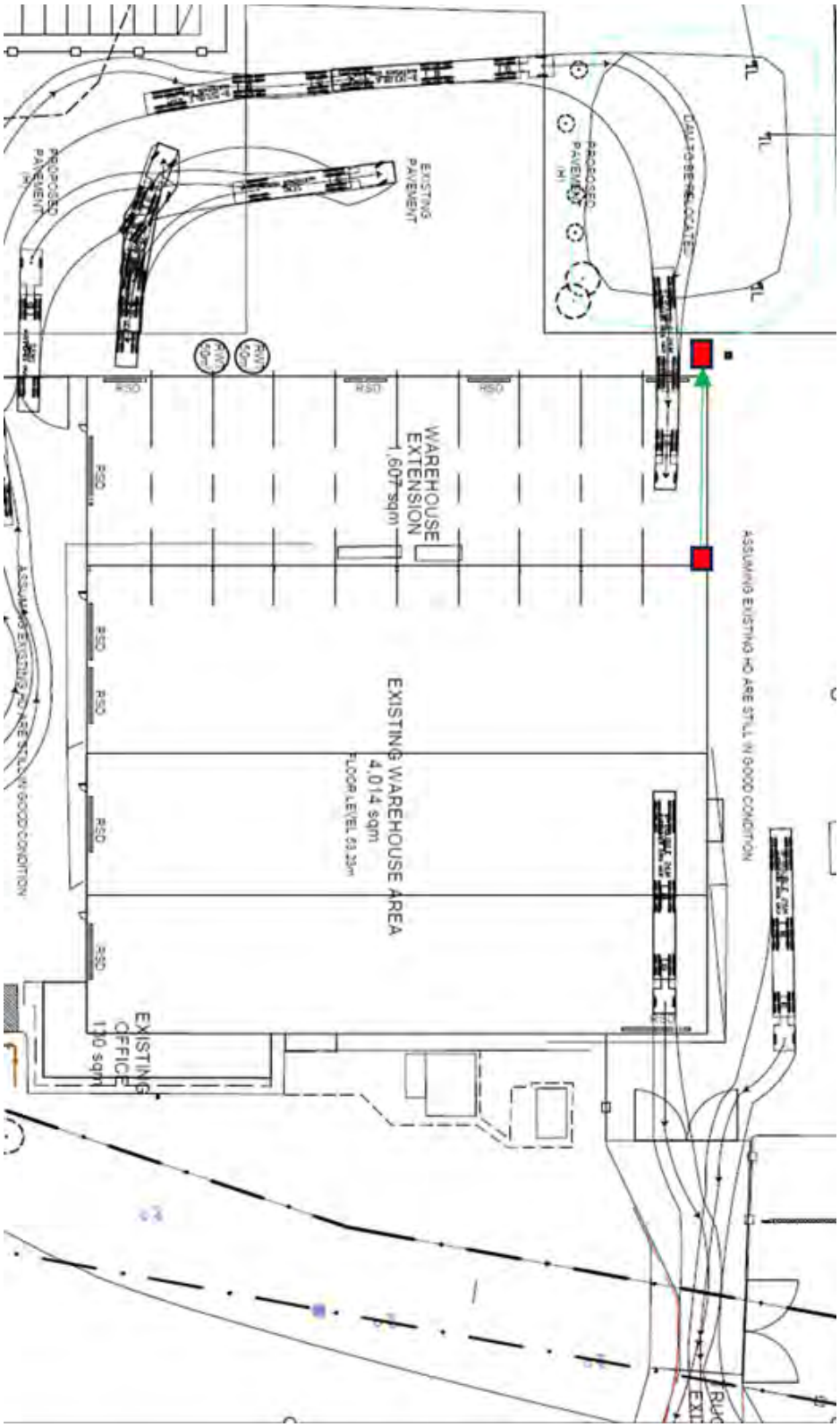
CONTOUR INT: N/A

SHEET #: 3 OF 3

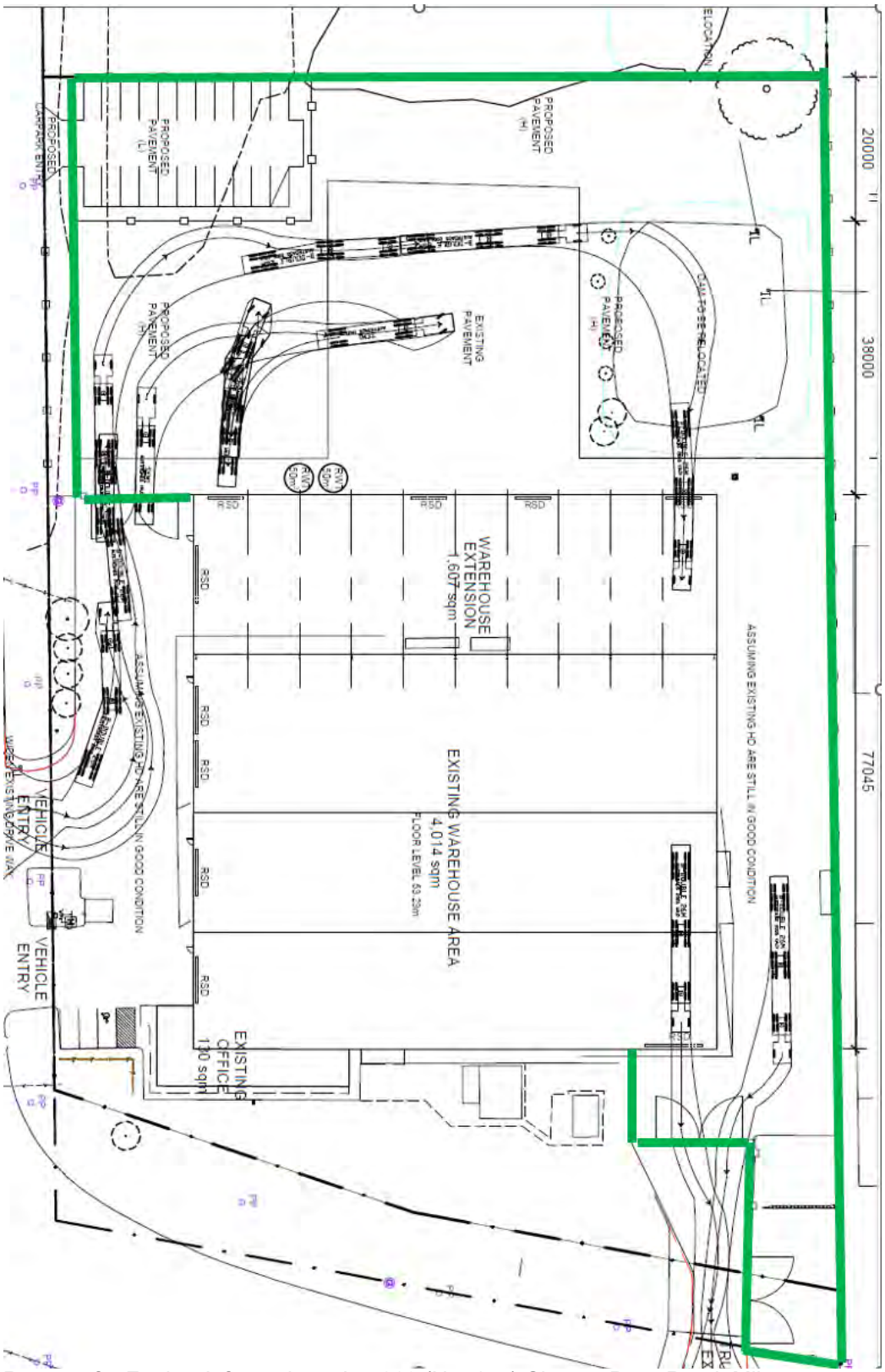
REV.	DESCRIPTION	SURVEY BY/DATE	DRAWN BY/DATE	CHECK
C	ADDED ADDITIONAL DRAINAGE INFORMATION FROM SERVICE LOCATOR	N/A	CM 25/01/2024	JL
B	ADDED ADDITIONAL SHEET WITH DRAINAGE INFORMATION ONLY	N/A	BC 29/11/2023	SK
A	INITIAL ISSUE	EF/CM 20/06/23	EF/CM 30/06/23	SK

APPENDIX B WASTE MAP

The site currently has one commercial skip bin for waste on the northwest corner which will remain in a similar position after the extension (red square below). Storing of steel won't require any additional waste collection.



APPENDIX C FENCE LOCATION MAP



Proposed fencing highlighted green

Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2018

This Certificate has been issued by a person accredited by Fire Protection Association Australia under the Bushfire Planning and Design (BPAD) Accreditation Scheme. The certificate details the conclusions of the full Bushfire Attack Level Assessment Report (full report) prepared by the Accredited Practitioner.

Property Details and Description of Works

Address Details	**Unit no**	**Street no**	**Lot no**	**Street name / Plan Reference**	
		177	869	Chester Pass Road	
	Suburb			**State**	**Postcode**
	Milpara			WA	6330
Local government area	City of Albany				
Main BCA class of the building	7b	**Use(s) of the building**		Warehouse	
Description of the building or works	Proposed Extension to an Existing Warehouse				

Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class D Scrub	Upslope/flat	20m	BAL-19

BPAD Accredited Practitioner Details

Name
Jason Benson BPAD-37893 (L2)

Company Details
Bio Diverse Solutions

I hereby certify that I have undertaken the assessment of the above site and determined the Bushfire Attack Level stated above in accordance with the requirements of AS 3959-2018.

I hereby declare that I am a BPAD accredited bushfire practitioner.
Accreditation No. BPAD-37893
Signature Jbenson
Date 17/05/2024

Authorised Practitioner Stamp

Reliance on the assessment and determination of the Bushfire Attack Level contained in this certificate should not extend beyond a period of 12 months from the date of issue of the certificate. If this certificate 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 certificate issued.

Bushfire Attack Level Assessment Report

Prepared by a BPAD Accredited Practitioner

Fire Protection Association Australia Life Property Environment



AS 3959 BAL Assessment Report

This report has been prepared by an Accredited BPAD Practitioner using the Simplified Procedure (Method 1) as detailed in Section 2 of AS 3959 – 2018. 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.

Property Details and Description of Works

Address Details	**Unit no**	**Street no**	**Lot no**	**Street name / Plan Reference**		
		177	869	Chester Pass Road		
	Suburb				**State**	**Postcode**
	Milpara				WA	6330
Local government area	City of Albany					
Main BCA class of the building	7b	**Use(s) of the building**		Warehouse		
Description of the building or works	Proposed Extension to an Existing Warehouse					

Report Details

Report / Job Number	Report Version	Assessment Date	Report Date
MSC0665	Final	15 May 2024	17 May 2024

BPAD Accredited Practitioner Details

Name
Jason Benson BPAD-37893 (L2)

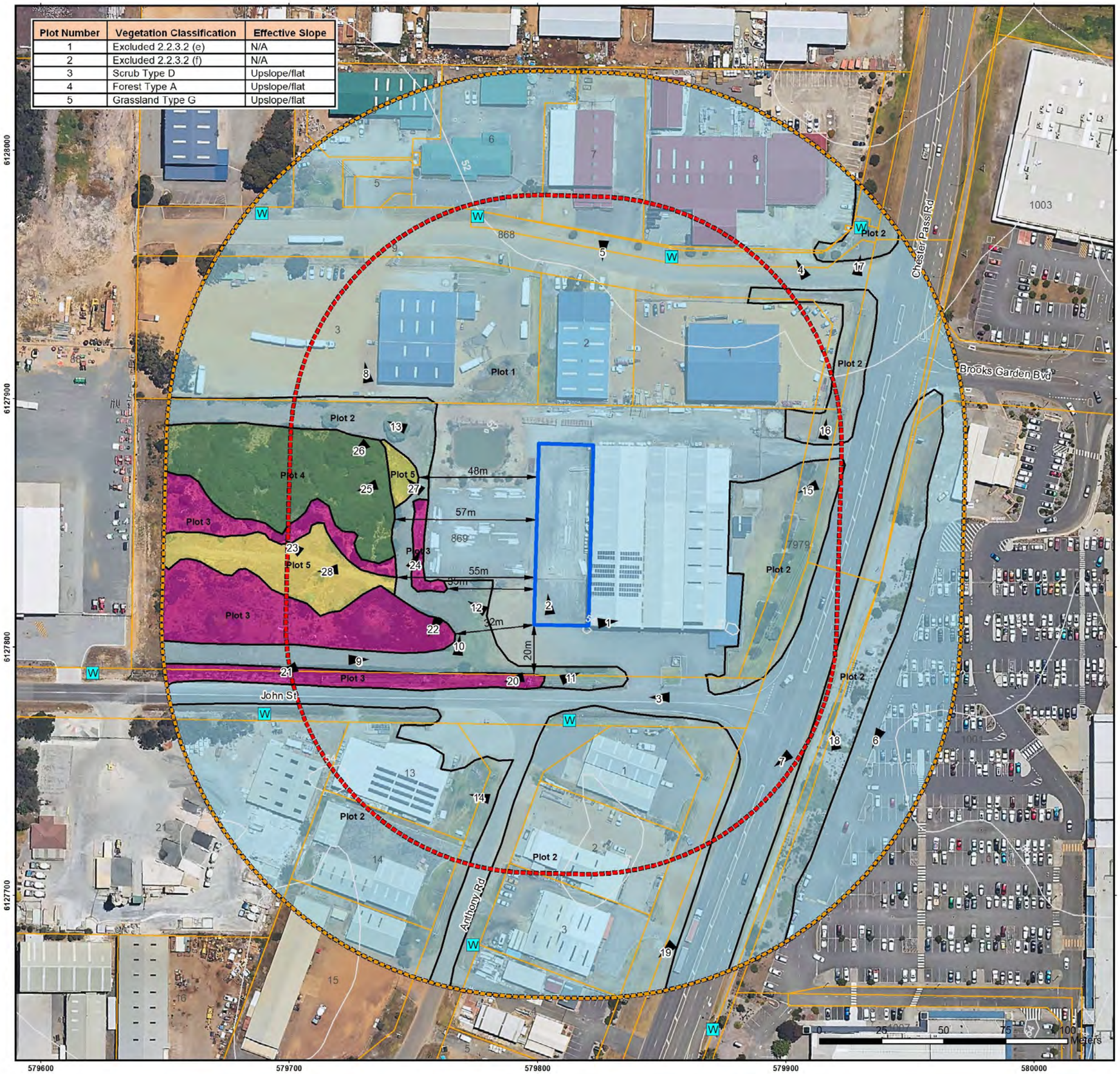
Company Details
Bio Diverse Solutions
29 Hercules Crescent
Albany WA 6330.

I hereby declare that I am a BPAD accredited bushfire practitioner.
Accreditation No. BPAD-37893
Signature Jbenson
Date 17/05/2024

Authorised Practitioner Stamp

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 issued.

Plot Number	Vegetation Classification	Effective Slope
1	Excluded 2.2.3.2 (e)	N/A
2	Excluded 2.2.3.2 (f)	N/A
3	Scrub Type D	Upslope/flat
4	Forest Type A	Upslope/flat
5	Grassland Type G	Upslope/flat



Albany Office:
29 Hercules Crescent
Albany, WA 6330
(08) 9842 1575

Denmark Office:
7/40 South Coast Highway
Denmark, WA 6333
(08) 9848 1309

Esperance Office:
2A/113 Dempster Street
Esperance, WA 6450
(08) 9072 1382

BPAD Bushfire Planning & Design

BIO DIVERSE SOLUTIONS



Overview Map Scale 1:100,000

Legend

- Subject Site
- 100m Assessment Boundary
- 150m Assessment Boundary
- Cadastre
- 2m Contours
- Separation Distance
- Photo Point
- W Water Point
- Vegetation/Plot Boundary

Vegetation

- Forest Type A
- Scrub Type D
- Grassland Type G
- Excluded 2.2.3.2

Scale
1:1,500 @ A3
GDA MGA 2020 Zone 50

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2022
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI 2012

CLIENT
EMKC3 Client Metroll
Lot 869 (No. 177) Chester Pass Road
Milpara WA 6330

Site Plan / BAL Assessment

BAL Assessor	*QA Check*	*Drawn by*
JRB	LTS	GSK
STATUS	*FILE*	*DATE*
FINAL	MSC0665	17/05/2024

Vegetation Classification

All vegetation within 150m of the site / proposed development was classified in accordance with Clause 2.2.3 of AS 3959-2018. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below.

Photo ID:	1	**Plot:**	1
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(e) Non Vegetated Areas			
Description / Justification for Classification			
Location: North, east, southeast, southwest, west and northwest of the subject site. **Description:** Roads, driveways, buildings, dams, hard stand areas and other non-vegetated areas. As per exclusion clause 2.2.3.2 (e) of AS3959-2018. **Photo description:** View facing east towards carpark, located adjacent to the southeast corner of the subject site.			



Photo ID:	2	**Plot:**	1 cont.
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(e) Non Vegetated Areas			
Description / Justification for Classification			
Additional Photo of Plot 1. **Photo description:** View facing north towards hardstand and loading area, located internal to the subject site in the south.			



Photo ID:	3	Plot:	1 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(e) Non Vegetated Areas

Description / Justification for Classification

Additional Photo of Plot 1.

Photo description: View facing west along John Street, located to the southeast of the subject site.

Note: Error in photo direction.



Photo ID:	4	Plot:	1 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(e) Non Vegetated Areas

Description / Justification for Classification

Additional Photo of Plot 1.

Photo description: View facing north-northwest towards carpark, located to the northeast of the subject site.



Photo ID:	5	Plot:	1 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(e) Non Vegetated Areas

Description / Justification for Classification

Additional Photo of Plot 1.

Photo description: View facing south towards hardstand area, located to the north of the subject site.



Photo ID:	6	Plot:	1 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(e) Non Vegetated Areas

Description / Justification for Classification

Additional Photo of Plot 1.

Photo description: View facing south-southwest through carpark, located to the southeast of the subject site.

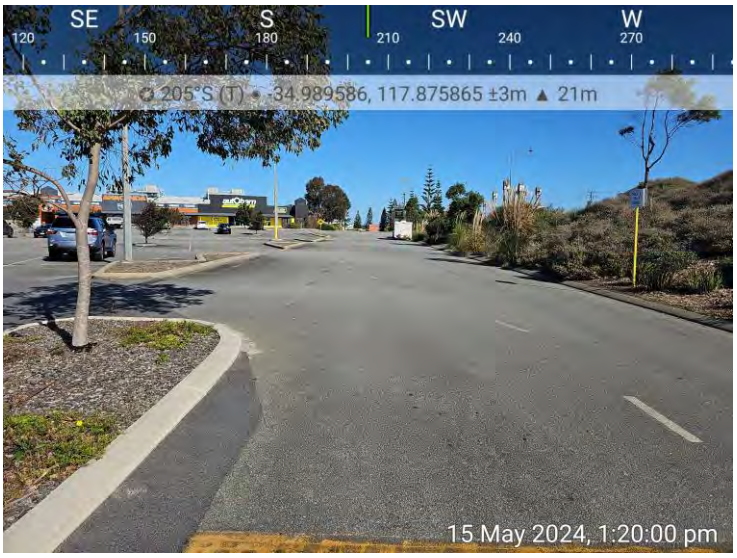


Photo ID:	7	Plot:	1 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(e) Non Vegetated Areas

Description / Justification for Classification

Additional Photo of Plot 1.

Photo description: View facing southwest along Chester Pass Road, located to the southeast of the subject site.



Photo ID:	8	Plot:	1 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(e) Non Vegetated Areas

Description / Justification for Classification

Additional Photo of Plot 1.

Photo description: View facing north toward hardstand area, located to the northwest of the subject site.

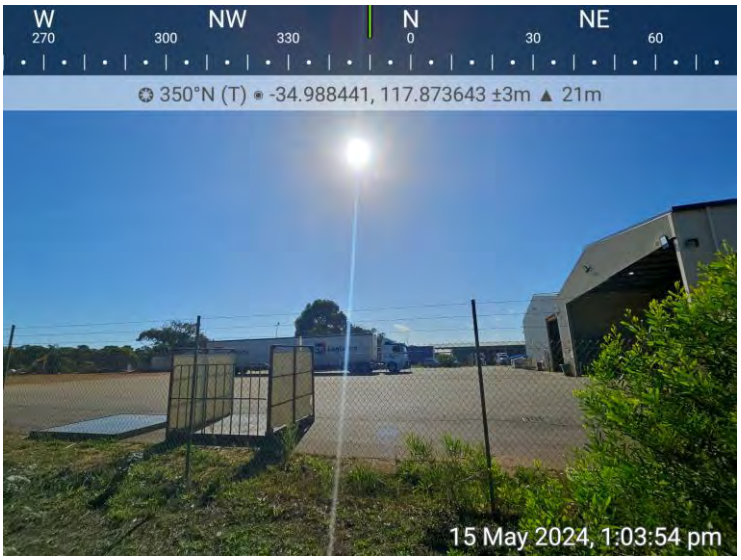


Photo ID:	9	Plot:	2

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(f) Low Threat Vegetation

Description / Justification for Classification

Location: Northeast, east, south, southwest and west of the subject site.

Description: Managed vegetation including maintained lawns and gardens surrounding existing buildings, road reserves and managed firebreaks.

As per exclusion clause 2.2.3.2 (f) of AS3959-2018.

Available fuel loading: <2 t/ha.

Photo description: View facing east along managed firebreak, located to the southwest of the subject site.



Photo ID:	10	Plot:	2 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(f) Low Threat Vegetation

Description / Justification for Classification

Additional Photo of Plot 2.

Photo description: View facing north toward managed grass, located to the southwest of the subject site.



Photo ID:	11	Plot:	2 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(f) Low Threat Vegetation

Description / Justification for Classification

Additional Photo of Plot 2.

Photo description: View facing east-northeast towards low threat area, located to the south of the subject site.



Photo ID:	12	Plot:	2 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(f) Low Threat Vegetation

Description / Justification for Classification

Additional Photo of Plot 2.

Photo description: View facing west-northwest towards managed grass, located to the west of the subject site.

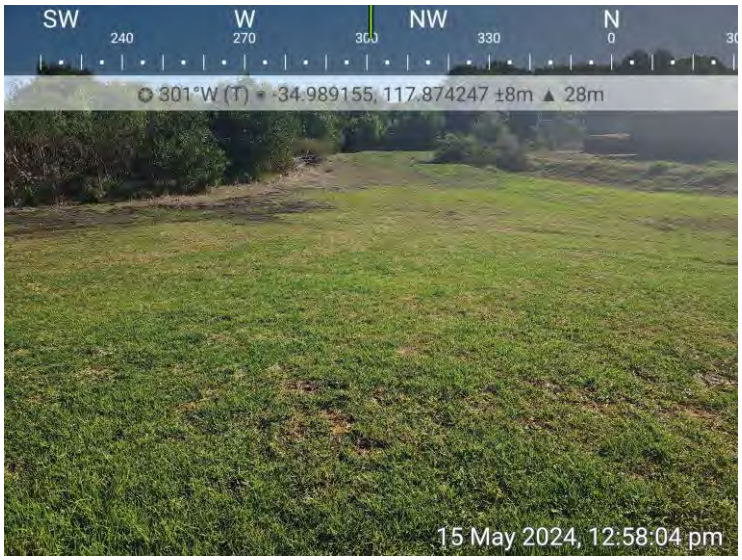


Photo ID:	13	Plot:	2 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(f) Low Threat Vegetation

Description / Justification for Classification

Additional Photo of Plot 2.

Photo description: View facing west-northwest along firebreak, located to the northwest of the subject site.



Photo ID:	14	Plot:	2 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(f) Low Threat Vegetation

Description / Justification for Classification

Additional Photo of Plot 2.

Photo description: View facing west-northwest towards low threat area, located to the south-southwest of the subject site.

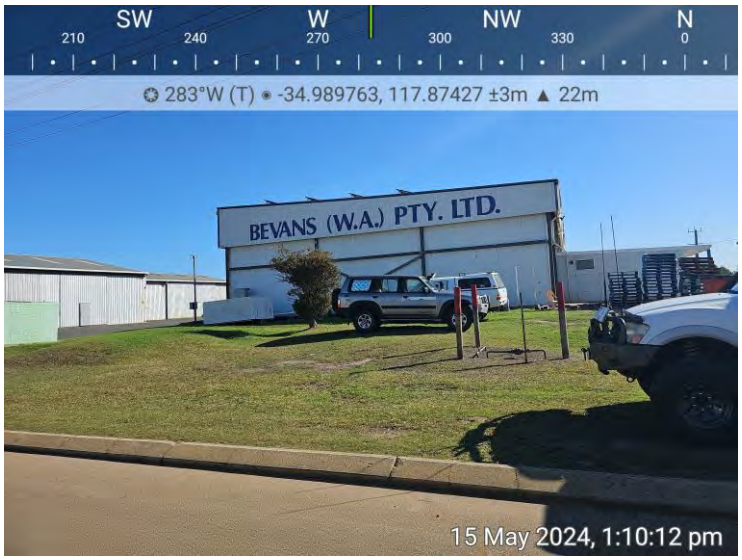


Photo ID:	15	Plot:	2 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(f) Low Threat Vegetation

Description / Justification for Classification

Additional Photo of Plot 2.

Photo description: View facing west-southwest towards low threat area, located to the east of the subject site.



Photo ID:	16	Plot:	2 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(f) Low Threat Vegetation

Description / Justification for Classification

Additional Photo of Plot 2.

Photo description: View facing north towards low threat area, located to the east of the subject site.



Photo ID:	17	Plot:	2 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(f) Low Threat Vegetation

Description / Justification for Classification

Additional Photo of Plot 2.

Photo description: View facing north towards low threat area, located to the northeast of the subject site.



Photo ID:	18	Plot:	2 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(f) Low Threat Vegetation

Description / Justification for Classification

Additional Photo of Plot 2.

Photo description: View facing north-northwest towards low threat area, located to the southeast of the subject site.

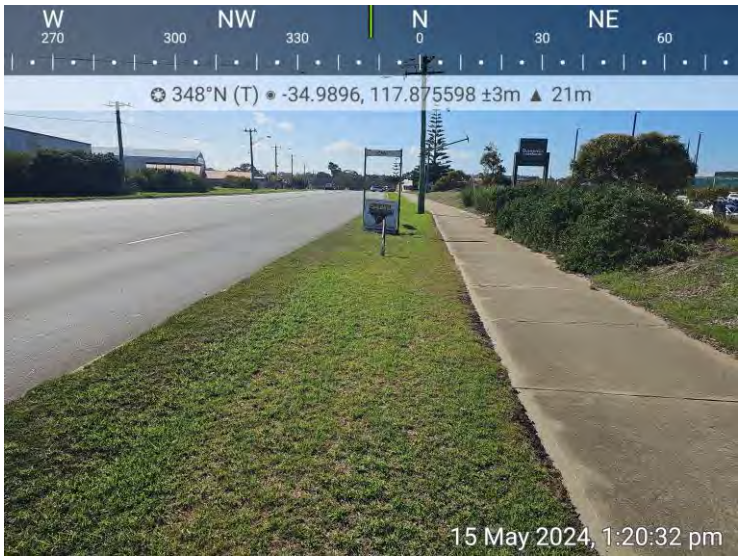


Photo ID:	19	Plot:	2 cont.

Vegetation Classification or Exclusion Clause

Excludable - 2.2.3.2(f) Low Threat Vegetation

Description / Justification for Classification

Additional Photo of Plot 2.

Photo description: View facing southwest towards low threat area, located to the southeast of the subject site.



Photo ID:	20	Plot:	3

Vegetation Classification or Exclusion Clause

Class D Scrub - Open scrub D-14

Description / Justification for Classification

Location: South, southwest and west of the subject site.

Separation distance: 20m.

Dominant species & description: Scrub vegetation consisting of Acacia, Taylorina, Watsonia, tea tree, grasses, sedges and rushes.

Average vegetation height: 1-4m.

Vegetation Coverage: 10-30%foliage cover.

Available fuel loading: 25 t/ha.

Effective slope: Upslope/flat.

Photo description: View facing west-southwest towards scrub vegetation, located to the south-southwest of the subject site.



Photo ID:	21	Plot:	3 cont.

Vegetation Classification or Exclusion Clause

Class D Scrub - Open scrub D-14

Description / Justification for Classification

Additional Photo of Plot 3.

Photo description: View facing west-southwest towards scrub vegetation, located to the southwest of the subject site.



Photo ID:	22	Plot:	3 cont.

Vegetation Classification or Exclusion Clause

Class D Scrub - Open scrub D-14

Description / Justification for Classification

Additional Photo of Plot 3.

Photo description: View facing south-southwest towards scrub vegetation, located to the west of the subject site.



Photo ID:	23	Plot:	3 cont.

Vegetation Classification or Exclusion Clause

Class D Scrub - Open scrub D-14

Description / Justification for Classification

Additional Photo of Plot 3.

Photo description: View facing northwest towards scrub vegetation, located to the west of the subject site.



Photo ID:	24	Plot:	3 cont.

Vegetation Classification or Exclusion Clause

Class D Scrub - Open scrub D-14

Description / Justification for Classification

Additional Photo of Plot 3.

Photo description: View facing northeast towards scrub vegetation, located to the west of the subject site.



Photo ID:	25	Plot:	4

Vegetation Classification or Exclusion Clause

Class A Forest - Low open forest A-04

Description / Justification for Classification

Location: West of the subject site.

Separation distance: 57m.

Dominant species & description: Forest vegetation consisting large sydney golden wattle, victorian tea tree and Melaleuca trees. Dense canopy cover with multilayered scrub mid/understorey of Acacia, Taylorina, Watsonia, tea tree, grasses, sedges and rushes.

Average vegetation height: 4-10m.

Vegetation Coverage: 30-70% foliage cover.

Available fuel loading: 25-35 t/ha.

Effective slope: Upslope/flat.

Photo description: View facing west-southwest towards forest vegetation, located to the west of the subject site.



Photo ID:	26	Plot:	4 cont.

Vegetation Classification or Exclusion Clause

Class A Forest - Low open forest A-04

Description / Justification for Classification

Additional Photo of Plot 4.

Photo description: View facing southwest towards forest vegetation, located to the west of the subject site.



Photo ID:	27	Plot:	5

Vegetation Classification or Exclusion Clause

Class G Grassland – Sown pasture G-26

Description / Justification for Classification

Location: West of the subject site.

Separation distance: 48m.

Dominant species & description: Mixed unmanaged grasses, sedges and weeds in open area. Some trees present, less than 10% canopy cover noted.

Average vegetation height: 100-300mm.

Vegetation Coverage: <10% trees.

Available fuel loading: 4.5 t/ha.

Effective slope: Upslope/flat.

Photo description: View facing northwest towards grassland vegetation, located to the west of the subject site.



Photo ID:	28	Plot:	5 cont.

Vegetation Classification or Exclusion Clause

Class G Grassland – Sown pasture G-26

Description / Justification for Classification

Additional Photo of Plot 5.

Photo description: View facing west towards grassland vegetation, located to the west of the subject site.



Relevant Fire Danger Index

The fire danger index for this site has been determined in accordance with Table 2.1 or otherwise determined in accordance with a jurisdictional variation applicable to the site.

Fire Danger Index			
FDI 40 ☐	FDI 50 ☐	FDI 80 ☒	FDI 100 ☐
Table 2.7	*Table 2.6*	*Table 2.5*	*Table 2.4*

Potential Bushfire Impacts

The potential bushfire impact to the proposed building works from each of the identified vegetation plots are identified below.

Plot	Vegetation Classification	Effective Slope	Separation (m)	BAL
1	Excludable – Clause 2.2.3.2(e)	-	N/A	BAL-LOW
2	Excludable – Clause 2.2.3.2(f)	-	N/A	BAL-LOW
3	Class D Scrub	All upslopes and flat land (0 degrees)	20	BAL-19
4	Class A - Forest	All upslopes and flat land (0 degrees)	57	BAL-12.5
5	Class G Grassland	All upslopes and flat land (0 degrees)	48	BAL-12.5

Table 1: BAL Analysis

Determined Bushfire Attack Level (BAL)

The Determined Bushfire Attack Level (highest BAL) for the site / proposed development has been determined in accordance with clause 2.2.6 of AS3959-2018 using the above analysis.

Determined Bushfire Attack Level	**BAL – 19**

Note: For land uses involving Class 4 to Class 9 buildings, the planning process focuses on location, siting, vehicular access and firefighting water supply, not building construction requirements. AS3959-2018 only applies to Class 1, 2, 3 and associated Class 10a buildings or decks. However, the construction requirements as set out in AS3959-2018 can be utilised voluntarily to enhance a buildings survivability if it is subject to a bushfire.

Appendix 1: Plans and Drawings

Plans and drawings relied on to determine the bushfire attack level.		
Drawing / Plan Description Lot 869 (No. 177) Chester Pass Road Milpara - Site Plan		
Job Number 100450 DA01	**Revision** F	**Date of Revision** 27-03-2024



Appendix 2: Additional Information / Advisory Notes

BAL-19 construction as per Sections 3 and 6 of AS3959-2018.

BAL Calculation is based on the "Method 1" of AS3959-2018. Separation distances were measured in the field to surface fuel loads with a Nikon Forestry Pro. Effective Slopes measured in the field with a Nikon Forestry Pro and verified with AHD contour analysis in GIS mapping. See Site Plan Page 2.

Refer to attached WAPC extract from the current and endorsed guidelines regarding an Asset Protection Zone (APZ) in Appendix 3. This is information for the lot owners regarding long -term maintenance of a lot/building in a bushfire prone area. All areas surrounding the building should be maintained as per APZ standards associated with the BAL setback assigned to the lot/building. Any setback associated to a BAL setback distance is to apply APZ **standards at all times**. Failure of the building owner to do so will void the BAL Assessment as defined in this document.

Builders under contract are to ensure this full BAL documentation/report is given to the lot owner.

AS3959-2018 disclaimer
The survivability of buildings is also dependant on a combination of measures such as landscaping, water supplies, access, building design and maintenance. Care should also be exercised when siting and designing for these measures when constructing a building under this Standard.
(AS3959, 2018)

This Standard is primarily concerned with improving the ability of buildings in designated bushfire-prone areas to better withstand attack form bushfire thus giving a measure of protection to the building occupants (until the fire front passes) as well as to the building itself.
(AS3959-2018)

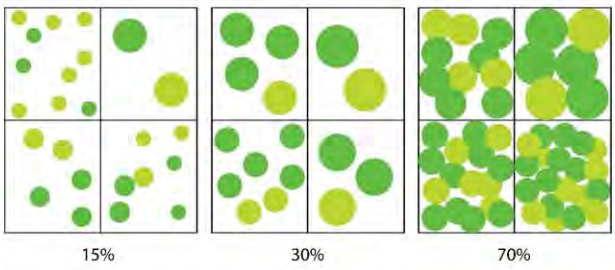
DISCLAIMER
The recommendations and measures contained in this assessment report are based on the requirements of the Australian Standards 3959-2018 – Building in Bushfire Prone Areas. These are considered the minimum standards required to balance the protection of the proposed dwelling and occupants with the aesthetic and environmental conditions required by local, state and federal government authorities. They DO NOT guarantee that a building will not be destroyed or damaged by a bushfire. All surveys and forecasts, projections and recommendations made in this assessment report and associated with this proposed dwelling are made in good faith on the basis of the information available to the fire protection consultant at the time of assessment. The achievement of the level of implementation of fire precautions will depend amongst other things on actions of the landowner or occupiers of the land, over which the fire protection consultant has no control. Notwithstanding anything contained within, the fire consultant/s or local government authority will not, except as the law may require, be liable for any loss or other consequences (whether or not due to negligence of the fire consultant/s and the local government authority, their servants or agents) arising out of the services rendered by the fire consultant/s or local government authority.

Appendix 3: Asset Protection Zone (APZ) standards to apply for long term management of BAL setbacks



ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

OBJECT	REQUIREMENT
Fences within the APZ	• Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).
Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness)	• Should be managed and removed on a regular basis to maintain a low threat state. • Should be maintained at <2 tonnes per hectare (on average). • Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch >6 millimetres in thickness.
Trees* (>6 metres in height)	• Trunks at maturity should be a minimum distance of six metres from all elevations of the building. • Branches at maturity should not touch or overhang a building or powerline. • Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. • Canopy cover within the APZ should be <15 per cent of the total APZ area. • Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ. **Figure 19:** Tree canopy cover – ranging from 15 to 70 per cent at maturity  15% 30% 70%
Shrub* and scrub* (0.5 metres to six metres in height). Shrub and scrub >6 metres in height are to be treated as trees.	• Should not be located under trees or within three metres of buildings. • Should not be planted in clumps >5 square metres in area. • Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground covers* (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)	• Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above. • Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.



ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

OBJECT	REQUIREMENT
Grass	• Grass should be maintained at a height of 100 millimetres or less, at all times. • Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.
Defendable space	• Within three metres of each wall or supporting post of a habitable building, the area is kept free from vegetation, but can include ground covers, grass and non-combustible mulches as prescribed above.
LP Gas Cylinders	• Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building. • The pressure relief valve should point away from the house. • No flammable material within six metres from the front of the valve. • Must sit on a firm, level and non-combustible base and be secured to a solid structure.

** Plant flammability, landscaping design and maintenance should be considered – refer to explanatory notes*

TECHNICAL MEMORANDUM
Flora, Vegetation and Fauna Assessment
177 Chester Pass Road, Albany WA

PROJECT NUMBER	VEP24-016(01)	**DOC. NUMBER**	VEP24-016(01)--001 GAB
PROJECT NAME	EMKC^3 Albany Ecological Assessment	**CLIENT**	EMKC3
AUTHOR	GAB	**REVIEWER**	TAA
VERSION	1	**DATE**	10/05/2024

1. INTRODUCTION

1.1. Project background

Emerge Associates (Emerge) were engaged by EMKC^3 to undertake a flora, vegetation and fauna assessment at 177 Chester Pass Road, Albany WA (herein referred to as the 'site').

The site is located within the City of Albany and extends over approximately 2.9 hectares (ha). It is bounded by commercial/industrial land to the north and west, Chester Pass Road to the east and John Street to the south. The location of the site is shown in **Figure 1**.

1.2. Purpose and scope of work

The flora, vegetation and fauna assessment was required to support a development application. The scope of work was to provide sufficient detail on the flora, vegetation and fauna values within the site to inform the development application process (see **Appendix A**).

As part of the scope of work the following tasks were completed:

- Desktop review of relevant background information pertaining to the site and surrounds, including database searches for conservation significant flora, fauna and communities.
- A reconnaissance field survey to record flora, vegetation and fauna values.
- Identification of potential habitat for conservation significant flora, vegetation and fauna.
- Documentation of the desktop assessment, methodology, field surveys and results into this report.

2. Desktop assessment

2.1. Site Context

2.1.1. Climate

The Albany region of Western Australia experiences a Mediterranean climate of warm, dry summers and mild, wet winters (BoM 2024). Recent rainfall at the closest weather station to the site has been inconsistent with long term averages, and generally indicative of a significant reduction.

2.1.2. Geomorphology and soils

Examination of broad scale soil mapping places the site within the 'Dempster Crest' phase (DPIRD 2020). This phase comprises sands and laterite on elongate crests; duplex sandy gravels, grey deep sandy duplexes, pale deep sands and shallow gravels. Soil landscape mapping is shown in **Figure 2.**

The site is not known to contain any restricted landforms or unique geological features.

2.1.3. Topography

The elevation of the site ranges from 44 metres (m) above sea level to 55 m above sea level.

At the time of survey, the site was observed to be generally flat, with a minor depression towards the centre.

2.1.4. Hydrology and wetlands

Wetlands are areas of seasonally, intermittently or permanently waterlogged land such as poorly drained soils, ponds, billabongs, lakes, swamps, tidal flats, estuaries, rivers and their tributaries (Wetlands Advisory Committee 1977). Wetlands can be recognised by the presence of vegetation associated with waterlogging or the presence of hydric soils such as peat, peaty sand or carbonate mud (Hill et al. 1996).

Wetlands of national or international significance may be afforded special protection under Commonwealth or international agreements.

Review of the *Ramsar List of Wetlands of International Importance* (DBCA 2017) and *A Directory of Important Wetlands in Australia – Western Australia* (DBCA 2018) indicates that no Ramsar or listed 'important wetlands' are located within or near the site.

2.1.5. Regional vegetation

The site is contained within the Southern Jarrah Forrest IBRA subregion and within the 978 association of the Albany system. This subregion is described as low forest, woodland or low woodland with scattered trees and characterised by *Eucalyptus marginata* (jarrah)*, Banksia spp.* (banksia), *Allocasuarina spp* (casuarina). The 'Albany' 978 association was determined to have 29% of its pre-European extent remaining in 2017, with 7% protected for conservation purposes (Government of Western Australia 2018).

2.1.6. Historical land use

Review of historical images available from 1954 onwards shows that the site was largely cleared of native vegetation by 1964 . The partial regrowth of vegetation is apparent up until the 2007 when further clearing in the central portion of the site occurred to allow for development of a carpark and basin. Successive stages of clearing and regrowth appear to have occurred up until the latest image in 2022.

2.2. Threatened and priority flora and fauna

The Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) has compiled various datasets relating to 'matters of national environmental significance' (MNES) (DCCEEW 2024). The *Protected Matters Search Tool* provides general guidance on threatened flora listed under the *Environmental Protection Biodiversity Conservation Act 1999* (EPBC Act) that may occur within a location based on validated records and less reliable unvalidated habitat distribution modelling (DCCEEW 2024).

Department of Biodiversity, Conservation and Attraction's (DBCA) *Threatened and Priority Flora Database* contains records of threatened and priority flora in Western Australia (DBCA 2023). DBCA also maintains a database of conservation significant fauna. Searches of these databases provides point data for threatened and priority flora and fauna within a location, comprising validated and historical unvalidated records.

A search was conducted for threatened, specially protected and priority flora and fauna that may occur or have been recorded within a 15 km or 10 km radius of the site using NatureMap (DBCA 2023), *Protected Matters Search Tool* (DCCEEW 2024) and the DBCA conservation significant fauna and flora databases (reference no. FLORA#26-0424NM and FAUNA#32-0424FA).

A total of 55 flora species were identified from database searches as occurring or potentially occurring within 15 km of the site and 72 fauna species within 10km of the site.

2.3. Threatened and priority ecological communities

The *Protected Matters Search Tool* provides also general guidance on threatened ecological communities (TEC) listed as critically endangered (CR) and endangered (EN) under the EPBC Act that may occur within a location based on reliable records and less reliable habitat distribution modelling (DCCEEW 2024).

DBCA's *Threatened and Priority Ecological Community buffers and boundaries in WA* dataset contains validated records of TECs and priority ecological communities (PEC). Searches of this dataset provides buffered polygons of TEC and PEC records.

The *Protected Matters Search Tool* (DCCEEW 2024) and DBCA's TEC and PEC database (reference no. 45-0424EC) identified 4 TECs and 3 PECs occurring or potentially occurring within a 10 km radius of the site.

2.4. Likelihood of occurrence method

2.4.1. Flora and vegetation

The distribution and habitat preferences of threatened flora species and ecological communities listed in **Section 2** were reviewed against site context information[1] and preliminary survey results. Likelihood of occurrence of threatened flora species and ecological communities within the site was classified as 'high', 'moderate', 'low' or 'negligible' as outlined below in **Table 1**.

[1] Including relevant Commonwealth documentation such as approved conservation advice, listing advice and other relevant literature.

Table 1: Decision matrix for likelihood of occurrence of threatened and priority flora and ecological communities

		Distribution[1]	
		Reliable record within search area	No reliable record within search area (15 km)
Habitat	Suitable	High	Negligible
	Potentially suitable	Moderate	
	Unsuitable	Low	

[1]Reliable record defined as validated, recent (within the last ~40 years) and spatially accurate (refer DBCA search meta data) in order to exclude unverified range or habitat projections.

2.4.2. Fauna

The distribution and habitat preferences of the threatened and specially protected fauna species identified from **Section 2** was reviewed against site context[1] information and preliminary survey results. Likelihood of occurrence of threatened and specially protected fauna species within the site was classified as 'high', 'moderate', 'low', 'very low', 'negligible' or 'nil' as outlined in **Table 2**. Noting some marine species were excluded from the assessment due to lack of habitat.

Table 2: Decision matrix for likelihood of occurrence of threatened, specially protected and priority fauna

		Reliable record[1]		Unreliable record[2]
		Access to site not impeded	Access to site impeded	
Habitat	Suitable	High	Very low	Negligible
	Potentially suitable	Moderate		
	Unsuitable	Low		
	Absent	Nil		

[1]Reliable record defined as DBCA record from the last ~20 years, [2]Unreliable record defined as record >20 years old or PMST prediction.

2.5. Likelihood of occurrence results

2.5.1. Threatened and priority flora

Based on background information available for the site, 11 priority flora species were considered to have a moderate likelihood of occurring within the site, as outlined in **Table 3**. No priority flora species were considered to have a high likelihood of occurrence within the site. The complete likelihood of occurrence assessment is provided as **Appendix B**.

Table 3: Threatened or priority flora species with a moderate likelihood occurrence in the site

Species	Status		Life strategy	Flowering period
	WA	EPBC Act		
Andersonia auriculata	P3	-	P	Apr-Oct
Andersonia sp. Jamesii	P4	-	P	Jun-Oct
Boronia crassipes	P3	-	P	Aug-Sep
Caustis sp. Boyanup	P3	-	P	Jan-Feb
Chorizema carinatum	P3	-	P	Oct-Dec

Drosera paleacea	P1	-	P	Sep-Dec/Jan
Schoenus sp. Grey Rhizome	P1	-	P	Oct
Tricostularia sandifordiana	P3	-	P	Nov-Dec
Lysinema lasianthum	P4	-	P	Jul-Nov
Microtis pulchella	P4	-	P	Nov-Dec/Jan
Prasophyllum paulinae	P1	-	PG	Oct

2.5.2. Vegetation

The database search results identified 7 TEC/PECs as occurring or potentially occurring within a 15 kilometre (km) radius of the site. Information on these communities is provided in **Appendix C**.

2.5.3. Threatened, specially protected and priority fauna

Isoodon fusciventer (quenda) was classified as having a high likelihood of occurrence and seven other threatened, specially protected or priority species were classified as having a moderate likelihood of occurrence. The legislative or policy status and habitat preferences of these species are shown in **Table 4**.

The remainder of the conservation significant fauna species identified in the desktop assessment (64 species) were considered as having a low, very low, negligible or nil likelihood of occurrence. Refer to **Table 4** and **Appendix D** for detail on individual species likelihood of occurrence.

Table 4: Summary of conservation significant fauna species with potential to occur in the site

Species name	Common name	Status		Habitat description
		WA	EPBC Act	
Birds				
Actitis hypoleucos	Common sandpiper	MI	MI	Edge of sheltered waters salt or fresh, e.g. estuaries, mangrove creeks, rocky coasts, near-coastal saltlakes (including saltwork ponds), river pools, lagoons, claypans, drying swamps, flood waters, dams and sewage ponds. Preferring situations where low perches are available (Johnstone & Storr 1998).
Calidris acuminata	Sharp-tailed sandpiper	VU	VU	Occurs in tidal mudflats, saltmarshes and mangroves, as well as shallow fresh, brackish or saline inland wetlands. It is also known from floodwaters, irrigated pastures and crops, sewage ponds, saltfields (Pizzey & Knight 2012).
Falco peregrinus	Peregrine falcon	OS	-	Mainly found around cliffs along coasts, rivers, ranges and around wooded watercourses and lakes (Johnstone and Storr 1998).
Falco peregrinus macropus	Australian peregrine falcon	S	-	Mainly about cliffs along coasts, rivers and ranges and about wooded watercourses and lakes (Johnstone & Storr 1988).
Tringa nebularia	Common greenshank	EN	EN	Mudflats, estuaries, saltmarshes, margins of lakes, wetlands, claypans (fresh and saline), commercial saltfields, sewage ponds (Pizzey & Knight 2012).

Species name	Common name	Status		Habitat description
		WA	EPBC Act	
Tringa stagnatilis	Marsh sandpiper	MI	MI	Mainly shallow fresh or brackish waters: swamps, lakes, river pools, soaks, sewage ponds and bore overflows. Occasionally estuaries and salt ponds, and rarely coasts (DCCEEW 2023).
Mammals				
Isoodon fusciventer	Quenda	P4	-	Dense scrubby, often swampy, vegetation with dense cover up to one metre high (DEC 2012)
Pseudocheirus occidentalis	Western ringtail possum	CR	CR	On the Swan Coastal Plain in Agonis flexuosa woodlands and Agonis flexuosa/ Eucalyptus gomphocephala forests. Also Eucalyptus marginata forests (DBCA 2017).

3. Methods

3.1.1. Vegetation

Vegetation units were identified from information collected during the field survey in April 2024. The vegetation was described according to the dominant species present using the structural formation descriptions of the *National Vegetation Inventory System* (NVIS) (NVIS Technical Working Group 2017). The identified vegetation units were mapped on aerial photography during the field survey and boundaries were interpreted from aerial photography and notes taken in the field. Vegetation condition was mapped on aerial photography based on notes recorded during the field survey to define areas with differing condition and using the Keighery (1994) scale **Table 5**.

Table 5: Vegetation condition scale applied during the field assessment

Condition	Definition (Keighery 1994)
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species.
Very good	Vegetation structure altered obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

3.1.2. Threatened and priority ecological community

Areas of native vegetation potentially representing a TEC/PEC were assessed against key diagnostic characteristics and, if available, size and/or vegetation condition thresholds.

3.1.3. Native vegetation under the EP Act

Vegetation within the site that meets the definition of 'native vegetation' under the *Environmental Protection Act 1986* (EP Act) was recorded.

3.1.4. Fauna habitat

The site was traversed during the day, and the characteristics of fauna habitat and presence of fauna species was recorded. Microhabitats were investigated and secondary evidence of species presence such as tracks, scats, skeletal remains, foraging evidence or calls was also noted.

3.1.5. Black cockatoo habitat

Black cockatoo foraging, breeding and roosting habitat was assessed within the site, as modelled distribution mapping indicated that all three black cockatoo species may occur within the site.

Foraging habitat

Foraging habitat was identified by assessing vegetation in the site for plant species known to provide food for black cockatoos (Davies 1966; Saunders 1980; Johnstone and Storr 1998; Johnstone and Kirkby 1999; Groom 2011; Johnstone *et al.* 2011; DAWE 2022). If present, foraging habitat was classified as either 'native' or 'non-native' based on the predominant vegetation's naturalised status and in accordance with DAWE (2022).

Breeding habitat

Breeding habitat comprises 'habitat trees' which were defined as native eucalypts typically known to support black cockatoo nesting such as marri, jarrah, blackbutt, tuart, wandoo, salmon gum or to a lesser extent flooded gum, with a DBH ≥50 cm or DBH ≥30 cm for wandoo or salmon gum.

Roosting habitat

If present, groups of tall native and non-native trees were assumed to provide roosting habitat. The presence of active or historical roosts in these trees was determined through evidence of roosting activity, such as branch clippings, droppings or moulted feathers.

4. Results

4.1. Flora

4.1.1. Flora species inventory

A total of 15 weed species and 5 native species were recorded in the site during the field survey. The dominant families containing native taxa were *Myrtaceae* and *Fabaceae*. Many non-native and planted species were identified at the site.

A complete species list is provided in **Appendix B**.

4.1.2. Threatened and priority flora

No threatened or priority flora were recorded and none are considered likely to occur in the site due to the lack of suitable habitat and the degraded condition of the site.

4.1.3. Declared pests

No species listed as a declared pest (pursuant to s22(2) of the *Biosecurity and Agriculture Management Act 2007*) were recorded within the site.

4.2. Vegetation

4.2.1. Vegetation units

The following vegetation units were identified within the site: Mp, AlAs, landscape planting, non-native, including shrubs, and grasses and forbes.

A description and the area of each vegetation unit is provided in **Table 6** and representative photographs are provided in **Plate 1** to **Plate 4**. The location of each vegetation unit is shown in **Figure 2**.

Table 6: Vegetation unit present within the site

Vegetation Unit	Description	Area (ha)
Mp	Scattered trees of *Melaleuca preissiana* and occasionally **Acacia longifolia* over low closed grassland and forbeland of predominantly non-native species	0.01
AlAs	Tall open shrubland of **Acacia longifolia* and or **Gaudium laevigatum* over low closed shrubland of *Astartea scoparia* and **Psoralea pinnata* over low grassland and forbeland of predominantly non-native species	0.15
Landscape planting	Closed shrubland of planted **Calistopmen sp.* and non-native species over mulch	0.01
Non-native grasses and forbes	Low closed grassland and forbeland of predominantly non-native species	0.9
Non-native shrubs	Tall open to closed shrubland of **Acacia longifolia* and or **Gaudium laevigatum* over **Psoralea pinnata* and occasionally *Astartea scoparia* over low grassland and forbeland of predominantly non-native species	0.60
Non-native shrubs	Open shrubland of **Calistopmen sp., *Acacia longifolia* and **Gaudium laevigatum* over low open grassland and forbeland of predominantly non-native species or bare ground	0.02



*Plate 1: Vegetation unit **Mp** in 'degraded - completely degraded' condition*



*Plate 2: Vegetation unit **AlAs** in 'degraded - completely degraded' condition*



*Plate 3: Vegetation unit **Non-native shrubs** in 'completely degraded' condition*



*Plate 4: Vegetation unit **Non-native grasses and forbes** in 'completely degraded' condition*

4.2.2. Vegetation condition

The vegetation in the site occurred in 'degraded', 'degraded - completely degraded' and 'completely degraded condition. The extent of vegetation by condition category is detailed in **Table 7** and shown in **Figure 3**.

Table 7: Vegetation condition categories within the site

Condition category (Keighery (1994))	Size (ha)
Pristine	0
Excellent	0
Very good	0
Good – very good	0
Good	0
Degraded	0.06
Degraded – completely degraded	0.23
Completely degraded	2.56

4.2.3. Threatened and priority ecological communities

An area likely representative of the '*Astartea scoparia* swamp thicket' PEC exists within the central southern portion of the site (see **Figure 5**). This PEC is listed as a priority 1 community in Western Australia. The PEC was recorded to be in degraded condition, as shown in **Plate 5**.



Plate 5: Astartea scoparia Swamp Thicket PEC in 'degraded' condition

4.2.4. Native vegetation under the EP Act

A total of approximately 0.16 ha of vegetation meeting the definition of 'native vegetation' pursuant to the EP Act occurs within the site, comprising **Mp** and **AIAs** vegetation. This includes scattered *Melaleuca preissiana* (modong) and patches comprising species such as *Acacia longifolia* (Sydney golden wattle), *Astartea scoparia*, *Juncus pallidus* (pale rush) and infrequently noted juvenile *Agnosis flexuosa* (peppermint).

4.3. Fauna

4.3.1. Fauna habitat

Habitat values are limited by historical disturbance and are primarily suited to widespread fauna species with non-specific habitat requirements.

The **AlAs** vegetation provides a cover of native shrubs and understory cover of riparian vegetation that may offer cover for ground dwelling fauna.

Native and non-native trees and large shrubs associated with the ***Mp*** and **Non-native shrubs** vegetation units may also provide value to native birds and other arboreal fauna. While **Non-native grasses and forbes** areas may be used for foraging.

4.3.2. Fauna species inventory

No fauna were observed onsite during the survey. However, evidence of *Isoodon fusciventer* (quenda)(diggings), *Macropus fuliginosus* (western grey kangaroo) and *Oryctolagus cuniculus* (rabbit) (scats) was recorded at the site.

4.3.3. Conservation significant fauna

Quenda, which were identified as having a high likelihood of occurrence, were recorded in the site.

5. Discussion

5.1. Flora and vegetation

Of the fourteen threatened and priority flora species identified as having moderate potential of occurring in the site, none were identified during the field survey. Where possible, flora and vegetation surveys should be undertaken during the season that is most suitable for detection and identification of the range of flora likely to occur in the area (EPA 2016). Whilst the survey was undertaken outside of the optimal spring flowering period, due to the degraded condition of vegetation within the site it is considered unlikely that these species would be present. Further survey is therefore not considered necessary to confirm their absence.

The **AlAs** and **Mp** and to a lesser extent **Non-native shrubs** vegetation units contain 'native vegetation'.

In Western Australia 'native vegetation' is defined under section 3(1) and 51A of the EP Act as follows:

Indigenous aquatic or terrestrial vegetation and includes dead vegetation unless that dead vegetation is of a class declared by regulation to be excluded from this definition but does not include vegetation in a plantation.

Planted vegetation is not considered native vegetation unless:

- sown, planted or propagated as required under the EP Act or another written law

- otherwise declared by regulation to be defined as native vegetation.

Under the EP Act, native vegetation cannot be cleared without a permit or valid exemption.

Threatened ecological communities (TECs) may be protected under the *Biodiversity Conservation Act 2016* (BC Act) and associated regulations and/or the Commonwealth EPBC Act. No vegetation in the site represents a TEC.

The *Astartea scoparia* swamp thicket PEC (priority 1), was recorded in the site (**Figure 5**). Limited information exists on diagnostic criteria for this PEC. The vegetation identified as *Astartea scoparia* swamp thicket is present in degraded condition and it is unclear whether it is sufficiently intact to be considered relevant. Nevertheless, it was recorded on the basis that being dominated by *Astartea scoparia* it is assumed to be at least generally representative.

PECs are ecological communities that are not listed as threatened under the BC Act or EPBC Act, but are otherwise considered rare or under threat. PECs are published on DBCA's priority list (DBCA 2022b, c) and classified as either 'priority 1' (P1), 'priority 2' (P2), 'priority 3' (P3) or 'priority 4' (P4). PECs do not have direct statutory protection, and so, whilst their classification is taken into account during State and Local government approval processes, they have the same legal protection as native vegetation.

5.2. Fauna

With the exception of quenda, the site generally has low value as habitat for native fauna. Nevertheless, a range of common and widespread species are likely to occur.

Quenda are a small marsupial that is commonly observed in the Albany region, including urban areas and particularly where understorey vegetation or grasses provide dense cover.

Western ringtail possum was identified as having a moderate likelihood of occurrence. While this species could occur, it would probably only be as a transient visitor as the vegetation present is not core habitat.

Similarly, the bird species given a moderate likelihood of occurrence might occasionally pass through or fly over the site but are not expected to be residents or regular visitors.

With respect to black cockatoos, the site lies within the modelled distribution of forest red-tailed, Baudin's and Carnaby's black cockatoo. None of the trees in the site qualify as habitat trees, nor would any be considered to have potential as roost sites or provide foraging habitat. Therefore, if black cockatoos were to occur in the site it would be occasional and for short periods of time.

6. Conclusions

6.1. Flora and vegetation

Vegetation in the site is predominantly non-native. However, remnant and regrown native vegetation occurs, including the priority 1 PEC *Astartea scoparia* swamp thicket. In accordance with the EP Act, a permit or exemption would need to be obtained for removal of this vegetation.

6.2. Fauna and fauna habitat

The priority 3 marsupial, quenda, was recorded in the site (diggings). The site provides suitable habitat for this species. However, due to its small size and historical disturbance, the site is otherwise primarily suited to widespread fauna species with non-specific habitat requirements.

7. Limitations

In accordance with the *Environmental Factor Guideline: Flora and Vegetation* (EPA 2016), where possible, flora and vegetation surveys should be undertaken during the season that is most suitable for detection and identification of the range of flora likely to occur in the area. The survey was completed by an experienced ecologist (>20 years' botanical experience in the southwest of WA) and the entire site was traversed. While the survey was completed outside of spring, due to the degraded condition of vegetation, timing is not considered to have posed significant limitation to outcomes of the assessment.

8. References

8.1. General references

Bray, D. J. and Gomon, M. F. 2018, Pouch Lamprey, *Geotria australis*.

Bureau of Meterology (BoM) 2024, *Climate Data Online*, <http://www.bom.gov.au/climate/data/>.

Christensen, P. and Strahan, R. 1984, The Australian Museum Complete Book of Australian Mammals, Angus and Robertson Publishers, Sydney.

Department of Agriculture, Water and the Environment (DAWE) 2022, *Referral guideline for 3 WA threatened black cockatoo species: Carnaby's Cockatoo, Baudin's Cockatoo and the Forest Red-tailed Black cockatoo*, Canberra.

Department of Biodiversity, Conservation and Attractions (DBCA) 2023, *NatureMap*, <https://static.dbca.wa.gov.au/pages/naturemap.html>.

Department of Biodiversity, Conservation and Attractions (DBCA) 2017, *Ramsar Sites (DBCA-010)*.

Department of Biodiversity, Conservation and Attractions (DBCA) 2018, *Directory of Important Wetlands in Australia - Western Australia (DBCA-045)*.

Department of Biodiversity Conservation and Attractions (DBCA) 2019, *Vegetation Complexes - South West forest region of Western Australia (DBCA-047)*, Kensington.

Department of Biodiversity, Conservation and Attractions (DBCA) 2022, *Priority Ecological Communities for Western Australian Version 34*.

Department of Biodiversity, Conservation and Attractions (DBCA) 2023, *Methods for survey and identification of Western Australian threatened ecological communities (draft)*, Perth, Western Australia.

Department of Biodiversity, Conservation and Attractions (DBCA) 2023, *Threatened Species and Communities - Data Searches*, Perth, WA, <https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities>.

Department of the Climate Change, Energy, the Environment and Water 2023, Conservation Advice for *Phaethon rubricauda westralis* (Indian Ocean red-tailed tropcbird), Canberra.

Department of the Climate Change, Energy, the Environment and Water 2023, *Limicola falcinellus* in Species Profile and Threats Database, Canberra.

Department of Climate Change, Energy, the Environment and Water (DCCEEW) 2024, *Protected Matters Search Tool*, <https://pmst.awe.gov.au/>.

Department of Primary Industries and Regional Development (DPIRD) 2020, *Soil Landscape Mapping - Systems (DPIRD-064)*.

Environment Australia 2000, *Revision of the Interim Biogeographic Regionalisation for Australia (IBRA) and Development of Version 5.1 - Summary Report*, Department of Environment and Heritage.

Environmental Protection Authority (EPA) 2016b, *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment*, Perth.

Government of Western Australia 2018, *Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017*, WA Department of Biodiversity, Conservation and Attractions, Perth.

Groom, C. 2011, *Plants Used by Carnaby's Black Cockatoo*, Department of Environment and Conservation, Perth.

Johnstone, R. E., Johnstone, C. and Kirkby, T. 2011, *Black Cockatoos on the Swan Coastal Plain: Carnaby's Cockatoo (Calyptorhynchus latirostris), Baudin's Cockatoo (Calyptorhynchus baudinii) and the Forest Red-tailed Black Cockatoo (Calyptorhynchus banksii naso) on the Swan Coastal Plain (Lancelin–Dunsborough), Western Australia. Studies on distribution, status, breeding, food, movements and historical changes.*, Department of Planning, Western Australia.

Johnstone, R. E. and Kirkby, T. 1999, *Food of the Red-tailed Forest Black Cockatoo Calyptorhynchus banksii naso in Western Australia*, Western Australian Naturalist, 22: 167-178.
Johnstone, R. E. and Storr, G. M. 1998, Handbook of Western Australian Birds. Volume 1 - Non-Passerines (Emu to Dollarbird), Western Australian Museum, Perth.
Marchant, S. and Higgins, P. J. 1993, Handbook of Australian, New Zealand and Antarctic Birds. Volume two - Raptors to Lapwings, Oxford University Press, Melbourne, Victoria.
Morgan, D. L., Beatty, S. J., Klunzinger, M. W., Allen, M. G. and Burnham, Q. E. 2011, Field Guide to the Freshwater Fishes, Crayfishes and Mussels of South Western Australia, SERCUL, Perth, Western Australia.
Macrombe, M. 2004, Field Guide to Australian Birds, Steve Parish Publishing, Archerfield, Queensland.
NVIS Technical Working Group 2017, *Australian Vegetation Attribute Manual: National Vegetation Information System*, Department of the Environment and Energy, Canberra.
Pizzey, G. and Knight, F. 2012, The Fieldguide to the Birds of Australia, Harper Collins Publishers, Sydney, Australia
Threatened Species Scientific Committee (TSSC) 2018, Conservation advice for Bettongia penicillata (woylie), Department of the Environment, Canberra.
W. A. L. I. Authority (WALIA) 2024, *Landgate Map Viewer Plus*, <https://map-viewer-plus.app.landgate.wa.gov.au/index.html>.
(Western Australian Herbarium) 2024, *Florabase*, Department of Biodiveristy, Conservation and Attractions (DBCA), <https://florabase.dbca.wa.gov.au/>.
Wetlands Advisory Committee 1977, *The status of reserves in System Six*, Environmental Protection Authority, Perth.

8.2. Online references

The online resources that have been utilised in the preparation of this report are referenced in **Section 8.1**, with access date information provided in **Table R1**.

Table R1: Access dates for online references

Reference	Date accessed	Website or dataset name
DCCEEW (2023)	24/04/2024	Protected Matters Search Tool
DBCA (2023)	19/04/2024	NatureMap
DBCA (2023)	19/04/2024 & 22/04/2024	Threatened Species and Communities - Data Searches
WALIA (2024)	19/04/2024	Landgate Map Viewer
Western Australian Herbarium (2024)	30/04/2024	Florabase

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Figures

Figure 1: Site Location

Figure 2: Geology

Figure 3: Vegetation Units

Figure 4: Vegetation Condition

Figure 5: Priority Ecological Communities



Figure 1: Site Location

Project:	Ecological Assessment EMKC3 Albany Ecological Assessment
Client:	EMKC3

Plan Number:
VEP24-016(01)--F01

Drawn:	AS
Date:	06/05/2024
Checked:	GAB
Approved:	TAA
Date:	10/05/2024

N

0 25 50
Metres

Scale: 1:2,000@A4

GDA2020 MGA Zone 50

emerge ASSOCIATES

While Emerge Associates makes every attempt to ensure the accuracy and completeness of data, Emerge accepts no responsibility for externally sourced data used
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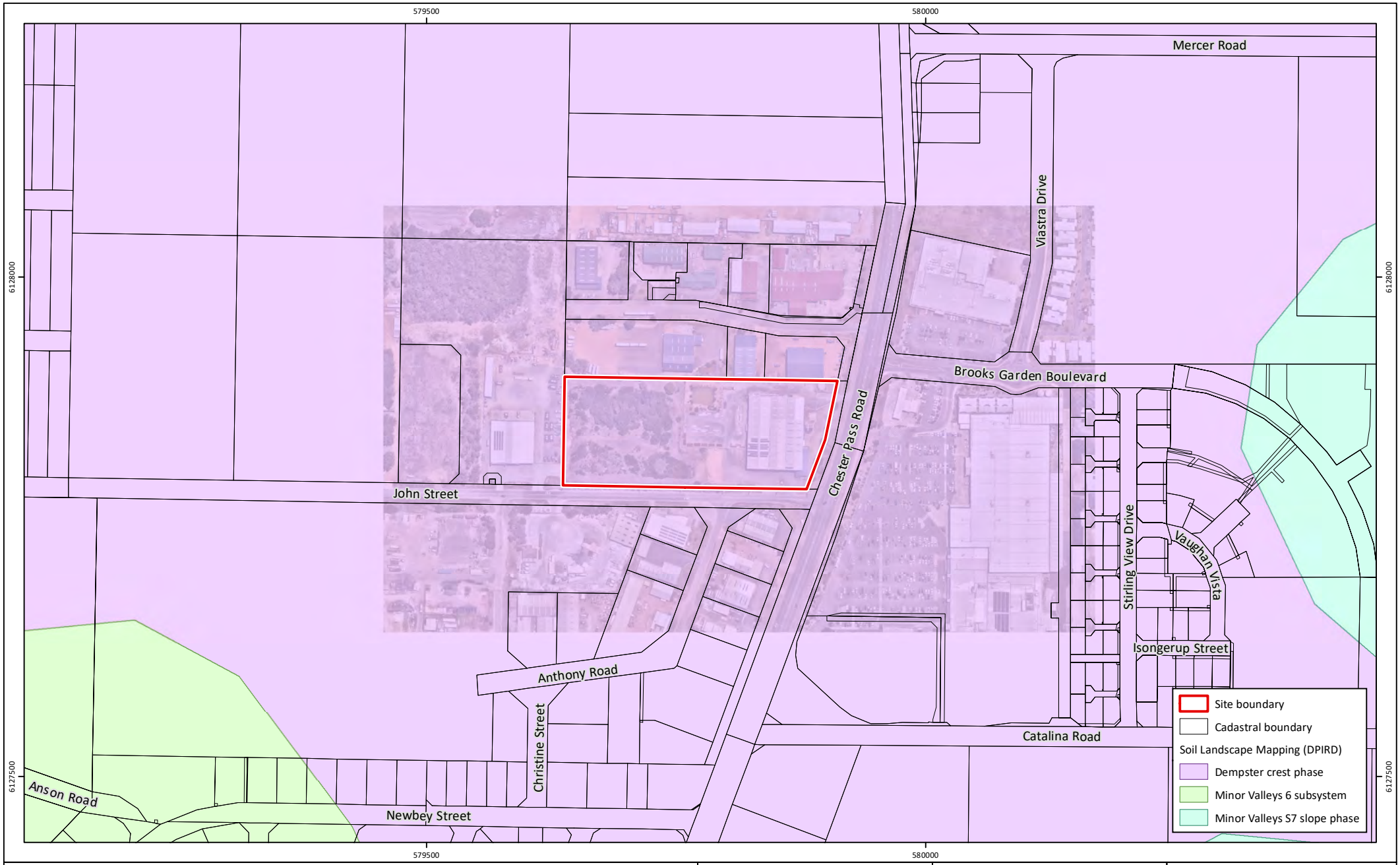


Figure 2: Soil Mapping

Project: Ecological Assessment
EMKC3 Albany Ecological Assessment
Client: EMKC3

Plan Number:
VEP24-016(01)--F02
Drawn: AS
Date: 06/05/2024
Checked: GAB
Approved: TAA
Date: 10/05/2024

N

0 40 80 120
Metres
Scale: 1:5,000@A4
GDA2020 MGA Zone 50

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Figure 3: Vegetation Units

Project: Ecological Assessment
EMKC3 Albany Ecological Assessment
Client: EMKC3

Plan Number:
VEP24-016(01)--F03
Drawn: AS
Date: 06/05/2024
Checked: GAB
Approved: TAA
Date: 10/05/2024

N

0 10 20 30
Metres
Scale: 1:1,250@A4
GDA2020 MGA Zone 50

emerge ASSOCIATES

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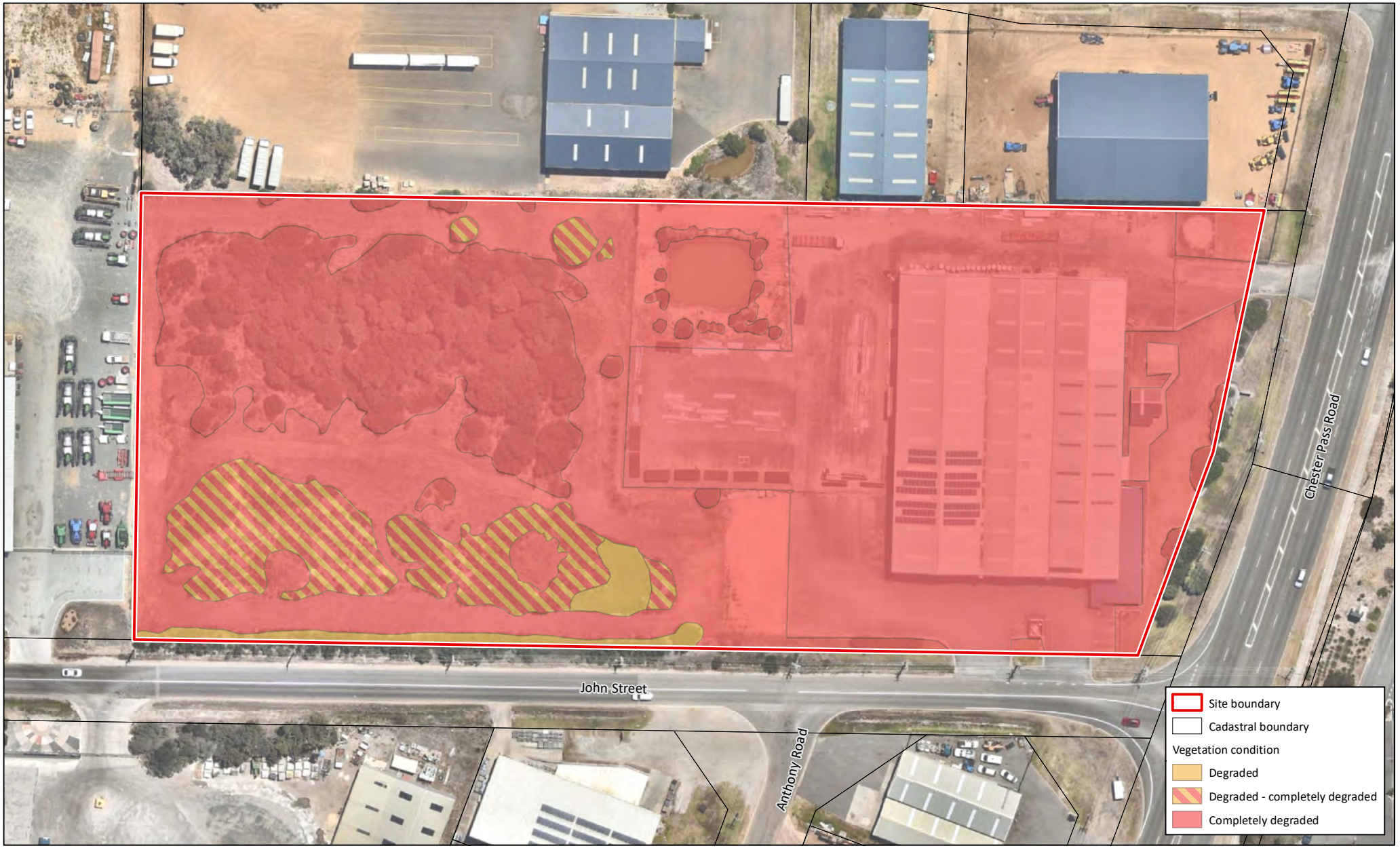


Figure 4: Vegetation Condition

Project: Ecological Assessment
EMKC3 Albany Ecological Assessment
Client: EMKC3

Plan Number:
VEP24-016(01)--F04
Drawn: AS
Date: 06/05/2024
Checked: GAB
Approved: TAA
Date: 10/05/2024

N

0 10 20 30
Metres
Scale: 1:1,250@A4
GDA2020 MGA Zone 50

emerge ASSOCIATES

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Figure 5: Priority Ecological Communities

Project: Ecological Assessment
EMKC3 Albany Ecological Assessment
Client: EMKC3

Plan Number:
VEP24-016(01)--F05
Drawn: AS
Date: 06/05/2024
Checked: GAB
Approved: TAA
Date: 10/05/2024

N

0 10 20 30
Metres
Scale: 1:1,250@A4
GDA2020 MGA Zone 50

emerge ASSOCIATES

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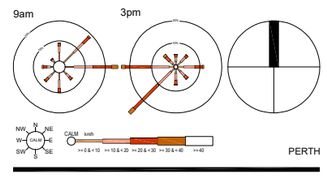
Appendix A

Development Plans

REVISIONS

A	PRELIMINARY	21.11.23
B	REVISION – SURVEY OVERLAY	29.01.24
C	REVISION – SURVEY OVERLAY	09.02.24
D	REVISION – REMOVED WALL, RSD & CARPARK UPDATE	06.03.24
E	REVISION – FENCE & GATE UPDATE	20.03.24
F	REVISION – FOR APPROVAL	27.03.24





EMKC³
development | cubed

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ARBV 17867 | NSW ARB 10125 | BOAQ 5835
DEP0003111 | PDP0001062

PROJECT

EXPANSION

177 CHESTER PASS ROAD
MILPARA, WA

DRAWING TITLE

PROPOSED ESTATE PLAN

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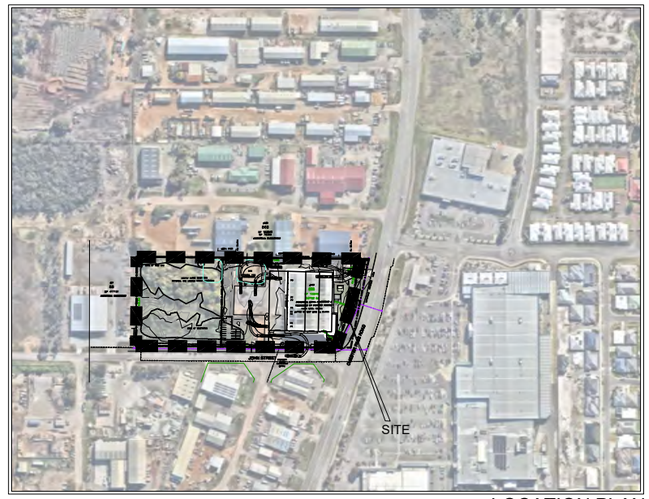
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CREATE DATE : 27.03.2024 PLOT DATE : 27.03.2024

LAST SAVED BY: aaimun.tariq

100450 DA01 E

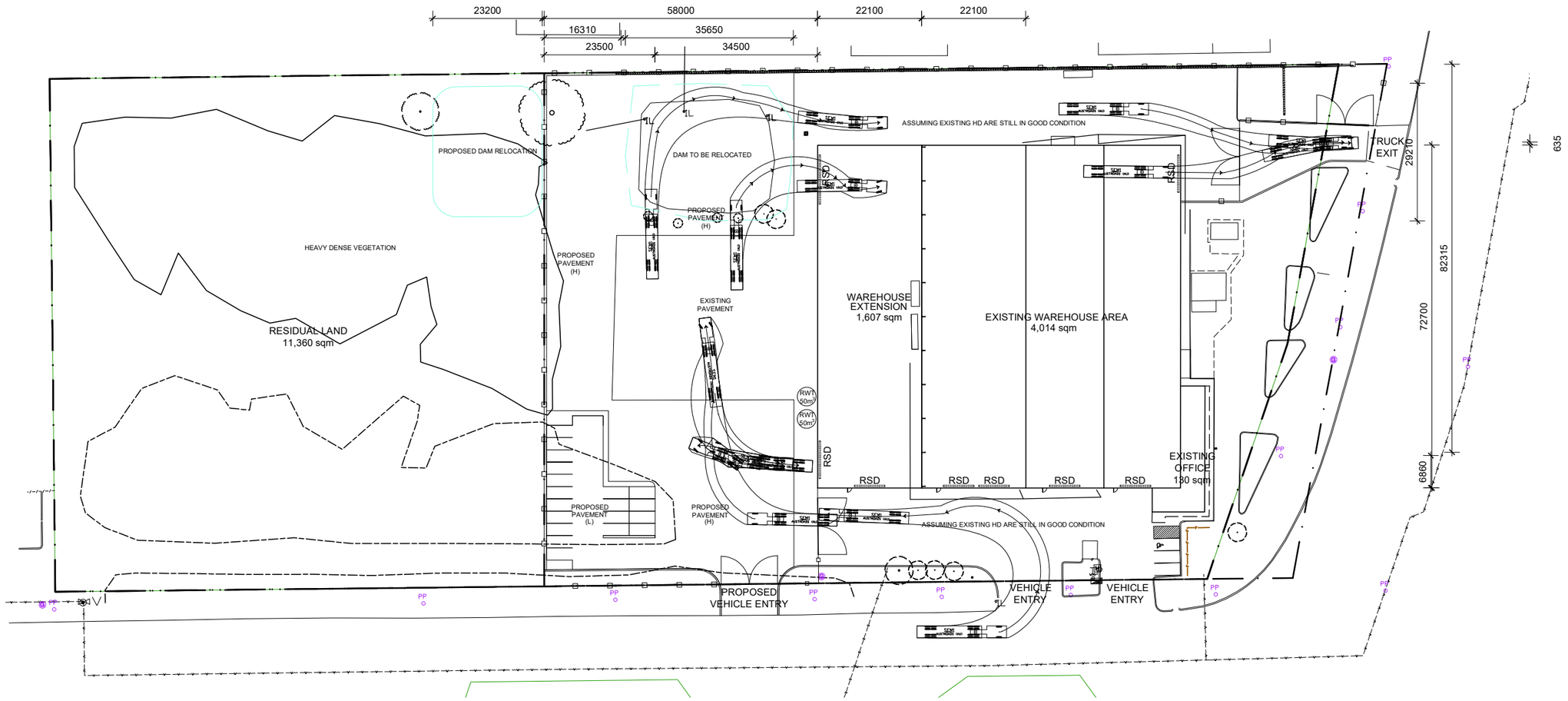
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LOCATION PLAN

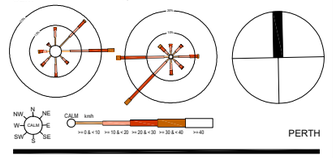
REVISIONS

A	PRELIMINARY	21.12.23
B	REVISION – CIVIL – BASIN	09.02.24
C	REVISION – REMOVED WALL, RSD & CARPARK UPDATE	06.03.24
D	REVISION – FENCE& GATE UPDATE	20.03.24
E	REVISION – FOR APPROVAL	27.03.24



DEVELOPMENT SUMMARY

SITE AREA	17,066 sqm
EXISTING WAREHOUSE AREA	4,014 sqm
EXISTING OFFICE	130 sqm
WAREHOUSE EXTENSION	1,607 sqm
TOTAL BUILDING AREA	5,751 sqm
EFFICIENCY	33.70 %
CARPARKING PROVIDED	22 spaces
ADDITIONAL HD PAVEMENT (H)	3,680 sqm
ADDITIONAL LD PAVEMENT (L)	555 sqm



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AREV 17867 | NSW ARB 10125 | BOAQ 5835
DEP0003111 | PDP0001062

PROJECT

EXPANSION

177 CHESTER PASS ROAD
MILPARA, WA

DRAWING TITLE

PROPOSED SITE PLAN

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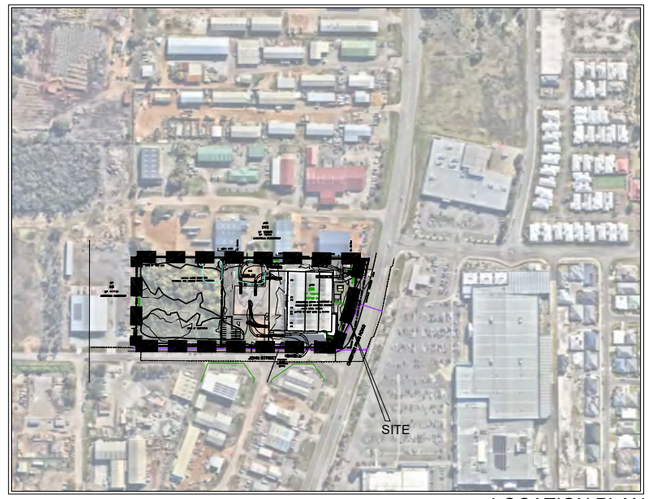
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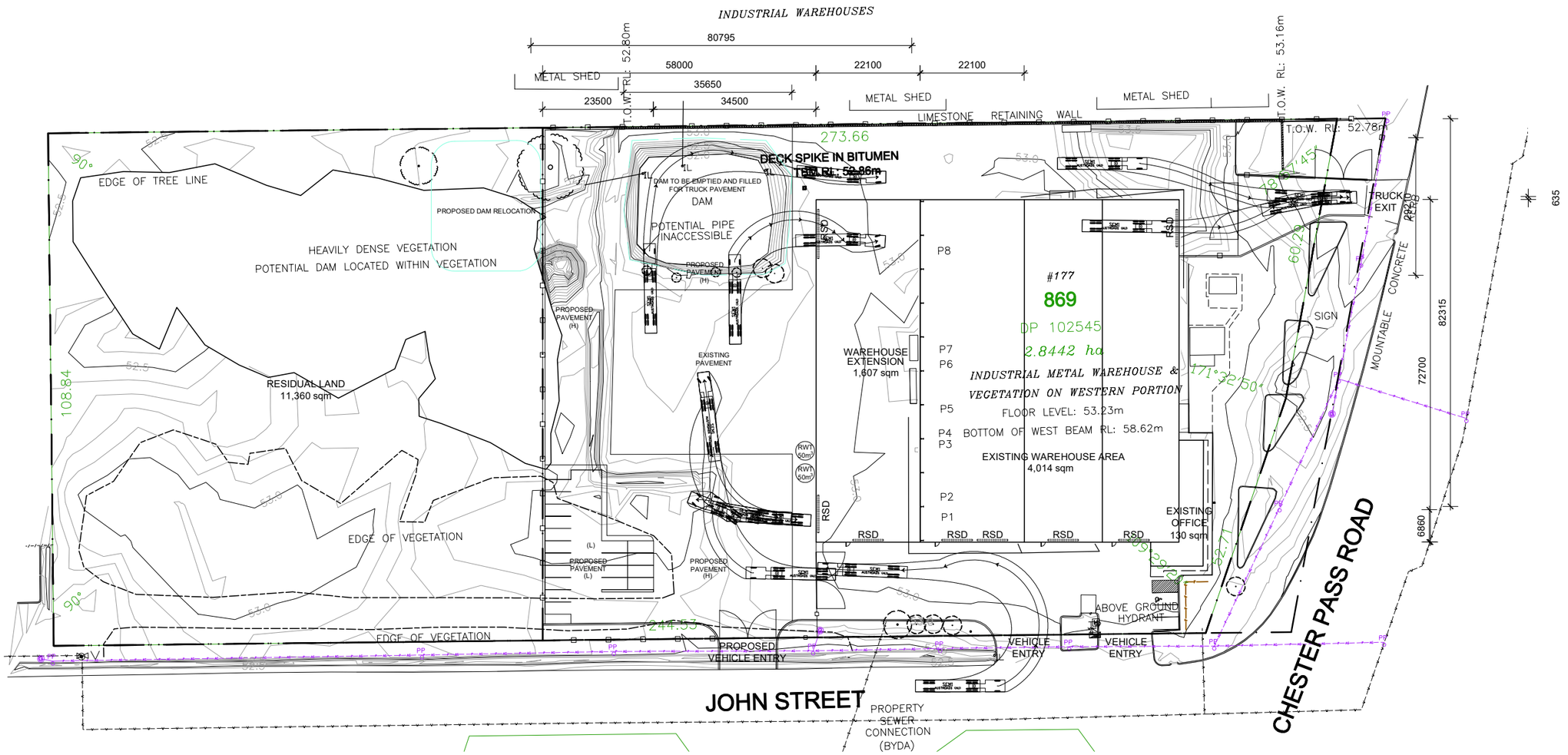
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REVISIONS

A	PRELIMINARY	21.12.23
B	REVISION – SURVEY OVERLAY	29.01.24
C	REVISION – REMOVED WALL, RSD & CARPARK UPDATE	06.03.24
D	REVISION – FENCE & GATE UPDATE	20.03.24
E	REVISION – FOR APPROVAL	27.03.24

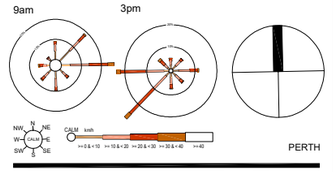


LOCATION PLAN



DEVELOPMENT SUMMARY

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ARBV 17867 | NSW ARB 10125 | BOAQ 5835
DEP0003111 | PDP0001062

PROJECT

EXPANSION

177 CHESTER PASS ROAD
MILPARA, WA

DRAWING TITLE

PROPOSED SITE PLAN
WITH SURVEY

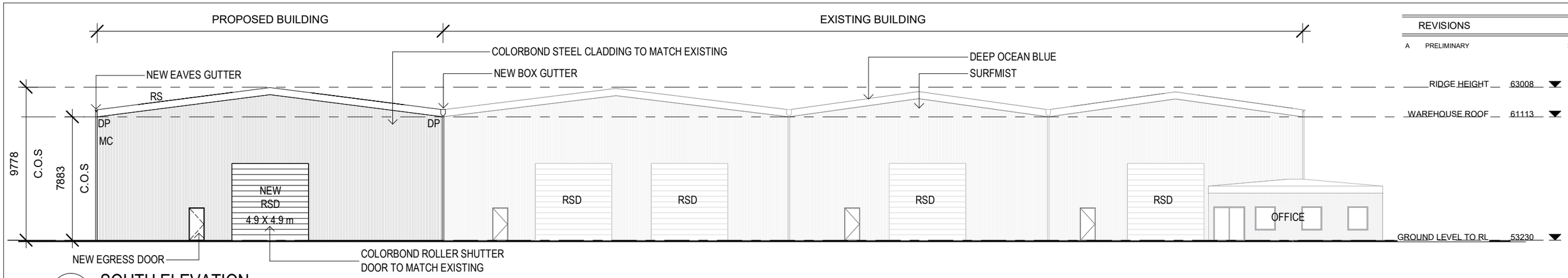
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CREATE DATE : 27.03.2024 PLOT DATE : 27.03.2024
LAST SAVED BY: aaimun.tariq

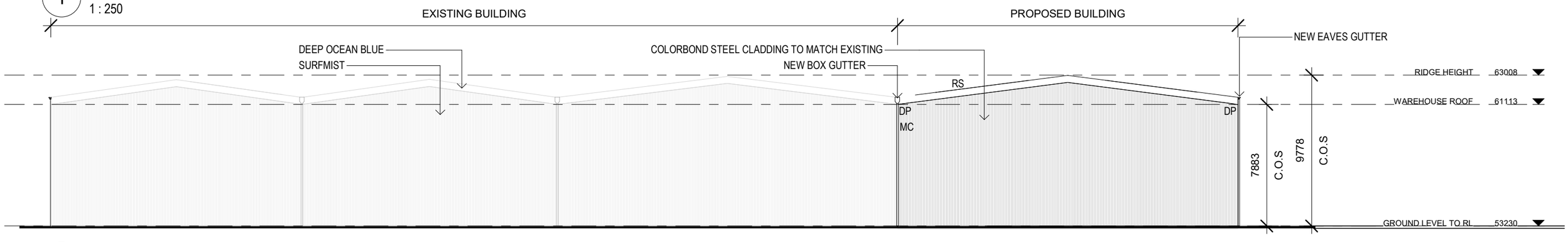
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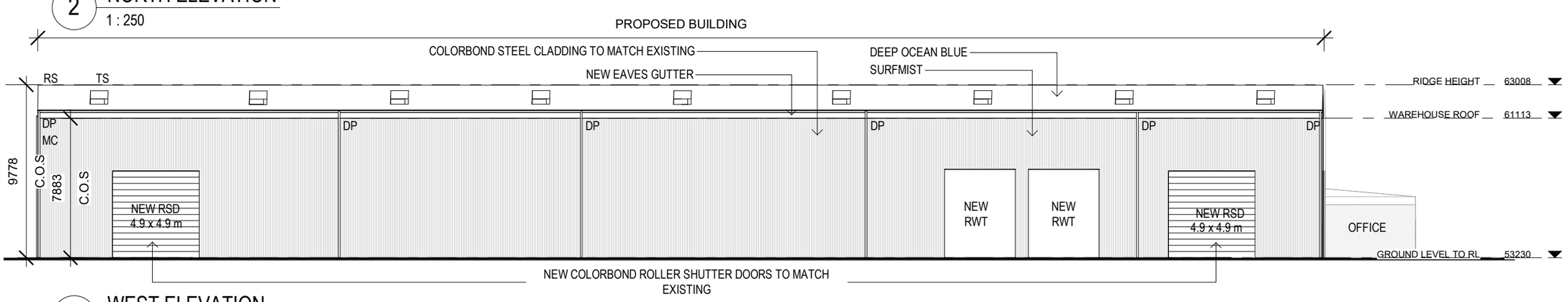
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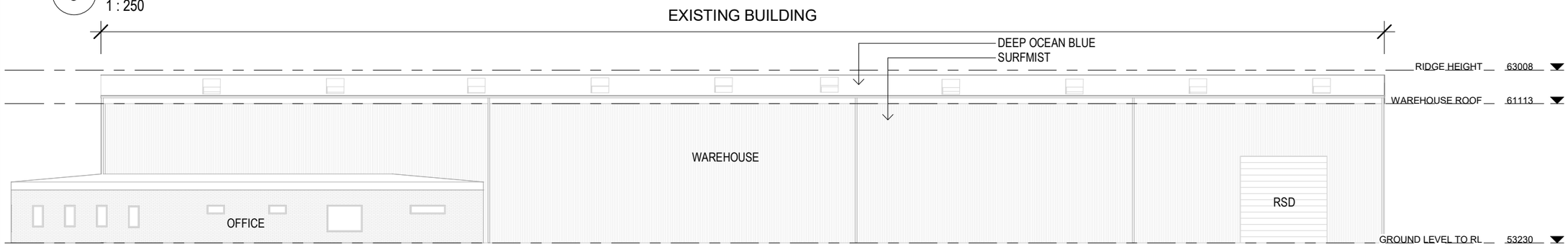
2 NORTH ELEVATION

1 : 250



3 WEST ELEVATION

1 : 250



4 EAST ELEVATION

1 : 250

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REVISIONS

A	PRELIMINARY	27.03.24

LEGEND:

AL	ALUMINIUM CLADDING
COL	COLUMN
DP	DOWN PIPE
CFC	COMPRESSED FIBRE CEMENT
GL	GLASS
MC	METAL CLADDING
PC	PRECAST CONCRETE
PIR	POLYISOCYANURATE INSULATED PANEL
RSD	ROLLER SHUTTER DOOR
RS	ROOF SHEETING
TS	TRANSLUCENT SHEETING

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ARBV 17867 | NSW ARB 10125 | BOAQ 5835

EXPANSION

177 CHESTER PASS ROAD
MILPARA, WA

DRAWING TITLE

EXISTING ELEVATIONS

2 0 2 4 6 8

SCALE 1: 250 @A3

DATE 25.03.2024
DRAWN BY AAIMUN TARIQ

100450 FS05 020 A

COLOUR LEGEND (C.O.S)

COLORBOND SURFMIST
COLORBOND DEEP OCEAN BLUE

NOTE:
- ALL MATERIALS AND COLORS SHOULD MATCH EXISTING

PRINTED: 27/03/2024 2:46:13 PM

Appendix B

Conservation Significant Flora Likelihood of Occurrence

Species name	Level of significance		Life strategy	Habitat	Flowering period	Likelihood of occurrence
	WA	EPBC Act				
Andersonia auriculata	P3	-	P	Grey or peaty sand, often over laterite. Swampy areas, granite outcrops.	Apr-Oct	Moderate
Andersonia sp. Jamesii	P4	0	P	Sand, clay or laterite.	Jun-Oct	Moderate
Banksia biterax	P3	-	P	Lateritic gravel, sand.	May or Jul to Oct	Moderate
Banksia brownii	CR	EN	P	Open scrub over heath or low open woodland. It grows in a variety of soils, including shallow sand over laterite, sandy loam over granite and shallow sand over schist on slight rises, gullies or mountain tops.	May-Jul	Low
Banksia goodii	VU	VU	P	Low open forest and low woodland of jarrah (Eucalyptus marginata) and western sheoak (Allocasuarina fraseriana) over Agonis heath. Soils are generally shallow, white to grey sand over laterite.	Nov-Jan	Low
Banksia serra	P4	0	P	Gravel, sand or clay loam over laterite. Hillslopes.	Jul-Sep	Low
Boronia crassipes	P3	0	P	Sand, peaty sand. Winter-wet swamps, creeklines.	Aug-Sep	Moderate
Bossiaea divaricata	P4	-	P	Sandy lateritic soils.	Sep (limited information)	Low
Calectasia cyanea	CR	CR	P	Heathland on white sand or laterite gravel over laterite. Known only from one population near Albany.	Jun-Oct	Moderate
Caustis sp. Boyanup	P3	-	P	White or grey sand.	Jan-Feb	Moderate
Chorizema carinatum	P3	-	P	Sand, sandy clay.	Oct-Dec	Moderate
Drosera paleacea	P1	-	P	White sand, sandy clay.	Sep-Dec/Jan	Moderate
Schoenus sp. Grey Rhizome	P1	0	P	Sandy clay, sand.	Oct	Moderate
Stylidium falcatum	P2	-	P	Sand, gravelly clay loam. Plains, lateritic ridges.	Oct-Nov	Moderate
Tricostularia sandifordiana	P3	0	P	White-grey sand on lower slopes and flats.	Nov-Dec	Moderate
Adenanthos x cunninghamii	P4	0	P	Grey sand. Coastal dunes & sandplains.	Mar or Sep-Oct	Low
Austrostipa mundula	P3	-	P	Grey sand over limestone.	Sept-Nov	Low

Species name	Level of significance		Life strategy	Habitat	Flowering period	Likelihood of occurrence
	WA	EPBC Act				
Banksia seneciifolia	P4	0	P	Sandy loam, sand. Rocky hillsopes.	Jun or Aug	Low
Banksia verticillata	CR	VU	P	Granite fissures and deeper soil around the edges of outcrops and often on rocks that run into the ocean.	Jan-Apr	Low
Caladenia harringtoniae	VU	VU	PG	Sandy loam in winter-wet flats, margins of lakes, creeklines, granite outcrops.	Oct-Nov	Low
Caladenia startiorum	P2	-	P	Clay loam. Winter-wet swamps.	Sep-Oct	Low
Chordifex abortivus	VU	EN	P	Sand over gravelly clay in scrub over sedges. Often low lying areas.	Aug-Oct	Low
Conospermum quadripetalum	P2	0	P	Sandy clay, grey sand. Flats behind coastal hills.	Sep-Nov	Low
Corysanthes limpida	P4	-	P	White sands over limestone. Coastal/dune areas.	Aug-Oct	Low
Diuris drummondii	VU	VU	PG	In low-lying depressions in peaty and sandy clay swamps.	Nov-Jan	Low
Drakaea micrantha	EN	VU	PG	Open sandy patches often adjacent to winter-wet swamps.	Sept-early Oct	Low
Drosera fimbriata	P4	-	P	White sand, granite.	Sep-Oct	Low
Eucalyptus newbeyi	P3	0	P	Sandy clay, loam. Steep spongolite valley sides & cliffs forming river banks.	Sep-Dec or Jan-Feb	Low
Gahnia sclerioides	P4	-	P	Loam, sandy soils. Moist shaded situations.	Feb, Apr, Jun, Aug or Nov	Low
Gonocarpus pusillus	P4	-	A	Grey sandy clay in winter-wet swamps.	Nov-Dec	Low
Gonocarpus simplex	P4	0	P	Peaty sand. Swamps, seasonally inundated areas.	Nov-Dec	Low
Goodenia sp. South Coast	P3	0	P	Gravelly loams, sandy clays. Edge granite outcrop, roadside.	Nov-Dec	Low
Gyrostemon thesioides	P2	0	P	Sand over limestone. Consolidated coastal dunes	Nov	Low
Isopogon uncinatus	CR	EN	P	Loam or sand on granite, peaty sand. Swampy depressions, hillslopes.	Oct-Nov	Low
Lachnagrostis billardierei subsp. billardierei	P3	0	P	Sand over granite. Hilltops.	Dec	Low
Leucopogon altissimus	P3	0	P	Sandy loam over granite on slopes and flats.	Jul-Sep	Low
Lysinema lasianthum	P4	0	P	Swamps, seasonally wet areas.	Jul-Nov	Moderate

Species name	Level of significance		Life strategy	Habitat	Flowering period	Likelihood of occurrence
	WA	EPBC Act				
Microtis globula	VU	VU	PG	Peaty soils in seasonally wet swamps.	Dec-Jan	Low
Microtis pulchella	P4	0	P	Peaty sand. Winter-wet swamps	Nov-Dec/Jan	Moderate
Pleurophascum	P4	-	0	Gentle slopes and hills.	0	Low
Poa billardierei	P3	0	P	Coastal foredunes on beach	Nov	Low
Prasophyllum paulinae	P1	0	PG	Swamps and low-lying areas in	Oct	Moderate
Pterostylis heberlei	P2	0	PG	Steep granite slopes. Black sandy clay over granite.	Aug-Oct	Low
Spyridium spadiceum	P4	0	P	Sand or gravelly loam. Granitic	Aug-Dec	Low
Stenanthemum sublineare	P2	-	P	White sand on coastal plains.	Oct-Dec	Low
Synaphea incurva	P3	0	P	Gravelly loam, sandy soils.	Sep-Nov	Low
Synaphea preissii	P3	0	P	Sand, gravelly loam.	Jul-Nov	Low
Thelymitra porphyrosticta	P2	0	PG	Sand and clay loam in woodland	Aug	Low
Thomasia purpurea x	P1	0	P	Grey sand over limestone. Creek	Nov-	Low
Thomasia quercifolia	P4	0	P	Grey sand over limestone in	Oct-Nov,	Low
Thomasia solanacea	P4	0	P	Alluvium, sand over limestone,	Sep-Dec	Low
Thysanotus isantherus	P4	-	P	Hillsides, sand over granite.	Nov-Dec	Low
Verticordia fimbrilepis subsp. australis	EN	VU	P	Low heath in brown sandy loam around outcropping granite.	Oct-Dec	Low

Note: CR=critically endangered, EN=endangered, VU=vulnerable, P1=Priority 1, P2=Priority 2, P3=Priority 3, P4=Priority 4, P=perennial, PG=perennial geophyte, A=annual. Species considered to potentially occur within the site are shaded green.

Appendix C

Conservation Significant Communities Likelihood of Occurrence

Code	Community name	TEC/ PEC	Level of significance		Likelihood of occurrence
			State	EPBC Act	
	Astartea scoparia Swamp Thicket	PEC	P1	-	Moderate
	Banksia coccinea Shrubland/Eucalyptus staeri/Sheo	TEC	P1	Endangered	Low
	Banksia littoralis woodland / Melaleuca incana Shru	PEC	P1	-	Low
	Coastal Melaleuca incana / Taxandria juniperina Shr	PEC	P1	-	Low
	Subtropical and Temperate Coastal Saltmarsh	TEC	P3	Vulnerable	Low
	Empodisma peatlands of southwestern Australia	TEC	P1	Endangered	Low
	Proteaceae Dominated Kwongkan Shrublands of the	TEC	P3	Endangered	Low

Note: TEC=threatened ecological community, PEC=priority ecological community, P1=priority 1, P3=priority 3

Appendix D

Conservation Significant Fauna Likelihood of Occurrence

Species name	Common name	Level of significance		Habitat	Likelihood of occurrence
		WA	EPBC Act		
Birds					
Ardenna carneipes	Flesh-footed shearwater	VU	MI	Marine species that breeds on islands off south coast from near Cape Leeuwin (Johnstone and Storr 1998).	Low
Arenaria interpres	Ruddy turnstone	VU (MI)	VU (MI)	Tidal mud and reef flats, sheltered rocky coasts, stony and seaweedy beaches and sandpits, dry coral ridges (Abrolhos) and pebbly shores of near-coastal saltlakes (including saltwork ponds) (Johnstone and Storr 1998).	Low
Calidris alba	Sanderling	MI	MI	Mainly steeply shelving sandy beaches exposed to ocean swell. Also sandy inlets, estuarine sandbanks and near-coastal saltlakes (including saltwork ponds) (Johnstone & Storr 1998).	Low
Calidris canutus	Red knot	EN	EN (MI)	Mud and sand flats in estuaries and on sheltered coasts. Also near-coastal saltlakes, including saltwork ponds (Pizzey & Knight 2012).	Low
Calidris ferruginea	Curlew sandpiper	CR	CR (MI)	Mainly shallows of estuaries and near-coastal saltlakes (including saltwork ponds) and drying near-coastal freshwater lakes and swamps. Also beaches and near-coastal sewage ponds (Johnstone & Storr 1988).	Low
Calidris ruficollis	Red-necked stint	MI	MI	Tidal mudflats, saltmarshes, sandy or shelly	Low
Calidris tenuirostris	Great knot	CR	CR (MI)	Mud or sand flats in estuaries and on sheltered coasts. Also near-coastal saltlakes, including saltwork ponds (Johnstone & Storr 1988).	Low
Charadrius leschenaultii	Great sand plover	VU	VU (MI)	Wide sandy or shelly beaches, sandpits, tidal mudflats, reefs, sand cays, mangroves, saltmarsh, dune wilderness, bare paddocks, seldom far inland (Pizzey & Knight 2012).	Low
Charadrius mongolus	Lesser sand plover	EN	EN (MI)	Sandy beaches and tidal estuarine flats. Also near-coastal saltlakes, including saltwork ponds (Johnstone & Storr 1998).	Low
Hydroprogne caspia	Caspian tern	MI	MI	Mainly sheltered areas, estuaries (when not laden	Low
Limosa lapponica	Bar-tailed godwit	MI	MI	Estuarine sand and mudflats and sandy beaches with loads of seaweed; also reef flats and near-coastal saltlakes (including saltwork and sewage ponds) (Johnstone and Storr 1998).	Low
Macronectes giganteus	Southern giant-petrel	MI	EN (MI)	Breeds on southern subantarctic and antarctic islands. May visit Western Australian waters from February to December (mostly June to September) (Johnstone and Storr 1998).	Low
Numenius madagascariensis	Eastern curlew	CR	CR (MI)	Mainly tidal mudflats; also reef flats, sandy beaches and rarely near-coastal lakes (including saltwork ponds) (Johnstone and Storr 1998).	Low
Numenius phaeopus	Whimbrel	MI	MI	Estuaries, mangroves, tidal flats, coral cays, exposed reefs, flooded paddocks, sewage ponds, bare grasslands, sportsgrounds and lawns (Pizzey & Knight 2012).	Low
Oceanites oceanicus	Wilson's storm petrel	MI	MI	Marine, migratory species that may visit south-western Australian waters and shores in late autumn to winter (Pizzey & Knight 2012).	Low
Oxyura australis	Blue-billed duck	P4	-	Mainly deeper freshwater swamps and lakes; occasionally saltlakes and estuaries freshened by flood waters (Johnstone and Storr 1998).	Low
Pandion haliaetus	Osprey	MI	MI	Coasts, estuaries, bays, inlets, islands, and surrounding waters; coral atolls, reefs, lagoons, rock cliffs, stacks (Pizzey & Knight 2012).	Low

Species name	Common name	Level of significance		Habitat	Likelihood of occurrence
		WA	EPBC Act		
Pluvialis fulva	Pacific golden plover	MI	MI	Estuaries, mudflats, saltmarshes, mangroves; rocky reefs and stranded seaweed on ocean shores; margins of shallow open inland swamps; sewage ponds, short-grass paddocks, sportsgrounds, airfields, ploughed land (Pizzey &	Low
Pluvialis squatarola	Grey Plover	VU (MI)	VU (MI)	Mudflats, saltmarsh, tidal reefs and estuaries, rarely inland (Pizzey and Knight 2012).	Low
Puffinus huttoni	Hutton's shearwater	EN	MI	Marine species that breeds in New Zealand and disperses mainly to seas off northern Australia (Johnstone & Storr 1998).	Low
Stercorarius antarcticus lonnbergi	Brown skua	P4	-	Mostly beyond shelf break; occasionally on beaches foraging on dead seals or whales (Pizzey & Knight 2012).	Low
Thalassarche chlororhynchos	Atlantic yellow-nosed albatross	VU	MI	Marine migratory species that breeds on the Tristan da Cunha group and on Gough Island. Sparse visitor to Australian waters/shores (ACAP,	Low
Thalasseus bergii	Crested tern	MI	MI	Mainly blue-water seas (especially within 3 km of land), including southern estuaries in summer and autumn (when free of silt); also tidal creeks in north, but not penetrating far into larger estuaries (DCCEEW 2023).	Low
Tringa brevipes	Grey-tailed tattler	P4 (MI)	MI	Tidal mud and reef flats, sheltered rocky coasts, stony and seaweedy beaches and sandpits, dry coral ridges (Abrolhos) and pebbly shores of near-coastal saltlakes (including saltwork ponds) (Johnstone and Storr 1998).	Low
Xenus cinereus	Terek sandpiper	VU (MI)	VU (MI)	Tidal mudflats, estuaries; shores and reefs of islands; coastal swamps, commercial saltfields (Pizzey & Knight 2012).	Low
Zanda baudinii	Baudin's black cockatoo	EN	EN	Mainly eucalypt forests. Attracted to seeding Corymbia calophylla, Banksia spp., Hakea spp., and to fruiting apples and pears (Johnstone and Storr 1998).	Low
Zanda latirostris	Carnaby's black cockatoo	EN	EN	Mainly proteaceous scrubs and heaths and adjacent eucalypt woodlands and forests; also plantations of Pinus spp. Attracted to seeding Banksia spp., Hakea spp., Eucalyptus spp., Corymbia calophylla, Grevillea spp., and Allocasuarina spp. (Johnstone and Storr 1998).	Low
Pezoporus flaviventris	Western ground parrot	CR	CR	Low, dry or swampy near-coastal heathland. (DCCEEW 2023).	Very low
Actitis hypoleucos	Common sandpiper	MI	MI	Edge of sheltered waters salt or fresh, e.g. estuaries, mangrove creeks, rocky coasts, near-coastal saltlakes (including saltwork ponds), river pools, lagoons, claypans, drying swamps, flood waters, dams and sewage ponds. Preferring situations where low perches are available (Johnstone & Storr 1998).	Moderate
Calidris acuminata	Sharp-tailed sandpiper	VU (MI)	VU (MI)	Occurs in tidal mudflats, saltmarshes and mangroves, as well as, shallow fresh, brackish or saline inland wetlands. It is also known from floodwaters, irrigated pastures and crops, sewage ponds, saltfields (Pizzey & Knight 2012).	Moderate
Falco peregrinus	Peregrine falcon	OS	-	Mainly found around cliffs along coasts, rivers, ranges and around wooded watercourses and lakes (Johnstone and Storr 1998).	Moderate
Falco peregrinus macropus	Australian peregrine falcon	S	-	Mainly about cliffs along coasts, rivers and ranges and about wooded watercourses and lakes (Johnstone & Storr 1988).	Moderate

Species name	Common name	Level of significance		Habitat	Likelihood of occurrence
		WA	EPBC Act		
Tringa nebularia	Common greenshank	EN (MI)	EN (MI)	Mudflats, estuaries, saltmarshes, margins of lakes, wetlands, claypans (fresh and saline), commercial saltfields, sewage ponds (Pizzey & Knight 2012).	Moderate
Tringa stagnatilis	Marsh sandpiper	MI	MI	Mainly shallow fresh or brackish waters: swamps, lakes, river pools, soaks, sewage ponds and bore overflows. Occasionally estuaries and salt ponds, and rarely coasts (DCCEEW 2023).	Moderate
Aphelocephala leucopsis	Southern whiteface	-	VU	Relatively undisturbed open woodlands and shrublands with low tree densities, with an understory of grasses or herbaceous litter cover. They require hollows and crevices in living or dead trees for roosting and nesting (DCCEEW 2023).	Negligible
Ardenna grisea	Sooty shearwater	MI	MI	Marine, migratory species that may visit south-western Australian waters from June to October (Pizzey & Knight 2012).	Negligible
Botaurus poiciloptilus	Australasian bittern	EN	EN	In or over water, in tall reedbeds, sedges, rushes, cumbungi, lignum. Also occurs in ricefields, drains in tussocky paddocks and occasionally in saltmarshes and brackish wetlands (TSSC 2019).	Negligible
Calyptorhynchus banksii naso	Forest red-tailed black cockatoo	VU	VU	Eucalypt and Corymbia forests, often in hilly interior. More recently also observed in more open agricultural and suburban areas including Perth metropolitan area. Attracted to seeding Corymbia calophylla, Eucalyptus marginata, introduced Melia azedarach and Eucalyptus spp. trees (Johnstone et al. 2013).	Negligible
Cereopsis novaehollandiae grisea	Cape Barren Goose	VU	VU	Succulent mats (pigface Carpobrotus), open grassland and glades in scrubs (Johnstone and Storr 1998).	Negligible
Dasyornis longirostris	Western bristlebird	EN	EN	Dense, low, closed coastal heaths. Open heaths with dense clumps of shrubs, eucalypt thickets and tall swampy heaths. Much reduced by fire, draining for agriculture, but may need fire for optimal status over 50-10+ years. Current range in WA confined to south coast from Albany to Hopetoun (Pizzey and Knight 2012).	Negligible
Diomedea antipodensis	Gibson's Albatross	EN	VU	Marine, pelagic and aerial species. Rare visitor in the Indian and Pacific oceans (DCCEEW 2023).	Negligible
Diomedea dabbenena	Tristan albatross	CR	EN (MI)	The Tristan albatross is a marine, pelagic seabird. It forages in open water in the Atlantic Ocean near the Cape of Good Hope, South Africa. It sleeps and rests on ocean waters when not breeding (Marchant and Higgins 1990).	Negligible
Diomedea epomophora	Southern royal albatross	VU	VU (MI)	Rare visitor to Western Australian seas; it breeds on subantarctic islands south of New Zealand (Johnstone and Storr 1998).	Negligible
Diomedea exulans	Wandering albatross	VU	VU (MI)	Marine, pelagic and aerial species. It breeds on Macquarie Island and feeds in Australian portions of the Southern Ocean (DoE 2018).	Negligible
Diomedea sanfordi	Northern royal albatross	EN	EN	Species is marine, pelagic and aerial. Habitat includes subantarctic, subtropical, and occasionally Antarctic waters (Marchant & Higgins 1990). Rare visitors to south-western Australian	Negligible
Falco hypoleucos	Grey falcon	VU	-	Species occurs in arid and semi-arid Australia, where it inhabits timbered lowland plains. In particular Acacia shrublands and that are crossed by tree-lined water courses. Species has also been observed hunting in treeless areas and frequenting tussock grassland and open woodlands (TSSC 2020).	Negligible

Species name	Common name	Level of significance		Habitat	Likelihood of occurrence
		WA	EPBC Act		
Halobaena caerulea	Blue petrel	MI	VU (MI)	Marine species that breeds on southern subantarctic and northern artic islands. Only an accidental or uncommon visitor to Western Australian waters (Johnstone & Storr 1998).	Negligible
Limosa lapponica menzbieri	Bar-tailed godwit	CR (MI)	CR (MI)	Mainly coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. Has also been recorded in coastal sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats (Higgins and Davies 1996).	Negligible
Limosa limosa	Black-tailed godwit	EN MI	EN (MI)	Tidal mudflats, estuaries, sewage ponds, shallow river margins, brackish or saline inland lakes, flooded pastures, airfields (Pizzey & Knight 2012).	Negligible
Macronectes halli	Northern giant petrel	MI	VU (MI)	Breeds on subantarctic islands. May visit Western Australian water from February to September (Johnstone and Storr 1998).	Negligible
Pachyptila turtur subantarctica	Fairy prion	-	VU	Breeds on subantarctic islands and is presumed to frequent subtropical waters during non-breeding period (TSSC 2015).	Negligible
Phaethon rubricauda westralis	Red-tailed tropicbird	P4 (MI)	EN (MI)	Spend most of their lives at sea and rarely venture near land. This bird is normally found in tropical and subtropical seas around northern Australia. Though rarely seen in colder areas, a few pairs breed on Sugarloaf Rock, south of Cape Naturaliste (DPAW 2017b). Are known to breed on Rottnest Island (DCCEEW 2023).	Negligible
Phoebetria fusca	Sooty albatross	EN	VU (MI)	Marine, pelagic species that tolerates a wide range of sea surface temperatures and salinities. breeds on subtropical and subantarctic islands in the Indian and Atlantic Oceans, on vegetated cliffs and steep slopes that are sheltered from prevailing winds, often amongst tussock grass (Pizzey &	Negligible
Psophodes nigrogularis nigrogularis	Western Whipbird (western heath)	EN	EN	Dense scrub of heath, mallee and broombush (Macrombe & Stewart 2004). Species range is restricted to a small area east of Albany Western Australia.	Negligible
Pterodroma mollis	Soft-plumaged petrel	MI	VU (MI)	Marine species that breeds on temperate and subantarctic islands in south Atlantic and south Indian Ocean. Visitor to West Australian waters from March to September. Rarely observed inshore (Johnstone & Storr 1998).	Negligible
Sternula nereis nereis	Australian fairy tern	VU	VU	Sheltered blue-water seas close to land, estuaries (when free of silt) and near-coastal lakes (Johnstone and Storr 1998).	Negligible
Thalassarche carteri	Indian yellow-nosed albatross	EN	VU (MI)	Marine species that inhabits seas of south and west coast of Western Australia and breeds on islands in the south Indian Ocean and in the south Atlantic (Johnstone & Storr 1998).	Negligible
Thalassarche cauta	Shy albatross	VU	VU (MI)	Scarce visitor (late May to mid-October) to southwestern and western seas. Breeds on islands off Tasmania and south New Zealand (Johnstone and Storr 1998).	Negligible
Thalassarche impavida	Campbell albatross	VU	VU (MI)	Scarce visitor to south-western and western Australian seas. Breeds on Campbell Island (Pizzey & Knight 2012).	Negligible
Thalassarche melanophris	Black-browed albatross	EN	VU (MI)	Seas of south and west coasts. Visitor to Western Australian mainland from January to early November (mostly May to September). Breeds on southern subantarctic and Antarctic islands (Johnstone and Storr 1998).	Negligible

Species name	Common name	Level of significance		Habitat	Likelihood of occurrence
		WA	EPBC Act		
Thalassarche steadi	White-capped albatross	VU	VU (MI)	Scarce visitor (late May to mid-October) to southwestern and western seas. Breeds on islands off Tasmania and south New Zealand (Johnstone and Storr 1998).	Negligible
Mammals					
Isoodon fusciventer	Quenda	P4	-	Dense scrubby, often swampy, vegetation with dense cover up to one metre high (DEC 2012)	High
Hydromys chrysogaster	Rakali	P4	-	Areas with permanent water, fresh, brackish or marine. Likely to occur in all major rivers and most of the larger streams as well as bodies of permanent water in the lower south-west (Christensen et al. 1984). Intact riparian vegetation and associated bank stability is critical to their survival (DWER 2023).	Low
Pseudocheirus occidentalis	Western ringtail possum	CR	CR	On the Swan Coastal Plain in Agonis flexuosa woodlands and Agonis flexuosa/ Eucalyptus gomphocephala forests. Also Eucalyptus marginata forests (DBCA 2017).	Moderate
Dasyurus geoffroii	Chuditch	VU	VU	Wide range of habitats from woodlands, dry sclerophyll forests, riparian vegetation, beaches and deserts. Appears to utilise native vegetation along roadsides in the wheatbelt (DEC 2012).	Negligible
Parantechinus apicalis	Dibbler	EN	EN	Old-growth mallee heath in coastal southwest and Escape Island off Jurien Bay (Menkhorst and Knight 2011).	Negligible
Phascogale tapoatafa wambenger	South-western brush-tailed phascogale	CD	-	Dry sclerophyll forests and open woodlands that contain hollow-bearing trees but a sparse ground cover (Triggs 2003).	Negligible
Fish					
Geotria australis	Pouched lamprey	P3	-	Marine, estuarine and coastal rivers and streams. Adults live in Southern Ocean and migrate upstream to spawn. Larvae live in muddy burrows in the upper reaches of streams (Bray and Gomon	Nil
Invertebrates					
Westralunio carteri	Carter's freshwater mussel	VU	VU	Occurs in greatest abundance in slower flowing streams with stable sediments that are soft enough for burrowing amongst woody debris and exposed tree roots. Also occupies lentic systems including large water supply dams and even on-stream farm dams. Salinity tolerance quite low (Morgan et al. 2011).	Negligible

Note: CR=critically endangered, EN=endangered, VU=vulnerable, CD=conservation dependent, MI=migratory, OS=other specially protected, P3=Priority 3, P4=Priority 4.

Appendix E

Flora Species Inventory

Family	Status	Species
Asparagaceae		
	*	*Asparagus asparagoides*
Asteraceae		
	*	*Erigeron ?bonariensis*
	*	*Hypochaeris glabra*
Boraginaceae		
		Echium candicans
Dennstaedtiaceae		
		Pteridium esculentum
Fabaceae		
	*	*Acacia longifolia*
	*	*Psoralea pinnata*
Geraniaceae		
	*	*Pelargonium capitatum*
Iridaceae		
	*	*Watsonia sp.*
Juncaceae		
		Juncus ?pallidus
Myrtaceae		
		Agonis flexuosa
		Astartea scoparia
	*	*Callistomen sp.*
	*	*Gaudium laevigatum*
		Melaleuca preisianna
Plantaginaceae		
	*	*Plantago major*
Poaceae		
	*	*Avena sp.*
	*	*Briza maxima*
	*	*Cenchrus clandestinus*
	*	*Cortaderia selloana*
	*	*Phalaris paradoxa*

*=non-native

TECHNICAL MEMORANDUM
Flora, Vegetation and Fauna Assessment
177 Chester Pass Road, Albany WA

PROJECT NUMBER	VEP24-016(01)	**DOC. NUMBER**	VEP24-016(01)--001 GAB
PROJECT NAME	EMKC^3 Albany Ecological Assessment	**CLIENT**	EMKC3
AUTHOR	GAB	**REVIEWER**	TAA
VERSION	1	**DATE**	10/05/2024

1. INTRODUCTION

1.1. Project background

Emerge Associates (Emerge) were engaged by EMKC^3 to undertake a flora, vegetation and fauna assessment at 177 Chester Pass Road, Albany WA (herein referred to as the 'site').

The site is located within the City of Albany and extends over approximately 2.9 hectares (ha). It is bounded by commercial/industrial land to the north and west, Chester Pass Road to the east and John Street to the south. The location of the site is shown in **Figure 1**.

1.2. Purpose and scope of work

The flora, vegetation and fauna assessment was required to support a development application. The scope of work was to provide sufficient detail on the flora, vegetation and fauna values within the site to inform the development application process (see **Appendix A**).

As part of the scope of work the following tasks were completed:

- Desktop review of relevant background information pertaining to the site and surrounds, including database searches for conservation significant flora, fauna and communities.
- A reconnaissance field survey to record flora, vegetation and fauna values.
- Identification of potential habitat for conservation significant flora, vegetation and fauna.
- Documentation of the desktop assessment, methodology, field surveys and results into this report.

2. Desktop assessment

2.1. Site Context

2.1.1. Climate

The Albany region of Western Australia experiences a Mediterranean climate of warm, dry summers and mild, wet winters (BoM 2024). Recent rainfall at the closest weather station to the site has been inconsistent with long term averages, and generally indicative of a significant reduction.

2.1.2. Geomorphology and soils

Examination of broad scale soil mapping places the site within the 'Dempster Crest' phase (DPIRD 2020). This phase comprises sands and laterite on elongate crests; duplex sandy gravels, grey deep sandy duplexes, pale deep sands and shallow gravels. Soil landscape mapping is shown in **Figure 2.**

The site is not known to contain any restricted landforms or unique geological features.

2.1.3. Topography

The elevation of the site ranges from 44 metres (m) above sea level to 55 m above sea level.

At the time of survey, the site was observed to be generally flat, with a minor depression towards the centre.

2.1.4. Hydrology and wetlands

Wetlands are areas of seasonally, intermittently or permanently waterlogged land such as poorly drained soils, ponds, billabongs, lakes, swamps, tidal flats, estuaries, rivers and their tributaries (Wetlands Advisory Committee 1977). Wetlands can be recognised by the presence of vegetation associated with waterlogging or the presence of hydric soils such as peat, peaty sand or carbonate mud (Hill et al. 1996).

Wetlands of national or international significance may be afforded special protection under Commonwealth or international agreements.

Review of the *Ramsar List of Wetlands of International Importance* (DBCA 2017) and *A Directory of Important Wetlands in Australia – Western Australia* (DBCA 2018) indicates that no Ramsar or listed 'important wetlands' are located within or near the site.

2.1.5. Regional vegetation

The site is contained within the Southern Jarrah Forrest IBRA subregion and within the 978 association of the Albany system. This subregion is described as low forest, woodland or low woodland with scattered trees and characterised by *Eucalyptus marginata* (jarrah)*, Banksia spp.* (banksia), *Allocasuarina spp* (casuarina). The 'Albany' 978 association was determined to have 29% of its pre-European extent remaining in 2017, with 7% protected for conservation purposes (Government of Western Australia 2018).

2.1.6. Historical land use

Review of historical images available from 1954 onwards shows that the site was largely cleared of native vegetation by 1964 . The partial regrowth of vegetation is apparent up until the 2007 when further clearing in the central portion of the site occurred to allow for development of a carpark and basin. Successive stages of clearing and regrowth appear to have occurred up until the latest image in 2022.

2.2. Threatened and priority flora and fauna

The Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) has compiled various datasets relating to 'matters of national environmental significance' (MNES) (DCCEEW 2024). The *Protected Matters Search Tool* provides general guidance on threatened flora listed under the *Environmental Protection Biodiversity Conservation Act 1999* (EPBC Act) that may occur within a location based on validated records and less reliable unvalidated habitat distribution modelling (DCCEEW 2024).

Department of Biodiversity, Conservation and Attraction's (DBCA) *Threatened and Priority Flora Database* contains records of threatened and priority flora in Western Australia (DBCA 2023). DBCA also maintains a database of conservation significant fauna. Searches of these databases provides point data for threatened and priority flora and fauna within a location, comprising validated and historical unvalidated records.

A search was conducted for threatened, specially protected and priority flora and fauna that may occur or have been recorded within a 15 km or 10 km radius of the site using NatureMap (DBCA 2023), *Protected Matters Search Tool* (DCCEEW 2024) and the DBCA conservation significant fauna and flora databases (reference no. FLORA#26-0424NM and FAUNA#32-0424FA).

A total of 55 flora species were identified from database searches as occurring or potentially occurring within 15 km of the site and 72 fauna species within 10km of the site.

2.3. Threatened and priority ecological communities

The *Protected Matters Search Tool* provides also general guidance on threatened ecological communities (TEC) listed as critically endangered (CR) and endangered (EN) under the EPBC Act that may occur within a location based on reliable records and less reliable habitat distribution modelling (DCCEEW 2024).

DBCA's *Threatened and Priority Ecological Community buffers and boundaries in WA* dataset contains validated records of TECs and priority ecological communities (PEC). Searches of this dataset provides buffered polygons of TEC and PEC records.

The *Protected Matters Search Tool* (DCCEEW 2024) and DBCA's TEC and PEC database (reference no. 45-0424EC) identified 4 TECs and 3 PECs occurring or potentially occurring within a 10 km radius of the site.

2.4. Likelihood of occurrence method

2.4.1. Flora and vegetation

The distribution and habitat preferences of threatened flora species and ecological communities listed in **Section 2** were reviewed against site context information[1] and preliminary survey results. Likelihood of occurrence of threatened flora species and ecological communities within the site was classified as 'high', 'moderate', 'low' or 'negligible' as outlined below in **Table 1**.

[1] Including relevant Commonwealth documentation such as approved conservation advice, listing advice and other relevant literature.

Table 1: Decision matrix for likelihood of occurrence of threatened and priority flora and ecological communities

		Distribution[1]	
		Reliable record within search area	No reliable record within search area (15 km)
Habitat	Suitable	High	Negligible
	Potentially suitable	Moderate	
	Unsuitable	Low	

[1]Reliable record defined as validated, recent (within the last ~40 years) and spatially accurate (refer DBCA search meta data) in order to exclude unverified range or habitat projections.

2.4.2. Fauna

The distribution and habitat preferences of the threatened and specially protected fauna species identified from **Section 2** was reviewed against site context[1] information and preliminary survey results. Likelihood of occurrence of threatened and specially protected fauna species within the site was classified as 'high', 'moderate', 'low', 'very low', 'negligible' or 'nil' as outlined in **Table 2**. Noting some marine species were excluded from the assessment due to lack of habitat.

Table 2: Decision matrix for likelihood of occurrence of threatened, specially protected and priority fauna

		Reliable record[1]		Unreliable record[2]
		Access to site not impeded	Access to site impeded	
Habitat	Suitable	High	Very low	Negligible
	Potentially suitable	Moderate		
	Unsuitable	Low		
	Absent	Nil		

[1]Reliable record defined as DBCA record from the last ~20 years, [2]Unreliable record defined as record >20 years old or PMST prediction.

2.5. Likelihood of occurrence results

2.5.1. Threatened and priority flora

Based on background information available for the site, 11 priority flora species were considered to have a moderate likelihood of occurring within the site, as outlined in **Table 3**. No priority flora species were considered to have a high likelihood of occurrence within the site. The complete likelihood of occurrence assessment is provided as **Appendix B**.

Table 3: Threatened or priority flora species with a moderate likelihood occurrence in the site

Species	Status		Life strategy	Flowering period
	WA	EPBC Act		
Andersonia auriculata	P3	-	P	Apr-Oct
Andersonia sp. Jamesii	P4	-	P	Jun-Oct
Boronia crassipes	P3	-	P	Aug-Sep
Caustis sp. Boyanup	P3	-	P	Jan-Feb
Chorizema carinatum	P3	-	P	Oct-Dec

Drosera paleacea	P1	-	P	Sep-Dec/Jan
Schoenus sp. Grey Rhizome	P1	-	P	Oct
Tricostularia sandifordiana	P3	-	P	Nov-Dec
Lysinema lasianthum	P4	-	P	Jul-Nov
Microtis pulchella	P4	-	P	Nov-Dec/Jan
Prasophyllum paulinae	P1	-	PG	Oct

2.5.2. Vegetation

The database search results identified 7 TEC/PECs as occurring or potentially occurring within a 15 kilometre (km) radius of the site. Information on these communities is provided in **Appendix C**.

2.5.3. Threatened, specially protected and priority fauna

Isoodon fusciventer (quenda) was classified as having a high likelihood of occurrence and seven other threatened, specially protected or priority species were classified as having a moderate likelihood of occurrence. The legislative or policy status and habitat preferences of these species are shown in **Table 4**.

The remainder of the conservation significant fauna species identified in the desktop assessment (64 species) were considered as having a low, very low, negligible or nil likelihood of occurrence. Refer to **Table 4** and **Appendix D** for detail on individual species likelihood of occurrence.

Table 4: Summary of conservation significant fauna species with potential to occur in the site

Species name	Common name	Status		Habitat description
		WA	EPBC Act	
Birds				
Actitis hypoleucos	Common sandpiper	MI	MI	Edge of sheltered waters salt or fresh, e.g. estuaries, mangrove creeks, rocky coasts, near-coastal saltlakes (including saltwork ponds), river pools, lagoons, claypans, drying swamps, flood waters, dams and sewage ponds. Preferring situations where low perches are available (Johnstone & Storr 1998).
Calidris acuminata	Sharp-tailed sandpiper	VU	VU	Occurs in tidal mudflats, saltmarshes and mangroves, as well as shallow fresh, brackish or saline inland wetlands. It is also known from floodwaters, irrigated pastures and crops, sewage ponds, saltfields (Pizzey & Knight 2012).
Falco peregrinus	Peregrine falcon	OS	-	Mainly found around cliffs along coasts, rivers, ranges and around wooded watercourses and lakes (Johnstone and Storr 1998).
Falco peregrinus macropus	Australian peregrine falcon	S	-	Mainly about cliffs along coasts, rivers and ranges and about wooded watercourses and lakes (Johnstone & Storr 1988).
Tringa nebularia	Common greenshank	EN	EN	Mudflats, estuaries, saltmarshes, margins of lakes, wetlands, claypans (fresh and saline), commercial saltfields, sewage ponds (Pizzey & Knight 2012).

Species name	Common name	Status		Habitat description
		WA	EPBC Act	
Tringa stagnatilis	Marsh sandpiper	MI	MI	Mainly shallow fresh or brackish waters: swamps, lakes, river pools, soaks, sewage ponds and bore overflows. Occasionally estuaries and salt ponds, and rarely coasts (DCCEEW 2023).
Mammals				
Isoodon fusciventer	Quenda	P4	-	Dense scrubby, often swampy, vegetation with dense cover up to one metre high (DEC 2012)
Pseudocheirus occidentalis	Western ringtail possum	CR	CR	On the Swan Coastal Plain in Agonis flexuosa woodlands and Agonis flexuosa/ Eucalyptus gomphocephala forests. Also Eucalyptus marginata forests (DBCA 2017).

3. Methods

3.1.1. Vegetation

Vegetation units were identified from information collected during the field survey in April 2024. The vegetation was described according to the dominant species present using the structural formation descriptions of the *National Vegetation Inventory System* (NVIS) (NVIS Technical Working Group 2017). The identified vegetation units were mapped on aerial photography during the field survey and boundaries were interpreted from aerial photography and notes taken in the field. Vegetation condition was mapped on aerial photography based on notes recorded during the field survey to define areas with differing condition and using the Keighery (1994) scale **Table 5**.

Table 5: Vegetation condition scale applied during the field assessment

Condition	Definition (Keighery 1994)
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species.
Very good	Vegetation structure altered obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

3.1.2. Threatened and priority ecological community

Areas of native vegetation potentially representing a TEC/PEC were assessed against key diagnostic characteristics and, if available, size and/or vegetation condition thresholds.

3.1.3. Native vegetation under the EP Act

Vegetation within the site that meets the definition of 'native vegetation' under the *Environmental Protection Act 1986* (EP Act) was recorded.

3.1.4. Fauna habitat

The site was traversed during the day, and the characteristics of fauna habitat and presence of fauna species was recorded. Microhabitats were investigated and secondary evidence of species presence such as tracks, scats, skeletal remains, foraging evidence or calls was also noted.

3.1.5. Black cockatoo habitat

Black cockatoo foraging, breeding and roosting habitat was assessed within the site, as modelled distribution mapping indicated that all three black cockatoo species may occur within the site.

Foraging habitat

Foraging habitat was identified by assessing vegetation in the site for plant species known to provide food for black cockatoos (Davies 1966; Saunders 1980; Johnstone and Storr 1998; Johnstone and Kirkby 1999; Groom 2011; Johnstone *et al.* 2011; DAWE 2022). If present, foraging habitat was classified as either 'native' or 'non-native' based on the predominant vegetation's naturalised status and in accordance with DAWE (2022).

Breeding habitat

Breeding habitat comprises 'habitat trees' which were defined as native eucalypts typically known to support black cockatoo nesting such as marri, jarrah, blackbutt, tuart, wandoo, salmon gum or to a lesser extent flooded gum, with a DBH ≥50 cm or DBH ≥30 cm for wandoo or salmon gum.

Roosting habitat

If present, groups of tall native and non-native trees were assumed to provide roosting habitat. The presence of active or historical roosts in these trees was determined through evidence of roosting activity, such as branch clippings, droppings or moulted feathers.

4. Results

4.1. Flora

4.1.1. Flora species inventory

A total of 15 weed species and 5 native species were recorded in the site during the field survey. The dominant families containing native taxa were *Myrtaceae* and *Fabaceae*. Many non-native and planted species were identified at the site.

A complete species list is provided in **Appendix B**.

4.1.2. Threatened and priority flora

No threatened or priority flora were recorded and none are considered likely to occur in the site due to the lack of suitable habitat and the degraded condition of the site.

4.1.3. Declared pests

No species listed as a declared pest (pursuant to s22(2) of the *Biosecurity and Agriculture Management Act 2007*) were recorded within the site.

4.2. Vegetation

4.2.1. Vegetation units

The following vegetation units were identified within the site: Mp, AlAs, landscape planting, non-native, including shrubs, and grasses and forbes.

A description and the area of each vegetation unit is provided in **Table 6** and representative photographs are provided in **Plate 1** to **Plate 4**. The location of each vegetation unit is shown in **Figure 2**.

Table 6: Vegetation unit present within the site

Vegetation Unit	Description	Area (ha)
Mp	Scattered trees of *Melaleuca preissiana* and occasionally **Acacia longifolia* over low closed grassland and forbeland of predominantly non-native species	0.01
AlAs	Tall open shrubland of **Acacia longifolia* and or **Gaudium laevigatum* over low closed shrubland of *Astartea scoparia* and **Psoralea pinnata* over low grassland and forbeland of predominantly non-native species	0.15
Landscape planting	Closed shrubland of planted **Calistopmen sp.* and non-native species over mulch	0.01
Non-native grasses and forbes	Low closed grassland and forbeland of predominantly non-native species	0.9
Non-native shrubs	Tall open to closed shrubland of **Acacia longifolia* and or **Gaudium laevigatum* over **Psoralea pinnata* and occasionally *Astartea scoparia* over low grassland and forbeland of predominantly non-native species	0.60
Non-native shrubs	Open shrubland of **Calistopmen sp., *Acacia longifolia* and **Gaudium laevigatum* over low open grassland and forbeland of predominantly non-native species or bare ground	0.02



*Plate 1: Vegetation unit **Mp** in 'degraded - completely degraded' condition*



*Plate 2: Vegetation unit **AlAs** in 'degraded - completely degraded' condition*



*Plate 3: Vegetation unit **Non-native shrubs** in 'completely degraded' condition*



*Plate 4: Vegetation unit **Non-native grasses and forbes** in 'completely degraded' condition*

4.2.2. Vegetation condition

The vegetation in the site occurred in 'degraded', 'degraded - completely degraded' and 'completely degraded condition. The extent of vegetation by condition category is detailed in **Table 7** and shown in **Figure 3**.

Table 7: Vegetation condition categories within the site

Condition category (Keighery (1994))	Size (ha)
Pristine	0
Excellent	0
Very good	0
Good – very good	0
Good	0
Degraded	0.06
Degraded – completely degraded	0.23
Completely degraded	2.56

4.2.3. Threatened and priority ecological communities

An area likely representative of the '*Astartea scoparia* swamp thicket' PEC exists within the central southern portion of the site (see **Figure 5**). This PEC is listed as a priority 1 community in Western Australia. The PEC was recorded to be in degraded condition, as shown in **Plate 5**.



Plate 5: Astartea scoparia Swamp Thicket PEC in 'degraded' condition

4.2.4. Native vegetation under the EP Act

A total of approximately 0.16 ha of vegetation meeting the definition of 'native vegetation' pursuant to the EP Act occurs within the site, comprising **Mp** and **AIAs** vegetation. This includes scattered *Melaleuca preissiana* (modong) and patches comprising species such as *Acacia longifolia* (Sydney golden wattle), *Astartea scoparia*, *Juncus pallidus* (pale rush) and infrequently noted juvenile *Agnosis flexuosa* (peppermint).

4.3. Fauna

4.3.1. Fauna habitat

Habitat values are limited by historical disturbance and are primarily suited to widespread fauna species with non-specific habitat requirements.

The **AlAs** vegetation provides a cover of native shrubs and understory cover of riparian vegetation that may offer cover for ground dwelling fauna.

Native and non-native trees and large shrubs associated with the ***Mp*** and **Non-native shrubs** vegetation units may also provide value to native birds and other arboreal fauna. While **Non-native grasses and forbes** areas may be used for foraging.

4.3.2. Fauna species inventory

No fauna were observed onsite during the survey. However, evidence of *Isoodon fusciventer* (quenda)(diggings), *Macropus fuliginosus* (western grey kangaroo) and *Oryctolagus cuniculus* (rabbit) (scats) was recorded at the site.

4.3.3. Conservation significant fauna

Quenda, which were identified as having a high likelihood of occurrence, were recorded in the site.

5. Discussion

5.1. Flora and vegetation

Of the fourteen threatened and priority flora species identified as having moderate potential of occurring in the site, none were identified during the field survey. Where possible, flora and vegetation surveys should be undertaken during the season that is most suitable for detection and identification of the range of flora likely to occur in the area (EPA 2016). Whilst the survey was undertaken outside of the optimal spring flowering period, due to the degraded condition of vegetation within the site it is considered unlikely that these species would be present. Further survey is therefore not considered necessary to confirm their absence.

The **AlAs** and **Mp** and to a lesser extent **Non-native shrubs** vegetation units contain 'native vegetation'.

In Western Australia 'native vegetation' is defined under section 3(1) and 51A of the EP Act as follows:

Indigenous aquatic or terrestrial vegetation and includes dead vegetation unless that dead vegetation is of a class declared by regulation to be excluded from this definition but does not include vegetation in a plantation.

Planted vegetation is not considered native vegetation unless:

- sown, planted or propagated as required under the EP Act or another written law

- otherwise declared by regulation to be defined as native vegetation.

Under the EP Act, native vegetation cannot be cleared without a permit or valid exemption.

Threatened ecological communities (TECs) may be protected under the *Biodiversity Conservation Act 2016* (BC Act) and associated regulations and/or the Commonwealth EPBC Act. No vegetation in the site represents a TEC.

The *Astartea scoparia* swamp thicket PEC (priority 1), was recorded in the site (**Figure 5**). Limited information exists on diagnostic criteria for this PEC. The vegetation identified as *Astartea scoparia* swamp thicket is present in degraded condition and it is unclear whether it is sufficiently intact to be considered relevant. Nevertheless, it was recorded on the basis that being dominated by *Astartea scoparia* it is assumed to be at least generally representative.

PECs are ecological communities that are not listed as threatened under the BC Act or EPBC Act, but are otherwise considered rare or under threat. PECs are published on DBCA's priority list (DBCA 2022b, c) and classified as either 'priority 1' (P1), 'priority 2' (P2), 'priority 3' (P3) or 'priority 4' (P4). PECs do not have direct statutory protection, and so, whilst their classification is taken into account during State and Local government approval processes, they have the same legal protection as native vegetation.

5.2. Fauna

With the exception of quenda, the site generally has low value as habitat for native fauna. Nevertheless, a range of common and widespread species are likely to occur.

Quenda are a small marsupial that is commonly observed in the Albany region, including urban areas and particularly where understorey vegetation or grasses provide dense cover.

Western ringtail possum was identified as having a moderate likelihood of occurrence. While this species could occur, it would probably only be as a transient visitor as the vegetation present is not core habitat.

Similarly, the bird species given a moderate likelihood of occurrence might occasionally pass through or fly over the site but are not expected to be residents or regular visitors.

With respect to black cockatoos, the site lies within the modelled distribution of forest red-tailed, Baudin's and Carnaby's black cockatoo. None of the trees in the site qualify as habitat trees, nor would any be considered to have potential as roost sites or provide foraging habitat. Therefore, if black cockatoos were to occur in the site it would be occasional and for short periods of time.

6. Conclusions

6.1. Flora and vegetation

Vegetation in the site is predominantly non-native. However, remnant and regrown native vegetation occurs, including the priority 1 PEC *Astartea scoparia* swamp thicket. In accordance with the EP Act, a permit or exemption would need to be obtained for removal of this vegetation.

6.2. Fauna and fauna habitat

The priority 3 marsupial, quenda, was recorded in the site (diggings). The site provides suitable habitat for this species. However, due to its small size and historical disturbance, the site is otherwise primarily suited to widespread fauna species with non-specific habitat requirements.

7. Limitations

In accordance with the *Environmental Factor Guideline: Flora and Vegetation* (EPA 2016), where possible, flora and vegetation surveys should be undertaken during the season that is most suitable for detection and identification of the range of flora likely to occur in the area. The survey was completed by an experienced ecologist (>20 years' botanical experience in the southwest of WA) and the entire site was traversed. While the survey was completed outside of spring, due to the degraded condition of vegetation, timing is not considered to have posed significant limitation to outcomes of the assessment.

8. References

8.1. General references

Bray, D. J. and Gomon, M. F. 2018, Pouch Lamprey, *Geotria australis*.

Bureau of Meterology (BoM) 2024, *Climate Data Online*, <http://www.bom.gov.au/climate/data/>.

Christensen, P. and Strahan, R. 1984, The Australian Museum Complete Book of Australian Mammals, Angus and Robertson Publishers, Sydney.

Department of Agriculture, Water and the Environment (DAWE) 2022, *Referral guideline for 3 WA threatened black cockatoo species: Carnaby's Cockatoo, Baudin's Cockatoo and the Forest Red-tailed Black cockatoo*, Canberra.

Department of Biodiversity, Conservation and Attractions (DBCA) 2023, *NatureMap*, <https://static.dbca.wa.gov.au/pages/naturemap.html>.

Department of Biodiversity, Conservation and Attractions (DBCA) 2017, *Ramsar Sites (DBCA-010)*.

Department of Biodiversity, Conservation and Attractions (DBCA) 2018, *Directory of Important Wetlands in Australia - Western Australia (DBCA-045)*.

Department of Biodiversity Conservation and Attractions (DBCA) 2019, *Vegetation Complexes - South West forest region of Western Australia (DBCA-047)*, Kensington.

Department of Biodiversity, Conservation and Attractions (DBCA) 2022, *Priority Ecological Communities for Western Australian Version 34*.

Department of Biodiversity, Conservation and Attractions (DBCA) 2023, *Methods for survey and identification of Western Australian threatened ecological communities (draft)*, Perth, Western Australia.

Department of Biodiversity, Conservation and Attractions (DBCA) 2023, *Threatened Species and Communities - Data Searches*, Perth, WA, <https://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities>.

Department of the Climate Change, Energy, the Environment and Water 2023, Conservation Advice for *Phaethon rubricauda westralis* (Indian Ocean red-tailed tropcbird), Canberra.

Department of the Climate Change, Energy, the Environment and Water 2023, *Limicola falcinellus* in Species Profile and Threats Database, Canberra.

Department of Climate Change, Energy, the Environment and Water (DCCEEW) 2024, *Protected Matters Search Tool*, <https://pmst.awe.gov.au/>.

Department of Primary Industries and Regional Development (DPIRD) 2020, *Soil Landscape Mapping - Systems (DPIRD-064)*.

Environment Australia 2000, *Revision of the Interim Biogeographic Regionalisation for Australia (IBRA) and Development of Version 5.1 - Summary Report*, Department of Environment and Heritage.

Environmental Protection Authority (EPA) 2016b, *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment*, Perth.

Government of Western Australia 2018, *Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017*, WA Department of Biodiversity, Conservation and Attractions, Perth.

Groom, C. 2011, *Plants Used by Carnaby's Black Cockatoo*, Department of Environment and Conservation, Perth.

Johnstone, R. E., Johnstone, C. and Kirkby, T. 2011, *Black Cockatoos on the Swan Coastal Plain: Carnaby's Cockatoo (Calyptorhynchus latirostris), Baudin's Cockatoo (Calyptorhynchus baudinii) and the Forest Red-tailed Black Cockatoo (Calyptorhynchus banksii naso) on the Swan Coastal Plain (Lancelin–Dunsborough), Western Australia. Studies on distribution, status, breeding, food, movements and historical changes.*, Department of Planning, Western Australia.

Johnstone, R. E. and Kirkby, T. 1999, *Food of the Red-tailed Forest Black Cockatoo Calyptorhynchus banksii naso in Western Australia*, Western Australian Naturalist, 22: 167-178.
Johnstone, R. E. and Storr, G. M. 1998, Handbook of Western Australian Birds. Volume 1 - Non-Passerines (Emu to Dollarbird), Western Australian Museum, Perth.
Marchant, S. and Higgins, P. J. 1993, Handbook of Australian, New Zealand and Antarctic Birds. Volume two - Raptors to Lapwings, Oxford University Press, Melbourne, Victoria.
Morgan, D. L., Beatty, S. J., Klunzinger, M. W., Allen, M. G. and Burnham, Q. E. 2011, Field Guide to the Freshwater Fishes, Crayfishes and Mussels of South Western Australia, SERCUL, Perth, Western Australia.
Macrombe, M. 2004, Field Guide to Australian Birds, Steve Parish Publishing, Archerfield, Queensland.
NVIS Technical Working Group 2017, *Australian Vegetation Attribute Manual: National Vegetation Information System*, Department of the Environment and Energy, Canberra.
Pizzey, G. and Knight, F. 2012, The Fieldguide to the Birds of Australia, Harper Collins Publishers, Sydney, Australia
Threatened Species Scientific Committee (TSSC) 2018, Conservation advice for Bettongia penicillata (woylie), Department of the Environment, Canberra.
W. A. L. I. Authority (WALIA) 2024, *Landgate Map Viewer Plus*, <https://map-viewer-plus.app.landgate.wa.gov.au/index.html>.
(Western Australian Herbarium) 2024, *Florabase*, Department of Biodiveristy, Conservation and Attractions (DBCA), <https://florabase.dbca.wa.gov.au/>.
Wetlands Advisory Committee 1977, *The status of reserves in System Six*, Environmental Protection Authority, Perth.

8.2. Online references

The online resources that have been utilised in the preparation of this report are referenced in **Section 8.1**, with access date information provided in **Table R1**.

Table R1: Access dates for online references

Reference	Date accessed	Website or dataset name
DCCEEW (2023)	24/04/2024	Protected Matters Search Tool
DBCA (2023)	19/04/2024	NatureMap
DBCA (2023)	19/04/2024 & 22/04/2024	Threatened Species and Communities - Data Searches
WALIA (2024)	19/04/2024	Landgate Map Viewer
Western Australian Herbarium (2024)	30/04/2024	Florabase

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Figures

Figure 1: Site Location

Figure 2: Geology

Figure 3: Vegetation Units

Figure 4: Vegetation Condition

Figure 5: Priority Ecological Communities



Figure 1: Site Location

Project:	Ecological Assessment EMKC3 Albany Ecological Assessment
Client:	EMKC3

Plan Number:
VEP24-016(01)--F01

Drawn:	AS
Date:	06/05/2024
Checked:	GAB
Approved:	TAA
Date:	10/05/2024

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Scale: 1:2,000@A4

GDA2020 MGA Zone 50

emerge ASSOCIATES

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©Landgate (2023). Nearmap Imagery date: 10/02/2024

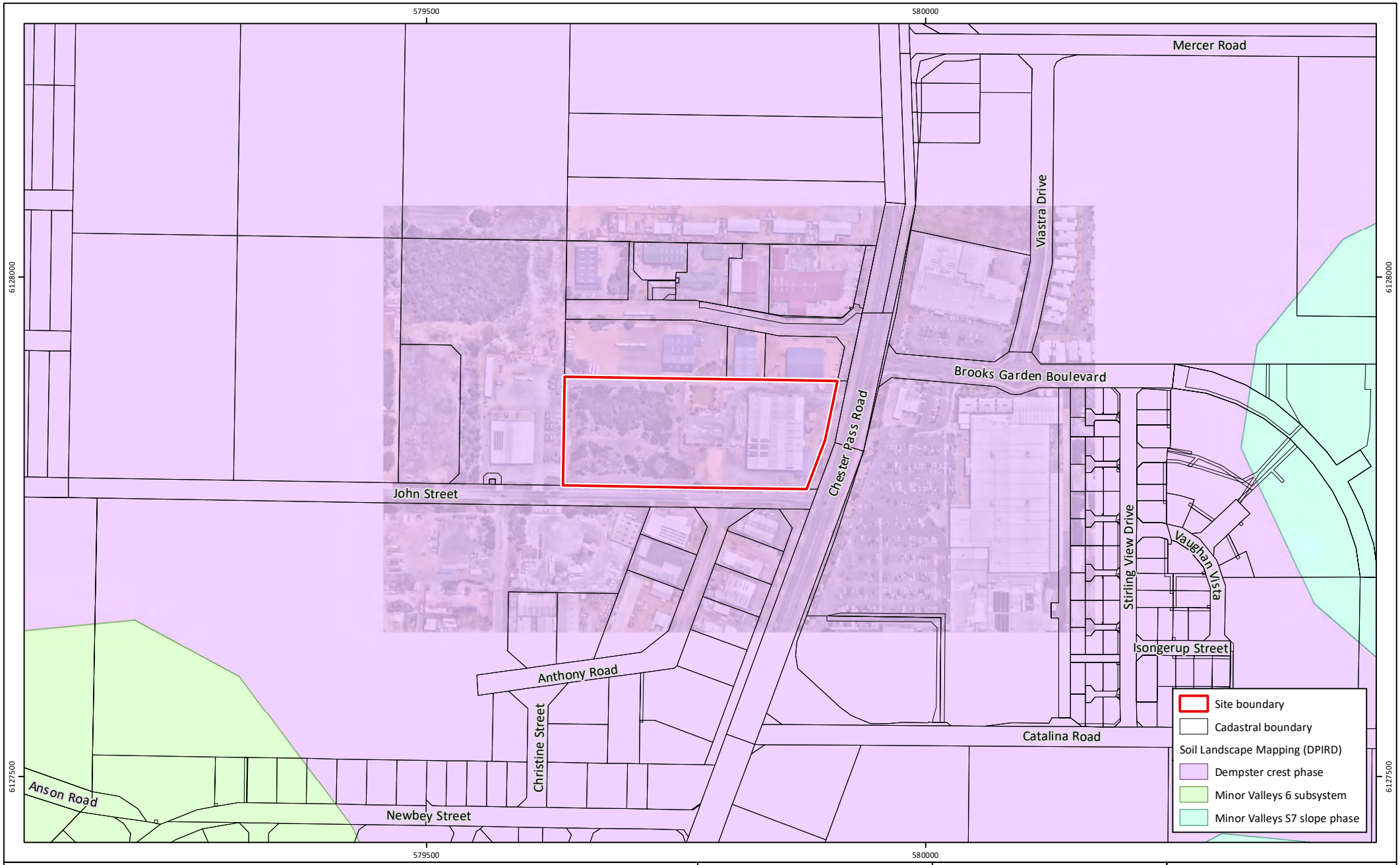


Figure 2: Soil Mapping

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EMKC3 Albany Ecological Assessment
Client: EMKC3

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Checked: GAB
Approved: TAA
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Figure 3: Vegetation Units

Project: Ecological Assessment
EMKC3 Albany Ecological Assessment
Client: EMKC3

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Approved: TAA
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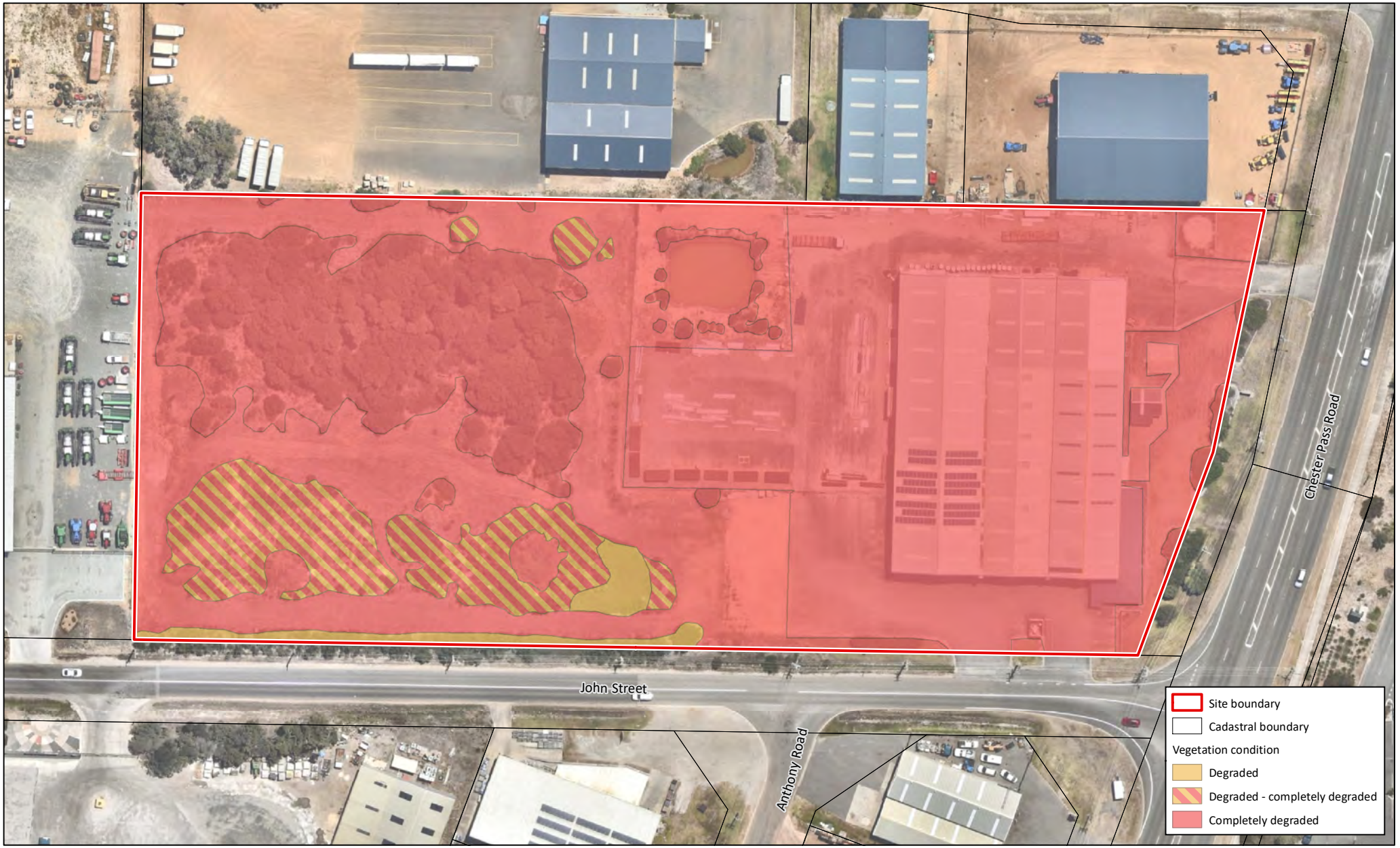


Figure 4: Vegetation Condition

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EMKC3 Albany Ecological Assessment
Client: EMKC3

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GDA2020 MGA Zone 50

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Figure 5: Priority Ecological Communities

Project: Ecological Assessment
EMKC3 Albany Ecological Assessment
Client: EMKC3

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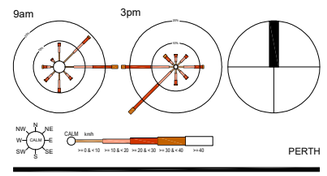
Appendix A

Development Plans

REVISIONS

A	PRELIMINARY	21.11.23
B	REVISION – SURVEY OVERLAY	29.01.24
C	REVISION – SURVEY OVERLAY	09.02.24
D	REVISION – REMOVED WALL, RSD & CARPARK UPDATE	06.03.24
E	REVISION – FENCE & GATE UPDATE	20.03.24
F	REVISION – FOR APPROVAL	27.03.24





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ARBV 17867 | NSW ARB 10125 | BOAQ 5835
DEP0003111 | PDP0001062

PROJECT

EXPANSION

177 CHESTER PASS ROAD
MILPARA, WA

DRAWING TITLE

PROPOSED ESTATE PLAN

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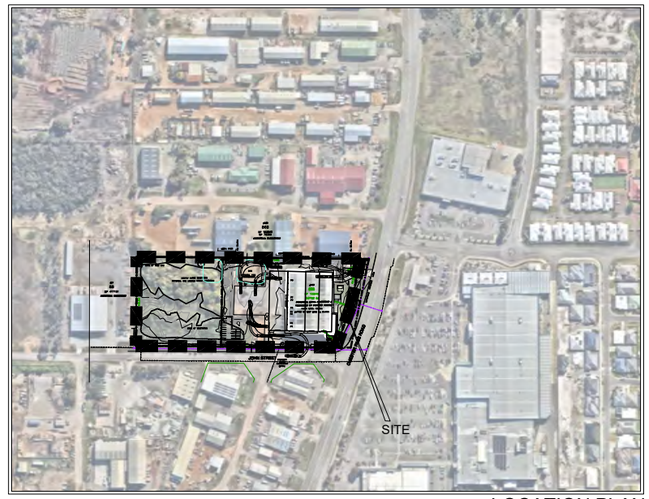
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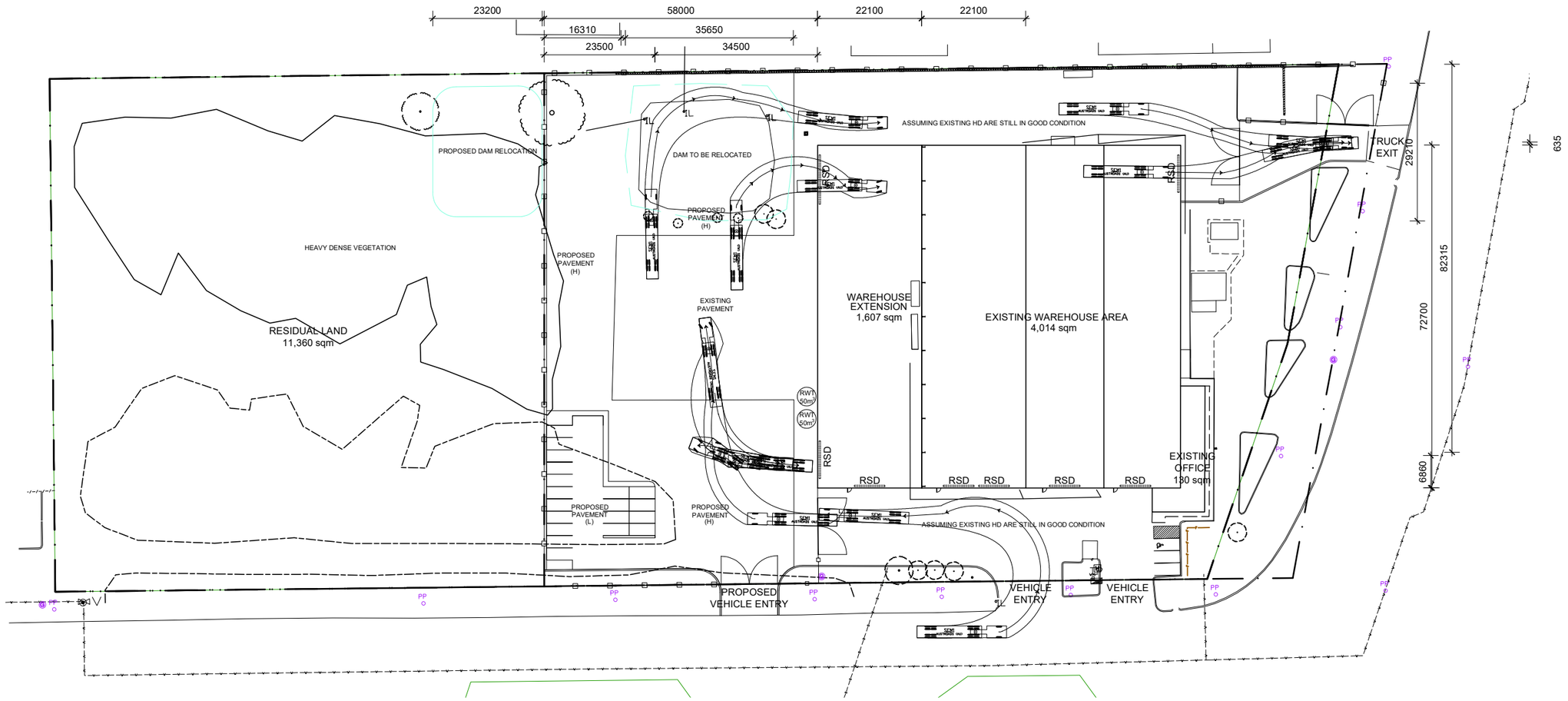
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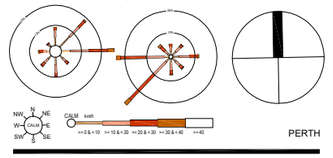
REVISIONS

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B	REVISION – CIVIL – BASIN	09.02.24
C	REVISION – REMOVED WALL, RSD & CARPARK UPDATE	06.03.24
D	REVISION – FENCE& GATE UPDATE	20.03.24
E	REVISION – FOR APPROVAL	27.03.24



DEVELOPMENT SUMMARY

SITE AREA	17,066 sqm
EXISTING WAREHOUSE AREA	4,014 sqm
EXISTING OFFICE	130 sqm
WAREHOUSE EXTENSION	1,607 sqm
TOTAL BUILDING AREA	5,751 sqm
EFFICIENCY	33.70 %
CARPARKING PROVIDED	22 spaces
ADDITIONAL HD PAVEMENT (H)	3,680 sqm
ADDITIONAL LD PAVEMENT (L)	555 sqm



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DEP0003111 | PDP0001062

PROJECT

EXPANSION

177 CHESTER PASS ROAD
MILPARA, WA

DRAWING TITLE

PROPOSED SITE PLAN

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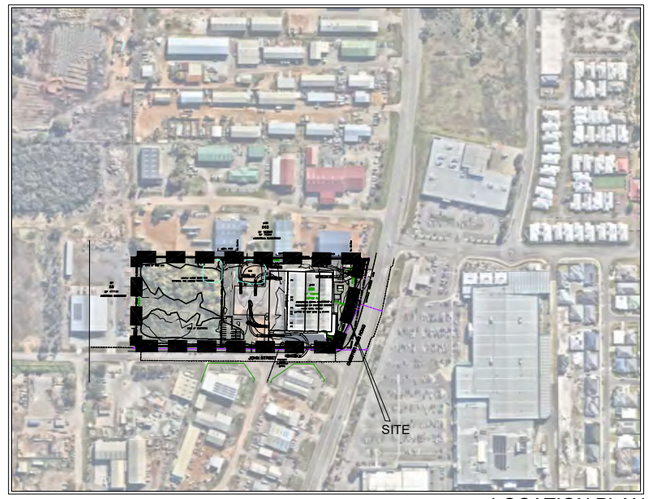
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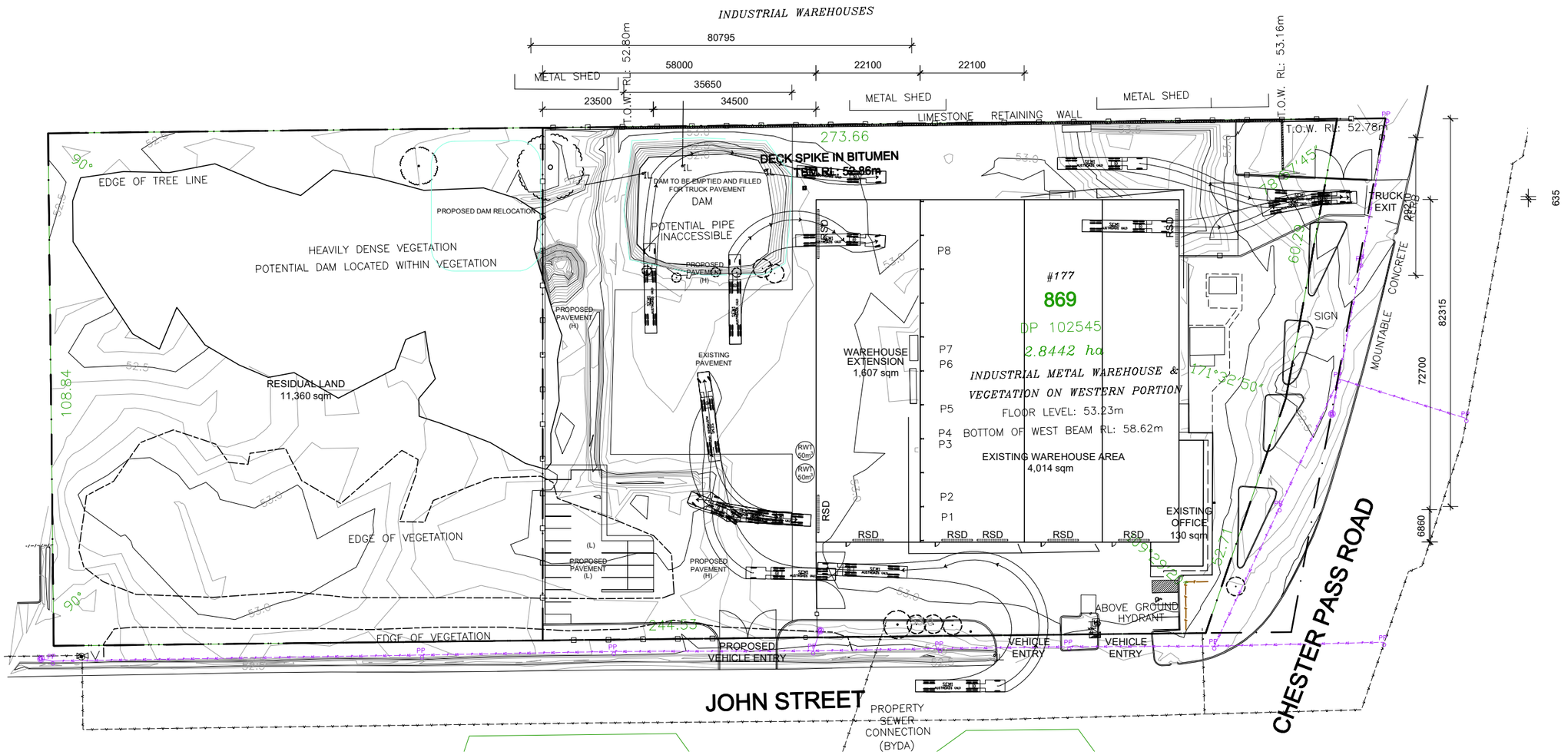
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REVISIONS

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C	REVISION – REMOVED WALL, RSD & CARPARK UPDATE	06.03.24
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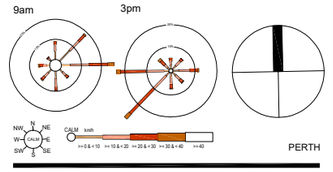


LOCATION PLAN



DEVELOPMENT SUMMARY

SITE AREA	17,066 sqm
EXISTING WAREHOUSE AREA	4,014 sqm
EXISTING OFFICE	130 sqm
WAREHOUSE EXTENSION	1,607 sqm
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ADDITIONAL LD PAVEMENT (L)	555 sqm



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DEP0003111 | PDP0001062

PROJECT

EXPANSION

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MILPARA, WA

DRAWING TITLE

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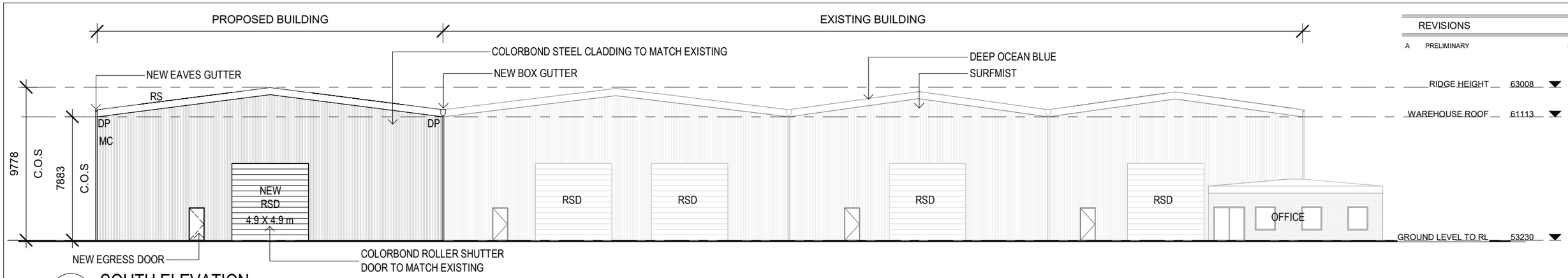
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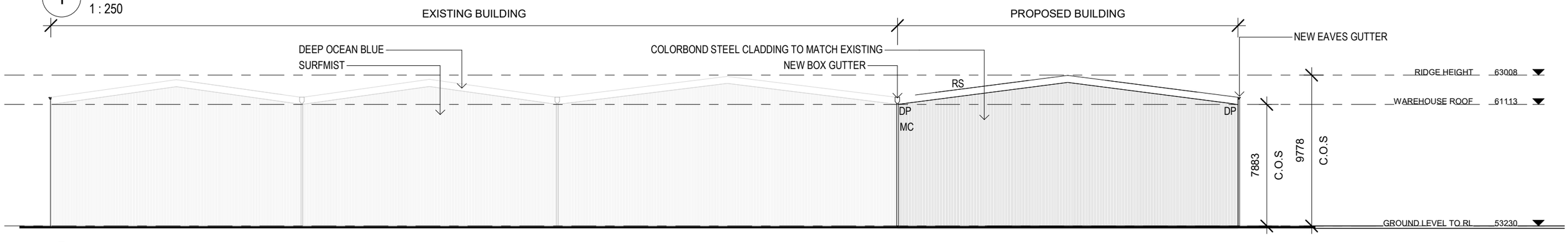
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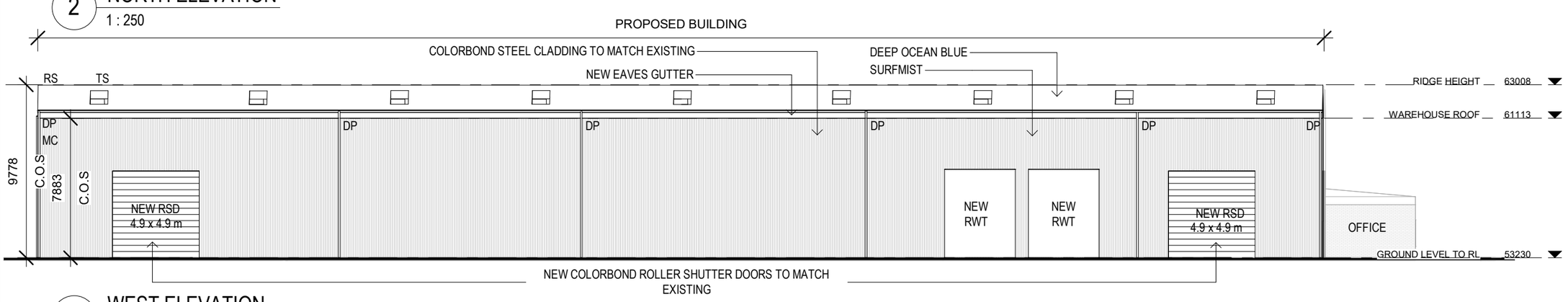
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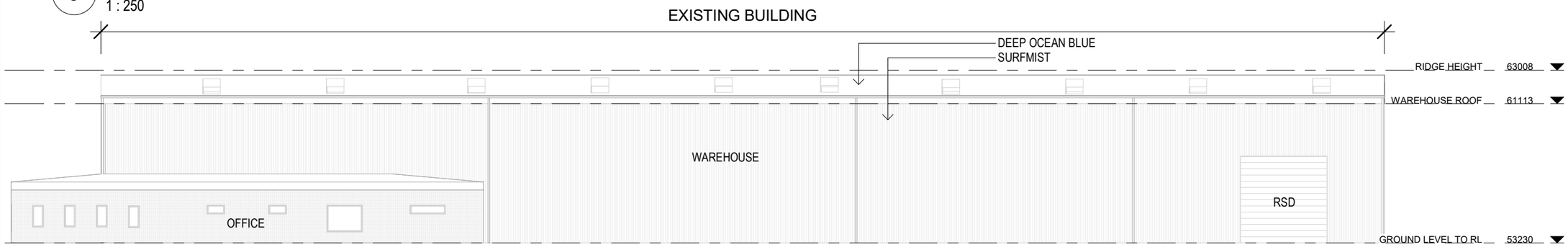
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3 WEST ELEVATION

1 : 250



4 EAST ELEVATION

1 : 250

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REVISIONS

A	PRELIMINARY	27.03.24

LEGEND:

AL	ALUMINIUM CLADDING
COL	COLUMN
DP	DOWN PIPE
CFC	COMPRESSED FIBRE CEMENT
GL	GLASS
MC	METAL CLADDING
PC	PRECAST CONCRETE
PIR	POLYISOCYANURATE INSULATED PANEL
RSD	ROLLER SHUTTER DOOR
RS	ROOF SHEETING
TS	TRANSLUCENT SHEETING

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ARBV 17867 | NSW ARB 10125 | BOAQ 5835

EXPANSION

177 CHESTER PASS ROAD
MILPARA, WA

DRAWING TITLE

EXISTING ELEVATIONS

2 0 2 4 6 8

SCALE 1: 250 @A3

DATE 25.03.2024
DRAWN BY AAIMUN TARIQ

100450 FS05 020 A

COLOUR LEGEND (C.O.S)

COLORBOND SURFMIST
COLORBOND DEEP OCEAN BLUE

NOTE:
- ALL MATERIALS AND COLORS SHOULD MATCH EXISTING

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Appendix B

Conservation Significant Flora Likelihood of Occurrence

Species name	Level of significance		Life strategy	Habitat	Flowering period	Likelihood of occurrence
	WA	EPBC Act				
Andersonia auriculata	P3	-	P	Grey or peaty sand, often over laterite. Swampy areas, granite outcrops.	Apr-Oct	Moderate
Andersonia sp. Jamesii	P4	0	P	Sand, clay or laterite.	Jun-Oct	Moderate
Banksia biterax	P3	-	P	Lateritic gravel, sand.	May or Jul to Oct	Moderate
Banksia brownii	CR	EN	P	Open scrub over heath or low open woodland. It grows in a variety of soils, including shallow sand over laterite, sandy loam over granite and shallow sand over schist on slight rises, gullies or mountain tops.	May-Jul	Low
Banksia goodii	VU	VU	P	Low open forest and low woodland of jarrah (Eucalyptus marginata) and western sheoak (Allocasuarina fraseriana) over Agonis heath. Soils are generally shallow, white to grey sand over laterite.	Nov-Jan	Low
Banksia serra	P4	0	P	Gravel, sand or clay loam over laterite. Hillslopes.	Jul-Sep	Low
Boronia crassipes	P3	0	P	Sand, peaty sand. Winter-wet swamps, creeklines.	Aug-Sep	Moderate
Bossiaea divaricata	P4	-	P	Sandy lateritic soils.	Sep (limited information)	Low
Calectasia cyanea	CR	CR	P	Heathland on white sand or laterite gravel over laterite. Known only from one population near Albany.	Jun-Oct	Moderate
Caustis sp. Boyanup	P3	-	P	White or grey sand.	Jan-Feb	Moderate
Chorizema carinatum	P3	-	P	Sand, sandy clay.	Oct-Dec	Moderate
Drosera paleacea	P1	-	P	White sand, sandy clay.	Sep-Dec/Jan	Moderate
Schoenus sp. Grey Rhizome	P1	0	P	Sandy clay, sand.	Oct	Moderate
Stylidium falcatum	P2	-	P	Sand, gravelly clay loam. Plains, lateritic ridges.	Oct-Nov	Moderate
Tricostularia sandifordiana	P3	0	P	White-grey sand on lower slopes and flats.	Nov-Dec	Moderate
Adenanthos x cunninghamii	P4	0	P	Grey sand. Coastal dunes & sandplains.	Mar or Sep-Oct	Low
Austrostipa mundula	P3	-	P	Grey sand over limestone.	Sept-Nov	Low

Species name	Level of significance		Life strategy	Habitat	Flowering period	Likelihood of occurrence
	WA	EPBC Act				
Banksia seneciifolia	P4	0	P	Sandy loam, sand. Rocky hillsopes.	Jun or Aug	Low
Banksia verticillata	CR	VU	P	Granite fissures and deeper soil around the edges of outcrops and often on rocks that run into the ocean.	Jan-Apr	Low
Caladenia harringtoniae	VU	VU	PG	Sandy loam in winter-wet flats, margins of lakes, creeklines, granite outcrops.	Oct-Nov	Low
Caladenia startiorum	P2	-	P	Clay loam. Winter-wet swamps.	Sep-Oct	Low
Chordifex abortivus	VU	EN	P	Sand over gravelly clay in scrub over sedges. Often low lying areas.	Aug-Oct	Low
Conospermum quadripetalum	P2	0	P	Sandy clay, grey sand. Flats behind coastal hills.	Sep-Nov	Low
Corysanthes limpida	P4	-	P	White sands over limestone. Coastal/dune areas.	Aug-Oct	Low
Diuris drummondii	VU	VU	PG	In low-lying depressions in peaty and sandy clay swamps.	Nov-Jan	Low
Drakaea micrantha	EN	VU	PG	Open sandy patches often adjacent to winter-wet swamps.	Sept-early Oct	Low
Drosera fimbriata	P4	-	P	White sand, granite.	Sep-Oct	Low
Eucalyptus newbeyi	P3	0	P	Sandy clay, loam. Steep spongolite valley sides & cliffs forming river banks.	Sep-Dec or Jan-Feb	Low
Gahnia sclerioides	P4	-	P	Loam, sandy soils. Moist shaded situations.	Feb, Apr, Jun, Aug or Nov	Low
Gonocarpus pusillus	P4	-	A	Grey sandy clay in winter-wet swamps.	Nov-Dec	Low
Gonocarpus simplex	P4	0	P	Peaty sand. Swamps, seasonally inundated areas.	Nov-Dec	Low
Goodenia sp. South Coast	P3	0	P	Gravelly loams, sandy clays. Edge granite outcrop, roadside.	Nov-Dec	Low
Gyrostemon thesioides	P2	0	P	Sand over limestone. Consolidated coastal dunes	Nov	Low
Isopogon uncinatus	CR	EN	P	Loam or sand on granite, peaty sand. Swampy depressions, hillslopes.	Oct-Nov	Low
Lachnagrostis billardierei subsp. billardierei	P3	0	P	Sand over granite. Hilltops.	Dec	Low
Leucopogon altissimus	P3	0	P	Sandy loam over granite on slopes and flats.	Jul-Sep	Low
Lysinema lasianthum	P4	0	P	Swamps, seasonally wet areas.	Jul-Nov	Moderate

Species name	Level of significance		Life strategy	Habitat	Flowering period	Likelihood of occurrence
	WA	EPBC Act				
Microtis globula	VU	VU	PG	Peaty soils in seasonally wet swamps.	Dec-Jan	Low
Microtis pulchella	P4	0	P	Peaty sand. Winter-wet swamps	Nov-Dec/Jan	Moderate
Pleurophascum	P4	-	0	Gentle slopes and hills.	0	Low
Poa billardierei	P3	0	P	Coastal foredunes on beach	Nov	Low
Prasophyllum paulinae	P1	0	PG	Swamps and low-lying areas in	Oct	Moderate
Pterostylis heberlei	P2	0	PG	Steep granite slopes. Black sandy clay over granite.	Aug-Oct	Low
Spyridium spadiceum	P4	0	P	Sand or gravelly loam. Granitic	Aug-Dec	Low
Stenanthemum sublineare	P2	-	P	White sand on coastal plains.	Oct-Dec	Low
Synaphea incurva	P3	0	P	Gravelly loam, sandy soils.	Sep-Nov	Low
Synaphea preissii	P3	0	P	Sand, gravelly loam.	Jul-Nov	Low
Thelymitra porphyrosticta	P2	0	PG	Sand and clay loam in woodland	Aug	Low
Thomasia purpurea x	P1	0	P	Grey sand over limestone. Creek	Nov-	Low
Thomasia quercifolia	P4	0	P	Grey sand over limestone in	Oct-Nov,	Low
Thomasia solanacea	P4	0	P	Alluvium, sand over limestone,	Sep-Dec	Low
Thysanotus isantherus	P4	-	P	Hillsides, sand over granite.	Nov-Dec	Low
Verticordia fimbrilepis subsp. australis	EN	VU	P	Low heath in brown sandy loam around outcropping granite.	Oct-Dec	Low

Note: CR=critically endangered, EN=endangered, VU=vulnerable, P1=Priority 1, P2=Priority 2, P3=Priority 3, P4=Priority 4, P=perennial, PG=perennial geophyte, A=annual. Species considered to potentially occur within the site are shaded green.

Appendix C

Conservation Significant Communities Likelihood of Occurrence

Code	Community name	TEC/ PEC	Level of significance		Likelihood of occurrence
			State	EPBC Act	
	Astartea scoparia Swamp Thicket	PEC	P1	-	Moderate
	Banksia coccinea Shrubland/Eucalyptus staeri/Sheo	TEC	P1	Endangered	Low
	Banksia littoralis woodland / Melaleuca incana Shru	PEC	P1	-	Low
	Coastal Melaleuca incana / Taxandria juniperina Shr	PEC	P1	-	Low
	Subtropical and Temperate Coastal Saltmarsh	TEC	P3	Vulnerable	Low
	Empodisma peatlands of southwestern Australia	TEC	P1	Endangered	Low
	Proteaceae Dominated Kwongkan Shrublands of the	TEC	P3	Endangered	Low

Note: TEC=threatened ecological community, PEC=priority ecological community, P1=priority 1, P3=priority 3

Appendix D

Conservation Significant Fauna Likelihood of Occurrence

Species name	Common name	Level of significance		Habitat	Likelihood of occurrence
		WA	EPBC Act		
Birds					
Ardenna carneipes	Flesh-footed shearwater	VU	MI	Marine species that breeds on islands off south coast from near Cape Leeuwin (Johnstone and Storr 1998).	Low
Arenaria interpres	Ruddy turnstone	VU (MI)	VU (MI)	Tidal mud and reef flats, sheltered rocky coasts, stony and seaweedy beaches and sandpits, dry coral ridges (Abrolhos) and pebbly shores of near-coastal saltlakes (including saltwork ponds) (Johnstone and Storr 1998).	Low
Calidris alba	Sanderling	MI	MI	Mainly steeply shelving sandy beaches exposed to ocean swell. Also sandy inlets, estuarine sandbanks and near-coastal saltlakes (including saltwork ponds) (Johnstone & Storr 1998).	Low
Calidris canutus	Red knot	EN	EN (MI)	Mud and sand flats in estuaries and on sheltered coasts. Also near-coastal saltlakes, including saltwork ponds (Pizzey & Knight 2012).	Low
Calidris ferruginea	Curlew sandpiper	CR	CR (MI)	Mainly shallows of estuaries and near-coastal saltlakes (including saltwork ponds) and drying near-coastal freshwater lakes and swamps. Also beaches and near-coastal sewage ponds (Johnstone & Storr 1988).	Low
Calidris ruficollis	Red-necked stint	MI	MI	Tidal mudflats, saltmarshes, sandy or shelly	Low
Calidris tenuirostris	Great knot	CR	CR (MI)	Mud or sand flats in estuaries and on sheltered coasts. Also near-coastal saltlakes, including saltwork ponds (Johnstone & Storr 1988).	Low
Charadrius leschenaultii	Great sand plover	VU	VU (MI)	Wide sandy or shelly beaches, sandpits, tidal mudflats, reefs, sand cays, mangroves, saltmarsh, dune wilderness, bare paddocks, seldom far inland (Pizzey & Knight 2012).	Low
Charadrius mongolus	Lesser sand plover	EN	EN (MI)	Sandy beaches and tidal estuarine flats. Also near-coastal saltlakes, including saltwork ponds (Johnstone & Storr 1998).	Low
Hydroprogne caspia	Caspian tern	MI	MI	Mainly sheltered areas, estuaries (when not laden	Low
Limosa lapponica	Bar-tailed godwit	MI	MI	Estuarine sand and mudflats and sandy beaches with loads of seaweed; also reef flats and near-coastal saltlakes (including saltwork and sewage ponds) (Johnstone and Storr 1998).	Low
Macronectes giganteus	Southern giant-petrel	MI	EN (MI)	Breeds on southern subantarctic and antarctic islands. May visit Western Australian waters from February to December (mostly June to September) (Johnstone and Storr 1998).	Low
Numenius madagascariensis	Eastern curlew	CR	CR (MI)	Mainly tidal mudflats; also reef flats, sandy beaches and rarely near-coastal lakes (including saltwork ponds) (Johnstone and Storr 1998).	Low
Numenius phaeopus	Whimbrel	MI	MI	Estuaries, mangroves, tidal flats, coral cays, exposed reefs, flooded paddocks, sewage ponds, bare grasslands, sportsgrounds and lawns (Pizzey & Knight 2012).	Low
Oceanites oceanicus	Wilson's storm petrel	MI	MI	Marine, migratory species that may visit south-western Australian waters and shores in late autumn to winter (Pizzey & Knight 2012).	Low
Oxyura australis	Blue-billed duck	P4	-	Mainly deeper freshwater swamps and lakes; occasionally saltlakes and estuaries freshened by flood waters (Johnstone and Storr 1998).	Low
Pandion haliaetus	Osprey	MI	MI	Coasts, estuaries, bays, inlets, islands, and surrounding waters; coral atolls, reefs, lagoons, rock cliffs, stacks (Pizzey & Knight 2012).	Low

Species name	Common name	Level of significance		Habitat	Likelihood of occurrence
		WA	EPBC Act		
Pluvialis fulva	Pacific golden plover	MI	MI	Estuaries, mudflats, saltmarshes, mangroves; rocky reefs and stranded seaweed on ocean shores; margins of shallow open inland swamps; sewage ponds, short-grass paddocks, sportsgrounds, airfields, ploughed land (Pizzey &	Low
Pluvialis squatarola	Grey Plover	VU (MI)	VU (MI)	Mudflats, saltmarsh, tidal reefs and estuaries, rarely inland (Pizzey and Knight 2012).	Low
Puffinus huttoni	Hutton's shearwater	EN	MI	Marine species that breeds in New Zealand and disperses mainly to seas off northern Australia (Johnstone & Storr 1998).	Low
Stercorarius antarcticus lonnbergi	Brown skua	P4	-	Mostly beyond shelf break; occasionally on beaches foraging on dead seals or whales (Pizzey & Knight 2012).	Low
Thalassarche chlororhynchos	Atlantic yellow-nosed albatross	VU	MI	Marine migratory species that breeds on the Tristan da Cunha group and on Gough Island. Sparse visitor to Australian waters/shores (ACAP,	Low
Thalasseus bergii	Crested tern	MI	MI	Mainly blue-water seas (especially within 3 km of land), including southern estuaries in summer and autumn (when free of silt); also tidal creeks in north, but not penetrating far into larger estuaries (DCCEEW 2023).	Low
Tringa brevipes	Grey-tailed tattler	P4 (MI)	MI	Tidal mud and reef flats, sheltered rocky coasts, stony and seaweedy beaches and sandpits, dry coral ridges (Abrolhos) and pebbly shores of near-coastal saltlakes (including saltwork ponds) (Johnstone and Storr 1998).	Low
Xenus cinereus	Terek sandpiper	VU (MI)	VU (MI)	Tidal mudflats, estuaries; shores and reefs of islands; coastal swamps, commercial saltfields (Pizzey & Knight 2012).	Low
Zanda baudinii	Baudin's black cockatoo	EN	EN	Mainly eucalypt forests. Attracted to seeding Corymbia calophylla, Banksia spp., Hakea spp., and to fruiting apples and pears (Johnstone and Storr 1998).	Low
Zanda latirostris	Carnaby's black cockatoo	EN	EN	Mainly proteaceous scrubs and heaths and adjacent eucalypt woodlands and forests; also plantations of Pinus spp. Attracted to seeding Banksia spp., Hakea spp., Eucalyptus spp., Corymbia calophylla, Grevillea spp., and Allocasuarina spp. (Johnstone and Storr 1998).	Low
Pezoporus flaviventris	Western ground parrot	CR	CR	Low, dry or swampy near-coastal heathland. (DCCEEW 2023).	Very low
Actitis hypoleucos	Common sandpiper	MI	MI	Edge of sheltered waters salt or fresh, e.g. estuaries, mangrove creeks, rocky coasts, near-coastal saltlakes (including saltwork ponds), river pools, lagoons, claypans, drying swamps, flood waters, dams and sewage ponds. Preferring situations where low perches are available (Johnstone & Storr 1998).	Moderate
Calidris acuminata	Sharp-tailed sandpiper	VU (MI)	VU (MI)	Occurs in tidal mudflats, saltmarshes and mangroves, as well as, shallow fresh, brackish or saline inland wetlands. It is also known from floodwaters, irrigated pastures and crops, sewage ponds, saltfields (Pizzey & Knight 2012).	Moderate
Falco peregrinus	Peregrine falcon	OS	-	Mainly found around cliffs along coasts, rivers, ranges and around wooded watercourses and lakes (Johnstone and Storr 1998).	Moderate
Falco peregrinus macropus	Australian peregrine falcon	S	-	Mainly about cliffs along coasts, rivers and ranges and about wooded watercourses and lakes (Johnstone & Storr 1988).	Moderate

Species name	Common name	Level of significance		Habitat	Likelihood of occurrence
		WA	EPBC Act		
Tringa nebularia	Common greenshank	EN (MI)	EN (MI)	Mudflats, estuaries, saltmarshes, margins of lakes, wetlands, claypans (fresh and saline), commercial saltfields, sewage ponds (Pizzey & Knight 2012).	Moderate
Tringa stagnatilis	Marsh sandpiper	MI	MI	Mainly shallow fresh or brackish waters: swamps, lakes, river pools, soaks, sewage ponds and bore overflows. Occasionally estuaries and salt ponds, and rarely coasts (DCCEEW 2023).	Moderate
Aphelocephala leucopsis	Southern whiteface	-	VU	Relatively undisturbed open woodlands and shrublands with low tree densities, with an understory of grasses or herbaceous litter cover. They require hollows and crevices in living or dead trees for roosting and nesting (DCCEEW 2023).	Negligible
Ardenna grisea	Sooty shearwater	MI	MI	Marine, migratory species that may visit south-western Australian waters from June to October (Pizzey & Knight 2012).	Negligible
Botaurus poiciloptilus	Australasian bittern	EN	EN	In or over water, in tall reedbeds, sedges, rushes, cumbungi, lignum. Also occurs in ricefields, drains in tussocky paddocks and occasionally in saltmarshes and brackish wetlands (TSSC 2019).	Negligible
Calyptorhynchus banksii naso	Forest red-tailed black cockatoo	VU	VU	Eucalypt and Corymbia forests, often in hilly interior. More recently also observed in more open agricultural and suburban areas including Perth metropolitan area. Attracted to seeding Corymbia calophylla, Eucalyptus marginata, introduced Melia azedarach and Eucalyptus spp. trees (Johnstone et al. 2013).	Negligible
Cereopsis novaehollandiae grisea	Cape Barren Goose	VU	VU	Succulent mats (pigface Carpobrotus), open grassland and glades in scrubs (Johnstone and Storr 1998).	Negligible
Dasyornis longirostris	Western bristlebird	EN	EN	Dense, low, closed coastal heaths. Open heaths with dense clumps of shrubs, eucalypt thickets and tall swampy heaths. Much reduced by fire, draining for agriculture, but may need fire for optimal status over 50-10+ years. Current range in WA confined to south coast from Albany to Hopetoun (Pizzey and Knight 2012).	Negligible
Diomedea antipodensis	Gibson's Albatross	EN	VU	Marine, pelagic and aerial species. Rare visitor in the Indian and Pacific oceans (DCCEEW 2023).	Negligible
Diomedea dabbenena	Tristan albatross	CR	EN (MI)	The Tristan albatross is a marine, pelagic seabird. It forages in open water in the Atlantic Ocean near the Cape of Good Hope, South Africa. It sleeps and rests on ocean waters when not breeding (Marchant and Higgins 1990).	Negligible
Diomedea epomophora	Southern royal albatross	VU	VU (MI)	Rare visitor to Western Australian seas; it breeds on subantarctic islands south of New Zealand (Johnstone and Storr 1998).	Negligible
Diomedea exulans	Wandering albatross	VU	VU (MI)	Marine, pelagic and aerial species. It breeds on Macquarie Island and feeds in Australian portions of the Southern Ocean (DoE 2018).	Negligible
Diomedea sanfordi	Northern royal albatross	EN	EN	Species is marine, pelagic and aerial. Habitat includes subantarctic, subtropical, and occasionally Antarctic waters (Marchant & Higgins 1990). Rare visitors to south-western Australian	Negligible
Falco hypoleucos	Grey falcon	VU	-	Species occurs in arid and semi-arid Australia, where it inhabits timbered lowland plains. In particular Acacia shrublands and that are crossed by tree-lined water courses. Species has also been observed hunting in treeless areas and frequenting tussock grassland and open woodlands (TSSC 2020).	Negligible

Species name	Common name	Level of significance		Habitat	Likelihood of occurrence
		WA	EPBC Act		
Halobaena caerulea	Blue petrel	MI	VU (MI)	Marine species that breeds on southern subantarctic and northern artic islands. Only an accidental or uncommon visitor to Western Australian waters (Johnstone & Storr 1998).	Negligible
Limosa lapponica menzbieri	Bar-tailed godwit	CR (MI)	CR (MI)	Mainly coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. Has also been recorded in coastal sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats (Higgins and Davies 1996).	Negligible
Limosa limosa	Black-tailed godwit	EN MI	EN (MI)	Tidal mudflats, estuaries, sewage ponds, shallow river margins, brackish or saline inland lakes, flooded pastures, airfields (Pizzey & Knight 2012).	Negligible
Macronectes halli	Northern giant petrel	MI	VU (MI)	Breeds on subantarctic islands. May visit Western Australian water from February to September (Johnstone and Storr 1998).	Negligible
Pachyptila turtur subantarctica	Fairy prion	-	VU	Breeds on subantarctic islands and is presumed to frequent subtropical waters during non-breeding period (TSSC 2015).	Negligible
Phaethon rubricauda westralis	Red-tailed tropicbird	P4 (MI)	EN (MI)	Spend most of their lives at sea and rarely venture near land. This bird is normally found in tropical and subtropical seas around northern Australia. Though rarely seen in colder areas, a few pairs breed on Sugarloaf Rock, south of Cape Naturaliste (DPAW 2017b). Are known to breed on Rottnest Island (DCCEEW 2023).	Negligible
Phoebetria fusca	Sooty albatross	EN	VU (MI)	Marine, pelagic species that tolerates a wide range of sea surface temperatures and salinities. breeds on subtropical and subantarctic islands in the Indian and Atlantic Oceans, on vegetated cliffs and steep slopes that are sheltered from prevailing winds, often amongst tussock grass (Pizzey &	Negligible
Psophodes nigrogularis nigrogularis	Western Whipbird (western heath)	EN	EN	Dense scrub of heath, mallee and broombush (Macrombe & Stewart 2004). Species range is restricted to a small area east of Albany Western Australia.	Negligible
Pterodroma mollis	Soft-plumaged petrel	MI	VU (MI)	Marine species that breeds on temperate and subantarctic islands in south Atlantic and south Indian Ocean. Visitor to West Australian waters from March to September. Rarely observed inshore (Johnstone & Storr 1998).	Negligible
Sternula nereis nereis	Australian fairy tern	VU	VU	Sheltered blue-water seas close to land, estuaries (when free of silt) and near-coastal lakes (Johnstone and Storr 1998).	Negligible
Thalassarche carteri	Indian yellow-nosed albatross	EN	VU (MI)	Marine species that inhabits seas of south and west coast of Western Australia and breeds on islands in the south Indian Ocean and in the south Atlantic (Johnstone & Storr 1998).	Negligible
Thalassarche cauta	Shy albatross	VU	VU (MI)	Scarce visitor (late May to mid-October) to southwestern and western seas. Breeds on islands off Tasmania and south New Zealand (Johnstone and Storr 1998).	Negligible
Thalassarche impavida	Campbell albatross	VU	VU (MI)	Scarce visitor to south-western and western Australian seas. Breeds on Campbell Island (Pizzey & Knight 2012).	Negligible
Thalassarche melanophris	Black-browed albatross	EN	VU (MI)	Seas of south and west coasts. Visitor to Western Australian mainland from January to early November (mostly May to September). Breeds on southern subantarctic and Antarctic islands (Johnstone and Storr 1998).	Negligible

Species name	Common name	Level of significance		Habitat	Likelihood of occurrence
		WA	EPBC Act		
Thalassarche steadi	White-capped albatross	VU	VU (MI)	Scarce visitor (late May to mid-October) to southwestern and western seas. Breeds on islands off Tasmania and south New Zealand (Johnstone and Storr 1998).	Negligible
Mammals					
Isoodon fusciventer	Quenda	P4	-	Dense scrubby, often swampy, vegetation with dense cover up to one metre high (DEC 2012)	High
Hydromys chrysogaster	Rakali	P4	-	Areas with permanent water, fresh, brackish or marine. Likely to occur in all major rivers and most of the larger streams as well as bodies of permanent water in the lower south-west (Christensen et al. 1984). Intact riparian vegetation and associated bank stability is critical to their survival (DWER 2023).	Low
Pseudocheirus occidentalis	Western ringtail possum	CR	CR	On the Swan Coastal Plain in Agonis flexuosa woodlands and Agonis flexuosa/ Eucalyptus gomphocephala forests. Also Eucalyptus marginata forests (DBCA 2017).	Moderate
Dasyurus geoffroii	Chuditch	VU	VU	Wide range of habitats from woodlands, dry sclerophyll forests, riparian vegetation, beaches and deserts. Appears to utilise native vegetation along roadsides in the wheatbelt (DEC 2012).	Negligible
Parantechinus apicalis	Dibbler	EN	EN	Old-growth mallee heath in coastal southwest and Escape Island off Jurien Bay (Menkhorst and Knight 2011).	Negligible
Phascogale tapoatafa wambenger	South-western brush-tailed phascogale	CD	-	Dry sclerophyll forests and open woodlands that contain hollow-bearing trees but a sparse ground cover (Triggs 2003).	Negligible
Fish					
Geotria australis	Pouched lamprey	P3	-	Marine, estuarine and coastal rivers and streams. Adults live in Southern Ocean and migrate upstream to spawn. Larvae live in muddy burrows in the upper reaches of streams (Bray and Gomon	Nil
Invertebrates					
Westralunio carteri	Carter's freshwater mussel	VU	VU	Occurs in greatest abundance in slower flowing streams with stable sediments that are soft enough for burrowing amongst woody debris and exposed tree roots. Also occupies lentic systems including large water supply dams and even on-stream farm dams. Salinity tolerance quite low (Morgan et al. 2011).	Negligible

Note: CR=critically endangered, EN=endangered, VU=vulnerable, CD=conservation dependent, MI=migratory, OS=other specially protected, P3=Priority 3, P4=Priority 4.

Appendix E

Flora Species Inventory

Family	Status	Species
Asparagaceae		
	*	*Asparagus asparagoides*
Asteraceae		
	*	*Erigeron ?bonariensis*
	*	*Hypochaeris glabra*
Boraginaceae		
		Echium candicans
Dennstaedtiaceae		
		Pteridium esculentum
Fabaceae		
	*	*Acacia longifolia*
	*	*Psoralea pinnata*
Geraniaceae		
	*	*Pelargonium capitatum*
Iridaceae		
	*	*Watsonia sp.*
Juncaceae		
		Juncus ?pallidus
Myrtaceae		
		Agonis flexuosa
		Astartea scoparia
	*	*Callistomen sp.*
	*	*Gaudium laevigatum*
		Melaleuca preisianna
Plantaginaceae		
	*	*Plantago major*
Poaceae		
	*	*Avena sp.*
	*	*Briza maxima*
	*	*Cenchrus clandestinus*
	*	*Cortaderia selloana*
	*	*Phalaris paradoxa*

*=non-native

177 CHESTER PASS ROAD
MILPARA, ALBANY

LANDSCAPE DA REPORT

JUNE 2024

emerge ASSOCIATES



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REVISION	DATE	ISSUE OR AMENDMENT	BY	REVIEWED
A	15/05/2024	DA ISSUE	CW	NM
B	07/06/2024	DA ISSUE	CW	NM
C	21/06/2024	DA ISSUE	CW	NM

2.0 Landscape Quality

1.1 Landscape Response

Emerge Associates have been engaged to prepare a landscape concept design for the site. Going beyond ensuring species selection, soil depths and maintenance of structure planting areas, Emerge Associates' proposal works with the architecture to create multiple functional, considered and beautiful landscapes.

Generally

1. The proposal achieves **1045m2** of deep soil, all of which being true deep soil at the ground level. Deep soil provision allows for 10x Large trees.
2. The integration of landscape has been considered as part of the overall building strategy.
3. Landscaped areas can be easily maintained to ensure they remain in perpetuity.
4. Increased green infrastructure reduces urban heat island effect.

1.2 Overall Landscape Strategy and Character

- Provide an integrated landscape design which provides a low maintenance, soft edge to the industrial built form.
- Reduce heat island effect of urban development through landscape provision & proposed tree planting.
- Provide an integrated landscape design which integrates with & enhances the surrounding architecture and streetscape
- The landscape proposal will allow for mostly native plant species to provide a large green space to celebrate native Australian & West Australian landscapes. Flowering plant selections will assist in attracting birds, insects & local fauna.

1.3 Water Efficient Landscape Design

- Plant selections will be selected in consultation with Emerge Associates' in-house Botanist, with resilient & low maintenance plant species to be selected.
- The landscape design will feature some exotic species which provide contrasts in flower and texture, and deciduous trees which provide more varied shade qualities. Exotic species selected will have a low water requirement.
- Proposed irrigation will be dripline irrigation installed under the mulch layer. The water supply will be mains water & part stormwater capture.
- Gravel mulch will be used for wind affected areas to ensure the mulch layer is retained in high wind environments which will provide an ongoing cover to reduce water evaporation.
- Where achievable, the garden beds will be arranged according to water requirements, allowing the reticulation to the native planting to be controlled separately & water usage reduced following establishment until the garden beds are self-sufficient.

3.0 Landscape Design

3.1 Existing Conditions

LEGEND

- LOT BOUNDARY
- 01 EXISTING GARDEN BEDS
- 02 EXISTING DAM LOCATION
- 03 TREES TO BE RETAINED
- 04 DENSE NATIVE VEGETATION
- 05 DENSE VERGE PLANTING
- 06 SIGN
- 07 VEHICLE ACCESS GATES
- 08 BOLLARDS



4.0 Proposed Site Adjustments

3.2 Existing Conditions

LEGEND

- LOT BOUNDARY
- EXTENT OF PROPOSED WORKS
- GRASS REMOVAL
- VEGETATION REMOVAL
- 01 EXISTING DAM TO BE DECOMISSIONED
- 02 EXISTING TREE RETENTION



4.2 Proposed Design

TREE LEGEND

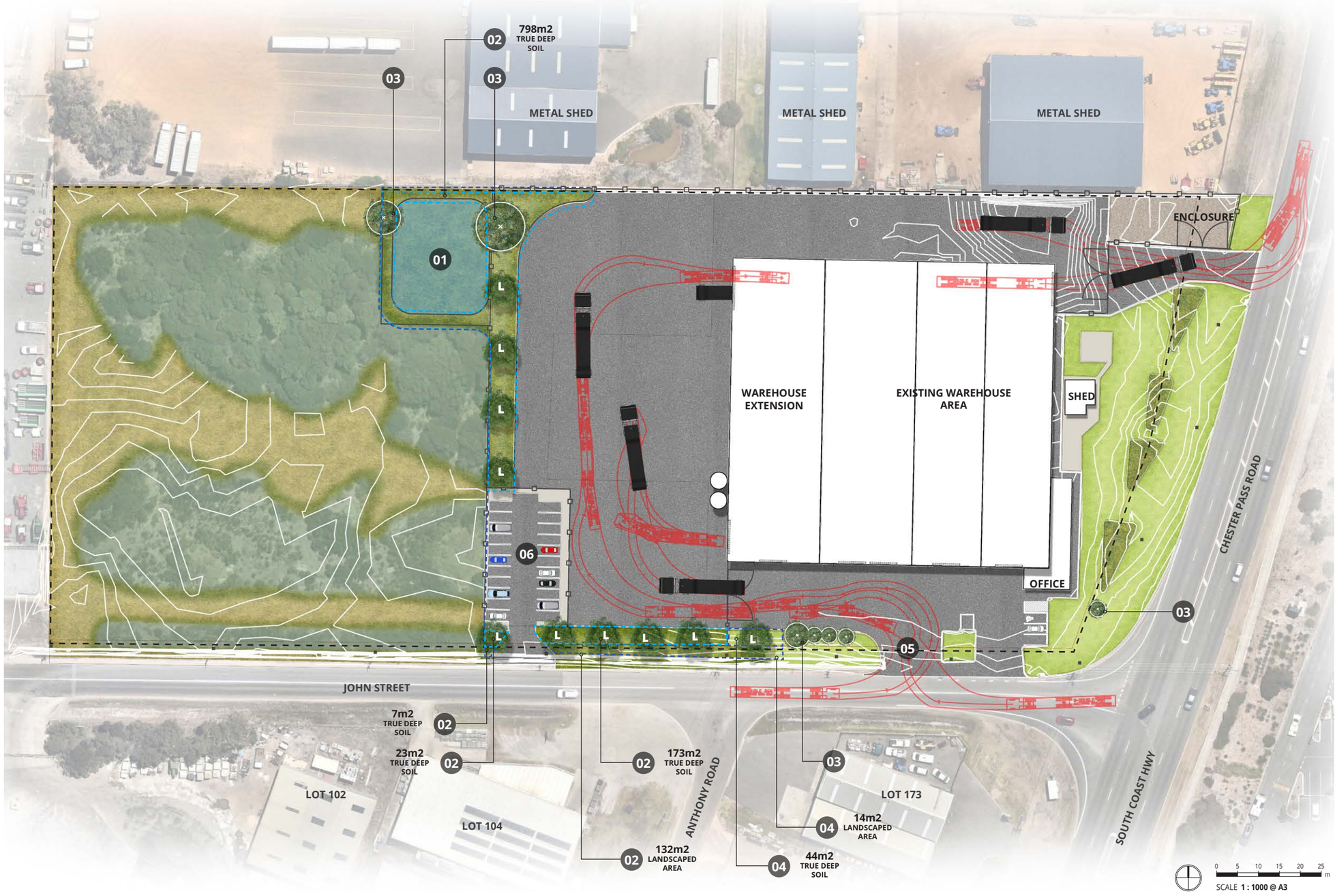
L LARGE TREES

LEGEND

01 PROPOSED DAM LOCATION
02 NATIVE PLANTING
03 RETAINED TREES
04 LAWN
05 PROPOSED VEHICLE ENTRY GATES WITH FENCING
06 FORMALISED CARPARK

DEEP SOIL ZONES	
LANDSCAPED AREA (<1M SOIL DEPTH)	146m2
DEEP SOIL AREA (TRUE)	1045m2
DEEP SOIL AREA (ON STRUCTURE, >1M)	0m2
TREE SUMMARY	
LARGE TREES (>12m HIGH)	10

NOTE:
VERGE AREAS EXCLUDED FROM DEEP SOIL CALCULATIONS.

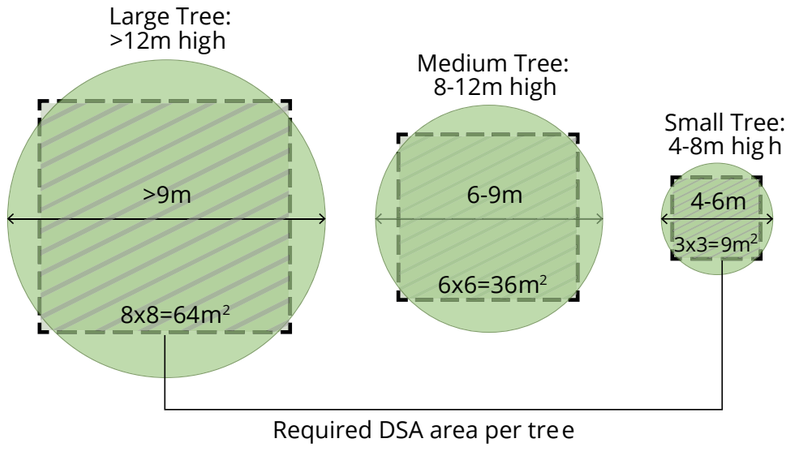


4.3 Deep Soil Zones

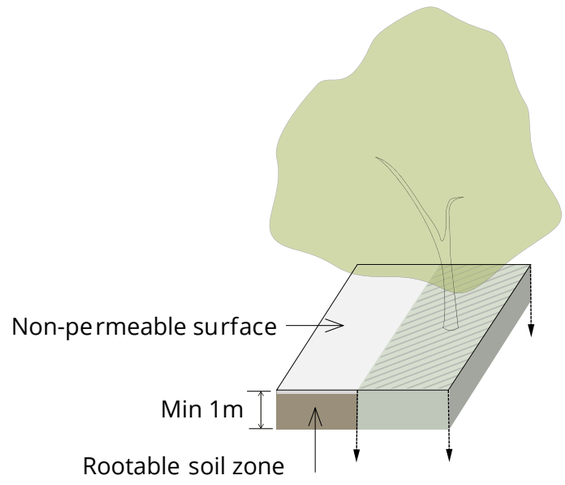
1. The current proposal achieves the required area of deep soil planting required as per the DesignWA guidelines.
2. The minimum deep soil area requirement is 7% or 670m2.
3. The proposal is required to provide 10 Large trees as per the DesignWA guidelines. The current proposal provides **10 x large trees**, with overall tree numbers providing those required according to DesignWA guidelines.

PROPOSED LANDSCAPE SUMMARY

Site Area	Minimum deep soil area required (7%)	Proposed deep soil area	Minimum requirement for trees	Proposed Trees
9,572 m2	**670m2**	**1045m2**	1 large tree and 1 medium tree for each additional 400m2 in excess of 1000m2 OR 1 large tree for each additional 900m2 in excess of 1000m2 and small trees to suit area	**10 Large Trees**



Tree size definitions when mature for deep soil areas.



Rootable soil zone.

Tree size	Indicative canopy diameter at maturity	Nominal height at maturity	Required DSA per tree	Recommended minimum DSA width	Minimum DSA width where additional rootable soil zone (RSZ) width provided[1] (min 1m depth)	Indicative pot size at planting
Small	4-6m	4-8m	9m²	2m	1m (DSA) + 1m (RSZ)	100L
Medium	6-9m	8-12m	36m²	3m	2m (DSA) + 1m (RSZ)	200L
Large	›9m	›12m	64m²	6m	4.5m (DSA) + 1.5m (RSZ)	500L

[1] Rootable areas are for the purposes of determining minimum width only and do not have the effect of reducing the required DSA.

Site Area	Minimum deep soil area	Minimum requirement for trees [1]
Less than 700m²	10% **OR** 7% if existing tree(s) retained on site (% site area)	1 medium tree and small trees to suit area
700 – 1,000m²		2 medium trees **OR** 1 large tree and small trees to suit area
› 1,000m²		1 large tree and 1 medium tree for each additional 400m² in excess of 1000m² **OR** 1 large tree for each additional 900m² in excess of 1000m² and small trees to suit area

[1] Minimum requirement for trees includes retained or new trees
Refer Table 3.3b for tree sizes

5.0 Native Planting Palette

Indicative Plant Schedule

Large Trees

Corymbia calophylla	Marri
Eucalyptus laeliae	Darling Range Ghost Gum
Eucalyptus lane-poolei	Salmon Ghost Gum

Feature Trees

Allocasuarina huegeliana	Rock Sheaok
Corymbia ficifolia grafted	Red Flowering Gum
Eucalyptus torquata	Coral Gum
Hakea petiolaris	Sea Urchin Hakea
Macozamia riedlei	Zamia Palm
Melaleuca rhaphiophylla	Swamp Paperbark
Melaleuca viminea	Mohan
Xanthorrhoea preissii	Grass Tree

Shrubs

Acacia saligna	Golden Wreath Wattle
Acacia drumondii	Drummonds Wattle
Banksia nivea	Couch Honeypot
Calothamnus sanguineus	Silky Leaved Blood Flower
Chorizema cordatum	Heart Leaf Flame Pea
Conostylis candicans	Grey Cottonhead
Hypocalymma angustifolium	White Myrtle
Melaleuca incana	Grey Honeymyrtle
Melaleuca trichophylla	
Philotheca spiccata	Salt & Pepper

Grasses and Strappy Leaves

Anigozanthos manglesii	Red & Green Kangaroo Paw
Dianella revoluta	Blueberry Lily
Baumea juncea	Bare Twig Rush
Lomandra Katrinus Deluxe	Katrinus Mat Rush
Lepidosperma gladiatum	Coast Sword-sedge
Patersonia occidentalis	Western Patersonia

Groundcovers

Burchardia multifora	Dwarf Burchardia
Calothamnus quadrifidus	Clean & Green Calothamnus
Clean & Green	
Hemiandra pungens	Snake Bush
Hibbertia scandens	Golden Guinea Vine
Myoporum parvifolium	Creeping Boobialla
Eremophila glabra 'Kalbarri Carpet'	Kalbarri Carpet
Kennedia coccinea	Coral Vine

Trees



Eucalyptus lane-poolei
Salmon Ghost Gum



Hakea petiolaris
Sea Urchin Hakea



Eucalyptus marginata
Jarrah



Allocasuarina huegeliana
Rock Sheaok

Embankment



Melaleuca rhaphiophylla
Swamp Paperbark



Eucalyptus occidentalis
Swamp Yate

Shrubs



Darwinia citriadora
Lemon-scented Darwinia



Chorizema cordatum
Heart-leaf Flame Pea



Conostylis candicans
Grey Cottonhead



Banksia nivea
Couch Honeypot

Groundcovers



Grevillea obtusifolia Gin Gin Gem
Gin Gin Gem



Eremophila glabra Kalbarri Carpet
Kalbarri Carpet



Hemiandra pungens
Snake Bush



Trachelospermum jasminoides
Chinese Star Jasmine

Grasses



Anigozanthos manglesii
Red Green Kangaroo Paw



Dianella revoluta
Blueberry Lily



Baumea juncea
Bare Twig Rush



Lomandra 'Katrinus Deluxe'
Katrinus Mat Rush

PART C – OTHER BUSINESS

1. **State Administrative Tribunal Applications and Supreme Court Appeals**
2. **General Business**
3. **Meeting Closure**