Metro Outer Development Assessment Panel Agenda

Meeting Date and Time: Wednesday, 21 August 2024; 9.30am
Meeting Number: MODAP/31
Meeting Venue: 140 William Street, Perth

A live stream will be available at the time of the meeting, via the following link:
MODAP/31 - 21 August 2024 - City of Joondalup - City of Mandurah

PART A – INTRODUCTION

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2. Apologies
3. Members on Leave of Absence
4. Noting of Minutes

PART B – CITY OF JOONDALUP

1. Declarations of Due Consideration
2. Disclosure of Interests
3. Form 1 DAP Applications
   - 3.1 Lot 600 (No.36) Clarke Crescent, Joondalup – Bulky goods showroom additions - DAP/24/02679
4. Form 2 DAP Applications
5. Section 31 SAT Reconsiderations

PART C – CITY OF MANDURAH

1. Declarations of Due Consideration
2. Disclosure of Interests
3. Form 1 DAP Applications
   - 3.1 Lots 11-13 (117-121) Mandurah Terrace, Mandurah – Proposed "Recreation Private" (Gym) & "Shop" Development – DAP/24/02652
4. Form 2 DAP Applications
5. Section 31 SAT Reconsiderations

PART D – 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

Francesca Lefante (Presiding Member)
Neema Premji (Deputy Presiding Member)
John Syme (Specialist Member)

Part B – City of Joondalup
Cr Adrian Hill (Local Government Member, City of Joondalup)
Cr Rebecca Pizzey (Local Government Member, City of Joondalup)

Part C – City of Mandurah
Mayor Rhys Williams (Local Government Member, City of Mandurah)
Cr Peter Rogers (Local Government Member, City of Mandurah)

Minute Secretary

Claire Ortlepp (DAP Secretariat)

Officers in Attendance

Ashlee Kelly (DAP Secretariat)

PART A – INTRODUCTION

1. Opening of Meeting, Welcome and Acknowledgement

The Presiding Member declares the meeting open and acknowledges the traditional owners and pay respects to Elders past and present of the land on which the meeting is being held.

This meeting is being recorded and livestreamed on the DAP website in accordance with regulation 40(2A) of the *Planning and Development (Development Assessment Panels) Regulations 2011*. Members are reminded to announce their name and title prior to speaking.

2. Apologies

Eugene Koltasz (Presiding Member)

3. Members on Leave of Absence

Nil

4. Noting of Minutes

Signed minutes of previous meetings are available on the DAP website.

PART B – CITY OF JOONDALUP

1. Declarations of Due Consideration

Any member who is not familiar with the substance of any report or other information provided for consideration at the DAP meeting must declare that fact before the meeting considers the matter.

2. Disclosure of Interests

Nil.

3. Form 1 DAP Applications

3.1 Lot 600 (No.36) Clarke Crescent, Joondalup – Bulky goods showroom additions - DAP/24/02679

4. Form 2 DAP Applications

Nil

5. Section 31 SAT Reconsiderations

Nil

PART B – ITEM 3.1 – LOT 600 (NO. 36) CLARKE CRESCENT, JOONDALUP – BULKY GOODS SHOWROOM ADDITIONS

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Metro Outer DAP
Local Government Area:	City of Joondalup
Applicant:	Element Advisory
Owner:	Calardu Joondalup Pty Ltd
Value of Development:	$25 million
Responsible Authority:	City of Joondalup
Authorising Officer:	Chris Leigh – Director Planning and Community Development
LG Reference:	DA23/0253
DAP File No:	DAP/24/02679
Application Received Date:	27 March 2024
Report Due Date:	12 August 2024
Application Statutory Process Timeframe:	90 Days with an additional 41 days agreed extension.
Attachment(s):	1. Location Plan 2. Development Plans and Landscaping Plans 3. Development Application Report 4. Department of Transport Comments 5. Public Transport Authority Comments 6. Department of Planning, Lands and Heritage Comments 7. JDRP Minutes and Applicants Response 8. Traffic Impact Statement & Technical Note 9. Arborist Report 10. Sustainability Report

Responsible Authority Recommendation

That the Metro Outer DAP resolves to:

1. **Approve** DAP Application reference DAP/24/02679 and accompanying plans (DA01 – Rev C, DA02 – Rev C, DA03 – Rev C, DA04 – Rev E, DA05 – Rev C, DA06 – Rev C, DA07 – Rev E, DA08 – Rev D, DA09 – Rev C, DA10 – Rev C and DA11 – Rev C) 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 Joondalup Local Planning Scheme No. 3, subject to the following conditions:

Conditions

1. Pursuant to clause 26 of the Metropolitan Region Scheme, this approval is deemed to be an approval under clause 24(1) of the Metropolitan Region Scheme.

2. This decision constitutes planning approval only and is valid for a period of four (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.

3. This approval relates to the Bulky Goods Showroom Additions and associated works only and development shall be in accordance with the approved plan(s), any other supporting information and conditions of approval. It does not relate to any other development on the lot.

4. The patterned and perforated steel façade sheeting as indicated on the approved plans shall be finished with high quality artwork/imagery, final details of which shall be submitted to and approved by the City of Joondalup, prior to submission of the relevant building permit application. The approved artwork/imagery shall be installed prior to the occupation of the development and thereafter maintained to the satisfaction of the City.

5. The car parking bays, driveways and access points shown on the approved plans are to be designed, constructed, drained and marked in accordance with the Australian Standards (AS2890), prior to the occupation of the development. These bays are to be thereafter maintained to the satisfaction of the City.

6. The parking area and pavement indicated on the approved plans shall have appropriate signs and line markings installed to give clear direction to vehicles, to the satisfaction of the City. All signs and line markings shall be in accordance with the Australian Standard for Off-street Car Parking (AS/NZS2890.1 2004) and installed prior to occupation of the development and thereafter maintained to the satisfaction of the City;

7. The bicycle parking spaces shall be designed and installed in accordance with the Australian Standard for Off-street Car Parking – Bicycles (AS2890.3-1993), prior to occupation of the development and thereafter maintained to the satisfaction of the City.

8. Detailed landscaping plans shall be submitted to the City for approval prior to the submission of a building permit. These landscaping plans are to indicate the proposed landscaping treatment(s) of the subject site and the adjoining road verge(s), and shall:

    a. Provide all details relating to paving and treatment of verges;
    b. Be drawn at an appropriate scale of either 1:100, 1:200 or 1:500;
    c. Show spot levels and/or contours of the site;
    d. Indicate any natural vegetation to be retained and the proposed manner in which this will be managed;
    e. Indicate the proposed species selection and plant densities;
    f. Reflect the tree information provided in the arborist report;
    g. Be based on water sensitive urban design principles to the satisfaction of the City;
    h. Be based on Designing out Crime principles to the satisfaction of the City;
    i. Show all irrigation design details.
    j. Demonstrate vegetation adjoining any vehicle access points or footpaths not exceeding 600mm to provide adequate sight lines.
    k. Demonstrate beds less than 1,000mm in width to be mulch or paved.

Landscaping and reticulation shall be established in accordance with the approved landscaping plans, Australian Standards and best trade practice prior to occupancy and thereafter maintained to the satisfaction of the City.

9. A Waste Management Plan indicating the method of rubbish collection is to be submitted prior to the submission of a building permit and approved by the City and thereafter implemented to the satisfaction of the City.

10. All external fixtures and utilities (e.g. air conditioning units, piping, ducting and water tanks) shall be located so as to minimise any visual and noise impact on surrounding landowners, and screened from view from the street or integrated with the building design. This includes placement of the air conditioning units within the basement car park as indicated on the approved plans.

11. All external walls of the proposed building shall be of a clean finish and shall at all times be free of vandalism, to the satisfaction of the City.

12. Any graffiti applied to the external surfaces of the building shall be removed within seven (7) days of it being applied to the satisfaction of the City of Joondalup.

13. All stormwater shall be contained on-site and disposed of in a manner acceptable to the City.

14. All development shall be contained within the property boundaries.

15. Lighting must be installed along all driveways, pedestrian pathways, car parking areas and in all common service areas prior to the occupation of the proposed additions.

16. All signage is to be established and thereafter maintained to a high standard to the satisfaction of the City.

17. The applicant/owner must ensure that all illuminated signage must have any boxing or casing in which it is enclosed constructed of incombustible materials, must not comprise of flashing, pulsating, chasing or running lights and must not have such intensity as to cause annoyance to the public or illuminate beyond the extent of the lot boundaries.

18. A Construction Management Plan must be submitted for approval when an application is made for a building permit. This plan is to detail how construction will be managed to minimise disruption in the area and to adjoining landowners. The plan must address the following:

    a) The delivery of materials and equipment to the site, including timing for deliveries.
    b) Storage of materials and the location and types of equipment on site.
    c) Parking arrangements for contractors and sub-contractors.
    d) The impact on traffic movement.
    e) Construction times.
    f) The relocation and/or management of public footpaths.
    g) Measures to minimise impacts of noise and sand drift and dust from the site.

h) Tree protection zones to be established for trees identified to be retained in the approved landscaping plan (including any verge trees) where applicable.
i) The relocation/disruption of any public transport infrastructure; and
j) Any other matter required by the City.

The construction management plan is to be submitted to and approved by the City prior to the commencement of any development.

Advice Notes

1. Prior to commencement of the development, or any works associated with the development, the applicant/owner must obtain approval from the PTA for works in and around the operating Joondalup Railway Corridor in accordance with the PTA's 8810-450-003 – Procedure – Working in and around the PTA rail corridor, Assets and Infrastructure, to the satisfaction of the PTA.

   The applicant/owner is required to submit an application to undertake works within the PTA protection zone prior to any works commencing. Information about the procedure and required information for assessment can be found in the PTA's 8810-450-003 – Procedure – Working in and around the PTA rail corridor, Assets and Infrastructure. The application must be submitted a minimum of 3 months prior to the commencement of the development. Please email the application to PTAThirdPartyAccess@pta.wa.gov.au.

2. Any existing infrastructure/assets within the road reserve (e.g. footpath, kerbing and street trees) are to be retained and protected during construction of the development and are not to be removed or altered unless otherwise approved by the City. Should any infrastructure or assets be damaged during the construction of the development, it is required to be reinstated to the satisfaction of the City.

3. The City encourages the applicant/owner to incorporate materials and colours to the external surface of the development, including roofing, that have low reflective characteristics to minimise potential glare from the development impacting the amenity of the adjoining or nearby neighbours.

4. In relation to condition 4, the City encourages the applicant/owner to engage with a public artist assist with the artwork for the car park screen.

5. The applicant/owner is advised that verge treatments are required to comply with the City's Street Verge Guidelines. A copy of the Guidelines can be obtained at www.joondalup.wa.gov.au/wp-content/uploads/2021/10/Street-Verge-Guidelines-2021.pdf.

6. In relation to Condition 16, any lighting is to achieve compliance with AS/NZS 1680.1:2006 Interior and workplace lighting or AS/NZS 4282:2019 Outdoor Lighting Obtrusive Effects.

Details:

Region Scheme	Metropolitan Region Scheme (MRS)
Region Scheme - Zone/Reserve	Central City Area
Local Planning Scheme	City of Joondalup Local Planning Scheme No. 3 (LPS 3)
Local Planning Scheme - Zone/Reserve	Centre
Structure Plan/Precinct Plan	Joondalup Activity Centre Plan (JACP)
Structure Plan/Precinct Plan - Land Use Designation	City Centre
Use Class and permissibility:	Bulky Goods Showroom ('X')
Lot Size:	14,683m^2
Existing Land Use:	Bulky Goods Showroom
State Heritage Register	No
Local Heritage	☒ N/A ☐ Heritage List ☐ Heritage Area
Design Review	☐ N/A ☒ Local Design Review Panel ☐ State Design Review Panel ☐ Other
Bushfire Prone Area	No
Swan River Trust Area	No

Proposal:

The proposal is seeking to incorporate additions to the existing 'Bulky Goods Showroom' at Lot 600 (36) Clarke Crescent, Joondalup (Harvey Norman).

The proposed development comprises the following:

- A 3,003m^2 expansion to the existing Bulky Goods Showroom.
- Modification of existing parking bays, and addition of a multi-deck car parking structure providing 186 car parking spaces (43 on ground level and 143 on the upper deck, 13 motorbike bays and 24 bicycle spaces).
- Relocation of an existing entry/exit crossover along Clarke Crescent. The existing northern and service crossovers are to be retained.
- Associated landscaping; and
- Installation of rooftop PV panels.

Plans of the proposal are provided at **Attachment 2**.

Background:

The subject site is zoned 'Centre' under the City's Local Planning Scheme No. 3 (LPS 3) and located within the 'City Centre' precinct of the Joondalup Activity Centre Plan (JACP).

A 'Bulky Goods Showroom' in the 'City Centre' precinct of the JACP is a 'X' (not permitted) land use as outlined in Table 3b of LPS 3. In this regard, the existing showroom has non-conforming use rights under LPS 3 dating back to its initial approval issued in 1998.

In 2015 approval was granted for a 3,000m^2 extension and two-level multi-deck car park (DA15/0572) under the City's previous Joondalup City Centre Development Plan and Manual (which has since been revoked). This approval was never enacted upon and has since lapsed.

The site is bound by Joondalup Drive to the west, Onslow Place to the north, Clarke Crescent and the Joondalup-Yanchep rail line to the east and Clarke Crescent to the south. Each of the subject site's lot boundaries are identified as a 'semi-active frontage' under the JACP.

A location plan and site photographs are included as **Attachment 1**.

Legislation and Policy:

Legislation

- *Planning and Development Act 2005.*
- Metropolitan Region Scheme (MRS).
- *Planning and Development (Local Planning Schemes) Regulations 2015.*
- City of Joondalup Local Planning Scheme No. 3 (LPS 3).

State Government Policies

- State Planning Policy 4.2 Activity Centres (SPP 4.2).
- State Planning Policy 7.0 Design of the Built Environment (SPP 7.0).

Structure Plans/Activity Centre Plans

- Joondalup Activity Centre Plan (JACP).

Local Policies / Strategies

- Advertisements Local Planning Policy.
- Planning Consultation Local Planning Policy.
- Environmentally Sustainable Design Local Planning Policy.

Consultation:

Public Consultation

The application was advertised in accordance with the City's Planning Consultation Local Planning Policy for a period of 28 days, commencing 23 May 2024 and concluded 20 June 2024.

Consultation was undertaken in the following manner:

- 128 letters issued to landowners and occupiers within 200 metres of the development.

- Two (2) signs were erected (one at each street frontage (Clarke Crescent and Joondalup Drive)); and
- Development plans and supporting information provided by the applicant were made available for public viewing on the City's website.

The City received one (1) submission during the consultation period, from the Department of Transport (DoT) which is outlined below and included as **Attachment 4**.

Referrals/consultation with Government/Service Agencies

Department of Transport

The DoT provided a response to the City to advise that the proposal proposes no identified risks to the operation of the Swan Transit Joondalup Bus Depot located at 15 Winton Road, Joondalup.

The DoT then referred the notification of proposed development to the Public Transport Authority (PTA) as the subject site is located within the vicinity of the Joondalup-Yanchep Rail Line reserve, which is located immediately east of the subject site.

Public Transport Authority

The PTA advised it had no objection to the proposal, and recommended the following be applied as part of the determination:

1. Prior to commencement of the development, or any works associated with the development, the applicant/owner must obtain approval from the PTA for works in and around the operating Joondalup Railway Corridor in accordance with the PTA's *8810-450-003 – Procedure – Working in and around the PTA rail corridor, Assets and Infrastructure*, to the satisfaction of the PTA.

2. The applicant/owner is required to submit an application to undertake works within the PTA protection zone prior to any works commencing. Information about the procedure and required information for assessment can be found in the PTA's 8810-450-003 – Procedure – Working in and around the PTA rail corridor, Assets and Infrastructure. The application must be submitted a minimum of 3 months prior to the commencement of the development. Please email the application to PTAThirdPartyAccess@pta.wa.gov.au

The above recommendation is acceptable to the City and has been included as an advice note in the above recommendation. It is noted that the site is within 100m of the PTA Railway Reserve (the PTA Protection Zone) and as such, any works carried out within the Protection Zone are required to receive prior approval for third party access from the PTA.

The PTA's comments are included at **Attachment 5**.

Department of Planning, Lands and Heritage

As part of the assessment, the application was referred to the Department of Planning, Lands and Heritage (DPLH) as the subject site adjoins Joondalup Drive, which is a Category 1 'Other Regional Road' under the Metropolitan Region Scheme (MRS).

The DPLH advised that it has no objection to the proposal (**Attachment 6**).

Design Review Panel Advice

The proposal was originally presented to the Joondalup Design Review Panel (JDRP) on 3 October 2023. The extract from the JDRP minutes and full comments are provided as **Attachment 7.** The JDRP was initially not supportive of the proposal and concluded that the proposal did not meet a number of the design principles of State Planning Policy 7.0 Design of the Built Environment (SPP7.0).

In response to recommendations made by the JDRP in October 2023, the applicant amended the proposal. Given the extent of modifications made to the design, the proposal was referred back to the JDRP on 20 December 2023, prior to lodging a formal development application. A copy of the minutes (20 December 2023) and the applicant's response to the recommendations made by the JDRP on 20 December 2023 is included as **Attachment 7**.

Key issues/recommendations identified by the JDRP included:

- Recommended to provide improved landscaping detail and design.
- Recommended to consider the façade aesthetics and building scale.
- Consideration of service locations and screening.
- Consideration of safety, pedestrian accessibility and legibility.
- Consideration of sustainability measures; and
- Consideration of general amenity.

Further amended plans were submitted on 24 March 2024, being the subject of this determination. The changes included:

- Modifications to the landscaping plans to incorporate a detailed plant palette (to include native species), increase the number of plants, expand planting areas to merge into the public realm and modified the path network to increase path width and connect to the shared pathways as well as providing additional bench seating areas.
- Improved articulation to the building façade and variation of mesh screen heights to break up the uniformity of the building façade and the break up the bulk and scale of the proposal.
- Modifications to the roof plan to demonstrate solar panels and new plant to be screened from the public realm.
- Modifications in relation to increasing legibility such as the relocation of the store entry and western pedestrian entry statement, increased glazing to the southern and western façades, lightwell voids and lighting in the carpark, outdoor furniture display closer to the entry.
- Modifications in relation to increasing safety such as ensuring clear sightlines from the road and carpark, visually permeable car parking screening with varied height to be backlit at night and designed to mitigate against vandalism.
- Modified the development plans to incorporate sustainability initiatives such as low energy LED lighting, rooftop shade structures, electric vehicle charging stations and solar panels.
- Modifications to the upper deck entry to incorporate more generous pedestrian entrances, seating opportunities and landscaping.

Based on the amendments made to the plans and additional reports provided by the applicant, it is considered that the proposal adequately addresses the recommendations of the JDRP and meets the intent of the principles of SPP 7.0. Further consideration of the relevant changes is outlined in the planning assessment below.

Planning Assessment:

The proposal has been assessed against the relevant planning requirements of the City's LPS3, JACP, State and Local Planning Policies as outlined in the Legislation and Policy section of this report. The following matters have been identified as key considerations for the determination of this application.

Land Use Permissibility

The existing use of the subject site ('Bulky Goods Showroom') is a 'X' (not permitted) land use in the 'City Centre' precinct of the JACP as outlined in Table 3b of LPS 3. In this respect, the existing showroom has non-conforming use rights under Clause 22 of LPS 3 dating back to the initial approval for the use issued in 1998.

Clause 23(1) of LPS 3 relates to changes to a non-conforming use and states that, a person must not, without development approval:

a) Alter or extend a non-conforming use of land; or
b) Erect, alter or extend a building used for, or in conjunction with, a non-conforming use; or
c) Repair, rebuild, alter or extend a building used for a non-conforming use that is destroyed to the extent of 75% or more of its value; or
d) Change the use of land from a non-confirming use to another non-conforming use that is not permitted by the Scheme.

An application for development approval under Clause 23 is also required to be advertised in accordance with Clause 64 of the deemed provisions.

In review of the application, the City confirms that:

a) Whilst the proposal includes additional floor space, there is no proposed change to the land use.
b) The proposal is seeking approval for the extension of the existing building.
c) The existing building is not damaged or requiring repair.
d) There is no change of use proposed.

Consultation for the application has also been undertaken as outlined in the public consultation section above.

The City does not consider the extension to the existing building to significantly alter the existing use or adversely impact the amenity of the locality and is therefore capable of approval as an extension to the non-confirming use in accordance with Clause 23 LPS 3.

Building Setbacks

The JACP outlines the permissible building setback development standards for properties within the City Centre Precinct, as outlined below:

Provision	Requirement	Proposal
CC2 Building Setbacks	A nil setback is required at ground level to 75% of the building frontage (Maximum setback 3 metres), with the exception of: • A colonnade having a maximum depth of 4m. • Minor variations to accommodate an irregular shaped lot; or • Entry courtyards or similar open spaces.	Joondalup Drive (Building Frontage) Setback: 8.675 metres (maximum)

The building setback to the Joondalup Drive boundary was originally proposed to follow the existing building line (setback 2.6 metres from the street alignment). However, in response to feedback provided by the JDRP in October 2023, it was acknowledged that the proposed setback would result in the loss of significant trees within the Joondalup Drive road reserve. The applicant subsequently amended the proposal to increase the building setback to 8.6 metres in order to ensure the maximum retention of the existing vegetation and to establish an entry plaza area at the south-western corner of the site.

In addition to the retention of the vegetation, the increased setback also assisted in breaking down the scale of the building's façade and helps better define a pedestrian entry point from the Joondalup Drive frontage.

The proposal also incorporates additional landscaping between the development and the Joondalup Drive lot boundary. This, in addition to the established landscaping in the verge area will assist in softening the view of the car park from the street and will offer improved streetscape amenity.

Given the above, it is considered that the setback of the development from the Joondalup Drive frontage is appropriate and allows for the retention of verge trees and reduces the appearance of building bulk in the streetscape and is recommended to be supported on this basis.

Car Parking and Traffic

The JACP outlines the car parking requirements for properties within the City Centre Precinct, as outlined below:

Clause	Provision	Proposal	Requirement	Provided
CC7 Car Parking & Access	Non-Residential Development: 1 bay per 75m^2 NLA Every 10th car bay to be replaced with 2 motorcycle/scooter bays.	NLA: Existing: 7,049.07m2 Additional 3,003m^2 proposed Total: 10,052.32m^2	Car Parking: 134.03 (minus 13.4 bays for MC/Scooter) = 124.03 (125) MC/Scooter Bays: 26.8 (27)	186 car bays (43 Ground and 143 upper) 13 MC/Scooter bays.

1.4.7 Bicycle Parking	1 per 750m^2 NLA		13.4 (14) bicycle bays.	24 bays.

An additional 51 on-street public parking bays are also available on Onslow Place and Clarke Crescent immediately adjoining the site.

The proposal is identified to have a shortfall in the provision of motorcycle/scooter bays (14 bay shortfall), however provides a surplus of 61 standard car parking bays. Accordingly, the additional parking is sufficient in accommodating the additional motorcycle/scooter parking requirements on site, whilst still maintaining a surplus in parking.

In addition to the above, the applicant has provided a Traffic Impact Statement (TIS) to consider the potential impact of the proposed additions on the surrounding road network (**Attachment 8**).

As outlined within the TIS the weekday and weekend peak traffic movements will be 145 vehicle movements (up from 102), and 242 vehicle movements (up from 170) respectively as a result of the increased floorspace. It was outlined that there would be no significant impact on the surrounding road network as a result of the proposal.

The City has reviewed the information provided and agree with the findings provided in the TIS.

The proposed development satisfies the car parking requirements of the JACP and the findings of the TIS raise no concerns in relation to impact on the surrounding road network. The proposal is recommended to be supported on this basis.

Street Interface and Façade Design

The subject site is identified for semi-active frontages to all street frontages, in accordance with Figure 6 (City Centre Precinct Plan) of the JACP. The proposal has been assessed against the criteria set out under provision CC3 – Street Interface of the JACP and determined to comply with the provisions for semi-active frontages located within the City Centre Precinct with respect to clearly defined entrances, pedestrian cover and glazing requirements.

Notwithstanding, as outlined within the JDRP comments on both the 3 October 2023 and 20 December 2023, the panel acknowledged the potential for the 'mesh screening' applied to the car parking area to hold promise for artistic impression, and further recommended that the applicant seek to engage a public artist to assist with the associated design.

As outlined in the applicant's response (**Attachment 7**), the applicant has confirmed that they will explore opportunities to work with a local photographic artist on the design of the imagery for the mesh screen.

The inclusion of the artwork into the mesh screening will assist in improving the street interface and overall façade design as well as provide for improved emphasis of the JACP semi-active frontage requirements.

In order to manage this outcome and ensure that an appropriate design is incorporated into the street interface of the building to connect with the public realm, the City recommends a condition and associated advice note be imposed.

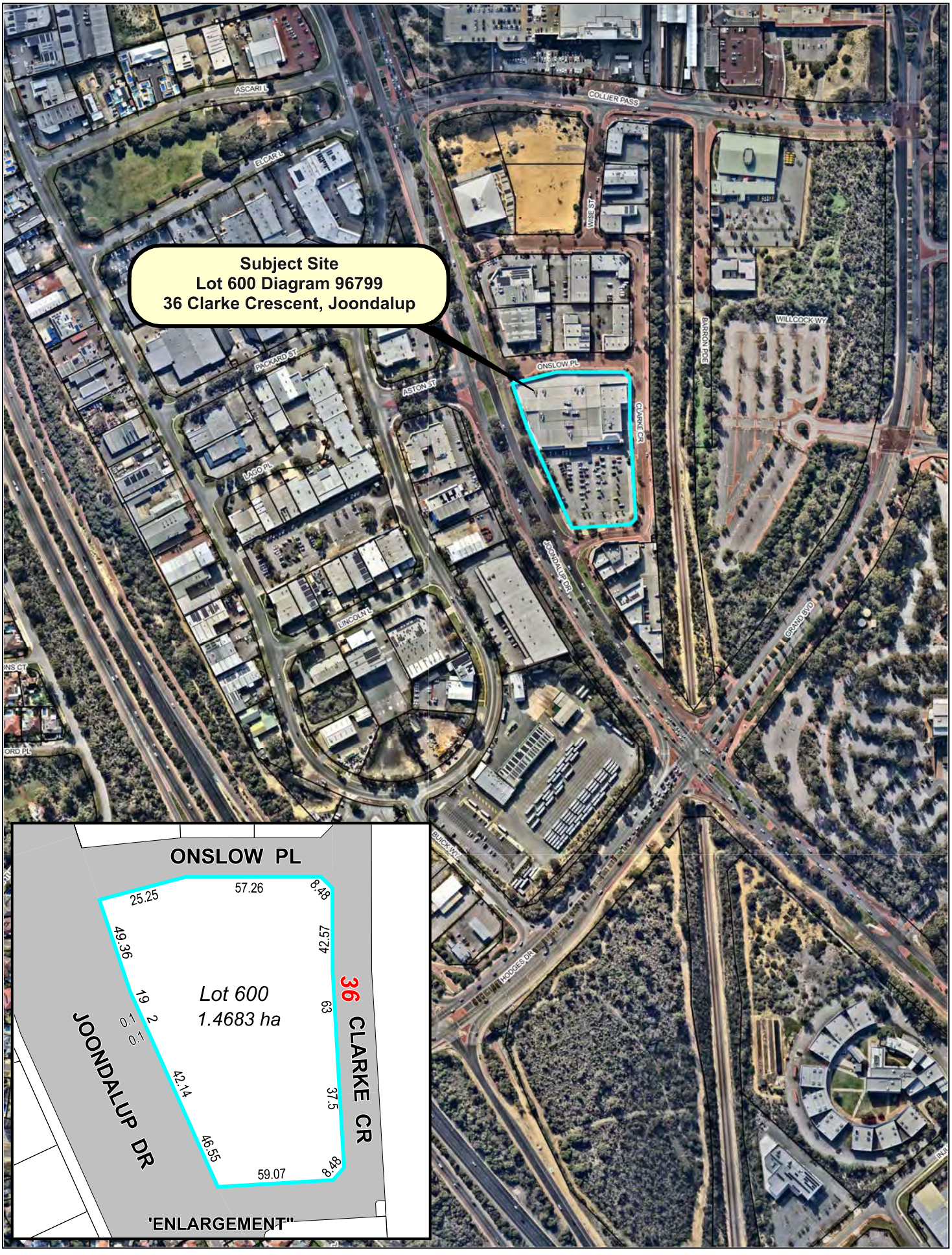
Conclusion:

The proposed development is considered to adequately address the relevant provisions and objectives under the City's LPS3, the JACP and SPP7.0.

While discretion is sought in relation to increased building setback to Joondalup Drive, the proposed setback allows for the retention of verge trees. The proposal is considered appropriate having regard to the context of the development being situated in a 'Centre' zoned lot and being adjacent to similar development within the 'City Centre' precinct of the JACP.

In addition, the development proposal was reviewed by the JDRP on two (2) occasions, with recommendations provided on how the proposal could be modified to meet the intent of the design principles of SPP7.0. As discussed in the planning assessment, it is considered that the comments raised by the JDRP have been adequately addressed and incorporated into the current design by the applicant.

In light of the above, the proposed expansion of the 'Bulky Goods Showroom' (Harvey Norman) is considered appropriate and is therefore recommended that the application be approved subject to conditions.



City of Joondalup

0 200

metres

Scale 1:5,000

Lot600-36_clarke-23072024

Site Photographs



View to the South of the Subject Site



Clarke Crescent and Joondalup Drive Intersection



Existing Carpark – Facing East



Existing Car Park Entry – Facing North



Existing Store Entry from Car Park – Facing North



Joondalup Drive Store Entry – Facing East



Joondalup Drive – Facing West



Verge trees along Joondalup Drive – Facing South

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ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC
B	AMENDED DEVELOPMENT APPLICATION	30.01.24	SJE
C	AMENDED DEVELOPMENT APPLICATION	24.07.24	SJE



1 **EX. SITE PLAN**
Scale: 1 : 500



2 **LOCATION PLAN**

DA - DRAWING LIST		
SHEET N°	**SHEET NAME**	**SCALE**
DA 01	EXISTING SITE & LOCATION PLAN	1:500
DA 02	EXISTING FLOOR PLAN	1:500
DA 03	OVERALL FLOOR PLAN	1:200
DA 04	FLOOR PLAN SOUTH	1:200
DA 05	END OF TRIP AND OFFICE LAYOUT	1:200
DA 06	ROOF PLAN NORTH	1:200
DA 07	ROOF PLAN SOUTH	1:200
DA 08	ELEVATIONS 1	1:200
DA 09	ELEVATIONS 2	1:200
DA 10	SECTIONS	1:200
DA 11	STEEL FACADE PANEL DETAIL	1:20
DA 12	PERSPECTIVE 1	NTS
DA 13	PERSPECTIVE 2	NTS

NOTE:
SITE BOUNDARIES AND SITE AREAS AND EXISTING BUILDING ARE INDICATIVE ONLY. SUBJECT TO CONFIRMATION BY LICENSED SURVEYOR.

DEVELOPMENT SUMMARY

EXISTING BUILDING	=	7,049 SQM
TOTAL CARPARKING	=	238 SPACES
EXISTING BUILDING EXTENSION	=	3,003 SQM
TOTAL AREA	=	10,052 SQM
PARKING PROVIDED		
TOTAL CAR SPACES	=	186 SPACES (1:54)
TOTAL MOTORBIKE	=	13 SPACES
TOTAL BICYCLES	=	24 SPACES

DEVELOPMENT APPLICATION

EXISTING SITE & LOCATION PLAN

LEFFLER SIMES PTY LTD ABN 39 001 043 992
SYDNEY SUITE 8.01, 140 ARTHUR ST, NORTH SYDNEY, NSW 2060 T:+61 2 99093344
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WEB: www.lefflersimes.com.au

SCALE 1:500 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. REV.
DATE: MAY '23 DA 01 C
DRAWN: LSA

LEFFLER SIMES ARCHITECTS

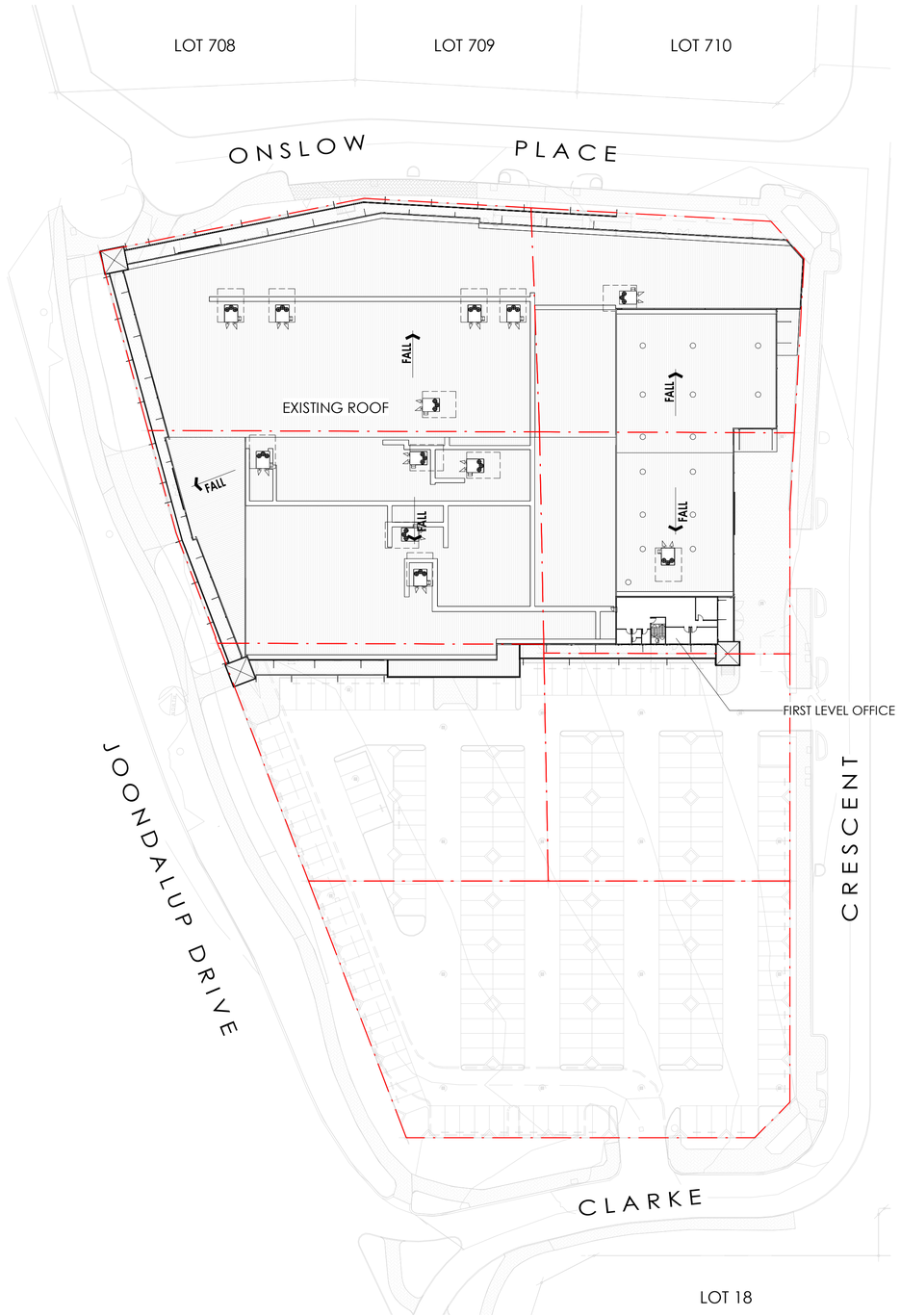
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Member Australian Institute of Architects

ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC
B	AMENDED DEVELOPMENT APPLICATION	30.01.24	SJE
C	AMENDED DEVELOPMENT APPLICATION	24.07.24	SJE



1 - **EXISTING GROUND FLOOR PLAN**
Scale: 1 : 500



2 - **EXISTING FIRST FLOOR PLAN**
Scale: 1 : 500

DEVELOPMENT APPLICATION

EXISTING FLOOR PLAN

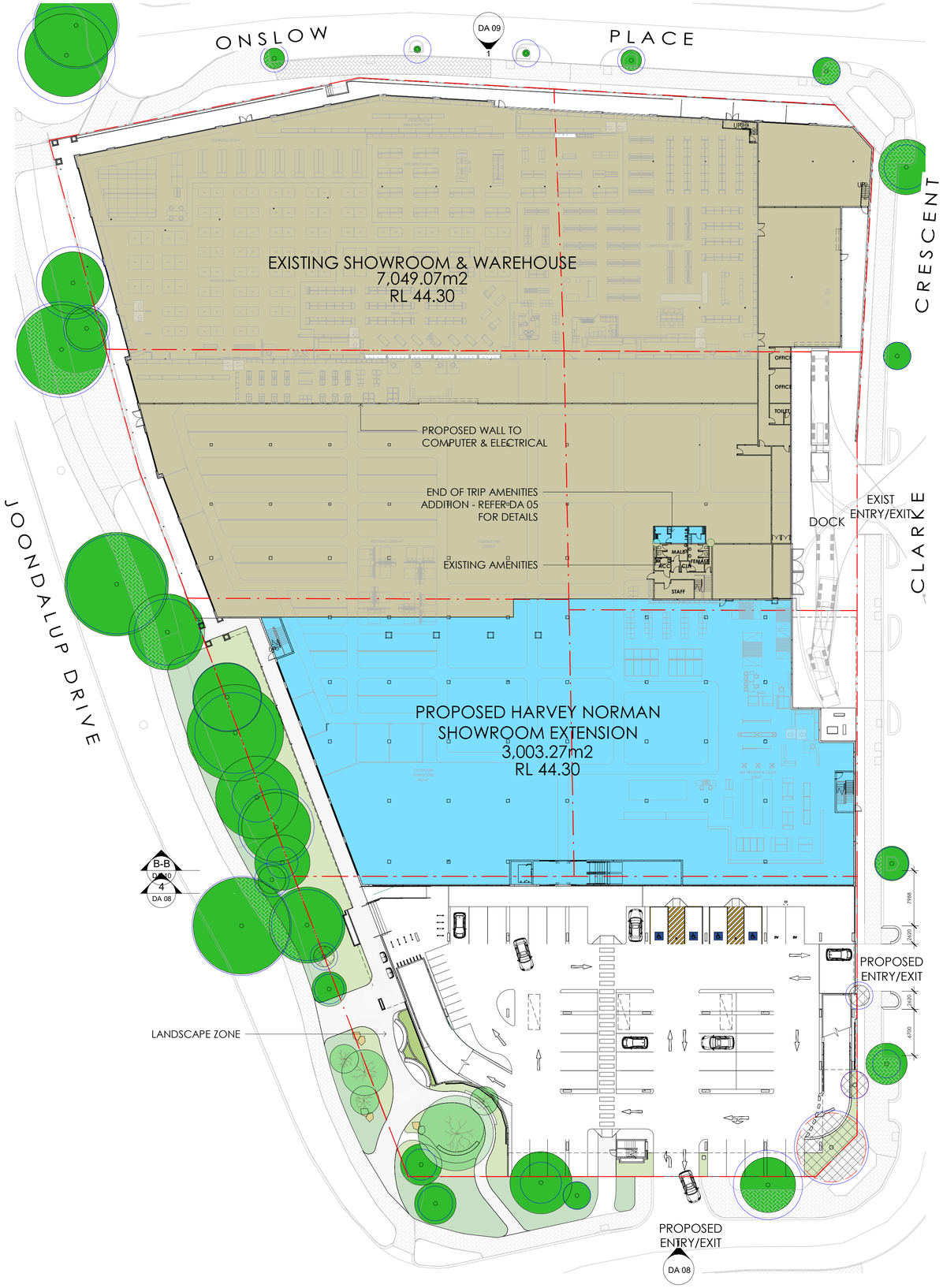
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SCALE 1:500 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DATE: MAY '23 DRAWN: LSA
DWG NO. DA 02
REV. C

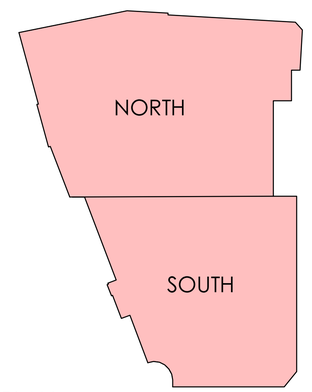
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A	DEVELOPMENT APPLICATION	17.11.23	SJC
B	AMENDED DEVELOPMENT APPLICATION	30.01.24	SJE
C	AMENDED DEVELOPMENT APPLICATION	24.07.24	SJE



KEYPLAN

1 / - **GROUND FLOOR OVERALL**
Scale: 1 : 350

DEVELOPMENT APPLICATION

OVERALL FLOOR PLAN

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SCALE 1:200 @A1
0 4 8 12 16 20

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. REV.
DATE: MAY '23 DA 03 C
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P1	PRE-DA	17.08.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC
B	AMENDED DEVELOPMENT APPLICATION	30.01.24	SJE
C	AMENDED DEVELOPMENT APPLICATION	08.03.24	SJE
D	AMENDED DEVELOPMENT APPLICATION	24.06.24	SJE
E	AMENDED DEVELOPMENT APPLICATION	24.07.24	SJE

EXISTING SHOWROOM

BEDDING 2006 m²

FURNITURE 2900m²

PROPOSED HARVEY NORMAN SHOWROOM EXTENSION

3,003m2

RL 44.30

NEW DOCK EXTENSION

ENTRY FILLED WITH LIKE PAVERS FROM EAST CLARKE CRES DEMO

NEW FIRE STAIR

DASHED LINE INDICATES AWNING ABOVE

OUTDOOR FURNITURE DISPLAY IN SHOWROOM

OUTDOOR FURNITURE 460m²

BATHROOM & TILES 504m²

WINDOW

LIFT

NEW AIRLOCK

ESCALATORS

NEW SHOPFRONT

[No Slope]

RL 44.300

ENTRY

UP

RL 44.865

BICYCLE PARKING X 24

RAMP 1 UP 1:6

1:12 TRANSITIONS @3.6m UP TO FIRST FLOOR

10 M.BIKE

RL 45.004

RL 44.880

RL 45.005

RL 44.350

RL 44.500

RL 45.000

PROPOSED CAR PARK

43 SPACES

LIGHTWELL VOID ABOVE

FUTURE EV CHARGING STATION FOR 2 SPACES

RL 43.340

RL 42.950

ENTRY / EXIT

RL 44.061

RAMP 2 DN 1:6

1:12 TRANSITIONS @3.6m DOWN FROM FIRST FLOOR

NEW ROAD VERGE AND DRIVEWAY TO CAR PARK, MAKE GOOD AND MATCH TO EXISTING

UNDERSIDE OF RAMP WALLED-IN

EXISTING TREE TO BE REMOVED

NEW ENTRY STATEMENT

UNDERSIDE OF RAMP WALLED-IN

LANDSCAPING PERMITTED TO ENCROACH BOUNDARY TO CYCLE PATH - DETAILING BY LANDSCAPE ARCHITECT

BENCH SEATING ENCAPSULATED IN FRONT OF STEPPED PLANTER BOXES AND ARTICULATED MESH SCREEN WALL

LANDSCAPED CORNER STATEMENT, RADIAL TREE FOCUS TO MODULATE FACADE REFER LANDSCAPE ARCHITECT DRAWINGS

EXISTING TREES TO BE REMOVED

FIRST FLOOR CARPARK ABOVE SHOWN DASHED

PROPOSED RECONFIGURATION OF ROAD VERGE/DRIVEWAY ENTRY

NEW FIRE STAIR

JOONDALUP DRIVE

CLARKE CRESCENT

B-B DA 10

4 DA 08

1 DA 05

1 DA 11

1 DA 08

NORTH

SOUTH

KEYPLAN

1 GROUND FLOOR - SOUTH

Scale: 1 : 200

DEVELOPMENT APPLICATION

FLOOR PLAN SOUTH

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SCALE 1:200 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

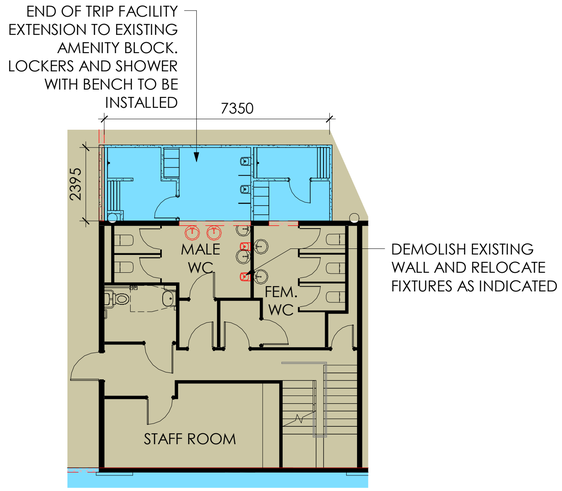
JOB NO: 5244 DWG NO. REV.
DATE: MAY '23 DA 04 E
DRAWN: LSA

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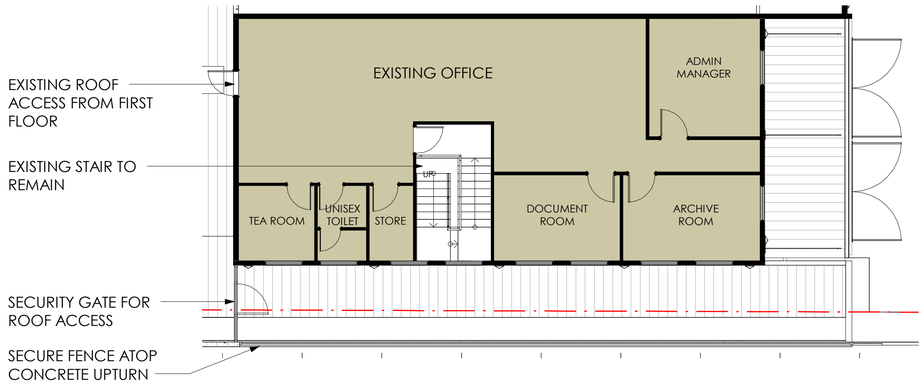
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A	DEVELOPMENT APPLICATION	17.11.23	SJC
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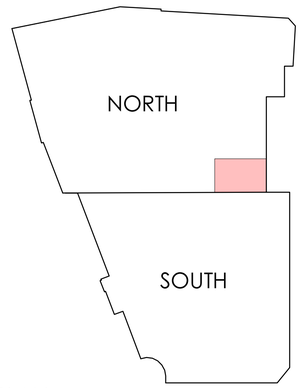
1 DA 04 PROPOSED GROUND FLOOR AMENITY WITH END OF TRIP

Scale: 1 : 100



2 DA 06 EXISTING FIRST FLOOR - OFFICE

Scale: 1 : 100



KEYPLAN

DEVELOPMENT APPLICATION

END OF TRIP AND OFFICE LAYOUT

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SCALE 1:100 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

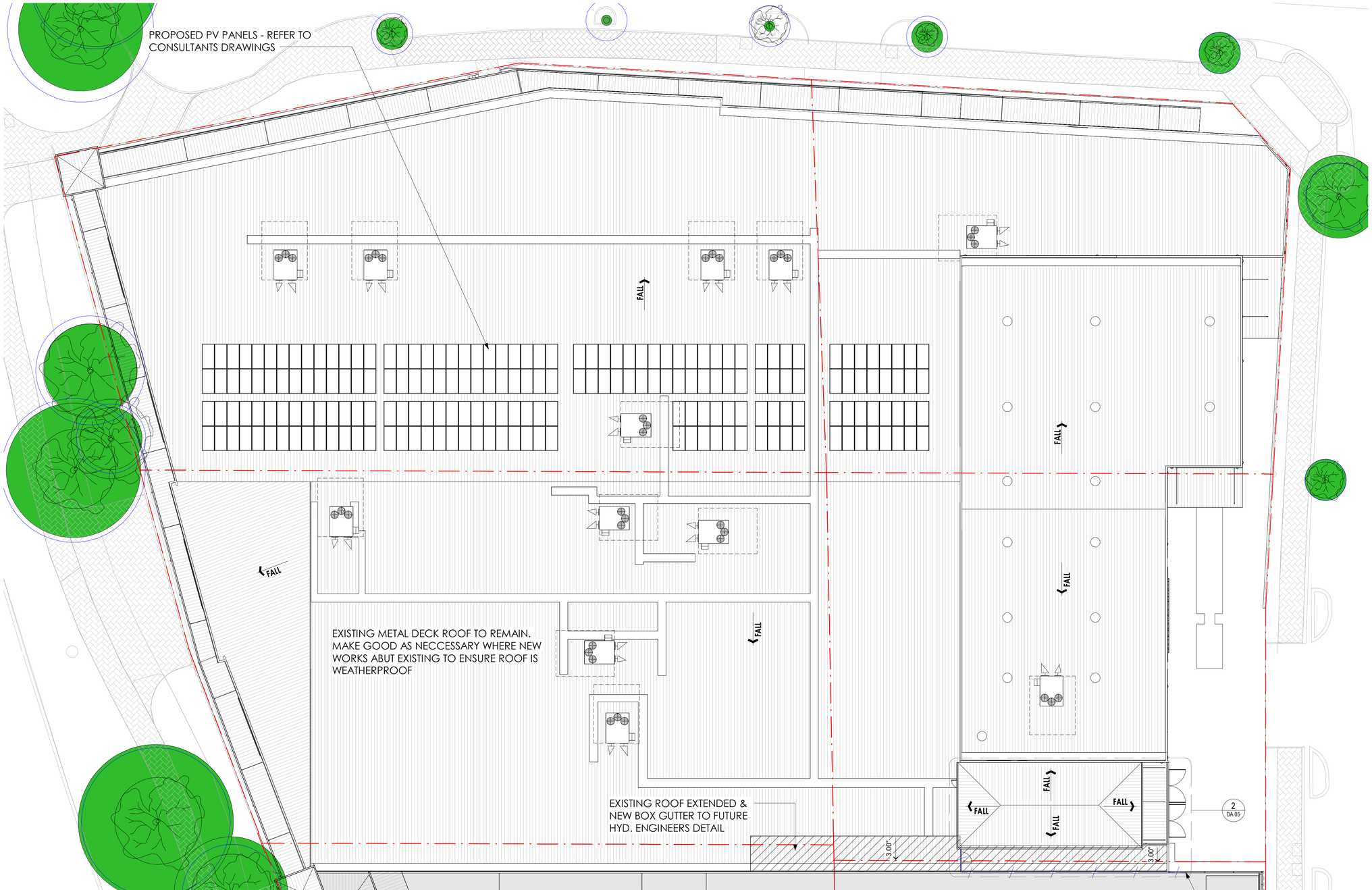
JOB NO: 5244
DATE: 11/02/23
DRAWN: CRB
DWG NO. DA 05
REV. C

LEFFLER SIMES ARCHITECTS

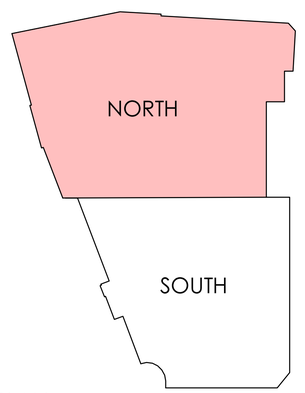
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C	AMENDED DEVELOPMENT APPLICATION	24.07.24	SJE



1 / - **ROOF PLAN - NORTH**
Scale: 1 : 200



KEYPLAN

DEVELOPMENT APPLICATION

ROOF PLAN NORTH

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SCALE 1:200 @A1 (0 4 8 12 16 20)

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DATE: MAY '23 DRAWN: LSA
DWG NO. DA 06
REV. C

LEFFLER SIMES ARCHITECTS

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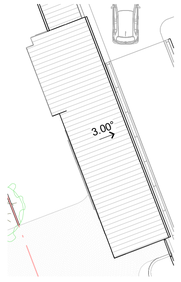
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ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC
B	DEVELOPMENT APPLICATION - ROOF PLAN AWNING INDICATED	07.12.23	SJC
C	AMENDED DEVELOPMENT APPLICATION	30.01.24	SJE
D	AMENDED DEVELOPMENT APPLICATION	24.06.24	SJE
E	AMENDED DEVELOPMENT APPLICATION	24.07.24	SJE



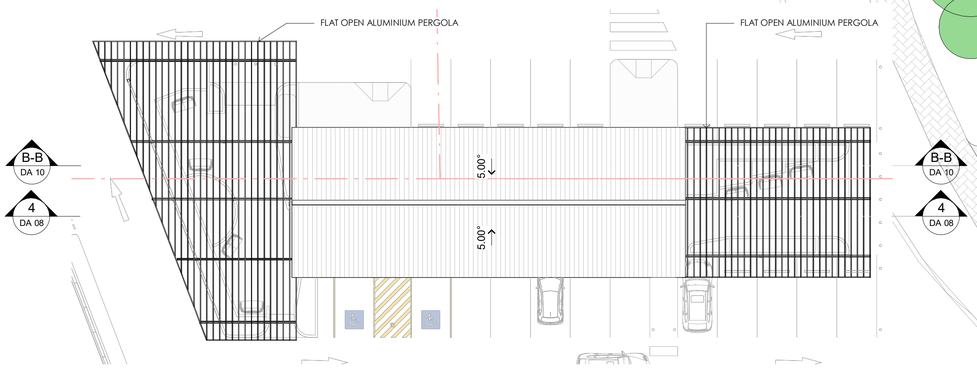
5 DA 07 **EAST EGRESS ROOF**
Scale: 1 : 200

6 DA 07 **NW EGRESS ROOF**
Scale: 1 : 200

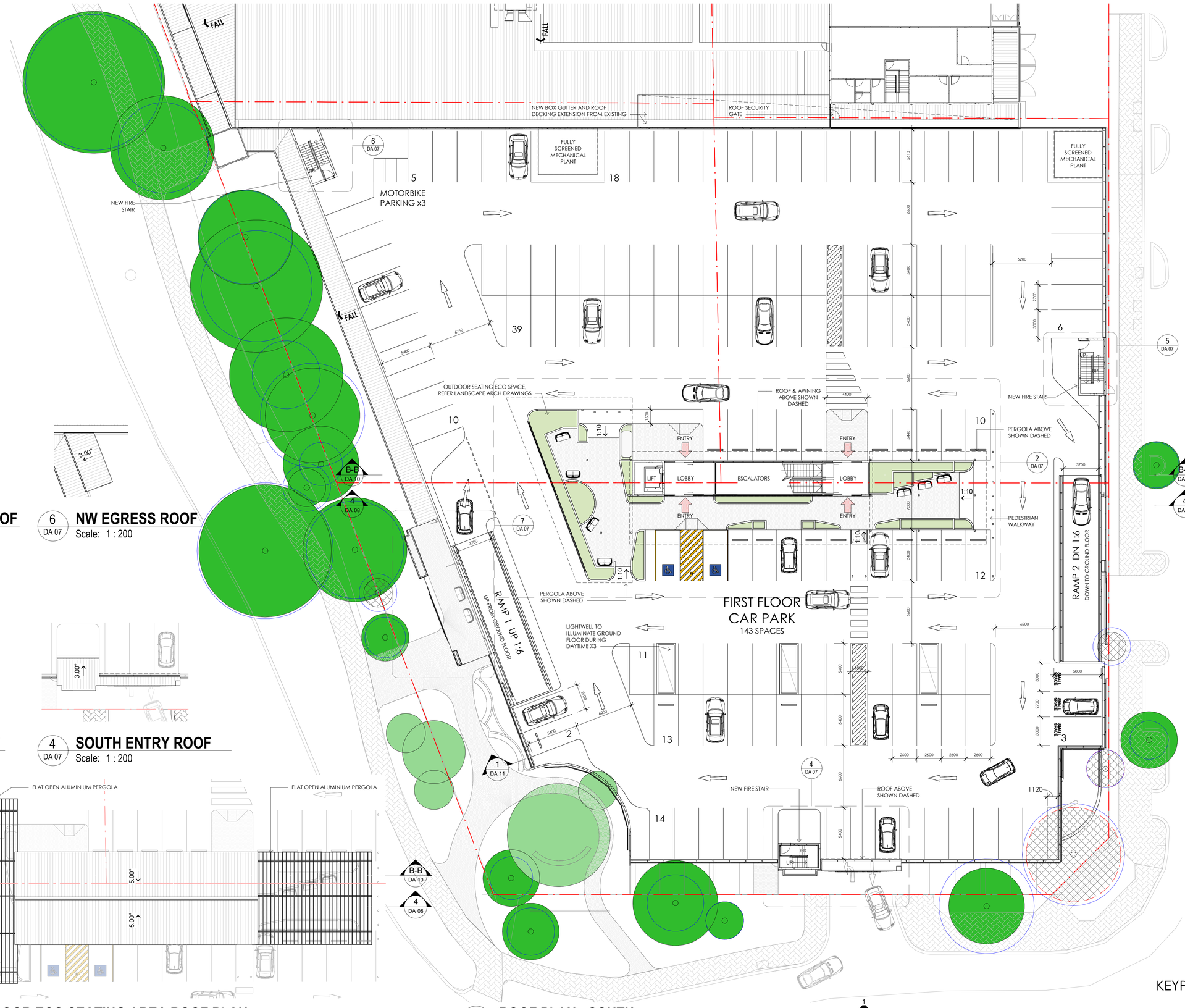


7 DA 07 **PED ENTRY ROOF**
Scale: 1 : 200

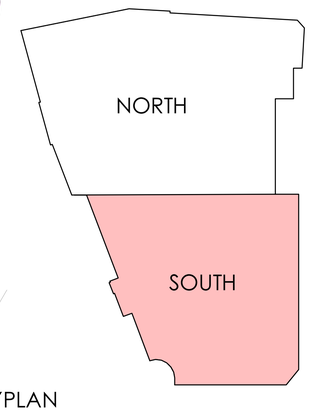
4 DA 07 **SOUTH ENTRY ROOF**
Scale: 1 : 200



2 DA 07 **LOBBY AND OUTDOOR ECO SEATING AREA ROOF PLAN**
Scale: 1 : 200



1 - **ROOF PLAN - SOUTH**
Scale: 1 : 200



KEYPLAN

DEVELOPMENT APPLICATION

ROOF PLAN SOUTH

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SCALE 1:200 @A1

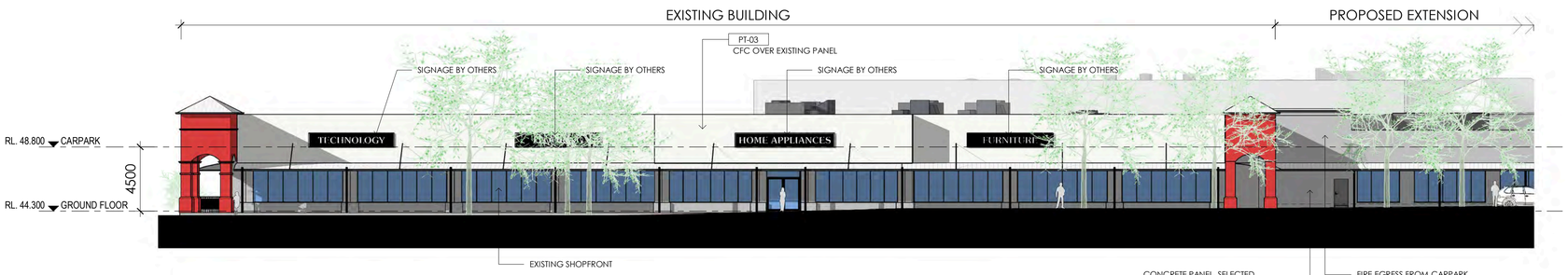
HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. REV.
DATE: MAY '23 DA 07 E
DRAWN: LSA

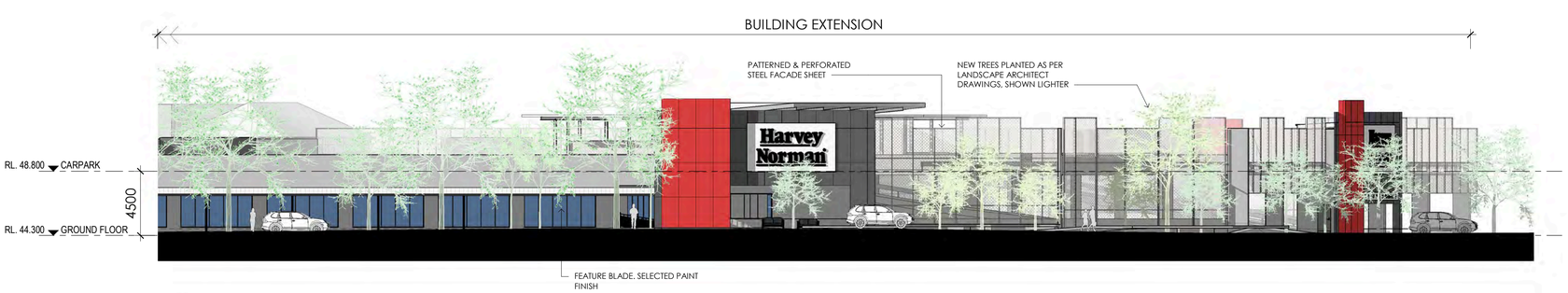
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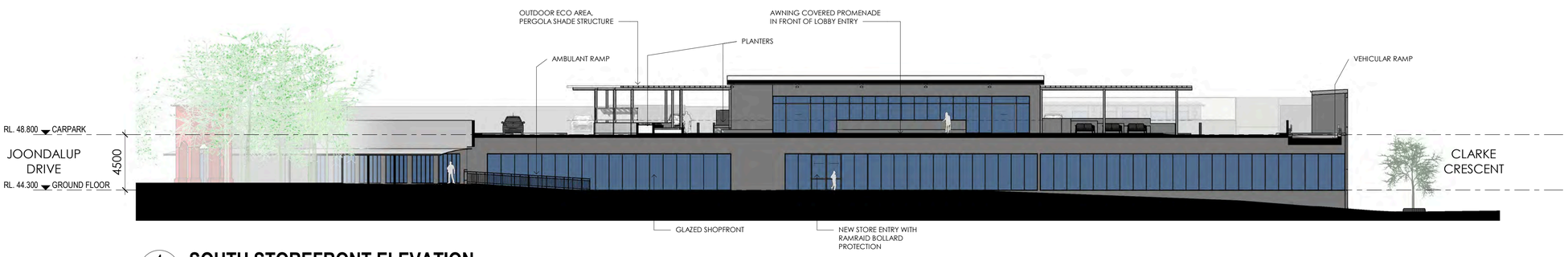
1 - SOUTH ELEVATION
Scale: 1 : 200



2 - WEST ELEVATION PART 1
Scale: 1 : 200



3 - WEST ELEVATION PART 2
Scale: 1 : 200



4 - SOUTH STOREFRONT ELEVATION
Scale: 1 : 200

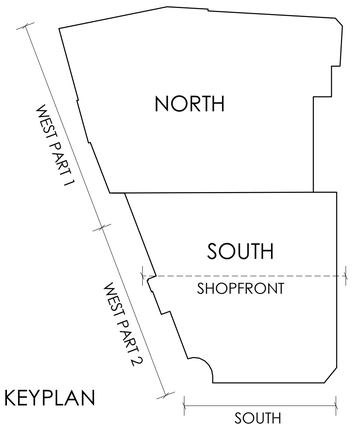
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ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC
B	DEVELOPMENT APPLICATION - SECTION C-C ADDED	07.12.23	SJC
C	AMENDED DEVELOPMENT APPLICATION	30.01.24	SJE
D	AMENDED DEVELOPMENT APPLICATION	24.07.24	SJE

FINISHES LEGEND

PT-01		DULUX MALAY GREY
PT-02		DULUX HARVEY NORMAN RED
PT-03		DULUX VIVID WHITE
PT-04		DULUX FLOODED GUM
RFS-01		DULUX SURFMIST (ROOF SHEETING)
MP-01		MESH FACADE PANELS



KEYPLAN

DEVELOPMENT APPLICATION

ELEVATIONS 1

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0 4 8 12 16 20 SCALE 1:200 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

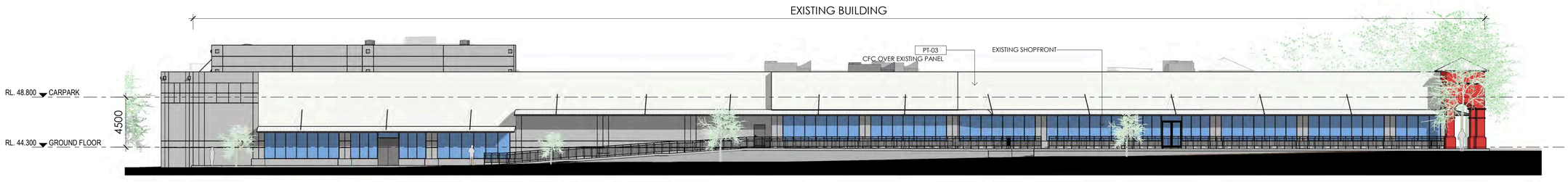
JOB NO: 5244
DATE: MAY '23
DRAWN: LSA
DWG NO. DA 08
REV. D

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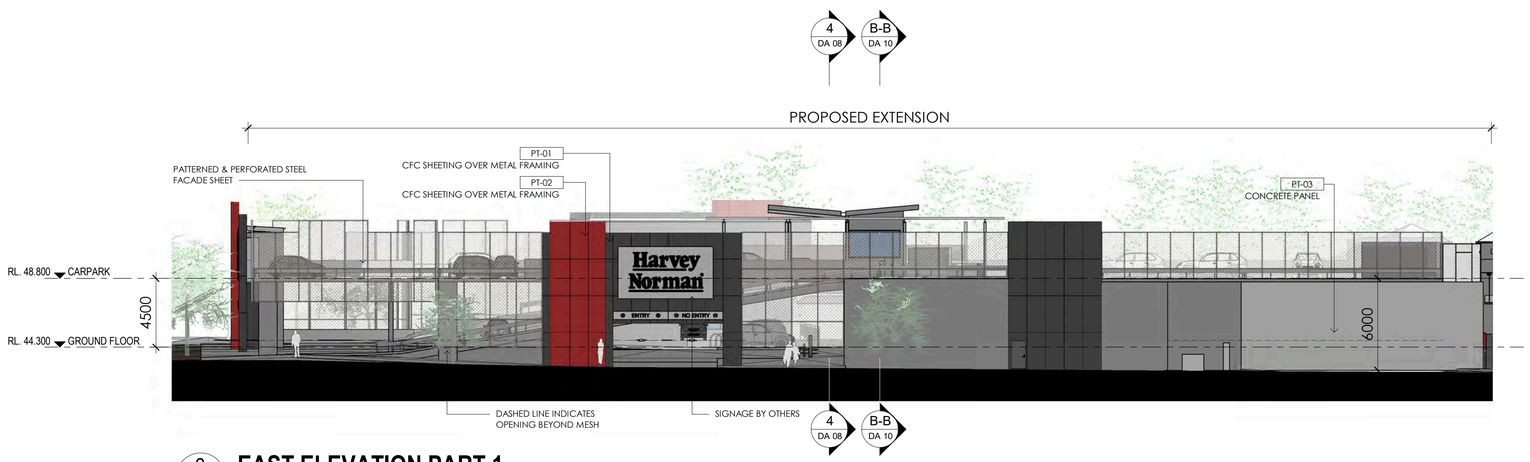
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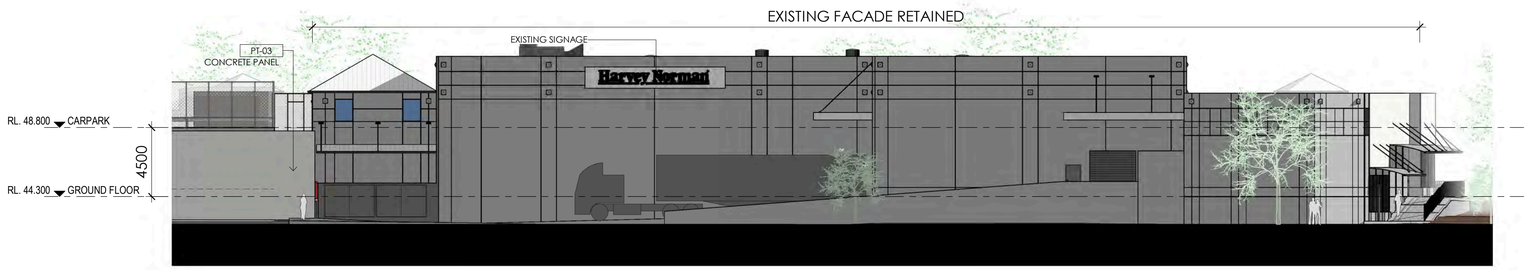
ISSUE	AMENDMENT	DATE	CHK'D
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C	AMENDED DEVELOPMENT APPLICATION	24.07.24	SJE



1 - **EXISTING NORTH ELEVATION**
Scale: 1 : 200



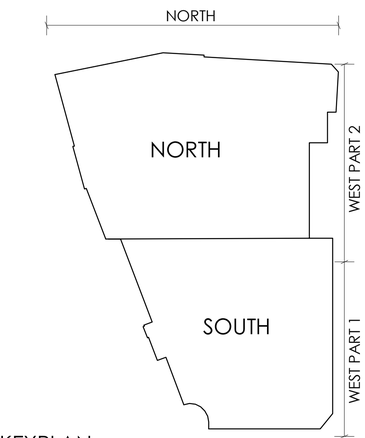
2 - **EAST ELEVATION PART 1**
Scale: 1 : 200



3 - **EXISTING EAST ELEVATION PART 2**
Scale: 1 : 200

FINISHES LEGEND

PT-01		DULUX MALAY GREY
PT-02		DULUX HARVEY NORMAN RED
PT-03		DULUX VIVID WHITE
PT-04		DULUX FLOODED GUM
RFS-01		DULUX SURFMIST (ROOF SHEETING)
MP-01		MESH FACADE PANELS



KEYPLAN

DEVELOPMENT APPLICATION

ELEVATIONS 2

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0 4 8 12 16 20 SCALE 1:200 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

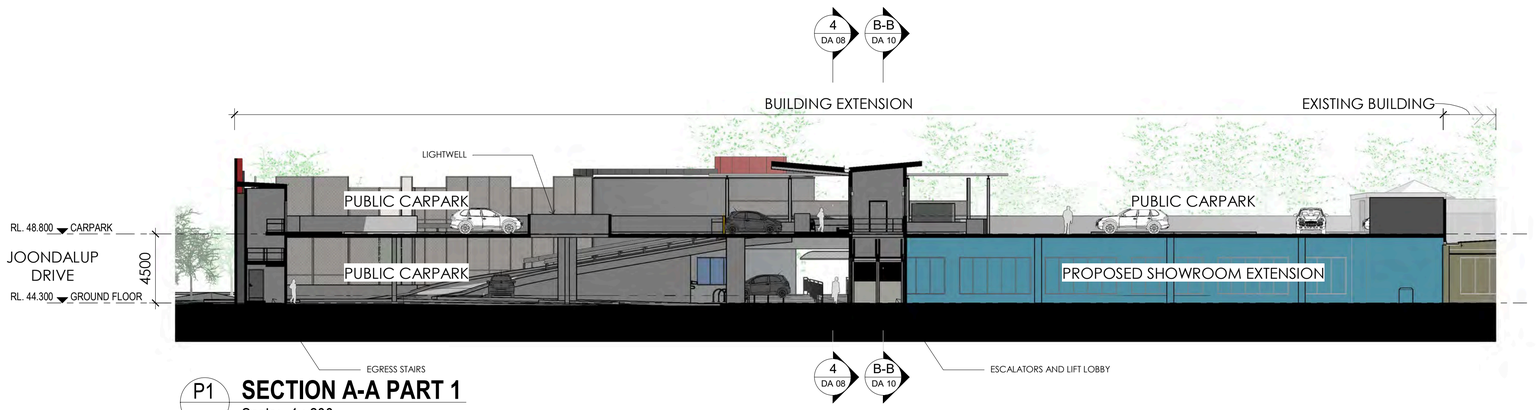
JOB NO: 5244
DATE: MAY '23
DRAWN: LSA
DWG NO. DA 09
REV. C

LEFFLER SIMES ARCHITECTS

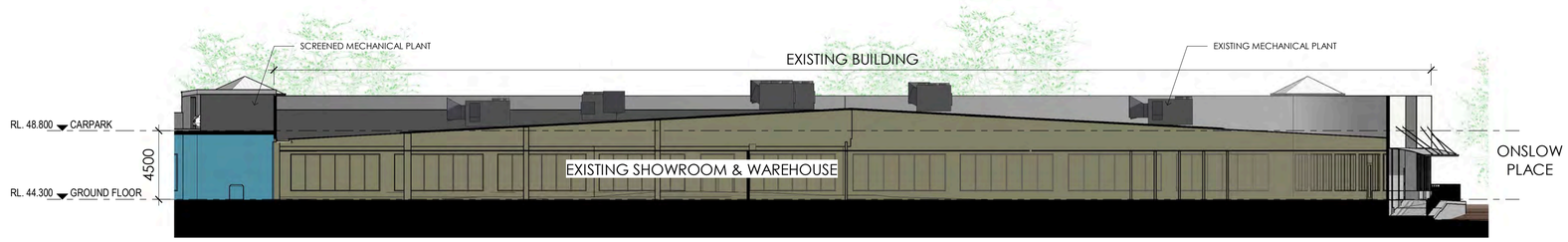
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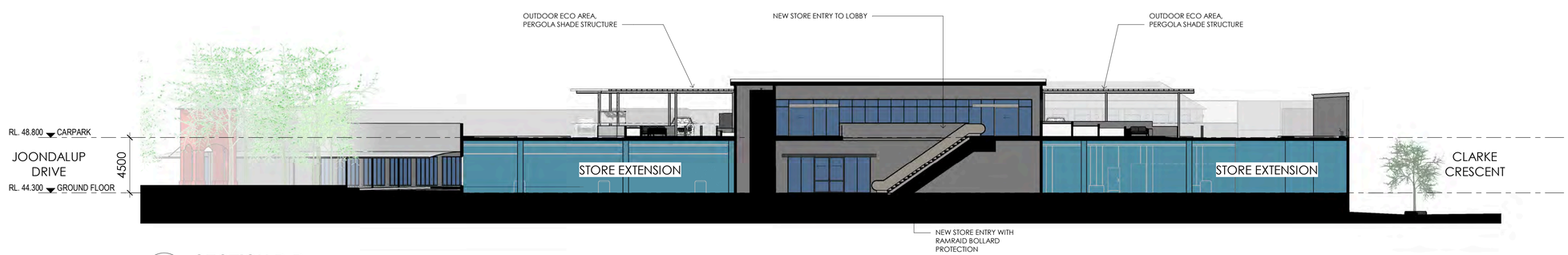
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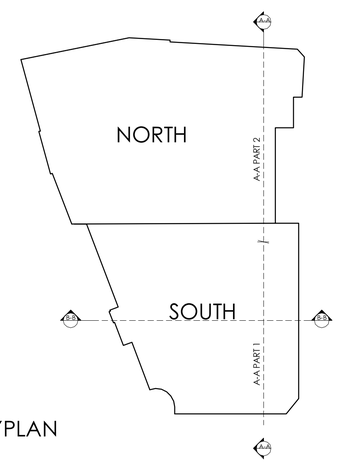
P1 **SECTION A-A PART 1**
Scale: 1 : 200



P2 **SECTION A-A PART 2**
Scale: 1 : 200



B-B DA 03 **SECTION B-B**
Scale: 1 : 200



KEYPLAN

DEVELOPMENT APPLICATION

SECTIONS

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0 4 8 12 16 20 SCALE 1:200 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

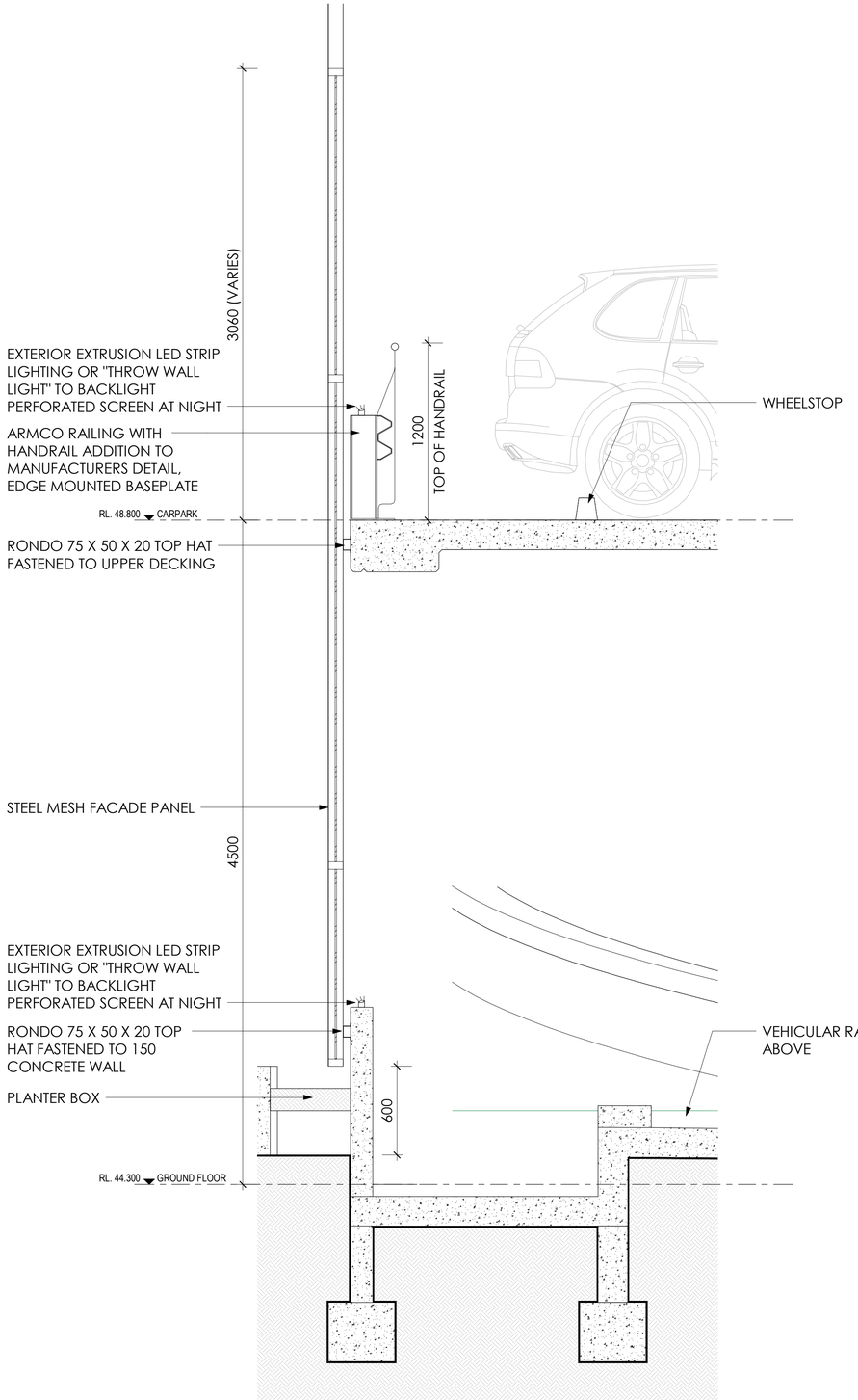
JOB NO: 5244 DWG NO. REV.
DATE: MAY '23 DA 10 C
DRAWN: LSA

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ISSUE	AMENDMENT	DATE	CHK'D
A	DEVELOPMENT APPLICATION	17.11.23	SJC
B	AMENDED DEVELOPMENT APPLICATION	30.01.24	SJE
C	AMENDED DEVELOPMENT APPLICATION	24.07.24	SJE



1 DA 04 **STEEL FACADE PANEL DETAIL**
Scale: 1 : 20



JOONDALUP DRIVE & CLARKE CRESCENT AERIAL CORNER STATEMENT

DEVELOPMENT APPLICATION

STEEL FACADE PANEL DETAIL

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ABN 39 001 043 992 MELBOURNE LEVEL 2 - 370 LT BOURKE ST, VIC 3000 T:+61 3 96546344
WEB: www.lefflersimes.com.au

SCALE 1:20 @A1 (0 0.4 0.8 1.2 1.6 2)

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. REV.
DATE: 11/15/23 DA 11 C
DRAWN: Author

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P1	PRE-DA	17.08.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC
B	AMENDED DEVELOPMENT APPLICATION	30.01.24	SJE
C	AMENDED DEVELOPMENT APPLICATION	24.07.24	SJE



JOONDALUP DRIVE & CLARKE CRESCENT CORNER STATEMENT

DEVELOPMENT APPLICATION

PERSPECTIVE 1

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SCALE NTS @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: 05/25/23
DRAWN: LSA
DWG NO. DA 12
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ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC
B	AMENDED DEVELOPMENT APPLICATION	30.01.24	SJE
C	AMENDED DEVELOPMENT APPLICATION	24.07.24	SJE



VIEW FROM JOONDALUP DRIVE

DEVELOPMENT APPLICATION

PERSPECTIVE 2

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SCALE NTS @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: 05/25/23
DRAWN: LSA
DWG NO. DA 13
REV. C

LEFFLER SIMES ARCHITECTS

Harvey Norman Joondalup

Landscape Development Application

36 Clarke Cres, Joondalup WA 6027

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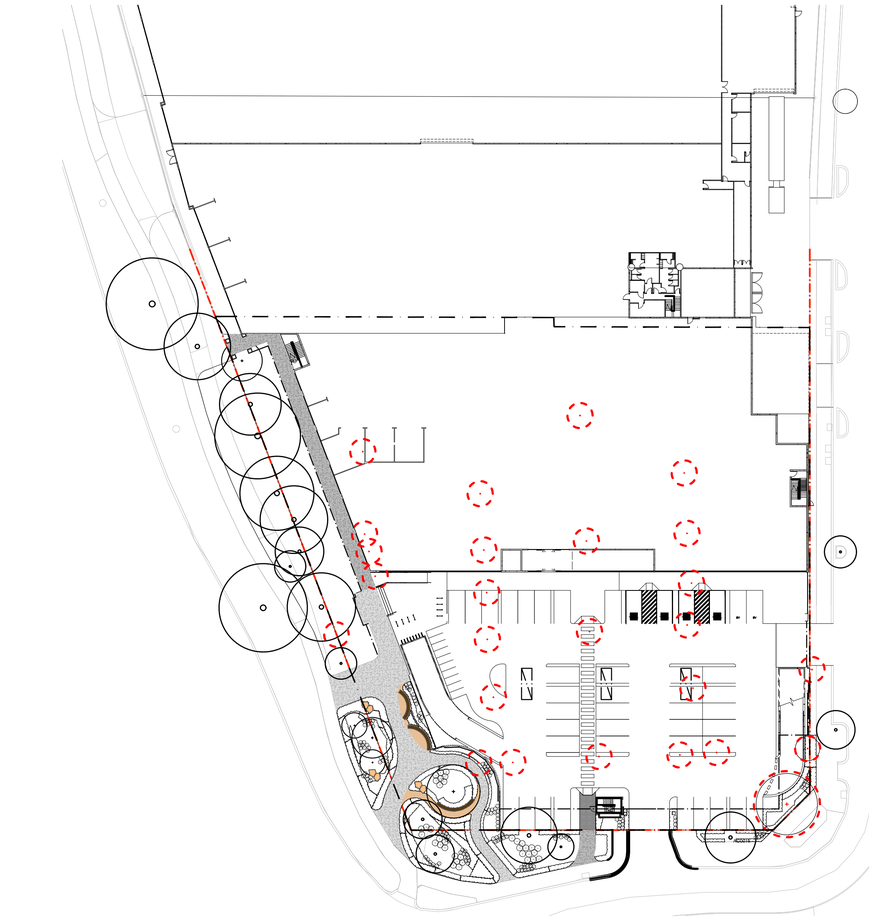
Drawing Schedule

Drawing Number	Drawing Title	Scale
000	Landscape Coversheet	N/A
001	Tree Retention and Removal Plan	1:200
002	Deep Soil Plan	1:200
100	Landscape Plan - Ground Floor	1:200
101	Landscape Plan - First Floor	1:200
501	Landscape Details	Refer Details

	Botanic Name	Common Name	Mature Size (h x w)	Pot Size	Density	Qty
GROUND FLOOR						
TREES						
BAS	*Banksia ashbyi*	Ashby's Banksia	6 x 3	100L	Plan	1
CF	*Corymbia ficifolia*	Flowering Gum	5 x 4	200L	Plan	2
CM	*Corymbia maculata*	Spotted Gum	15 x 8	200L	Plan	1
SHRUBS & ACCENTS						
An	*Atriplex nummularia*	Old Man Saltbush	3.0 x 1.0	300mm	Plan	9
Ba	*Banksia ashbyi 'Dwarf'*	Ashby's Banksia	1.0 x 1.0	300mm	Plan	59
Cu	*Chamelaucium uncinatum*	Geraldton Wax Flower	1 x 1	300mm	Plan	30
Cal	*Correa alba*	White Correa	0.8 x 1.0	300mm	Plan	75
Cr	*Cycas revoluta*	Cycad	0.3 x 0.3	300mm	Plan	27
Dg	*Diosma 'Golden'*	Diosma	1.0 x 1.0	300mm	Plan	13
De	*Doryanthes excelsa*	Gymea lily	3 x 1..5	300mm	Plan	27
Eg	*Eremophila glabra*	Common Emu Bush	0.5 x 1.0	300mm	Plan	39
Wm	*Westringia 'Mundi'*	Coastal Rosemary	0.5 x 1.0	300mm	Plan	155
Lb	*Leucophyta brownii*	Cushion Bush	1.0 x 0.5	300mm	Plan	21
Ro	*Rhaphiolepsis 'Oriental Pearl'*	Indian Hawthorn	0.6 x 0.6	300mm	Plan	31
Xp	*Xanthorrea preissi*	*Grass Tree*	3 x 1..5	300mm	Plan	10
GRASSES & GROUND COVERS						
CAR	*Carpobrotus "Aussie Rambler"*	Pigface	0.3 x 1	150mm	5/m2	313
Ca	*Chrysocephalum apiculatum*	Yellow Buttons	0.4 x 1	150mm	5/m2	110
DLR	*Dianella 'Little Red'*	Flax Lily	0.5 x 0.5	150mm	5/m2	60
Dr	*Dianella revoluta*	Blue Flax-Lily	0.5 x 0.4	150mm	5/m2	47
Go	*Goodenia ovata 'Gold Cover'*	Hop Goodenia	0.5 x 1.0	150mm	5/m2	252
Lt	*Lomandra 'Tanika'*	Dwarf Lomandra	0.5 x 0.6	150mm	5/m2	329
Mp	*Myoporum parvifolia*	Creeping Boobiala	0.4 x 0.8	150mm	5/m2	50

	Botanic Name	Common Name	Mature Size (h x w)	Pot Size	Density	Qty
Level 1						
TREES						
SHRUBS & ACCENTS						
Al	*Acacia 'Limelight'*	Bower Wattle	0.5 x 1.0	300mm	Plan	23
Aa	*Agave attenuata*	Foxtail Agave	0.5 x 1.0	300mm	Plan	19
Cr	*Cycas revoluta*	Cycad	0.3 x 0.3	300mm	Plan	10
Cb	*Crasulla 'Blue Bird'*	Blue Bird	0.8 x 0.6	300mm	Plan	37
Cc	*Crassula 'Campfire'*	Red Pagoda	3.4 x 0.5	150mm	Plan	36
Lb	*Leucophyta brownii*	Cushion Bush	1.0 x 0.5	300mm	Plan	28
Wm	*Westringia 'Mundi'*	Coastal Rosemary	0.5 x 1.0	300mm	Plan	23
Ro	*Rhaphiolepsis 'Oriental Pearl'*	Indian Hawthorn	0.6 x 0.6	300mm	Plan	12
GRASSES & GROUND COVERS						
CAR	*Carpobrotus "Aussie Rambler"*	Pigface	0.3 x 1	150mm	5/m2	44
Sm	*Senecio mandraliscae*	Blue Chalksticks	0.5 x 0.8	150mm	5/m2	47
Mp	*Myoporum parvifolia*	Creeping Boobiala	0.4 x 0.8	150mm	5/m2	89
DLR	*Dianella 'Little Red'*	Flax Lily	0.5 x 0.5	150mm	5/m2	31

	Botanic Name	Common Name	Mature Size	Pot Size	Density	Qty
Matrix Planting						
An	*Atriplex nummularia*	Old Man Saltbush	3.0 x 1.0	Tube	Refer Detail	566
Cu	*Chamelaucium uncinatum*	Geraldton Wax Flower	1 x 1	Tube	Refer Detail	259
Dr	*Dianella revoluta*	Blue Flax-Lily	0.5 x 0.4	Tube	Refer Detail	377
Lt	*Lomandra* 'Tanika'	Dwarf Lomandra	0.5 x 0.6	Tube	Refer Detail	330
Go	*Goodenia ovata 'Gold Cover'*	Hop Goodenia	0.5 x 1.0	Tube	Refer Detail	330
Wm	*Westringia 'Mundi'*	Coastal Rosemary	0.5 x 1.0	Tube	Refer Detail	259
Eg	*Eremophila glabra*	Common Emu Bush	0.5 x 1.0	Tube	Refer Detail	259



Site Plan | Scale

Issue	Revision Description	Drawn	Check	Date
B	Development Application	LP	NM	19.03.2024
A	Development Application	LP	NM	07.02.2024

Legend

Key Plan

Client
Harvey Norman

Project
Harvey Norman Joondalup

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Development Application

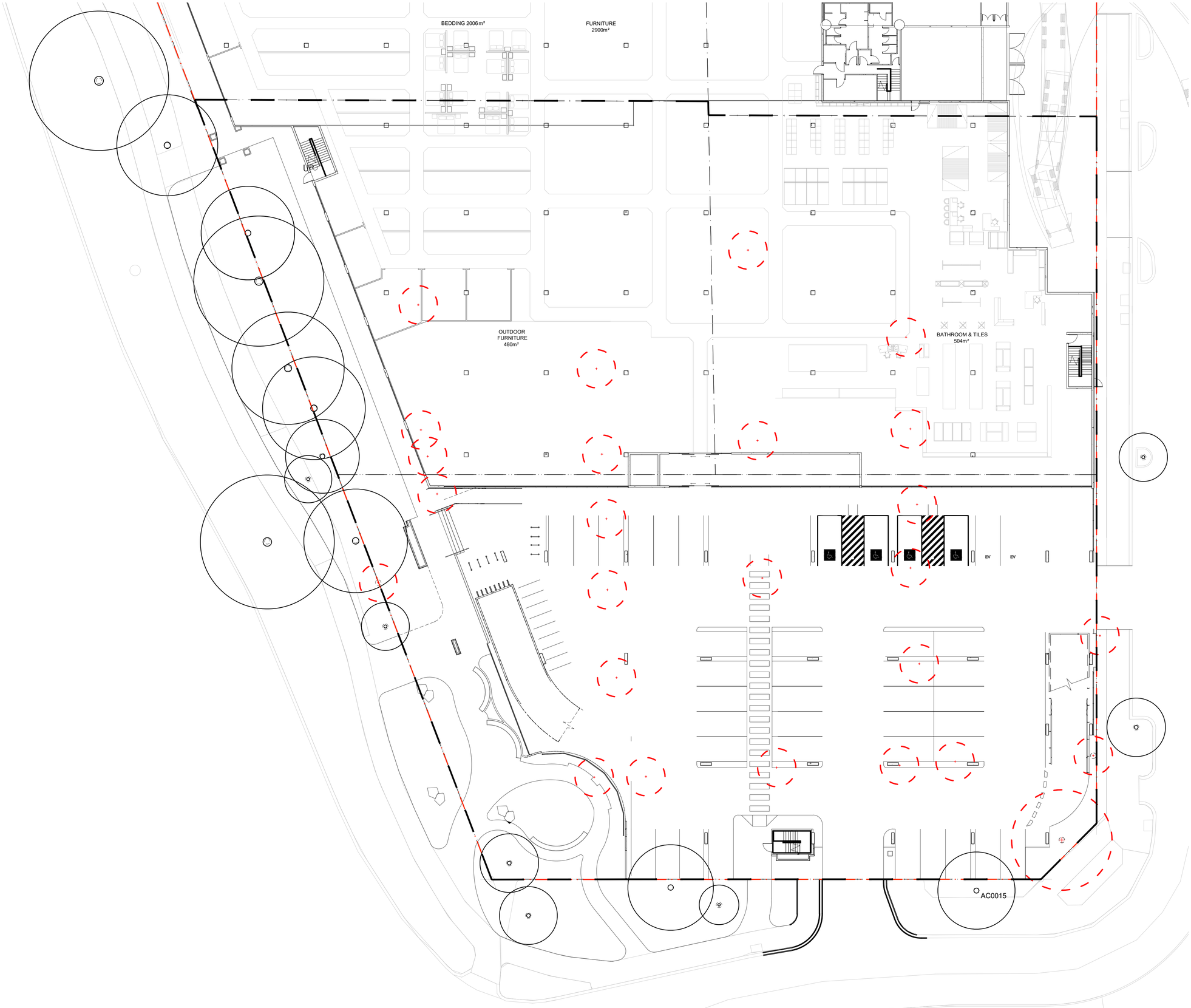
Drawing Name
Landscape Coversheet

Scale

Job Number	Drawing Number	Issue
SS23-5212	000	B

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A1



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Issue	Revision Description	Drawn	Check	Date
B	Development Application	LP	NM	19.03.2024
A	Development Application	LP	NM	07.02.2024

Legend

- Property Boundary
- Existing Tree Retained
- Existing Tree to be Removed

Client
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Project
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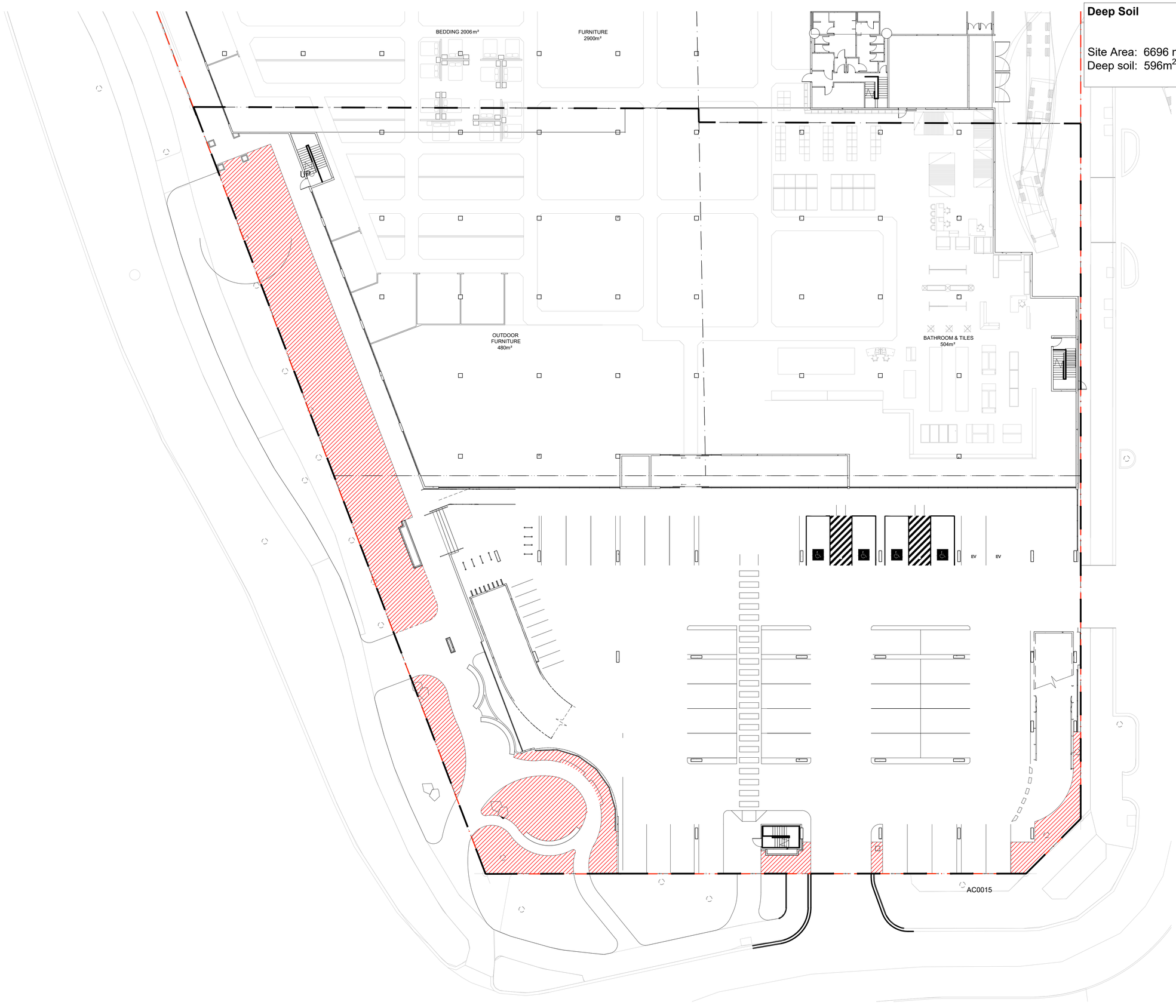
Drawing Name
Tree Retention and Removal Plan
Ground Floor

Scale 1:200 @ A1
0 1 2 4 6 10m

Job Number: SS23-5212
Drawing Number: 001
Issue: B

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Deep Soil

Site Area: 6696 m^2
Deep soil: 596m^2 (8.3%)

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Issue	Revision Description	Drawn	Check	Date
B	Development Application	LP	NM	19.03.2024
A	Development Application	LP	NM	07.02.2024

Legend

Property Boundary

Deep Soil Area
Within Extent of Lot Boundary

Client
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Project
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Development Application

Drawing Name
Deep Soil Plan
Ground Floor

Scale 1:200 @ A1
0 1 2 4 6 10m

Job Number: SS23-5212
Drawing Number: 002
Issue: B

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Issue	Revision Description	Drawn	Check	Date
B	Development Application	LP	NM	19.03.2024
A	Development Application	LP	NM	07.02.2024

BEDDING 2006m²

FURNITURE 2900m²

OUTDOOR FURNITURE 480m²

BATHROOM & TILES 504m²

Matrix Planting

7 Cu 38 Go 5 Wm

38 Ca 20 CAR 1 Cf 8 Wm 1 BAS 9 Eg 28 Go 20 Lt 8 Cu 1 Cf 6 Wm 6 Eg 30 CAR 3 Xp 35 Ca 30 CAR 16 Go 24 CAR 8 Lb 4 An 11 Wm 4 De 16 Go 5 An 45 Lt 4 De 35 CAR

8 Eg 7 Cu 10 Wm 40 Lt 25 Go 5 Eg 5 Wm 45 CAR 21 Lt 25 CAR 12 Go 1 Xp

5 Ro 2 Wm 3 Ro 35 Mp 3 Wm 4 Ro 10 CAR 3 Wm

15 CAR 7 Wm 7 Ro 8 Wm 9 Cr 8 Cr 9 Cal 39 Lt 6 Ba 5 De 8 Wm 1 Cm 7 Ro 25 DLR 12 Cal 35 DLR 3 De 12 Wm 12 CAR 8 Cal 11 Ba

10 Cr 13 Dg 8 Wm 12 CAR 8 Cal

10 CAR 5 Ro 11 Cal 7 Ba 10 Lt 8 Wm 35 Lt

15 Lt 4 Cal

AC001S

25 Lt 6 Ba 8 Wm 20 Lt 7 Cal

25 Go 20 Lt 8 Cal 15 Mp 8 Wm 25 Lt 5 Wm 7 Ba 20 CAR

20 Go 15 Lt 3 Xp 8 Wm 18 Go 25 CAR 13 Lb 20 CAR 3 Xp 24 Go 25 Ca 32 Dr 5 De 12 Ca 15 Go 6 De 10 Ba 15 Dr 12 Wm 12 Ba 8 Cal

Legend

- Property Boundary
- Existing Tree Retained
- Proposed Tree
- Existing Tree to be Removed
- Proposed Shrubs and Accents
- Proposed Groundcover/ Grasses
- Planting Matrix
  Refer Detail
- Mulch Circle to trees
- Insitu Concrete Paving
- Insitu Coloured Concrete Paving
- Decomposed Granite
- Rock Boulders
- Feature Seating

Client
Harvey Norman

Project
Harvey Norman Joondalup

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Development Application

Drawing Name
Landscape Plan
Ground Floor

Scale 1:200 @ A1
0 1 2 4 6 10m

Job Number SS23-5212
Drawing Number 100
Issue B

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Issue	Revision Description	Drawn	Check	Date
B	Development Application	LP	NM	19.03.2024
A	Development Application	LP	NM	07.02.2024

Legend

- Proposed Shrubs and Accents
- Proposed Groundcover/ Grasses
- Bench Seating

Key Plan

Client
Harvey Norman

Project
Harvey Norman Joondalup

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Development Application

Drawing Name
Landscape Plan
Level 1

Scale 1:200 @ A1
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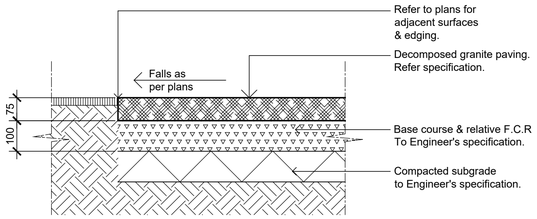
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SS23-5212	101	B

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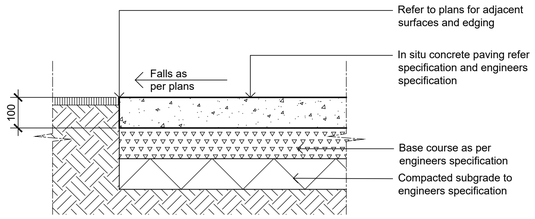
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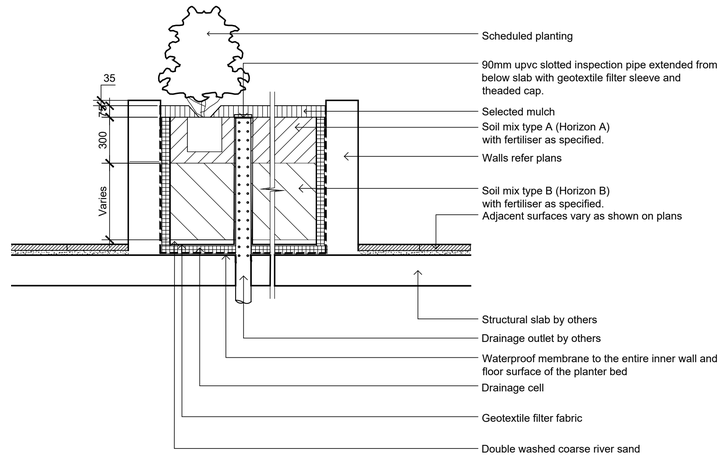
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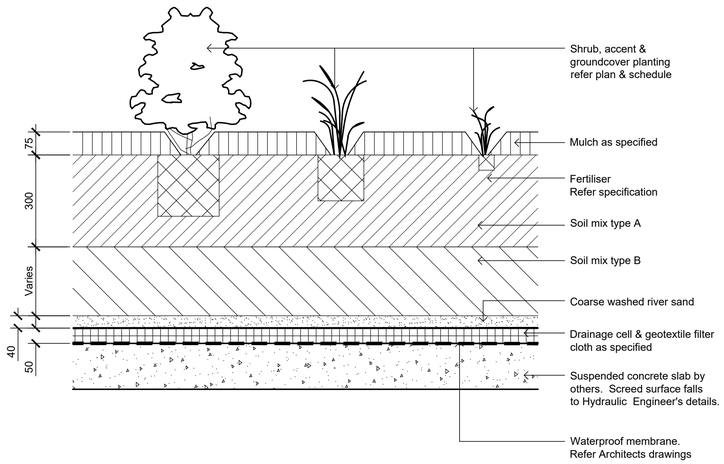
DECOMPOSED GRANITE PAVING ON GRADE
SCALE 1:10



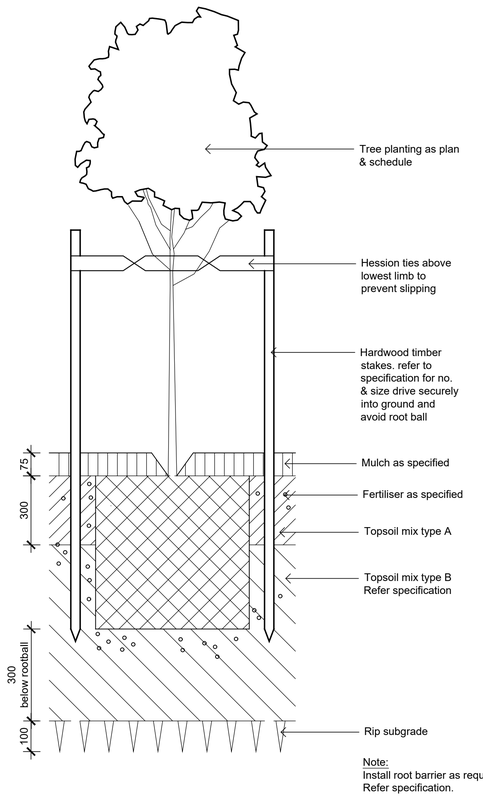
INSITU CONCRETE PAVING
SCALE 1:10



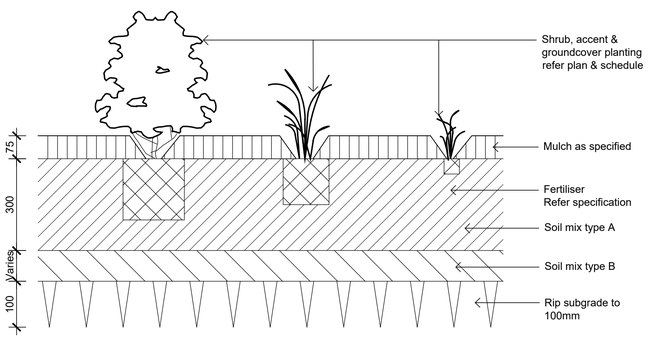
Section - Typical Raised Planter Bed on Structure
1:20
Inspection riser pipe



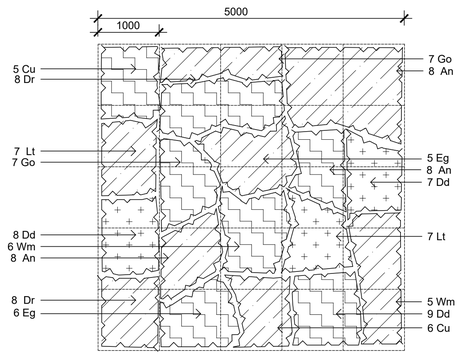
Detail Shrub Accent & Groundcover Planting on Structure
1:10



Detail 75-200L Tree Planting on Grade
1:10



Detail Shrub Accent & Groundcover Planting on Grade
1:10



Matrix Planting
1:50

NOT FOR CONSTRUCTION

A1

Issue	Revision Description	Drawn	Check	Date
B	Development Application	LP	NM	19.03.2024
A	Development Application	LP	NM	07.02.2024

Legend

Key Plan

Client
Harvey Norman

Project
Harvey Norman Joondalup

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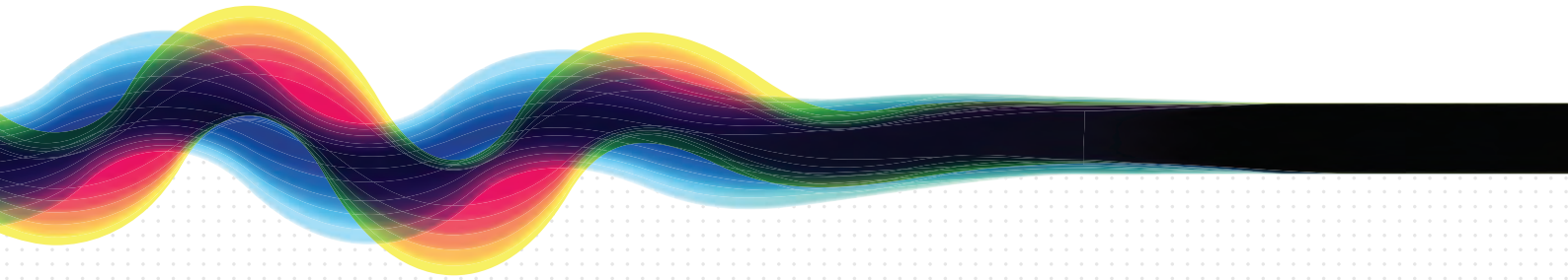
Drawing Name
Landscape Details

Scale N/A
0 1 2 4 6 10m
Job Number SS23-5212
Drawing Number 501
Issue B

Harvey Norman, 36 Clarke Crescent, Joondalup Retail Showroom Expansion

Development Application

March 2024 | 22-374



element.
the art and science of place

We acknowledge the Whadjuk people of the Noongar nation as traditional owners of the land on which we live and work.

We acknowledge and respect their enduring culture, their contribution to the life of this city, and Elders, past and present.

Document ID: /Volumes/Graphics/2022/22-374 Joondalup, Town Centre/00 Report/00 InDesign/22-374 36 Clarke Cres Joondalup DA 240319 Folder/22-374 36 Clarke Cres Joondalup DA F 240325.indd

Issue	Date	Status	Prepared by	Approved by	Graphics	File
1	Draft	19.03.24	Fiona Atkins, Renee Young	David Read	MS	D1
2	Final	25.04.24	Fiona Atkins, Renee Young	David Read	MS	F

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1. Key Application Details

Table 1. Application Details

Property Location	Lot 600 (No. 36) Clarke Crescent, Joondalup
Applicant	**element**, on behalf of Calardu Joondalup Pty Ltd
Landowner	Calardu Joondalup Pty Ltd
Responsible Authority	City of Joondalup
Metropolitan Region Scheme	Urban
Existing Land Use	Bulky Goods Showroom
Proposed Use Class	Ongoing use as Bulky Goods Showroom
Total Land Area	14,863m^2 (1.4683 hectares)
Proposed development	Proposed expansion of the existing Bulky Goods Showroom floorspace into the existing at-grade car park; provision of a new screened multi-deck car parking structure and upgrades to the facade of the existing building.
Development Value	$25,000,000.00

1.1 Consultant Team

This development application has been prepared on behalf of Harvey Norman with input from the following consultants:

Table 2. Consultant List

Discipline	Company
Project Manager	DMG Property
Architect	Leffler Simes Architecture
Town Planning	**element**
Landscape Design	Site Image Landscape Architecture
Traffic	Level 5 Design
Arborist	The Arbor Centre Consultancy
Sustainability	Cundall

2. Introduction

This report has been prepared by **element**, on behalf of Calardu Joondalup Pty Ltd for the expansion of the existing Harvey Norman retail showroom at 36 Clarke Crescent, Joondalup.

The development will provide an extension of the existing Bulky Goods Showroom floorspace into the existing at-grade car park providing an additional 3,003m^2 of retail floorspace. A new screened multi-deck car parking structure is also proposed together with upgrades to the facade of the existing building.

The existing showroom was approved in 1998 and the premises have not undergone any significant modification since that time. Harvey Norman's strength as a retailer is in its physical showrooms and it continues to invest in the development of new and redeveloped showrooms and homemaker centres throughout Australia. The Joondalup store has been identified as in need of both expansion and renovation to better serve the needs of its local customers.

A development application proposing a 3,000m^2 extension to the showroom and a multi-storey car park was approved in November 2015. This approval has since lapsed.

This report has been prepared to provide an overview of the subject site and the proposed development, as well as a detailed assessment against the relevant planning requirements and an examination of the planning merits of the proposal. This report is accompanied by detailed development plans and elevations as well as supporting technical reports as follows:

- Appendix A – Certificate of Title
- Appendix B – Development Plans
- Appendix C – Landscaping Plan
- Appendix D – Traffic Impact Assessment
- Appendix E – Waste Management Plan
- Appendix F – Sustainability Report
- Appendix E - Arboricultural Assessment

As detailed in this report, the development is considered appropriate for the location and designed such that it will improve the exiting aesthetics of the building and ensure greater interaction with the public realm. Approval of the application is therefore sought, subject to relevant and reasonable conditions.

2.1 Planning Approval Required

The development application requires determination under the requirements of the City of Joondalup (the City) Local Planning Scheme No. 3 (LPS 3).

As the cost of development is over $2 million, the application may opt into the Development Assessment Panel (DAP) pathway or choose to be determined by the City. In this instance the Applicant is electing to have the application determined by a DAP.

3. Site Characteristics

3.1 Site Location

The site of the proposed development is located at Lot 600 (36) Clarke Crescent, Joondalup within the municipality of the City of Joondalup. The site is bound by Joondalup Drive to the west, by Clarke Crescent to the south and east and by Onslow Place to the north.

Approximately 500m to the north is the Lakeside Joondalup Shopping Centre and Joondalup Train Station. The site is located centrally within an existing bulky goods precinct. Surrounding retailers include 99 Bikes, Battery World, Sydney Tools, Kennards Hire and Repco.

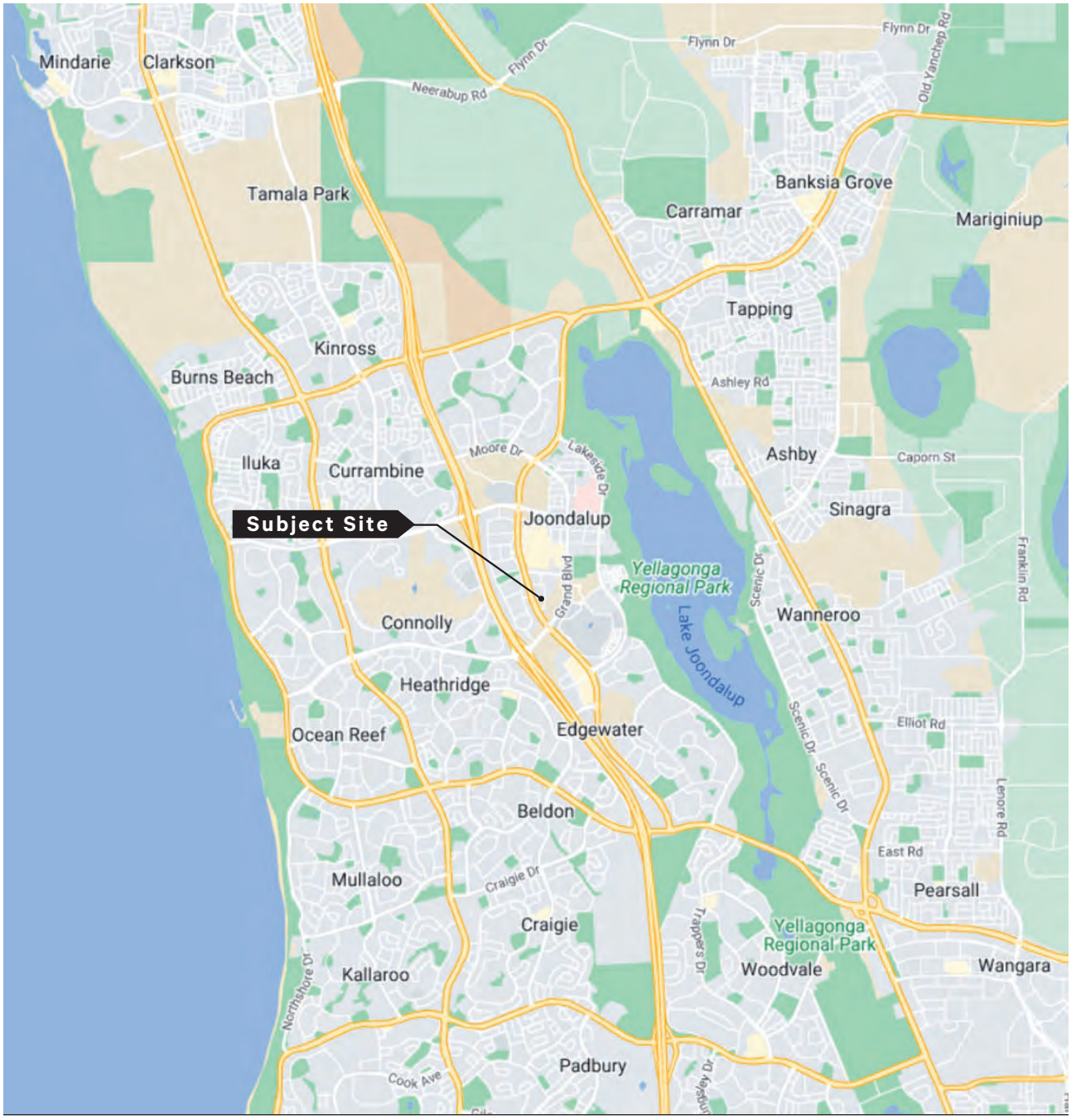
There is an existing shared path within the Joondalup Drive frontage of the site which merges into a footpath that runs around the southern, eastern and northern boundaries of the site.

Refer to Figure 1 – Location Plan

Refer to Figure 2 – Site Plan

Refer to Figure 3 – Aerial Plan

Refer to Figure 4 – Photos of Site Context



Source: googlemaps

Figure 1. Location Plan

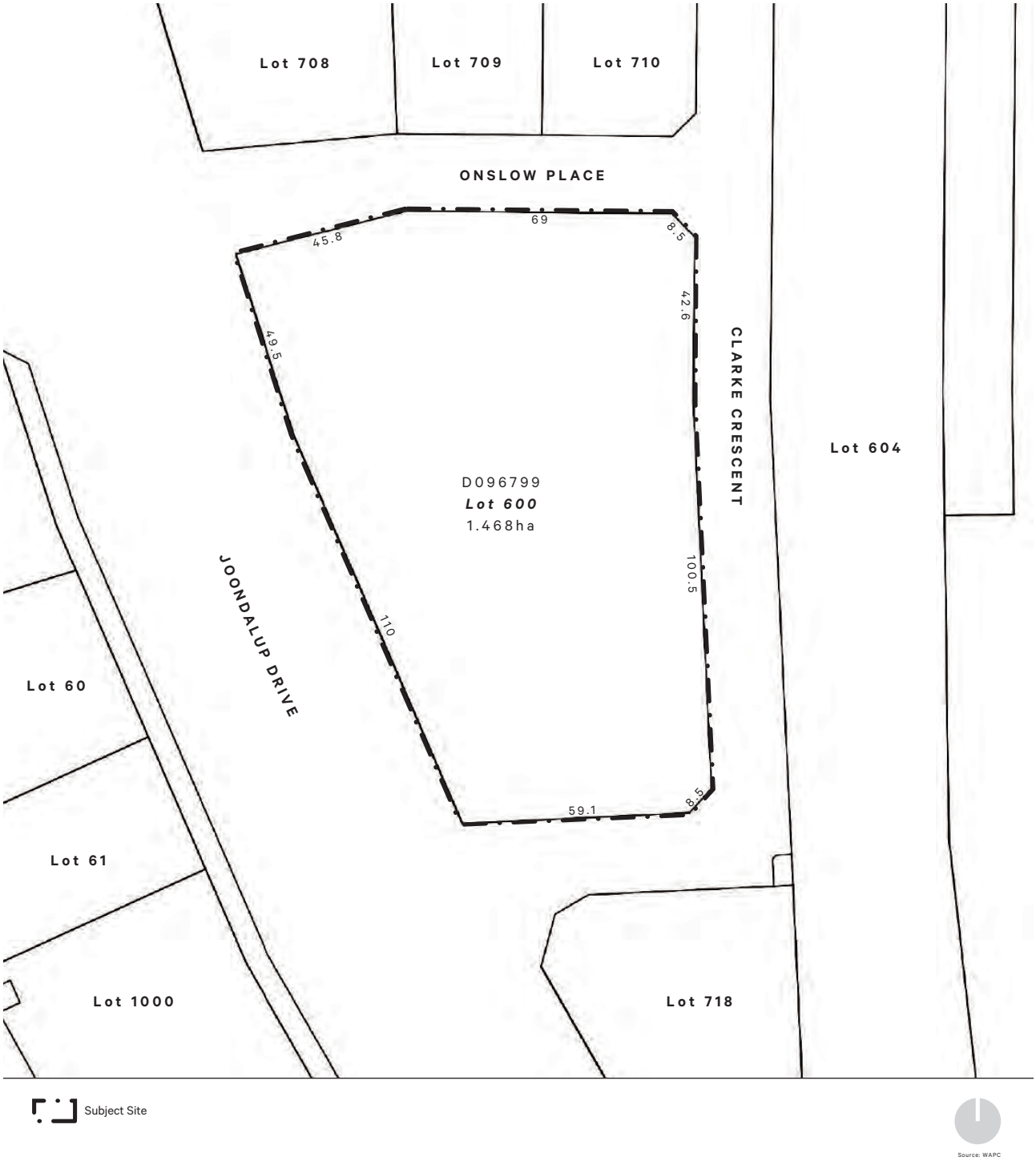


Figure 2. Site Plan



Figure 3. Location Plan

3.2 Site Description

The subject site comprises the existing Harvey Norman bulky goods showroom and the associated at-grade car park, access and landscaping.

The subject site has an irregular shape, with angled boundaries to Onslow Place and Joondalup Drive and to the north and west respectively. It contains a showroom building in the northern portion of the site and an at grade car park in the southern part of the site. Vehicle access to the car park is obtained via Clarke Crescent at two points, one to the southern boundary and one to the eastern boundary. A separate loading dock access is also available from the eastern boundary from Clarke Crescent.

Existing landscaping on the subject site is predominantly in the form of small shade trees disbursed throughout the at grade car park. There is limited other landscaping on site, as the existing showroom and warehouse are generally constructed to the site boundaries.

Table 3. Site Particulars

Lot	Street Address	Plan	Volume/Folio	Area	Landowner
600	36 Clarke Crescent, Joondalup	D96799	2166/200	14,863m^2	Calardu Joondalup Pty Ltd

Refer to Appendix A – Certificate of Title



View to development to the west of the subject site



View to development to the south of the subject site

Figure 4. Photos of Site Context



View of the existing southern facade of the Harvey Norman Showroom



View of the existing western facade of the Harvey Norman Showroom



View of the existing at grade car park located in the southern part of the subject site



View of the existing Joondalup Drive verge adjacent to the western boundary of the subject site

Figure 5. Site Photos

3.3 Encumbrances

There is an easement recorded on the Certificate of Title along with a number of restrictive covenants. The easement is for underground electricity purposes.

There is a 0.1 metre wide pedestrian access way which adjoins part of the Joondalup Drive frontage of the site. This is a historical 'spite strip' designed to prevent access from the site to Joondalup Drive.

3.4 Heritage and Environmental Considerations

3.4.1 Heritage

A desktop review of the Heritage Council's State Heritage Register confirms that there are no State registered heritage places in the vicinity of the site. Further, there are no local heritage items in the vicinity of the site.

A desktop search of the Department of Planning, Lands and Heritage (DPLH) Aboriginal Heritage Inquiry System indicates that there no places of Aboriginal Heritage significance in the immediate proximity of the site.

3.4.2 Bushfire

A desktop search of the Department of Fire and Emergency Services State Map of Bushfire Prone Areas indicates that the site is not located within a bushfire prone area.

3.4.3 Contamination

A desktop search of the Department of Water and Environmental Regulations (DWER) Contaminated Sites Database identifies that the subject site is not listed as a known contaminated site.

3.4.4 Acid Sulphate Soils

A desktop search of the DWER Acid Sulphate soils mapping indicated that the site does not contain acid sulphate soils.

4. Project Background

4.1 Approval History

Approval for the development of the site was originally granted to Harvey Norman in 1998 when the City of Joondalup granted approval for a showroom with ancillary warehouse of 7,147m^2 with 238 on-site car parking spaces. The site was subsequently developed in accordance with this approval.

On 5 November 2015, the City of Joondalup granted a further approval for the site for the purposes of additions to the showroom (additional 3,036m^2 showroom floorspace) with a two tier multi storey car park located in the southern part of the lot to accommodate 255 on-site car parking spaces. The proposed multideck car park was unscreened and of concrete construction. This approval was not acted upon and has since lapsed.

4.2 Pre-lodgement Engagement and Design Review Panel

During the design development process for this application, the technical project team met with the City of Joondalup (the City) to discuss the proposal. There have also been two meetings with the City's Design Review Panel ('DRP').

The project team met with the DRP on 3 October 2023 and again on 20 December 2023 for formal design review meetings. The summary from the 20 December 2023 meeting is as follows:

> *The DRP thanks the Applicant for considering several of the comments from Design Review 1 (DR1), and updating the proposal to include the following design strengths:*
>
> - *Building setback from the street boundary for tree retention now preserves existing amenity and character and will be greatly valued by the community.*
> - *Engagement of a landscape architect. The landscape plans are developing well for the spaces provided, including the new south-western pocket park.*
> - *Materials palette and aspirational imagery are all relevant.*
> - *Climate protected bench seating area and landscape on the rooftop deck will be welcoming for visitors.*
> - *Greater articulation of the facades (note, however, the comments on improvement below).*
> - *Awning over Joondalup Drive footpath.*
> - *Addition of PV solar panels on the existing building.*
>
> *However, the DRP advises that many of the original concerns from DR1, in addition to suggested improvements to the current design, require resolution before the DRP can provide its support for the design.*
>
> *The key recommendations focus on information requirements and improvements to: landscape design; façade aesthetics and building scale; services locations; safety, pedestrian accessibility and legibility; sustainability measures; and amenity.*

A summary of the DRP's comments from December 2023, with the Applicant's responses to the items (which are documented in the development application plans included at Appendix B) is provided in Table 4 on the following page.

Table 4. Summary of DRP Comments from 20 December 2023 and Design Responses

Principle	DRP Review Comments and Recommendations	Design Comments / Response
1. Context and Character	**Comments:** • Refer to the comments below for detailed advice on the design response to the context and contributing to a sense of place. **Recommendation 1:** • Refer to Principles 2 to 10 for detailed comment.	The plans included in this development application have been revised following each of the two DRP meetings. They have evolved to ensure that they respond to the DRP feedback and are responsive to the context and character of the subject site and the Joondalup Activity Centre, both now and into the future, contributing positively to the sense of place. Refer to the responses for each of the principles below.
2. Landscape Quality	**Comments:** • The Applicant is commended for the proposed tree retention. Following on from this, the Applicant should commission a full arboricultural assessment of the retained trees to understand the Structural Root Zone and Tree Protection Zones and how these are to be respected during construction and to ensure the trees ongoing survival post development. • Consider deep soil diagrams and calculations to clarify the provisions on site. • Provide more detail on the proposed plant palette, including the use of native planting. • Consider substituting the large areas of mulch for plants. • Consider a more generous and flowing approach to planting rather than strictly following the lot boundary • Consider planted areas behind the cycle path rather than all turf. • Consider a path connection in the verge to the south. • The path provided within the front setback on the lot could be widened to be more welcoming and safer for pedestrians. **Recommendation 2:** • Commission a full arboricultural assessment of the retained trees. • Consider deep soil diagrams and calculations. • Provide a detailed plant palette, including consideration of native species. • Consider plants instead of lots of mulch. • Consider a more generous and flowing approach to planting at the boundary interface with the verge. • Consider planted areas behind the cycle path. • Consider a new path connection along the verge to the south.	• The landscape design has been revised consistent with the DRP's recommendations to: - Incorporate a detailed plant palette incorporating native species; - Increase the number of plants being provided with a reduction in open mulched areas; - Expanded the proposed planting area beyond the site boundary to merge into the shared pathway in the public realm; - Reviewed and increased path widths where appropriate; - Expanded the path network to connect into the existing shared path to the west and south of the site; • Other key aspects of the design, which were included following the first DRP review include: - All existing trees within the verge to the Joondalup Drive frontage of the site are being retained as a result of the façade of the new extension and multideck car park being set back from this boundary. - Seating for rest and relaxation for passing cyclists and pedestrians or store users is provided to the site frontage. - Deep soil planting of 8.3% of the development footprint area is being delivered. - Planting, seating and shade are provided on the roof deck of the multistorey car park for use by staff or customers. This supplements the seating and shade provided fronting the public realm to Joondalup Drive.
3. Built Form and Scale	**Comments:** • Consider greater building articulation of the south-western corner, such as variation or an increase in screen height. The screening height currently appears monotonous. **Recommendation 3:** • Consider greater building articulation of the south-western corner.	• The screen heights have been varied to provide articulation and visual interest.

Principle	DRP Review Comments and Recommendations	Design Comments / Response
4. Functionality and Quality	**Comments:** Indicate the location of visually screened A/C plant and all other services in a location that is not visible from the public realm and impacting on user amenity. **Recommendation 4:** Indicate the location of all visually screened building services.	• All existing A/C and plant are identified on the roof plan. No change is proposed to this existing plant. • The proposed new solar panels are indicated on the roof plan. These are located so as to be screened from the public realm. • New plant for the proposed extension is shown in screened enclosures on the car park deck roof.
5. Sustainability	**Comments:** • Due to the scale of the project, consider opportunities in the design to reinforce sustainability, such as (but not limited to) robust material selection, energy efficiency and generation, water capture and re-use and waste recycling. • As per DR1, consider adding shade structures with PV panels on the large upper deck carpark to provide climate protection and reduce the heat sink impact. • As per DR1, consider electric vehicle charging stations in dedicated bays. **Recommendation 5:** • Provide a broad sustainability strategy and commitment to initiatives. • Consider shade structures and PV panel provision on the roof deck. • Consider providing EV chargers.	• The Applicant's sustainability consultant, Cundall has completed a sustainability assessment covering a number of targets and initiatives across multiple sustainable outcomes. Some of the key initiatives include: - The proposed extension will be all electric and fossil fuel free. - All lighting will be LED, low energy lighting. - All appliances installed will be energy and water efficient. - All metering to be designed in line with NABERS requirements. - The proposed development includes approximately 224 PV panels generating approximately 107MWh per year and have been shown on the roof plans. - Shade structures are provided for the rooftop amenity areas. - Provision is provided for two (2) future electric vehicle charging stations.
6. Amenity	**Comments:** • Consider enlarging the entry void at the upper carpark deck to introduce light, air and enable an outlook to trees from below. • Consider locations for more voids in the upper level deck for natural light and air to enter the large expanse of the ground floor car park. **Recommendation 6:** • Consider enlarging the entry void at the upper carpark deck.	• The upper deck entry has been reconfigured and now incorporates more generous pedestrian entrances, additional seating opportunities and increased landscaping. A pergola has been added to the seating area.

Principle	DRP Review Comments and Recommendations	Design Comments / Response
7. Legibility	**Comments:** • As highlighted at DR1, the front door to the store (located in the centre of the building on the southern side) remains concealed from public view due to coverage by the proposed carpark structure. • Consider a wider pedestrian entry on the western Joondalup Drive side leading to the store's front door, co-located with the area of the showroom (with glazed openings) designated as outdoor furniture and a second pocket park for amenity. This park would be passively surveilled by passers-by and visitors to the store, and likely would be better used than the current south-western park that functions more as a landmark space. **Recommendation 7:** • Consider a wider and more welcoming pedestrian entry positioned closer to Joondalup Drive leading to the store's front door, co-located with the outdoor furniture showroom and a second pocket park.	• The store entry has been adjusted and moved west of its previous location to bring it closer to the Joondalup Drive frontage of the site. It will now be in the direct line of sight for pedestrians entering the store from the Joondalup Drive pedestrian entry point, increasing its legibility. • The entry statement to the western pedestrian entry has also been relocated to sit directly above the proposed new stairs. • The extent of glazing to the western façade has also been extended towards the corner to make this more transparent and inviting. • Lightwell voids have been incorporated into the car park design to improve the amenity and light in the lower car parking area. • Bench seating has been relocated closer to the pedestrian entry to provide a gathering space near the entrance. • The outdoor furniture display area is notated as being adjacent to the south western corner of the new showroom to create synergy with the new entrance.
8. Safety	**Comments:** • Refer to Principle 7 – Legibility above about passive surveillance of the western pedestrian entry to the store's front door. • Given the street interface of the proposed carpark extension is largely inactive, consider improving the safety of the development generally through passive surveillance opportunities and lighting at night, such as back lighting of the screen around the carpark. Refer also to Principle 9 – Community. **Recommendation 8:** • Consider safety for users of the western pedestrian entry. • Consider safety of the development through passive surveillance opportunities and lighting at night	• There is increased glazing to the south western corner of the showroom entry to increase legibility and passive surveillance to the western pedestrian entry. • The car park will be lit at night. • Other CPTED principles that have been considered in the design include: - Providing shopfront glazing to the southern showroom elevation to ensure there is passive surveillance at the building entry and into the car park; - Ensuring the landscaped frontage and seating node has clear sightlines from the adjacent road; - Avoiding the design of entrapment spaces; - Utilising visually permeable screening to the car park façade to facilitate natural surveillance and light (as well as natural ventilation); - Ensuring the car parking areas are designed with clear sightlines to the building entries; - Planning the trees (clear trunks) and shrub heights to ensure planting will not impede sightlines; and - Selecting furniture and finishes that are designed to mitigate against misuse or vandalism.
9. Community	**Comments:** • Consider the opportunity for the carpark screen to be back lit to enhance community safety at night, and for the perforated screen to present as a striking artwork that relates strongly to its urban setting at all times of the day. **Recommendation 9:** • Consider the opportunity for the carpark screen to be back lit and be visible after dark.	• The steel façade panel detail included with the architectural plans indicates the proposal to back light the perforated screen at night.

Principle	DRP Review Comments and Recommendations	Design Comments / Response
10. Aesthetics	**Comments:** • Consider early engagement of a public artist to assist with the design of the artwork for the car park screen; this large-scale element should be designed collaboratively with the artist and not in advance. • The specific design issues for the car park screen include its monotonous height and length along Joondalup Drive, the heavy industrial appearance, and the upper-level railing that may be visible through the screen. Suggested improvements are: - Adjust the upper-level screening to present a less vertically continuous façade to the street - As above, the artist should assist with finer details for the screen. • Consider the design of the ceiling soffit in the ground level carpark to improve the amenity for visitors and considering the front door is also in this space. **Recommendation 10:** • Consider early engagement of a public artist to assist with the design of the artwork for the car park screen. • Consider reducing the screen's monotonous height and length and evolving a more refined design. • Consider how the design of the ceiling soffit in the carpark could improve the amenity of the space for visitors.	The City does not yet have an adopted policy regarding the provision of public art. Nonetheless the Applicant will explore opportunities to work with a local photographic artist on the design of the imagery for the screen. The plans have been amended to provide variation in the height of the car park screens. Voids have also been incorporated in the multideck car park design to introduce additional natural light into the lower car parking area and provide enhanced amenity.

As demonstrated in Table 4, the minutes from the second DRP demonstrate that the design is progressing to advance in a direction that was supported by the DRP. It is considered that the development application plans included at Appendix B, which have incorporated further changes since December 2023 (as also outlined in Table 4), address the key outstanding matters recommended by the DRP and can now be supported on the basis of their design response to the ten principles of *State Planning Policy 7.0 Design of the Built Environment* (SPP 7.0).

5. Proposed Development

5.1 Development Details

This application seeks approval for an extension to the existing Harvey Norman Bulky Goods showroom which will include:

- An additional 3,003.27m^2 of floorspace giving a total of 10,052.34m^2;
- A screened multideck car parking structure providing 186 car spaces (43 at the lower level and 143 on the upper deck), 13 motorbike spaces and 24 bicycle spaces;
- One way access ramp to the upper-level parking deck on the western side of existing car park (adjacent to Joondalup Drive) and a one way exit ramp on the eastern side of the existing carpark (adjacent to Clarke Crescent).
- Relocating the eastern customer entrance/exit crossover to the south, to align with the new reduced footprint of the at grade car park;
- Associated landscaping;
- Upgrades to the existing building including the installation of PV panels.

The design has been prepared by Leffler Simes Architects and delivers an architectural design which complements the existing building whilst also reflecting the aspirations for the local area and reflecting Harvey's Norman's corporate branding and colours. Leffler Simes Architects have prepared a design package that sets out the design approach to the development. This is included at Appendix B.

Refer to Appendix B – Development Plans

5.2 Landscaping

A Landscaping Plan has been prepared by Site Image Landscape Architects and is included at Appendix C. Key features of the proposed landscaping include:

- 596m^2 of deep soil landscaping at the Joondalup Drive frontage of the site incorporating a tiered planting palette utilising native groundcover/grasses, shrubs and trees.
- Meandering concrete paths set within the landscaping within the frontage of the site which connects to the shared path in the Joondalup Drive frontage of the site. These concrete pathways will provide a path to the pedestrian entry of the store and will provide a path to a number of seating / rest opportunities that have been provided with bench seating provided both adjacent to the entrance as well as set within the landscaped setting under a shade tree.
- Rooftop planters containing native shrubs and groundcovers/grasses.
- Shaded bench seating in the central amenity area on the rooftop.

The proposed landscape design retains and builds upon the vegetated character of the existing road reserve in the frontage of the site which contains a number of semi mature native species that lend a shaded landscaped character to the frontage of the site. Recognising the need to contribute to the sense of place and community in the design response, the proposed landscape design provides opportunities for visitors to the site, staff working at the site and those passing by the site to stop and enjoy this existing shaded character which is to be significantly enhanced with the additional deep planting proposed.

Refer to Appendix C – Landscaping Plan

5.3 Access and Parking

The subject site is currently accessible via three (3) crossovers located at the south, east and northeast of the Site, all connected to Clarke Crescent. The south and northeast crossovers will undergo minor adjustments, while the eastern crossover is proposed to be relocated further south. Importantly, all crossovers shall maintain their existing capacity and functionality with the new car parking and access arrangements.

As the proposed development extends over part of the original at-grade car park, additional car parking in the form of a multi deck structure is proposed. The proposed car parking arrangements include 43 car parking spaces at grade and 143 on the new upper deck.

A Traffic Impact Statement (TIS) has been prepared by Level 5 Design is accordance with the WAPC Transport Assessment Guidelines (WAPC Guidelines) and has been included at Appendix D. Key aspects of the proposal documented in the TIS include:

- 186 car parking bays are provided for off-street parking.
- 6 accessible car parking bays are provided for people with disabilities with adjacent shared spaces in accordance with AS2890.
- 24 secure bicycle racks have been positioned throughout the subject site at convenient locations.
- 13 motorcycle/ scooter bays have been provided at central locations within the subject site.
- The proposed development is expected to generate approximately 43 additional vehicle trips in the PM peak hour, and 72 additional vehicle trips in the weekend peak hour.
- The traffic capacity analysis indicates that during the weekday evening and weekend peaks no intersections in the close surrounds of the development will be materially affected, and all will continue to operate at similar levels of service as at present.
- The two main entries to the subject site will continue to enjoy a high Level of Service (LOS A) with delays to all turning traffic of less 5 to 10 seconds in the busiest peak periods.
- No changes are required to either the capacity of the road network or the geometry due to the construction and operation of this development.
- There are 33 existing on-street parking bays surrounding the subject site that are currently heavily underutilised. These car parking bays will also be available to users of the subject site and can provide spare parking capacity.
- Truck parking is provided in an existing service dock on the eastern side of the building. This parking is incorporated in the loading and unloading area. All swept paths for trucks up to a 19 metre articulated truck have been checked and are appropriately accommodated.
- A range of pedestrian friendly elements including good pedestrian connections to the footpath network, generous entry and lobby spaces and wide parking aisles for the safe movement of pedestrians have been incorporated into the design of the development.
- The site has good access to public transport via the Joondalup Train Station, which is a 500 metre walk from the subject site. There are also existing bus stops on Grand Boulevard within proximity of the site.
- The proposed development includes an end of trip facility for the storage of bicycles as well as showers, lockers and other amenities.
- The sight distance from the subject site to Clarke Crescent was checked to ensure it is compliant.
- A Green Travel Plan has been prepared that provides guidance on 20 specific actions to encourage the use of more sustainable travel and to reduce the impact of the development on surrounding streets. Once implemented this will have the added advantage of reducing the traffic generated by the development, particularly in busy peak periods for the road network.
- Given the low-speed environment and the low number of trips generated, it is considered unlikely that the development will cause any material impact on the traffic safety of the surrounding road network.

Refer to Appendix D – Traffic Impact Statement

5.4 Waste Management

Waste collection arrangements have been assessed by Level 5 Design as part of the TIS which is included at Appendix D. The TIS concludes that:

- All waste collection will occur via the existing designated loading area located adjacent to Clarke Crescent on the eastern side of the building.
- Diagrams illustrating the swept paths of large service trucks moving through and turning around in the loading area and adjacent spaces are given in Appendix E of the TIS.
- Sufficient room has been provided for large service trucks to safely enter and exit to/from Clarke Crescent while remaining in forward gear.
- Waste pickups will be undertaken using a commercial waste collection service. Commercial waste pickup services utilise a range of differently sized collection trucks. However, given that an allowance has been made in the design for large articulated trucks to conveniently access the subject site (which are bigger than the biggest commercial waste collection vehicle used in Perth) it and therefore the manoeuvring room for waste collection vehicles will be sufficient to provide safe and convenient access.

5.5 Sustainability

Sustainability details have been assessed by Cundall's in their Sustainability Report, included as Attachment E. The Sustainability Report concludes that the following key sustainability initiatives have been included in the development:

- Intensification of economic activity on the site.
- The development includes the retention of most of the existing trees along Joondalup Drive, a landscape area which enhances the existing planted verge and provides areas for rest and contemplation by passing cyclists, pedestrians, staff or customers; and a clear, legible pedestrian entry to the site/building from Joondalup Drive.
- Provision of end of trip facilities, encouraging active transport for workers commuting to the site.
- The proposed extension will be all electric and fossil fuel free.
- All lighting will be LED, low energy lighting.
- All appliances installed will be energy and water efficient.
- All metering to be designed in line with NABERS requirements.
- The proposed development includes approximately 224 PV panels generating approximately 107MWh per year and have been shown on the roof plans.
- Shade structures are provided for the rooftop amenity areas.
- Provision is provided for two (2) future electric vehicle charging stations.

Overall, the report concludes that the proposed development is considered to meet all the sustainability objectives included in the City of Joondalup local planning requirements. Refer to Appendix E – Sustainability Report.

5.6 Tree Retention and Removal

The existing trees located within the at grade car park, which are within the boundaries of the subject site are to be removed to make way for the proposed development. These have been assessed by an arborist as having questionable canopy structure and identified as being unstable in the ground with major root/infrastructure conflict. Hence their limited and poor growth.

An Iron Bark located in the south eastern corner of the site is proposed to be removed. This has been assessed as having a slightly sparse canopy and with root/infrastructure conflict with the adjoining car park.

Of the mature trees in the City's verge in front of the site, all are to be retained and protected other than a smaller, semi mature, Iron Bark which has been assessed as having major canopy suppression, major deadwood and major root/ infrastructure conflict and is not transplantable.

The proposed landscape concept plan includes new tree planting to the south western frontage of the site that more than offsets the loss of these trees that are in a compromised state.

Refer to Appendix E – Arboricultural Assessment

6. Planning Framework and Assessment

6.1 State Planning Framework

6.1.1 Perth and Peel @3.5 Million

The Perth and Peel @ 3.5 Million framework is an overarching suite of documents, which builds on the vision established under Directions 2031. It aims to achieve a more consolidated urban form to meet long–term housing needs and strengthen key activity centres and employment nodes as the Perth and Peel population grows to 3.5 million.

The subject site is located within the 'North West Sub-Region' which is identified as having the following priorities which are relevant to the proposed development:

- Achieve a more consolidated urban form; and
- Strengthen key activity centres and employment nodes to meet the future needs of industry, commerce and the community.

The proposed development directly responds to these priorities as it is:

- consolidating an existing bulky goods retail land use within an activity centre, which is an attractor for the Joondalup Strategic Activity Centre, servicing a wide catchment area;
- is consolidating and expanding the employment opportunities available from the site in close proximity to public transport;
- enhances the retail offering from the site, enhancing it as a retail attractor to the activity centre; and
- results in flow on economic benefits for the Joondalup Strategic Activity Centre.

6.1.2 Metropolitan Region Scheme

Under the provisions of the Metropolitan Regional Scheme (MRS) the Site is zoned 'Central City Area'. The 'Central City Area' zone is intended to support the development of strategic regional centres for major retail, commercial and office facilities as well as employment, civic, business and residential uses. As such the proposed development is consistent with the purpose and intent of the Central City Area zoning under the MRS, being major retail.

Refer to Figure 5 – Metropolitan Region Scheme Zoning

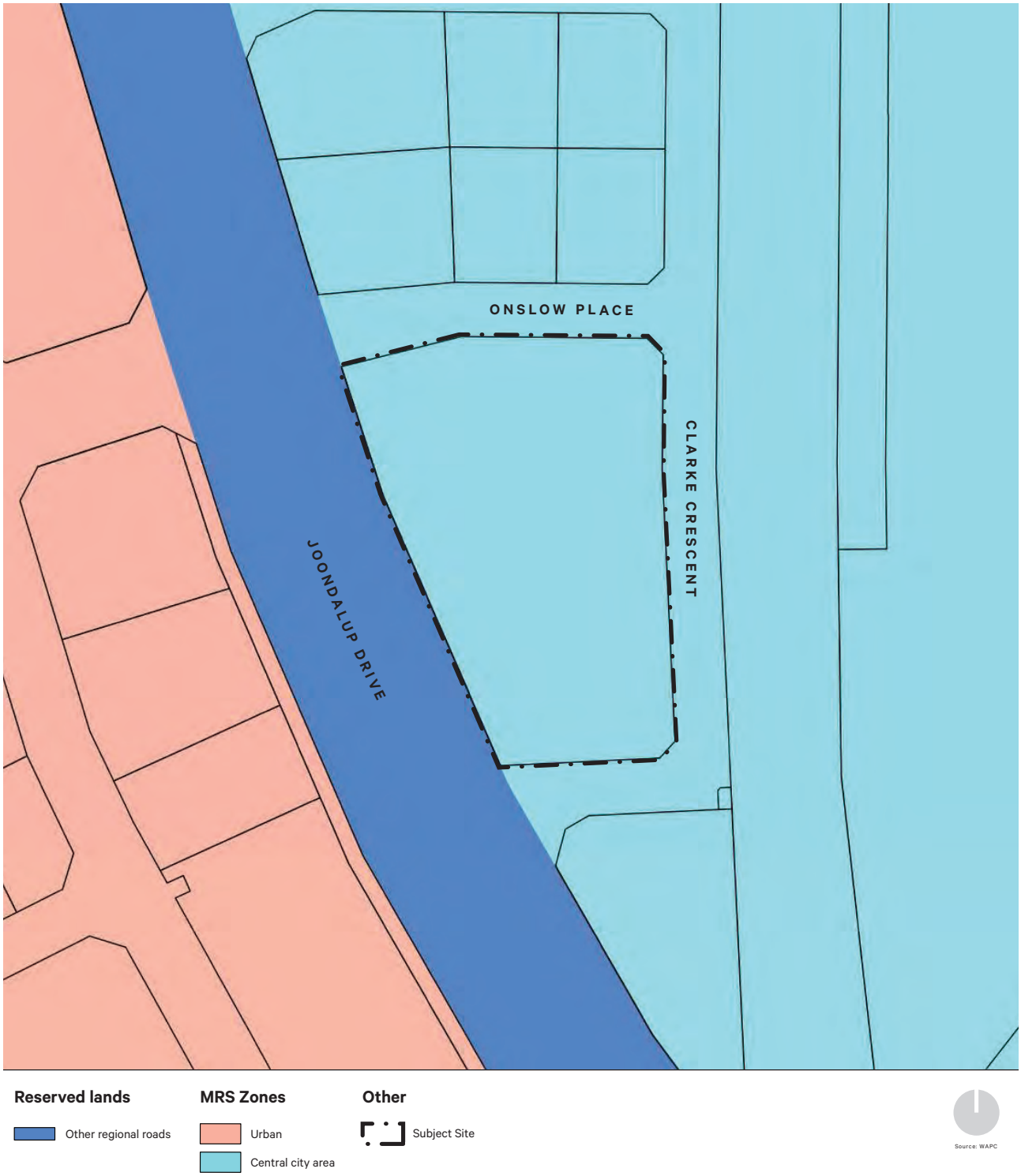


Figure 6. Metropolitan Region Scheme Zoning

6.1.3 Planning and Development (Local Planning Schemes) Regulations 2015

Clause 67 of Schedule 2 of the *Planning and Development (Local Planning Schemes) Regulations 2015 (the Regulations)* specifies the other matters that may be taken into consideration by the local government when assessing/determining a development application. The following relevant provisions to this development are listed and discussed below.

(a) the aims and provisions of this Scheme and any other local planning scheme operating within the Scheme area;

This is discussed later within this section of the report.

(b) the requirements of orderly and proper planning including any proposed local planning scheme or amendment to this Scheme that has been advertised under the Planning and Development (Local Planning Schemes) Regulations 2015 or any other proposed planning instrument that the local government is seriously considering adopting or approving;

The requirements of orderly and proper planning are discussed later in this report.

(c) any approved State planning policy;

Refer to the assessment against the applicable State planning policies within this section of the report.

(d) any environmental protection policy approved under the Environmental Protection Act 1986 section 31(d);

There are no relevant environmental protection policies.

(e) any policy of the Commission;

There are no relevant policies of the Commission.

(f) any policy of the State;

There are no relevant policies of the State.

(fa) any local planning strategy for this Scheme endorsed by the Commission;

Relevant considerations under the local planning strategy are included at Section 6.2.1.

(g) any local planning policy for the Scheme area;

Refer to the local planning framework discussion below.

(h) any structure plan or local development plan that relates to the development;

Refer to the local planning framework discussion below and the planning assessment section of this report.

(j) in the case of land reserved under this Scheme, the objectives for the reserve and the additional and permitted uses identified in this Scheme for the reserve;

Refer to the assessment of the proposal having regard to the MRS at Section 6.1.2.

(m) the compatibility of the development with its setting including the relationship of the development to development on adjoining land or on other land in the locality including, but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the development;

Please refer to the site details section of this report and the commentary in Section 4.2 regarding the design response of the site to context and character. The proposal seeks to expand the existing use of the site in a manner that is compatible with the existing character of the site and in a manner that responds to the existing and desired future character of the Joondalup Strategic Activity Centre.

(n) the amenity of the locality including the following —

(i) environmental impacts of the development;

(ii) the character of the locality;

(iii) social impacts of the development;

The subject site is located in an activity centre and the proposed development is consistent with the character of the locality. All relevant environmental impacts have been assessed. There will not be any social impacts arising from the proposal.

(p) whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved;

Please refer to the discussion on landscaping and tree retention at sections 5.2 and 5.6.

(q) the suitability of the land for the development taking into account the possible risk of flooding, tidal inundation, subsidence, landslip, bush fire, soil erosion, land degradation or any other risk;

The site is currently developed and is not subject to flooding, tidal inundation, subsidence, landslip soil erosion or other risk. The subject site is also not identified as being bushfire prone land.

(r) the suitability of the land for the development taking into account the possible risk to human health or safety;

The proposed development does not result in emissions that give rise to impacts on human health or safety.

(s) the adequacy of —

(i) the proposed means of access to and egress from the site; and

(ii) arrangements for the loading, unloading, manoeuvring and parking of vehicles;

The proposed access and egress of vehicles associated with the development has been addressed in the TIS, prepared in accordance with industry best practice. As demonstrated in the TIS the development provides appropriate access and parking requirements to meet the demands of the development. Whilst a minor shortfall in parking is proposed, based on parking surveys, the provision of car parking is considered to represent an over-supply of carparking. There is also existing underutilised on street parking in the immediate vicinity of the site.

(t) the amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety;

As demonstrated within the TIS, the development proposes additional traffic which can be readily accommodated within the existing road network.

(u) the availability and adequacy for the development of the following —

(i) public transport services;

(ii) public utility services;

(iii) storage, management and collection of waste;

(iv) access for pedestrians and cyclists (including end of trip storage, toilet and shower facilities);

(v) access by older people and people with disability;

The subject site is well serviced by public transport as outlined in the TIS. The proposed development is designed to meet accessibility requirements.

The site already has access to all relevant public utility services.

Waste is already well managed on site and will continue to be so. The waste collection facilities are appropriate and adequate.

End of trip facilities are proposed for use by staff.

The proposal provides for good pedestrian and cyclist access and facilities.

A universal access parking bay and universal access will be provided.

(w) the history of the site where the development is to be located; and

The proposed development is located within an existing developed area with similar bulky goods retail uses surrounding the site. The subject site has always been used by Harvey Norman as a bulky good showroom and will continue to be so. Refer to Section 4.1, Approval History.

(x) the impact of the development on the community as a whole notwithstanding the impact of the development on particular individuals.

The proposed development of the site represents investment in the local economy and continued employment opportunities from the site.

(y) any submissions received on the application;

No comment has been sought or received at the time of lodgement of the application.

(za) the comments or submissions received from any authority consulted under clause 66;

No comment has been sought or received at the time of lodgement of the application.

(zb) any other planning consideration the local government considers appropriate.

The proposed development ensures that Harvey Norman can continue to support employment and economic investment and growth in the Joondalup Strategic Activity Centre through the ongoing use of the site. The existing retail showroom is in need of renovation and expansion to continue to meet Harvey Norman's needs and to continue to serve the significant retail catchment of this store.

6.1.4 State Planning Policy 7.0 Design of The Built Environment

State Planning Policy No. 7.0 – Design of the Built Environment (SPP 7.0) is a State Government initiative aimed at ensuring good design and is a key consideration of all development in Western Australia. SPP 7.0 is to be taken into due regard by the determining authority when assessing development applications.

The policy includes the '10 Design Principles of Good Design' which developments are assessed against – ideally utilising a design review panel to ensure holistic assessment from a range of relevant design disciplines. As set out at Section 4.2 of this report, Leffler Simes Architects presented this development to two (2) separate DRP meetings, addressing the 10 Design Principles of Good Design. The design has evolved materially in response to the DRP process. A summary of the outcomes of this DRP process, including the DRP's appraisal of the development against the 10 Design Principles assessment and a summary of the further design changes that have been made since the second DRP meeting is included at Section 4.2 of this report.

6.1.5 State Planning Policy 4.2 Activity Centres for Perth and Peel

State Planning Policy 4.2 Activity Centres for Perth and Peel (SPP4.2) specifies broad planning requirements for the planning and development of new activity centres and the redevelopment and renewal of existing centres in Perth and Peel.

An 'activity centre' is defined under clause 2, which states:

> *Activity centres are mixed use urban areas where there is a concentration of commercial, residential and other land uses. They are multi-functional community focal points where people live, work, shop, meet and relax. They vary in size and function and are generally well-serviced by transport networks with a focus on public transport and active transport. Activity centres may include land uses such as commercial, retail, food and hospitality, medium and high-density housing, entertainment, tourism, civic/ community, higher education, and medical services.*

The subject site is within the Joondalup activity centre, which is identified as a strategic centre under SPP4.2. The role and function of a 'Strategic Centre' is defined in Appendix 1 of SPP4.2, which states:

> *Strategic centres are the main regional and sub-regional activity centres. They are multi-purpose centres that provide a diversity of uses and are the main focus for housing and employment growth outside the Capital City. These centres provide the full range of economic and community services necessary for the communities in their catchments and wider region.*

The proposed intensification of the ongoing bulky goods showroom in this location would be generally in accordance with SPP 4.2.

SPP 4.2 promotes bulky goods showrooms as part of activity centres, albeit preferrable in the frame, adjacent to the activity centre core. In the case of the subject site, whilst it is located within the core of the activity centre (i.e. within the walkable catchment of the train station) it also satisfies the key requirements for bulky good showroom sites, having good vehicular access and a large site area. This is consistent with the principles set out in SPP 4.2. The subject site is also located in an area in which there is currently a conglomeration of other bulky goods retail users, creating a precinct despite being in the walkable catchment of the train station and thus core of the activity centre.

Importantly, examining the available landholdings in the Joondalup Activity Centre Plan in the precincts where bulky goods retail uses are specifically encouraged, there are no available, undeveloped, land parcels for a development of the scale proposed on the subject site. The subject site offers the only feasible option for Harvey Norman within the Joondalup Strategic Activity Centre.

Having regard to the relevant considerations under SPP 4.2 it is considered that the proposed development is consistent with the objectives of the Policy in that it will enable the continued location of a Harvey Norman showroom within an activity centre, offering employment and retail choice whilst being designed to focus an active edge towards Joondalup Drive and the public realm.

6.2 Local Planning Framework

6.2.1 City of Joondalup Local Planning Strategy 2017

The City of Joondalup Local Planning Strategy (the Strategy) sets out the vision and strategic planning direction for the City for the next 10-15 years. The proposal complies with the relevant objectives of the Strategy:

Objective	Applicant Response
To develop and consolidate the City Centre as the Strategic Metropolitan Centre for the North-West sub region and aspire to achieve Primary Centre status.	The proposed development contributes to the consolidation of Joondalup as the Strategic Metropolitan Centre for the North-West sub-region, providing a larger store format to cater for the growing community in Perth's northern corridor.
To provide additional and more diverse housing to cater for an ageing population and changing household structures.	Not applicable.
To develop attractive, successful commercial centres that are accessible and well-connected to residents.	The proposed addition is well designed and makes use of high quality materials and the iconic Harvey Norman styling. The development contributes to an accessible and well-connected commercial centre.
To achieve greater employment self-sufficiency.	The proposed development will provide more opportunities for employment for local residents.
To ensure existing transport routes are used to their full capability by locating intensive land uses with significant trip generating potential in close proximity to those routes, and adjacent to railway stations.	The proposed extension to the development is considered likely to attract residents from the northern corridor seeking options to furnish their homes. The development is ideally located on Joondalup Drive and in proximity to Joondalup train station, providing easy access to the site.
To enhance cycling and pedestrian networks.	Not applicable.
To protect and enhance the natural and built environment within the City.	The development has been designed to ensure trees on the western side of the site are retained, protecting the mature trees within the busy city centre. The proposed development itself is a high quality commercial proposal, contributing to the built environment of the area.
To ensure public open space is easily accessible and provides protection for vegetation and biodiversity, amenity and quality recreational opportunities.	The development proposes contributions to amenity through the provision of areas of public open space within the development, complete with furniture and landscaping.
To protect and promote buildings, objects and places of heritage significance.	Not applicable.

6.2.2 City of Joondalup Local Planning Scheme No. 3

The City of Joondalup Local Planning Scheme No.3 (LPS 3) is the primary document guiding land use and development within the locality. The subject site is zoned 'Centre' under LPS 3. The objectives of this zone are:

- To designate land for future development as an activity centre.
- To provide a basis for future detailed planning in accordance with the structure planning provisions of this Scheme or the Activity Centres State Planning Policy.

LPS 3 provides a separate zoning table for land uses within the Joondalup Activity Centre at Table 3b. Table 3b identifies bulky goods showrooms use as an 'X' use in the City Centre Zone, which means the use is not permitted on the subject site. Notwithstanding, the land use received lawful development approval and it is only as a result of the introduction of Table 3b into LPS 3 associated with the Joondalup Activity Centre Plan that the land use has become an 'X' use. Accordingly, the land use is considered to be a non-conforming land use and the provisions of cl. 23 of LPS 3 are relevant.

Cl. 23 of LPS 3 allows the granting of a development approval for alterations and extensions to an existing non-conforming use, however the development application must be advertised in accordance with cl. 64 of the deemed provisions.

Whilst LPS 3 has rendered the existing lawful use to be non-conforming, it is submitted that this is not consistent with the provisions of SPP 4.2, which support bulky goods showroom uses in activity centres. SPP 4.2 is the more contemporary planning document.



Figure 7. Local Planning Scheme No. 3 Zoning

6.2.3 Joondalup Activity Centre Plan

The Joondalup Activity Centre Plan (JACP), gazetted on 23 October 2018, is a strategic planning document prepared by the City to provide guidance on the development of the city centre over a 10-year period.

The JACP supports the City's aspirations for the Joondalup City Centre to be recognised as the Central Business District of the north-west corridor of the Perth metropolitan region and envisages an increased urban intensity as part of the City's next era of development.

The subject site is located within the 'City Centre Precinct' under the JACP, in which the highest intensity of mixed-use development is intended to be accommodated, with a key focus on employment intensive land uses. The expansion of the existing retail offering at Harvey Norman responds positively to this stated intent, by expanding the range of goods and employment opportunities available to the local community.

Planning and/or development in the JAC is to have due regard for the objectives of the JACP. This has been considered in Table 5 below.

Table 5. JACP Objectives

Standards	Applicant Response	Consistency
1.2.1.1 – General *Aspire to elevate Joondalup Activity Centre to a primary centre, recognised by the WAPC.* *Promote employment self-sufficiency, self-containment and inter-regional access.* *Provide a simple, transparent and flexible planning framework that enables development to respond to investment opportunities.*	All land uses with good distribution are encouraged in primary (Capital City) Activity Centres under SPP 4.2. The proposed development will contribute to an attractive and liveable city environment in the Joondalup strategic activity centre consistent with the aspirations for it to be elevated to a primary centre. The proposed assists in achieving employment self-sufficiency and self-containment. Notably, the prohibition of bulky goods showroom uses in the city centre the planning system isn't flexible to respond to investment opportunities. Nonetheless as a lawfully approved existing use the City has discretion to continue to support this land use and the continued investment in the site under the provisions of LPS 3.	Y
1.2.1.2 - Activity *Establish significant knowledge intensive industry and employment, complemented by education.* *Facilitate land assembly and redevelopment that will further intensify development and activity in the city centre.* *Achieve a diverse mix of compatible uses that generate activity at all times of the day and night.* *Establish street based retail activity outside of Lakeside Shopping Centre within the city centre.* *Encourage increased activation of city streets and Central Walk.* *Facilitate high density residential development in the city centre and a diversity of housing to provide choice for residents.* *Encourage land uses that generate high concentrations of workers, residents and visitors to improve local employment self-sufficiency and self-containment.* *Focus travel, employment and user intensive activity around public transport stations and along movement corridors.*	The proposed development seeks to consolidate an existing lawful land use on the subject site. It does not preclude further intensification of land uses on the subject site in the longer term future. The proposed land use completements the traditional retail uses that are located in the Lakeside Joondalup retail centre and the strip shopping that is located in the civic heart of the activity centre. The proposal diversifies the nature of land uses in the Joondalup strategic activity centre and ensures that the centre continues to serve its retail catchment with a full range of goods and services. The proposed interface to Joondalup Drive will encourage increased activation to this frontage.	Y

Standards	Applicant Response	Consistency
1.2.1.3 – Movement *Integrate and prioritise transport modes including local area transit to efficiently connect people with attractions, and destinations in the city centre and region.* *Provide safe, functional and attractive interchange facilities and waiting areas for public transport patrons.* *Provide safe and attractive streets and public places to enhance the pedestrian experience throughout JAC.* *Strengthen east-west movement across the city with pedestrian/cycle connections between Mitchell Freeway, Joondalup West, the CCP and Lake Joondalup.* *Reduce transport conflict by providing dedicated cycle lanes, footpaths separated from vehicles and minimal vehicle crossovers in the city centre.* *Provide car parking commensurate with the road network capacity.* *Promote short-term, public on-street car parking in highly accessible areas.* *Consolidate car parking, encourage reciprocal public use and consolidate access to reduce the dominance of cars in the urban landscape.* *Provide adequate bicycle parking and end of trip facilities to promote cycling trips within JAC.*	The proposed development is providing car parking on site that is commensurate with the land use and the requirements of the JACP. The proposed development also includes a significant number of bicycle parking spaces and end of trip facilities to encourage walking and cycling by both employees and customers. It is also located in the walkable catchment of the train station. The proposed landscaping and seating to the Joondalup Drive frontage of the site will enhance the pedestrian and cyclist experience on Joondalup Drive.	Y
1.2.1.4 - Urban Form (Character) *Create an identifiable and unique civic heart that is enlivened and activated through a series of connected city squares, each with a unique character and function.* *Create an attractive city centre that sets Joondalup apart through the use of high-quality design, materials, street furniture, public art, landscape and the retention of vegetation where appropriate.* *Promote buildings with scale and character that reflects JAC's status as the primary centre of the north-west sub-region.* *Encourage development at gateways to the city to enhance arrival and contribute to the city's character and identity.* *Encourage increased development intensity, building scale and design quality along transport corridors to appropriately frame the city centre.* *Encourage buildings and development that are able to adapt to changing economic, technological, environmental and social conditions.* *Encourage buildings that have a well- considered relationship to the street, enabling the city to become more intense and active while retaining a human scale.* *Enhance the natural environment and emphasise the existing 'bush' identity and landscape quality throughout the JAC.*	The proposed development will: • Deliver high quality design and materials to provide an attractive site. • Employ a distinctive and interesting façade solution to the car parking area to contribute to an attractive streetscape and local character. • Retains all significant vegetation within the verge in front of the site. • Contributes to additional bush character with a landscape solution that extends native planting across the verge to meet with the existing landscaping in the frontage of the site and delivers additional trees within the front setback area. • The 4.5 metre floor to ceiling heights in both the new showroom extension and the car park delivers floorplates that have the potential to adapt over time. • The western façade and front entrance to Joondalup Drive has considered its relationship to the street to provide a clear and legible entry. Passive surveillance opportunities are facilitated towards Joondalup Drive.	Y

Standards	Applicant Response	Consistency
1.2.1.5 Resource Conservation *Adopt an environmentally sustainable approach to development within the JAC.* *Create a green open space and landscaped street network to lessen the heat island effect of city development.* *Encourage conservation of resources, including reduced waste and energy and water use.* *Encourage solar access, natural cross ventilation and renewable energy use in buildings.* *Maximise solar access and good microclimate conditions in public open spaces and city squares.* *Optimise water quality management outcomes.*	Facilitating the expansion of the existing use and building on the site represents the efficient use of existing built resources on the subject site. Deep soil planting, landscaping and shading to parts of the roof top parking area week to contribute to lessening the heat island effect of the development. A solar array to the roof along with the use of energy and water efficient fittings throughout the development will encourage the conservation of resources.	Y

The JACP includes both general development standards and precinct specific development standards. Table 6 below sets out the general development standards of the JACP and Table 7 sets out the specific development standards in relation to the City Centre precinct.

Table 6. JACP General Development Standards

Standards	Applicant Response	Compliance
1.4.1 – Land Use *Land use shall be in accordance with the City of Joondalup's Local Planning Scheme No. 3.*	Table 3b of LPS 3 identifies bulky goods showrooms use as an 'X' use in the City Centre Zone, which means the use is not permitted on the subject site. Notwithstanding, the land use received lawful development approval and is now a non-conforming land use. The prohibition of bulky goods showrooms in the City Centre Zone is not considered to reflect contemporary planning practice, with SPP 4.2 supporting the provision of bulky goods showrooms in appropriate locations in activity centre. Whilst the subject site is located in the core of the activity centre, within a walkable catchment of the train station it is also well located proximate to the regional road network and provides for good safe vehicular accessibility that does not negatively impact on the function of the activity centre. It also supports employment and economic growth in the activity centre. Cl. 23 of LPS 3 specifically enables the granting of a development approval for alterations and extensions to an existing non-conforming use. It is submitted that the ongoing use of the site for a bulky goods showroom is appropriate and should be supported.	N
1.4.2 – Residential Density *Residential density shall be in accordance with Figure 3 - Residential Density Code Plan.*	Not applicable – no residential use is proposed.	N/A

Standards	Applicant Response	Compliance
1.4.3 - Subdivision Requirements *Subdivision within the JAC will not be supported unless the following criteria are met to the satisfaction of the City:* *The resultant lot/s are 2,000m^2 or larger; or* *It is adequately demonstrated that the resultant lots are of a size which will accommodate development with a form and scale that reflects the relevant development provisions and objectives of the JACP, which may include the preparation and approval of a Local Development Plan; or* *The subdivision relates to development which has been approved and the construction of which is substantially commenced; or* *The subdivision facilitates the creation of road reserves and/or superlots generally consistent with the relevant precinct plan/s (Figures 6 to 12).* *In all instances, it must be demonstrated that any subdivision proposal has regard to the highest applicable residential density coding under the JACP.*	Not applicable – no subdivision is proposed.	N/A
1.4.4 Building Heights *Buildings shall comply with the minimum building height required under Figure 4 - Building Heights Plan, however, parts of a building (including the podium) may be developed at a lesser height provided that the proposed development:* *Includes a tower structure which exceeds the minimum building height required under Figure 4 by at least the equivalent dimension to the reduction sought to those portions of the building below the minimum height; and is considered to meet the relevant objectives under the JACP; and is consistent with the existing/desired streetscape; or* *Represents extensions/alterations to an existing approved building; and is considered to meet the relevant objectives under the JACP; and is consistent with the existing/desired streetscape to the satisfaction of the determining authority.*	The proposed development represents extensions and alterations to an existing approved building and therefore the requirement to meet the minimum building height is not relevant to the development. The proposal is considered to meet the relevant objectives under the JACP as outlined above.	Y

Standards	Applicant Response	Compliance
1.4.5 Street Interface *Street frontages shall be in accordance with the relevant Precinct Plans.* *Where an active or semi-active frontage is not required, the following edge types must be provided:* *Passive frontage shall be provided where office and residential land uses are provided on the ground floor. These edges shall ensure that buildings and their entrances are articulated toward the street providing a strong urban character; and* *Attractive frontage shall be provided to improve the visual appearance of non-active frontages such as blank walls, service edges and car parks. They can provide visual interest and appeal through high-quality materials, artwork, screens or landscape.* *Multi-storey parking decks with street elevations shall be treated aesthetically with applications such as screening, artwork and green walls to reduce their visual impact.*	The subject site is identified for semi-active frontages to all street frontages. The provisions for these are set out in Table 7 below. The proposed multi deck car park is proposed with screening incorporating a photographic image of Lake Joondalup (with final imagery still to be confirmed). The articulation of the screening has been revised in response to feedback from the City's DRP to provide a visually interesting façade which will positively contribute to the street frontages of the site. The screen is more open to the Clarke Crescent frontage of the site representing the primacy of the Joondalup Drive frontage and the need to achieve natural ventilation for the car park. It is nonetheless designed to provide a positive visual impact on the surrounds.	Y
1.4.6 Cash In Lieu of Car Parking *Where it is considered by the City that there is a reasonable expectation in the immediate future that there will be adequate provision of public car parking in the proximity of the proposed development; and* *Where an applicant proposes a development which is required to provide car parking bays, that person may, if so agreed by the City, make a cash payment to the City in lieu of the provision of all or any of the required number of car parking bays in accordance with the relevant clauses under LPS3.*	N/A – The provision of car parking spaces exceeds the JACP requirement of 1 car parking space for every 75m^2 NLA.	Y
1.4.7 Bicycle Parking and End of Trip Facilities *Bulky Goods Showrooms are to provide employee bicycle parking at a rate of 1 space per 750m^2 of NLA and visitor bicycle parking at a rate of 1 space per 1,000m^2 NLA.* *Non-Residential Development:* *All developments that are required to provide 6 or more employee bicycle parking bays in accordance with Table 2 above must also provide end of trip facilities with the following criteria:* *A minimum of one female and one male shower, located in separate change rooms or a minimum of two separate unisex showers and change rooms;* *Additional shower facilities to be provided at a rate of one shower for every 10 additional bicycle parking bays;* *A locker for every bicycle parking bay provided; and* *End-of-trip facilities are to be located as close as possible to the bicycle parking facilities.*	3,003m^2 of additional NLA is proposed, this equates to a requirement for 5 employee bicycle spaces and 4 visitor spaces. 24 secure bicycle racks have been positioned throughout the subject site at convenient locations significantly exceeding the quantum needed considering only the proposed extension is subject to these requirements. End of trip facilities are proposed. These include two separate showers and change rooms and lockers.	Y

Standards	Applicant Response	Compliance
1.4.8 Screening of Equipment *Air conditioner condensers and any other external building plant, lift overruns, piping, ducting, water tanks, transformers, and fire booster cabinets shall be located so as to minimise any visual and noise impact on adjacent developments and public spaces and shall be screened from view of the street.*	New mechanical plant enclosures on the upper deck of the car park roof are noted as being within fully screened enclosures. No new service areas are located fronting the street.	Y
1.4.9 Service Areas *A storage area for refuse and recyclable material must be provided on the land and the area must not be visible from any street; and* *Facilities must be provided on the land for the loading and unloading of service and delivery vehicles.*	The proposed development relies on the existing storage areas for refuse and recyclable materials. These are out of site, behind a fence and are located within the loading area from Clarke Crescent.	Y
1.4.10 Adaptable Buildings *All buildings shall be adaptable to future uses. They should have:* *Minimum floor to floor height of 4.5 metres at ground floor; and* *Structure and core configurations, vertical circulation and services provision to enable futureproofing and adaptation of floor/tenancy spaces.*	Both the proposed new showroom extension as well as the multideck car park have been designed with floor to floor heights of 4.5 metres to facilitate future adaptation if required.	Y
1.4.11 Variation from the R-Codes	Not applicable – no residential use is proposed.	N/A
1.4.12 Bushfire Management	Not applicable – the site is not identified as being in a Bushfire Prone Area.	N/A

Table 7. JACP Precinct Specific Development Standards – City Centre

Standards	Applicant Response	Compliance
1.5.1.1 City Centre Objectives *a) Encourage the highest intensity of mixed use development and the greatest concentration of employment intensive land uses.* *b) Support mixed-use development along Joondalup Drive and Grand Boulevard to form intense inner-city development corridors.* *c) Establish the Joondalup Drive/Grand Boulevard and Shenton Avenue/Grand Boulevard intersections as the primary gateways into the city centre.* *d) Improve connectivity from Joondalup Train / Bus Stations to surrounding precincts.* *e) Establish a local mobility hub at the Collier Pass city square to improve connectivity between Joondalup Train Station and other precincts within the JAC.* *f) Establish a series of interconnected, functional and unique squares that form part of an integrated pedestrian network.* *g) Provide car parking in negotiation with Lakeside Shopping Centre as the major trip generator in the City Centre.* *h) Reinforce Central Walk (north-south) and Boas Avenue (east-west) as the primary pedestrian spines by activating buildings at ground floor uses.* *i) Encourage the amalgamation of smaller lots into larger parcels to optimise redevelopment potential.*	The proposed development responds to the objectives for the city centre in the following ways: - Consolidating an existing, important employer within the city centre. - Defining a strong architectural response to the south western corner of the site, which contributes to the gateway/sense of arrival into the city centre from the south. - Improving the amenity of the Joondalup Drive frontage of the site to help make this more attractive for walking and cycling.	Y
CC1 – Building Height No maximum Min – 20.5 metres	As set out in relation to building heights at Table 6 above, the proposed development represents extensions and alterations to an existing approved building. Given that the proposed development meets the relevant objectives under the JACP and is consistent with the existing/ desired streetscape the minimum height provisions are not applicable to the development.	N/A

Standards	Applicant Response	Compliance
CC2 – Building Setbacks Street Frontage: • A nil setback is required at ground level to 75% of the building frontage (maximum setback 3m), Minimum Side and Rear Setbacks: • No openings or balconies - Nil • With openings and balconies - 4m Tower Structure: • Tower structures shall be stepped back a minimum of 6m from the street frontage, side and rear lot boundaries.	• The design of the building and its landscape features are intended to reflect those of the surrounding community. The proposed extension to the existing store is proposed to be set back 8.675 metres from the front boundary, enabling the development to: - retain the existing trees in the Joondalup Drive verge in front of the site; - provide a landscape area which enhances the existing Joondalup Drive planted verge and provides areas for rest and contemplation by passing cyclists, pedestrians, staff, or customers; - maintain and provide the opportunity to enhance the existing streetscape; and - provide a clear, legible pedestrian entry to the site/ building from Joondalup Drive. The existing alignment of the store to the northern part of the site is set back 3 metres from the front boundary. Notably a nil setback was not supported by the DRP on the basis that it would result in the loss of significant trees in the public realm. A nil setback is proposed to parts of the southern and eastern site boundaries. No tower is proposed.	N (alternative outcomes proposed)
CC3 – Street Interface Semi-Active Frontages (as designated in Figure 6): • Continuous pedestrian shelter of 2.5m minimum width and a minimum 3m and maximum 4m height clearance above the footpath shall be provided to a minimum of 50% of street frontage. • Primary building entrances shall be visible from the public realm and provide pedestrian shelter and be accessed directly from the primary frontage; • Glazing shall be provided, be visible from the public realm and at ground floor to a minimum of 50% of the area of any street frontage; • There shall be no fencing to any public road or public space; and • There shall be no on-site parking adjacent to any public road.	Continuous pedestrian shelter is provided to the building on the western and northern elevations. This shelter constitutes the minimum required street frontage and guides pedestrians naturally to the centre's entrances; Primary building entrances are visible from the public realm, clearly delineated by the colour differentiation (red used to highlight pedestrian entrances) and the provision of pedestrian shelter at these entrances; Glazing is provided as the treatment for the majority of the ground floor frontage, in excess of minimum requirements; No fencing is proposed to public roads or public spaces; Parking is separated from the public road by substantial portions of landscaped area.	Y
CC4 – Floor Levels The ground floor level of a development should not be more than 1m above the existing pedestrian pavement level.	The ground level of the development is 550mm above the level of the existing footpath in the verge.	Y
CC5 – Adaptable Buildings All buildings should be adaptable to future uses. They should have: • Minimum floor to floor height of 4.5 metres at ground floor; and • Structure and core configurations, vertical circulation and service provision to enable future subdivision/amalgamation of tenancy spaces and enable future uses (e.g. grease traps, metering provisions).	The proposed development incorporates adaptable floor to floor heights (4.5m floor to ceiling) and a structural grid for the multi-deck car park which future proofs the structure for future adaptability.	Y

Standards	Applicant Response	Compliance
CC6 – Open Space & Landscape Non-Residential Development: • Where a building is set back from the street, the front setback area is to be landscaped.	The proposed development incorporates a landscaped front setback to Joondalup Drive which extends into the public verge to enhance and complement the existing Joondalup Drive planted verge, to enhance the amenity of the site and to provide an area for rest and contemplation by passing cyclists, pedestrians, staff, or customers.	Y
CC7 Car Parking & Access Non-Residential Development: • 1 bay per 75m^2 NLA. Motorcycle/Scooter Parking: • 10% of required car bays shall each be replaced by 2 motorcycle/scooter bays. The car bay requirement shall be reduced accordingly. At-Grade Parking: • Private off-street at-grade parking is discouraged and shall be located behind buildings. • Uncovered car parking at ground level shall be provided with minimum one shade tree per 4 bays.	The proposed development provides car parking in excess of the required minimum rate of 1 bay per 75m^2 NLA. Motorcycle parking is provided at the specified rate of 10% of the proposed additional parking bays (134 parking bays and 13 motorbike bays proposed). The provision of motorcycle bays in accordance with the LPP means that a 10% reduction in car parking bays is applicable to the development. However, the parking provided is already in excess of the required amount for the site, and this reduction is therefore irrelevant to the proposal. The car parking is to be provided in a multi deck solution and will be screened.	Y
CC8 – City Squares	Not applicable	N/A
CC9 – Landmark Sites	Not applicable	N/A
CC10 – Main Street Boas Avenue	Not applicable	N/A
CC11 - Green Link Collier Pass	Not Applicable	N/A

6.2.4 Advertisements Local Planning Policy

The City's Advertisements Local Planning Policy applies to the proposed advertising signage on the development. The proposed signs on the southern, western and eastern elevations are defined as a 'wall sign' under the LPP. Wall signs are exempt from requiring development approval in a designated Joondalup Activity Centre – City Centre Precinct where they comply with the following conditions of the LPP:

Conditions	Applicant Response	Compliance
In aggregate, to a maximum of 25% of the façade.	The proposed wall signs for the development will be, in aggregate, considerably less than 25% of the façade.	Y
Wall signs are to: • be contained within signage panels within the building façade, if provided; • not extend beyond the top or any side of the wall; and • not obscure architectural details.	The proposed wall signs: • are to be contained within signage panels on the building façade; • will not extend beyond the top or side of the building walls; • are not proposed to obscure any architectural details of the proposed development, but rather are proposed on otherwise blank portions of the building façade.	Y
Window signs are to be: • Maximum of 20% of the glazing.	Not applicable.	Y

6.2.5 Environmentally Sustainable Design Policy

The City's Environmentally Sustainable Design Policy applies to the construction and redevelopment of residential, commercial and mixed-use buildings (excluding single and grouped dwellings, internal fits and minor extensions) within the City.

It is recognised that an Environmentally Sustainable Design Checklist must accompany this application. A copy has been enclosed pursuant to the requirements of the Policy. A Sustainability Report, prepared by Cundall, accompanies this proposal at Appendix E.

6.2.6 Design Review Panel Local Planning Policy

The City's Design Review Panel Local Planning Policy applies to proposals subject to JDAP determination. Pursuant to clause 5.2.1 of the DRP Policy, the proposed development has been subject to the City's design review process, and this is outlined in Section 4.1 of this report.

7. Orderly and Proper Planning

In addition to the assessment and justification provided in the preceding sections of this report, the principles of orderly and proper planning require that new development is a logical and efficient replacement of existing development, and consistent with the planning vision and strategic direction for the locality.

The key points regarding the proposal are as follows:

- The use of the proposed development is consistent with the existing approved use of the site. The proposed development, in expanding the existing showroom, seeks to optimise the existing land use and built form on the site, which is efficient and more sustainable than new greenfield development.
- The use of the subject site, as proposed, is appropriate having regard to the catchment area of the Joondalup strategic activity centre. Accommodating bulky goods showrooms that have a large catchment area in activity centres that have good access to both public transport and the regional road network are appropriate, as recognised in SPP 4.2.
- The scale and intensity of the proposed development is consistent with the context of the site and surrounds, which contains numerous retail showroom developments.
- The design and scale of the proposed development responds to the objectives of the Joondalup Activity Centre Plan to provide attractive, active street frontages, to provide adaptable buildings and to consolidate and improve the employment self-sufficiency of the Joondalup centre.
- The proposal will not compromise the current role or function or long term vision for the Joondalup strategic activity centre. Joondalup strategic activity centre.
- The design of the development has been conditionally supported by the City's DRP.
- The proposed development will not result in any adverse amenity impacts to adjoining properties.
- The proposed development has been designed to positively contribute to the community, through the landscaping and façade improvements to the Joondalup Drive frontage of the site, which will contribute to shade and amenity and through the sustainability initiatives that have been included in the development.

Given the above, the proposed development is considered to be consistent with the principles of orderly and proper planning and should be supported on its planning merit.

8. Conclusion

This report has been prepared by **element**, on behalf of Calardu Joondalup Pty Ltd to support an application for the expansion of the existing Harvey Norman retail showroom at 36 Clarke Crescent, Joondalup.

The report sets out the approval framework, project area description, proposed development and planning framework applicable to the proposal. As set out in this report:

- The subject site is currently used as by Harvey Norman for a bulky goods retail showroom and has been since the site was first developed by Harvey Norman in the late 1990s. The showroom is strategically important for Harvey Norman and has a significant catchment area. The proposed development represents new investment into the showroom to modernise it and provide the facilities and services that customers expect. The development will provide a high quality new showroom extension and multi deck car park that is built for purpose and meets the contemporary functional requirements of Harvey Norman whilst elevating the appearance of the site as viewed from the public realm and contribution to the amenity of the area. The development will support further development and growth in the region.
- The subject site is well located with respect to its proximity to both public transport and the regional road network. It also has good pedestrian and cyclists links to the centre.
- Vehicles are able to safely and readily access the subject site without impacting on the functionality or safety of the activity centre.
- The proposal is considered to align with relevant State and local planning provisions and the objectives of the Joondalup Activity Centre Park Plan.
- Relevant technical assessments have been provided in support of the development which demonstrate that the development manages all impacts (traffic / waste) appropriately and in line with industry standards.

On the basis of the above, the proposed development is considered to be consistent with the principles of orderly and proper planning and is compatible with the intended use of the site.

It is therefore respectfully requested that the City support and approve the proposed development subject to appropriate and reasonable conditions.

Government of **Western Australia**
Department of **Transport**

Our ref: 72-51511
Your ref: 11841

Ms Morgan Hutton
Senior Urban Planner, Planning Services
City of Joondalup
info@joondalup.wa.gov.au

Dear Ms Hutton

Community Consultation - Harvey Norman 36 Clarke Crescent Joondalup

The Minister for Transport has asked me to thank you for your correspondence dated 22 May 2024 regarding the community consultation for 36 Clarke Crescent, Joondalup, and to respond on her behalf.

The Department of Transport has reviewed the documentation relating to the proposed development and provides the following comments:

- The proposal poses no identified risks to the operation of the Swan Transit Joondalup Bus Depot located at 15 Winton Road, Joondalup.
- The City of Joondalup is encouraged to contact the Public Transport Authority directly in relation to construction impact management in the vicinity of the Yanchep Rail Line reserve, which is located immediately to the east of the proposed development.

If you require further information please contact Mr Matt Buckels, Manager Strategic Transport Planning, on 6551 6119 or at matt.buckels@transport.wa.gov.au.

Yours sincerely



Michelle Prior
A/Executive Director Urban Mobility

19 / 06 / 2024

140 William Street, Perth, Western Australia 6000
GPO Box C102 Perth WA 6839
www.transport.wa.gov.au
ABN 27 285 643 255

Hutton, Morgan

From: WAPCreferrals <WAPCreferrals@pta.wa.gov.au>
Sent: Monday, 24 June 2024 12:22 PM
To: info@joondalup.wa.gov.au
Subject: PUBLIC TRANSPORT AUTHORITY RESPONSE - BULKY GOODS SHOWROOM (ADDITIONS - HARVEY NORMAN) AT 36 CLARKE CRESCENT, JOONDALUP

Dear Morgan Hutton,

BULKY GOODS SHOWROOM (ADDITIONS - HARVEY NORMAN) AT 36 CLARKE CRESCENT, JOONDALUP

With regards to the above proposal the Public Transport Authority (PTA) has no objection to the proposal subject to the following condition and advice:

Conditions

1. Prior to commencement of the development, or any works associated with the development, the applicant/owner must obtain approval from the PTA for works in and around the operating Joondalup Railway Corridor in accordance with the PTA's *8810-450-003 – Procedure – Working in and around the PTA rail corridor, Assets and Infrastructure*, to the satisfaction of the PTA.

   Justification for Condition: The site is within 100m of the PTA Railway Reserve (approximately 30m from the nearest rail of the Fremantle Railway Reserve), this places the proposed development within the PTA Protection Zone. An application for third party access is required prior to the commencement of any development/construction works within the Protection Zone.

Advice

1. The applicant/owner is required to submit an application to undertake works within the PTA protection zone prior to any works commencing. Information about the procedure and required information for assessment can be found in the PTA's *8810-450-003 – Procedure – Working in and around the PTA rail corridor, Assets and Infrastructure*. The application must be submitted a minimum of 3 months prior to the commencement of the development. Please email the application to PTAThirdPartyAccess@pta.wa.gov.au

The PTA wishes to remain involved in the application moving forward, with updates to be email to wapcreferrals@pta.wa.gov.au

Kind regards,

Rashidah MacLeod
Transport and Land Use Planner | Infrastructure Planning and Land Services
Public Transport Authority of Western Australia
Public Transport Centre, West Parade, Perth, 6000
PO Box 8125, Perth Business Centre, WA, 6849
Tel: (08) 9326 5658 Fax: (08) 9326 2000
Email: WAPCReferrals@pta.wa.gov.au | Web: www.pta.wa.gov.au



The Public Transport Authority of Western Australia cannot accept any liability for any loss or damage sustained as a result of software viruses. You must carry out such virus checking as is necessary before opening any attachment to this message. The information in this email and any files transmitted with it may be of a privileged and/or confidential nature and is intended solely for the addressee(s). If you are not an intended addressee please notify the sender immediately, and note that any disclosure, copying or distribution by you is prohibited and may be unlawful. The views expressed in this email are not necessarily the views of the Public Transport Authority.

Department of **Planning, Lands and Heritage**

GOVERNMENT OF WESTERN AUSTRALIA

Your Ref: DA24/0253
Our ref: 808/02/34/003P
Enquiries: Simon Luscombe (Ph: 6551 9307)

City of Joondalup
PO Box 21
Joondalup WA 6919

6 June 2024

Attention: Morgan Hutton

Dear Morgan,

Re: Lot 600 (36) Clarke Crescent, Joondalup

I refer to your correspondence dated 6 June 2024. In accordance with the Western Australian Planning Commission's (WAPC) Instrument of Delegation dated 22 January 2022, the following comments are provided. This proposal seeks approval for an extension of 3,003sqm to an existing showroom, including construction of an additional floor.

Land Requirements

The site abuts Joondalup Drive, which is classified as an Other Regional Road (ORR) in the Metropolitan Region Scheme (MRS) and Category 1 per WAPC plan number SP 694/6 (control of access). The site is not affected by the ORR reservation.

Transport Impact Statement

The above report by Level 5 Design (February 2024) states that the current showroom generates 170 weekend peak hour trips. Post-expansion the development will generate 242 weekend peak hour trips, representing an increase of 72 trips (43 additional trips during weekday peak hour periods).

Access to the site is obtained from Clarke Crescent with no access proposed to Joondalup Drive. This is in accordance with the Commission's Regional Roads (Vehicular Access) Policy D.C. 5.1, which seeks to minimise the number of new crossovers onto regional roads.

Recommendation

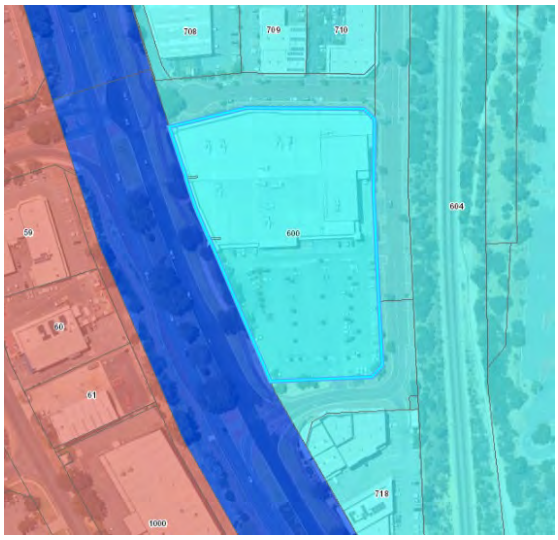
The Department has no objection to the proposal on ORR planning grounds.

Thank you for your correspondence. Should you have any queries regarding this matter, please contact me via email: simon.luscombe@dplh.wa.gov.au

Yours sincerely

S D Luscombe

Simon Luscombe
Principal Planning Officer
Strategy and Engagement

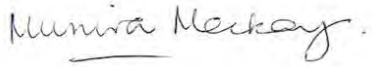


Metropolitan Region Scheme

Item No. 4.3	Proposed Bulky Goods Showroom (additions)	
Panel Members	Cathrine Temple Munira Mackay Simon Venturi Kukame McPierzie Tony Blackwell	Presiding Member Chairperson Member Member Member
Proponent/s	Stephen Camillo Stephen McDonald Renee Young	Leffler Simes Architects PMG Property Element Advisory

Design Review	
Property address	36 Clarke Crescent, Joondalup
Background	This is a pre-lodgement design review of the proposal.
Proposal	The proposed development comprises the following: • A 3,019m^2 expansion to the existing Showroom at ground level (including end of trip facilities) with an upper level parking deck, resulting in the net addition of 14 car parking bays onsite. • Access ramp to upper-level parking deck on western side of existing carpark (adjacent to Joondalup Drive) and exit ramp on eastern side of existing carpark (adjacent to Clark Crescent). • The retention of the two existing vehicle access points into the site, both from Clarke Crescent; one from the south and the other from the east. • Removal of existing trees within the car parking area, and removal and replacement of street trees within the Joondalup Drive and Clarke Crescent verges.

Key Design Review Comments	The proposal has the following design strengths: • The screen holds some promise for artistic expression. The Panel recommends: • The DRP does not support this conventionally designed Harvey Norman bulky goods showroom extension proposal in the Joondalup 'City Centre' precinct. • Key issues related to the proposed extension include the sheer and unrelenting scale of the finished development, the internalising and concealing the main pedestrian entry within the overall building and the lack of opportunity for activity or interaction at the interface of the building with the public realm ie. the streets. • Further significant design iteration to aspire and respond to the local community aspirations and place. • The DRP suggested ways forward for the proposal, including designing a welcoming destination/place within this urban context; a legible and safe main pedestrian entry; streetscape activation; and

	provision of community infrastructure and amenity for customers, staff and for pedestrians in the streetscape. • Provision of a landscape design that contributes meaningfully to the place and the community. • Early consideration of passive environmentally sustainable design as well as other initiatives for resource efficiency. • Involvement of a skilled artist to assist with the design of the screen and advise on other opportunities to animate and articulate and illuminate the proposal's aesthetic. • Presentation of internal layouts and co-ordination between the architectural proposal and the landscape design. Note that the presentation package was challenging to review due to a lack of clarity and co-ordinated information.
Chairperson's signature Date:	

Design Quality Evaluation

Legend

	Meets the Design Principle objective.
	Requires further attention to meet the Design Principle objective.
	Does not meet the Design Principle objective.
	Insufficient information to enable comments to be provided.

Design Principle		Comments/Recommendations
Principle 1 – Context and character		*Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.* **Comments:** • The proposal to extend the existing, approved but non-conforming bulky goods showroom would create a modified larger building form of considerable scale and bulk. It is vital that this current extension proposal aligns as much as practicable with the current aspirations of the 'City Centre' precinct of the *Joondalup Activity Centre Plan.* The proposal, however, falls significantly below achieving the requirements of the Plan and as outlined in the comments below. • Place making and retail experience is more than just driving to a site and then driving directly into a large format 'Big Box' building. Carefully consider and clarify how this proposal for extending the existing Harvey Norman showroom can contribute positively to the desired outcomes for the community and local streetscapes. The DRP is concerned that the proposal is, instead, simply replicating the existing building, is self-referential and has adopted a 'business as usual' approach. • The precedents in the application document are irrelevant as the aspirational imagery does not relate to the proposal. • The DRP advises that other businesses in the large format retail/bulky goods sector, such as Woolworths and Bunnings, are proactively innovating with different models for urban development and with more of a community and landscape-oriented focus. Contemporary developments are including establishing some diversity in terms of their external aesthetic/architectural language; sleeving with smaller tenancies facing streetscapes; establishing legible main entrances; and integrating soft landscape

Design Principle		Comments/Recommendations
		as well as safe/legible pedestrian movement through the carpark areas. • Consider what is expected for this significant business in the Joondalup 'City Centre' precinct and the necessary benefits for the community. Basic but vital design elements include: an attractive, welcoming place and destination for people; activation of the streetscapes; and a visible, legible, safe entry for pedestrians (noting that once cars are parked, drivers become pedestrians). • The proposal appears to assume that people are only car drivers, who will enter the carpark within the 'Big Box' and then walk to the main pedestrian entry that is internalised from public view in the centre of the enclosed 'Big Box'. • The DRP advises that the proposal should interact with the surrounding streetscapes. Design suggestions include: -Defining safe and comfortable pedestrian zones. -Increasing the amount of boundary wall glazing for opportunities for interaction at the boundary and avoiding frosting/film. -Planting more street trees and installing planter boxes and bench seating to create more opportunities for public interaction and to soften the building interface. -Providing lighting for community safety and visual effect. -Adding canopies and awnings where appropriate along the boundaries with the street for public amenity and to help articulate the building. -Sleeving the blank facades along the streetscape with smaller tenancies to help reduce the perceived scale and improve the human interaction with the street. • The building proposal is bulky and has a very long, flat unarticulated façade. Provide more detail on the screen and how it will look. • Consider appointing an artist to prepare a unique design language and narrative for the screen and to further inform the built form and architectural features of the extension, including how it will look at night. • Consider a more contemporary, articulated architectural language for the extension, and one that improves upon the conventional 'Big Box' Harvey Norman branding. **Recommendation 1:**

Design Principle		Comments/Recommendations
		1. Consider how this proposal can aspire to the requirements of the Joondalup ACP and 'City Centre' precinct context. **2. Consider the design's positive contributions to the local community and streetscapes.** **3. Research more innovative design precedents that better respond to place and community.** **4. Essential considerations are an identifiable place/destination for people; activation of the streetscapes; and a visible, legible, safe pedestrian entry.** **5. The proposal should interact with the surrounding streetscapes as per the ideas suggested in the comments.** **6. Provide detail on the façade screen, with suggested input by an artist, and how it can contribute to greater building articulation.** **7. Consider a more contemporary, articulated architectural language for the extension.**
Principle 2 – Landscape quality		*Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.* **Comments:** • With reference to the scale and non-conforming nature of this development, the extent of landscape on-site is unacceptable and doesn't meet minimum expectations in terms of landscape for a light industrial area, let alone a city centre/urban environment. • Retention of the existing trees along the Joondalup Drive boundary would have been a community and amenity benefit. Given their close proximity to the boundary and limited impact upon the developable land, their proposed removal is unacceptable and will impact detrimentally on the amenity of the public streetscape. • Clarify the 'tree protection zone' plan that *implies* trees are retained on-site, yet they actually would be lost within the confines of the 'Big Box'. Provide a legible and accurate plan of what landscape is to be retained on-site. • The DRP advises increasing soft landscape and deep soil areas for trees on site and landscape treatments in general. • Consider outdoor facilities for staff and customers to provide people with amenity and somewhere to relax and enjoy the experience, appreciating Joondalup's sense of place and community in the context of this large development. **Recommendation 2:** **1. The DRP strongly suggests retaining the existing trees along the Joondalup Drive boundary.** **2. Provide an accurate plan of retained landscape on-site.** **3. Develop a landscape plan with good provision of soft landscape and trees.**

Design Principle		Comments/Recommendations
		4. Consider landscaped outdoor spaces for a diversity of building users.
Principle 3 – Built form and scale		*Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.* **Comments:** • The proposed extension of blank facades contributes to increasing the building's overall large bulk and scale. Consider ways the extension can include architectural innovation and articulate and lessen the bulk and scale. Refer also to *Principle 1: Context and Character*. **Recommendation 3:** **1. Consider how the extension can include architectural innovation and articulate and lessen the buildings overall bulk and scale.**
Principle 4 – Functionality and build quality		*Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life cycle.* **Comments:** • Provide more detail on the internal planning and clarify functional requirements. • Provide detail on the façade screen. Refer also to *Principle 1: Context and Character*. **Recommendation 4:** **1. Provide internal plans and functional requirements.** 2. **Provide detail on the façade screen.**
Principle 5 – Sustainability		*Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.* **Comments:** • Sustainability (such as managing the heat island effect; water capture, storage and re-use; Water Sensitive Urban Design and energy efficiency strategies) is not evident based on the information provided. This large-scale development should demonstrate foremost passive ESD and provide a sustainability strategy with initiatives at this concept design stage. • No PV cells are shown on the roof, but also no metrics around the system/s to support the benefit of the solar panels from a sustainability perspective. • The building extension increases the extent of hard surfaces and will impact on the heat island effect. Roofing and paving materials should be considered, including colour. • The deck car park should include shade structures, ideally roofed with PV cells and supplied with EV charging facilities to provide amenity, comfort and convenience to all building users.

Design Principle		Comments/Recommendations
		Recommendation 5: 1. **Demonstrate a passive ESD solution and a sustainability strategy with initiatives.** 2. **Consider PV cells, mitigating the heat island effect and provision of shade structures in exposed areas.**
Principle 6 – Amenity		*Good design optimises internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.* **Comments:** • Refer to *Principle 1: Context and Character* and *Principle 2: Landscape Quality*. **Recommendation 6:** -
Principle 7 – Legibility		*Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.* **Comments:** • Refer to *Principle 1: Context and Character*. **Recommendation 7:** -
Principle 8 – Safety		*Good design optimises safety and security, minimising the risk of personal harm and easily identifiable elements to help people find their way around.* **Comments:** • Refer to *Principle 1: Context and Character*. **Recommendation 8:** -
Principle 9 – Community		*Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interactions.* **Comments:** • Refer to *Principle 1: Context and Character*. **Recommendation 9:** -
Principle 10 – Aesthetics		*Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.* **Comments:** • Refer to *Principle 1: Context and Character*. **Recommendation 10:** -

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Green Building Council Australia Member

Member Australian Institute of Architects

ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC



1 **EX. SITE PLAN**
Scale: 1 : 500



2 **LOCATION PLAN**
Scale NTS

DA - DRAWING LIST		
SHEET N°	**SHEET NAME**	**SCALE**
DA 00	EXISTING SITE & LOCATION PLAN	1:500
DA 01	EXISTING FLOOR PLAN	1:500
DA 02	OVERALL FLOOR, ROOF & UPPER CAR PARK PLAN	1:500
DA 03	FLOOR PLAN NORTH	1:200
DA 04	FLOOR PLAN SOUTH	1:200
DA 05	ROOF PLAN NORTH	1:200
DA 06	ROOF PLAN SOUTH	1:200
DA 07	ELEVATIONS 1	1:200
DA 08	ELEVATIONS 2	1:200
DA 09	SECTIONS	1:200
DA 10	PERSPECTIVE 1	NTS
DA 11	PERSPECTIVES 2	NTS
DA 12	TREE PROTECTION ZONE PLAN	1:250, 1:500

NOTE:
SITE BOUNDARIES AND SITE AREAS AND EXISTING BUILDING ARE INDICATIVE ONLY. SUBJECT TO CONFIRMATION BY LICENSED SURVEYOR.

DEVELOPMENT SUMMARY

EXISTING BUILDING	=	7,226 SQM
TOTAL CARPARKING	=	238 SPACES
EXISTING BUILDING EXTENSION	=	3,019 SQM
TOTAL AREA	=	10,245 SQM
PARKING PROVIDED		
TOTAL CAR SPACES	=	252 SPACES (1:40)
TOTAL MOTORBIKE	=	14 SPACES
TOTAL BICYCLES	=	24 SPACES

PRELIMINARY

EXISTING SITE & LOCATION PLAN

LEFFLER SIMES PTY LTD
ABN 39 001 043 992
WEB: www.lefflersimes.com.au
SYDNEY 7 YOUNG ST, NEUTRAL BAY, NSW 2089 T:+61 2 99093344
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BRISBANE L5 U39 131 LEICHHARDT ST, SPRING HILL, QLD 4000 T:+61 7 31235544

SCALE 1:500 (0 10 20 30 40 50)

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. REV.
DATE: MAY '23 DA 00 P1
DRAWN: LSA

LEFFLER SIMES ARCHITECTS

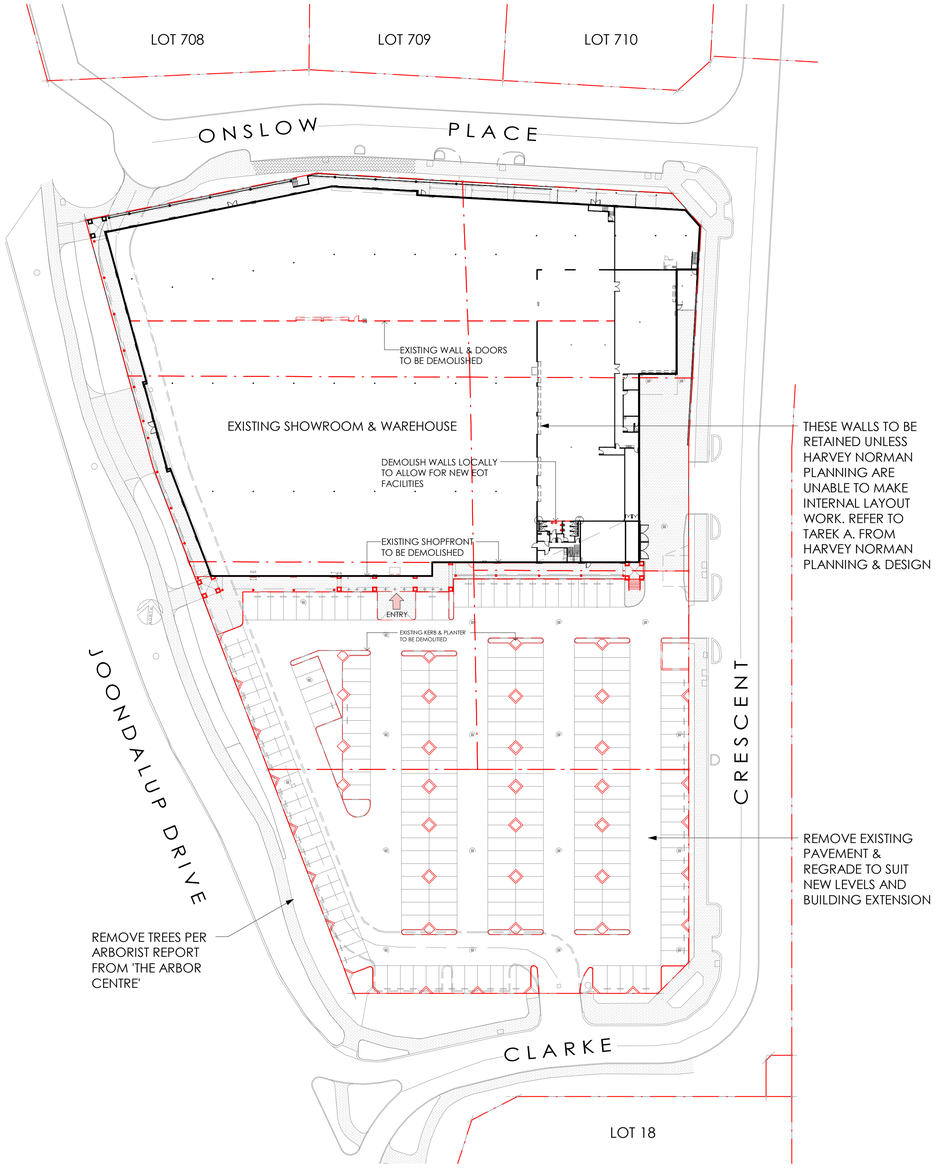
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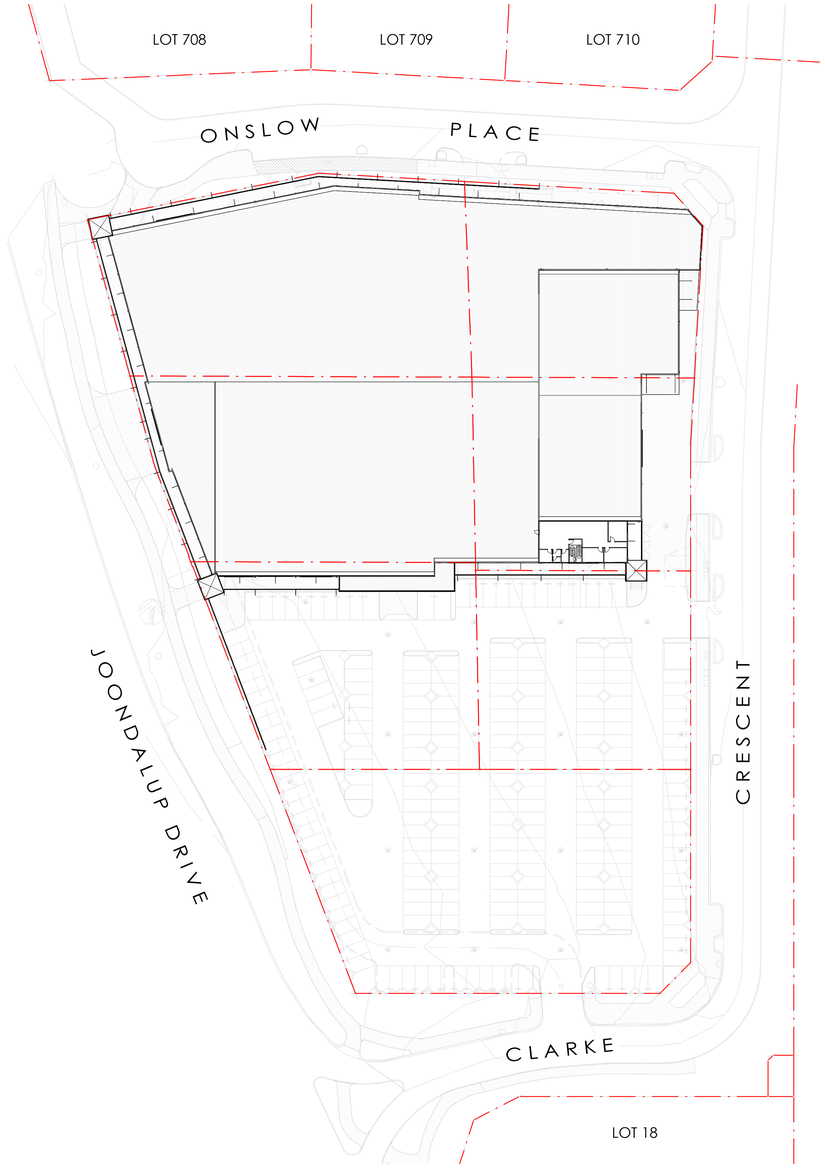
10 YEARS 10 YEARS OF MEMBERSHIP

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ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC



1 - **EXISTING GROUND FLOOR PLAN**
Scale: 1 : 500



2 - **EXISTING FIRST FLOOR PLAN**
Scale: 1 : 500

PRELIMINARY

EXISTING FLOOR PLAN

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BRISBANE L5 U39 131 LEICHHARDT ST, SPRING HILL, QLD 4000 T:+61 7 31235544

SCALE 1:500
0 10 20 30 40 50

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: MAY '23
DRAWN: LSA
DWG NO. DA 01
REV. P1

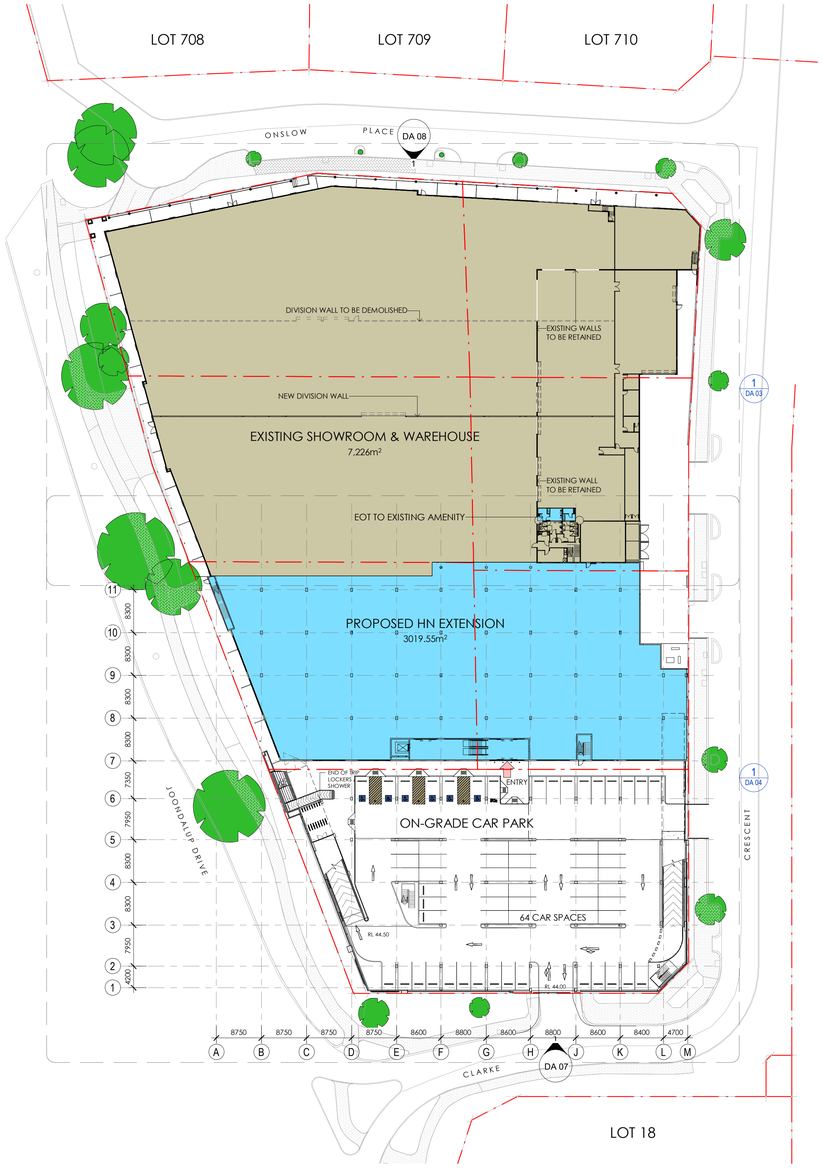
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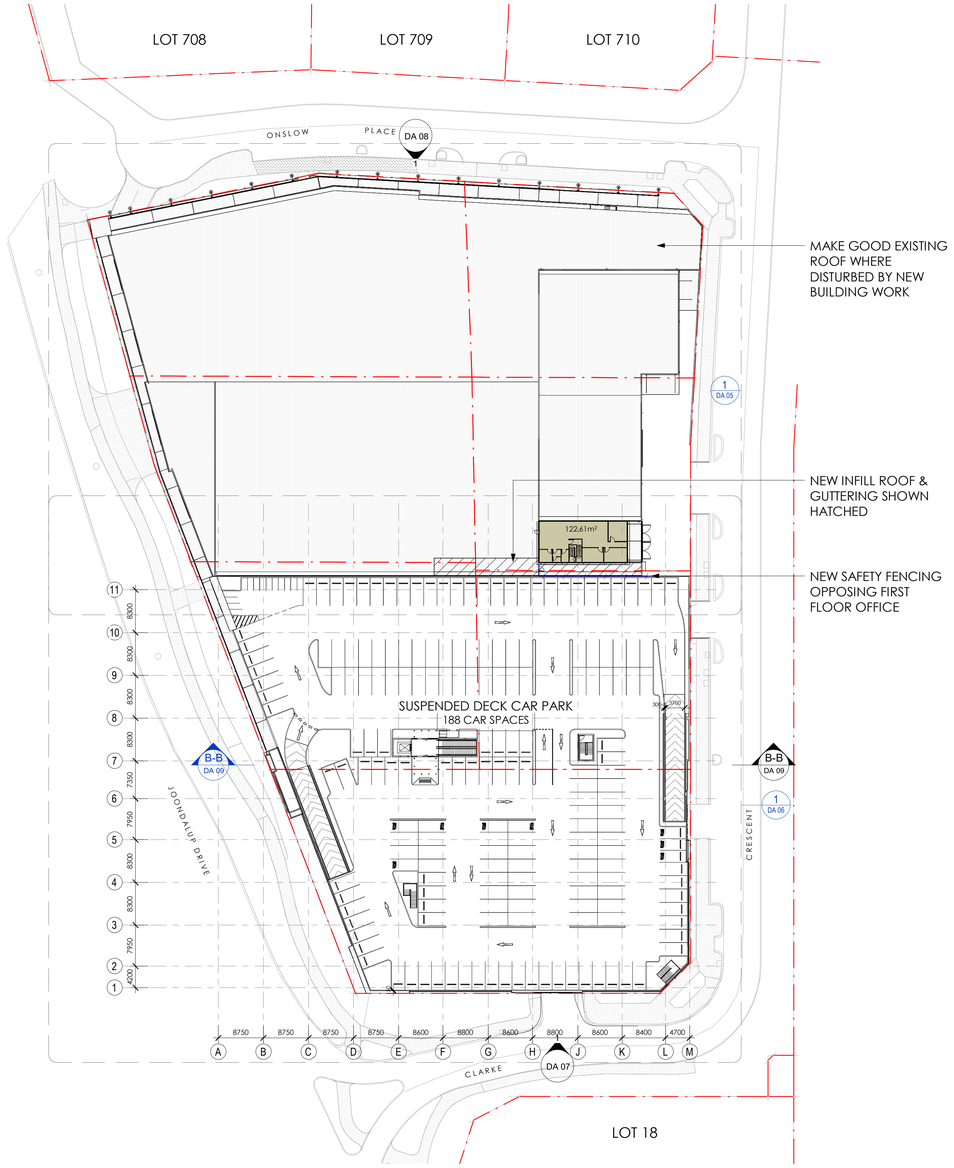
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ISSUE	AMENDMENT	DATE	CHK'D
P1	FLOOR PLAN WITH FITOUT FLOOR AREA ISSUED FOR COORDINATION	12.04.23	MSL
P2	PRE-DA	17.08.23	SJC



1 - **OVERALL GROUND FLOOR**
Scale: 1 : 500



2 - **OVERALL ROOF PLAN**
Scale: 1 : 500

NOTE:
SITE BOUNDARIES AND SITE AREAS AND EXISTING BUILDING ARE INDICATIVE ONLY. SUBJECT TO CONFIRMATION BY LICENSED SURVEYOR.

DEVELOPMENT SUMMARY

EXISTING BUILDING	=	7,226 SQM
TOTAL CARPARKING	=	238 SPACES
EXISTING BUILDING EXTENSION	=	7,226 SQM 3,019 SQM
TOTAL AREA	=	10,245 SQM
PARKING PROVIDED		
TOTAL CAR SPACES	=	252 SPACES (1:40)
TOTAL MOTORBIKE	=	14 SPACES
TOTAL BICYCLES	=	24 SPACES

PRELIMINARY

OVERALL FLOOR, ROOF & UPPER CAR PARK PLAN

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SCALE 1:500
0 10 20 30 40 50

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: MAY '23
DRAWN: LSA
DWG NO. DA 02
REV. P2

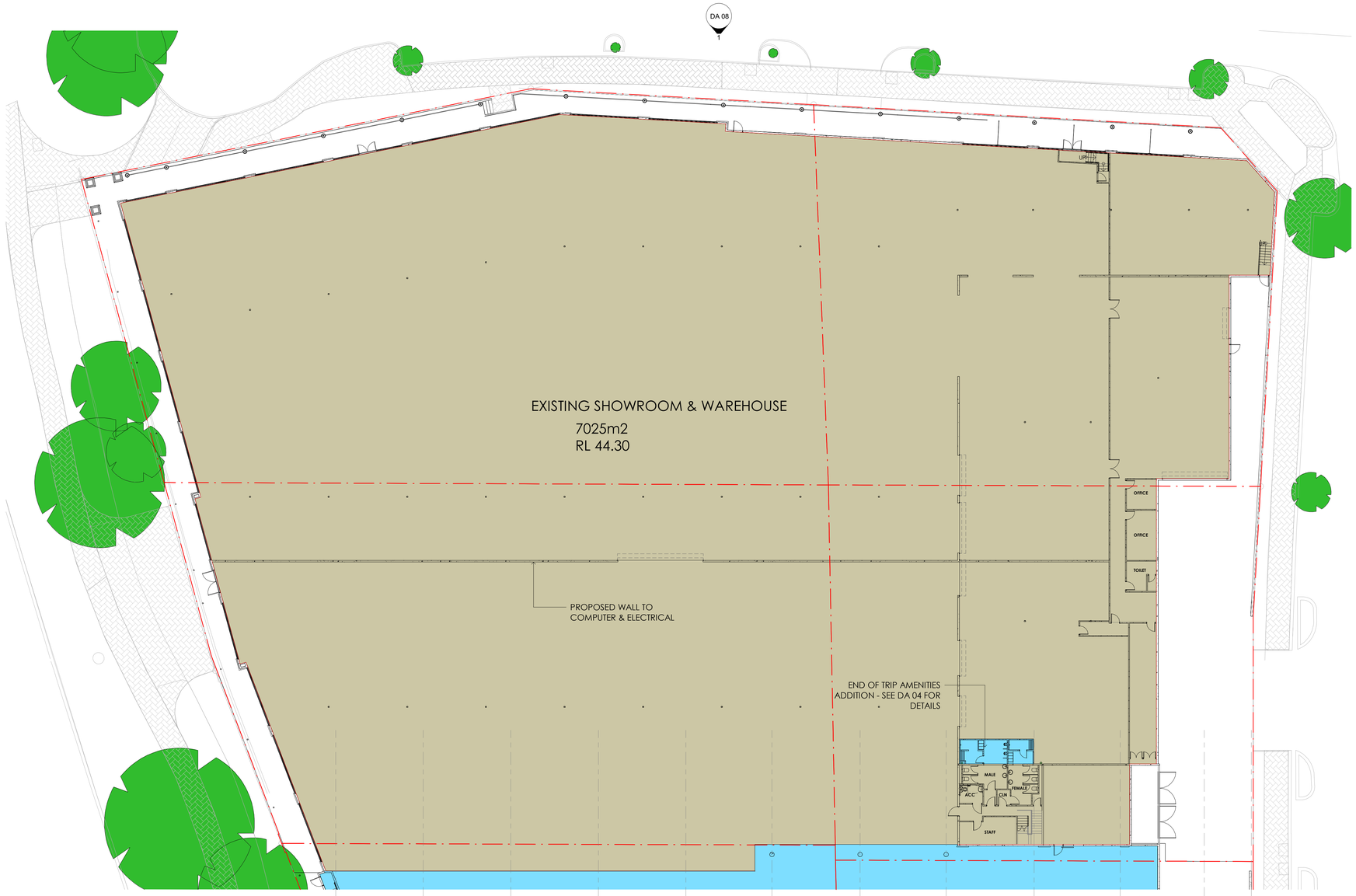
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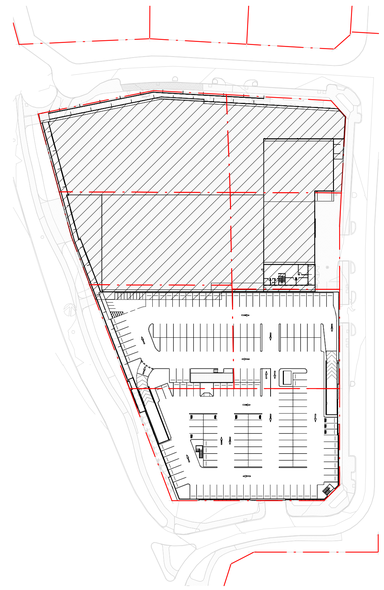
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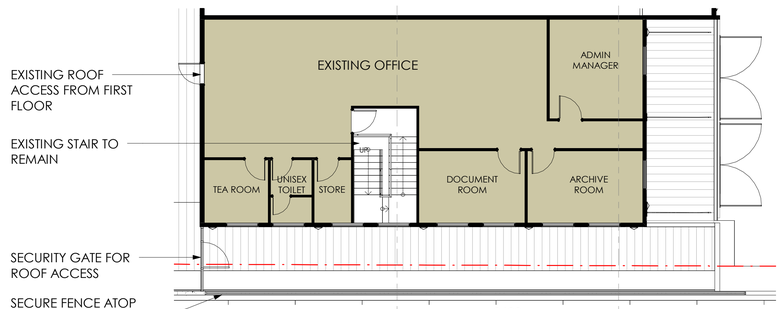
ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC



1 DA 02 **GROUND FLOOR - NORTH**
Scale: 1 : 200



SITE KEYPLAN 1 : 1000



2 DA 05 **FIRST FLOOR - OFFICE**
Scale: 1 : 100

PRELIMINARY

FLOOR PLAN NORTH

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SCALE 1:200
0 4 8 12 16 20

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: MAY '23
DRAWN: LSA
DWG NO. DA 03
REV. P1

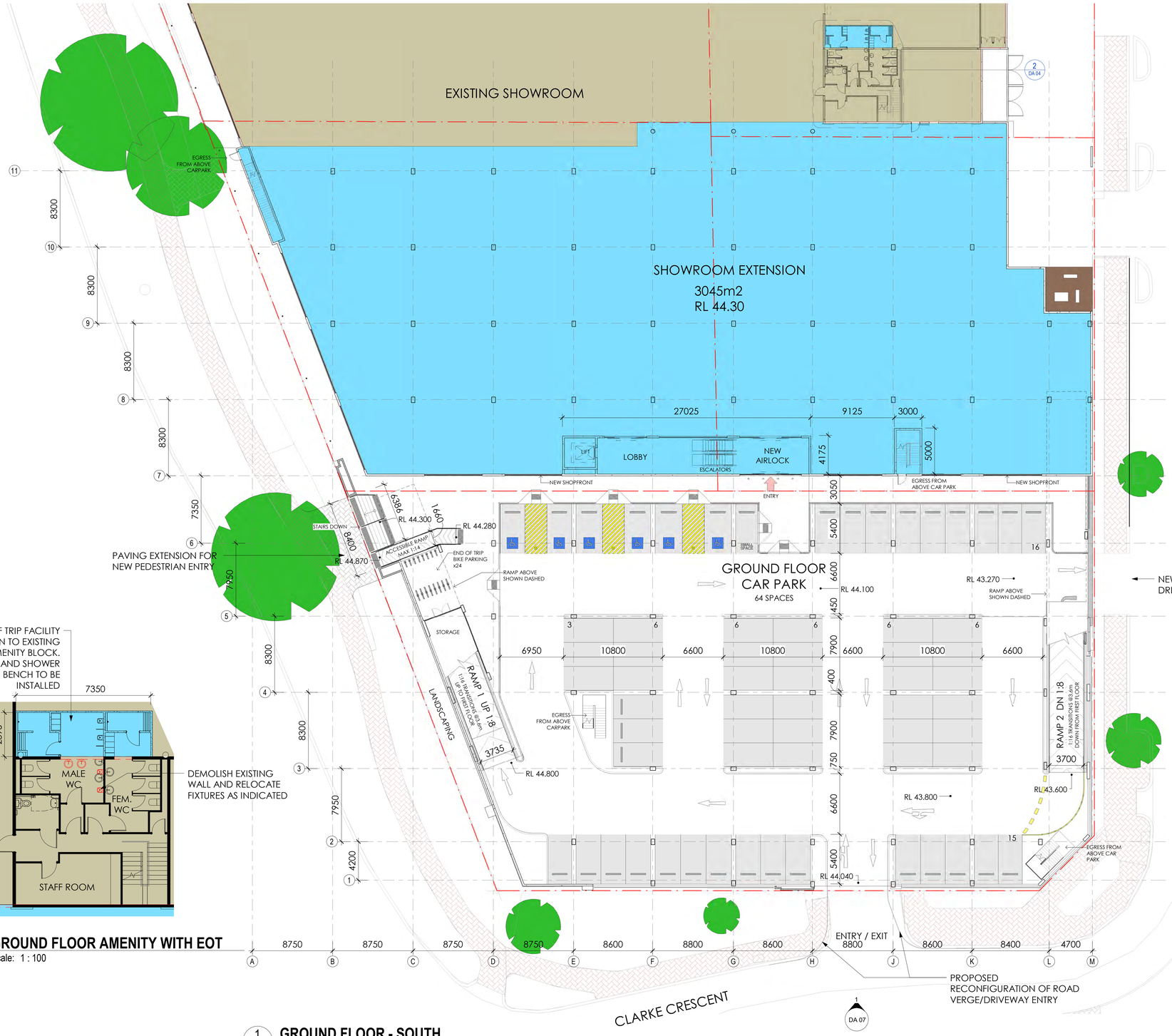
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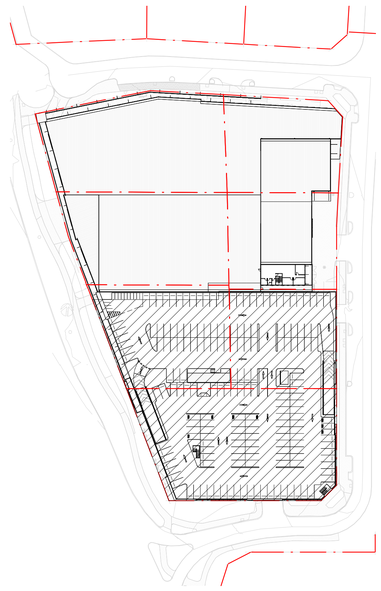
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ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC



2 DA 04 **GROUND FLOOR AMENITY WITH EOT**
Scale: 1 : 100

1 DA 02 **GROUND FLOOR - SOUTH**
Scale: 1 : 200



SITE KEYPLAN 1 : 1000

PRELIMINARY

FLOOR PLAN SOUTH

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SCALE 1:200 (0 4 8 12 16 20)

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. REV.
DATE: MAY '23 DA 04 P1
DRAWN: LSA

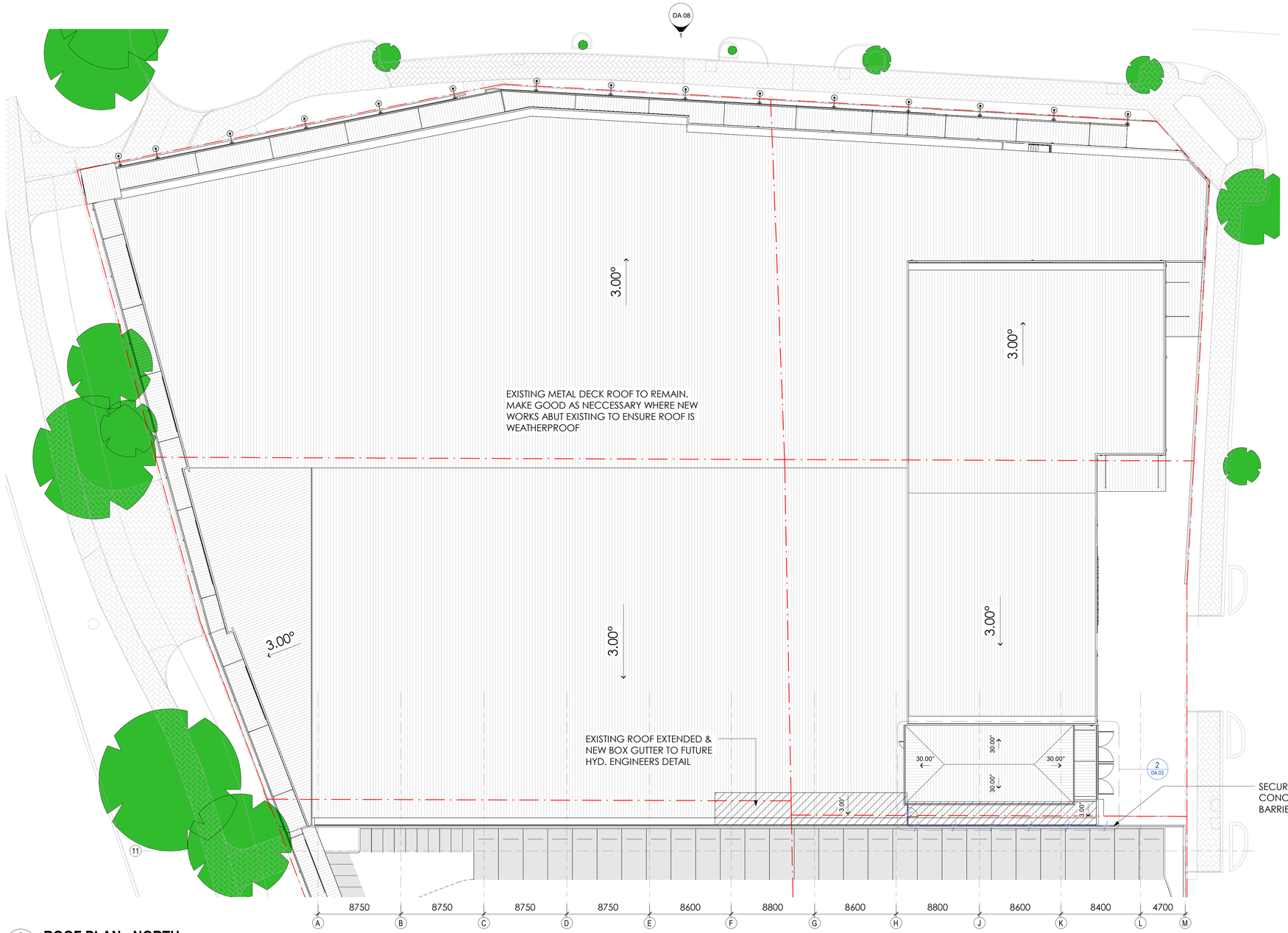
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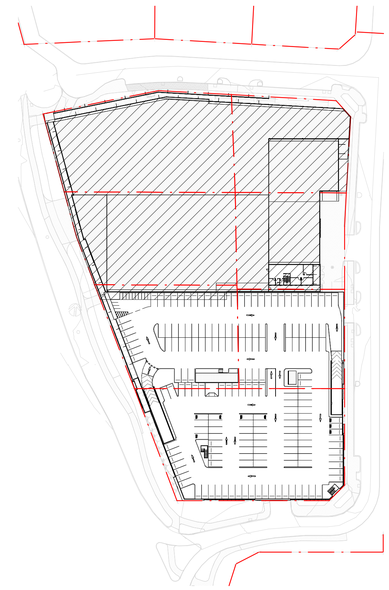
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ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC



1 DA 02 **ROOF PLAN - NORTH**
Scale: 1 : 200



SITE KEYPLAN 1 : 1000

PRELIMINARY

ROOF PLAN NORTH

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SCALE 1:200

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: MAY '23
DRAWN: LSA

DWG NO. DA 05

REV. P1

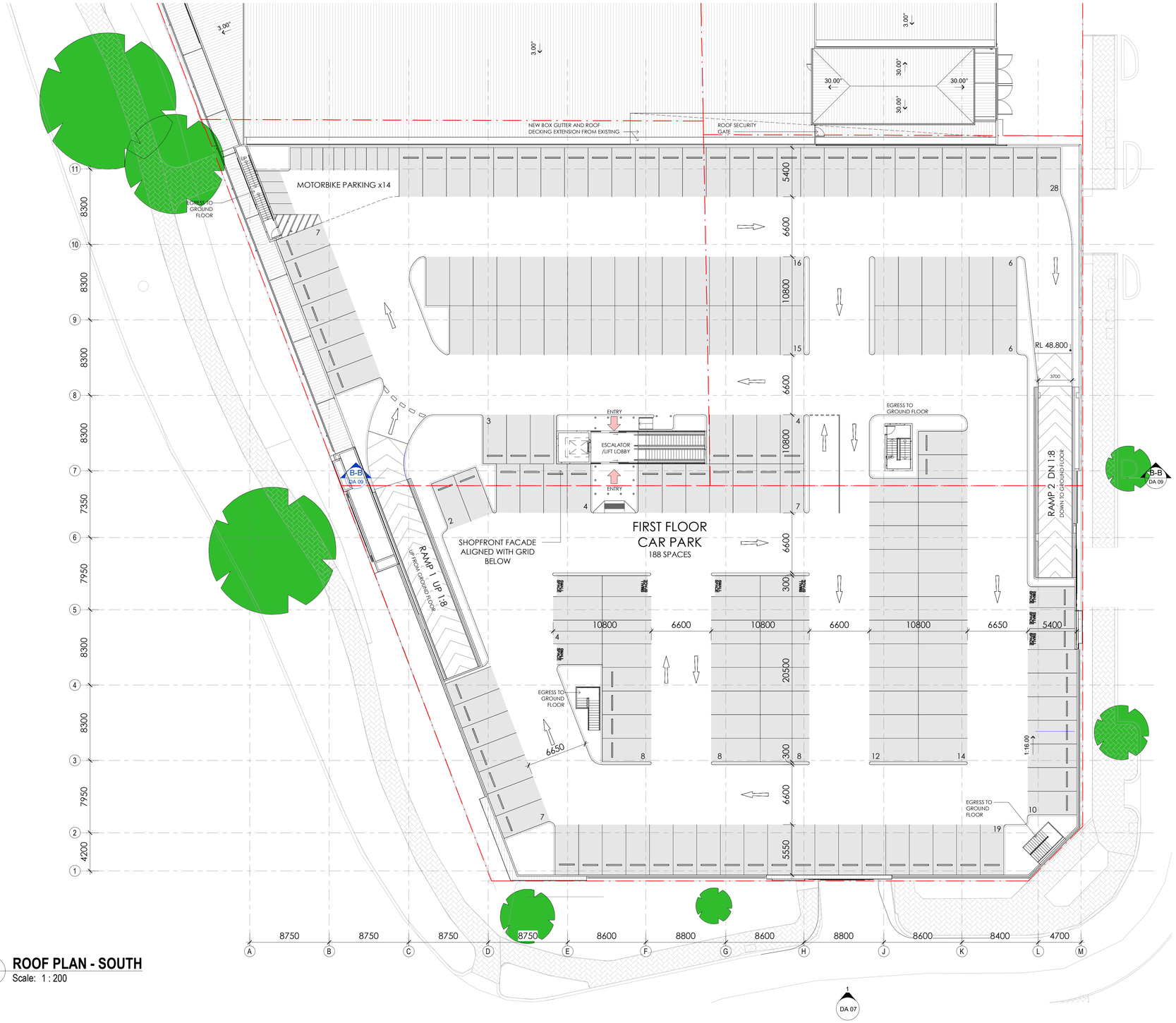
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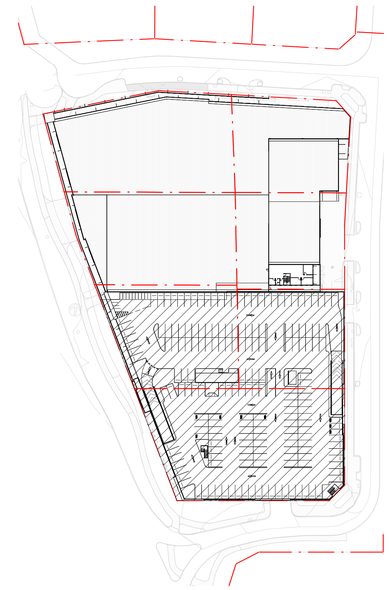
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ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC



1 DA 02 **ROOF PLAN - SOUTH**
Scale: 1 : 200



SITE KEYPLAN 1 : 1000

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ROOF PLAN SOUTH

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SCALE 1:200 (0 4 8 12 16 20)

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. DA 06 REV. P1
DATE: MAY '23
DRAWN: LSA

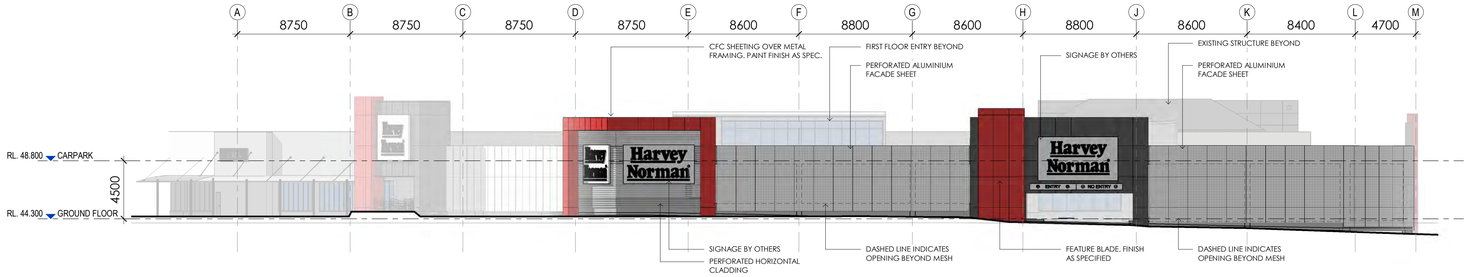
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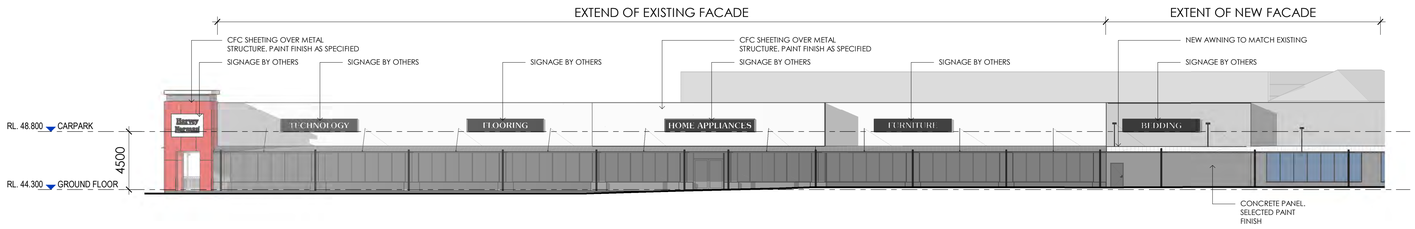
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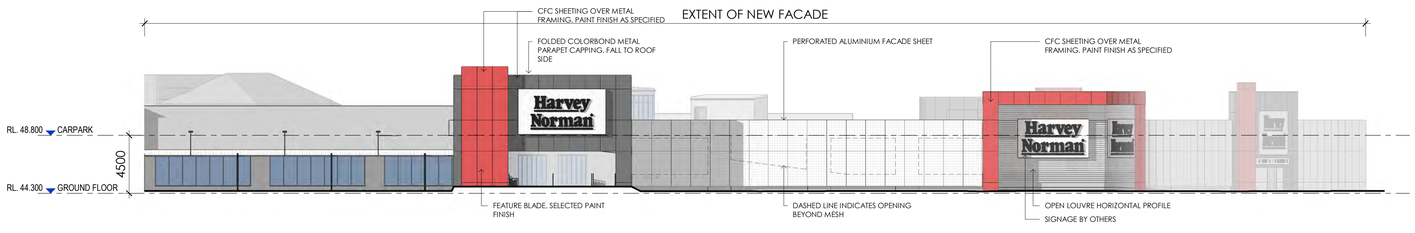
ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC



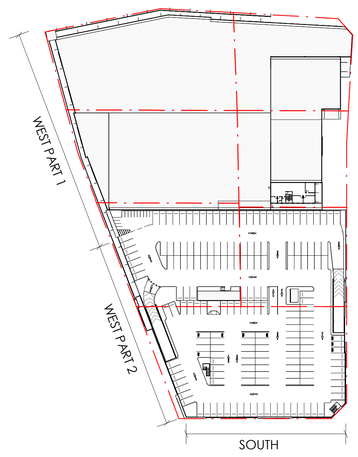
1 DA 02 **SOUTH ELEVATION**
Scale: 1 : 200



2 **WEST ELEVATION PART 1**
Scale: 1 : 200



3 **WEST ELEVATION PART 2**
Scale: 1 : 200



SITE KEYPLAN 1 : 1000

FINISHES LEGEND

PT-01	DULUX MALAY GREY
PT-02	DULUX HARVEY NORMAN RED
PT-03	DULUX VIVID WHITE
PT-04	DULUX FLOODED GUM
RFS-01	DULUX SURFMIST (ROOF SHEETING)
MP-01	MESH FACADE PANELS

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SCALE 1:200
0 4 8 12 16 20

PRELIMINARY

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

ELEVATIONS 1

JOB NO: 5244
DATE: MAY '23
DRAWN: LSA
DWG NO. DA 07
REV. P1

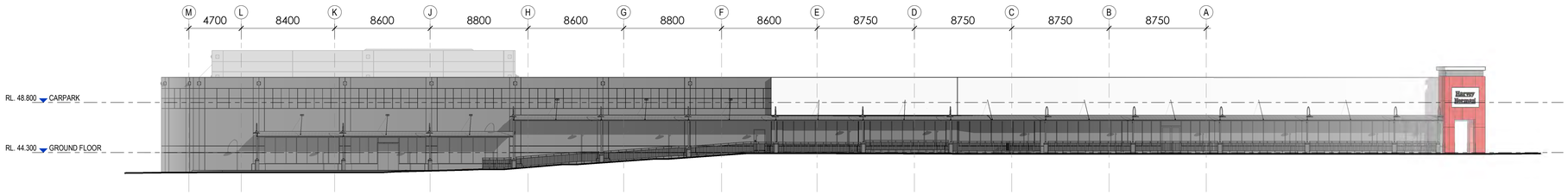
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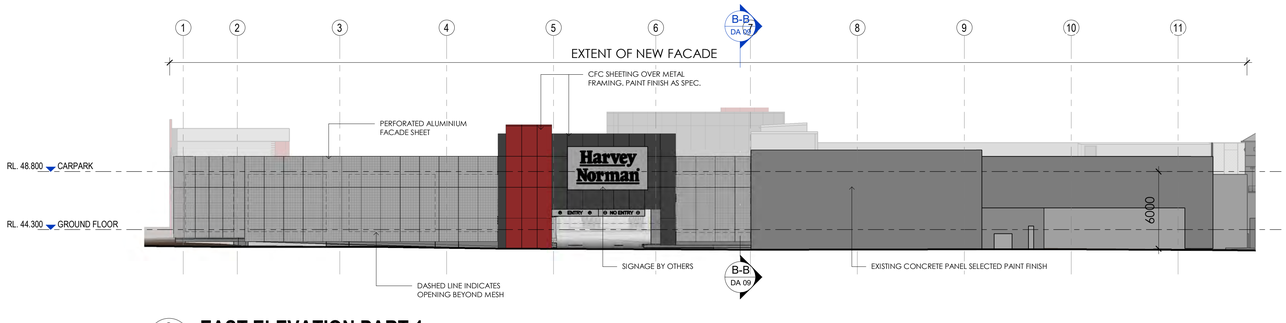
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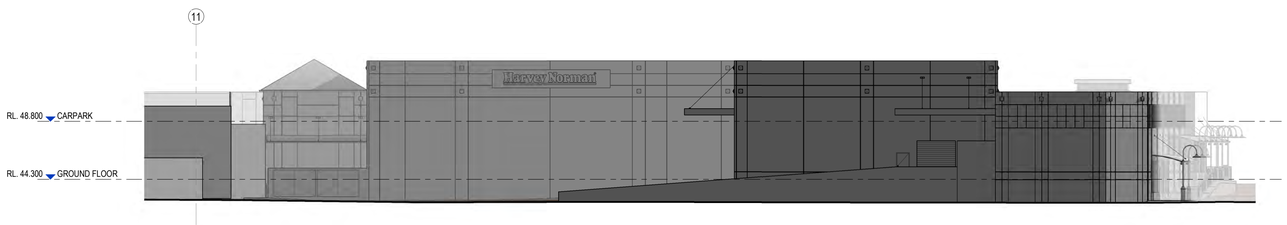
ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC



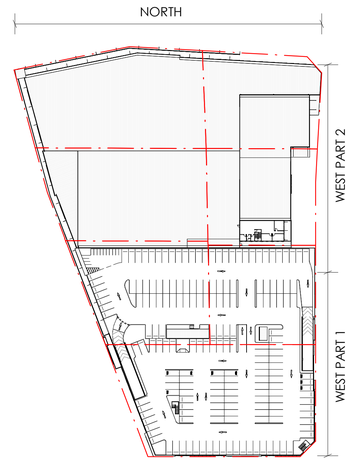
1 NORTH ELEVATION
DA 02
Scale: 1 : 200



2 EAST ELEVATION PART 1
Scale: 1 : 200



3 EAST ELEVATION PART 2
Scale: 1 : 200



SITE KEYPLAN 1 : 1000

FINISHES LEGEND

PT-01		DULUX MALAY GREY
PT-02		DULUX HARVEY NORMAN RED
PT-03		DULUX VIVID WHITE
PT-04		DULUX FLOODED GUM
RFS-01		DULUX SURFMIST (ROOF SHEETING)
MP-01		MESH FACADE PANELS

PRELIMINARY

ELEVATIONS 2

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SCALE 1:200

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. DA 08 REV. P1
DATE: MAY '23
DRAWN: LSA

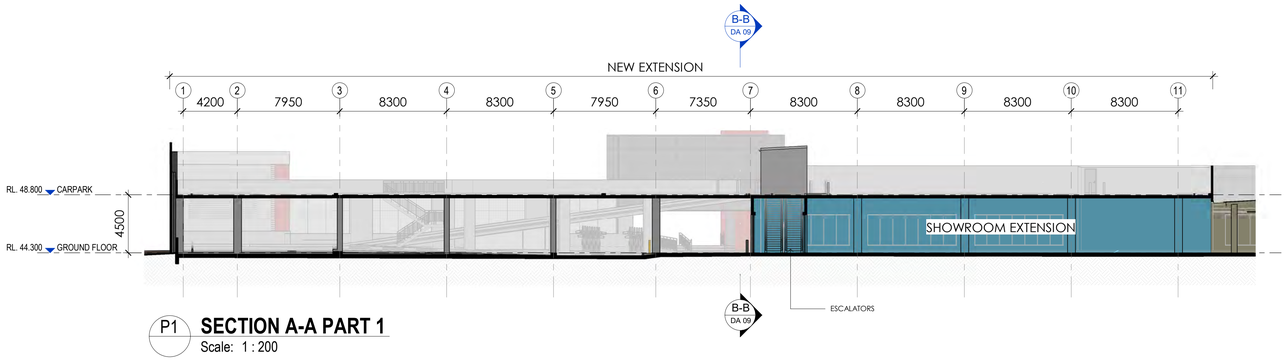
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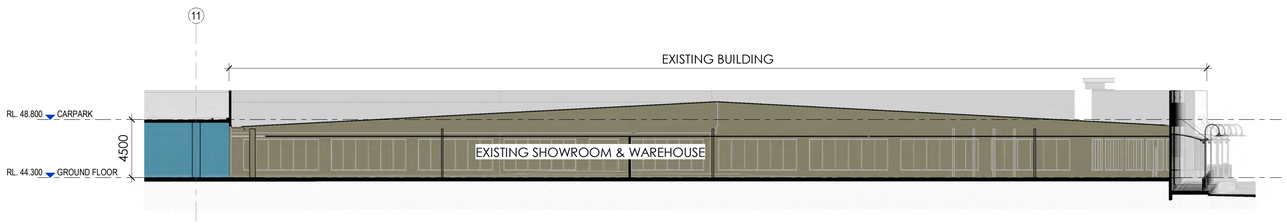
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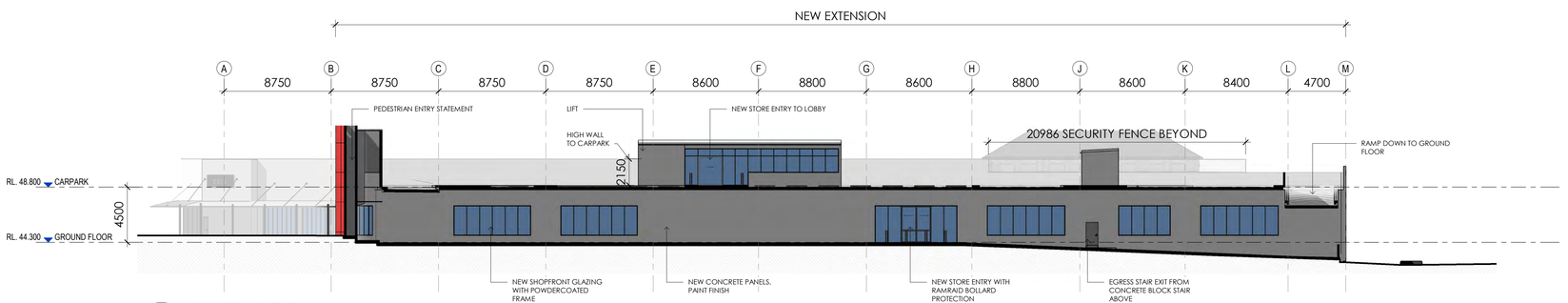
ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC



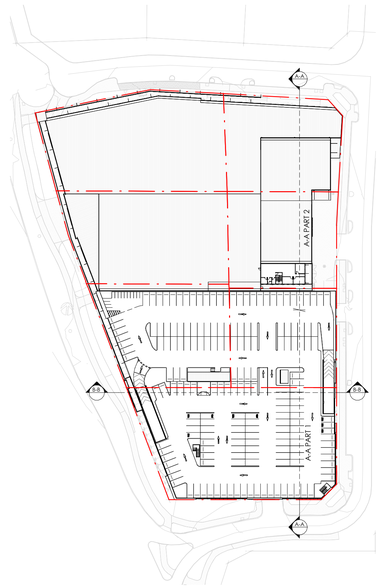
P1 **SECTION A-A PART 1**
Scale: 1 : 200



P2 **SECTION A-A PART 2**
Scale: 1 : 200



B-B
DA 02 **SECTION B-B**
Scale: 1 : 200



SITE KEYPLAN 1 : 1000

PRELIMINARY

SECTIONS

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SCALE 1:200
0 4 8 12 16 20

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: MAY '23
DRAWN: LSA
DWG NO. DA 09
REV. P1

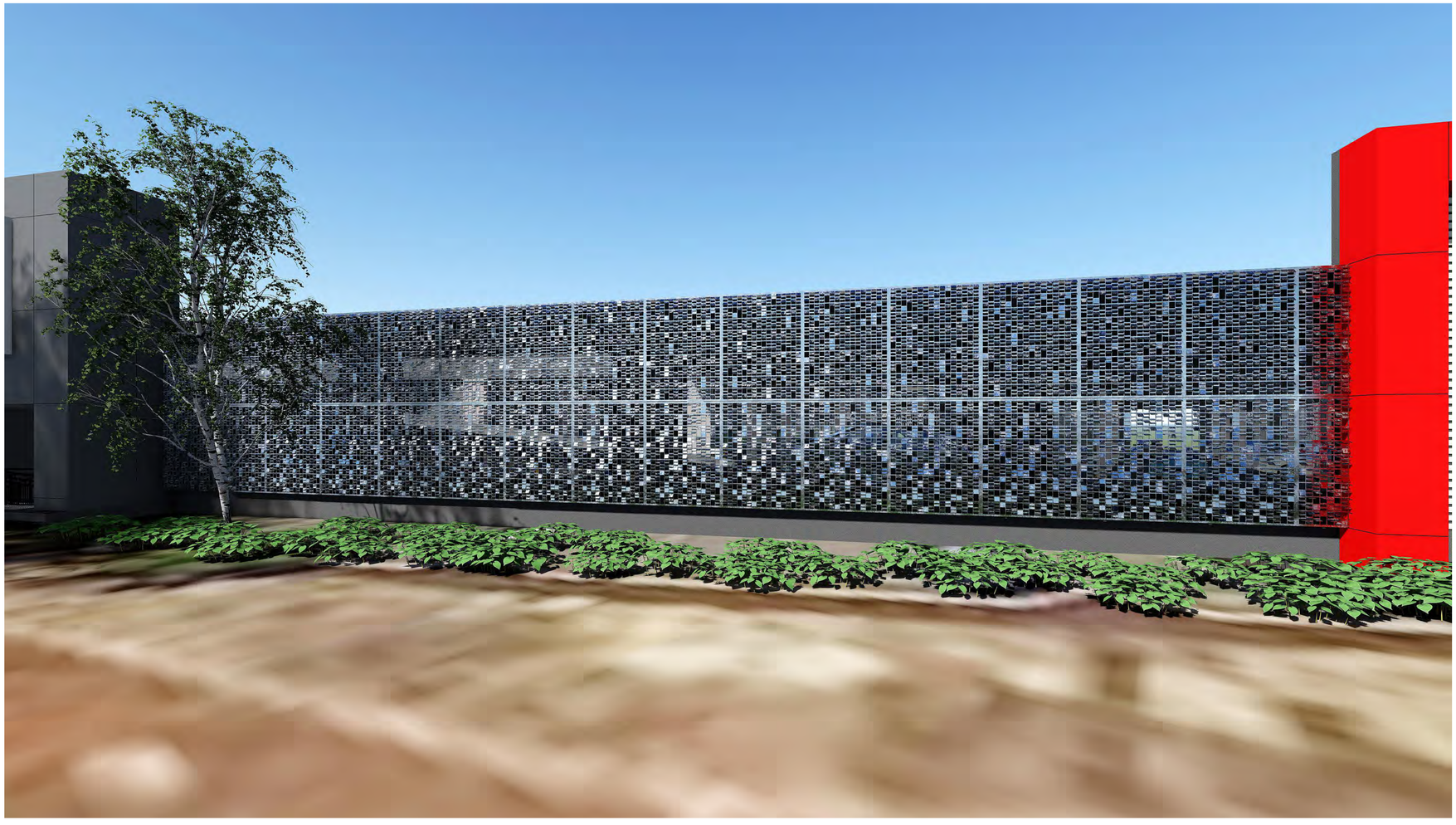
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ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC



VIEW FROM JOONDALUP DRIVE

PRELIMINARY

PERSPECTIVE 1

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SCALE NTS

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: 05/25/23
DRAWN: LSA

DWG NO. DA 10

REV. P1

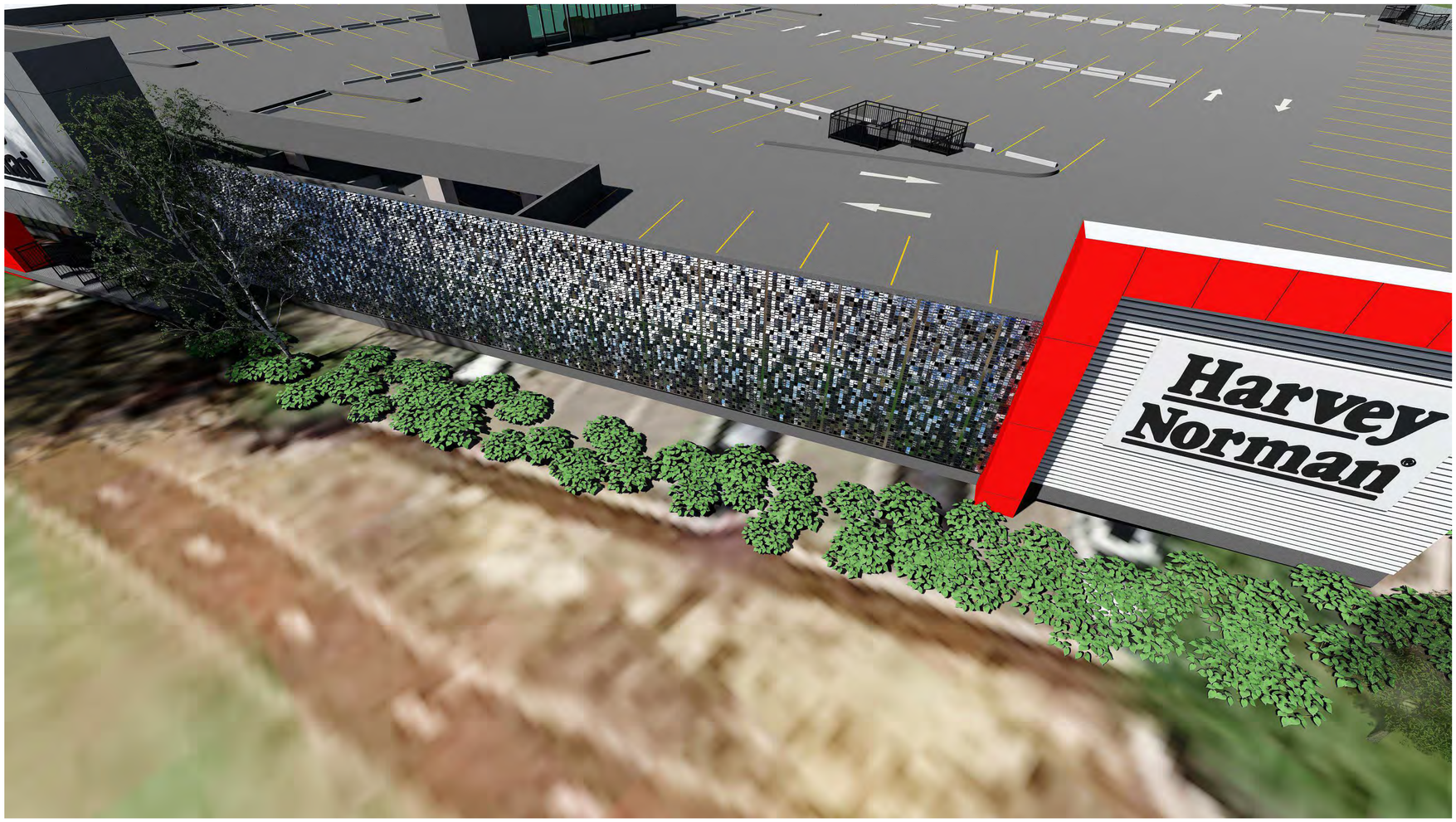
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ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC



VIEW FROM JOONDALUP DRIVE & CLARKE CRESCENT

PRELIMINARY

PERSPECTIVES 2

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SCALE NTS

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: 05/25/23
DRAWN: LSA

DWG NO. DA 11

REV. P1

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ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC



2 SK002A **TREE PROTECTION ZONE PLAN - ENLARGED**
Scale: 1 : 250



1 **TREE PROTECTION ZONE OVERALL PLAN**
Scale: 1 : 500

TREE PROTECTION ZONE LEGEND

- PROPERTY BOUNDARIES
- PROPOSED BUILDING AWNING
- OUTLINE OF PROPOSED PARKING STRUCTURE
- PROPOSED STORE EXTENSION
- AC00XX — ARBORIST TREE CODE - TO RETAIN
- AC00XX — ARBORIST TREE CODE - TO REMOVE
- TREE DIAGRAM
  - TREE CANOPY
  - TREE TRUNK
  - TREE PROTECTION ZONE

NOTE: FOR ALL EXISTING TREE DETAILS, REFER ARBORIST TREE SURVEY REPORT OCT 2022 - REF. Q005685

PRELIMINARY

TREE PROTECTION ZONE PLAN

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BRISBANE L5 U39 131 LEICHHARDT ST, SPRING HILL, QLD 4000 T:+61 7 31235544

SCALE 1:100 (0 2 4 6 8 10)

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: 05/16/23
DRAWN: LSA
DWG NO. DA 12
REV. P1

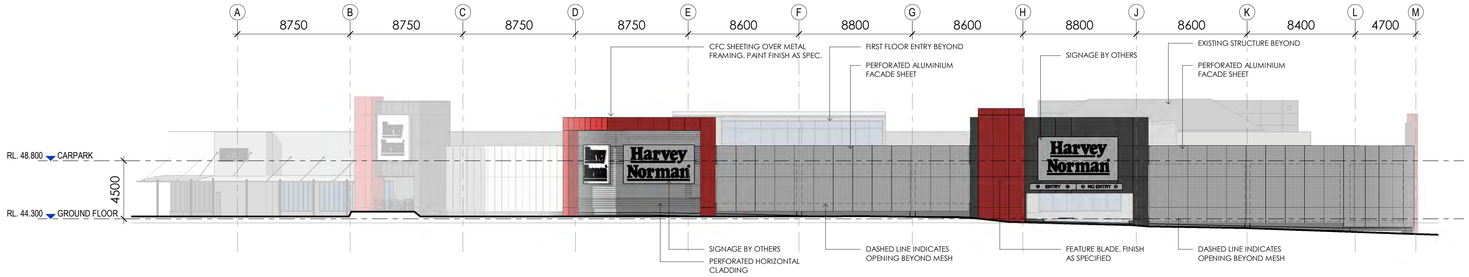
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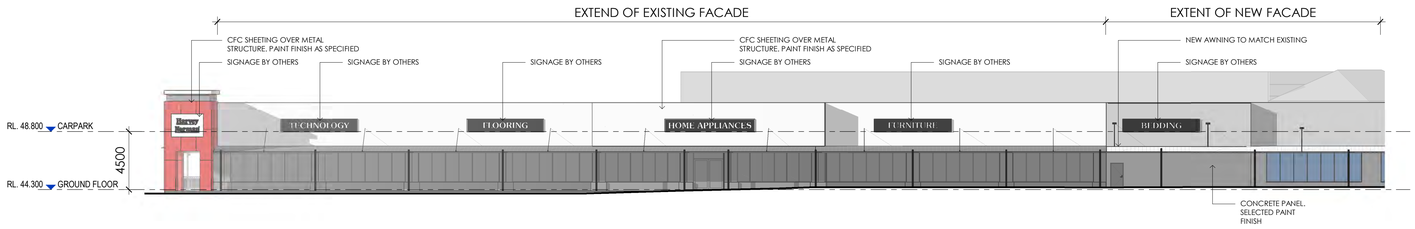
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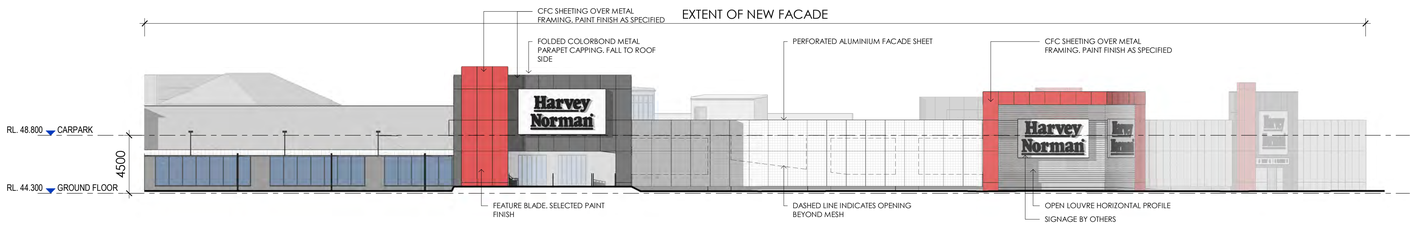
ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC



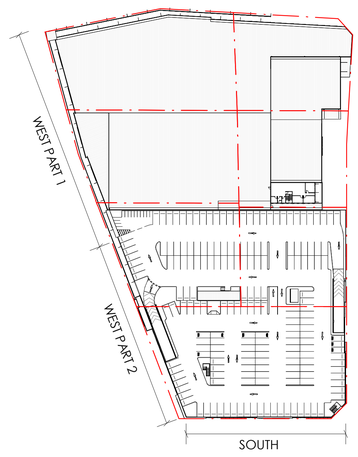
1 DA 02 **SOUTH ELEVATION**
Scale: 1 : 200



2 **WEST ELEVATION PART 1**
Scale: 1 : 200



3 **WEST ELEVATION PART 2**
Scale: 1 : 200



SITE KEYPLAN 1 : 1000

FINISHES LEGEND

PT-01	DULUX MALAY GREY
PT-02	DULUX HARVEY NORMAN RED
PT-03	DULUX VIVID WHITE
PT-04	DULUX FLOODED GUM
RFS-01	DULUX SURFMIST (ROOF SHEETING)
MP-01	MESH FACADE PANELS

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SCALE 1:200
0 4 8 12 16 20

PRELIMINARY

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

ELEVATIONS 1

JOB NO: 5244
DATE: MAY '23
DRAWN: LSA
DWG NO. DA 07
REV. P1

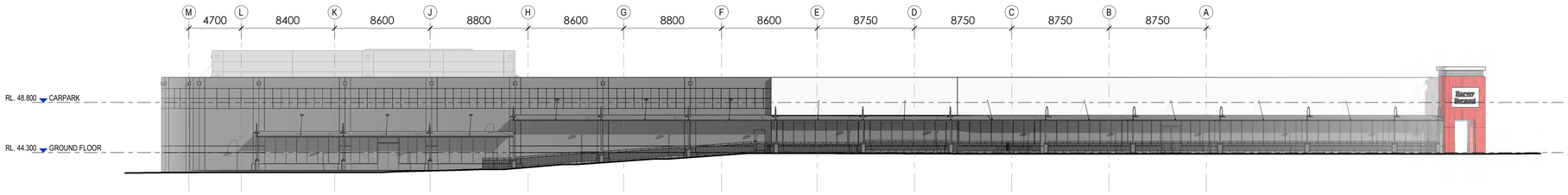
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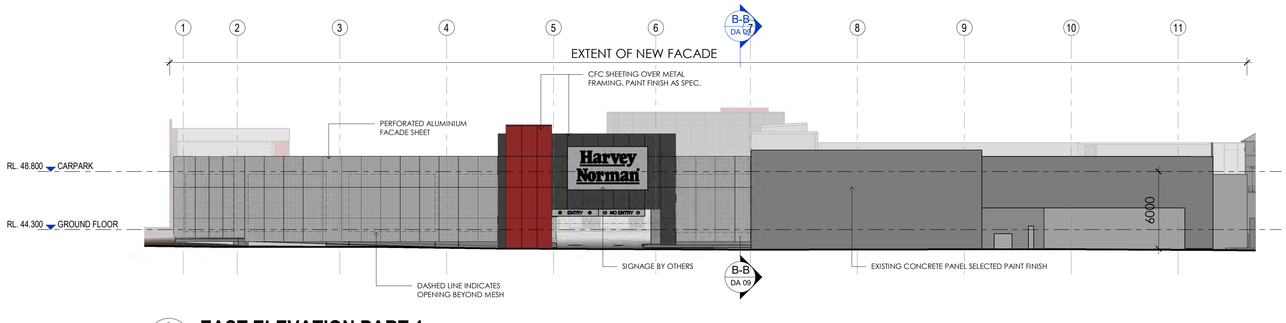
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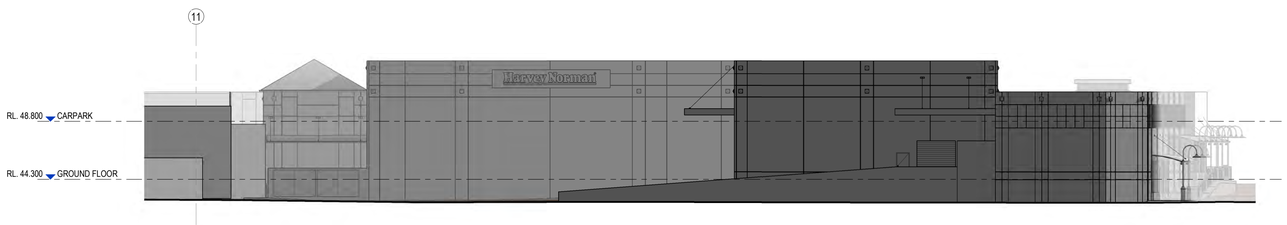
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P1	PRE-DA	17.08.23	SJC



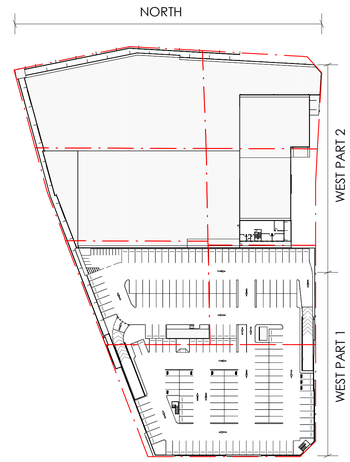
1 NORTH ELEVATION
DA 02
Scale: 1 : 200



2 EAST ELEVATION PART 1
Scale: 1 : 200



3 EAST ELEVATION PART 2
Scale: 1 : 200



SITE KEYPLAN 1 : 1000

FINISHES LEGEND

PT-01		DULUX MALAY GREY
PT-02		DULUX HARVEY NORMAN RED
PT-03		DULUX VIVID WHITE
PT-04		DULUX FLOODED GUM
RFS-01		DULUX SURFMIST (ROOF SHEETING)
MP-01		MESH FACADE PANELS

PRELIMINARY

ELEVATIONS 2

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SCALE 1:200

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. DA 08 REV. P1
DATE: MAY '23
DRAWN: LSA

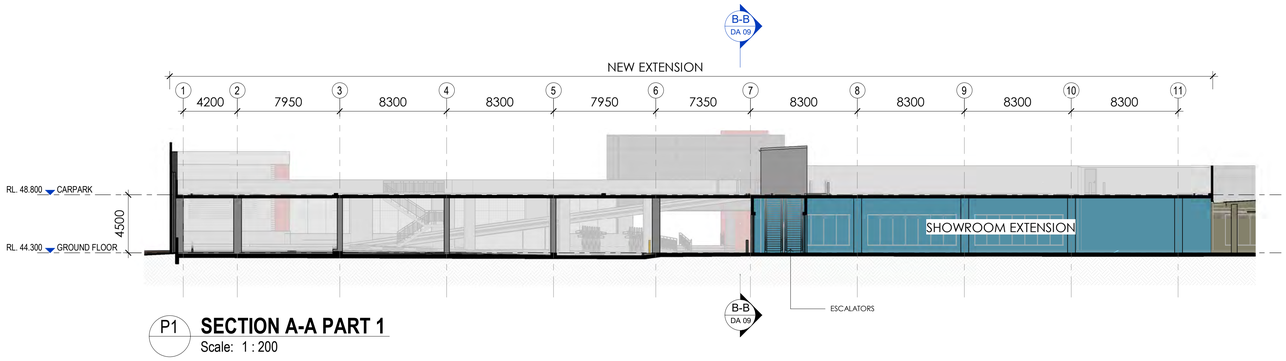
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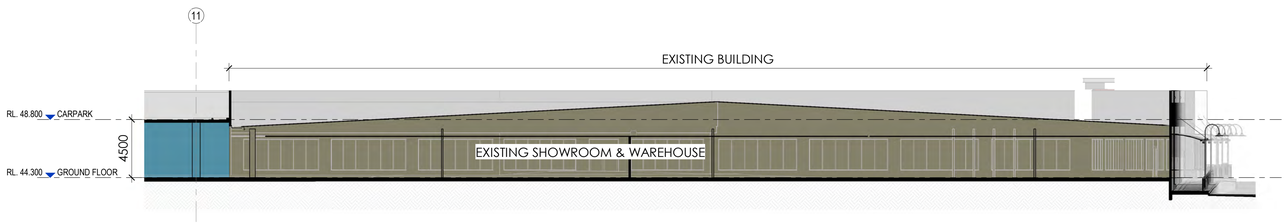
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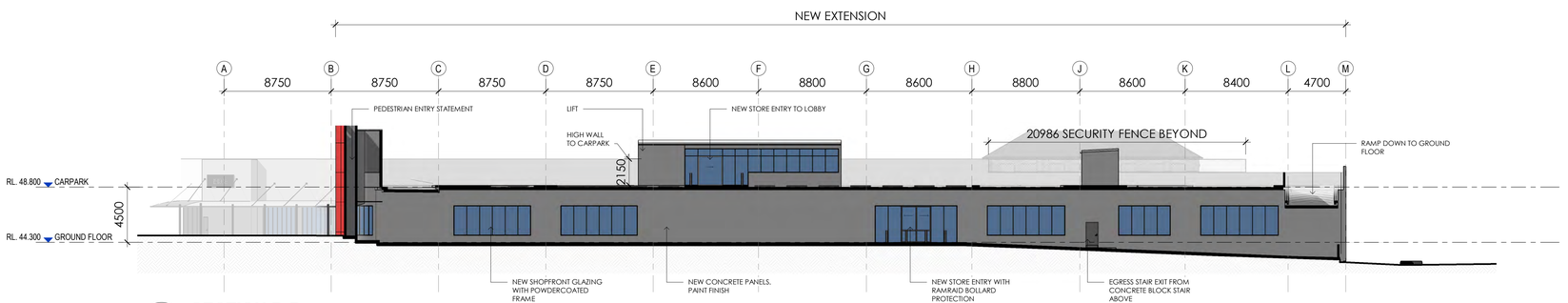
ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC



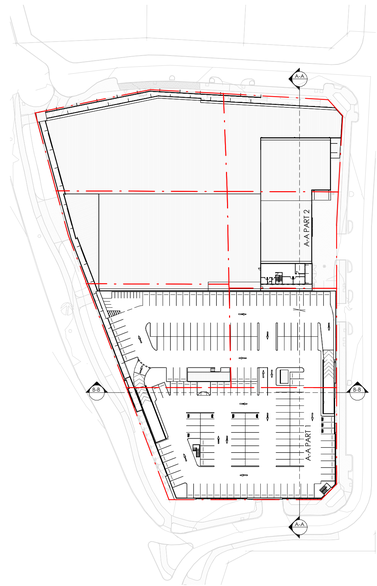
P1 **SECTION A-A PART 1**
Scale: 1 : 200



P2 **SECTION A-A PART 2**
Scale: 1 : 200



B-B
DA 02 **SECTION B-B**
Scale: 1 : 200



SITE KEYPLAN 1 : 1000

PRELIMINARY

SECTIONS

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SCALE 1:200
0 4 8 12 16 20

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: MAY '23
DRAWN: LSA
DWG NO. DA 09
REV. P1

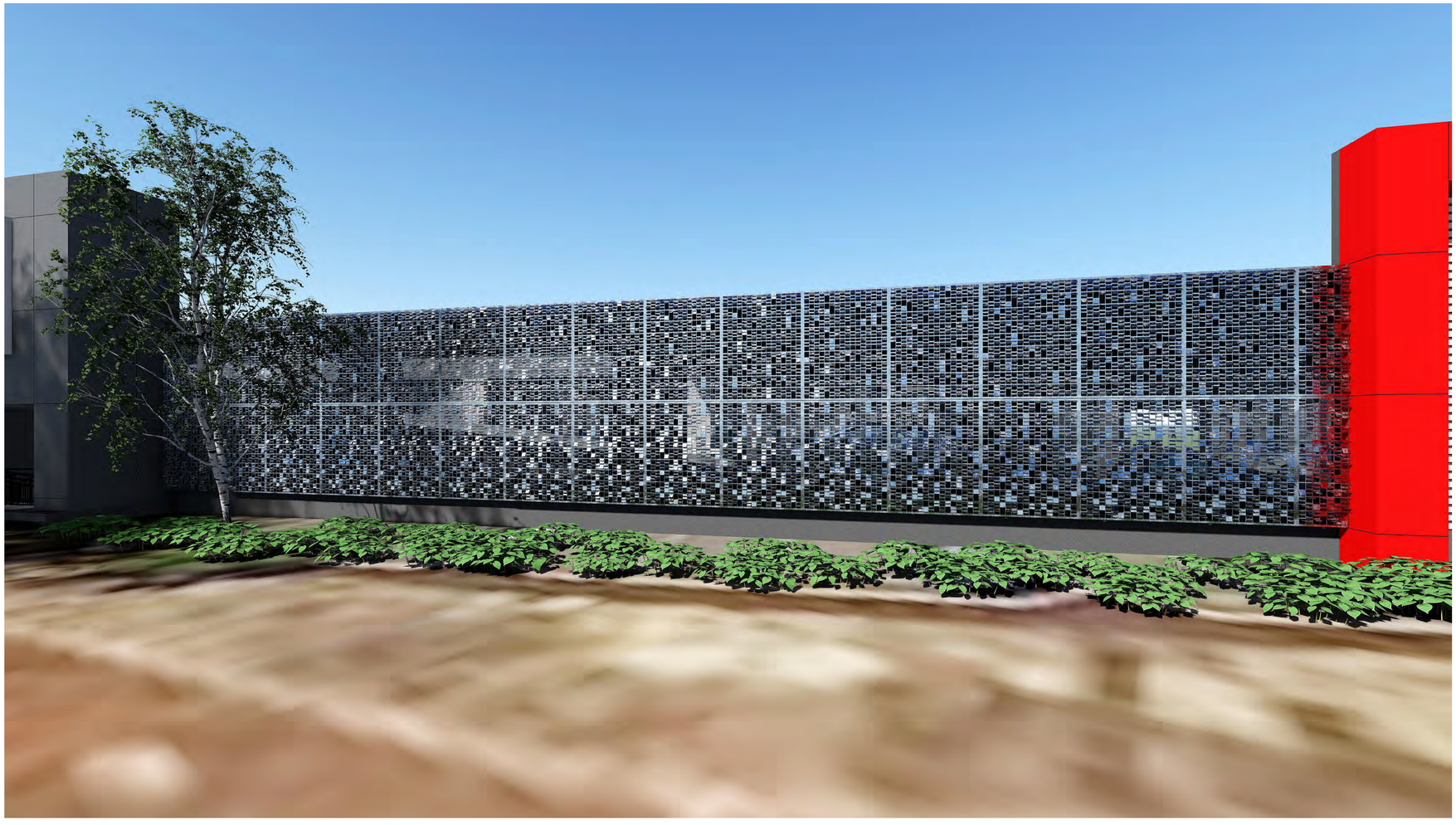
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P1	PRE-DA	17.08.23	SJC



VIEW FROM JOONDALUP DRIVE

PRELIMINARY

PERSPECTIVE 1

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SCALE NTS

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: 05/25/23
DRAWN: LSA

DWG NO. DA 10

REV. P1

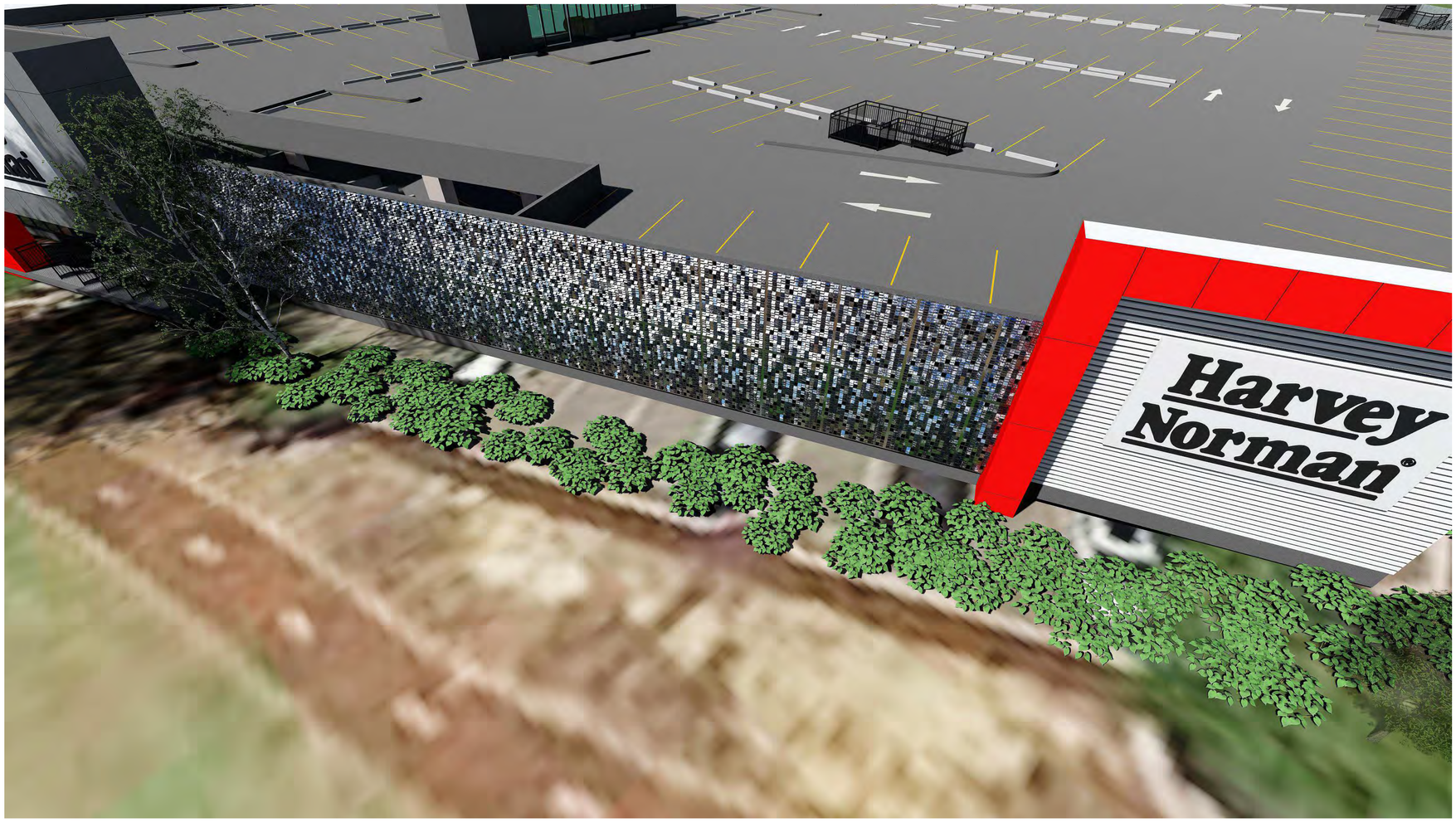
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VIEW FROM JOONDALUP DRIVE & CLARKE CRESCENT

PRELIMINARY

PERSPECTIVES 2

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SCALE NTS

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: 05/25/23
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DWG NO. DA 11

REV. P1

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ISSUE	AMENDMENT	DATE	CHK'D
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2 SK002A **TREE PROTECTION ZONE PLAN - ENLARGED**
Scale: 1 : 250



1 **TREE PROTECTION ZONE OVERALL PLAN**
Scale: 1 : 500

TREE PROTECTION ZONE LEGEND

- PROPERTY BOUNDARIES
- PROPOSED BUILDING AWNING
- OUTLINE OF PROPOSED PARKING STRUCTURE
- PROPOSED STORE EXTENSION
- AC00XX — ARBORIST TREE CODE - TO RETAIN
- AC00XX — ARBORIST TREE CODE - TO REMOVE
- TREE DIAGRAM
  - TREE CANOPY
  - TREE TRUNK
  - TREE PROTECTION ZONE

NOTE: FOR ALL EXISTING TREE DETAILS, REFER ARBORIST TREE SURVEY REPORT OCT 2022 - REF. Q005685

PRELIMINARY

TREE PROTECTION ZONE PLAN

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SCALE 1:100 (0 2 4 6 8 10)

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: 05/16/23
DRAWN: LSA
DWG NO. DA 12
REV. P1

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ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC



1 **EX. SITE PLAN**
Scale: 1 : 500



2 **LOCATION PLAN**

DA - DRAWING LIST		
SHEET N°	**SHEET NAME**	**SCALE**
DA 01	EXISTING SITE & LOCATION PLAN	1:500
DA 02	EXISTING FLOOR PLAN	1:500
DA 03	OVERALL FLOOR PLAN	1:200
DA 04	FLOOR PLAN SOUTH	1:200
DA 05	END OF TRIP AND OFFICE LAYOUT	1:200
DA 06	ROOF PLAN NORTH	1:200
DA 07	ROOF PLAN SOUTH	1:200
DA 08	ELEVATIONS 1	1:200
DA 09	ELEVATIONS 2	1:200
DA 10	SECTIONS	1:200
DA 11	STEEL FACADE PANEL DETAIL	1:20
DA 12	PERSPECTIVE 1	NTS
DA 13	PERSPECTIVE 2	NTS

NOTE:
SITE BOUNDARIES AND SITE AREAS AND EXISTING BUILDING ARE INDICATIVE ONLY. SUBJECT TO CONFIRMATION BY LICENSED SURVEYOR.

DEVELOPMENT SUMMARY

EXISTING BUILDING	=	7,049 SQM
TOTAL CARPARKING	=	238 SPACES
EXISTING BUILDING EXTENSION	=	3,003 SQM
TOTAL AREA	=	10,052 SQM
PARKING PROVIDED		
TOTAL CAR SPACES	=	197 SPACES (1:51)
TOTAL MOTORBIKE	=	14 SPACES
TOTAL BICYCLES	=	24 SPACES

DEVELOPMENT APPLICATION

EXISTING SITE & LOCATION PLAN

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SCALE 1:500 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. REV.
DATE: MAY '23 DA 01 A
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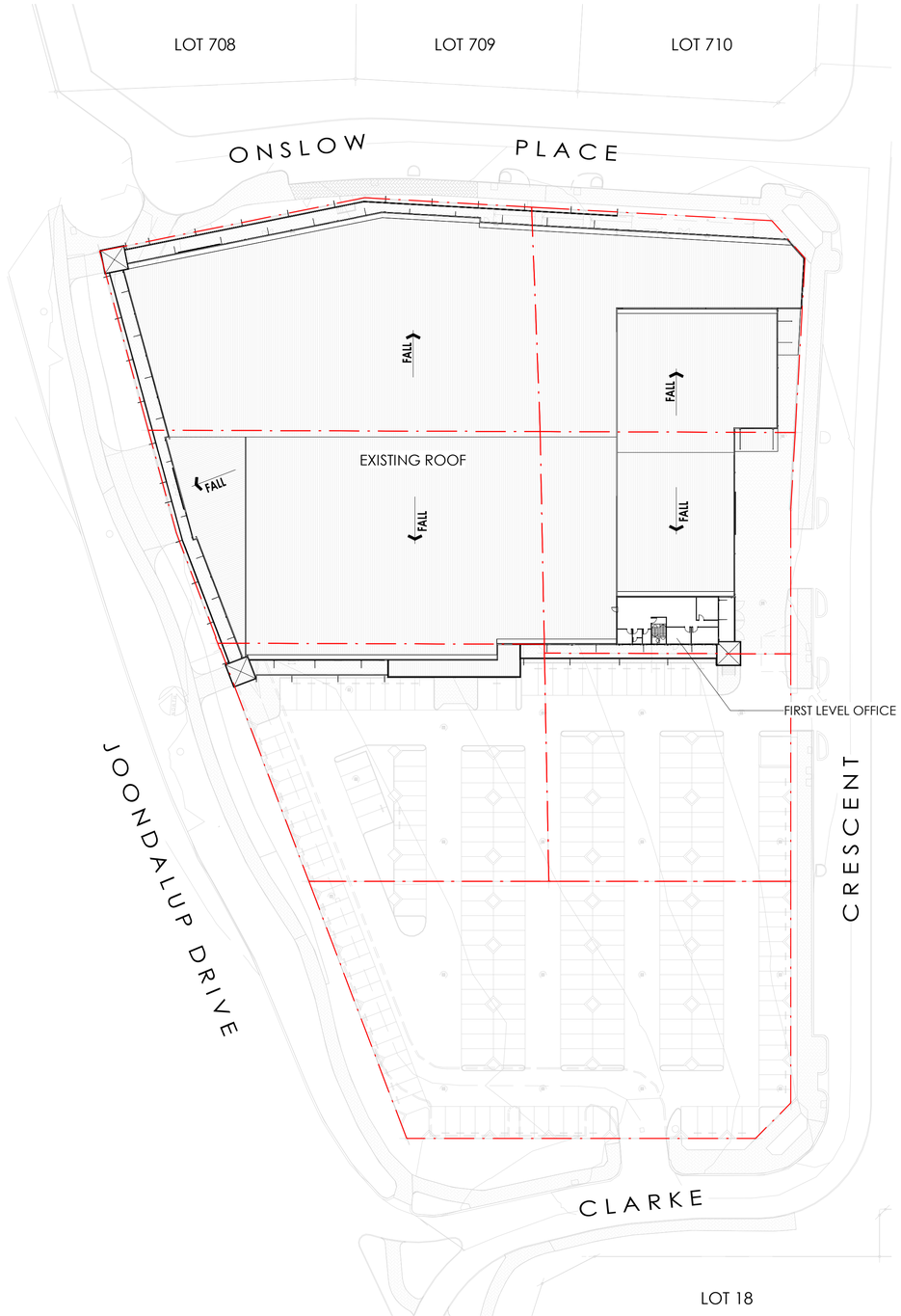
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ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC



1 - **EXISTING GROUND FLOOR PLAN**
Scale: 1 : 500



2 - **EXISTING FIRST FLOOR PLAN**
Scale: 1 : 500

DEVELOPMENT APPLICATION

EXISTING FLOOR PLAN

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SCALE 1:500 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DATE: MAY '23 DRAWN: LSA
DWG NO. DA 02
REV. A

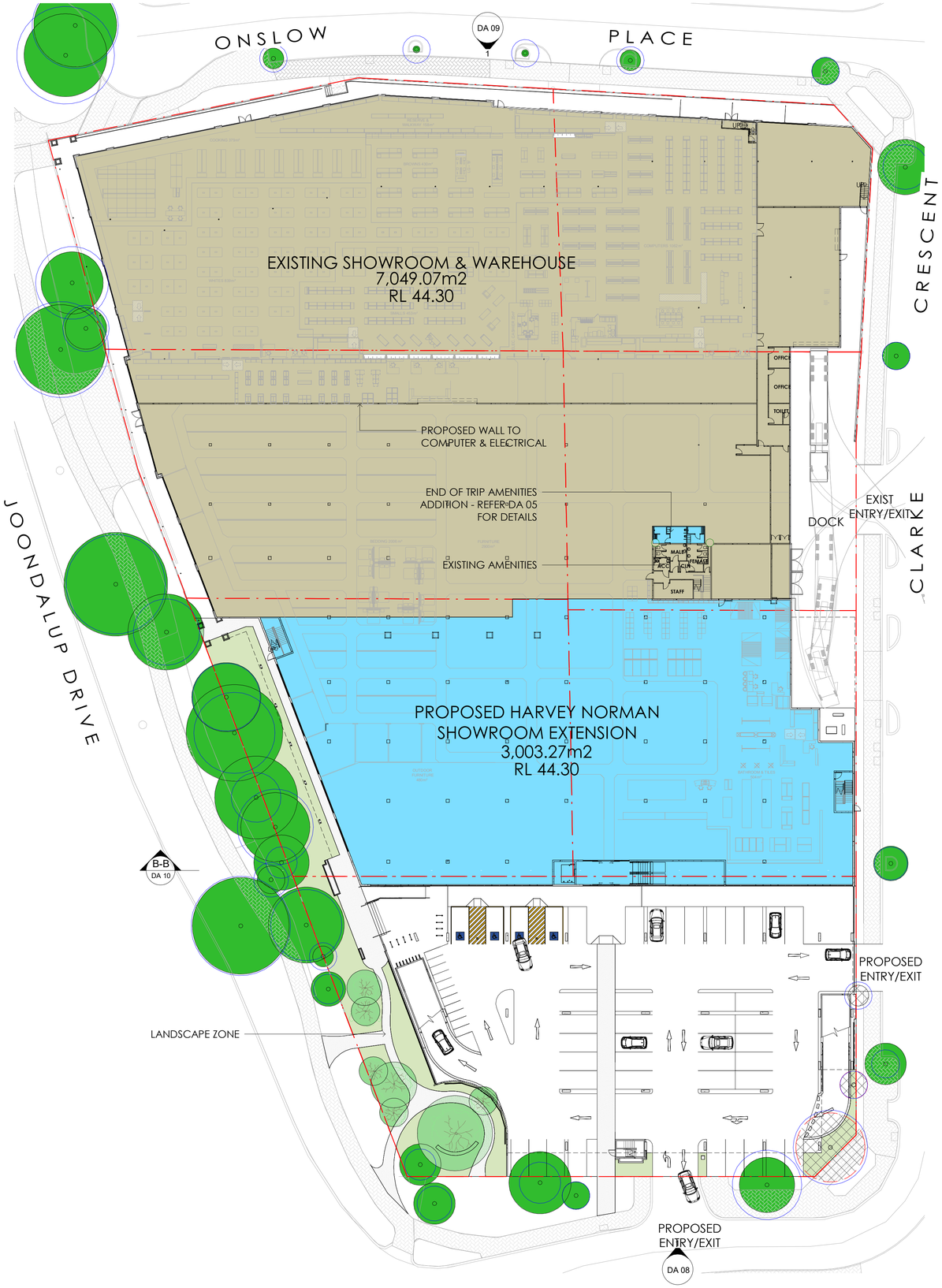
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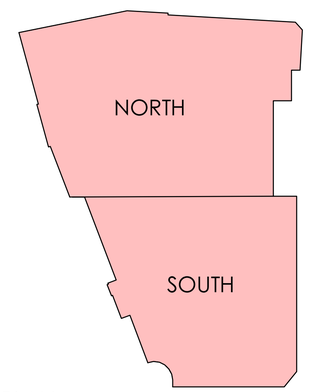
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P1	PRE-DA	17.08.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC





KEYPLAN

1 DASS 02 **GROUND FLOOR OVERALL**
Scale: 1 : 350

DEVELOPMENT APPLICATION

OVERALL FLOOR PLAN

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SCALE 1:200 @A1
0 4 8 12 16 20

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DATE: MAY '23 DRAWN: LSA
DWG NO. DA 03 REV. A

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EXISTING SHOWROOM

BEDDING 2006 m²

FURNITURE 2900m²

PROPOSED HARVEY NORMAN SHOWROOM EXTENSION

3,003m2

RL 44.30

NEW DOCK EXTENSION

1 DA 05

ENTRY FILLED WITH LIKE PAVERS FROM EAST CLARKE CRES DEMO

NEW FIRE STAIR

NEW FIRE STAIR

DASHED LINE INDICATES AWNING ABOVE

OUTDOOR FURNITURE 460m²

BATHROOM & TILES 504m²

WINDOW

LIFT

NEW AIRLOCK ENTRY

ESCALATORS

NEW SHOPFRONT

NEW SHOPFRONT

RL 43.810

JOONDALUP DRIVE

CLARKE CRESCENT

B-B DA 10

B-B DA 10

A575

1:18

UP

BICYCLE PARKING X 24

RAMP 1 UP 1:6

1:12 TRANSITIONS @3.6m UP TO FIRST FLOOR

11 M.BIKE

A675

1 DA 11

1 DA 11

PROPOSED CAR PARK

43 SPACES

5

5

10

9

5

4

5

6850

RAMP 2 DN 1:6

1:12 TRANSITIONS @3.6m DOWN FROM FIRST FLOOR

ENTRY / EXIT

NEW ROAD VERGE AND DRIVEWAY TO CAR PARK

UNDERSIDE OF RAMP WALLED-IN

PAVING EXTENSION FOR NEW PEDESTRIAN ENTRY, EXISTING TREE REMOVED

NEW ENTRY STATEMENT

UNDERSIDE OF RAMP WALLED-IN

LANDSCAPE ZONE WITH PEDESTRIAN ENTRY PATHING, PROPOSED TREES DISPLAYED IN LIGHT GREEN HATCH

RL 44.288

EXISTING TREES TO BE REMOVED

FIRST FLOOR CARPARK ABOVE SHOWN DASHED

AC0018

AC0015

ENTRY / EXIT

LANDSCAPED CORNER STATEMENT, RADIAL TREE FOCUS TO MODULATE FACADE REFER LANDSCAPE ARCHITECT DRAWINGS

PROPOSED RECONFIGURATION OF ROAD VERGE/DRIVEWAY ENTRY

NEW FIRE STAIR

1 DA 08

NORTH

SOUTH

KEYPLAN

1 DASS 02 **GROUND FLOOR - SOUTH**

Scale: 1 : 200

DEVELOPMENT APPLICATION

FLOOR PLAN SOUTH

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SCALE 1:200 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: MAY '23
DRAWN: LSA
DWG NO. DA 04
REV. A

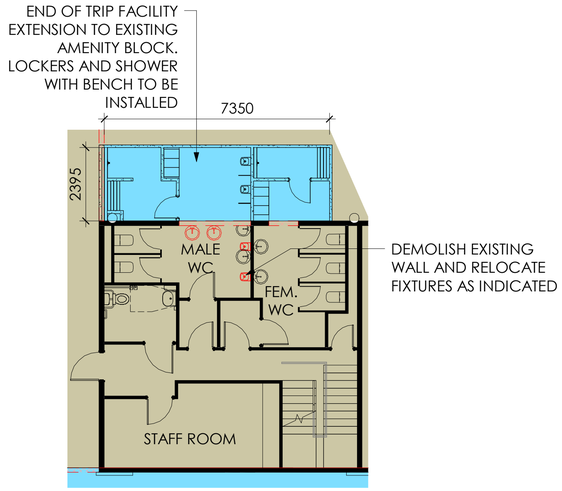
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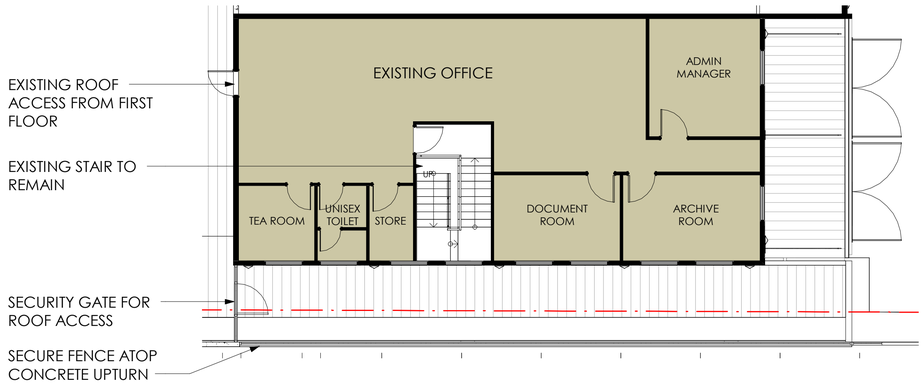
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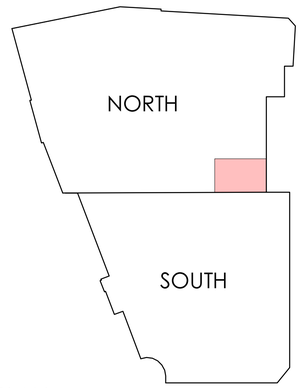
ISSUE	AMENDMENT	DATE	CHK'D
A	DEVELOPMENT APPLICATION	17.11.23	SJC



1 DA 04 **PROPOSED GROUND FLOOR AMENITY WITH END OF TRIP**
Scale: 1 : 100



2 DA 06 **EXISTING FIRST FLOOR - OFFICE**
Scale: 1 : 100



KEYPLAN

END OF TRIP AND OFFICE LAYOUT

DEVELOPMENT APPLICATION

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SCALE 1:100 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. REV.
DATE: 11/02/23 DA 05 A
DRAWN: CRB

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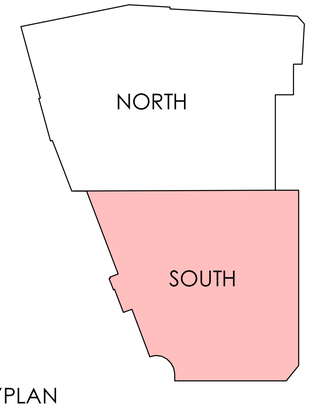
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P1	PRE-DA	17.08.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC
B	DEVELOPMENT APPLICATION - ROOF PLAN AWNING INDICATED	07.12.23	SJC





KEYPLAN

1 DASS 02 **ROOF PLAN - SOUTH**
Scale: 1 : 200

1 DA 08

DEVELOPMENT APPLICATION

ROOF PLAN SOUTH

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SCALE 1:200 @A1 (0 4 8 12 16 20)

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DATE: MAY '23 DRAWN: LSA
DWG NO. DA 07 REV. B

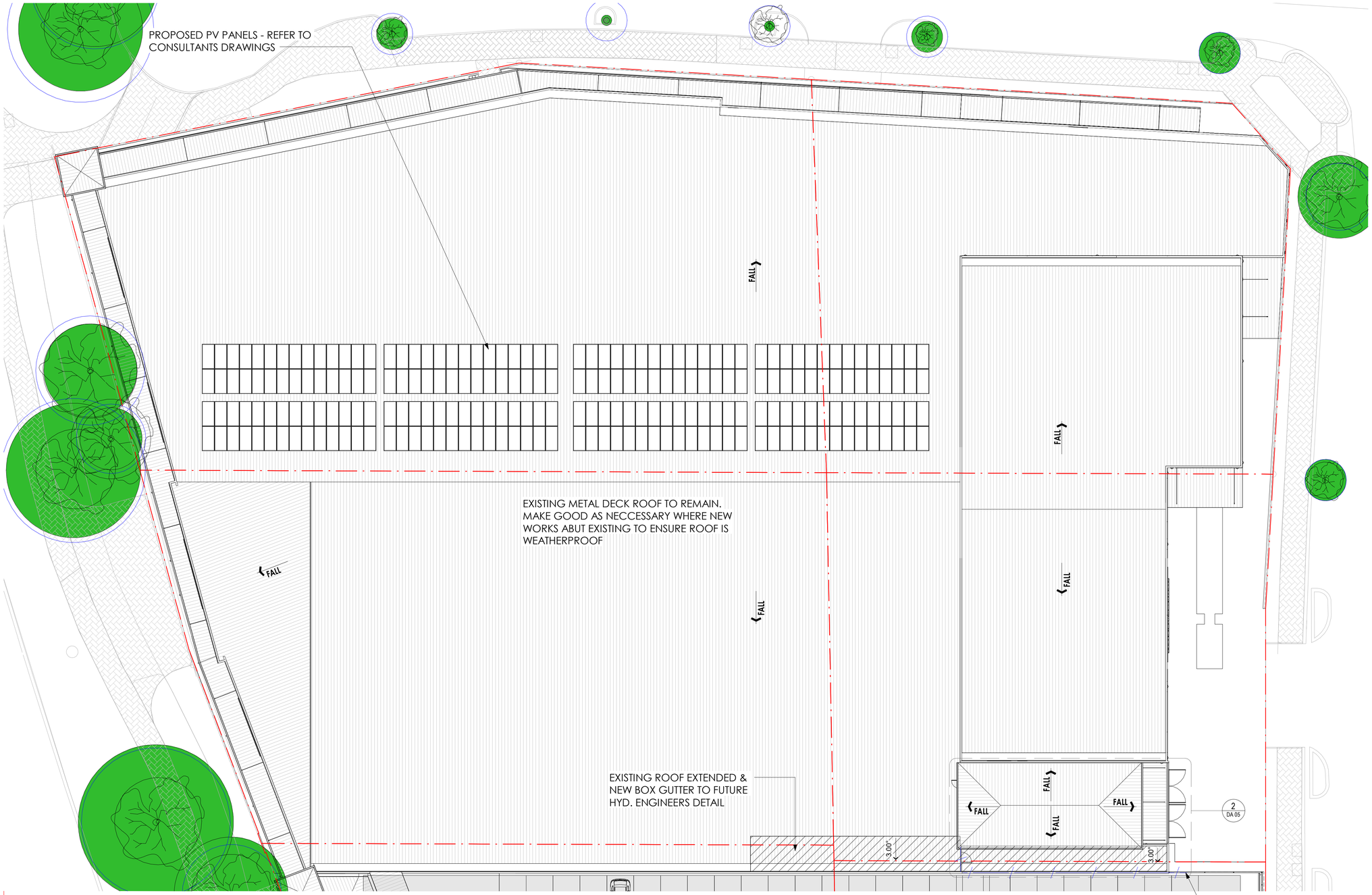
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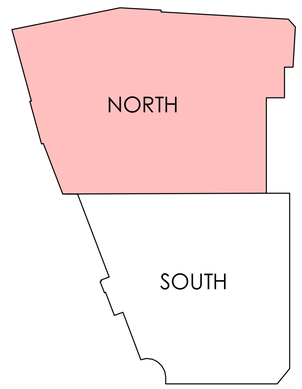
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ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC



1 DASS 02 **ROOF PLAN - NORTH**
Scale: 1 : 200



KEYPLAN

DEVELOPMENT APPLICATION

ROOF PLAN NORTH

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SCALE 1:200 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. REV.
DATE: MAY '23 DA 06 A
DRAWN: LSA

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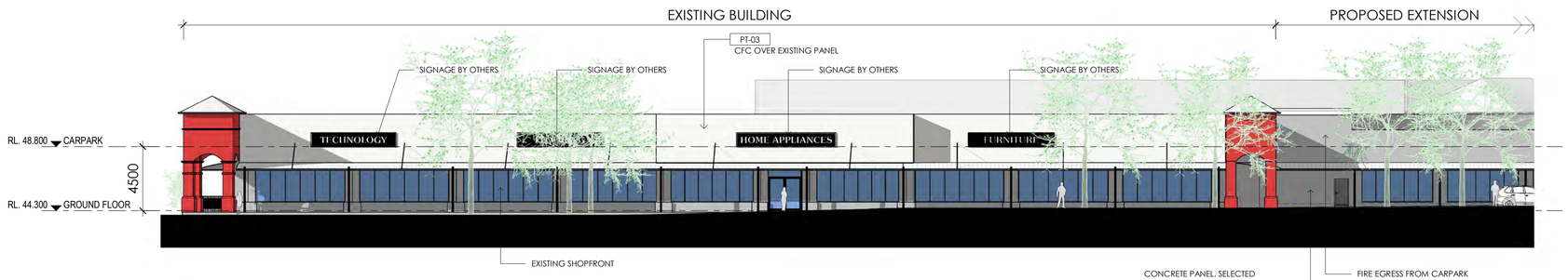
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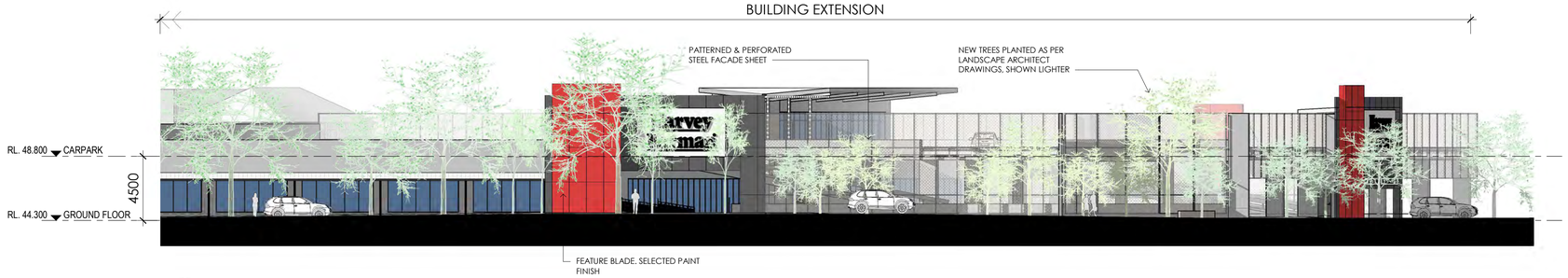
ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC
B	DEVELOPMENT APPLICATION - SECTION C-C ADDED	07.12.23	SJC



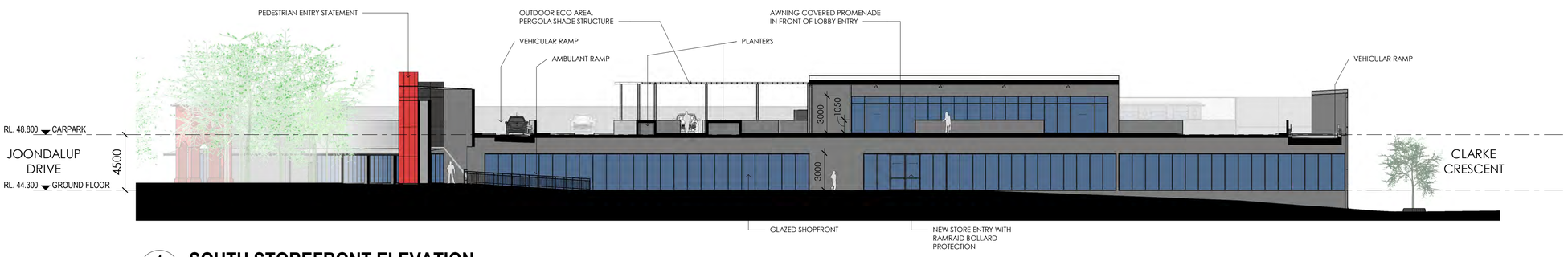
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2 **WEST ELEVATION PART 1**
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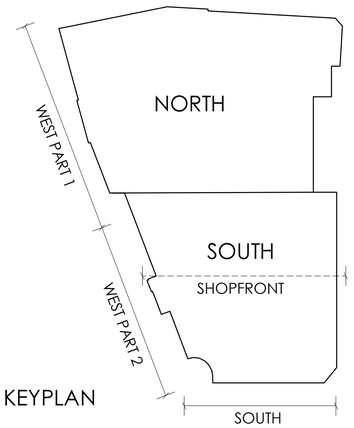
3 **WEST ELEVATION PART 2**
Scale: 1 : 200



4 - **SOUTH STOREFRONT ELEVATION**
Scale: 1 : 200

FINISHES LEGEND

PT-01	DULUX MALAY GREY
PT-02	DULUX HARVEY NORMAN RED
PT-03	DULUX VIVID WHITE
PT-04	DULUX FLOODED GUM
RFS-01	DULUX SURFMIST (ROOF SHEETING)
MP-01	MESH FACADE PANELS



KEYPLAN

DEVELOPMENT APPLICATION

ELEVATIONS 1

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SCALE 1:200 @A1 (0 4 8 12 16 20)

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. REV.
DATE: MAY '23 DA 08 B
DRAWN: LSA

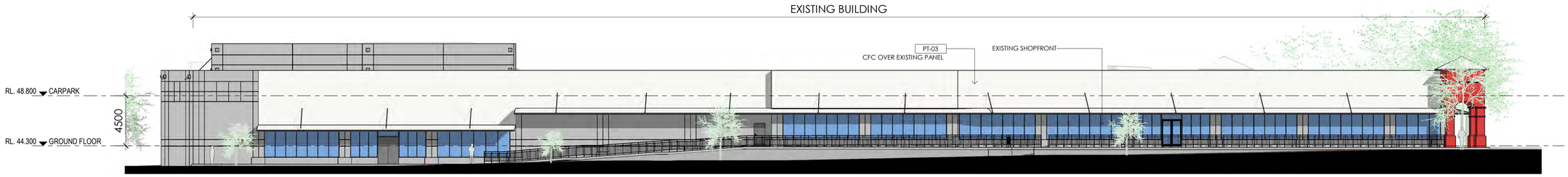
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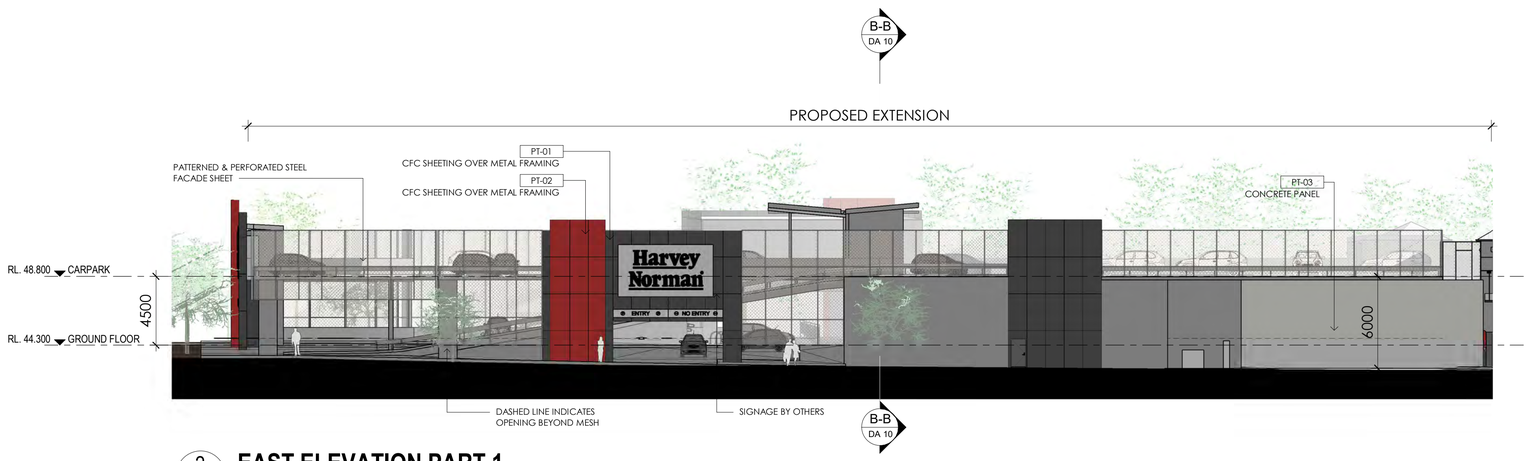
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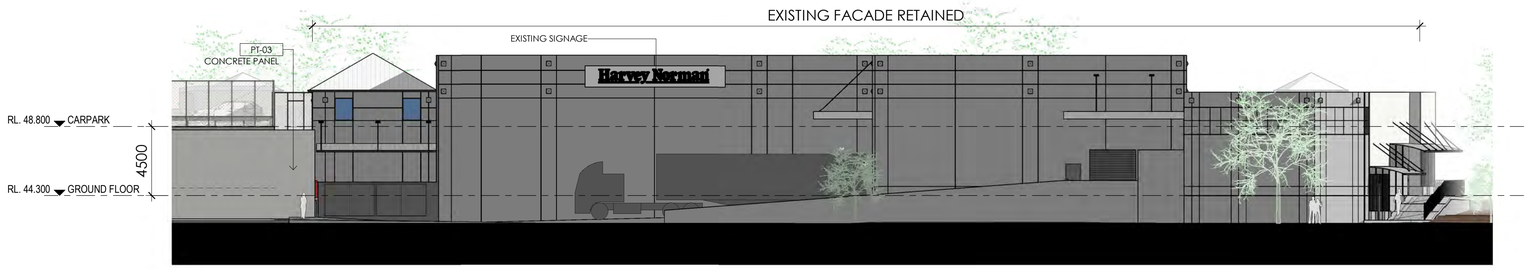
ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.08.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC



1 EXISTING NORTH ELEVATION
Scale: 1 : 200



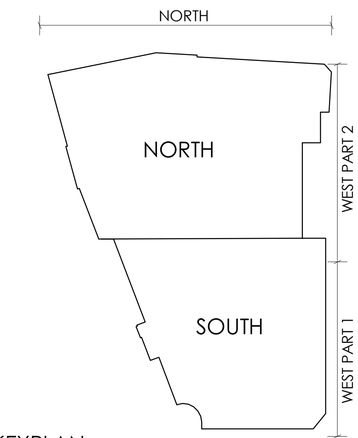
2 EAST ELEVATION PART 1
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3 EXISTING EAST ELEVATION PART 2
Scale: 1 : 200

FINISHES LEGEND

PT-01		DULUX MALAY GREY
PT-02		DULUX HARVEY NORMAN RED
PT-03		DULUX VIVID WHITE
PT-04		DULUX FLOODED GUM
RFS-01		DULUX SURFMIST (ROOF SHEETING)
MP-01		MESH FACADE PANELS



KEYPLAN

DEVELOPMENT APPLICATION

ELEVATIONS 2

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0 4 8 12 16 20 SCALE 1:200 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. REV.
DATE: MAY '23 DA 09 A
DRAWN: LSA

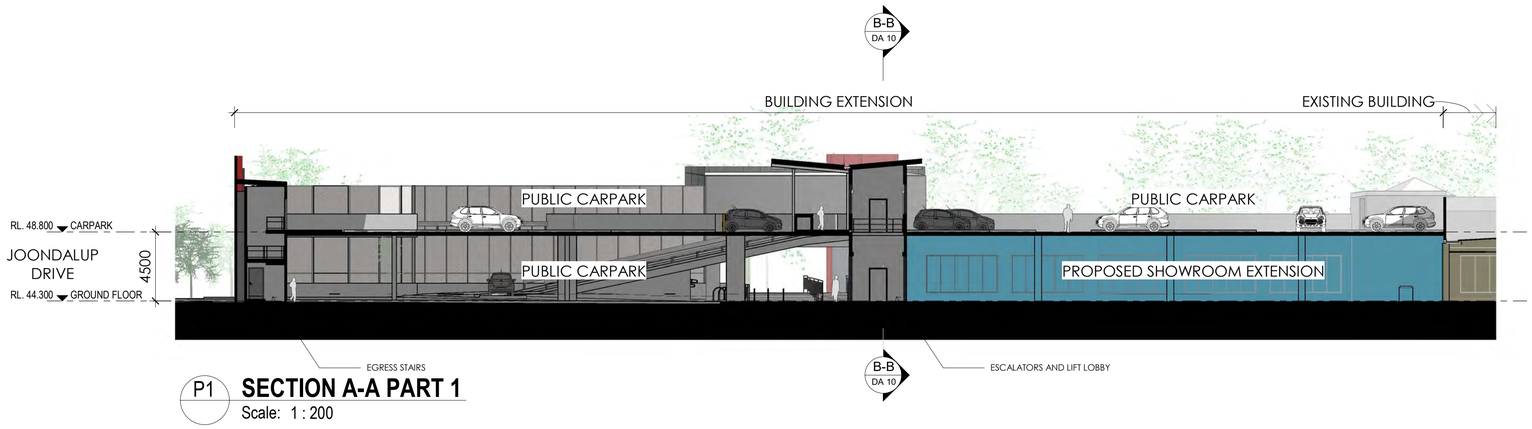
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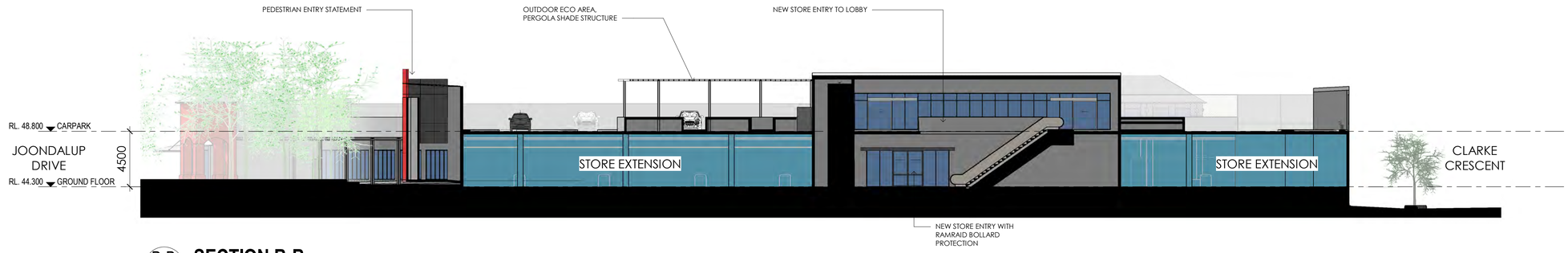
ISSUE	AMENDMENT	DATE	CHK'D
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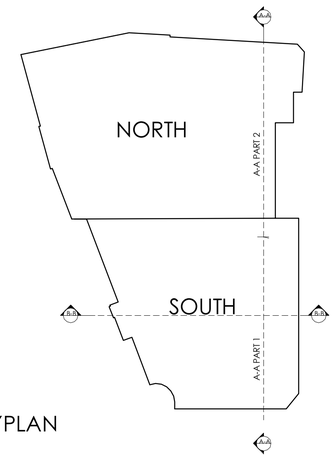
P1 **SECTION A-A PART 1**
Scale: 1 : 200



P2 **SECTION A-A PART 2**
Scale: 1 : 200



B-B DA 03 **SECTION B-B**
Scale: 1 : 200



KEYPLAN

DEVELOPMENT APPLICATION

SECTIONS

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0 4 8 12 16 20 SCALE 1:200 @A1

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DATE: MAY '23
DRAWN: LSA

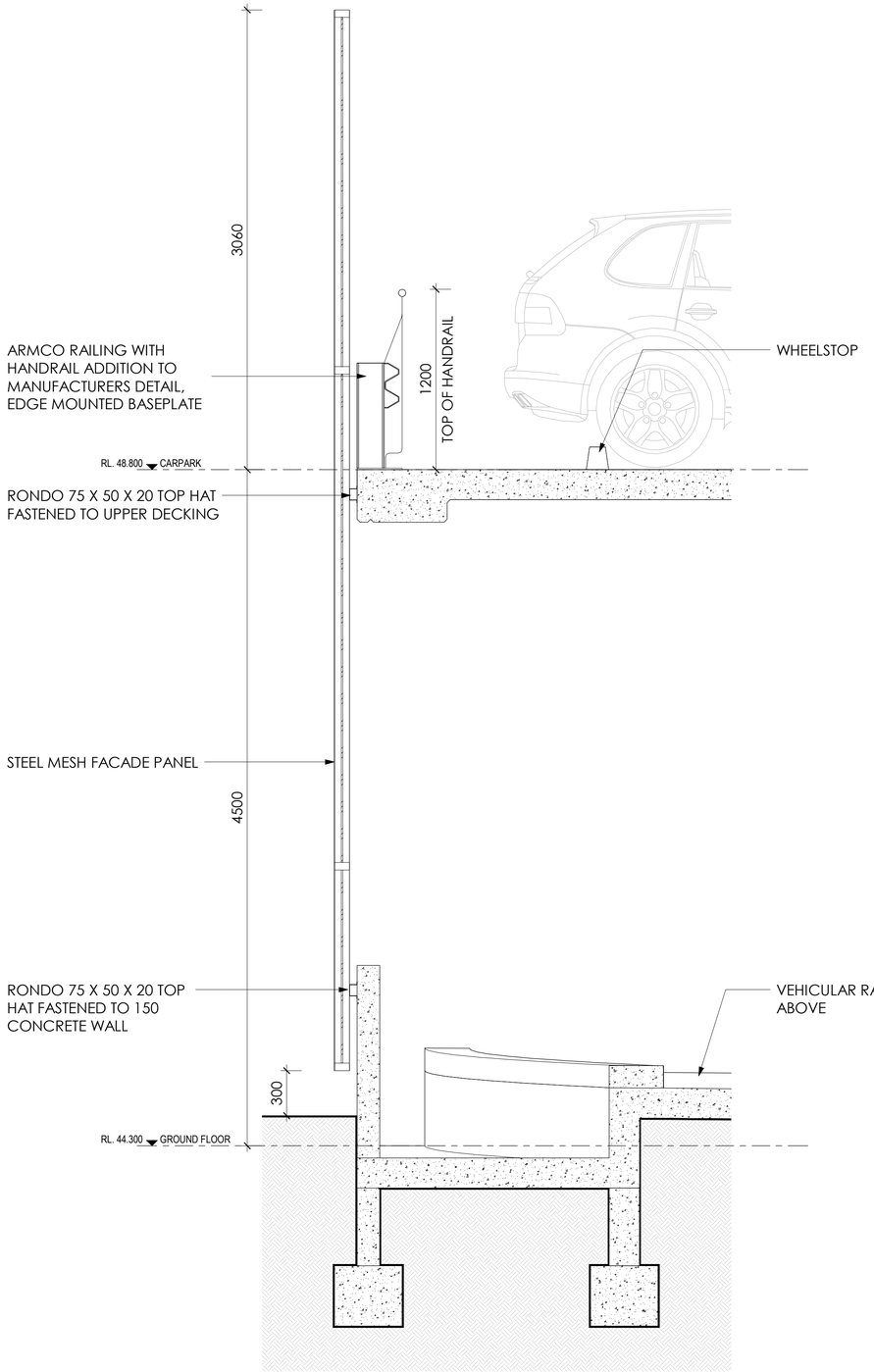
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1 DA 04 **STEEL FACADE PANEL DETAIL**
Scale: 1 : 20



JOONDALUP DRIVE & CLARKE CRESCENT AERIAL CORNER STATEMENT

DEVELOPMENT APPLICATION

STEEL FACADE PANEL DETAIL

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0 0.4 0.8 1.2 1.6 2 SCALE 1:20 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244 DWG NO. REV.
DATE: 11/15/23 DA 11 A
DRAWN: Author

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Harvey Norman
ENTRY
NO ENTRY

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JOONDALUP DRIVE & CLARKE CRESCENT CORNER STATEMENT

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SCALE NTS @A1

DEVELOPMENT APPLICATION

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: 05/25/23
DRAWN: LSA
DWG NO. DA 12
REV. A

PERSPECTIVE 1

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VIEW FROM JOONDALUP DRIVE

DEVELOPMENT APPLICATION

PERSPECTIVE 2

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SCALE NTS @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: 05/25/23
DRAWN: LSA
DWG NO. DA 13
REV. A

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VIEW FROM JOONDALUP DRIVE

DEVELOPMENT APPLICATION

PERSPECTIVE 2

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SCALE NTS @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE. JOONDALUP WA

JOB NO: 5244
DATE: 05/25/23
DRAWN: LSA
DWG NO. DA 13
REV. A

LEFFLER SIMES ARCHITECTS

Table 4. Summary of DRP Comments from 20 December 2023 and Design Responses

Principle	DRP Review Comments and Recommendations	Design Comments / Response
1. Context and Character	**Comments:** • Refer to the comments below for detailed advice on the design response to the context and contributing to a sense of place. **Recommendation 1:** • Refer to Principles 2 to 10 for detailed comment.	The plans included in this development application have been revised following each of the two DRP meetings. They have evolved to ensure that they respond to the DRP feedback and are responsive to the context and character of the subject site and the Joondalup Activity Centre, both now and into the future, contributing positively to the sense of place. Refer to the responses for each of the principles below.
2. Landscape Quality	**Comments:** • The Applicant is commended for the proposed tree retention. Following on from this, the Applicant should commission a full arboricultural assessment of the retained trees to understand the Structural Root Zone and Tree Protection Zones and how these are to be respected during construction and to ensure the trees ongoing survival post development. • Consider deep soil diagrams and calculations to clarify the provisions on site. • Provide more detail on the proposed plant palette, including the use of native planting. • Consider substituting the large areas of mulch for plants. • Consider a more generous and flowing approach to planting rather than strictly following the lot boundary • Consider planted areas behind the cycle path rather than all turf. • Consider a path connection in the verge to the south. • The path provided within the front setback on the lot could be widened to be more welcoming and safer for pedestrians. **Recommendation 2:** • Commission a full arboricultural assessment of the retained trees. • Consider deep soil diagrams and calculations. • Provide a detailed plant palette, including consideration of native species. • Consider plants instead of lots of mulch. • Consider a more generous and flowing approach to planting at the boundary interface with the verge. • Consider planted areas behind the cycle path. • Consider a new path connection along the verge to the south.	• The landscape design has been revised consistent with the DRP's recommendations to: - Incorporate a detailed plant palette incorporating native species; - Increase the number of plants being provided with a reduction in open mulched areas; - Expanded the proposed planting area beyond the site boundary to merge into the shared pathway in the public realm; - Reviewed and increased path widths where appropriate; - Expanded the path network to connect into the existing shared path to the west and south of the site; • Other key aspects of the design, which were included following the first DRP review include: - All existing trees within the verge to the Joondalup Drive frontage of the site are being retained as a result of the façade of the new extension and multideck car park being set back from this boundary. - Seating for rest and relaxation for passing cyclists and pedestrians or store users is provided to the site frontage. - Deep soil planting of 8.3% of the development footprint area is being delivered. - Planting, seating and shade are provided on the roof deck of the multistorey car park for use by staff or customers. This supplements the seating and shade provided fronting the public realm to Joondalup Drive.
3. Built Form and Scale	**Comments:** • Consider greater building articulation of the south-western corner, such as variation or an increase in screen height. The screening height currently appears monotonous. **Recommendation 3:** • Consider greater building articulation of the south-western corner.	• The screen heights have been varied to provide articulation and visual interest.

Principle	DRP Review Comments and Recommendations	Design Comments / Response
4. Functionality and Quality	**Comments:** Indicate the location of visually screened A/C plant and all other services in a location that is not visible from the public realm and impacting on user amenity. **Recommendation 4:** Indicate the location of all visually screened building services.	• All existing A/C and plant are identified on the roof plan. No change is proposed to this existing plant. • The proposed new solar panels are indicated on the roof plan. These are located so as to be screened from the public realm. • New plant for the proposed extension is shown in screened enclosures on the car park deck roof.
5. Sustainability	**Comments:** • Due to the scale of the project, consider opportunities in the design to reinforce sustainability, such as (but not limited to) robust material selection, energy efficiency and generation, water capture and re-use and waste recycling. • As per DR1, consider adding shade structures with PV panels on the large upper deck carpark to provide climate protection and reduce the heat sink impact. • As per DR1, consider electric vehicle charging stations in dedicated bays. **Recommendation 5:** • Provide a broad sustainability strategy and commitment to initiatives. • Consider shade structures and PV panel provision on the roof deck. • Consider providing EV chargers.	• The Applicant's sustainability consultant, Cundall has completed a sustainability assessment covering a number of targets and initiatives across multiple sustainable outcomes. Some of the key initiatives include: - The proposed extension will be all electric and fossil fuel free. - All lighting will be LED, low energy lighting. - All appliances installed will be energy and water efficient. - All metering to be designed in line with NABERS requirements. - The proposed development includes approximately 224 PV panels generating approximately 107MWh per year and have been shown on the roof plans. - Shade structures are provided for the rooftop amenity areas. - Provision is provided for two (2) future electric vehicle charging stations.
6. Amenity	**Comments:** • Consider enlarging the entry void at the upper carpark deck to introduce light, air and enable an outlook to trees from below. • Consider locations for more voids in the upper level deck for natural light and air to enter the large expanse of the ground floor car park. **Recommendation 6:** • Consider enlarging the entry void at the upper carpark deck.	• The upper deck entry has been reconfigured and now incorporates more generous pedestrian entrances, additional seating opportunities and increased landscaping. A pergola has been added to the seating area.

Principle	DRP Review Comments and Recommendations	Design Comments / Response
7. Legibility	**Comments:** • As highlighted at DR1, the front door to the store (located in the centre of the building on the southern side) remains concealed from public view due to coverage by the proposed carpark structure. • Consider a wider pedestrian entry on the western Joondalup Drive side leading to the store's front door, co-located with the area of the showroom (with glazed openings) designated as outdoor furniture and a second pocket park for amenity. This park would be passively surveilled by passers-by and visitors to the store, and likely would be better used than the current south-western park that functions more as a landmark space. **Recommendation 7:** • Consider a wider and more welcoming pedestrian entry positioned closer to Joondalup Drive leading to the store's front door, co-located with the outdoor furniture showroom and a second pocket park.	• The store entry has been adjusted and moved west of its previous location to bring it closer to the Joondalup Drive frontage of the site. It will now be in the direct line of sight for pedestrians entering the store from the Joondalup Drive pedestrian entry point, increasing its legibility. • The entry statement to the western pedestrian entry has also been relocated to sit directly above the proposed new stairs. • The extent of glazing to the western façade has also been extended towards the corner to make this more transparent and inviting. • Lightwell voids have been incorporated into the car park design to improve the amenity and light in the lower car parking area. • Bench seating has been relocated closer to the pedestrian entry to provide a gathering space near the entrance. • The outdoor furniture display area is notated as being adjacent to the south western corner of the new showroom to create synergy with the new entrance.
8. Safety	**Comments:** • Refer to Principle 7 – Legibility above about passive surveillance of the western pedestrian entry to the store's front door. • Given the street interface of the proposed carpark extension is largely inactive, consider improving the safety of the development generally through passive surveillance opportunities and lighting at night, such as back lighting of the screen around the carpark. Refer also to Principle 9 – Community. **Recommendation 8:** • Consider safety for users of the western pedestrian entry. • Consider safety of the development through passive surveillance opportunities and lighting at night	• There is increased glazing to the south western corner of the showroom entry to increase legibility and passive surveillance to the western pedestrian entry. • The car park will be lit at night. • Other CPTED principles that have been considered in the design include: - Providing shopfront glazing to the southern showroom elevation to ensure there is passive surveillance at the building entry and into the car park; - Ensuring the landscaped frontage and seating node has clear sightlines from the adjacent road; - Avoiding the design of entrapment spaces; - Utilising visually permeable screening to the car park façade to facilitate natural surveillance and light (as well as natural ventilation); - Ensuring the car parking areas are designed with clear sightlines to the building entries; - Planning the trees (clear trunks) and shrub heights to ensure planting will not impede sightlines; and - Selecting furniture and finishes that are designed to mitigate against misuse or vandalism.
9. Community	**Comments:** • Consider the opportunity for the carpark screen to be back lit to enhance community safety at night, and for the perforated screen to present as a striking artwork that relates strongly to its urban setting at all times of the day. **Recommendation 9:** • Consider the opportunity for the carpark screen to be back lit and be visible after dark.	• The steel façade panel detail included with the architectural plans indicates the proposal to back light the perforated screen at night.

Principle	DRP Review Comments and Recommendations	Design Comments / Response
10. Aesthetics	**Comments:** • Consider early engagement of a public artist to assist with the design of the artwork for the car park screen; this large-scale element should be designed collaboratively with the artist and not in advance. • The specific design issues for the car park screen include its monotonous height and length along Joondalup Drive, the heavy industrial appearance, and the upper-level railing that may be visible through the screen. Suggested improvements are: - Adjust the upper-level screening to present a less vertically continuous façade to the street - As above, the artist should assist with finer details for the screen. • Consider the design of the ceiling soffit in the ground level carpark to improve the amenity for visitors and considering the front door is also in this space. **Recommendation 10:** • Consider early engagement of a public artist to assist with the design of the artwork for the car park screen. • Consider reducing the screen's monotonous height and length and evolving a more refined design. • Consider how the design of the ceiling soffit in the carpark could improve the amenity of the space for visitors.	The City does not yet have an adopted policy regarding the provision of public art. Nonetheless the Applicant will explore opportunities to work with a local photographic artist on the design of the imagery for the screen. The plans have been amended to provide variation in the height of the car park screens. Voids have also been incorporated in the multideck car park design to introduce additional natural light into the lower car parking area and provide enhanced amenity.

As demonstrated in Table 4, the minutes from the second DRP demonstrate that the design is progressing to advance in a direction that was supported by the DRP. It is considered that the development application plans included at Appendix B, which have incorporated further changes since December 2023 (as also outlined in Table 4), address the key outstanding matters recommended by the DRP and can now be supported on the basis of their design response to the ten principles of *State Planning Policy 7.0 Design of the Built Environment* (SPP 7.0).

Inspiring Innovation in Parking and Transport

Transport Impact Statement

36 Clarke Crescent, Joondalup



LEVEL 5 DESIGN

Project number 12020

February 2024

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1 Introduction

Level5Design (L5D) has been commissioned by Harvey Norman to prepare a Transport Impact Statement (TIS) for the expansion of the Harvey Norman Store in Joondalup. The proposal includes the extension of the current showroom and the construction of an additional floor, providing further showroom space and parking area ('the Development'). Core to the development will be advancing the existing shopfront forward and increasing the ground floor show room space to provide an additional 3,003 m^2.

This TIS has been prepared in accordance with the Western Australian Planning Commission (WAPC) *Transport Impact Assessment Guidelines for Developments: Volume* 4 - Individual *Developments* (2016) and the checklist is included in Appendix A. The Guidelines promote a three-level assessment process, where the required level of assessment is dependent on the likely level of impact, as follows (and as shown in Figure 1.1):

- Low impact – less than 10 peak hour trips, no assessment required,
- Moderate impact – between 10 and 100 peak hour trips, Transport Impact Statement required, and
- High Impact – more than 100 peak hour trips, full Transport Impact Assessment required.

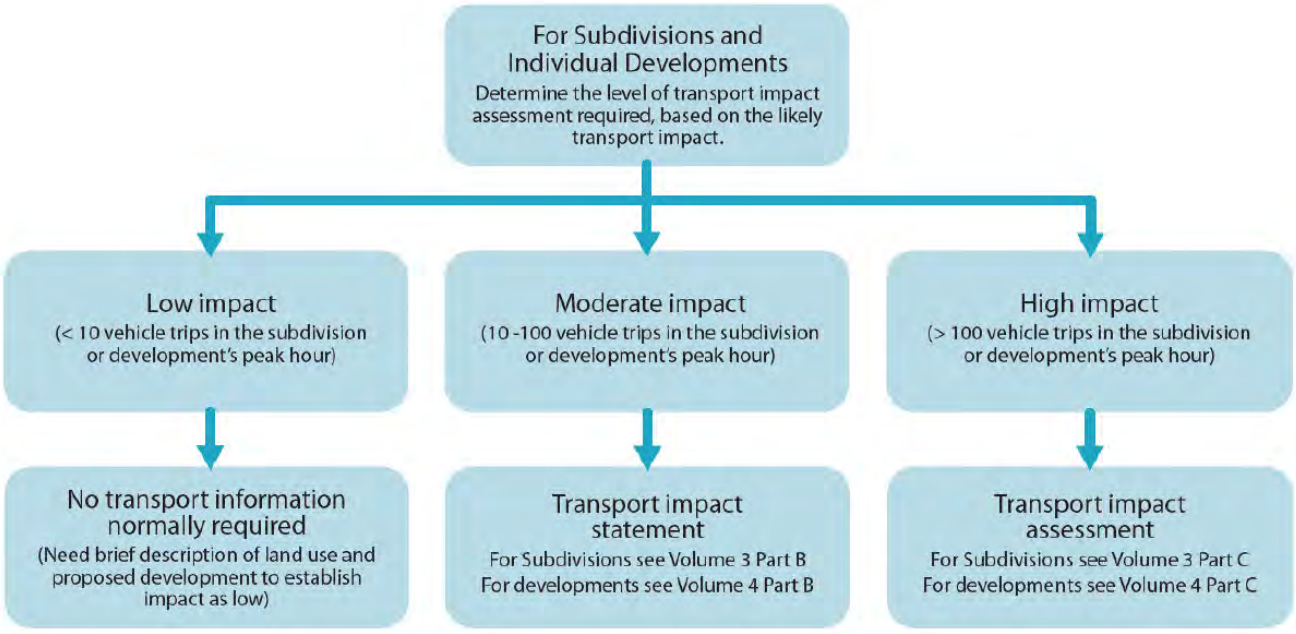


Figure 1.1 - Level of Transport Impact Assessment Required
(Source: WAPC Transport Impact Assessment Guidelines 2016)

The additional traffic generated by the Development has been determined to be between 10 and 100 vehicles during peak hour periods and therefore, a less comprehensive Transport Impact Statement (TIS) is required. Nonetheless, to be thorough and ensure all significant traffic impacts are considered, many of the requirements for a Transport Impact Assessment (TIA) have been undertaken. This higher level of assessment also recognises the need to properly assess the proposed changes to the immediate surrounding road network.

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2 Existing Situation

2.1 Existing Site

The Subject Site (the 'Site') is located 36 Clarke Crescent, within the City of Joondalup ('the City'). An aerial image of the Subject Site is shown in Figure 2.1. The Site currently hosts the Harvey Norman Joondalup Store (the 'Store') and its car park, comprising 238 bays. Landscaping with trees and a footpath line the western border of the Site.

The Site is bounded by Joondalup Drive to the west, the Joondalup Train line to the east, and health/retail centres to the north and south. These areas are encapsulated by the Clarke Crescent and Onslow Place Roads. The Site is currently accessible via three crossovers at the eastern and southern borders of the Site, all connecting the Site to Clarke Crescent.



Figure 2.1 - Existing Subject Site (Source: Google Maps, 2023, Annotated for Presentation)

2.2 Site Context

The Store is located close to the centre of Joondalup, within 1 km of Lakeside Joondalup Shopping City and Edith Cowan University, and within 2 kms of HBF Arena.

The opening hours of the Store are 11/12 AM to 5 PM Sunday and Monday, 9 AM to 5/5:30 PM Tuesday, Wednesday, Friday and Saturday, and 9 AM to 9 PM Thursday.

The Store currently has 7,049 m^2 of net lettable floor area, comprising showroom and warehouse space. The Store also features of a 238-bay parking lot. A floorplan of the existing site is provided in Appendix B.

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Figure 2.2 shows the location of the Site in the context of the City of Joondalup, with all natural and man-made features shown.



Figure 2.2 - Site in Surroundings (Source: Google Maps, 2023, Annotated for Presentation)

Figure 2.3 shows the location of the Site in the context of the surrounding road and public open space networks.

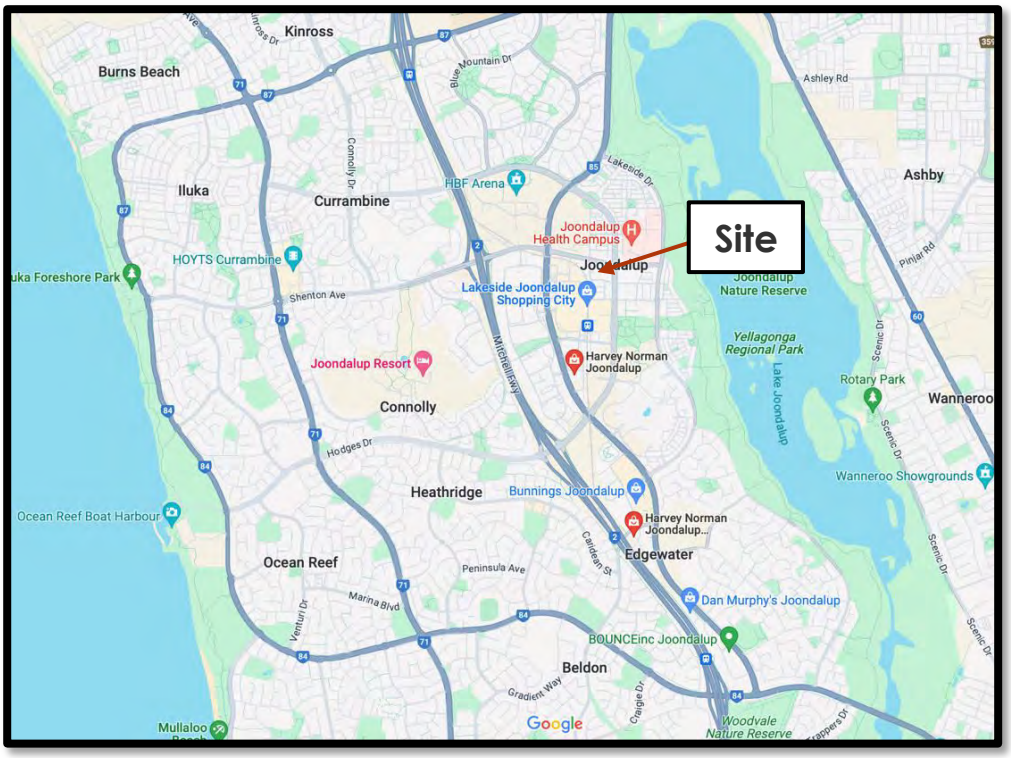


Figure 2.3 - Site Relative to Surrounding Road & Public Open Space Networks
(Source: Google Maps, 2023, Annotated for Presentation)

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2.3 Surrounding Area Use & Zoning

Figure 2.4 shows a section of the zoning map for the suburb of Joondalup City, featuring the area surrounding the Site. Zones marked in light beige with blue outlines are indicated to be "Centre Zones", which are zones specified to be areas designated for future development as activity centres as specified in the City of Joondalup's Local Planning Scheme No. 3 (LPS3).

Currently in these zones are the Harvey Norman Joondalup Store along with other commercial tenancies including Lakeside Joondalup Shopping City, Bunnings Joondalup, Sydney Tools and Edith Cowan University. The Site is firmly situated within Joondalup's main Centre Zone, with no other zones present within a 600-metre radius.

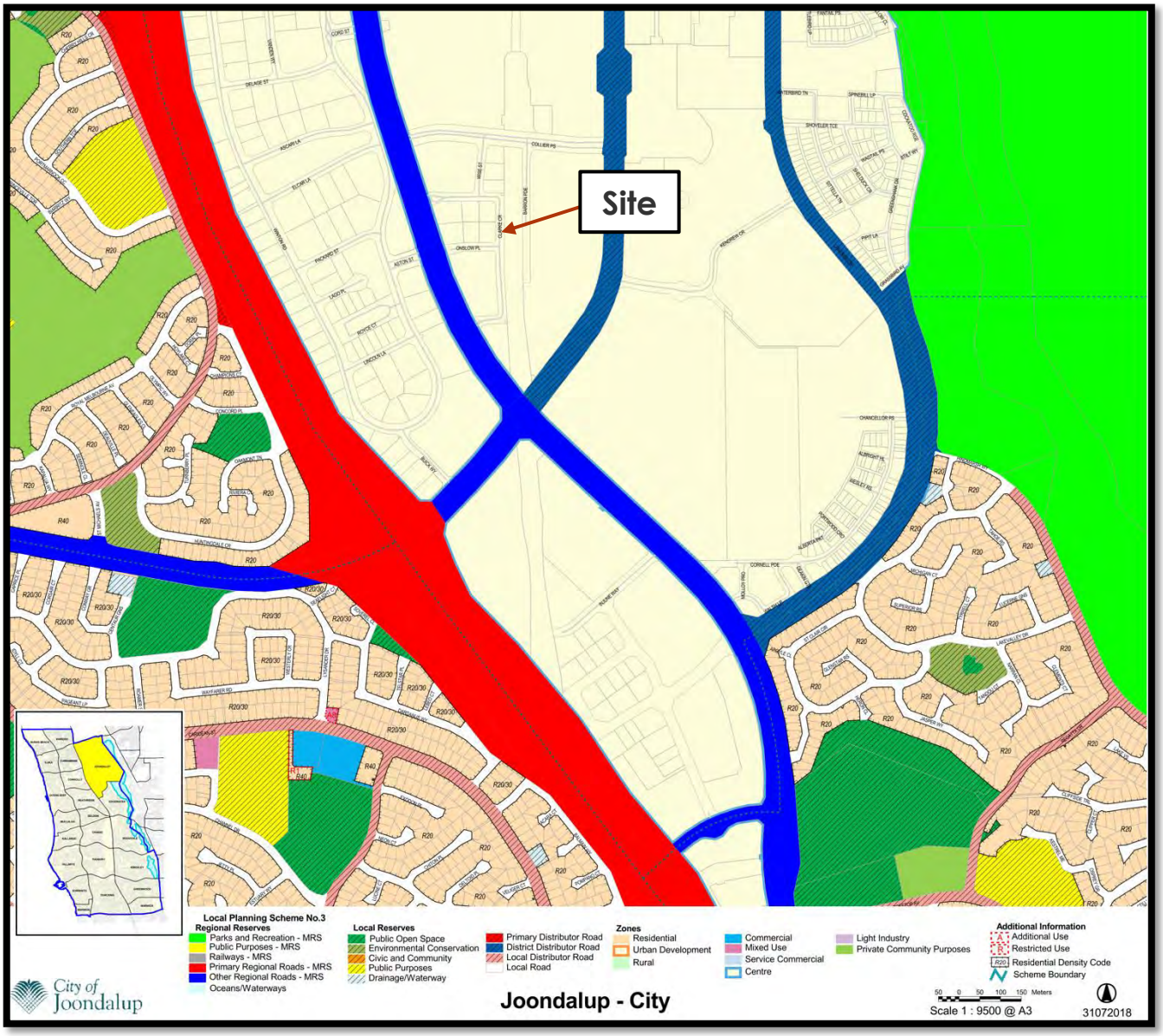


Figure 2.4 - Local Planning Scheme (Source: City of Joondalup, 'Scheme Map - Joondalup City')

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2.4 Existing Business

Harvey Norman Joondalup operates as a prominent bulky goods retail establishment in the central Joondalup area, showcasing consumer electronics, furniture, bedding, and home appliances. The Joondalup store prioritises a spacious layout. This design allows customers to physically explore the range of offerings in person. The Store currently has 7,049 m^2 of net lettable floor area (NLA), consisting of showroom space, staff amenities, two offices, a loading bay and warehouse storage.

2.5 Nearby Development Applications

The details of recent developments and proposals within the vicinity of the Development are presented below.

2.5.1 Lot 45 (8) Elcar Lane, Joondalup

A 3-storey mixed-use development proposed on the south-western side of Joondalup Drive is being reconsidered for determination. This development is forecast to have negligible impact on the roads providing direct access to the Harvey Norman Joondalup site.

2.5.2 Lot 500 (60) Shenton Avenue, Joondalup

The expansion of the existing public hospital north of Shenton Avenue. This is reasonably distant from the Harvey Norman Joondalup site and will have negligible impact on access to the Site.

2.5.3 Lot 500 (60) Shenton Avenue, Joondalup (Private Hospital)

The expansion of existing private hospital north of Shenton Avenue. This is reasonably distant from the Harvey Norman Joondalup site. It will also have negligible impact on access to the Site.

2.5.4 Black Spot Project (Hodges Drive/Joondalup Drive/Grand Boulevard Intersection)

The City of Joondalup currently has a Blackspot project planned at the Hodges Drive/Joondalup Drive/Grand Boulevard intersection. The project is designed to improve traffic flow and efficiency by undertaking the following modifications to the intersection:

- Installing an additional right turn lane from Hodges Drive into Joondalup Drive Southbound, resulting in a double right turn,
- Extending the right-hand slip lane from Joondalup Drive into Hodges Drive for improved accessibility and capacity,
- Implementing fresh road markings and new signage for the Mitchell Freeway entrance and exit ramps,
- Demarcating the cycle lanes with green paint, and
- Updating pedestrian crossing facilities to ensure compliance with MRWA standards.

Construction for these modifications is scheduled from late 2024/25 to the 2025/26 Financial year. They are expected to help improve the operation of the surrounding road network and will deliver positive traffic improvement outcomes.

2.6 Existing Road Network

The road classification in the vicinity of the Site as classified by the MRWA Metropolitan Functional Road Hierarchy (MFRH) is shown in Figure 2.5.

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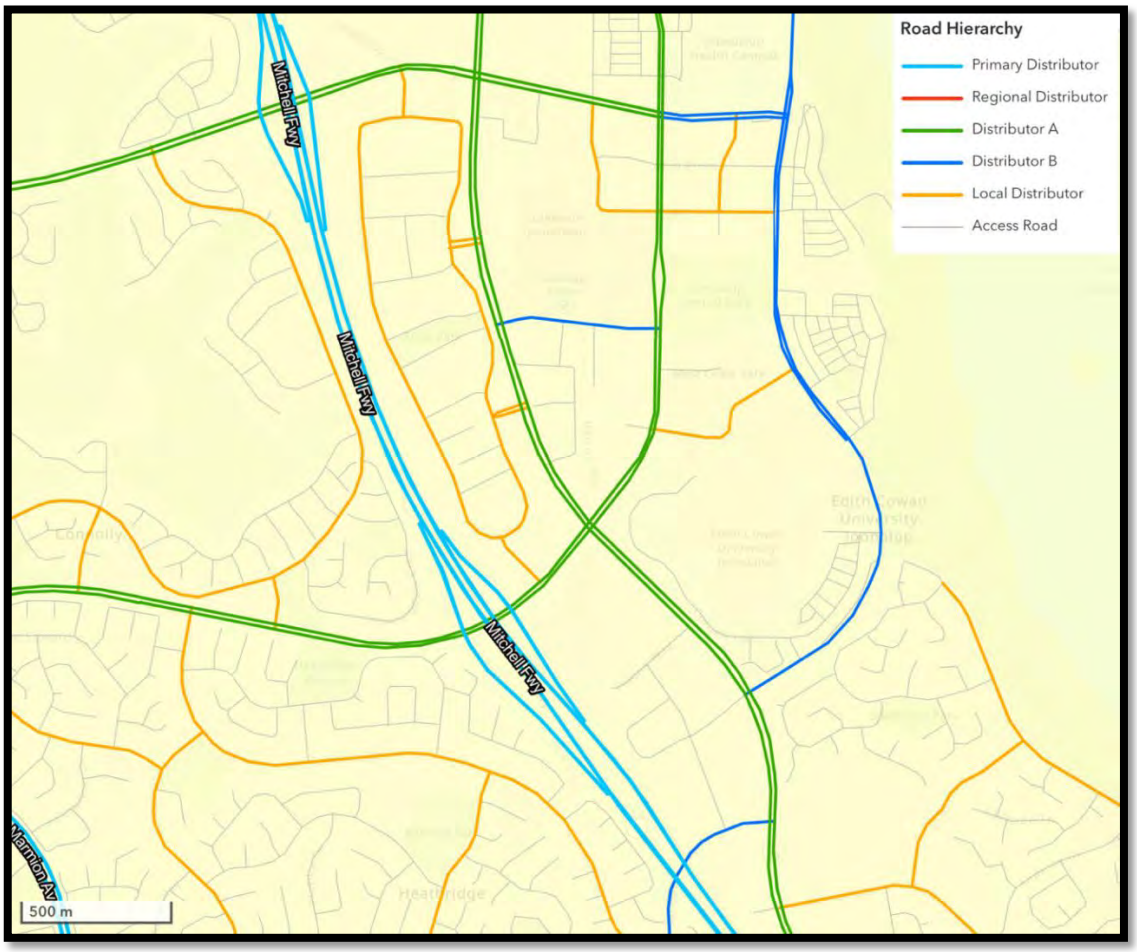


Figure 2.5 - Road Network Classification (Source: MRWA Road Information Mapping System)

2.6.1 Mitchell Freeway

Mitchell Freeway is classified as a 'Primary Distributor'. The road is under the jurisdiction of Main Roads and is a six-lane divided carriageway. The posted speed on Mitchell is 100 km/h.

2.6.2 Hodges Drive/Grand Boulevard

Hodges Drive is classified as a 'Distributor Type A'. The road is under the jurisdiction of the City of Joondalup. It has a 4-lane dual carriageway with a wide median and space for protected turns. The road has paved footpaths on both sides of the road. The pathway on the southern side is wider and lane-marked for cyclists. The kerb-to-kerb width is 25 m, a large amount of this width being made up of a wide median island and the slip lanes at the Mitchell Freeway and Joondalup Drive intersections. The posted speed limit is 70 km/h.

2.6.3 Joondalup Drive

Joondalup Drive is classified as a 'Distributor Type A'. It comes under the jurisdiction of the City of Joondalup. It is also a 4-lane dual carriageway with a wide median and protected turns. The road passes the Site on the western side. There are paved footpaths marked for cyclists on both sides of the road in the vicinity of the Site and the kerb-to-kerb width of the road is approximately 25 m. It has a posted speed limit of 70 km/h.

2.6.4 Collier Pass

Collier Pass is classified as 'Distributor B' road that comes under the jurisdiction of the City of Joondalup. The road connects Joondalup Drive to Grand Boulevard. It is a 2-lane road with a central medium providing protected right-turns. The road also has footpaths on both sides and parallel parking on the southern side. The kerb-to-kerb width of the road is approximately 15 m. It has a posted speed limit of 50 km/h.

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2.6.5 Wise Street

Wise Street is classified as an 'Access Road' that comes under the jurisdiction of the City of Joondalup. The road connects Collier Pass to Clarke Crescent. It is a 2-lane road with footpaths and parallel parking on both sides. The kerb-to-kerb width of the road is approximately 7 m. It has a posted speed limit of 50 km/h.

2.6.6 Clarke Crescent

Clarke Crescent is classified as an 'Access Road' that comes under the jurisdiction of the City of Joondalup. It is a 2-lane side-street branching from Joondalup Drive South, encircling the Site and the retail block to the north of the Site. It re-joins Joondalup Drive further south past the Site. The road has footpaths and parallel parking on both sides, and the kerb-to-kerb width of the road is approximately 7 m. It has a posted speed limit of 50 km/h. The road bounds the Site to the east and south, providing access to the Site via 3 crossovers: two to the car park, and one to the service area.

2.6.7 Onslow Place

Onslow Place is classified as an 'Access Road' that comes under the jurisdiction of the City of Joondalup. It is a 2-lane cul-de-sac that is linked to Clarke Crescent and bounds the Site to the north. The road also has footpaths and parallel parking on both sides, and the kerb-to-kerb width of the road is approximately 7 m. It has a posted speed limit of 50 km/h.

Table 2.1 - Summary of Road Network Characteristics

Road Name	Road Hierarchy		Road Network			
	Road Hierarchy	Capacity (2-way vph) [1]	Road Configuration	No. and width of paved verge / footpath	Kerb to kerb Width	Posted Speed (km/h)
Hodges Drive	Distributor A	3,800	4-Lane divided carriageway with wide median and protected right turns.	2 x 4 m	25 m	70
Joondalup Drive	Distributor A	3,800	4-Lane divided carriageway with wide median and protected right turns.	2 x 4 m	25 m	70
Collier Pass	Distributor B	300	2-Lane	2 x 4 m	15 m	50
Wise Street	Access Road	300	2-Lane	2 x 4 m	7 m	50
Clarke Crescent	Access Road	300	2-Lane	2 x 3 m	7 m	50
Onslow Place[2]	Access Road	300	2-Lane	2 x 3 m	7 m	50

[1] Based on Austroads Guide to Traffic Management Part 3 and the MRWA Functional Road Hierarchy. For a 60 km/hr District Distributor it assumes 1,000 vehicles per hour per lane for the median lane of a divided road with interrupted flow, 900 vehicles per hour per lane for a kerbside lane with interrupted flow or a median lane on an undivided road or where adjacent to a parking lane, and 600 vehicles per lane where the lane has occasional parked vehicles. For a Local Distributor it assumes 6,000 vehicles per day two-way, and for a residential local Access Road it assumes 3,000 vehicles per day two-way with the peak hour being one tenth of the daily traffic volume.

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2.7 Existing Traffic Volumes

The weekday PM peak hour in the vicinity of the Site is typically between 4 pm and 5 pm. The weekend peak hour is typically between 12.30 pm and 1.30 pm.

Traffic data reproduced from the Main Roads TrafficMap is presented in Table 2.2. Traffic data provided by the City of Joondalup is presented in Table 2.3.

Table 2.2 - Existing Traffic Volumes from Main Roads TrafficMap

Road Network	Avg. Weekday AM peak (vph)	Avg. Weekday PM peak (vph)	Avg. Daily Traffic Volume (vpd)	Percent HRV (%)
Mitchell Freeway (Nth) (At Shenton Ave Bridge) (2021/22 Data)	1,675 (7 AM-8 AM)	3,297 (3 PM-4 PM)	33,888	12.7%
Mitchell Freeway (Sth) (At Shenton Ave Bridge) (2021/22 Data)	2,833 (5 AM-6 AM)	2,007 (3 PM-4 PM)	32,601	9.2%
Hodges Drive (West of Joondalup Dr) (2020/21 Data)	2,369 (8 AM-9 AM)	2,717 (3 PM-4 PM)	31,289	4.2%
Joondalup Drive (North of Hodges Dr) (2021/22 Data)	2,332 (10 AM–11 AM)	2,439 (3 PM-4 PM)	27,026	7.5%
Joondalup Drive (North of Shenton Ave) (2021/22 Data)	1,611 (8 AM-9 AM)	1,981 (3 PM-4 PM)	21,208	5.2%
Shenton Avenue (East of Joondalup Dr) (2021/22 Data)	1,340 (8 AM-9 AM)	1,584 (3 PM-4 PM)	19,108	6.0%

Table 2.3 - Existing Traffic Volumes from the City of Joondalup

Road	Survey Location	Avg. Daily Traffic Volume (vpd)
Clarke Crescent	East of Joondalup Drive (June 2021 Data)	1,335
	South of Onslow Place (April 2019 Data)	1,450
	East of Wise Street (April 2019 Data)	1,421
Joondalup Drive	North of Hodges Drive (Oct 2022 Data)	24,828
Wise Street	South of Collier Pass (June 2021)	1,315

Traffic surveys were conducted in the busy peak periods of the Site on both a weekday and weekend period as follows:

- Saturday, 13 January 2024, 12.30-1.30pm
- Monday, 15 January 2024, 4-5pm

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Traffic counts were conducted at the intersections of:

- The southern entry point to the Site from Clarke Crescent,
- The eastern entry point to the Site from Clarke Crescent, and
- Joondalup Drive and Clarke Crescent (Sth) – turning traffic only.

The total amount of inbound traffic to the Site was between 34 and 71 vehicles per hour, and the total amount of outbound traffic was between 49 and 68 vehicles per hour. The busiest peak period for the Site was the weekend peak hour. The busiest period for the surrounding road network was the weekday evening (PM) peak hour. The maximum amount of traffic counted at any point along Clarke Crescent was 224 vehicles in one hour.

Due to the nature of the traffic counting process, it was possible to identify the traffic generation rate for the existing Harvey Norman store, which is as follows:

- Weekend peak hour of adjacent road network – 1.97 trips per 100 m^2 NLA (split 51% inbound and 49% outbound)
- Weekday PM peak hour of adjacent road network – 1.18 trips per 100 m^2 NLA (split 59% inbound and 41% outbound)

2.8 Existing Access Arrangements

The Site can currently be accessed directly from three crossovers on Clarke Crescent approximately 50, 100 and 200 metres from the southern intersection of Clarke Crescent with Joondalup Drive. Two crossovers (south and east) provide access to the parking lot and have a 2-lane capacity but are not lane-marked. The remaining crossover (northeast) provides service vehicle/truck access to the store warehouse for deliveries and is also used for customer pickups. Each crossover location is presented in Figures 2.6, 2.7 and 2.8.



Figure 2.6 – South Entrance to Site from Clarke Crescent (Source: Apple Maps)

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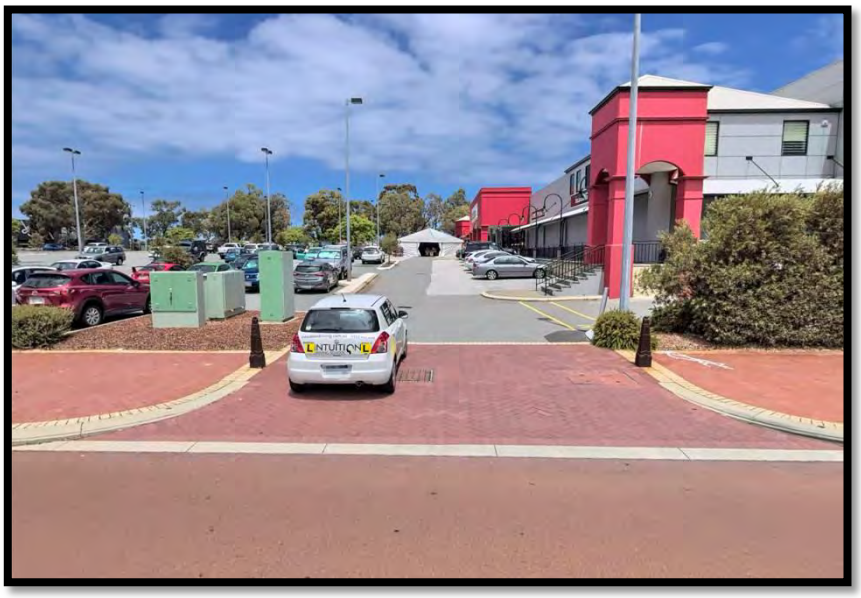


Figure 2.7 - East Entrance to Site from Clarke Crescent (Source: Apple Maps)

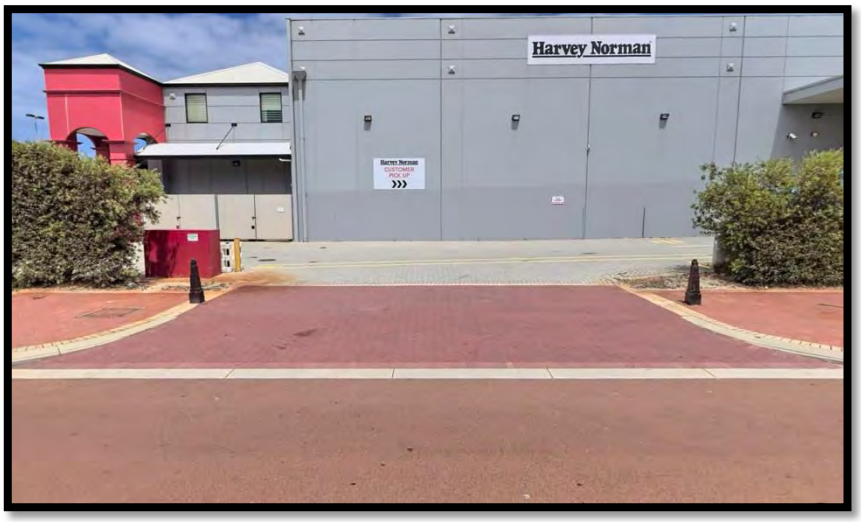


Figure 2.8 - Northeast Entrance to the Site (service area) from Clarke Crescent (Source: Apple Maps)

2.9 Existing Intersection and Crossover Operations

The intersection of Joondalup Drive and Clarke Crescent, as well as the two existing points of access to the Site from Clarke Crescent, were assessed in reference to the existing traffic levels.

All currently operate at a high level of service (Level of Service A) with delays of less than 10 seconds in the peak periods. The analysis indicates that there is plenty of spare capacity to accommodate additional traffic.

2.10 Existing Parking Situation

The Site currently provides 238 off-street parking bays including two accessible bays for people with disabilities and three short-term 'pick and collect' parking bays.

In addition, 51 on-street public parallel parking bays are situated on Onslow Place and in Clarke Crescent immediately adjacent to the Site.

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A spot parking utilisation survey was conducted on site during the weekday and weekend peak periods for the adjacent road network including:

- 1.30pm on Saturday, 13 January 2024
- 4.00pm on Monday, 15 January 2024

The survey results revealed a parking utilisation of 19% on the Saturday (22% off-street and 6% on-street) and 20% on the Monday (22% off-street and 12% on-street). The existing parking supply is therefore heavily underutilised both on and off-street and there is significant spare capacity available.

The results also indicate a current demand for parking of one car parking bay per approximately 136 m^2 NLA. This includes both the demand for on and off-street parking with very little on-street parking in demand and being utilised.

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3 The Proposed Development

3.1 Land Use Proposals

The proposed development involves the addition of approximately 3,003 m^2 of 'bulky goods' floor space over the southern part of the Site (the current car park) to advance the storefront further south. In addition, the proposal includes plans to install a first-floor parking area over the northern part of the Site with parking and rooftop access directly to the Store.

The car parking capacity is proposed to reduce from an existing 238 bays to 186 bays and will include 6 accessible parking bays. A one-way ramp system with separated up and down ramps is proposed to provide vehicular access to the first-floor level parking. The development will also provide 13 motorbike parking bays and 24 secure bicycle spaces.

The proposal also includes relocating the main eastern crossover to a location further to the southeast aligning with the new storefront location. There are also various other modifications to the landscaping and pedestrian pathways that are proposed. An artistic impression of the proposed development is given in Figure 3.1.

After the completion of the development, the Site will host a Medium Bulky Goods Showroom, totalling 10,052 m^2 of net lettable area (NLA). Figures 3.2 and 3.3 show the proposed site layout plan for the development.



Figure 3.1 – Artistic impression of Site from Clarke Crescent (Source: Leffler Simes)

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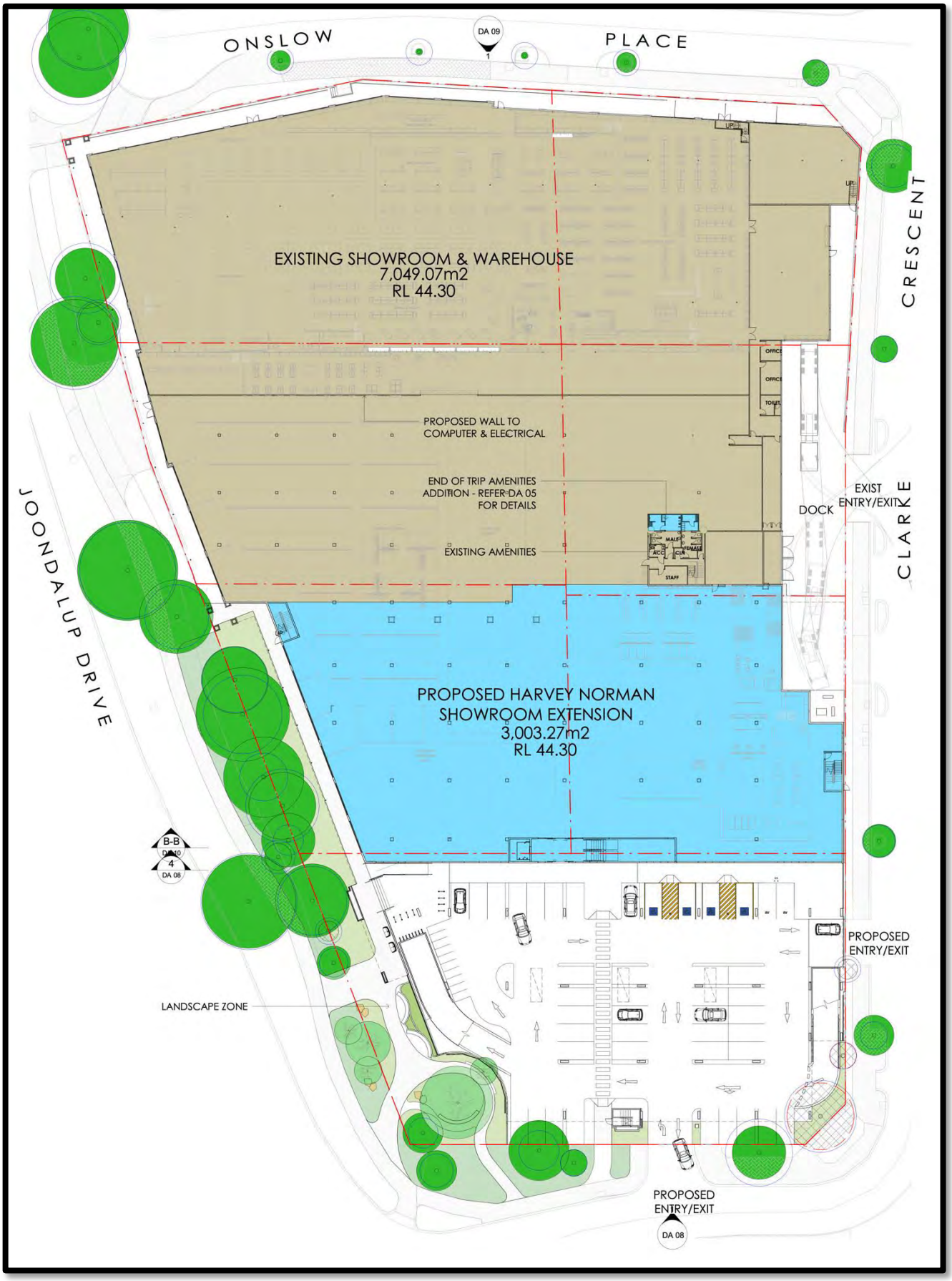


Figure 3.2 – Proposed Ground Floor Plan (Courtesy of Leffler Simes Architects)

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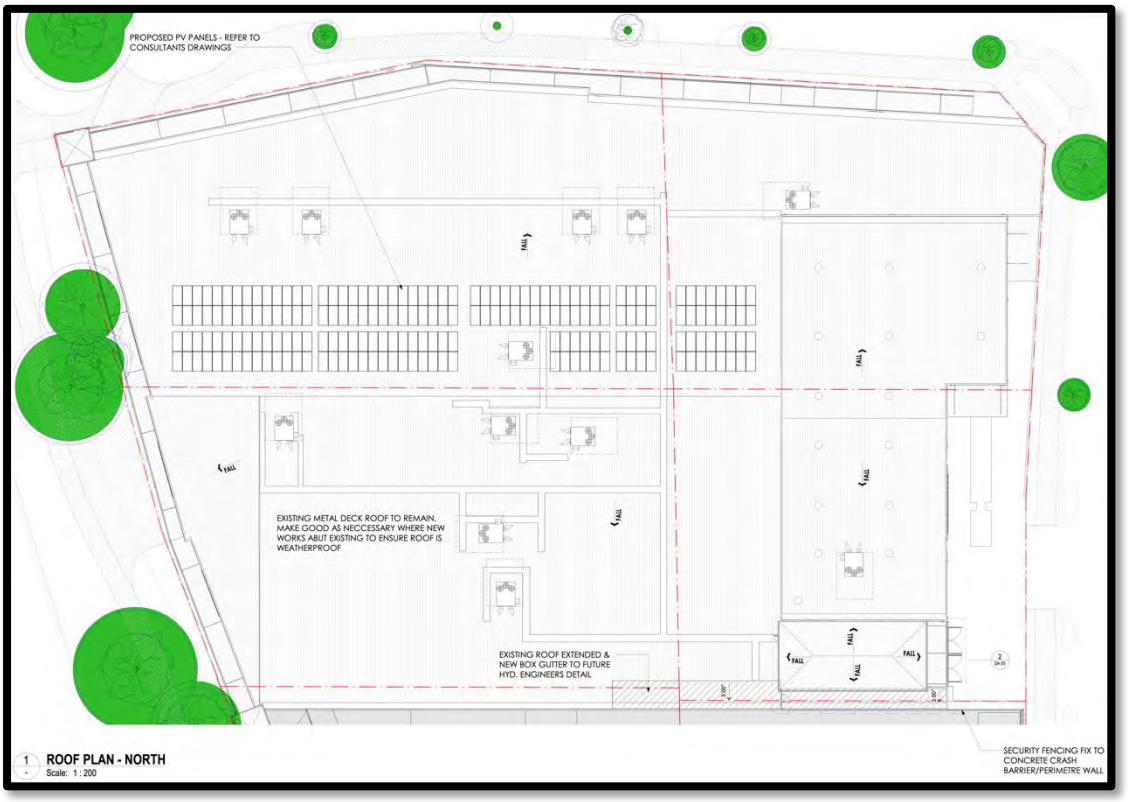


Figure 3.3a – Proposed 1st Floor Plan North (Courtesy of Leffler Simes Architects)



Figure 3.3b – Proposed 1st Floor Plan South (Courtesy of Leffler Simes Architects)

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3.2 Proposed Site Access Arrangements

The Site is presently accessible through three crossovers located at the south, east and northeast of the Site, all connected to Clarke Crescent. The south and northeast crossovers will undergo minor adjustments, while the eastern crossover is proposed to be relocated further south. Importantly, all crossovers shall maintain their existing capacity and functionality with the new arrangements.

The south crossover (1) is proposed to undergo reconfiguration to expand the width on the exterior side. The eastern crossover (2) is proposed to be relocated approximately 42 m southward to align with the new storefront location. Dimensions for this crossover shall remain unchanged. Pavers at the site of the new crossover shall be recovered and reused to pave the walkway where the east crossover previously existed.

Both proposed main entries to the Site are shown encircled in Figure 3.3. Swept path analyses are provided in Appendix K.

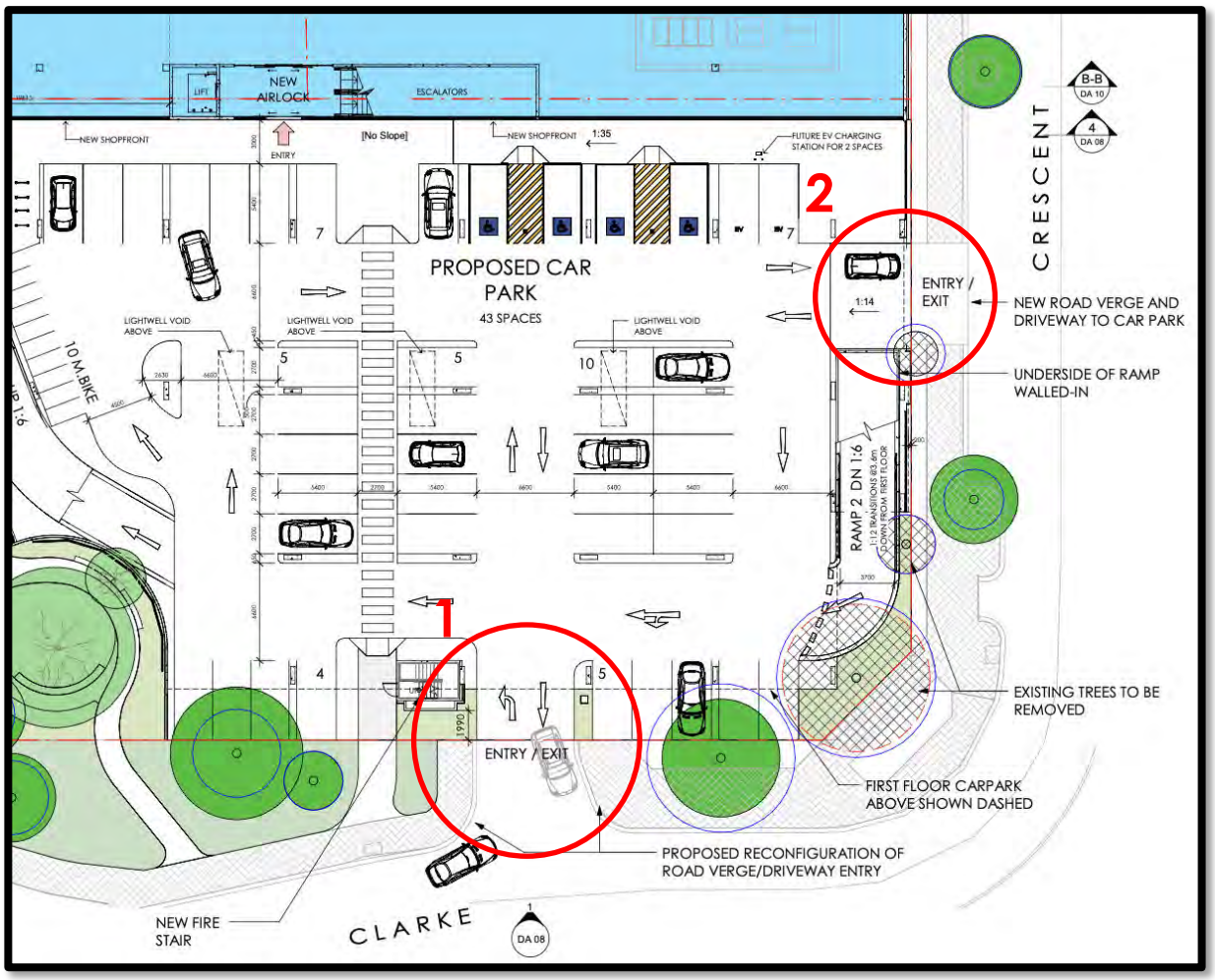


Figure 3.4 – Proposed Parking Lot Crossover Reconfigurations

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4 Servicing of the Site

4.1 Proposed Future Proofing for Service Deliveries of the Future

The future of road freight in activity centres is likely to be shaped by a combination of technological advances, shifting customer preferences, and government policies aimed at reducing carbon emissions and promoting more sustainable and healthy outcomes for communities.



Figure 4.1: Example of future right-sized automated delivery vehicle

A recent trend is towards electrification of delivery fleets, which is helping to reduce emissions and operating costs, and improve air quality. We are also seeing an increasing move towards micro-deliveries and the use of smaller vehicles to service demand. This is because customers are increasingly demanding faster, more flexible and more environmentally friendly delivery services, such as same-day, and on-demand deliveries, which is driving the need for more agile and efficient supply chain operations. The use of right-sized road freight is allowing companies to address these challenges as it is more cost effective because it allows businesses to optimise their delivery routes and reduce the number of partially loaded vehicles, leading to lower fuel costs, improved profitability and less empty or partially loaded vehicles on the roads. This is allowing these companies to become more competitive. Hence, the use of smaller and more efficient vehicles for last-mile deliveries is expected to be increasingly important. Perth bucks this trend to a certain extent as it is one of the most geographically long, spacious and low-density cities in the world. Consequently, there continues to be a need to accommodate larger goods vehicles albeit the amount of dedicated space allocated to them in the future will need to be less than before.

The design of the development has been prepared with acknowledgement of both the existing requirements and the needs of the future.

4.2 Proposed Service Vehicle Access

It is intended for large service vehicles (19 m articulated trucks) to enter the Site from Clarke Crescent predominantly via the northeastern crossover (3), encircled in Figure 4.2.

The suit the design of the local road network, the service dock has been orientated to the south parallel to Clarke Crescent. This alignment ensures that large trucks arriving at the Site from the north, via Clarke Crescent and Wise Street, are correctly aligned to enter the service dock and reverse efficiently into the loading bay. To maintain ease of access for service vehicles, the proposal includes an extension of area dedicated to the service dock further south before reaching the boundary of the Store expansion.

Swept path analyses are provided in Appendix E.

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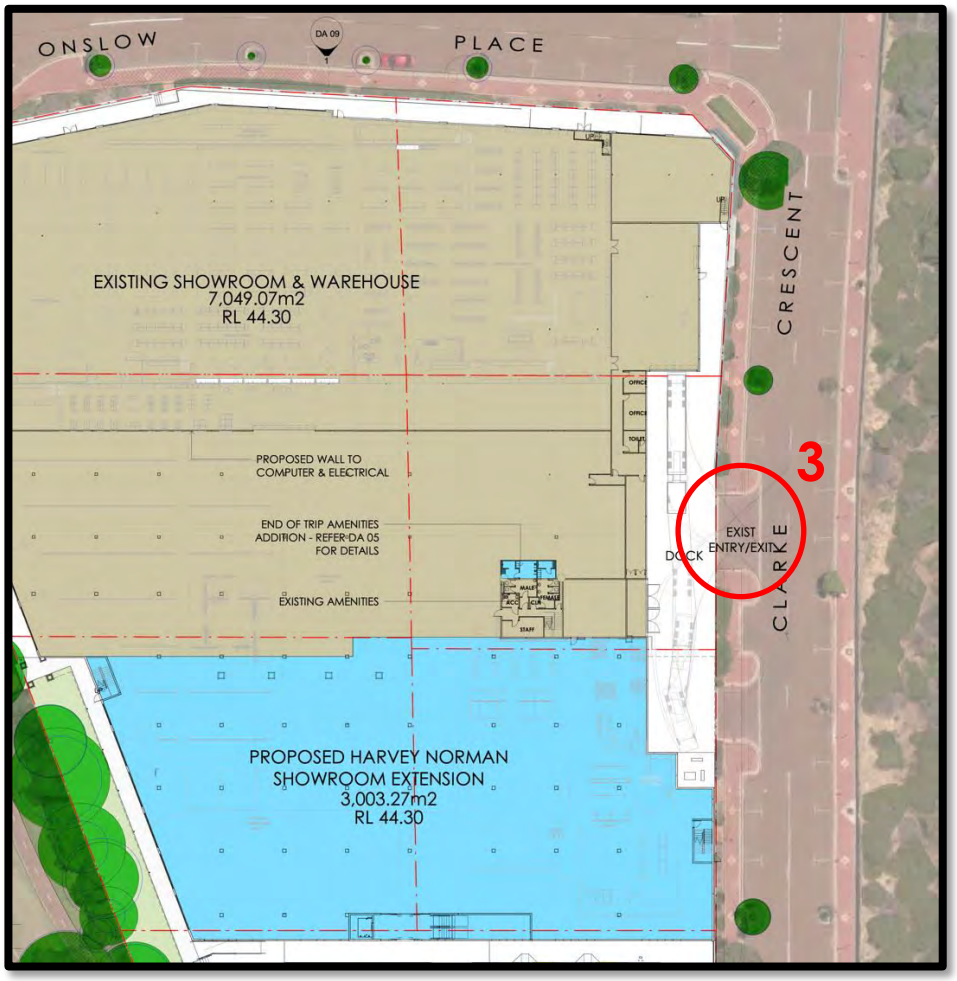


Figure 4.2 – Loading Dock Crossover

4.3 Proposed Waste Collection

All waste collection will occur via the designated loading area as shown in Figure 4.2. Diagrams illustrating the swept paths of large service trucks moving through and turning around in the loading area and adjacent spaces are given in Appendix E. Sufficient room has been provided for these trucks to safely enter and exit to/from Clarke Crescent while remaining in forward gear.

Waste pickups will be undertaken using a commercial waste collection service. The specifications for waste collection vehicles used by the major waste collection companies in Western Australia are given in Table 4.3. Allowance has been made in the design for large articulated trucks to conveniently access the Site. These vehicles are larger than the biggest commercial waste collection vehicle used in Perth and therefore the manoeuvring room for waste collection vehicles will be sufficient to provide safe and convenient access.

Table 4.3 – Commercial Waste Collection Vehicle Dimensions – Rear Lift

Vehicle Dimensions	Remondis	Cleanaway	Veolia
Height during bin lifting (m)	3.4 m	4.3 m	3.4 m
Width (m)	2.5 m	3.0 m	2.5 m
Length during operation (m)	12.5 m	11.5 m	11.6 m

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4.4 Pick up and drop off (PUDO) facilities

There are a number of on-street parking bays on Clarke Crescent that can be used for short-term PUDO. These bays are often utilised for this sort of activity now and can continue to be used by small utility vehicles and vans servicing the Site in the future.

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5 Traffic Analysis of Development Area

The traffic generation rates used for the analysis have been obtained from directly relevant survey data and checked against recognised and relevant technical documents. The trip generation, distribution and intersection capacity analysis have been conducted for the periods coinciding with the peaks for the adjacent road networks.

5.1.1 Trip Generation Rates

The trip generation for the proposed development was calculated using data specific to the Harvey Norman store in Joondalup identified from traffic surveys conducted in January 2024. These surveys revealed:

- A weekend trip generation coinciding with the peak hour of the adjacent road network of 1.97 trips per 100 m^2 NLA (split 51% inbound and 49% outbound)
- A weekday trip generation coinciding with the PM peak hour of the adjacent road network of 1.18 trips per 100 m^2 NLA (split 59% inbound and 41% outbound)

This data was compared with generic trip generation data sourced from the following documents:

- Western Australian Planning Commission (WAPC) *Transport Impact Assessment Guidelines for Developments: Volume 5 – Technical Guidance (2016)*,
- Institute of Transportation Engineering (ITE) Trip Generation Manual (11th Edition), and
- Transport for NSW (RMS) Guide to Traffic Generating Developments Updated Traffic Surveys (2013).

There is no directly relevant land use contained in the WAPC guidelines. Neither the 'commercial', 'industrial' nor the 'retail (non-food)' trip generation rates contained in that document are directly relevant to 'bulky goods stores'. Likewise, the ITE do not have a directly relevant trip generation rate. The RTA have generic trip generation rates more specific to 'bulky goods stores' and these trip generation rates are listed in Table 3.1 for a weekday and Table 3.3 for the weekend. This generic trip generation rates reinforce that the surveyed trip generation rates are approximately of the right order. Due to the peculiarities of the site and the way people travel to and from it, the surveyed rates are the most appropriate for use in the future trip generation forecasting exercise.

To be conservative, the surveyed trip generation rates were increased by 10% nominally to allow for the survey days being lower than the equivalent annual average travel days.

5.1.2 Weekday Analysis

The PM peak hour of the adjacent road network was determined to be in the afternoon between 4 PM and 5 PM. The survey rates that were used are highlighted in Table 5.1.

Table 5.1 Trip Generation Rates (Weekday)[2]

Land Use	Source	AM Peak	IN	OUT	PM Peak	IN	OUT
HN Joondalup	Surveys	-	-	-	1.44 trips per 100 m^2 GFA	59%	41%
Bulky Goods Retail[3]	TfNSW/RMS	-	-	-	1.31 trips per 100 m^2 GFA	-	-

[2] A conversion rate of 90 m^2 NLA to 100 m^2 GFA was used.

[3] Average of all survey sites for the Network PM peak

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Floor areas were taken from the latest development plans supplied by the Applicant (dated May 2023) as per Figure 3.1.

Bulky Goods stores do not operate or generate significant traffic during the AM peak of the surrounding road network. This is reinforced in the TfNSW trip generation document, which states that "the morning site peak hour does not generally coincide with the network peak hour". The AM peak hour period was therefore not considered a relevant analysis period for this development proposal.

The trip generation rates in Table 5.1 have been used to calculate estimates of proposed weekday peak hour traffic numbers that are shown in Table 5.2.

Table 5.2 Estimated Trip Generation Rates (Weekday)

Land Use	NLA	PM Peak	IN	OUT
Current Harvey Norman (Commercial)	7,049 m²	102	60	42
Total Trips Existing Harvey Norman Site		102	60	42
New Harvey Norman (Commercial)	10,052 m²	145	85	60
Total Trips Proposed Harvey Norman Site		145	85	60
Net Difference (Proposed - Existing) for Harvey Norman Site		+43	+25	+18

5.1.3 Weekend Analysis

The weekend trip generation rates were determined for the peak hour time from 12:30 to 1.30 pm. This was based on the average of the peaks of traffic count sites in the immediate surrounding road network.

The trip generation rate highlighted in Table 5.3 has been used to calculate estimates of proposed weekend peak hour traffic numbers that are shown in Table 5.4.

Table 5.3 Trip Generation Rates (Weekend)

Land Use	Source	Peak	IN	OUT
HN Joondalup	Surveys	2.41 trips per 100 m² GFA	51%	49%
Bulky Goods Retail[4]	TfNSW/RMS	2.48 trips per 100 m² GFA	50%	50%

Table 5.4 Estimated Trip Generation Rates (Weekend)

Land Use	NLA	Peak	IN	OUT
Current Harvey Norman (Commercial)	7,049 m²	170	87	83
Total Trips Existing Harvey Norman Site		170	87	83
New Harvey Norman (Commercial)	10,052 m²	242	124	118
Total Trips Proposed Harvey Norman Site		242	124	118
Net Difference (Proposed - Existing) for Harvey Norman Site		+72	+37	+35

[4] Average of all survey sites for the Weekend Vehicle Network Peak

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5.2 Traffic Distribution

The forecast traffic distribution for the Development has been based on:

1. The results of the January 2024 traffic surveys,
2. The local spread of population (based on 2022 data provided by the City of Joondalup Community Profile) - see Figure 5.2, and
3. The configuration of the broader road network.

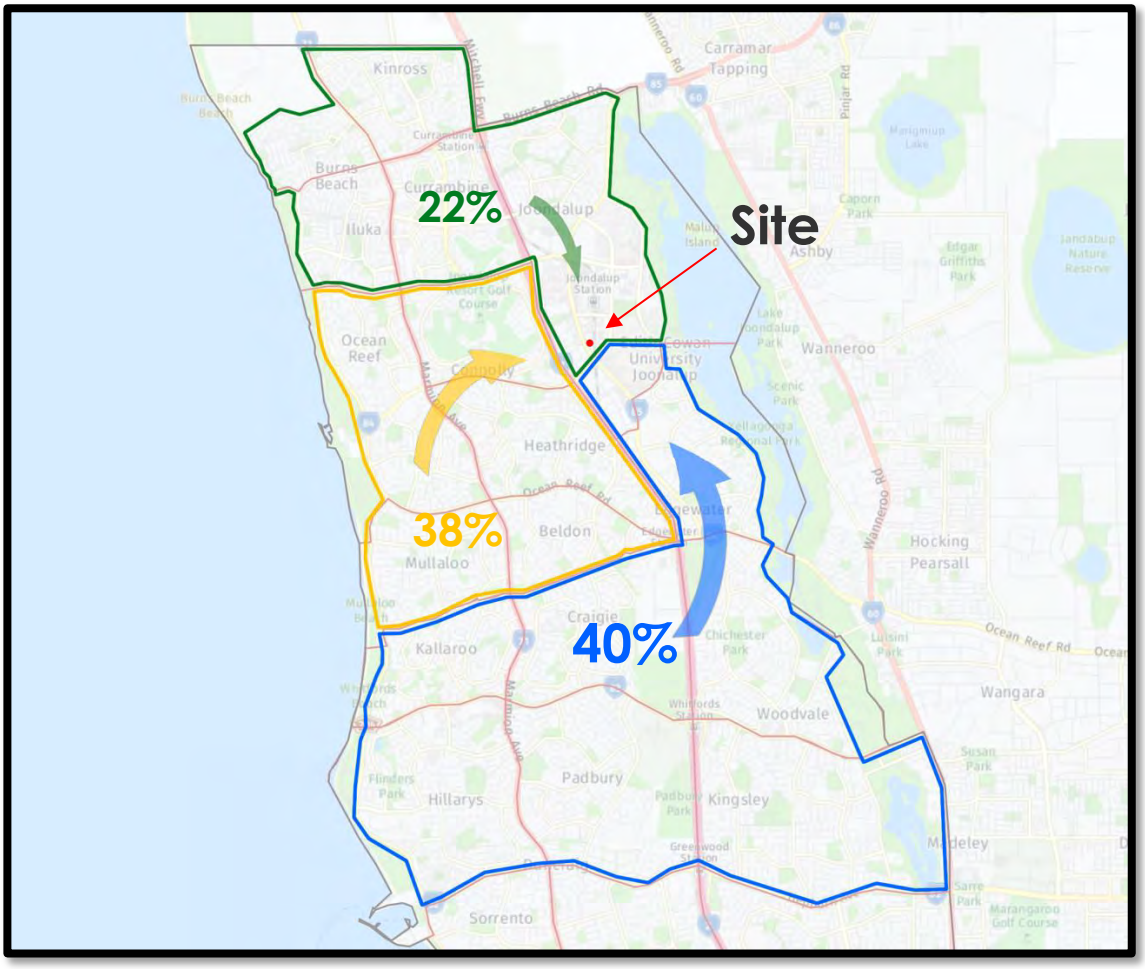


Figure 5.2: Broad Population Distribution

This information indicates that the majority of inbound traffic (85-90%) will enter the Site from Joondalup Drive turning left into the Clarke Cres (Sth) crossover. About 80% of this traffic will turn right and 20% will turn left into Clarke Crescent from Joondalup Drive. The remainder of inbound traffic will approach from the north along Clarke Crescent equally split between the two main crossovers to the Site.

The data also indicates that in excess of 50% of traffic outbound from the Site will turn right out of the Site using the same Clarke Cres (Sth) crossover and then left onto Joondalup Drive heading south. About 15% will exit right from the other eastern crossover to the Site and then left onto Joondalup Drive. The remaining 35% of outbound traffic will travel north using Clarke Crescent to connect to Wise Street and Collier Pass.

The traffic generated by the proposed development was distributed onto the local road network in line with these distribution findings.

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5.3 Intersection Capacity Analysis

This section provides an analysis of the existing traffic conditions on the surrounding road network. It is important to understand the baseline conditions upon which to assess the impact of the proposed development.

The key intersections and access points that were considered in the traffic analysis are:

1. Collier Pass/Grand Blvd,
2. Joondalup Dr/Grand Blvd/Hodges Dr,
3. Joondalup Dr/Clarke Cr Sth, and
4. Joondalup Dr/Collier Pass.

In addition, the two main points of access to the site were assessed including:

5. The southern entry point (1) to the Site from Clarke Crescent, and
6. The eastern entry point (2) to the Site from Clarke Crescent.

The analysis assessed the following parameters of intersection performance:

- **Degree of Saturation (DOS):** Degree of Saturation is a measure of how much physical capacity is being used compared to the theoretical capability of a particular movement, approach, or overall intersection. A DOS of 1.0 equates to full theoretical capacity although in some instances this level is exceeded in practice. SIDRA sets a maximum acceptable DOS of 0.90 for signalized intersections and 0.95 for an unsignalized intersection.
- **Average Delay:** This measure is the average delay per vehicle in seconds experienced by all vehicles in a particular lane, approach, or for the intersection as a whole. For severely congested intersections the average delay begins to climb exponentially. An unsignalized intersection can be considered as operating at capacity when the average delay exceeds 40 seconds.
- **Queue Length:** This is the 95th percentile length of approach queues (the maximum queue length that will not be exceeded for 95 percent of the time). It provides the indication of the likely impact of queues blocking back and impacting on upstream intersections and accesses.
- **Level of Service (LOS):** A qualitative measure describing the operational conditions at an intersection and the perception by motorists. LOS is expressed with levels from A to F. LOS A indicates an excellent level of service with minimal delays to drivers. Values of B through D are acceptable in normal traffic conditions. LOS E and F are typically considered undesirable.

The analysis criteria used in the analysis are given in Table 5.5. Note that only one of the analysis criteria need to be met to trigger the LOS category, e.g. average delay. The capacity analysis was undertaken in accordance with well accepted Austroads[5] guidance.

The analysis contained in this report is based on intersection configuration and signalling information obtained from aerial imagery and the Main Roads TrafficMap.

[5] In accordance with Austroads Guide to Traffic Management Part 2: Traffic Theory Concepts

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Table 5.5 - SIDRA Analysis Criteria

Level of Service (LOS)		Unsignalized		Signalized	
		DOS	Ave Delay	DOS	Ave Delay
A	Excellent	<=0.50	<10	<=0.60	<10
B	Very Good	0.50-0.70	10-15	0.60-0.70	10-20
C	Good	0.70-0.80	15-25	0.70-0.90	20-35
D	Acceptable	0.80-0.90	25-35	0.90-0.95	35-55
E	Poor	0.90-1.00	35-50	0.95-1.00	55-80
F	Very Poor	>1.00	>50	>1.00	>80

The WAPC Transport Assessment Guidelines for Developments (Volume 4) suggests that an intersection is considered to be materially affected if flows on any leg increase my more than 10% or any individual movement by more than 20% overall. None of the four key intersections investigated have forecast increases in traffic flows that exceed these levels. Consequently, the intersections cannot be considered to be materially affected and they will continue to operate at similar capacity utilisation levels as at present.

The capacity of the entries/crossovers to the Site were also checked and all continue to operate at high levels of service. Their practical absorption capacity is in excess of 300 vehicles per hour, which exceeds the number of vehicles forecast to be entering and exiting at each of these points under a worst-case scenario in the peak hour. They continue to enjoy a high level of Service (LOS A) with delays to all turning traffic of less than 5 to 10 seconds in the busiest peak periods.

5.4 Impact on Surrounding Roads

Reference to the WAPC Transport Assessment Guidelines for Developments (Volume 4) states that "where a traffic increase as a result of a proposed development is less than 10% of current road capacity, it would not normally have a material impact". The proposed development adds less than 100 vehicles per hour or less than 10% of capacity to any individual section of Joondalup Drive in any of its busiest peak periods.

The increase in forecast traffic varies depending on the time period, with the traffic generated during the weekend peak having the greatest overall impact. The increase in traffic due to the development is modest by comparison to the impact caused by the growth in through traffic on the road network over the same time period, particularly on Joondalup Drive and Mitchell Freeway.

Joondalup Drive is a 4-lane divided carriageway with a wide median and protected turning spots. It is forecast to continue to function within its operational capacity even with the forecast increase in traffic levels from the development.

Surrounding access streets including Clarke Crescent, and Wise Street will not be significantly impacted by the development and will continue to operate well within their environmental traffic capacity.

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5.5 Summary of Traffic Impacts

Based on the assessments undertaken it is concluded that the development will not significantly impact on the operation of surrounding roads and intersections and the road network will continue to operate satisfactorily. No changes are required to either the capacity of the road network or the geometry due to the construction and operation of this development.

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6 Proposed Parking Arrangements

6.1 Car Parking Provision / Supply

It is proposed that 186 car parking bays be provided off-street. It is also proposed that 6 accessible bays for people with disabilities be provided with adjacent shared spaces in accordance with AS2890 (set). In addition:

- 24 secure bicycle racks/lockers have been positioned throughout the Site at convenient locations, and
- 13 motorcycle/ scooter bays have been provided at central locations on the Site.

6.2 Car Parking Demand and Regulatory Requirements

The parking requirements for the proposed development have been calculated based on the requirements as defined by City of Joondalup "*Joondalup Activity Centre Plan*[6]," reproduced in Table 6.1.

The required parking provision is presented in Table 6.2.

Table 6.1 Car, Bicycle and Motorcycle Parking Provision Rates

Land Use	Minimum Number of Car Parking Bays	Minimum Number of Bicycle Parking Spaces	Minimum Number of Motorcycle Parking Spaces
Non-Residential Development	1 per 75 m^2 NLA	For employees: 1 per 750 m^2 NLA, For visitors: 1 per 1,000 m^2 NLA	10% of required car bays shall each be replaced by 2 motorcycle/scooter bays. The car bay requirement shall be reduced accordingly.

Table 6.2 Minimum Car Parking Provisions for Proposed Development

Land Use	NLA	Car Parking Provision Minimum	Bicycle Parking Provision Minimum	Motorcycle Parking Provision Minimum
Proposed Bulky Goods Development (Harvey Norman Showroom)	10,052 m^2	128[7]	23.5	13
Total Parking Provided		186	24	13
Parking Excess/(Deficit)		(58)	0	0

[6] Joondalup Activity Centre Plan, City of Joondalup, November 2021.

[7] Car parking provision requirements have been reduced by 6.5 bays to compensate for 13 motorcycle parking bays being provided on site.

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The current proposals (refer Figures 3.1 and 3.2), indicate the provision of 186 car parking bays on the Site. This represents an excess of 58 car parking bays relative to the minimum 128 car parking bays required by the City in their Joondalup Activity Centre Plan.

However, based on the existing rate of parking demand for the Site of one car parking bay per 136 m^2 NLA (refer Section 2.10) it is estimated that the future demand for parking on the Site will be 74 car parking bays. This forecast assumes the same rate of parking demand as identified for the existing Harvey Norman Joondalup operation from the January 2024 parking surveys. Therefore, the City of Joondalup prescribed parking requirements far exceed the forecast parking demand, and in that context, the proposed parking supply is considered satisfactory.

As the Site is in a mixed-use commercial area where many trips have multiple purposes, it is also likely that the parking demand for each use will be lower than for an isolated site. This suggests that the demand for parking in the future may be lower than forecast. Considering the relatively low demand for parking, and the community desire for more sustainable transport outcomes, there is good justification for providing less parking dedicated on the Site than prescribed. To that end, there is an action contained in the Green Travel Plan (refer Section 9.3) recommending a reduction in the parking provision for the Site.

Finally, it is also noted that there are 33 on-street parking bays surrounding the Site that are currently heavily underutilised. These car parking bays will also be available to users of the Site and can provide spare parking capacity in peak periods.

6.3 Parking for People with Disabilities

As more than 100 and less than 200 total car parking spaces are proposed to be provided for the development there is a requirement to designate a minimum of 4 accessible car parking spaces as ACROD bays / dedicated to people with disabilities. The proposals designate 6 of the 186 off-street car parking bays as accessible/ACROD bays with an adjacent shared space.

6.4 Bicycle & Motorcycle Parking Arrangements

Bicycle parking is proposed to be provided on the Site consistent with the provisions of the Green Travel Plan provided in Appendix J. In total, 24 secure bicycle racks have been positioned throughout the Site at convenient locations. This provision is consistent with the requirements of the *Joondalup Activity Centre Plan*. Some of this bike parking should be provided with capacity for electric bike recharging.

Due to the bulky goods nature of the Site, it is unlikely that there will be much demand for motorcycle or scooter parking. This is because bulky goods cannot be easily transported by motorcycles or scooters. Despite the reality of this situation, a provision of 13 motorcycle/ scooter bays have been provided at central locations on the Site. It is forecast that this motorcycle parking provision will be sufficient to exceed the demand for motorcycle parking on the Site. In addition, motorcyclists can park in underutilised car parking bays.

6.5 Truck Parking Arrangements and Access

The truck parking provided on the Site is provided in the service dock on the eastern side of the Harvey Norman building. This parking is incorporated in the loading and unloading area.

The swept paths of trucks moving throughout the Site have been analysed and are presented in Appendix E. In all cases the Site has been designed to be able to accommodate the safe and convenient movement of a 19 m articulated truck along the

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major circulating roads throughout the development. Waste trucks and other smaller service vehicles are also fully accommodated.

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7 Public Transport Facilities

7.1 Existing Public Transport Facilities

The Site is not directly serviced by any bus routes albeit there are several located along Grand Boulevard. The nearest train station is Joondalup Train Station located within an easy 500 m walk of the Site. All bus stops and transit stations are marked in red in Figure 7.1. The current public transport facilities, particularly rail, are considered excellent for servicing both the existing and proposed developments.



Figure 7.1 - Public Transport Stops & Stations in the Vicinity of the Site (Source: Google Maps, January 2024)

7.2 Future Public Transport Facilities

Currently there are no plans to change the existing public transport services and facilities in the vicinity of the Site. Section 9.3 identifies a number of initiatives to encourage the use of public transport and other non-transport modes.

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8 Pedestrian / Cycle Networks & Facilities

8.1 Existing Pedestrian / Cycle Network

Walking access to the Site is presently provided via an existing footpath network along all roads adjourning the Site, including facilities along both Clarke Crescent (including Onslow Place) and Joondalup Drive.

Pedestrian crossovers over Joondalup Drive exist at the Aston Street and Clarke Crescent junctions to allow pedestrians to cross safely. The current pedestrian/cycleway network is considered adequate for both the existing and proposed situations.

Figure 8.1 shows the local footpath and cycleway network in the vicinity of the Site.

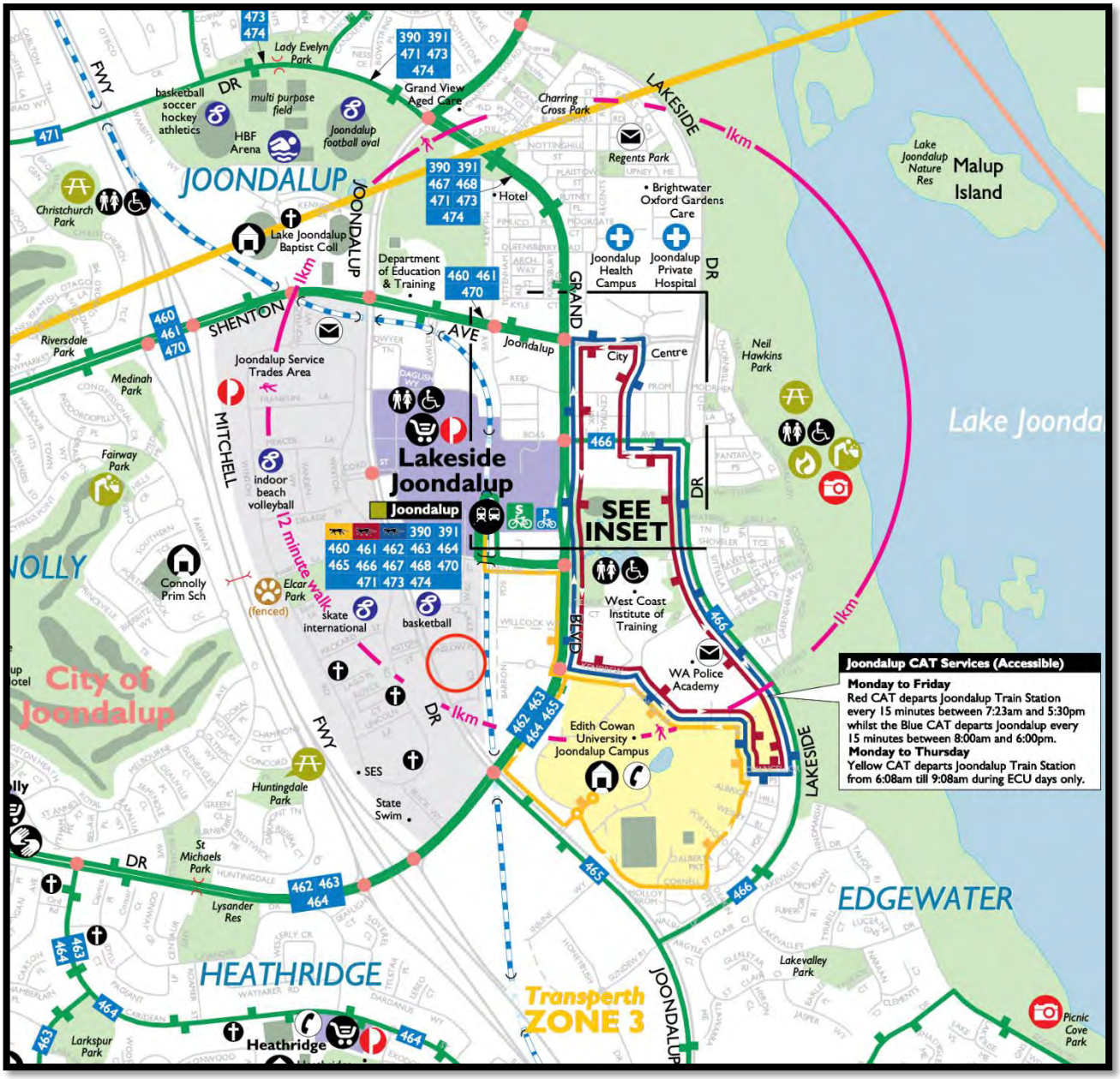


Figure 8.1 Existing Footpath and Cycling Network

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8.2 Joondalup Bike Plan

The City of Joondalup Bike Plan (2016-2021) recognises that creating the right social environment to support bike riding is equally important as creating the right physical environment. Creating positive outcomes for bike riding and maximising the number of people riding requires the coupling of strategic infrastructure improvements (including bike paths, bike lanes, signage, lighting, and end-of-trip facilities) with promotion and education that gets people excited and motivated about riding. This includes:

- Encouraging consideration of bike access, bike parking and end-of-trip facilities in new and redeveloped buildings within the City, and
- Improving bike connectivity and bike infrastructure within the Joondalup City Centre.

8.3 Future Pedestrian / Cycle Network

The City of Joondalup has confirmed that there are no changes proposed to modify the existing pedestrian and cycle networks in the vicinity of the Site. However, within the Site are a series of pedestrian footpaths which have been incorporated in the proposed design. This includes new and pre-existing pathways surrounding the perimeter of the Site and crossing the Site parallel to the new storefront. A new pathway winding through the proposed social area/landscaped area to the east of the reduced ground-floor car park will complement existing street pathways. Pre-existing pathways shall remain largely as they exist with minor alterations.

An outdoor eco space/social area is proposed to be installed across the midsection of the Level 1 parking area, adjacent to the 1st floor entrance lobby and escalators. Pedestrian facilities that are proposed include the following, as presented in Figure 8.2:

- An 'eco zone; outside the first-floor entrance to the Harvey Norman store comprising a sheltered area, seating and raised gardens adjacent the Store entrance.
- A paved corner statement on the west side of the extended storefront with landscaping and a seating area.



Figure 8.2 - Joondalup Drive & Clarke Crescent Aerial Corner Statement

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8.4 Encouraging Walking

The proposed development incorporates a range of pedestrian friendly elements including good pedestrian connections to the footpath network, generous entry and lobby spaces, wide parking aisles for the safe movement of pedestrians, etc.

8.5 Encouraging the Use of Scooters and Micromobility

Technological advancements, such as electric scooters and other forms of shared micro-mobility, have the potential to replace many short car trips and facilitate increased levels of activity.

Micro-mobility, particularly in the form of e-scooters and e-bikes, is gaining popularity in Australia as a convenient, environmentally friendly, and affordable option for short distance trips. The trend is emerging faster in our suburban activity centres. These modes fill an important gap in the transport system providing alternative options for localised travel.

Electric scooters (see Figure 8.3) are suited to short rides, including as a "last-mile" vehicle.

Provision shall be made within the development for easy access by this mode of travel including secure on-site storage.



Figure 8.3 – Electric Scooters

8.6 End of Trip Facilities

The proposed development includes an end of trip facility for the storage of bicycles as well as showers, lockers, and other amenities.

Other bicycle friendly initiatives such as the use of cargo bikes are being actively pursued as part of a Green Travel Plan for the Site (refer Section 8.2).

In the intricate interplay between retail and commercial precincts, end-of-trip facilities are essential not only for enhancing retail accessibility but also for mitigating potential impacts on the adjacent local streets.

These facilities have the potential to improve access, easing local impacts, and promoting sustainability through encouraging alternative modes of transport.

The expanded Harvey Norman store is expected to witness a steady flow of staff and visitors. End-of-trip facilities that encourage cycling and walking can mitigate impacts generated by vehicular traffic, making the precinct more liveable for others in the precinct.

The introduction of end-of-trip facilities can lead to slower vehicular speeds in the surrounding residential streets. This traffic calming effect contributes to pedestrian safety and residential amenity.

The provision of end-of-trip facilities that incentivize cycling and walking can significantly reduce carbon emissions by decreasing the number of vehicles on the road. This translates into improved air quality, reduced traffic congestion, and alignment with national and international sustainability goals.

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By facilitating alternative transportation modes, end-of-trip facilities help reduce the demand for on-street parking spaces. Fewer parked cars on the street contribute to a more visually appealing environment, positively impacting the overall aesthetics of the adjacent residential and local centre precincts.

End-of-trip facilities encourage visitors and staff to incorporate physical activity into their daily routines. This proactive approach can lead to healthier lifestyles. Accessible end-of-trip facilities, including showers and changing rooms, also allow staff and visitors to freshen up after their commutes, promoting physical and mental well-being.

The inclusion of end of trip facilities in the development not only benefits site access but also sets a positive precedent for future developments in similar commercial contexts across the City of Joondalup.

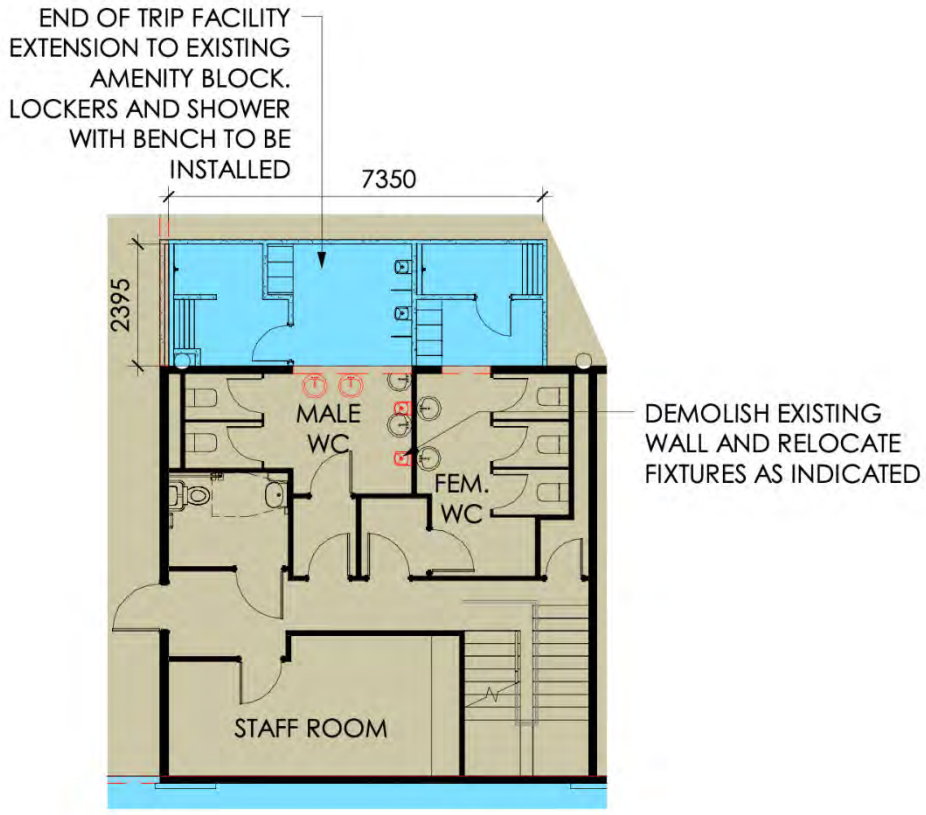


Figure 8.4 – Proposed Ground Floor End-of-Trip Facility

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9 Other Considerations

9.1 Crash Assessment

A search of the Main Roads Crash Database was undertaken for the period from January 2019 to January 2024 (6 Year Period). A search was conducted for each of the following roads including intersections:

- Joondalup Drive, from Grand Boulevard/Hodges Drive to Collier Pass,
- Hodges Drive, from Mitchel Freeway to Joondalup Drive,
- Shenton Avenue, from Joondalup Drive to Grand Boulevard,
- Collier Pass, from Joondalup Drive to Grand Boulevard,
- Wise Street,
- Onslow Place (no data), and
- Clarke Crescent.

Table 9.1: Joondalup Drive, from Grand Boulevard/Hodges Drive to Collier Pass (Distributor A)

Type of Crash	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total
Rear End	-	-	18	55	31	104
Hit Object	-	-	1	2	-	3
Right Turn Thru	1	3	13	15	3	35
Right Angle	-	-	4	5	4	13
Sideswipe	-	-	-	5	4	9
Undefined	-	-	-	4	1	5
Total	1	3	36	86	43	169

The section of Joondalup Drive from Grand Boulevard to Collier Pass has experienced a significant number of crashes within the 6-year period analysed. The most prevalent type being rear end collisions, constituting 104 out of 169 total crashes. Right Turn Thru crashes also contribute substantially to the total, including one fatal incident and 35 crashes in total.

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Table 9.2: Hodges Drive, from Mitchel Freeway to Joondalup Drive (Distributor A)

Type of Crash	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total
Rear End	-	-	19	47	27	93
Hit Object	-	-	1	2	-	3
Right Turn Thru	-	-	3	2	1	6
Right Angle	-	-	-	1	2	3
Sideswipe	-	-	1	5	6	12
Undefined	-	-	-	3	2	5
Total	0	0	24	60	38	122

A total of 122 crashes occurred on the section of Hodges Drive between Mitchell Freeway and Joondalup Drive. Rear-end collisions dominate, totalling 93 incidents, with a considerable portion leading to medical treatment and major property damage.

Table 9.3: Collier Pass, from Joondalup Drive to Grand Boulevard (Distributor B)

Type of Crash	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total
Rear End	-	-	4	8	7	19
Hit Object	-	-	-	2	-	2
Hit Pedestrian	-	-	1	-	-	1
Right Turn Thru	1	2	8	19	1	31
Right Angle	-	-	5	10	1	16
Sideswipe	-	-	-	13	1	14
Total	1	2	18	52	10	83

83 crashes occurred between Collier Pass, between Joondalup Drive and Grand Boulevard. Right-turn-thru crashes stand out in terms of frequency and severity, with 1 fatal incident and 2 hospitalisations.

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Table 9.4: Wise Street (Access Road)

Type of Crash	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total
Rear End	-	-	1	-	-	1
Right Angle	-	-	1	2	-	3
Sideswipe Down	-	-	-	-	1	1
Undefined	-	-	-	2	1	3
Total	0	0	2	4	2	8

Table 9.5: Clarke Crescent (Access Road)

Type of Crash	Fatal	Hospital	Medical	Major Property Damage	Minor Property Damage	Total
Rear End	-	-	-	3	-	3
Right Turn Thru	-	-	2	2	1	5
Right Angle	-	-	1	-	-	1
Total	0	0	3	5	1	9

Wise Street and Clarke Crescent both have been the site of relatively far fewer incidents. While the overall count is modest, the predominant crash types are right-turn-thru and right-angle crashes, related to turning manoeuvres.

The area within the immediate vicinity of the Site, constituting local access roads, has seen very few crashes relative to the roads at a further radius from the Site, predominantly resulting in major and minor property damage only. This is due to the low-speed nature of the driving environment. Further away from the Site, the road network comprises key Distributor roads with higher speed limits, and it is on these roads where the vast majority of crashes occur. The prevalent types of crashes include rear-ends, right-angles and right-turn-thru crashes, largely influenced by excessive speed and delayed reaction times facilitated by the straight nature of the Distributor roads.

Given the low-speed environment and the low number of trips generated, it is considered unlikely that the development will cause any material impact on the traffic safety of the surrounding road network.

9.2 Sight Distance

The sight distance from the Site to Clarke Crescent was checked to ensure it is compliant. The provision of wide verges and setbacks assists in achieving these requirements.

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9.3 Green Travel Action Plan

A Green Travel Action Plan has been produced for the Site and is contained in this report in Appendix D. The Travel Plan has been produced consistent with the objectives of the City of Joondalup to encourage more sustainable travel by reducing car use.

The Green Travel Plan incorporates 20 specific actions to increase sustainability and reduce the carbon emissions of the development focussed in the areas of:

- Providing physical infrastructure and end of trip facilities for non-car modes,
- Promoting walking and cycling,
- Providing electric charging systems to support low emissions vehicles,
- Encouraging sharing and non-travel options, and
- Spreading peak arrival and departure times.

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10 Summary

This Transport Impact Assessment report outlines the transport aspects of the proposed development focusing on traffic operations, access, and provision of sufficient parking. Included are details relating to pedestrians, cyclists, public transport, road safety, sustainable travel and a number of other important considerations.

This report has been prepared in accordance with the WAPC Transport Assessment Guidelines for Developments: Volume 4 - Individual Developments (2016).

The following points distil the key findings and conclusions of the assessment:

- The proposed development is expected to generate approximately 43 additional vehicle trips in the PM peak hour, and 72 additional vehicle trips in the weekend peak hour.
- The traffic capacity analysis indicates that during the weekday evening and weekend peaks no intersections in the close surrounds of the development will be materially affected, and all will continue to operate at similar levels of service as at present. Furthermore, the two main entries to the Site will continue to enjoy a high Level of Service (LOS A) with delays to all turning traffic of less 5 to 10 seconds in the busiest peak periods.
- The analysis indicates that the traffic generated by the proposed development can be adequately accommodated by the existing road network without creating significant impacts or issues. In all cases the traffic generated by the development can be accommodated within the environmental traffic capacity of the roads the traffic is forecast to use.
- The design has been checked for the safe movement of large service vehicles (up to and including 19 metre articulated trucks) into, out of, and throughout the Site, and all swept paths are appropriately accommodated.
- A total of 186 off-street basement car parking bays are proposed to be provided over two parking levels. In addition, there are 33 on-street public parking spaces adjacent to the development along Clarke Crescent and Onslow Place that are heavily underutilised.
- The parking supply proposed for the development both exceeds the total parking demand calculated for the Site and the City of Joondalup parking policy requirements as defined in the Joondalup Activity Centre Plan.
- The development has excellent access to pedestrian and cycling facilities and high-frequency public transport services that will provide outstanding opportunities for people to travel to/from the Site using public transport and more active modes and to reduce the amount of their car use.
- A Green Travel Plan has been prepared that provides guidance on 20 specific actions to encourage the use of more sustainable travel and to reduce the impact of the development on surrounding streets. Once implemented this will have the added advantage of reducing the traffic generated by the development, particularly in busy peak periods for the road network.
- Given the low-speed environment and the low number of trips generated, it is considered unlikely that the development will cause any material impact on the traffic safety of the surrounding road network.

In conclusion, we are of the view that the level of the expected traffic impact resulting from the redevelopment of the Harvey Norman Joondalup site can be accommodated within the environmental traffic capacity of the road network.

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Appendix A: WAPC Checklist

Item	Status
Introduction/Background	
Development location and context	Section 2
Description of proposed development	Section 3
Key issues	Section 2
Background information	Section 2
Existing situation	
Existing site uses	Section 2
Existing parking supply and demand	Section 2
Existing access arrangements	Section 2
Existing land uses	Section 2
Surrounding road network	Section 2
Traffic management of frontage streets	Section 2
Daily traffic volumes	Section 2
Peak traffic volumes	Section 2
Operation of surrounding intersections	Section 2
Existing pedestrian/cyclist networks	Section 2
Crash data	Section 9.1
Development proposal	
Regional context	Section 3
Proposed land uses	Section 3
Proposed access arrangements	Section 3
Proposed parking provision	Section 6
Proposed end of trip facilities	Section 8
Specific issues	Section 9
Proposed road network	Section 3
Proposed intersection layouts and controls	Section 3
Proposed pedestrian/ cycle networks and crossing facilities	Section 8
Public transport services	Section 7
Integration with surrounding area	
Surrounding major attractors/generators	Section 2
Proposed changes to surrounding land uses	Section 2
Travel desire lines	Section 5
Adequacy of existing transport networks	Section 2
Remedial measures to address deficiencies	Sections 5 and 10
Analysis of transport networks	
Time periods	Section 2
Development generated traffic	Section 5
Distribution of generated traffic	Section 5
Parking supply and demand	Section 6
Base with development traffic flows	Section 5
Analysis of development accesses	Section 5
Impact on surrounding roads, intersection and neighbouring areas	Section 5
Road safety	Section 9
Public transport access	Section 7
Pedestrian and cyclist access/amenity	Section 8

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Appendix B: Harvey Norman Joondalup Traffic Survey



Figure B1 – HN Entry facing West

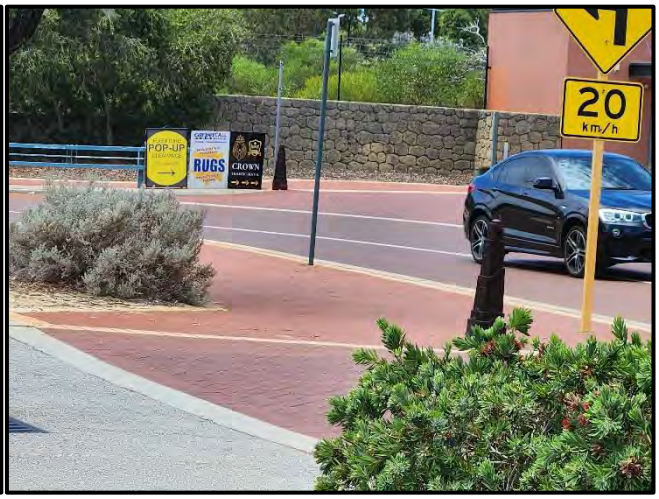


Figure B2 – HN Entry facing East

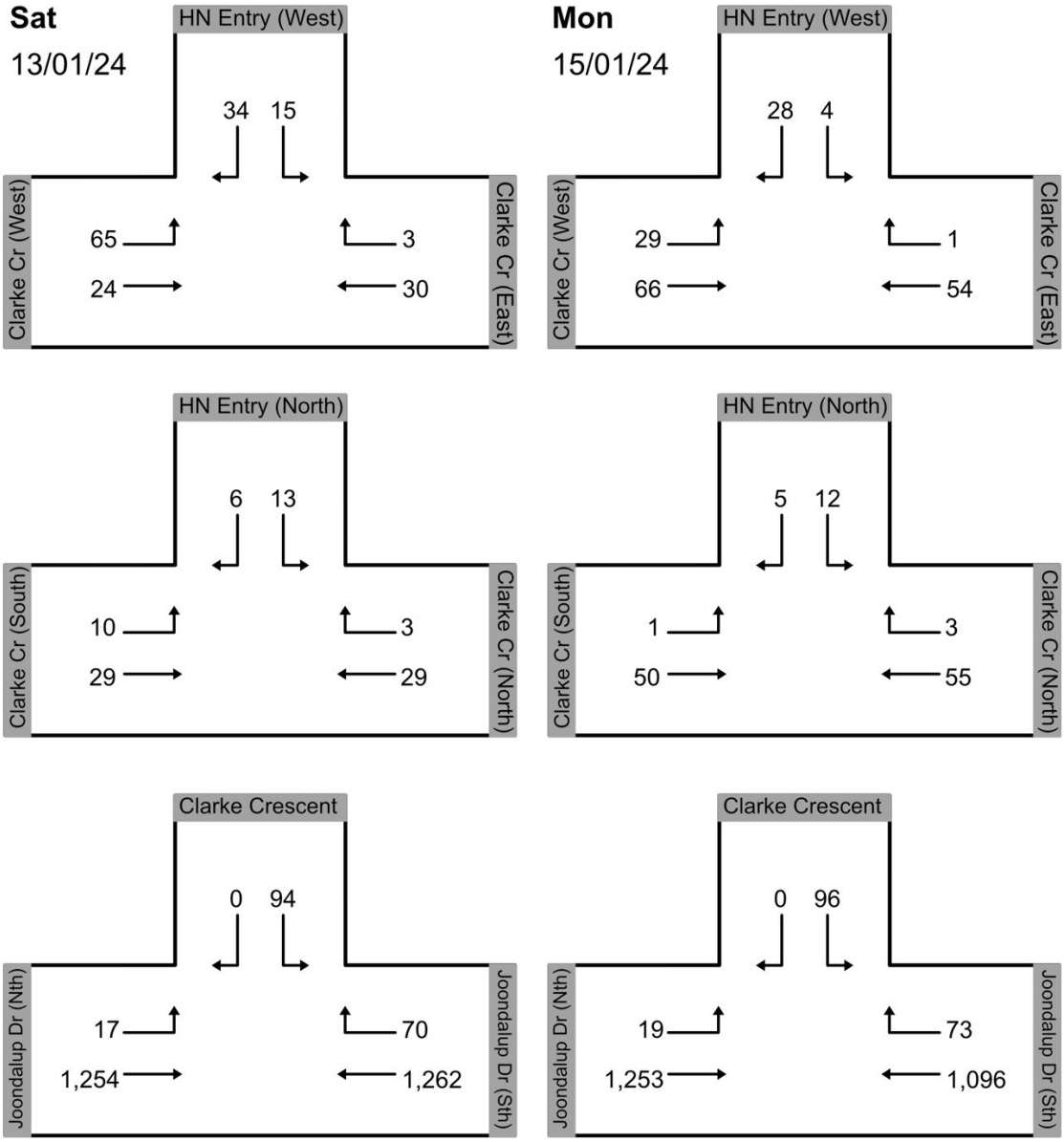


Figure B3 – Clarke Crescent Turning Counts

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Appendix C: Joondalup Harvey Norman Store Current Floor Plan and Development Summary

Courtesy of Leffler Simes Architects



1 EX. SITE PLAN
Scale: 1 : 500



2 LOCATION PLAN

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Green Building Council Australia Member

ISSUE	AMENDMENT	DATE	CHK'D
P1	PRE-DA	17.05.23	SJC
A	DEVELOPMENT APPLICATION	17.11.23	SJC
B	AMENDED DEVELOPMENT APPLICATION	30.01.24	SJE

DA - DRAWING LIST

SHEET N°	SHEET NAME	SCALE
DA 01	EXISTING SITE & LOCATION PLAN	1:500
DA 02	EXISTING FLOOR PLAN	1:500
DA 03	OVERALL FLOOR PLAN	1:200
DA 04	FLOOR PLAN SOUTH	1:200
DA 05	END OF TRIP AND OFFICE LAYOUT	1:200
DA 06	ROOF PLAN NORTH	1:200
DA 07	ROOF PLAN SOUTH	1:200
DA 08	ELEVATIONS 1	1:200
DA 09	ELEVATIONS 2	1:200
DA 10	SECTIONS	1:200
DA 11	STEEL FACADE PANEL DETAIL	1:20
DA 12	PERSPECTIVE 1	NTS
DA 13	PERSPECTIVE 2	NTS

NOTE:
SITE BOUNDARIES AND SITE AREAS AND EXISTING BUILDING ARE INDICATIVE ONLY. SUBJECT TO CONFIRMATION BY LICENSED SURVEYOR.

DEVELOPMENT SUMMARY

EXISTING BUILDING	=	7,049 SQM
TOTAL CARPARKING	=	238 SPACES
EXISTING BUILDING	=	7,049 SQM
EXTENSION	=	3,003 SQM
TOTAL AREA	=	10,052 SQM
PARKING PROVIDED		
TOTAL CAR SPACES	=	186 SPACES (1:54)
TOTAL MOTORBIKE	=	13 SPACES
TOTAL BICYCLES	=	24 SPACES

DEVELOPMENT APPLICATION

LEFFLER SIMES PTY LTD ABN 39 001 043 992
SYDNEY 7 YOUNG ST, NEUTRAL BAY, NSW 2089 T:+61 2 99093344
MELBOURNE LEVEL 2 - 370 LT BOURKE ST, VIC 3000 T:+61 3 96546944
WEB: www.lefflersimes.com.au BRISBANE L5 U39 131 LEICHHARDT ST, SPRING HILL, QLD 4000 T:+61 7 31235544

SCALE 1:500 @A1

HARVEY NORMAN ADDITION
Cnr CLARKE CRESCENT JOONDALUP DRIVE, JOONDALUP WA

JOB NO: 5244 DATE: MAY '23 DRAWN: LSA DWG NO. DA 01 REV. B

EXISTING SITE & LOCATION PLAN

LEFFLER SIMES ARCHITECTS

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Appendix D: Green Travel Plan – Harvey Norman Joondalup

	Green Travel Initiative	Description	Responsibility
1	**Encourage non-peak hour service deliveries**	Build a set of service delivery peak hour exclusions into lease documentation.	Harvey Norman
2	**Offer flexible start and finishing times**	Allow employee to offset start and finish times and to support flexible working arrangements where possible.	Harvey Norman Store Management
3	**Offer some employees part-time work from home arrangements**	Offer office-based support staff some flexibility to work from home.	Harvey Norman Store Management
4	**Provide secure bicycle and scooter parking for employees**	Install secure bicycle and scooter parking within the centre for employees.	Harvey Norman
5	**Provide secure bicycle and scooter parking for customers**	Install secure bicycle and scooter parking within the centre for customers.	Harvey Norman
6	**Provide end of trip facilities / showers for employees**	Building fit out to include staff showers and related end-of-trip facilities.	Harvey Norman
7	**Install posters in employee break areas**	Develop simple posters with clear messaging and circulate to all businesses to place in employee	Harvey Norman Store Management

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	Green Travel Initiative	Description	Responsibility
		communal break areas.	
8	**Provide maps of nearby facilities in walking distance to the site, e.g. gyms, day care facilities, bus stops, etc.**	Develop spatial maps and place in employee communal break areas.	Harvey Norman Store Management
9	**Map a 40-minute walking circle from the site**	Develop a spatial map and place in employee communal break areas.	Harvey Norman Store Management
10	**Encourage virtual meetings using MS Teams/Zoom/etc.**	Management to encourage staff to conduct virtual meetings where possible.	Harvey Norman Store Management
11	**Improve pedestrian pathways and connections**	Improve pedestrian connections as part of any redevelopment of the Site including the creation of east-west and north-south pedestrian spines.	Harvey Norman
12	**Provide free charging for e-bikes**	Install one or more charging points for electric bikes throughout the centre.	Harvey Norman
13	**Provide charging points for electric vehicles**	Install one or more charging points for electric vehicles throughout the centre.	Harvey Norman
14	**Consider organising a ride and walk to work / car free day for employees**	Store management to conduct an annual employee car free day. Also offer incentives to customers to ride and walk.	Harvey Norman Store Management
15	**Encourage carpooling**	Store Management to initiate workplace travel challenges to drive	Harvey Norman Store

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	Green Travel Initiative	Description	Responsibility
		health, wellbeing and sustainability outcomes.	Management
16	**Encourage use of cargo bikes**	Promote the use of cargo bikes.	Harvey Norman Store Management
17	**Provide on-line shopping and delivery options**	Provide genuine on-line shopping and delivery options.	Harvey Norman
18	**Encourage workplace pedometer challenges**	Centre businesses encouraged by Centre Management to initiate workplace travel challenges to drive health, wellbeing and sustainability outcomes.	Harvey Norman Store Management
19	**Consider a parking cash-out program for employees**	Store Management to consider small cash incentives to employees to use other modes to get to work rather than by car, which requires parking.	Harvey Norman Store Management
20	**Explore a lower parking supply for the Development**	Engage with the City and explore the provision of less parking on Site than prescribed by the Local Planning Policy	Harvey Norman

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Appendix E: Swept Path Simulations

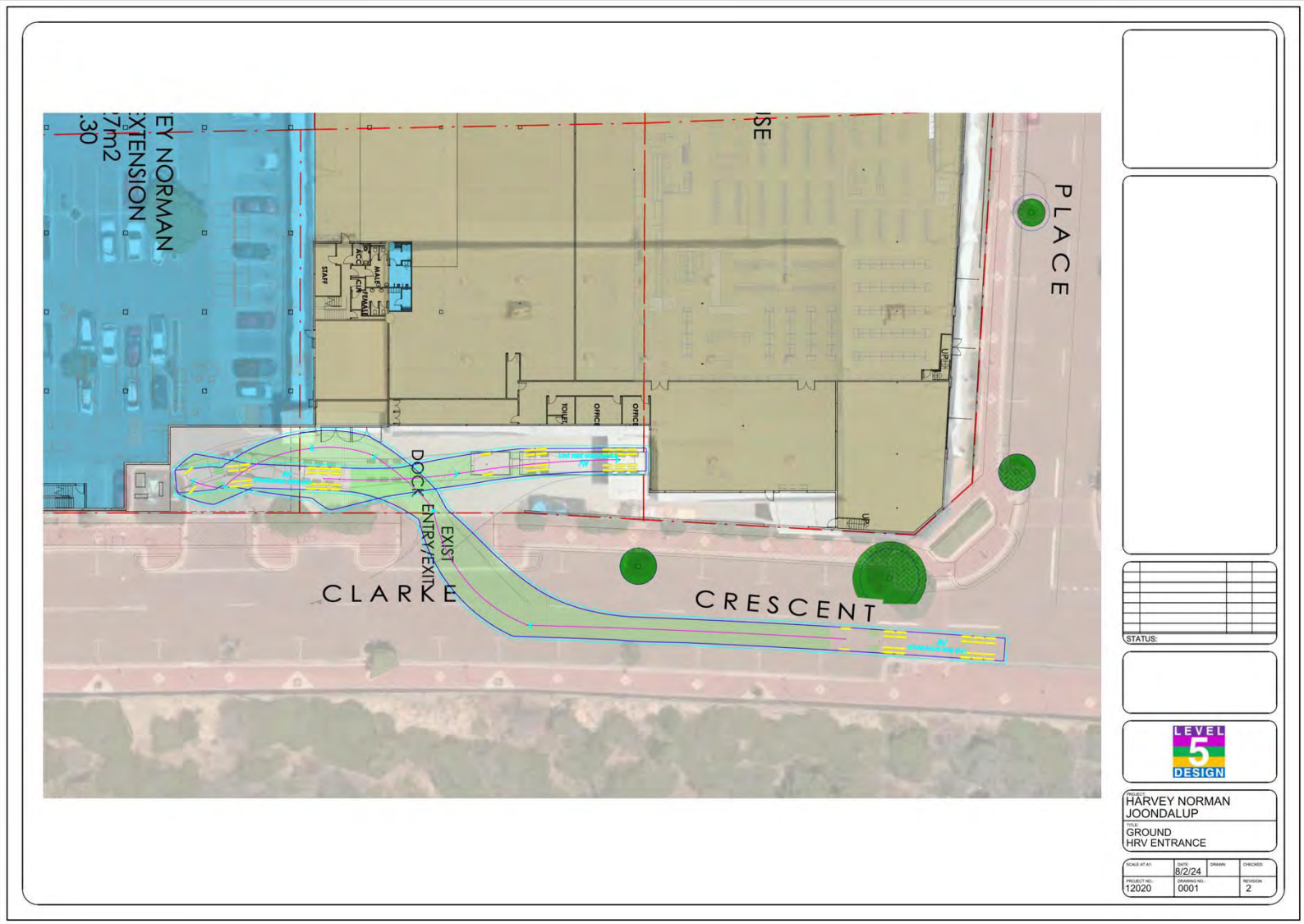


Figure E1 – Swept Path – Ground – HRV Entrance

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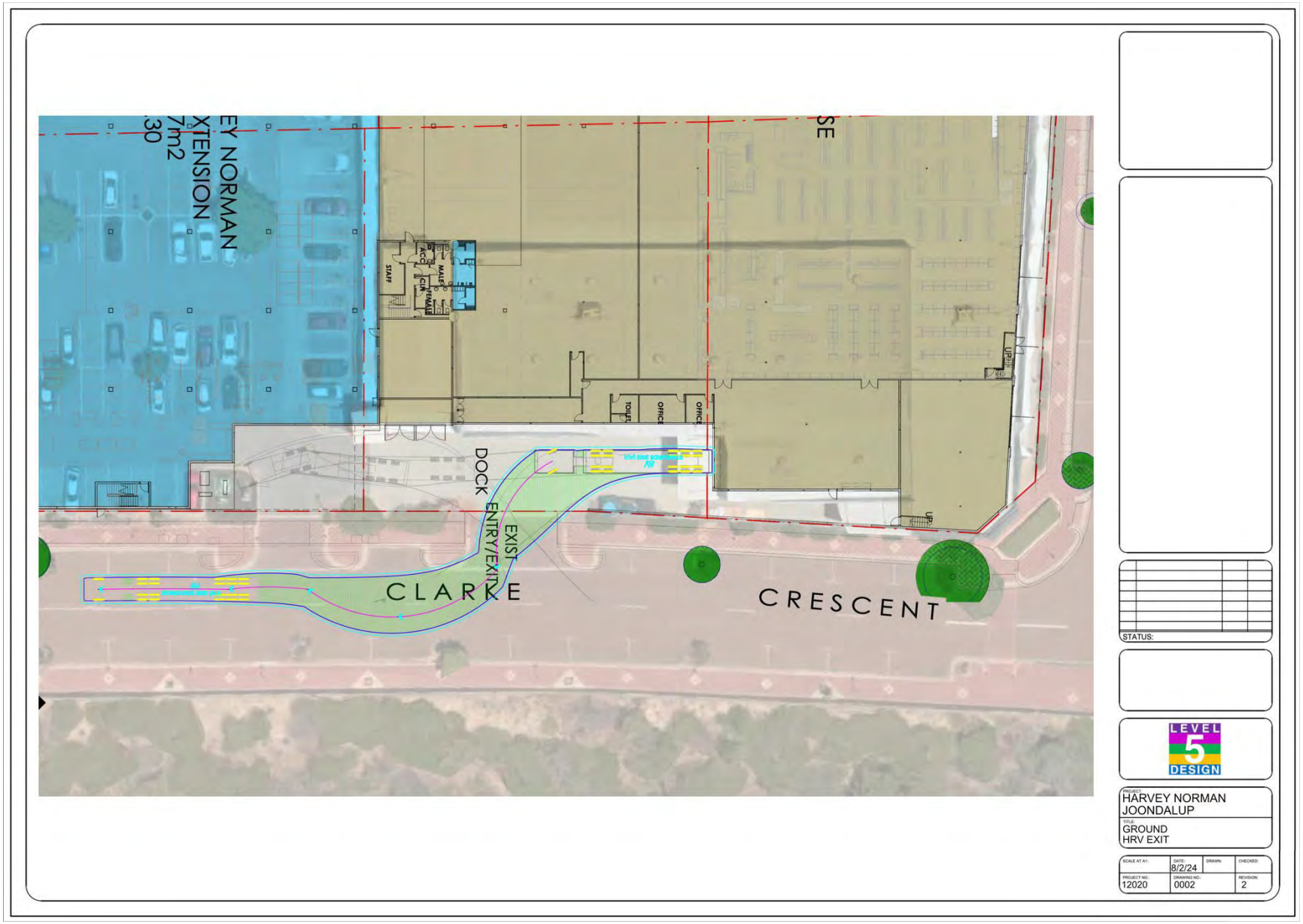


Figure E2 – Swept Path – Ground – HRV Exit

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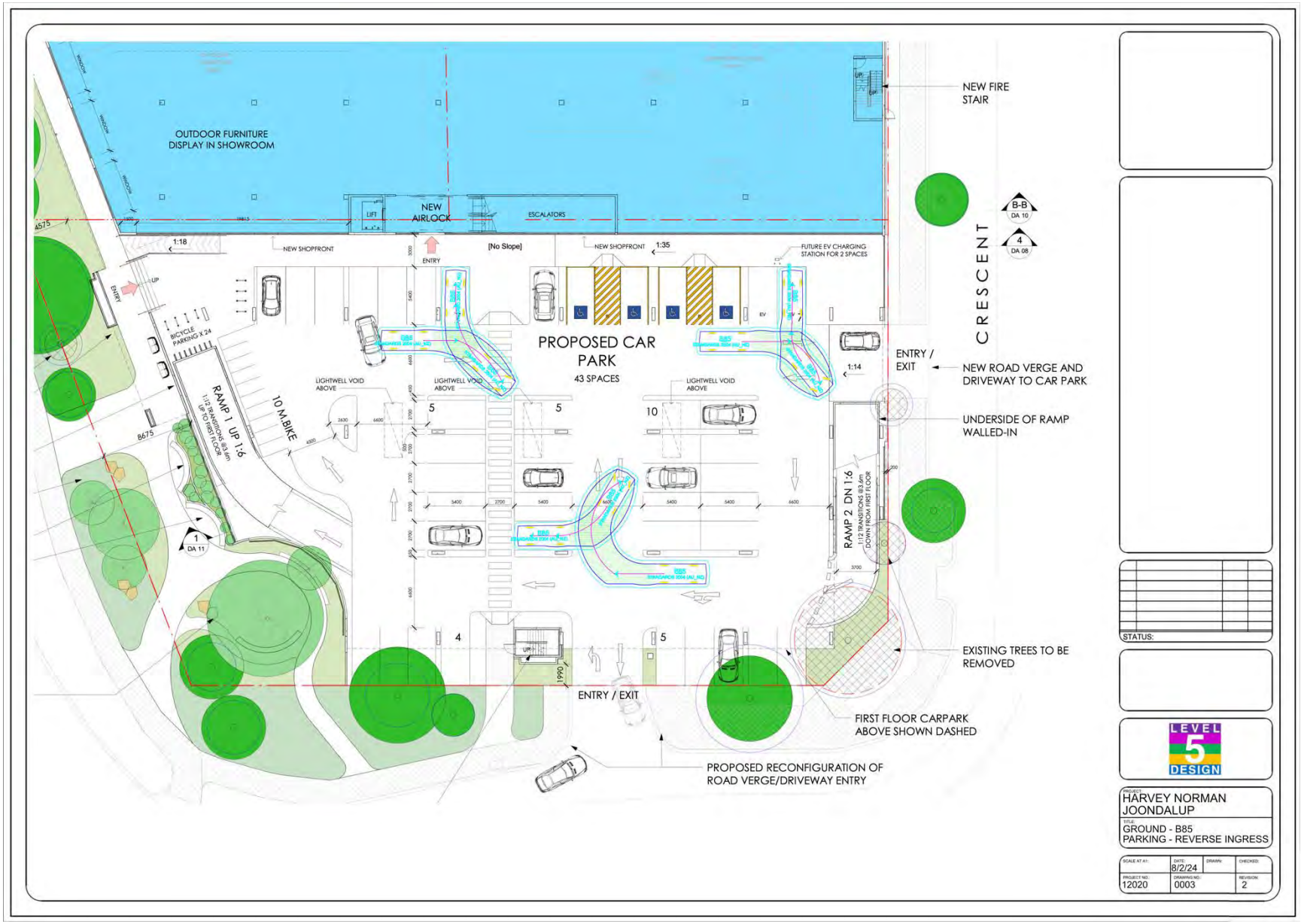


Figure E3 – Swept Path – Ground – B85 Parking – Reverse Ingress

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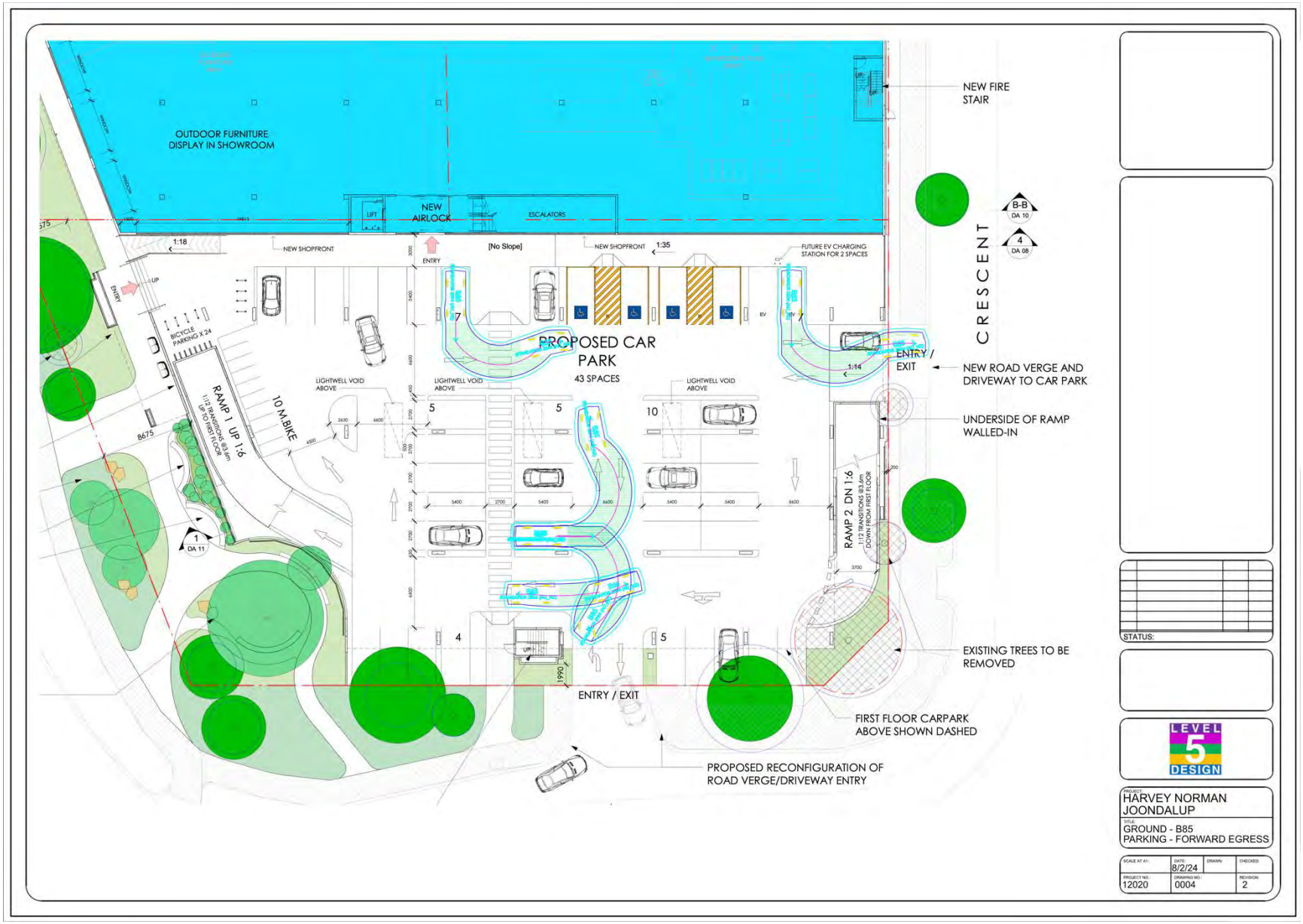


Figure E4 – Swept Path – Ground – B85 Parking – Forward Egress

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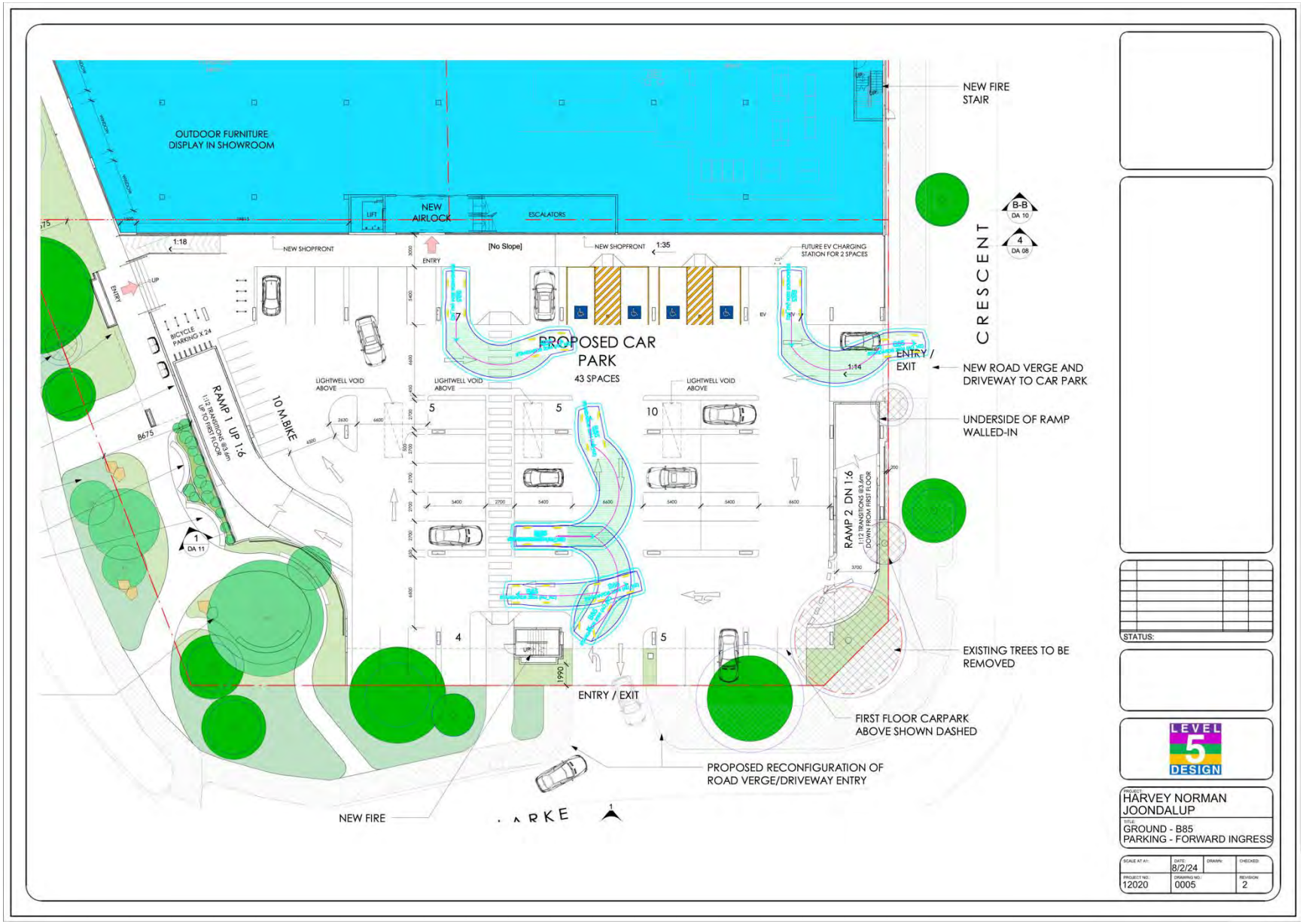


Figure E5 – Swept Path – Ground – B85 Parking – Forward Ingress

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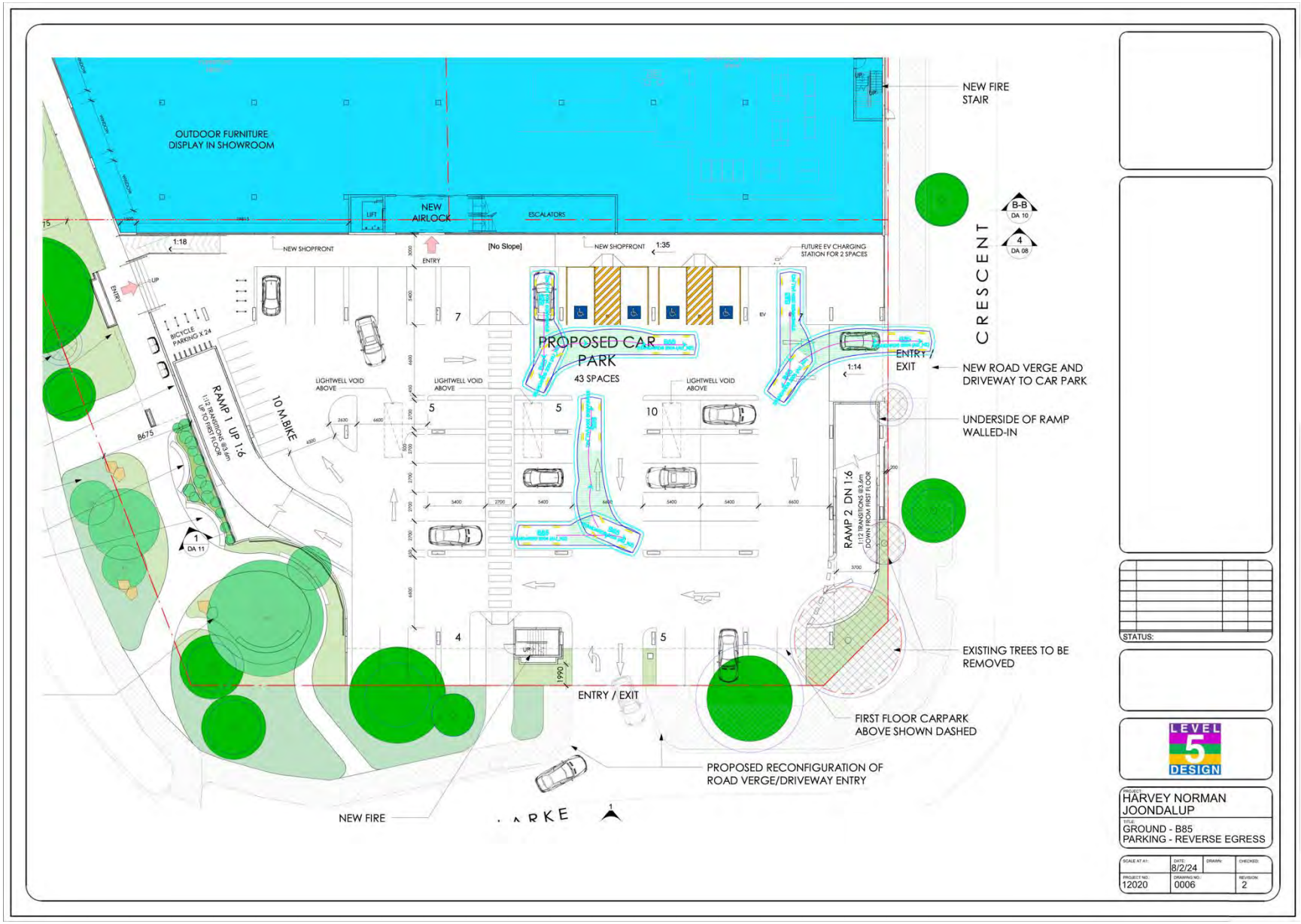


Figure E6 – Swept Path – Ground – B85 Parking – Reverse Egress

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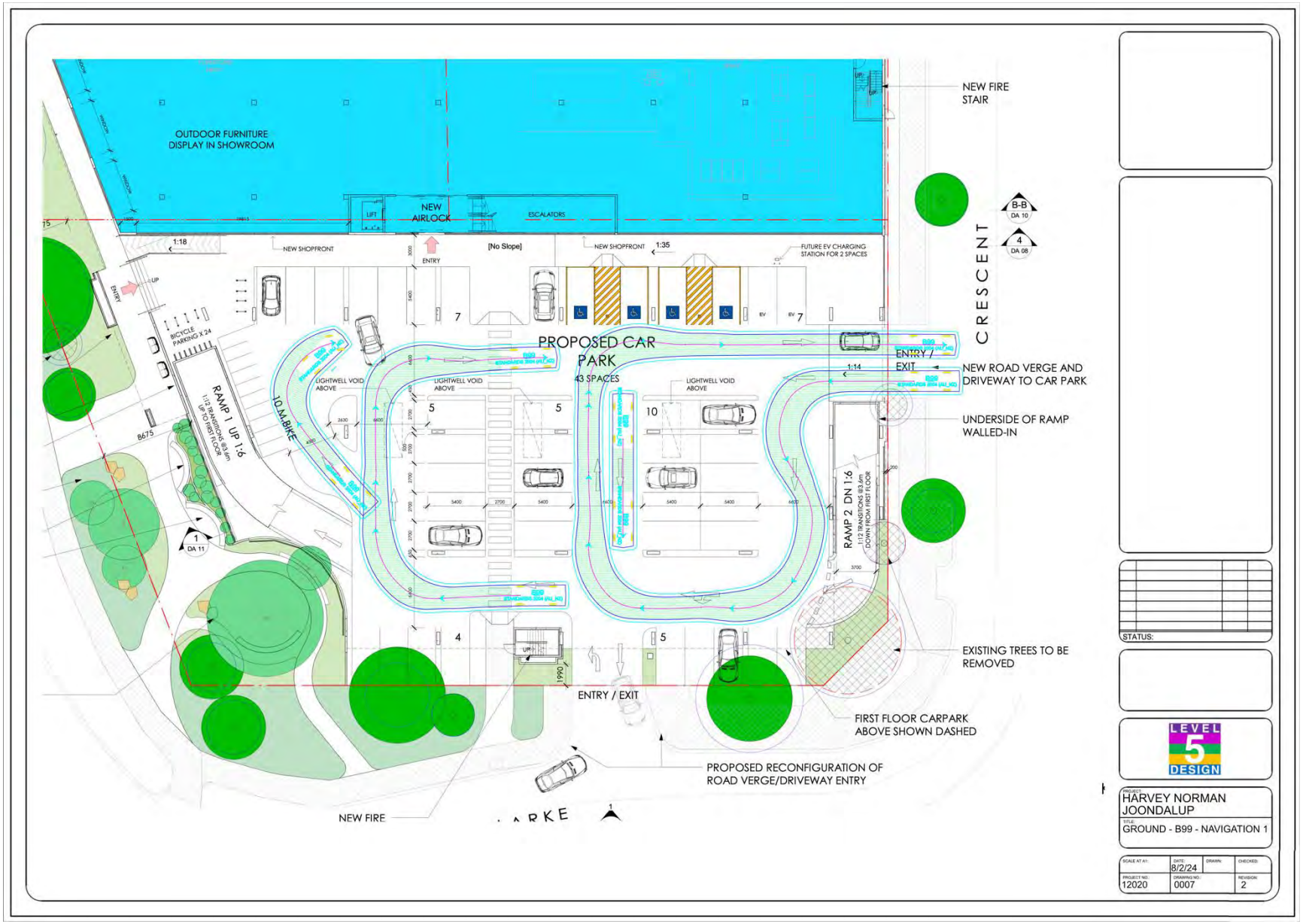


Figure E7 – Swept Path – Ground – B99 – Navigation 1

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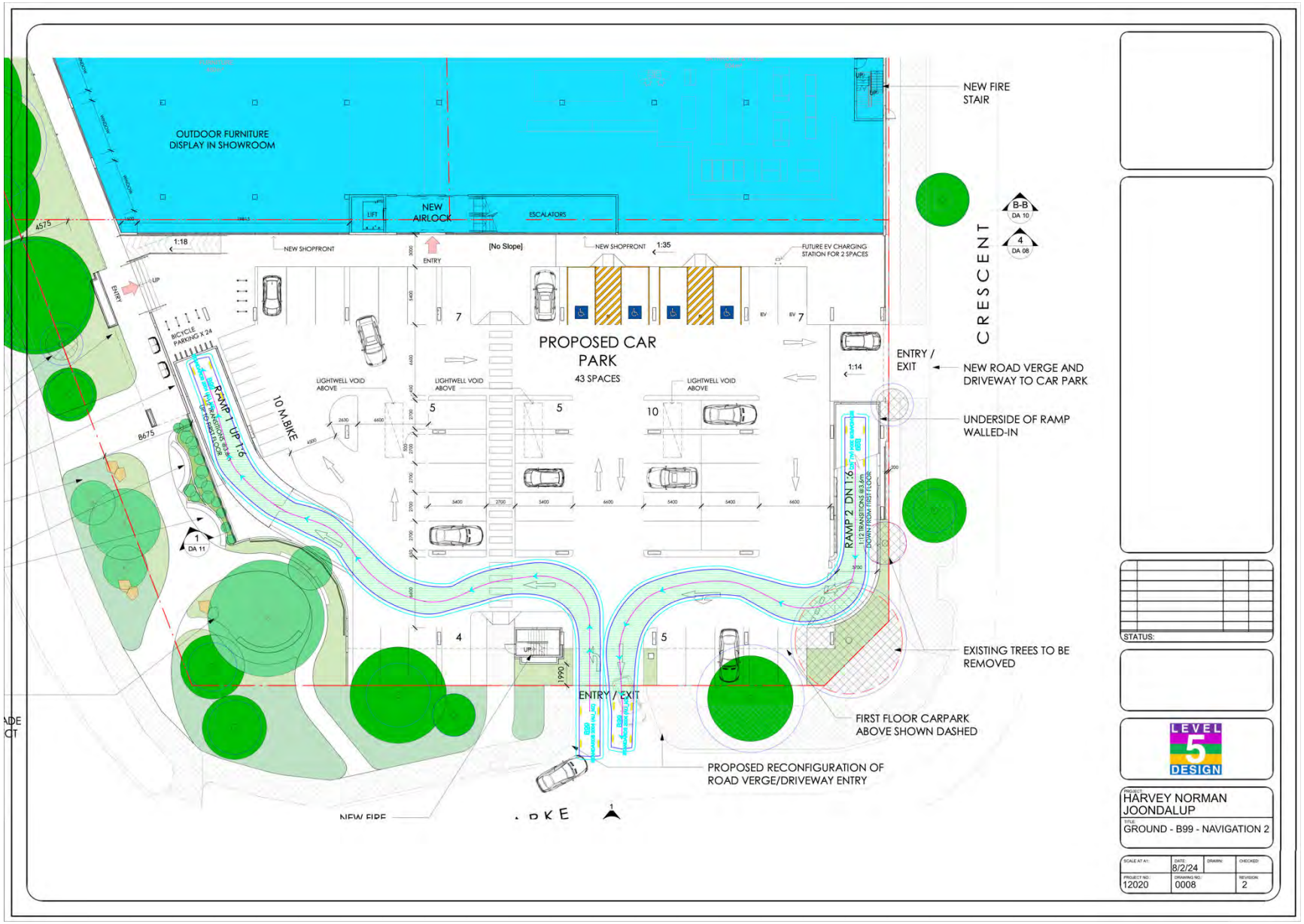


Figure E8 – Swept Path – Ground – B99 – Navigation 2

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Figure E9 – Swept Path – Ground – B85 Parking – Reverse Ingress

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Figure E10 – Swept Path – Ground – B85 Parking – Forward Egress

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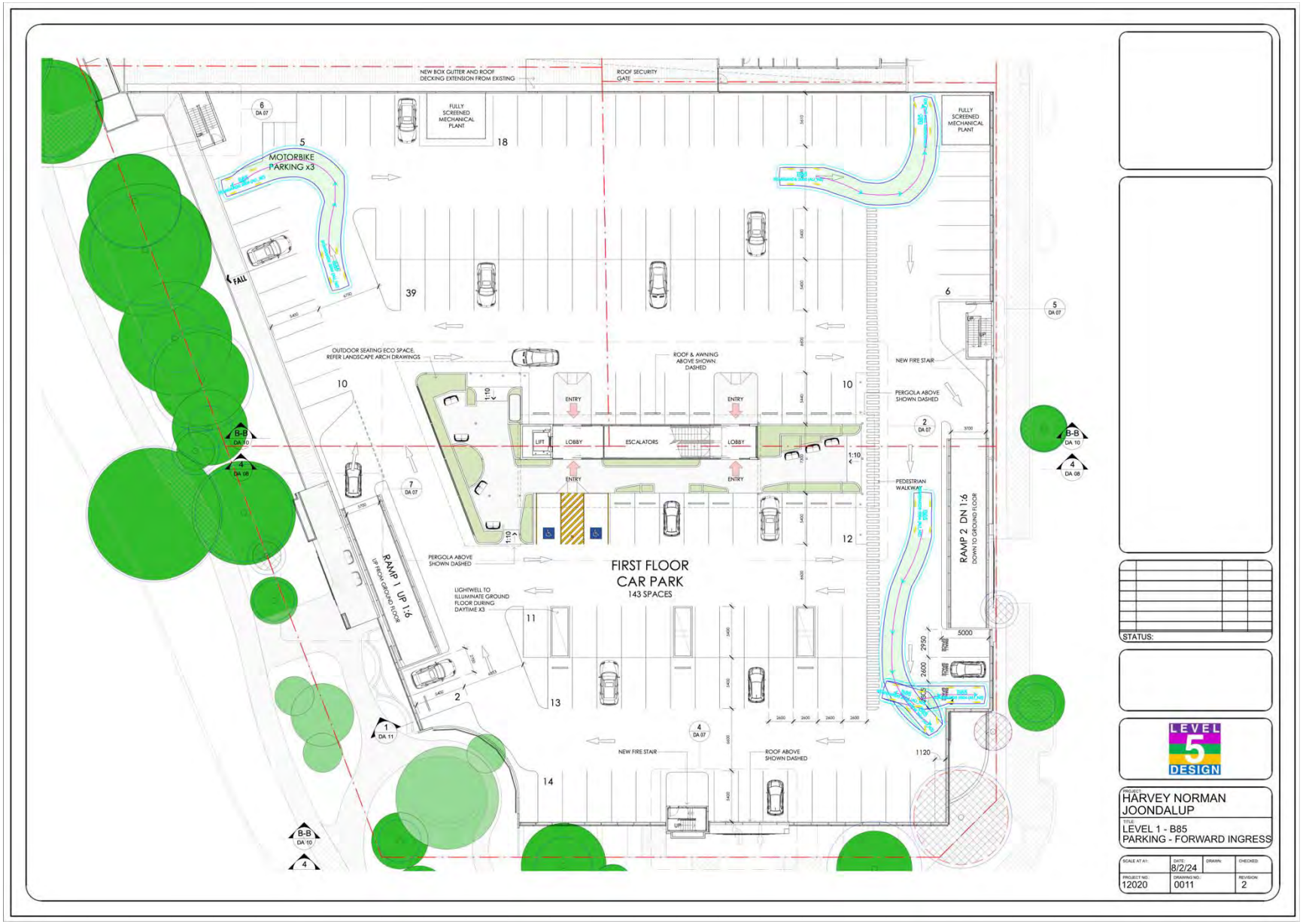


Figure E11 – Swept Path – Ground – B85 Parking – Forward Ingress

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Figure E12 – Swept Path – Ground – B85 Parking – Reverse Egress

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Figure E13 – Swept Path – Ground – B99 – Navigation 1

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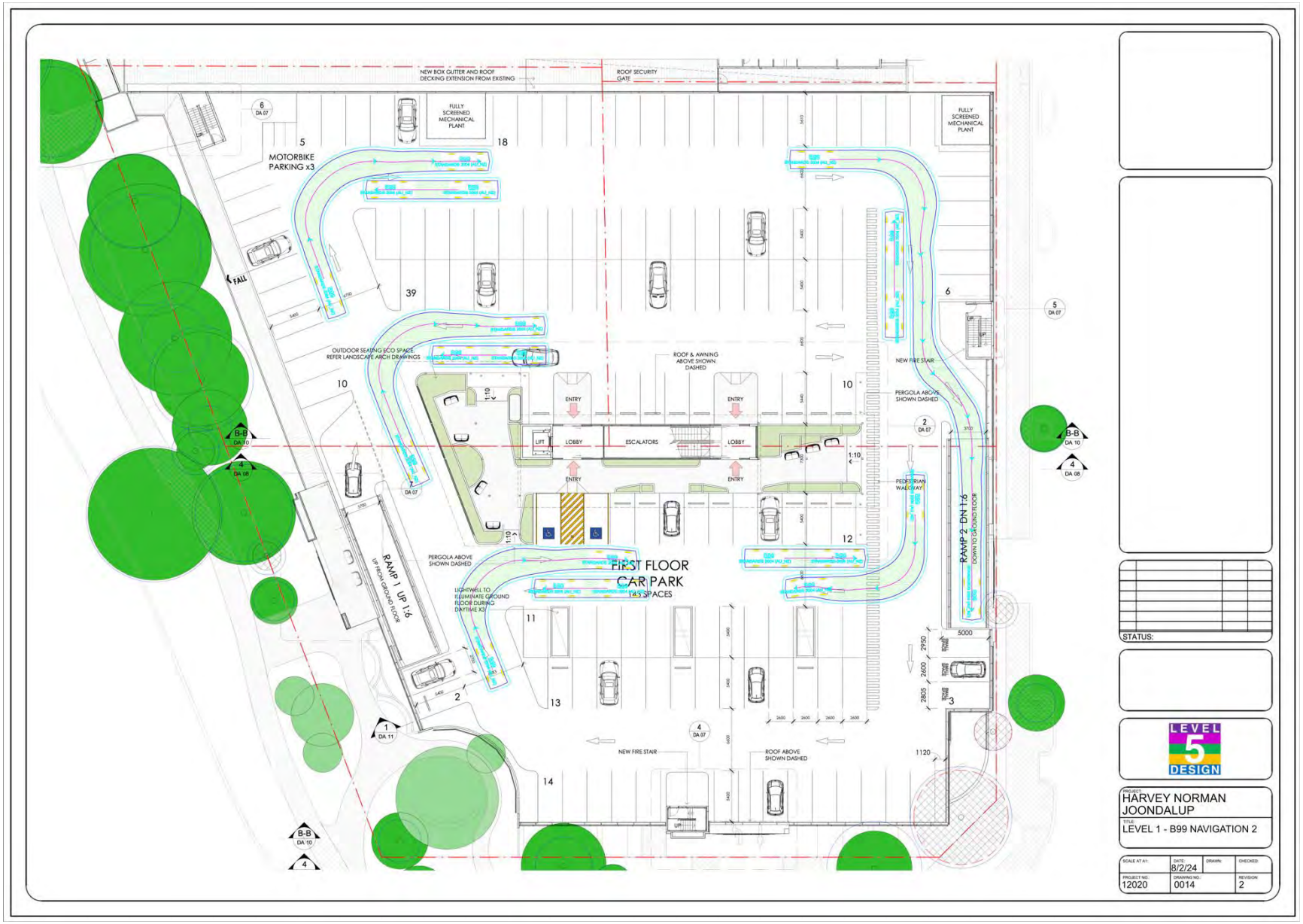


Figure E14 – Swept Path – Ground – B99 – Navigation 2

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TECHNICAL NOTE

To:	Fiona Atkins/Renee Young, Element
Date:	2 July 2024
Project Reference:	12020
Re:	Harvey Norman Joondalup: Truck Service Bay Check

Level5Design has been engaged to complete a functional design check of the current design for the service bay of Harvey Norman Joondalup. This Technical Note presents the findings of our assessment. The Appendices contain an export of the latest architectural drawing of the development and swept path simulation diagrams that were produced. These diagrams are superimposed over satellite imagery of the existing site to provide a more accurate depiction of the tested vehicle motions.

BACKGROUND

The development proposals that were assessed are as shown on the drawing for Harvey Norman Joondalup (the 'Site') published by Leffler Sims on the 22nd of June 2024.

Waste collection vehicle visits on site will be undertaken using a commercial waste collection service. The specifications for waste collection vehicles used by the major waste collection companies in Western Australia are given in Table 1.

Table 1 – Commercial Waste Collection Vehicle Dimensions

Vehicle Dimensions	Veolia	Cleanaway	Remondis
Length during travel (m)	10.0	10.3	10.7
Length during lifting operation (m)	11.6	11.5	12.5
Height during travel (m)	3.4	4.3	3.4
Height during bin lifting (m)	3.4	4.3	3.4
Width during travel (m)	2.5	3.0	2.5

Allowance has been made in the design for 11 m long service vehicles to access the Site. This is the length during travel.

The swept path analyses have been conducted using two model configurations in AutoTURN to represent front-loading and rear-loading waste collection trucks. These simulation models have been configured to exceed the minimum dimensional requirements:

- specified for trucks in AS2890.2 Parking facilities Part 2: Off-street commercial vehicle facilities, and
- of trucks used by commercial waste collection companies that operate in Perth as shown in Table 1.

This approach allowed the 'worst-case scenario' to be simulated.

Approaches from the north and south were simulated. Each simulation was conducted utilising a 300 mm clearance envelope around obstacles.

FINDINGS

Our assessment identified that the current design allows for the safe access and manoeuvring of both front and rear loading waste collection vehicles.

The best-operational solution is where a rear-loading waste collection vehicle arrives along Clarke Crescent from the north and departs to the south or vice versa for a front-loading vehicle. These are shown as Figures B1 and B2 in Appendix B.

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APPENDIX A – Ground Floor Plan

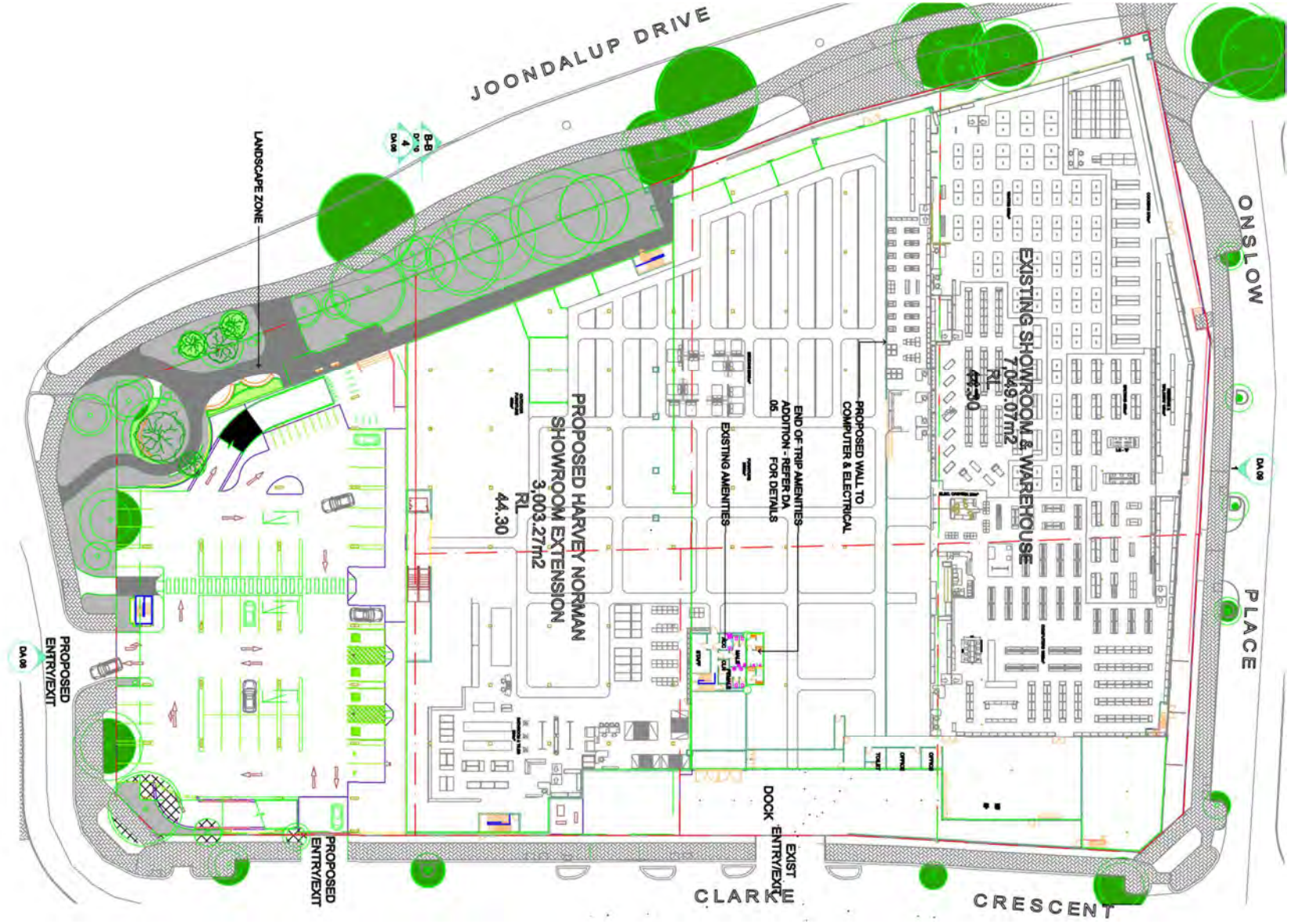


Figure A1 – Ground Floor Plan (DMG Export from Leffler Simes Drawing)

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Appendix B: Swept Paths

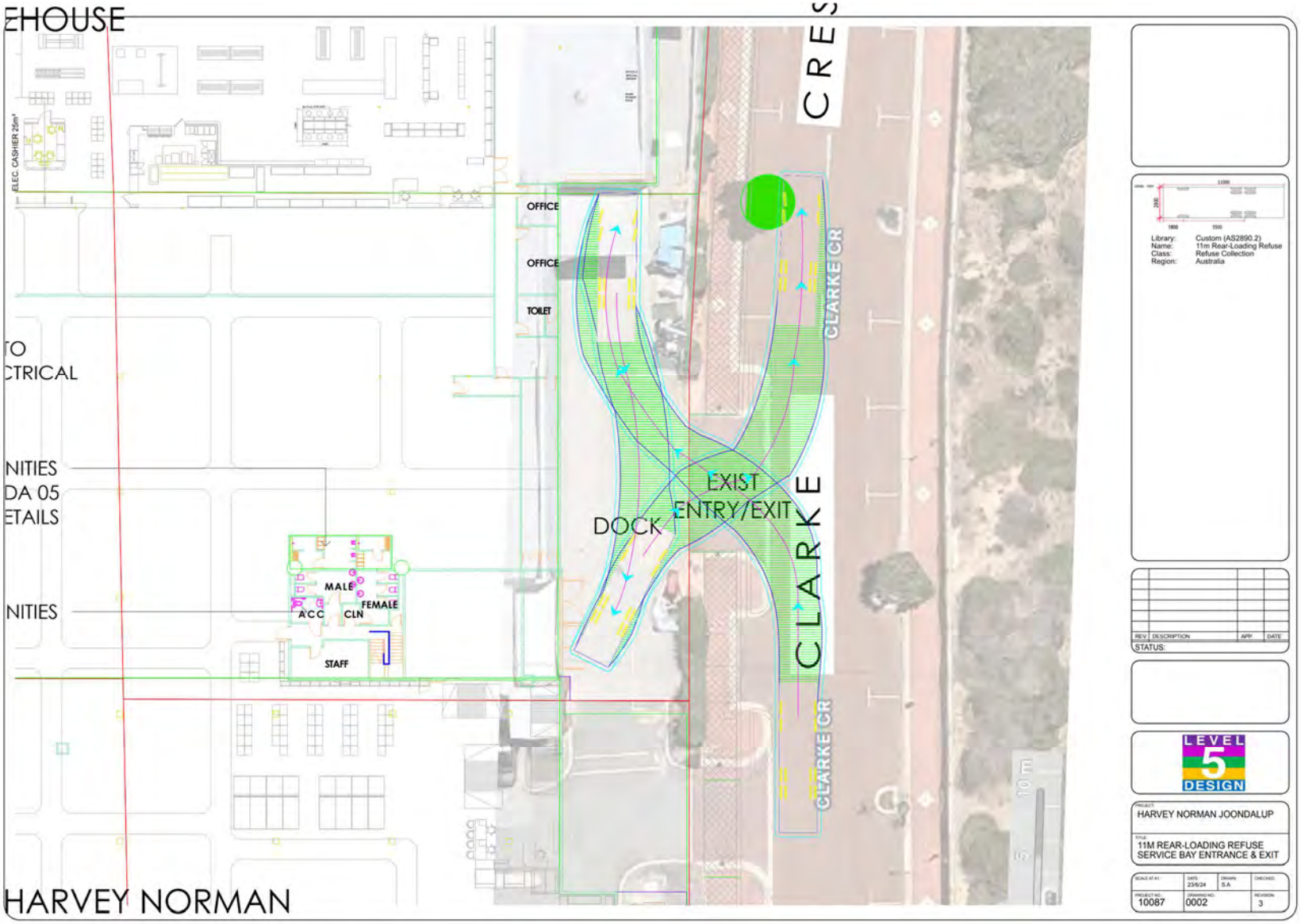


Figure B1 – 11 m Front-Loading Waste Collection Vehicle – Service Bay Entrance & Exit Manoeuvre

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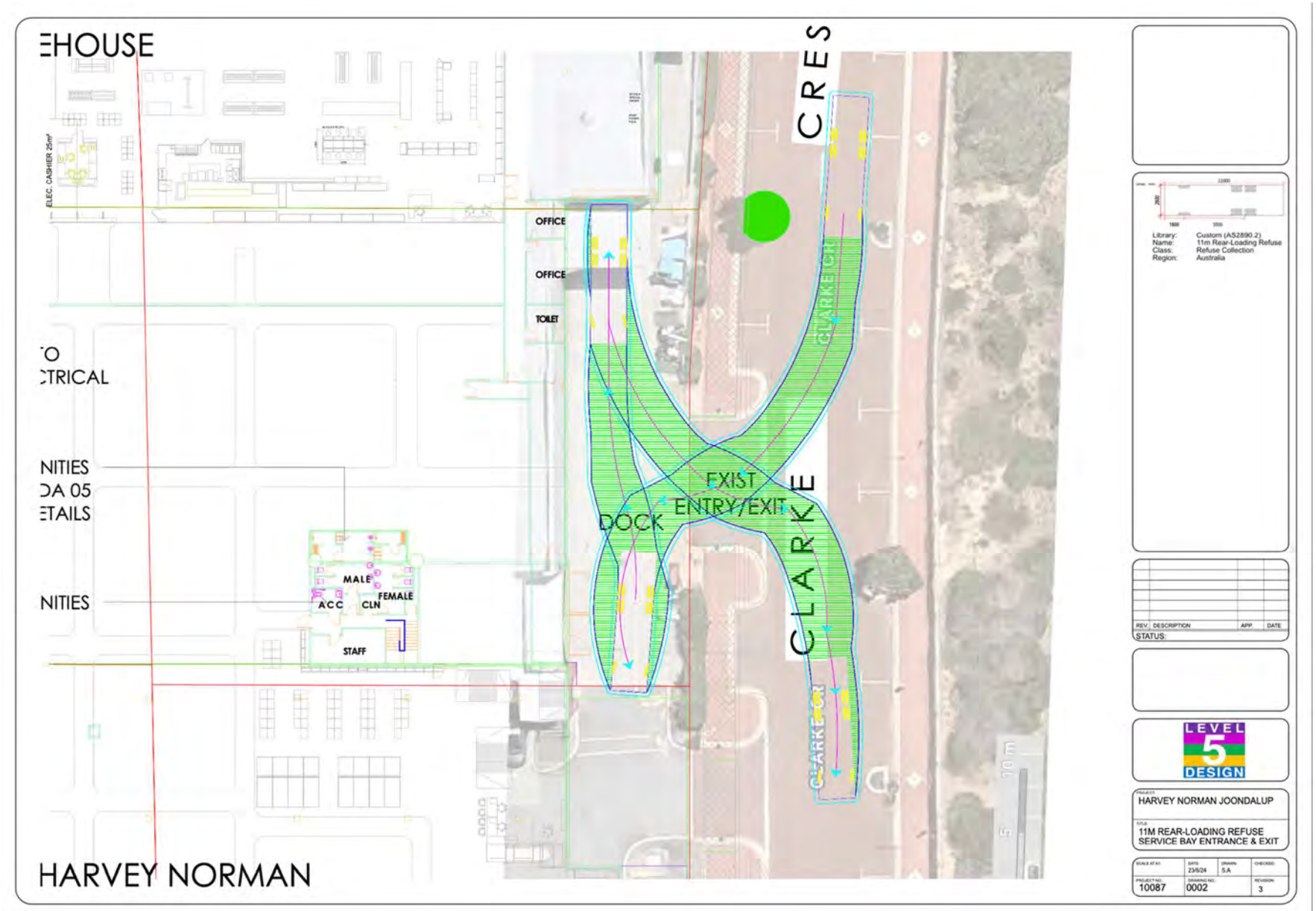


Figure B2 – 11 m Rear-Loading Waste Collection Vehicle – Service Bay Entrance & Exit Manoeuvre

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Stage 2 – Collaborative Design Review

Harvey Norman, Joondalup, Western Australia

March 2024

Prepared for:

DMG PROPERTY

Steve McDonald
Director of Project Management
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Prepared by: Alex Bodenstaff & Rob Bodenstaff (in conjunction with Veronica Lehman)
March 2024
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Reference Number: Q008065

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Appendix E – Back of Kerb Treatments 33

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Purpose of this Report

Arbor Centre have been engaged by DMG Property in October 2022 to assess the existing trees in light of the proposed development of Harvey Norman at Joondalup and provide Arboricultural Advice surrounding this development.

A tree survey was undertaken by Arbor Centre in October 2022 which provided the design team with base information regarding tree data. As part of these Stage 2 works Arbor Centre will provide an updated version of the Table of Results in light of the proposed construction works that includes: Species Name (Botanical and Common); Age; Tree Height; Canopy Spread; Useful Life Expectancy; Tree Health; Canopy Structure; Trunk Diameter; TPZ Radius; Observations and Comments; Preliminary Canopy Pruning Works; Recommendations / Proposed outcomes post design review; Longitude and Latitude for the x 56 trees (as specified within/adjacent the proposed development) located within the proposed works area at Harvey Norman in Joondalup, Western Australia (refer Table of Results and Field Definitions for further detail).

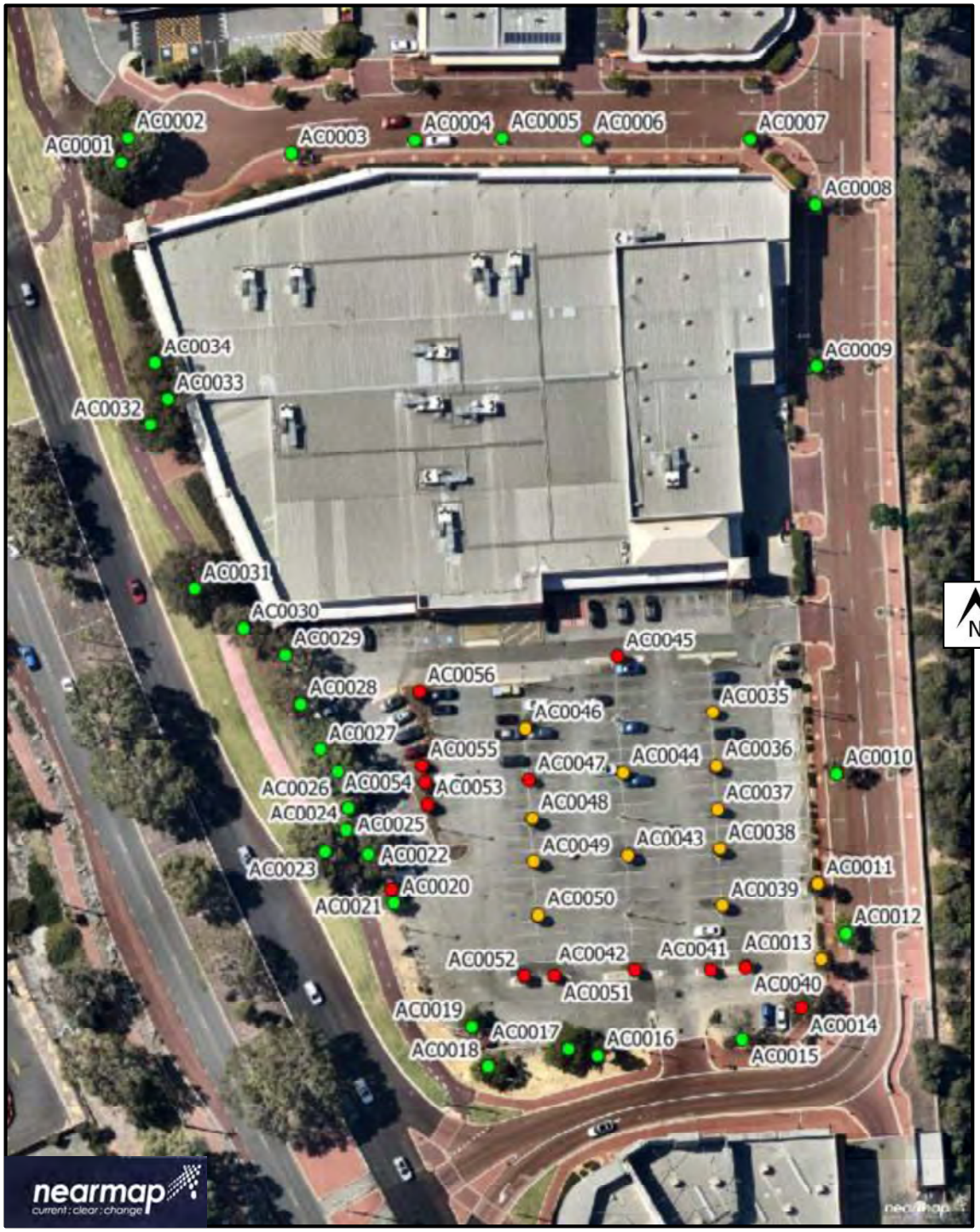


Figure 1. *Satellite image showing approximate area assessed at Harvey Norman (Joondalup, Western Australia). Image Source – www.NearMap.com , Image date 3rd February 2024*

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Tree Location Image

Tree Location Image – Recommendations Post Design Review



Legend

Retain; Develop Tree Retention Specifications – 🟢
Marked for Removal; Consider relocation – 🟡
Marked for Removal; Consider utilization of log sections – 🔴

Figure 2: *Tree location Image – Recommendations Post Design Review. Image Source – www.nearmaps.com , Image date 3rd February 2024*

Note: *Tree locations are an approximate and for reference purposes only (the GIS coordinates are to be used as a guide only to verifying location and tree specific information). The GIS Data is deemed reliable but provided "as is" without warranty of any representation of accuracy, timeliness, reliability or completeness. The map documents do not represent a legal survey of the land and are for graphical purposes only. Use of the Data for any purpose should be with acknowledgment of the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction, and update.*

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Arboricultural Design Comments

Overview

Root zone impacts (and associated root loss) can often negatively affect tree health (and stability) immediately and/or many years after the event.

To achieve tree success, appropriate tree protection and remedial measures must be factored into design refinements and works methodologies; appropriately implemented and; specific remedial measures actioned and appropriately supervised throughout the project.

This current proposal will require collaboration between Arbor Centre, DMG Property and the design team, to review and in some instances modify the proposal in order to successfully retain the subject trees. Where encroachment (demolition, construction, excavation, landscaping or otherwise) into the nominal AS 4970 Tree Protection Zones is required (refer Table of Results for specific TPZ measurements & Appendix A for detail), further Arboricultural input will be necessary to assess the extent of potential impact that may occur and if required, provide Arboricultural measures that can be taken to enable modification of the nominal TPZ and allow root zone encroachment to occur (as identified below).

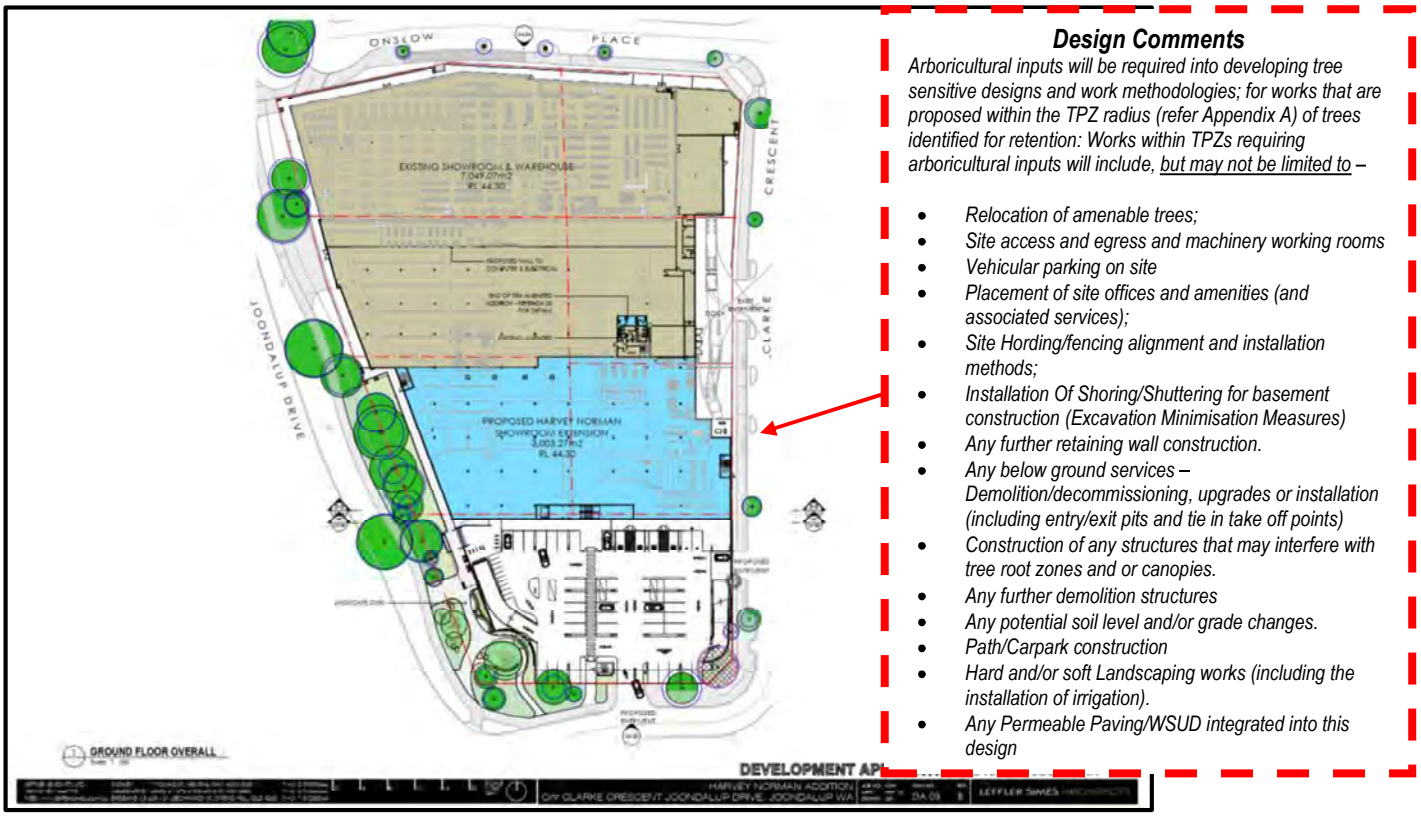


Figure 3. *Overall Floor Plan - Ground Floor Overall – Supplied by DMG Property – March 2024*

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Tree Relocation Considerations

Further specialist Arboricultural inputs will be required from Arbor Centre's Tree Supply and Relocation Division in identifying, preparing, relocating and re-establishing trees that are proposed for potential relocation within and/or externally to the development site. refer '*Arbor Centre's Stage 1 Report',* October 2022 for further detail.

Site and Tree Geo Location Validation

Validation of the sites survey data should be undertaken to ground truth location of trees in relation to the proposed structures and works. This will ensure that any issues regarding alignments in conflict with existing trees are addressed in the design stages for the project.

Relocation of Works Beyond TPZ Projections (where Possible)

To enable greater retention of tree root mass and lessen root zone encroachment, consideration should be given to relocating/diverting any construction works beyond the TPZ projections – refer *Appendix A AS 4970* for detail. Where diversion of works/impacts to beyond the TPZ is not possible/practicable, site assessment and exploratory excavations may need to be undertaken by Arbor Centre to quantify potential root loss, identify measures that may limit (additional) unnecessary root damage/impact; and/or provide possible remedial measures that effectively offset potential root loss. Furthermore, exploratory excavations can provide a better understanding of actual depths of roots and if descending/oblique (anchorage) roots are present (or otherwise) as part of confirming site safety and identifying actual tree risk mitigation management options.

Where scheduled works cannot reasonably be diverted outside the TPZ, Arboricultural supervision will be required to quantify potential root loss, limit unnecessary root damage/impact, and/or provide possible remedial measures necessary to offset potential root loss. Works include but are not limited to;

- Clearing/Demolition and site stripping;
- Any soil level changes (cut and/or fill);
- Any Construction;
- Below ground service installation/upgrades;
- Hard and Soft Landscaping (including irrigation installation).

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Below Ground Installations (or upgrade works)

Where redirection/relocation isn't possible/practical and below ground installation works (including entry and exit pits and take off and tie in points) are proposed to pass through/adjacent the TPZs, prior consultation with Arbor Centre is required to develop and specify root sensitive installation methodologies that avoid unnecessary damage to tree roots (e.g. subterranean boring; trenching using Air knife and industrial Vac truck or hand digging under the guidance of the Arbor Centre – refer figure 4 for example).



Figure 4. *Example of vacuum excavations to uncover root mass – image supplied by Arbor Centre.*

Realignment and/or redesign of types and locations of footings that encroach into the TPZs should also be considered to avoid and/or minimise impact with roots within the TPZ (e.g. consideration could be given to screw-piles or; pillar and panel and or bridging over roots as a 'more tree sensitive' alternatives to continuous strip footings – that allowing existing ground levels to be maintained and greater root mass within these areas to be retained).

Note: *Final design and installation methodologies that are proposed to be undertaken within TPZs should be determined in conjunction with Arbor Centre.*

Soil Levels

Modification of existing soil levels within TPZ areas should only occur if there is prior approval by Arbor Centre. Moderate raising of soil levels may be considered beyond the identified TPZ's area instead of cutting/lowering existing levels (i.e. omitting "boxing outs" for roads, paths, footings, retaining walls, paving etc...)

Note: *Any proposed modification of soil levels within the TPZs is to be determined in conjunction with Arbor Centre prior to being undertaken.*

Alternative Design Methodologies - Road & Path Construction Modifications

Arbor Centre recommends that root sensitive options be investigated/implemented for the installation of paths and roadways as to limit root loss (from box outs and grade changes); soil compaction and rutting, improve distribution of loading and to ensure that overall root disturbance can be properly quantified and managed. Preferred options include:-

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- Water Sensitive Urban Design (WSUD) and Permeable Paving installations within the TPZ's of the retained trees (where plausible) – Refer *Appendix C – Road and Path Construction Modifications* for further detail.
- Where Installation of surface protection and/or trunk and branch protection measures may need to be considered for the site (where identified by Arbor Centre and if required) to enable vehicle/machinery movement within the TPZ's - The installation of a *"Geoweb"* system https://www.geofabrics.co/products/geoweb%C2%AE refer Appendix C (or approved equivalent) on top of current ground level (i.e. no box outs or excavations for installation) should be considered as alternative ground protection measure. The *Geoweb* system is typically installed on top of a geotextile layer and filled with washed and screened aggregate (as to limit leaching and soil contamination).
- Consideration could be given to the moderate raising of soil levels within/adjacent the TPZ areas instead of cutting/lowering existing levels, however, the utilisation of aeration layers and further discussion with Arbor Centre will be required prior to the raising of soil levels in the TPZ's – refer *Appendix D* for further detail on Aeration Layers.

Alternative Design Methodologies - Back of Kerb Treatments (Asset Protection)

Where applicable consideration should be given to the integration of assets (kerbs, bitumen, parking, paths, etc.) and the existing trees being retained (and new plantings). Arbor Centre recommends root sensitive treatments are installed for the asset protection – Refer *Appendix E* for further detail.

Proactive and Reactive Remediation Works

The contractors/responsible party should make appropriate provision for supplementary watering of the retained and new trees, rates and frequencies of watering are subject to the amount of potential root loss sustained & seasonal variation. These watering requirements will be specified further in *Arbor Centre's Stage 3 Tree Retention Specification* and ongoing review of required remediation will be undertaken throughout the development (by the Project Arboriculturist in conjunction with the Superintendent).

Note: *Potential further remedial measures for both canopy and root zone (i.e. root zone coring, soil wetting agents and liquid organic soil drenching) may be required subject to approval from Arbor Centre.*

Tree Protection Zones (TPZ)

- Tree Protection Zones (TPZ's) are three dimensional. They include canopy above ground and root zones beneath the surface;

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- Activities within the 'work specific' TPZ's are restricted and subject to prior approval by the Superintendent (in conjunction with Arbor Centre) throughout the works phase;
- The TPZ's are to be treated as a "No Go" zones and provision for works or associated activities may need to be facilitated elsewhere on site unless otherwise pre-approved by the by the Superintendent (in conjunction with Arbor Centre);
- TPZ's are to be retained for the duration of the works period and are not subject to modification without approval by the Superintendent (in conjunction with Arbor Centre);
- Contractors are to be aware of the TPZ within their extent of works area at all times and that no works are to occur within these areas without prior approval by the Superintendent (in conjunction with Arbor Centre).

Note: *The 'Nominal' TPZ show the area where roots of significance are likely to be located and where if not otherwise identified in plans, drawings or the site-specific specification, are to be assumed as 'no go' zones. All TPZ's require authorisation by the site superintendent (in conjunction with Arbor Centre) prior to entry. Works specific TPZ's will be identified in the specifications for forward works and construction works and referred to as the 'work specific' TPZ's.*

Demolition & Forward Works

Arboricultural input should be included in determining methodologies and specifications prior to the commencement of any Demolition and Forward Works in the work specific TPZ's.

Note: *Demolition methodologies that are proposed to be undertaken within the nominal TPZs are to be determined in conjunction and with the approval of the Arbor Centre.*

Installation Of Shoring/Shuttering (Excavation Minimisation Measures)

Where excavations are proposed to occur within or adjacent TPZ areas, installation of Box/ Sheet pile Shoring or grout injection will need to be considered to prevent soil collapse and associated root zone impacts. ***Note:*** *Shoring types and installation methodologies that are proposed to be undertaken within the nominal TPZs are to be determined in conjunction with Arbor Centre.*

Selection and placement of construction machinery

Types and locations of machinery; construction methodologies and; site access/egress need to recognise the existing dimensions of the trees canopies (noted low spread of some trees on site) and root systems and that the implementation of protective measures may be required prior to the commencement of works.

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Note: *Final design and installation methodologies that are proposed to be undertaken within the nominal TPZs are to be determined in conjunction with Arbor Centre.*

TPZs and Tree Protection Fencing

The implementation of work specific Tree Protection Zones (TPZ's) and the erection of approved protective fencing and identification signage is to be installed prior any further commencement of works at the delineation of the TPZ's identified for every stage of the redevelopment

- During Demolition;
- During Forward Works;
- During Construction; and
- During Landscaping Works (Both hard and soft landscaping).

(refer *Appendix A Overview of Australian Standards AS 4970* for a high level overview of the tree retention process).

Hard and Soft Landscaping

Arboricultural inputs will be required to review contractor works methods to ensure works are implemented and undertaken in a tree sensitive manner.

Site Preperation and Tree Selection

Trees require structurally sound root systems to establish into the landscape and thrive over the long term; this can be supported by ensuring trees are produced in accordance with the Australian Standard *AS 2303 'Tree Stock for Landscape Use' 2015*. Tree stock strategies can be developed to find the best possible outcome for the landscaping locations throughout the site (i.e. Root ball investigations, growing trees from onsite sources, Arbor Centre Civic Tree options, Arbor Centre Tree Supply options, etc.). *refer Appendix A - Overview of Australian Standards AS 2303 'Tree Stock for Landscape Use' 2015.*

TPZ Usage and Restrictions

The Work Specific Tree Protection Zones to be retained for the duration of the construction period and should not be modified without prior approval from Arbor Centre. Contractors at each stage of development to be made aware of the Tree Protection Zone's within their site's works area, and that only pre-approved works (approved by Arbor Centre) are to occur within this area.

For example: -

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- Traversing and/or Parking of plant machinery or vehicles where root protection measures have not been implemented;
- Storage for construction or deleterious materials where root protection measures have not been implemented;
- Removal of existing trees/stumps to be ground (through the use of a stump grinder) instead of being 'grubbed out';
- Unauthorised removal of vegetation;
- Unprotected vehicle refuelling;
- Preparation of chemicals and concrete washout;
- Areas to dump construction and general waste where root protection measures have not been implemented;
- Unauthorised wash down or cleaning of any kind;
- Locations for site offices or toilets where root protection measures have not been implemented;
- Unauthorised excavation activities;
- Pruning of the tree's canopies – refer Appendix A *Overview of Australian Standards AS4373* for further detail;
- Pruning of roots (subject to Arbor Centre approval) where proposed works may encroach into the TPZ area(s), will need to be undertaken by and under the supervision of Arbor Centre; and
- Any other activity that may harm or injure the tree above or below ground.

Other TPZ Works Considerations

- Refinement and further specialist Arboricultural input will be required in determining construction methodologies and specifications prior to finalising and implementing a design; to ensure minimal tree root and canopy impact can be designed into the project.

- Ongoing Arboricultural inspections &/or supervision during the construction/works period by Arbor Centre will be critical in ensuring tree welfare is preserved.

References: AS 4373 2007, AS 4970 2009, AS 2303 2015,

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Conclusions

Further consultation with Arbor Centre will be required regarding:

- Further inputs into the relocation of the amenable specimens;
- How best to limit demolition and construction impact during and after the construction and development phase;
- The type of works being proposed around the trees and their associated methodologies and the impact these works may have on the trees;
- The development of Tree Preservation Specifications for the project (Arbor Centres Stage 3 *Tree Preservation Specifications*);
- The modification of the nominal TPZs to site specific TPZs.

Refer to Recommendations for further detail.

Consideration needs to be given to the specialised nature of the tree management works contained within this report which; if undertaken or specified incorrectly, may have a negative effect on tree health and/or structure. It is imperative that only arboricultural organisations with staff suitably qualified and experienced in tree management and/or tree preservation or relocation are engaged in monitoring, maintaining, and managing the trees into the future.

Any works undertaken to the subject trees are to be approved by Arbor Centres Arboricultural Consultants (in collaboration with the design team) prior to their commencement and; undertaken by Arbor Centre's qualified Arboriculturist's and/or Arborists.

It is important to recognise that the successful preservation of existing, mature trees through a development project requires a proactive approach to the tree preservation process.

Reactive works, which attempt to repair damaged trees, are generally more costly/problematic in the long term than adopting a preventative approach. Achieving the successful preservation & protection of the assessed trees will require specialist and timely Arboricultural input into the development of construction specifications and drawings.

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Recommendations

Site and Tree Geo Location Validation

That validation of the sites survey data should be undertaken to ground truth location of trees in relation to the proposed structures and works.

Relocation of Identified trees

Consideration should be given to the relocation of identified trees where construction may not enable successful in situ tree retention.

Develop Tree Retention Specifications

That Tree and site-specific retention specifications be developed by Arbor Centre for the proposed construction and implemented on ground to the necessary standards throughout the duration of the project.

Ongoing Arboricultural Inputs into the Project to Achieve Successful Tree Retention

- That the *"Tree Protection Notes for Incorporation into Construction Drawings*" identified in Appendix C are included into construction and landscape drawings as an immediate reference for contractors working on site – Refer Appendix C for further detail;
- That an ongoing, collaborative Arboricultural review and refinement of the proposed design and work methodology(s) is undertaken by Arbor Centre in conjunction with other parties, to develop and implement further tree sensitive designs which are proposed to occur and/or encroach within the work specific TPZ's of the subject trees identified for retention.

Ongoing Arboricultural Management

- That any further recommendations made for the subject trees be specified by Arbor Centre in keeping with the Australian Standards (refer Appendix A for further detail) :-
    - *AS 4970 'Protection of Trees on Development Sites' 2009;*
    - *AS 4373 'Pruning of Amenity Trees' 2007*
    - *AS 2303 'Tree Stock for Landscape Use' 2015*

  and; be approved prior to commencement by Arbor Centre.

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Table of Results and Field Definitions

Field Definitions

Arbor Centre Tree ID Number - States Arbor Centre's individual tree identification number for this project.

Species Identification - States the genus, species and common name for each tree.

Age Status: - States the estimated age at the time of assessment. (Juvenile, Semi Mature, Mature, Post Mature).

Tree Height - Measured in meters taken from ground level to the highest point of the trees canopy.

Canopy Spread - Measured in meters taken at the widest points of the trees canopy.

Useful Life Expectancy: - Provides estimation of the individual trees remaining Useful Life Expectancy (ULE) (0 Dead, <5 Years, 5 – 10 years, 10 – 40 years, or 40+).

Tree Health: - States the health of the tree at the time of assessment. (Good, Acceptable, Questionable, Poor, Dead). Refer *Health and Structure Definitions* below for further explanation.

Canopy Structure: - States the structure of the tree at the time of assessment. (Good, Acceptable, Questionable, Poor) Refer *Health and Structure Definitions* below for further explanation.

Trunk Diameter - Accurate measurement of trunk diameter in millimetres. Measured at 1.4 meters above ground level for single stemmed trees; immediately below bifurcation in co-dominant stemmed trees or at ground level for multi stemmed trees.

Tree Protection Zone (TPZ) Radius: - Minimum root zone required to be protected during construction, development or during any activities that may encroach into the zone which may cause harm or injure the tree and its parts. Measured in meters, as a **radius** from centre of trunk. Calculated as: x12 DBH. *Note: - TPZ is to not be <2 meters and not >15 meters or measured to the extent of canopy, whichever is greater. As per Australian Standards AS 4970 "Protection of trees on development sites" 2009*.

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Structural Root Zone (SRZ) Radius: - The SRZ is the nominal area required for tree stability, further investigations are required to validate work-specific SRZ's. A larger area (TPZ) is required to maintain a viable tree through the development. The SRZ is **not** a replacement for the Tree Protection Zone (TPZ) and should not be considered as such.

Observations & Comments: - Provides general information relevant for the individual specimen.

Preliminary Recommendation (identified in Stage 1 Reporting): - Provides preliminary recommendations for the assessed specimens Consider Removal, Retain, or Retain (Conditional - seek further Arboricultural advice), considering the proposed development for the site

Recommended / Proposed outcomes post design review: - Clarifies tree removals that are proposed for roads, buildings, service alignments, etc, identifies the trees which can be retained subject to further investigations and identifies the trees that can be retained with minimal (to no) alterations to the proposed design.

Longitude & Latitude: - Provides X & Y location coordinates for the individual tree.

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Health and Structure Definitions

Tree Health	Definition
Good	Tree displays typical foliage size, colouration and density for a specimen of the species. Seasonal stem elongation and wound wood response also appears typical. A build-up of seasonal deadwood may be present.
Acceptable	Tree displays typical foliage size and colouration. Canopy mass may be slightly thin or have more than typical amount of deadwood present within canopy. Seasonal stem elongation and wound wood response may be inhibited. Tree may be displaying a response to recently changed environs.
Questionable	Tree displays less than typical foliage size, colouration and density for a specimen of the species. Large sections of deadwood may be evident in upper canopy. Seasonal stem elongation and wound wood response may be suppressed. Retention of the tree requires remedial works in order for the specimen to become "Acceptable".
Poor	Tree canopy indicates decline. Tree displays less than 30% live canopy mass and will be problematic to long term retention. Beginning of spiral of decline. Remedial works unlikely to improve tree health.
Dead	Tree has no living conductive tissue within its main stem.

Tree Structure	Definition
Good	Primary framework has structure that is typical of the species at its stage of maturity. Secondary (and beyond) branch attachments are typical of the species. The tree may have inconsequential/minor imperfections.
Acceptable	Primary framework has structure that is typical of the species at its stage of maturity, but which presents defects that may need to be monitored. Secondary (and beyond) branch attachment are typical of the species, but presents structural defects that may require remedial work within the scope of ongoing maintenance. Can include storm damaged and Lopped trees that have developed acceptable branch attachment (subject to species).
Questionable	Primary and secondary framework has evidence of its structural integrity being compromised (i.e.: Storm damage, deleterious pruning, breaks, cracks, fractures, included bark, major decay, poor branch taper etc.). Retention of the tree requires remedial works in order for the specimen to become "Acceptable".
Poor	Tree displays significant structural defects that will be problematic to long term retention. i.e.: extensive stem cavities, split/broken unions. Remedial works unlikely to improve form.

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Arbor Centre Tree ID No.	Species (& Common Name)	Age	Tree Height (m)	Canopy Spread (m)	Useful Life Expectancy (ULE)	Tree Health	Canopy Structure	Trunk Diameter (m)	Diameter at Base (m)	Transplantable	Minimum Preparation Time	TPZ Radius (m)	SRZ Radius (m)	Observations & Comments	Preliminary Recommendation	Recommendation Post Design Review	Longitude	Latitude
AC0001	*Eucalyptus platypus var. platypus (Round Leaved Moort)*	Mature	10	12	40 + years	Good	Acceptable	0.590	0.649	No		7.08	2.760	Leggy form; Bark included branch/stem unions; Canopy suppression - major; Bifurcates at ground level; Deadwood - minor; Active wound occlusion; Prior pruning - acceptable	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7656396	-31.74883103
AC0002	*Eucalyptus platypus var. platypus (Round Leaved Moort)*	Mature	10	12	10 - 40 years	Acceptable	Questionable	0.520	0.572	No		6.24	2.617	Canopy suppression - major; Bifurcates at ground level; Wounding noted at basal area; Previous failures - major (150mm to 300mm); Habitat Value - hollows present; Active wound occlusion	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7656528	-31.74879164
AC0003	*Liquidambar styraciflua (Liquidamber)*	Semi-Mature	4	3	10 - 40 years	Acceptable	Acceptable	0.120	0.132	Yes	3 Months	2.00	1.414	Deadwood - major (< 50mm); Previous failures - major (< 50mm); Active wound occlusion; Root/infrastructure conflict - minor; Possible Poor Stock issues	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7659616	-31.74882
AC0004	*Liquidambar styraciflua (Liquidamber)*	Juvenile	1	1	40 + years	Good	Acceptable	0.030	0.033	Yes	N/A	2.00	0.790	Reasonable specimen; Tree situated within Nib	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7661969	-31.74880005
AC0005	*Liquidambar styraciflua (Liquidamber)*	Juvenile	2	1	40 + years	Good	Acceptable	0.040	0.044	Yes	N/A	2.00	0.891	Reasonable specimen; Bifurcates between ground level and 1m; Tree situated within Nib	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7663628	-31.74879847
AC0006	*Liquidambar styraciflua (Liquidamber)*	Semi-Mature	3	3	10 - 40 years	Acceptable	Questionable	0.120	0.132	Yes	3 Months	2.00	1.414	Canopy slightly sparse; Previous failures - major (< 50mm); Active wound occlusion; Root/infrastructure conflict - major; Prior pruning - poor; Tree situated within Nib	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7665241	-31.74880215
AC0007	*Liquidambar styraciflua (Liquidamber)*	Semi-Mature	4	4	40 + years	Good	Acceptable	0.130	0.143	Yes	3 Months	2.00	1.462	Reasonable specimen; Bifurcates between 1m and 2m; Wounding noted to main stem; Root/infrastructure conflict - major; Tree surrounded by impervious paving	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7668324	-31.7488053
AC0008	*Corymbia calophylla (Marri)*	Mature	9	8	10 - 40 years	Questionable	Acceptable	0.270	0.297	Yes - Not recommended		3.24	1.987	Reasonable specimen; Canopy indicates decline; Canopy chlorotic (yellowing); Canopy sparse; Deadwood - major (50mm to 150mm); Wounding noted to main stem; Wounding noted at basal area; Significant tree with issues - retain; Active wound occlusion; Root/infrastructure conflict - major	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7669558	-31.74891244
AC0009	*Eucalyptus torquata (Coral Gum)*	Semi-Mature	5	4	40 + years	Acceptable	Acceptable	0.130	0.143	No		2.00	1.462	Reasonable specimen; Canopy slightly sparse; Wounding noted at basal area; Previous failures - major (< 50mm); Tree on lean - minor; Root/infrastructure conflict - major; Tree situated within Nib	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7669526	-31.74917504
AC0010	*Corymbia calophylla (Marri)*	Semi-Mature	6	5	40 + years	Acceptable	Acceptable	0.200	0.22	Yes	12 Months	2.40	1.752	Reasonable specimen; Canopy slightly sparse; Bifurcates between 1m and 2m; Previous failures - major (50mm to 150mm); Root/infrastructure conflict - major; Tree situated within Nib	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7669831	-31.74983574
AC0011	*Corymbia maculata (Spotted Gum)*	Semi-Mature	6	3	40 + years	Good	Acceptable	0.140	0.154	Yes	6 Months	2.00	1.508	Reasonable specimen; Root/infrastructure conflict - major; New planting within 500mm wide garden bed	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development; Consider relocation where possible	115.7669442	-31.75001326
AC0012	*Jacaranda mimosifolia (Jacaranda)*	Semi-Mature	5	6	40 + years	Acceptable	Acceptable	0.170	0.187	Yes	6 Months	2.04	1.637	Bark included branch/stem unions; Bifurcates between 1m and 2m; Previous failures - major (< 50mm); Root/infrastructure conflict - major; Canopy/infrastructure conflict - minor	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7669962	-31.75009361
AC0013	*Corymbia maculata (Spotted Gum)*	Semi-Mature	8	4	40 + years	Good	Acceptable	0.130	0.143	Yes	6 Months	2.00	1.462	Reasonable specimen; Root/infrastructure conflict - major; Canopy/infrastructure conflict - minor; New planting within 500mm wide garden bed	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development; Consider relocation where possible	115.766949	-31.75013563
AC0014	*Eucalyptus sideroxylon (Iron Bark)*	Mature	8	10	40 + years	Acceptable	Acceptable	0.450	0.495	No		5.40	2.463	Good Specimen; Canopy slightly sparse; Root/infrastructure conflict - major; Within harden bed adjacent carpark	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development	115.7669112	-31.75021546
AC0015	*Eucalyptus sideroxylon (Iron Bark)*	Mature	8	8	10 - 40 years	Questionable	Acceptable	0.420	0.462	No		5.04	2.393	Canopy sparse; Bifurcates between 1m and 2m; Deadwood - major (< 50mm); Rubbing, crossing stems - major (50mm to 150mm); Root/infrastructure conflict - major; Canopy/infrastructure conflict - minor; Within 1500mm wide garden bed adjacent carpark	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7667988	-31.75026378
AC0016	*Corymbia maculata (Spotted Gum)*	Semi-Mature	7	4	40 + years	Good	Acceptable	0.100	0.11	Yes	6 Months	2.00	1.310	Reasonable specimen; Bifurcates between 2m and 4m; New planting within 7000mm wide garden bed	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7665241	-31.75028741
AC0017	*Tipuana tipu (Pride of Bolivia)*	Mature	5	9	10 - 40 years	Acceptable	Acceptable	0.250	0.275	Yes	6 Months	3.00	1.924	Bifurcates between 2m and 4m; Rubbing, crossing stems - major (< 50mm); Root/infrastructure conflict - major; Prior pruning - poor	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7664684	-31.75027586
AC0018	*Tipuana tipu (Pride of Bolivia)*	Semi-Mature	6	6	10 - 40 years	Acceptable	Questionable	0.210	0.231	Yes	6 Months	2.52	1.788	Tree unstable in the ground - minor; Root/infrastructure conflict - minor; Canopy/infrastructure conflict - minor; Wooden pole being used to brace tree	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7663151	-31.75030369
AC0019	*Tipuana tipu (Pride of Bolivia)*	Semi-Mature	5	6	10 - 40 years	Acceptable	Acceptable	0.190	0.209	Yes	6 Months	2.28	1.715	Deadwood - major (50mm to 150mm); Tree on lean - minor; Root/infrastructure conflict - minor; Cabling/Bracing/Fall arrest previously installed; Prior pruning - poor	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7662851	-31.75023857
AC0020	*Tipuana tipu (Pride of Bolivia)*	Semi-Mature	5	5	10 - 40 years	Acceptable	Acceptable	0.180	0.198	Yes	6 Months	2.16	1.676	Bifurcates between 1m and 2m; Root/infrastructure conflict - major; Prior pruning - poor	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7661396	-31.75003637
AC0021	*Eucalyptus sideroxylon (Iron Bark)*	Semi-Mature	8	3	10 - 40 years	Acceptable	Questionable	0.140	0.154	No		2.00	1.508	Canopy suppression - major; Bifurcates between 2m and 4m; Deadwood - major (< 50mm); Root/infrastructure conflict - major	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development	115.7661354	-31.75001483

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Arbor Centre Tree ID No.	*Species (& Common Name)*	Age	Tree Height (m)	Canopy Spread (m)	Useful Life Expectancy (ULE)	Tree Health	Canopy Structure	Trunk Diameter (m)	Diameter at Base (m)	Transplantable	Minimum Preparation Time	TPZ Radius (m)	SRZ Radius (m)	Observations & Comments	Preliminary Recommendation	Recommendation Post Design Review	Longitude	Latitude
AC0022	*Eucalyptus sideroxylon (Iron Bark)*	Mature	9	11	40 + years	Good	Acceptable	0.430	0.473	No		5.16	2.417	Good Specimen; Canopy suppression - minor; Deadwood - major (< 50mm); Active wound occlusion; Root/infrastructure conflict - major; Canopy/infrastructure conflict - minor; Prior pruning - acceptable	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7660929	-31.74995811
AC0023	*Eucalyptus sideroxylon (Iron Bark)*	Mature	13	14	40 + years	Good	Acceptable	0.600	0.66	No		7.20	2.779	Good Specimen; Bifurcates between 2m and 4m; Deadwood - major (< 50mm); Significant tree with issues - retain; Situated in grassed area	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.766011	-31.74995339
AC0024	*Eucalyptus sideroxylon (Iron Bark)*	Semi-Mature	8	4	10 - 40 years	Questionable	Acceptable	0.210	0.231	No		2.52	1.788	Canopy suppression - major; Canopy indicates decline; Canopy chlorotic (yellowing); Canopy sparse; Deadwood - major (< 50mm); Rubbing, crossing stems - major (< 50mm); Previous failures - major (< 50mm)	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7660519	-31.74991715
AC0025	*Tipuana tipu (Pride of Bolivia)*	Semi-Mature	5	8	10 - 40 years	Acceptable	Questionable	0.190	0.209	Yes	6 Months	2.28	1.715	Multi stemmed form; Bark included branch/stem unions; Canopy suppression - major; Bifurcates between 2m and 4m; Tree on lean - minor; Tree unstable in the ground - major; Root/infrastructure conflict - major; Previously lopped; Possible poor stock issues	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7660567	-31.74988091
AC0026	*Eucalyptus nicholii (Narrow Leaved Peppermint)*	Mature	12	10	40 + years	Good	Acceptable	0.460	0.506	No		5.52	2.486	Canopy suppression - minor; Bifurcates at 4m+; Deadwood - major (< 50mm); Rubbing, crossing stems - major (50mm to 150mm); Previous failures - major (50mm to 150mm); Significant tree with issues - retain; Surface roots; Surface root damage - minor; Root/infrastructure conflict - major	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7660372	-31.74982209
AC0027	*Tipuana tipu (Pride of Bolivia)*	Mature	8	12	10 - 40 years	Good	Questionable	0.300	0.33	Yes	6 Months	3.60	2.077	Reasonable specimen; Multi stemmed form; Canopy suppression - minor; Bifurcates between 1m and 2m; Deadwood - major (< 50mm); Rubbing, crossing stems - major (50mm to 150mm); Surface roots; Surface root damage - minor; Root/infrastructure conflict - major; Canopy/infrastructure conflict - minor; Previously lopped	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7660036	-31.74978742
AC0028	*Eucalyptus sideroxylon (Iron Bark)*	Mature	12	14	40 + years	Acceptable	Good	0.490	0.539	No		5.88	2.553	Reasonable specimen; Canopy slightly sparse; Bifurcates between 2m and 4m; Deadwood - major (< 50mm); Significant tree with issues - retain; Surface roots; Surface root damage - minor; Root/infrastructure conflict - major; Canopy/infrastructure conflict - minor	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7659684	-31.74971232
AC0029	*Eucalyptus sideroxylon (Iron Bark)*	Mature	12	10	40 + years	Acceptable	Acceptable	0.410	0.451	No		4.92	2.369	Reasonable specimen; Canopy suppression - minor; Canopy slightly sparse; Deadwood - major (< 50mm); Rubbing, crossing stems - major (< 50mm); Root/infrastructure conflict - minor; Canopy/infrastructure conflict - minor	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7659395	-31.74963249
AC0030	*Eucalyptus sideroxylon (Iron Bark)*	Mature	11	11	10 - 40 years	Acceptable	Acceptable	0.400	0.44	No		4.80	2.344	Canopy indicates decline; Canopy sparse; Deadwood - major (50mm to 150mm); Root/infrastructure conflict - major; Tree displays recovery from a shock	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7658602	-31.74958785
AC0031	*Eucalyptus sideroxylon (Iron Bark)*	Mature	12	15	40 + years	Good	Acceptable	0.600	0.66	No		7.20	2.779	Good Specimen; Bifurcates between 2m and 4m; Deadwood - major (< 50mm); Rubbing, crossing stems - major (50mm to 150mm)	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7657694	-31.7495243
AC0032	*Eucalyptus sideroxylon (Iron Bark)*	Mature	11	13	40 + years	Good	Acceptable	0.580	0.638	No		6.96	2.740	Good Specimen; Canopy suppression - minor; Bifurcates at 4m+; Deadwood - major (< 50mm); Rubbing, crossing stems - major (< 50mm)	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.765689	-31.7492575
AC0033	*Eucalyptus sideroxylon (Iron Bark)*	Mature	11	6	10 - 40 years	Acceptable	Acceptable	0.280	0.308	No		3.36	2.018	Bark included branch/stem unions; Canopy suppression - major; Canopy slightly sparse; Bifurcates at 4m+; Deadwood - major (< 50mm); Rubbing, crossing stems - major (< 50mm); Canopy/infrastructure conflict - minor	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.7657226	-31.749216
AC0034	*Eucalyptus sideroxylon (Iron Bark)*	Mature	13	9	40 + years	Acceptable	Acceptable	0.440	0.484	No		5.28	2.440	Leggy form; Bark included branch/stem unions; Canopy suppression - minor; Canopy slightly sparse; Bifurcates between 2m and 4m; Deadwood - major (< 50mm); Canopy/infrastructure conflict - major; Prior pruning - poor	Retain; Develop and implement tree retention specifications	Retain; Develop and implement tree retention specifications	115.765699	-31.74915718
AC0035	*Melaleuca quinquenervia (Broad Leaved Paperbark)*	Semi-Mature	2	2	10 - 40 years	Acceptable	Questionable	0.130	0.143	Yes	3 Months	2.00	1.462	Multi stemmed form; Bark included branch/stem unions; Bifurcates between ground level and 1m; Root/infrastructure conflict - major; Tree has been toporized; Within Nib	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development; Consider relocation where possible	115.7667497	-31.74973359
AC0036	*Melaleuca quinquenervia (Broad Leaved Paperbark)*	Semi-Mature	2	3	10 - 40 years	Good	Questionable	0.140	0.154	Yes	3 Months	2.00	1.508	Multi stemmed form; Bark included branch/stem unions; Bifurcates between ground level and 1m; Root/infrastructure conflict - major; Tree has been toporized; Within Nib	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development; Consider relocation where possible	115.7667549	-31.74981972
AC0037	*Melaleuca quinquenervia (Broad Leaved Paperbark)*	Semi-Mature	3	2	10 - 40 years	Acceptable	Questionable	0.130	0.143	Yes	3 Months	2.00	1.462	Multi stemmed form; Bark included branch/stem unions; Bifurcates between ground level and 1m; Root/infrastructure conflict - major; Tree has been toporized; Within Nib	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development; Consider relocation where possible	115.7667554	-31.7498901
AC0038	*Melaleuca quinquenervia (Broad Leaved Paperbark)*	Semi-Mature	3	2	10 - 40 years	Acceptable	Questionable	0.140	0.154	Yes	3 Months	2.00	1.508	Multi stemmed form; Bark included branch/stem unions; Bifurcates between ground level and 1m; Root/infrastructure conflict - major; Tree has been toporized; Within Nib	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development; Consider relocation where possible	115.7667591	-31.7499547

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Arbor Centre Tree ID No.	*Species (& Common Name)*	Age	Tree Height (m)	Canopy Spread (m)	Useful Life Expectancy (ULE)	Tree Health	Canopy Structure	Trunk Diameter (m)	Diameter at Base (m)	Transplantable	Minimum Preparation Time	TPZ Radius (m)	SRZ Radius (m)	Observations & Comments	Preliminary Recommendation	Recommendation Post Design Review	Longitude	Latitude
AC0039	*Melaleuca quinquenervia (Broad Leaved Paperbark)*	Semi-Mature	2	2	10 - 40 years	Acceptable	Questionable	0.120	0.132	Yes	3 Months	2.00	1.414	Multi stemmed form; Bark included branch/stem unions; Bifurcates between ground level and 1m; Root/infrastructure conflict - major; Tree has been toporized; Within Nb	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development; Consider relocation where possible	115.7667633	-31.75004766
AC0040	*Callistemon 'Kings Park Special' (King's Park Special Bottlebrush)*	Semi-Mature	3	3	5 - 10 years	Acceptable	Questionable	0.090	0.099	Yes - Not recommended		2.00	1.253	Bark included branch/stem unions; Tree on lean - major; Tree unstable in the ground - major; Mechanical damage to main stem; Tree has been hit by a vehicle	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development	115.7668059	-31.75014692
AC0041	*Callistemon 'Kings Park Special' (King's Park Special Bottlebrush)*	Semi-Mature	3	2	5 - 10 years	Acceptable	Questionable	0.080	0.088	Yes - Not recommended		2.00	1.192	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development	115.7667397	-31.7501506
AC0042	*Callistemon 'Kings Park Special' (King's Park Special Bottlebrush)*	Semi-Mature	3	2	5 - 10 years	Acceptable	Questionable	0.100	0.11	Yes - Not recommended		2.00	1.310	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development	115.7665963	-31.75015007
AC0043	*Melaleuca quinquenervia (Broad Leaved Paperbark)*	Semi-Mature	3	2	5 - 10 years	Questionable	Questionable	0.160	0.176	Yes	3 Months	2.00	1.595	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major; Tree has been toporized; Within Nb	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development; Consider relocation where possible	115.7665847	-31.7499631
AC0044	*Melaleuca quinquenervia (Broad Leaved Paperbark)*	Semi-Mature	3	2	10 - 40 years	Acceptable	Questionable	0.150	0.165	Yes	3 Months	2.00	1.553	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major; Tree has been toporized; Within Nb	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development; Consider relocation where possible	115.7665784	-31.74982918
AC0045	*Callistemon 'Kings Park Special' (King's Park Special Bottlebrush)*	Semi-Mature	3	2	5 - 10 years	Acceptable	Questionable	0.090	0.099	Yes - Not recommended		2.00	1.253	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development	115.7665695	-31.74964168
AC0046	*Melaleuca quinquenervia (Broad Leaved Paperbark)*	Semi-Mature	3	2	10 - 40 years	Acceptable	Questionable	0.130	0.143	Yes	3 Months	2.00	1.462	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development; Consider relocation where possible	115.7663941	-31.74975617
AC0047	*Melaleuca quinquenervia (Broad Leaved Paperbark)*	Semi-Mature	2	2	5 - 10 years	Questionable	Questionable	0.130	0.143	Yes - Not recommended		2.00	1.462	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major; Tree has been toporized; Within Nb	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development	115.7663993	-31.74983968
AC0048	*Melaleuca quinquenervia (Broad Leaved Paperbark)*	Semi-Mature	3	2	10 - 40 years	Acceptable	Questionable	0.140	0.154	Yes	3 Months	2.00	1.508	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major; Tree has been toporized; Within Nb	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development; Consider relocation where possible	115.7664046	-31.74990218
AC0049	*Melaleuca quinquenervia (Broad Leaved Paperbark)*	Semi-Mature	3	2	10 - 40 years	Acceptable	Questionable	0.140	0.154	Yes	3 Months	2.00	1.508	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major; Tree has been toporized; Within Nb	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development; Consider relocation where possible	115.7664067	-31.74997256
AC0050	*Melaleuca quinquenervia (Broad Leaved Paperbark)*	Semi-Mature	3	2	10 - 40 years	Acceptable	Questionable	0.130	0.143	Yes	3 Months	2.00	1.462	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major; Tree has been toporized; Within Nb	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development; Consider relocation where possible	115.7664146	-31.75005869
AC0051	*Callistemon 'Kings Park Special' (King's Park Special Bottlebrush)*	Semi-Mature	3	2	5 - 10 years	Acceptable	Questionable	0.090	0.099	Yes - Not recommended		2.00	1.253	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development	115.766444	-31.75015743
AC0052	*Callistemon 'Kings Park Special' (King's Park Special Bottlebrush)*	Semi-Mature	3	2	10 - 40 years	Acceptable	Questionable	0.100	0.11	Yes - Not recommended		2.00	1.310	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development	115.7663867	-31.75015743
AC0053	*Callistemon 'Kings Park Special' (King's Park Special Bottlebrush)*	Semi-Mature	3	3	5 - 10 years	Acceptable	Questionable	0.100	0.11	Yes - Not recommended		2.00	1.310	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development	115.7662055	-31.74987644
AC0054	*Callistemon 'Kings Park Special' (King's Park Special Bottlebrush)*	Semi-Mature	4	3	5 - 10 years	Acceptable	Questionable	0.120	0.132	Yes - Not recommended		2.00	1.414	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development	115.7662013	-31.74984126
AC0055	*Callistemon 'Kings Park Special' (King's Park Special Bottlebrush)*	Semi-Mature	3	2	5 - 10 years	Acceptable	Questionable	0.080	0.088	Yes - Not recommended		2.00	1.192	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development	115.7661956	-31.749815
AC0056	*Callistemon 'Kings Park Special' (King's Park Special Bottlebrush)*	Semi-Mature	3	2	5 - 10 years	Acceptable	Questionable	0.110	0.121	Yes - Not recommended		2.00	1.363	Bark included branch/stem unions; Bifurcates between ground level and 1m; Tree unstable in the ground - major; Root/infrastructure conflict - major	Retain; Develop and implement tree retention specifications	Tree has been marked for Removal (by Others) - Due to conflict with New Development	115.7661924	-31.7496942

References

American Society of Landscape Architects, 2018, *The Dirt: Uniting the Built and natural environments - Retrofitting with Green Infrastructure*, https://dirt.asla.org/2018/06/12/retrofitting-with-green-infrastructure/ (accessed March 2024)

Arbor Centre, 2022, '*Stage 1: - Preliminary Tree Survey Report, Harvey Norman, Joondalup, Western Australia'* October 2022, Perth, Western Australia

City & County of San Francisco, SF Better Streets (2015), via https://www.sfbetterstreets.org/find-project-types/pedestrian-safety-and-traffic-calming/traffic-calming-overview/chicanes/ (accessed March 2024)

Cronin, L, .C. 2000. Key guide to Australian trees. 1st ed. Australia: Envirobook.

Geoweb via https://www.geofabrics.co/sites/default/files/brochures/Geoweb-General-Brochure-M056-10-14NZ.pdf (accessed March 2024)

Harris, R., Clarke, J., & Matheny, N,.2004, *Arboriculture – Integrated Management of Landscape Trees, Shrubs and Vines*, 4th ed, Prentice-hall inc, New Jersey

Le Roux, D. S Et Al 2014, *'The Future of Large Old Trees in Urban Landscapes'* The Fenner School of Environment and Society, the Australian National University, Canberra, Australia

Lonsdale, D., 1999, *Principles of Hazard Tree Assessment and Management,* The Stationary Office, Norwich, UK

Mattheck, C.& Breloer, H.,1999, *The Body Language of Trees -A handbook for failure analysis*, The Stationary Office, Norwich, UK

NearMap Aerial Imagery, via http://www.nearmap.com/photomaps/ (accessed March 2024)

Powell, R., 1990, *Leaf and Branch – Trees & Tall Shrubs of Perth*, Department of Conservation & Land Management, Australia

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Space Down Under (Treenet Inlet), via https://spacedownunder.com.au/how-to-empower-design-teams-by-measuring-value/ (accessed March 2024)

Standards Australia, 2007, *Australian Standard AS4373: Pruning of amenity trees*, Standards Australia, Sydney, Australia

Standards Australia, 2009, *Australian Standard AS4970: Protection of Trees on Development Sites*, Standards Australia, Sydney, Australia

Standards Australia, 2015, *Australian Standard AS2303: 'Tree Stock for Landscape Use*, Standards Australia, Sydney, Australia

TreeNet, 2018, https://treenet.org/wsud-research-applied-latest-addition-symposium-resources/ (accessed March 2024)

Urban, J, (2008). *Up by the roots -Healthy soils and trees in the built environment*, Illinois, USA: International Society of Arboriculture.

Water Sensitive SA https://www.watersensitivesa.com/aila-award-winning-projects-embrace-wsud/ (accessed March 2024)

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Appendix A – Overview of AS 4970, AS 4373 & AS 2303

AS 4970 'Protection of Trees on Development Sites' 2009

To successfully incorporate trees into the urban environment, careful consideration, planning and protection should be afforded to both above and below ground parts of the tree - leaves, branches, stems of the above ground parts and below ground, absorbing roots and structural roots.

The operations and activities associated with the construction and development process can have adverse effects on tree health and stability. Those activities that can potentially impact on the tree(s) will require remedial measures to be taken prior to, during and post development to ensure that all reasonable measures are taken to offset such damage.

Damage to tree roots is often irreversible and a common cause of tree decline and/or death following the construction and development phase. The implementation of a Tree Protection process will help lessen the impact that proposed development will have on the root zone (resulting from grade changes, excavations, soil compaction, mechanical damage etc...) and enable timely remedial action to help the tree to retain enough root mass for the continuation of natural growth and development.

Australian Standards have created AS 4970 *'Protection of Trees on Development Sites'* 2009 that addresses many of the issues that construction and development can have on trees and specifies a process on how to avoid unnecessary damage and outlines guidance only on measures to protect tree welfare during the construction and development phase.

It is important to recognise that the TPZ's identified in this report are simply an indicative measurement of a boundary around the tree beyond which disturbance is considered inconsequential and is unrestricted. However, the main purpose of this circumference around the tree is to recognise that the works proposed within the indicative boundaries have been assessed, modified (where applicable) and approved by a suitably qualified person (minimum) Australian Qualification Framework Level 5 Arborist (AQF 5 – *Diploma in Arboriculture*) prior to the commencement of works

Where encroachment (building, construction, excavation, landscaping or otherwise) into the Tree Protection Zone is required, Arboricultural input will be necessary to assess the extent of potential impact that may occur and if required, provide Arboricultural measures that can be taken to enable modification of the TPZ and allow root zone encroachment to occur.

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In addition to the above and as recognised in the Australian Standard, all tree preservation recommendations need to appreciate the individual tree characteristics, tolerances that the species possess, the site-specific soil type(s), and other environmental conditions or circumstances that are specific to the site.

AS 4373 'Pruning of Amenity Trees' 2007

AS 4373 '*Pruning of Amenity Trees'* 2007 has been developed to provide a guide on tree pruning procedures and practices to limit poor or deleterious type pruning being unnecessarily inflicted onto amenity trees.

The result of incorrect pruning of a tree is often irreversible, can negatively impact its health and structure and create unnecessary hazards within and surrounding the trees.

Correct tree pruning practices can reduce the likelihood of branch failures, limit pest and disease infestations, improve site safety and tree amenity, encourage sound structural development and extend tree longevity.

Any pruning works undertaken to the assessed trees should be specified by a (minimum) Australian Qualification Framework Level 5 Arborist (AQF 5 – *Diploma in Arboriculture*); comply with the Australian Standards AS 4373 '*Pruning of Amenity Trees'* 2007 and be undertaken by suitably trained and qualified Arborists with a minimum AQF Certificate 3 in Arboriculture under the supervision of the Arbor Centre.

AS 2303 'Tree Stock for Landscape Use' 2015

It is essential that the tree specimens selected for planting are fit for purpose, in good condition and not compromised at the time of planting.

This includes -

- Appreciating that the investment in a tree is in the root system that it needs to sustain itself through to maturity; not the size of the canopy mass as a seedling or sapling or as a semi mature tree.
- Trees require structurally sound root systems to establish into the landscape and thrive over the long term. This can be supported by ensuring trees are produced in a manner such that the tree's root system is reasonably free of root entanglement and; that the ratio of above ground dynamic (canopy) mass is proportional to a healthy below ground dynamic (root) mass. AS 2303 'Tree stock for landscape use'; is an Australian Standard that provides guidance in achieving this by providing quantifiable tree performance measures that can be used as KPI's for the contract growing of trees. Management of tree production using Australian Standard AS 2303 should be exercised by a suitably qualified Arboriculturist/Horticulturists.

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- Recognizing the importance of maintaining stock quality, despite potential changes to planting dates and timeframes, (as this is not covered under Australian Standards) – i.e. that the holding of stock beyond the time when it was selected and approved for planting, may require re-potting or other treatment (to avoid irreversible root entanglement, that compromises the capacity of the tree to perform to expectations in the longer term).
- Ensure trees receive appropriate and sufficient preparation prior to planting and after care post planting.

References: AS 4373 2007, AS 4970 2009. AS 2303-2015

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Appendix B – Tree Protection Notes for Incorporation into Construction Drawings

Incorporating the below Tree Protection notes onto demolition, construction, service, landscape etc. Drawings as an immediate tree protection reference point would be beneficial for contractors (and subcontractors) reading drawings specific to their works.

Including (but not limited to);

- THE NOMINATED PROJECT ARBORICULTURIST IS ARBOR CENTRE GROUP PTY LTD CONTACT No. 08-9359 9300.
- THE IDENTIFIED TREES ARE TO BE PROTECTED AND PRESERVED IN ACCORDANCE WITH ARBOR CENTRES TREE PROTECTION SPECIFICATION FOR THE DURATION OF WORKS.
- THE TREES ARE TO BE FENCED AND SIGNED AT THE SPECIFIED TPZ DELINEATION IN ACCORDANCE WITH THE ARBORICULTURAL PROTECTION SPECIFICATIONS AND ADVICE FROM ARBOR CENTRE.
- NO UNAUTHORISED ACCESS OR WORKS ARE TO OCCUR WITHIN TPZ AREA WITHOUT PRIOR CONSULTATION AND FORMAL APPROVAL FROM ARBOR CENTRE.
- THE PROJECT ARBORICULTURIST IS TO BE NOTIFIED A MINIMUM OF 5 WORKING DAYS PRIOR TO WORKS PROPOSED WITHIN THE TPZ.
- ANY WORKS WITHIN THE TREE PROTECTION ZONE ARE TO BE CARRIED OUT IN ACCORDANCE WITH ADVICE FROM AND UNDER THE SUPERVISION OF THE ARBOR CENTRE.

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Appendix C – Road and Path Construction Modifications

Pervious paved surfaces

- The use of aggregate layer beneath **Pervious paved surfaces** (**Permeable &/or Porous type paving –** refer figure 5) provides benefit that include creating soil accessibility for tree roots, Soil moisture harvesting, Stormwater harvesting, and can help in mitigating pavement trip hazards.

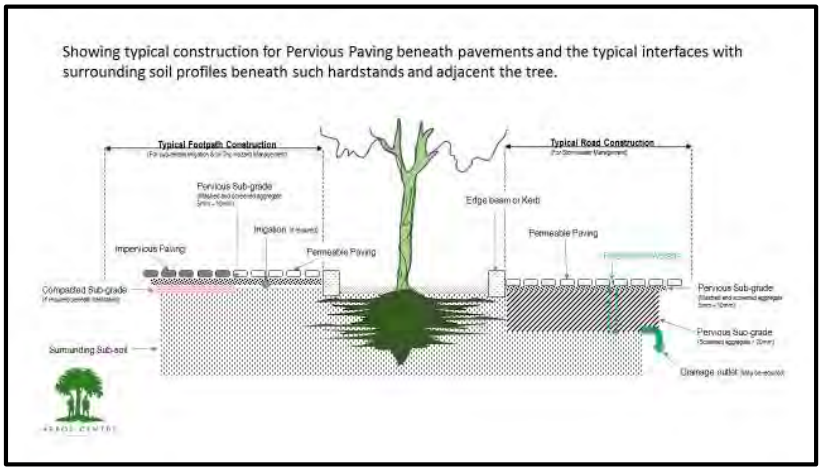


Figure 5. *Diagrammatic example of how pervious paving may be utilised within the landscape —Image property of Arbor Centre*

Root canals

- The use of **root canals** (refer figure 6) utilizing secure areas near tree plantings for tree root development so as to minimize the need for rootable soil space immediately surrounding the tree.

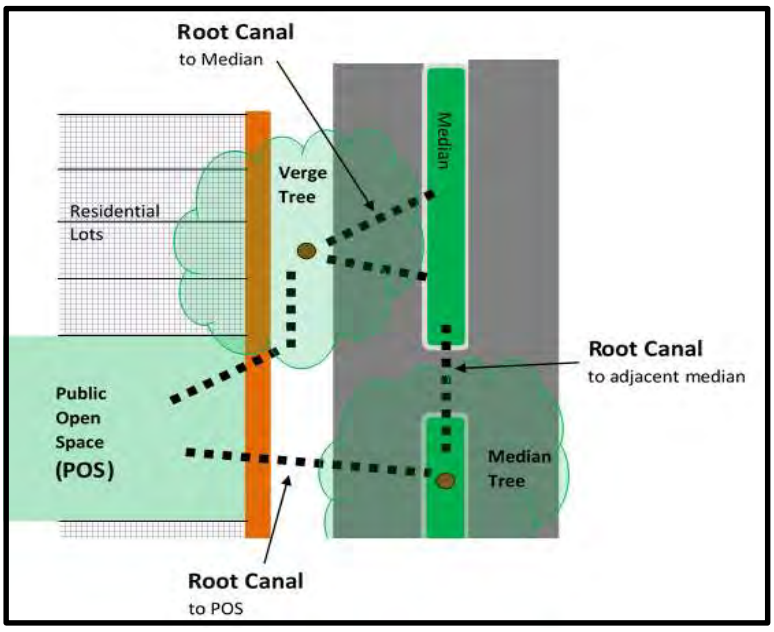


Figure 6. *Showing root canal possibilities to consider in urban design – image property of Arbor Centre*

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Water Sensitive Urban Design (WSUD)

Consideration should be given to the Implementation of WSUD water harvest and storage strategies throughout the site to minimize storm water runoff and better utilize and manage water from rain events (refer figures 7, 8 & 9).

Strategies may include (but may not be limited to);

1. Use of permeable and/or porous paving on roads, footpaths and parking bays etc.
2. Installation of below ground water storage cells.
3. Installation of water management systems i.e. rain gardens, swales, Treenet Inlets etc...



Figure 7. *Water Sensitive Urban Design - Image Source –*https://www.watersensitivesa.com/aila-award-winning-projects-embrace-wsud/



Figure 8. *Permeable paving-. Image Source* https://treenet.org/wsud-research-applied-latest-addition-symposium-resources/



Figure 9. *Treenet Inlet. Image Source* https://spacedownunder.com.au/resources/

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Geoweb Information



Figure 10. *Example of GeoWeb product – Image source* https://www.geofabrics.co/sites/default/files/brochures/Geoweb-General-Brochure-M056-10-14NZ.pdf

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Figure 11. *Example of GeoWeb product being installed within Epsom Avenue, Belmont – Image source City of Belmont (WA)*

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Appendix D - Arbor Centre Examples of Aeration Layers used for Tree Retention

Project:- Hale School *Eucalyptus gomphocephala* (Tuart) Rootzone assessment and remediation.

Date:- 2011

Descriptions:- Car park construction introduced approximately 1m of fill and hardstand immediately around tree trunk (refer images).

More than 50% of the tree's root system has been impacted by building and carpark construction. Fill Profile consists of 800mm – 900mm of compacted layers of poorly graded sands beneath a 300mm depth of typical hardstand construction of compacted road base with bitumen surfacing. The areas was remediated by Arbor Centre via the installation of aggrigate and geotextile to aid drainage and keep the bark area from excessive inundation.







Figure 12. *Example of Aeration Layer – Hale School – Image source Arbor Centre*

Project: - Curtin Bus Interchange

Date: - 2018

Description: - Installation of an Aeration Layer was placed over the existing root system of retained trees to allow the continuation of root growth beneath a proposed road. Road was built in 2018 and is currently trafficked by Bus's, Cars, and Pedestrians







Figure 13. *Example of Aeration Layer – Curtin Bus Exchange – Image source Arbor Centre*

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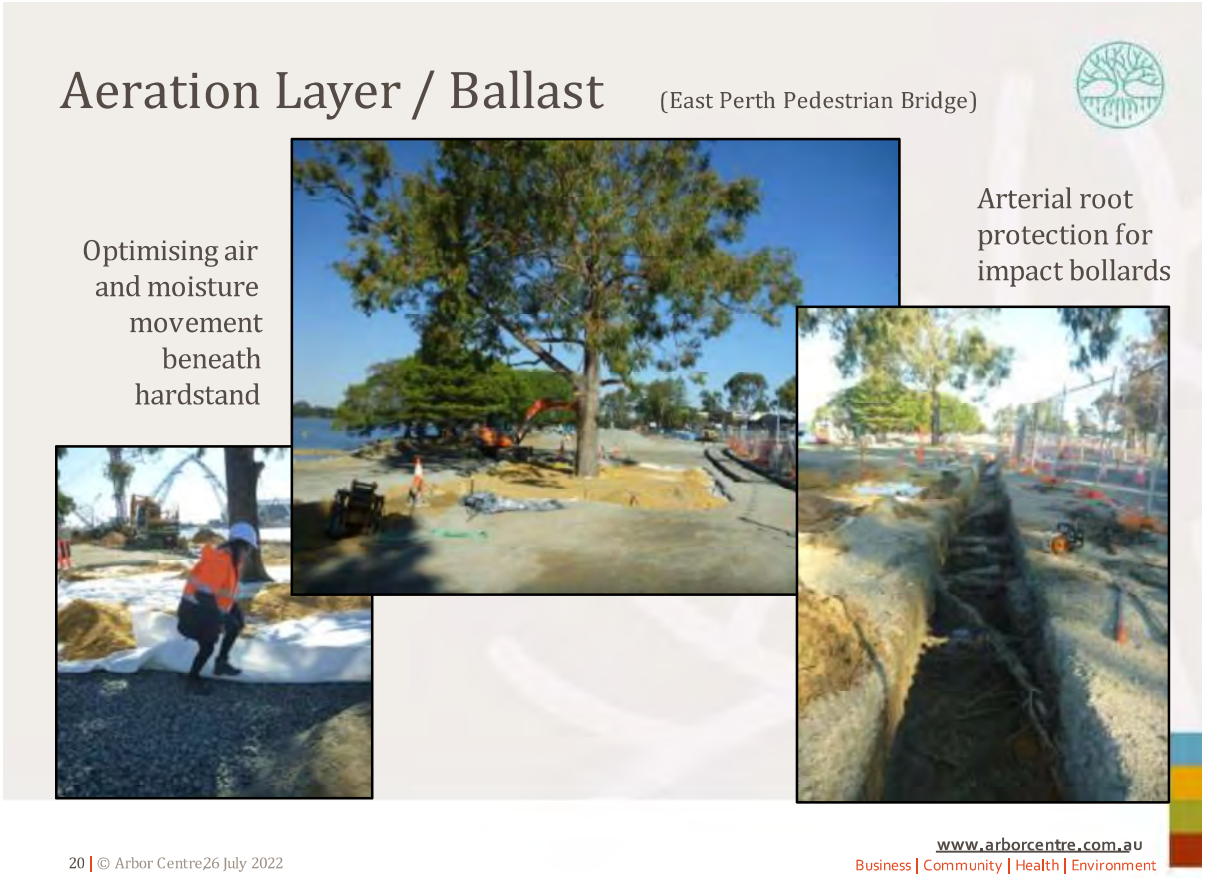


Figure 14. *Example of Aeration Layer – East Perth Pedestrian Bridge (Matagarup Bridge) – Image source Arbor Centre*



Figure 15. *Example of Aeration Layer – MRA – South Embankment Midland – Image source Arbor Centre*

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Appendix E – Back of Kerb Treatments

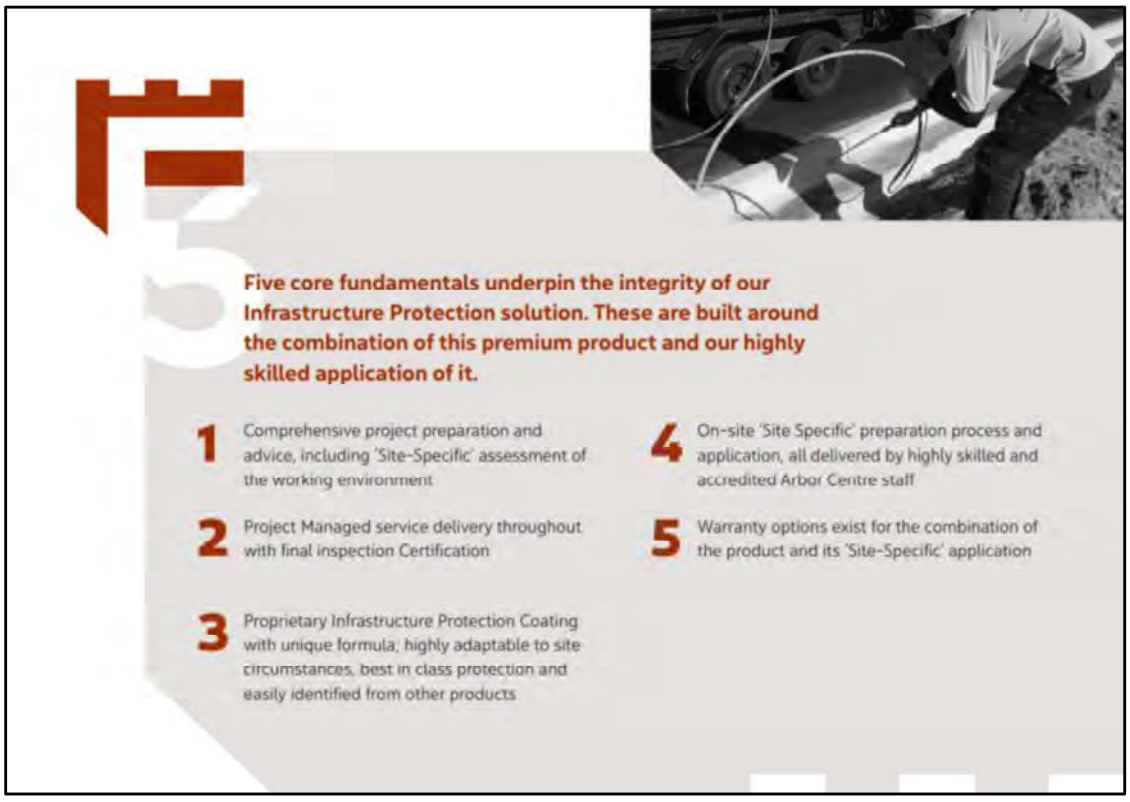


Figure 16. *Example of Fortress5 – Image source Arbor Centre*

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If you have any queries or if we can be of further assistance, do not hesitate to call the Arbor Centre office on (08) 9359 9300.

Regards,



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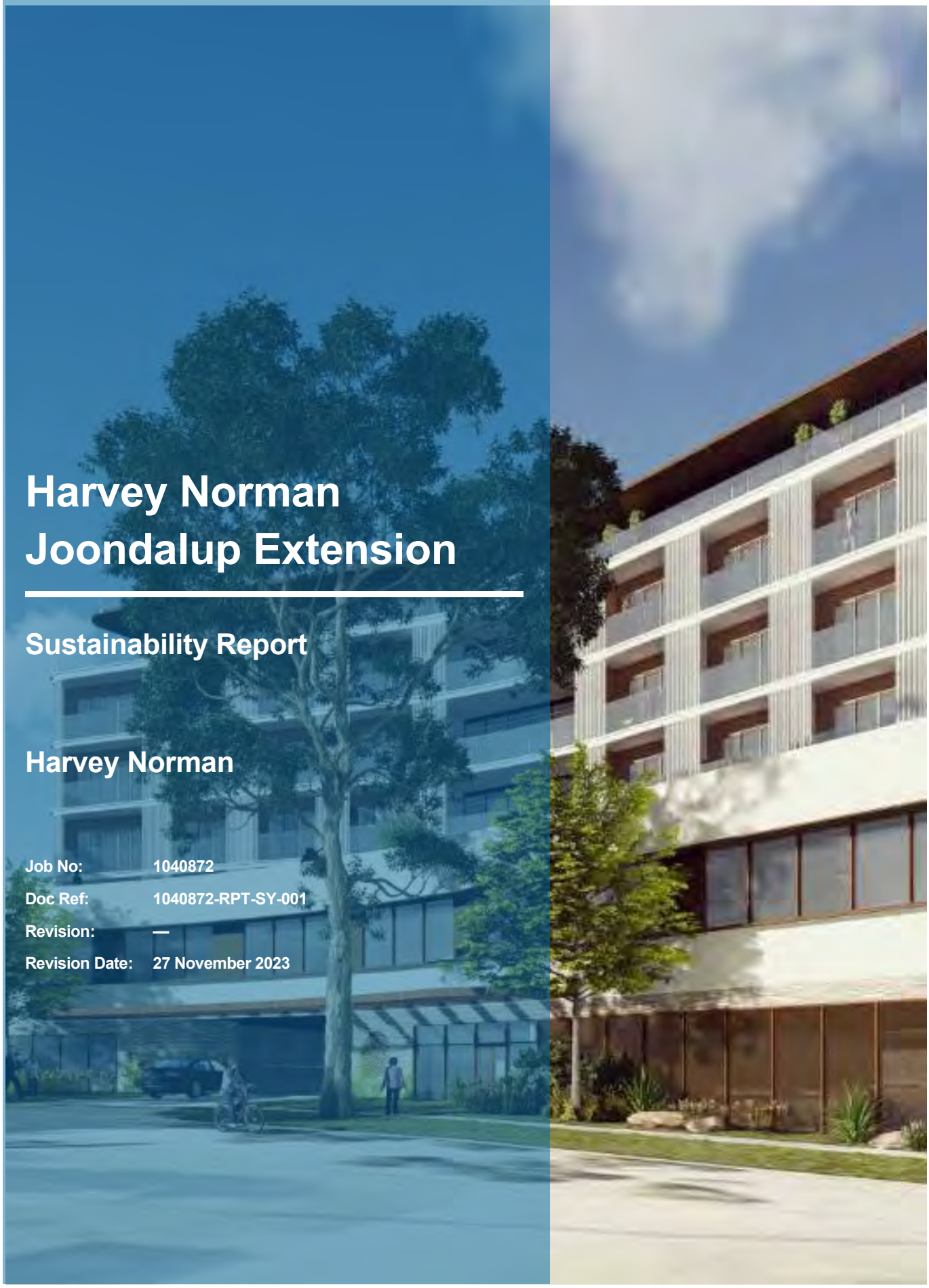
AQF Level 3 Arboriculture -- Interlink

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CUNDALL



Harvey Norman Joondalup Extension

Sustainability Report

Harvey Norman

Job No:	1040872
Doc Ref:	1040872-RPT-SY-001
Revision:	—
Revision Date:	27 November 2023

	Harvey Norman Joondalup Extension	Job Number
Report title	Sustainability Report	1040872

Revision Ref	Issue Date	Purpose of issue / description of revision
-	27/11/2023	ESD report

Document Validation (latest issue)

27/11/2023	27/11/2023	27/11/2023
X	X C Gubb	X
Principal author	Checked by	Verified by
Signed by: Jordan Kirrane	Signed by: Curtis Gubb	Signed by: Jordan Kirrane

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Executive summary

This report outlines the Sustainability Strategy for the proposed extension to the existing Harvey Norman retail unit on the corner of Clarke Crescent and Joondalup Drive within the City of Joondalup, Western Australia approximately 24 km from Perth CBD.



Figure 1-1 Site Location

The proposed extension is located on the existing 238 space carpark. The proposed 3,005m^2 (GFA) retail extension includes multideck parking for 197 cars, 15 motorbikes and 24 cycle spaces.

The report outlines how the proposed development aligns with the sustainability credentials of the City of Joondalup, Local Planning Scheme No. 3 and Joondalup Activity Centre Plan. **Overall, the proposed development is considered to meet all the sustainability objectives included in the City of Joondalup local planning requirements.**

Table 1-1 below confirms that the proposed development responds to each of the Local Planning Scheme requirements and outlines which sections of this report are relevant for each requirement. The site is currently zoned under:

- City of Joondalup City Centre Precinct, and
- Joondalup Activity Centre (JAC) Plan.

Table 1-1 City of Joondalup Activity Centre Plan

Development must demonstrate that:	Requirement will be met	Comments
Joondalup Activity Centre Plan, Activity. • Facilitate land assembly and redevelopment that will further intensify development and activity in the city centre. • Focus travel, employment, and user intensive activity around public transport stations and along movement corridors.	✓	The proposed extension is adding an additional 3,005m^2 of retail space to the site and retaining the majority of the existing car parking spaces with a roof top solution thereby intensifying economic activity on the site. The development also provides enhanced landscaping along Joondalup drive whilst retaining connectivity to Clark Crescent and Joondalup train station. Refer to sections 3.0, 4.0 and 8.0
Joondalup Activity Centre Plan, Movement. • Provide car parking commensurate with the road network capacity. • Provide adequate bicycle parking and end of trip facilities to promote cycling trips within JAC.	✓	The proposed development is to retain the majority of the existing car parking capacity. End of trip facilities are to be provided in line with policy requirements. Refer to section 7.0
Joondalup Activity Centre Plan, Urban Form (Character). • Create an attractive city centre that sets Joondalup apart through the use of high-quality design, materials, street furniture, public art, landscape and the retention of vegetation where appropriate. • Encourage increased development intensity, building scale and design quality along transport corridors to appropriately frame the city centre. • Encourage buildings and development that are able to adapt to changing economic, technological, environmental and social conditions. • Encourage buildings that have a well- considered relationship to the street, enabling the city to become more intense and active while retaining a human scale. • Enhance the natural environment and emphasise the existing 'bush' identity and landscape quality throughout the JAC.	✓	The proposed development aims to enrich Joondalup's character by incorporating enhanced landscaping and high-quality materials, including a perforated metal facade system displaying images of Lake Joondalup from multiple angles. These elements contribute to fostering Joondalup's distinct sense of place. The proposed development has been designed to be functionally adaptable and future proofed with provision for future solar battery storage and the infrastructure for EV charging throughout the car park. Refer to sections 3.0, 4.0, 7.0 and 8.0
Joondalup Activity Centre Plan, Resource Conservation. • Adopt an environmentally sustainable approach to development within the JAC. • Create a green open space and landscaped street network to lessen the heat island effect of city development. • Encourage conservation of resources, including reduced waste and energy and water use. • Encourage solar access, natural cross ventilation and renewable energy use in buildings. • Maximise solar access and good microclimate conditions in public open spaces and city squares. • Optimise water quality management outcomes.	✓	The proposed development will keep existing trees and create enhanced landscaping for cyclists, pedestrians, staff, or customers to rest and contemplate in Joondalup. The proposed development incorporates 244 solar panels, a light-coloured roof extension with high surface reflectivity, and uses specific hard landscaping materials to minimize heat absorption and mitigate the heat island effect. The proposed development includes large windows providing natural light and good views to the external landscaping. The development will investigate the installation of oil separators in the car park storm water drainage system. Refer to sections 3.0, 4.0, 5.0, 6.0 and 8.0

Joondalup Activity Centre Plan, Precinct 1 – City Centre. • Encourage the highest intensity of mixed use development and the greatest concentration of employment intensive land uses. • Support mixed-use development along Joondalup Drive and Grand Boulevard to form intense inner-city development corridors. • Establish the Joondalup Drive/Grand Boulevard and Shenton Avenue/Grand Boulevard intersections as the primary gateways into the city centre.	✓	See comments for 'Joondalup Activity Centre Plan, Activity' above.
Joondalup Activity Centre Plan, City Centre 5 – Adaptable Buildings. All buildings should be adaptable to future uses. They should have: • Minimum floor to floor height of 4.5 metres at ground floor; and • Structure and core configurations, vertical circulation and service provision to enable future subdivision/amalgamation of tenancy spaces and enable future uses (e.g. grease traps, metering provisions).	✓	The retail extension and multideck car park are designed with adaptable floor-to-ceiling heights for versatile future purposes. All metering aligns with NABERS standards. Additionally, the development is future-proofed, equipped for potential solar battery storage and widespread EV charging infrastructure in the car park. Refer to Sections 3.0
Joondalup Activity Centre Plan, City Centre 6 – Open Space & Landscape. Where a building is set back from the street, the front setback area is to be landscaped.	✓	The proposed development is set back along Joondalup drive and includes a landscaped area. Refer to Section 3.0
Joondalup Activity Centre Plan, City Centre 7 – Car Parking & Access: • 1 car parking bay per 75m^2 NLA • 10% of required car bays shall each be replaced by 2 motorcycle/scooter bays. The car bay requirement shall be reduced accordingly.	✓	See comments for 'Joondalup Activity Centre Plan, Movement.' above.
Joondalup Activity Centre Plan, Bicycle parking and end of trip facilities: Cycle parking requirements for Shopping Centres under 30,000m^2. • Employee Bicycle Parking 1 per 1500 m2 NLA • Visitor Bicycle Parking 1 per 3000 m2 NLA **End of trip facilities** • A minimum of one female and one male shower, located in separate change rooms or a minimum of two separate unisex showers and change rooms; • Additional shower facilities to be provided at a rate of one shower for every 10 additional bicycle parking bays; • A locker for every bicycle parking bay provided; and • End-of-trip facilities are to be located as close as possible to the bicycle parking facilities	✓	See comments for 'Joondalup Activity Centre Plan, Movement.' above.

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1.0 Introduction

The proposed extension is located on the existing 238 space carpark. The proposed 3,005m^2 (GFA) retail extension includes rooftop parking for 197 cars, 15 motorbikes and 24 cycle spaces.

The report outlines how the proposed development aligns with the sustainability credentials of the City of Joondalup, Local Planning Scheme No. 3 and Joondalup Activity Centre Plan.

Overall, the proposed development is considered to meet all the sustainability objectives included in the of the City of Joondalup local planning requirements.

Table 1-1 below confirms that the proposed development responds to each of the Local Planning Scheme requirements and outlines which sections of this report are relevant for each requirement. The site is currently zoned as:

- City of Joondalup City Centre Precinct
- Joondalup Activity Centre (JAC) Plan

2.0 Policy

2.1 City of Joondalup

The Joondalup Activity Centre Plan Scheme sets out the City's aim and intentions for the development of land and includes a number of relevant sustainability requirements to the development as follows:

- **Joondalup Activity Centre Plan, Activity**. Facilitate land assembly and redevelopment that will further intensify development and activity in the city centre. The focus is to be on travel, employment, and user intensive activity around public transport stations and along movement corridors.
- **Joondalup Activity Centre Plan, Movement.** Provide car parking commensurate with the road network capacity. Provide adequate bicycle parking and end of trip facilities to promote cycling trips within JAC.
- **Joondalup Activity Centre Plan, Urban Form (Character)** Create an attractive city centre that sets Joondalup apart through the use of high-quality design, materials, street furniture, public art, landscape and the retention of vegetation where appropriate. Encourage increased development intensity, building scale and design quality along transport corridors to appropriately frame the city centre. Encourage buildings and development that are able to adapt to changing economic, technological, environmental and social conditions. Encourage buildings that have a well- considered relationship to the street, enabling the city to become more intense and active while retaining a human scale. Enhance the natural environment and emphasise the existing 'bush' identity and landscape quality throughout the JAC.
- **Joondalup Activity Centre Plan, Resource Conservation.** Adopt an environmentally sustainable approach to development within the JAC. Create a green open space and landscaped street network to lessen the heat island effect of city development. Encourage conservation of resources, including reduced waste and energy and water use. Encourage solar access, natural cross ventilation and renewable energy use in buildings. Maximise solar access and good microclimate conditions in public open spaces and city squares. Optimise water quality management outcomes.

- **Joondalup Activity Centre Plan, City Centre 5 – Adaptable Buildings**. All buildings should be adaptable to future uses. They should have; a minimum floor to floor height of 4.5 metres at ground floor; and Structure and core configurations, vertical circulation and service provision to enable future subdivision/amalgamation of tenancy spaces and enable future uses (e.g. grease traps, metering provisions).
- **Joondalup Activity Centre Plan, City Centre 6 – Open Space & Landscape.** Where a building is set back from the street, the front setback area is to be landscaped.
- **Joondalup Activity Centre Plan, City Centre 7 – Car Parking & Access:** 1 car parking bay per 75m^2 NLA is required for non-residential developments; 10% of required car bays shall each be replaced by 2 motorcycle/scooter bays. The car bay requirement shall be reduced accordingly.
- **Joondalup Activity Centre Plan, Bicycle parking and end of trip facilities: Cycle parking requirements for Shopping Centres under 30,000m^2 are as follows:**
    - Employee Bicycle Parking 1 per 1500 m^2 NLA
    - Visitor Bicycle Parking 1 per 3000 m^2 NLA

  And end of trip facilities are as follows:
    - A minimum of one female and one male shower, located in separate changing rooms or a minimum of two separate unisex showers and changing rooms;
    - Additional shower facilities are to be provided at a rate of one shower for every 10 additional bicycle parking bays;
    - A locker for every bicycle parking bay provided; and
    - End-of-trip facilities are to be located as close as possible to the bicycle parking facilities

3.0 Activity

Economic viability is a central pillar to sustainability. The following table summarises the specific initiatives included in the design which relate to economic sustainability.

Table 3-1 Economic sustainability initiatives

Item	Proposed design initiatives
Intensify development and activity in the city centre.	The proposed extension is adding an additional 3,005 m^2 of retail space to the site and retaining the majority of the existing car parking spaces with a roof top solution.
Focus travel, employment, and user intensive activity around public transport stations and along movement corridors	The proposed intensification of the site will increase movement along Joondalup Drive Clark Crescent transport corridor. In addition, the proposed landscaping plans will enhance the pedestrian amenity (including areas for rest and contemplation by passing cyclists, pedestrians, staff or customers) along Joondalup drive. The existing connectivity to Clark Crescent is to be maintained.

4.0 Character (Urban Form) & Social Sustainability

Sustainable buildings are buildings people use now and, in the future, as well as contributing local community. The following table summarises the specific initiatives included in the design which relate to character and social sustainability.

Table 4-1 Economic sustainability initiatives

Item	Proposed design initiatives
Create an attractive city centre that sets Joondalup apart through the use of high-quality design, materials, street furniture, public art, landscape and the retention of vegetation where appropriate. **Encourage buildings and development that are able to adapt to changing economic, technological, environmental and social conditions.** **Encourage buildings that have a well- considered relationship to the street, enabling the city to become more intense and active while retaining a human scale.** **Enhance the natural environment and emphasise the existing 'bush' identity and landscape quality throughout the JAC.**	The Proposed development is in keeping with the existing urban character of Joondalup. The proposed extension whilst keeping the same form as the existing structure, includes a pattern of fenestration and awning style that differentiates itself from the existing showroom. The development includes the retention of most of the existing trees along Joondalup Drive, a landscape area which enhances the existing planted verge and provides areas for rest and contemplation by passing cyclists, pedestrians, staff or customers; and a clear, legible pedestrian entry to the site/building from Joondalup Drive. The proposed development is to be built from a pallet of high-quality materials including perforated metal facade systems for the multideck car park providing shading and acoustic benefits. The façade will have actual images of Lake Joondalup, looking to the west, east and north contributing to the Joondalup sense of place. The retail extension and multideck car park floor to celling heights allow flexibility for future uses. In addition, the increased floor area and associated improved landscaping and entrance will provide an enhanced shopping experience to the local community.
All buildings should be adaptable to future uses. **They should have; Minimum floor to floor height of 4.5 metres at ground floor; and Structure and core configurations, vertical circulation and service provision to enable future subdivision/amalgamation of tenancy spaces and enable future uses (e.g. grease traps, metering provisions).**	The retail extension and multideck car park floor to ceiling heights allow flexibility for future uses. All metering is to be provided in accordance with NABERS standards. The development is to be future proofed with provision for future solar battery storage and the infrastructure provided for EV charging throughout the car park.

5.0 Resource consumption

The following sections set out design strategies to reduce the building's energy, water demand and waste.

5.1 Energy efficiency

The following table summarises the specific initiatives targeted for inclusion in the design which relate to energy efficiency:

Table 5-1 Energy efficiency initiatives

Item	Proposed design initiatives
Building fabric	The extension will be NCC 2019 Section J complaint.
Fossil fuel free	The proposed extension will be all electric and fossil fuel free.
Lighting efficiency	All lighting will be LED, low energy lighting.
Ventilation and air-conditioning	Air conditioning equipment will be a minimum of 3-star as per AS 3823.2-2011.
Appliances and equipment	All appliances installed will be energy and water efficient. Appliances to have an Energy Star rating within one star of the most efficient rating. All fixtures are to be at least within one star of the most efficient WELS rating except for the showers which will be two stars below the maximum WELS rating.
Metering	All metering to be designed in line with NABERS requirements.
Renewables	The proposed development includes approximately 224 PV panels generating approximately 107MWh per year. The development will be designed to allow for future connection to onsite battery storage.

5.1.1 Light fittings

All light fittings to be specified as LED, including lighting in the 'communal' corridors, stairwells, garage, and external lighting.

Additionally, downward facing fittings will be considered for the external landscaped areas to reduce the negative effects of light pollution. All common area lighting will incorporate light sensing such as occupancy sensing (PIRs) to reduce lighting consumption when lighting is not required.

5.1.2 Metering

All metering is to be in accordance with NABERS requirements to allow for monitoring of the end use activities.



5.1.3 Solar photovoltaic (PV) panels

Solar photovoltaic will be provided as an alternate energy source, to supply power to Harvey Norman.



Figure 5-1 Rooftop PV system

5.2 Water efficiency

The water consumption of Western Australia is the second highest in Australia with an average of 241,000 litres per household per annum, well above the Australian average of 190,000 litres (Australian Bureau of Statistics, 2017).

A reduction of water usage does not only alleviate pressure from the local water supply but also means reduced costs of living in WA.

The following table summarises the specific initiatives to be investigated for inclusion in the design in relation to water efficiency:

Table 5-2 Water efficiency initiatives

Item	Proposed design initiatives
Potable water consumption	All water fittings and fixtures to be water efficient. All fixtures are to be at least within one star of the most efficient WELS rating except for the showers which will be two stars below the maximum WELS rating.
Landscape irrigation	All landscape irrigation will be drip irrigation with moisture sensing override. Native hardy plants to be specified as part of the landscaping.

5.2.1 Water fixtures & fittings

Occupant consumption is a major contributor to potable water usage. The following water fixture WELS ratings will be considered to ensure the efficient use of potable water by building occupants.

Table 5-3 Proposed water fittings WELS rating

Fixture / Fitting Type	WELS Rating
Taps	6-star
Urinals	6-star
Toilets	5-star
Showers	3-star
Clothes Washing Machine	5-star
Dishwasher	6-star

5.2.2 Water-wise landscaping and drip irrigation

The use of water-wise landscaping will be considered for the project. This includes the use of hardy natives and other low-water vegetation. A major amount of potable water usage goes back to landscape irrigation. To reduce the amount of water used for the landscaped areas a drip system with moisture sensor control will be installed for irrigation.



Figure 5-2 Use of hardy natives and drip irrigation system for landscaping

5.3 Building materials

Buildings consume considerable natural resources in their construction, operation, and demolition. This section of the report will provide details about the potential impacts caused by the building and how these impacts have been reduced when compared to typical buildings of this nature. The building will aim to reduce the total embodied energy and carbon during construction and then aim to maximise the operational efficiency of the buildings services to provide and enhance tenant provisions for the minimum amount of energy and water. Furthermore, methods for maintaining operational efficiency over the life of the building will be investigated to ensure that the benefits are maximised over the life of the building.

The following table summarises the specific initiatives to be investigated for inclusion in the design in relation to building materials:

Table 5-4 Building materials initiatives:

Item	Proposed design initiatives
Embodied carbon in the building materials	Low embodied carbon construction techniques and materials selection will be considered throughout the design development.
Concrete	Concrete in the building is aimed to have reduced Portland cement use targeting a reduction of at least 20%.
Sustainable timber	Timber selections used in the building and construction will be procured from a sustainable source.
Permanent formwork, pipes, ducts, cables	PVC products will meet Best Practice Guidelines for PVC.
Structural and reinforcing steel	Steel used in the building will be procured from an energy-reducing processing plant and a Responsible Steel Maker.
Carpets and engineered wood products	All the paints, adhesives, sealants, and carpets will have low levels of Volatile Organic Compounds. Engineered wood will be low formaldehyde. There will be no lead, asbestos, or PCBs in the building.

The design team will actively target a reduced carbon footprint during construction and embodied energy within building materials. Concrete with 20% cement replacement will be specified in conjunction with rebar with a recycled content. Timber used for construction works is targeted to be either certified as responsibly sourced or recycled material.

5.3.1 Embodied carbon

The construction industry contributes to greenhouse gas emissions in multiple ways beyond just the operational phase of buildings. The entire lifecycle of construction materials, from extraction and manufacturing to transportation and installation, involves the release of carbon and other greenhouse gases.

For instance, the production of materials like cement, steel, and aluminium—essential components in construction—requires significant energy and emits CO_2 during manufacture. Transportation of these materials to construction sites adds to the emissions. Even the demolition and disposal of buildings at the end of their life cycle contribute to greenhouse gas emissions.

The following measures will be considered throughout the design development to reduce the amount of embodied carbon:

- Sub-structure
    - Maximise recycled content of materials in structural components.

- Super-Structure
    - Maximise recycled content in concrete and formwork;
    - Use of lightweight and reusable materials where possible.
- Envelope
    - Adopt a low-carbon, lightweight approach;
    - Consider necessity of massing elements;
    - Consider composite materials or dual function elements;
    - Considering the use of recycled materials.
- Internal Walls
    - Consider necessity of internal walls;
    - Consider recycled content or reused materials;
    - Consider low carbon steel framing;
    - Designing for flexibility and futureproofing to reduce renovation efforts.
- Internal Finishes
    - Consider setting a recycled content target for all finishes;
    - Consider long life and highly durable finishes in areas of high foot traffic;
    - Considering Carbon Neutral certified products.

5.3.2 Low VOCs

Volatile organic compounds (VOCs) are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects. Concentrations of many VOCs are consistently higher indoors than outdoors. VOCs are emitted by a wide array of products numbering in the thousands (typically paints and lacquers, paint strippers, cleaning supplies, pesticides, building materials and furnishings, office equipment such as copiers and printers).



The development will specify materials with low emissions content including low-VOC paints.

5.4 Waste

The main objectives for the waste management strategies for construction and operational waste are to ensure that waste is avoided and recycled during design, construction, and operation.

Waste within a building construction context can be avoided by encouraging the selection of lower-impact and long-term materials. Operational waste to landfill can be reduced by providing relevant and easily accessible facilities for recyclable waste and other waste that can be diverted from landfill such as organic waste, batteries, or e-waste.

Waste streams – will be separated into refuse waste (landfill), organics, commingled recycling. The bin store has been sized to accommodate the additional retail use.

The following table summarises the specific initiatives that will be investigated for inclusion in the design in relation to waste management:

Table 5-5 Waste initiatives

Item	Proposed design initiatives
Construction and demolition waste	A minimum of 90% of waste from construction is to be diverted from landfill through active on-site waste management and waste separation.
Operational waste	Adequate facilities will be provided to store separate waste streams. Good external and internal access to the storeroom will be provided.

5.4.1 Construction and demolition waste

The team will investigate the following:

- Specifying SSA produced reinforcing bar and mesh.
- Use of low carbon construction concretes.
- Sustainably sourced timber.

Additionally, 'Designing out Waste' principles should be applied where possible. These principles are:

- Design for reuse and recovery
- Design for off-site construction
- Design for materials optimisation
- Design for waste efficient procurement, and
- Design for deconstruction and flexibility.



5.4.2 Operational waste

A dedicated waste storage area will be provided for the separation and storage of recyclable waste during operation, allowing for the different waste streams to be separated to match the local recycling scheme. At least three streams will be covered including landfill, recycling and a third stream for organic/food waste.

Throughout project design, operation and construction, principles of resource recovery will be applied, so that materials and products are recovered and reused where possible, reducing landfill and saving money. Some strategies that will be investigated include:

- Innovative waste separation and collection strategies to allow materials to be isolated for reuse;
- A purchasing policy which aims to minimise waste from products and packaging, encourages the use of products which have minimum environmental impact; and
- Manufacturers and suppliers will be encouraged to take full responsibility for the life cycle impact of products including ownership at end of life.

6.0 Indoor environmental quality

The Indoor Environment Quality of a building aims to achieve sustainable performance improvements in a manner that also improves occupants' experience of the space. Sustainable buildings are designed for people and reductions in energy use should never be made at the expense of the occupants' health and wellbeing.

A holistic approach to sustainability will result in multiple benefits both in energy efficiency and encouraging occupant wellbeing. This can be achieved by improvements to air quality through appropriate ventilation, the provision of high levels of thermal, visual, and acoustic comfort, reduction to occupant stress and the creation of a low-toxicity environment through the reduction of pollutants.

The following table summarises the specific initiatives to be investigated for inclusion in the design in relation to Indoor Environment Quality:

Table 6-1 Indoor Environment Quality initiatives

Item	Proposed design initiatives
Thermal comfort	The extension will meet the NCC 2019 Section J thermal comfort requirements.
Fresh Air	Mechanical ventilation to provide fresh air, with enhanced fresh air rates above Section J minimum requirements to be investigated.
External Views	Good orientation with views to the on-site landscaped gardens/vegetation. Large windows with moderate Visual Light Transmittance (VLT).
Exposure to toxins	Specification of low VOCs paints, adhesives, and sealants where feasible. Specification of low formaldehyde in engineered woods where feasible.
Internal lighting levels	All lighting will be LED or low energy, flicker-free and with no glare.

6.1 Fresh Air

Increased fresh air volumes can aid concertation and minimise indoor air pollution levels.

6.2 Amenity and comfort

The human body regulates its core temperature via the hypothalamus within a narrow range of 36 to 38 degrees. An indoor environment that is too hot or too cold can affect mood, performance, and productivity. However, at which temperature a resident feels comfortable varies significantly from person to person. To control internal comfort and minimise excessive heat loss in winter and heat gains in summer, the development will investigate the use of glazing with a low SHGC, and appropriate U values.

6.3 Natural lighting

The development includes facade screen shading to limit solar gains and glare, while allowing natural light into the retail space.

7.0 Transport

Sustainable projects facilitate a reduction of the dependency of occupants on private car use as an important means of reducing overall greenhouse gas emissions. The use of motor vehicles directly contributes to climate change in two ways; through the high amounts of energy required to produce cars and build and maintain supporting road transport infrastructure and services; and the direct emissions that result from car operations.

If reliance on individual motor vehicle transportation is to be reduced, it is necessary to maximise alternative transportation options. This may include initiatives that encourage and make possible the use of mass transport options, cycling or walking, and the selection of sites that are close to a large number of amenities.

The following table summarises the specific initiatives targeted for inclusion in the design in relation to transport:

Table 7-1 Transport initiatives

Item	Proposed design initiatives
Providing bike storage	Bike storage and end of trip facilities are to be provided.
Low emission vehicle infrastructure	Car parking bays and infrastructure for Electric Vehicles (EV) will be provided.
Improving pedestrian spaces	The building being located in central Joondalup provides excellent access to amenities such as shops, cafes, and bars with. The proposed landscaping to enhance the pedestrian route along Joondalup drive.

7.1 Permeability

The proposed landscaping plans enhance the amenity of pedestrian connectivity along Joondalup drive. The existing connectivity to Clark Crescent is to be maintained.

7.2 Cyclist facilities

In the greater Perth area 48% of all car trips are less than a 5 km distance. Cars produce an average of 0.3 kg of CO_2 per km travelled, whereas a cyclist emits negligible greenhouse or other pollution. For each kilometre a person cycles instead of driving, approximately 0.3 kg of CO_2 are saved from being emitted to the environment.

The proposed development includes cycle storage in the car park area and end of trip facilities.

7.3 End of trip facilities

End of trip facilities will be provided in line with the following requirements:

- A minimum of one female and one male shower, located in separate change rooms or a minimum of two separate unisex showers and changing rooms;
- Additional shower facilities are to be provided at a rate of one shower for every 10 additional bicycle parking bays (i.e. a minimum of 4 showers);
- A locker for every bicycle parking bay provided (i.e. 24); and
- End-of-trip facilities are to be located as close as possible to the bicycle parking facilities.

7.4 Access to public transport

Joondalup train station is within 650m walk along Clark Crescent, Wise Street and Collier Pass.

7.5 Electric vehicles

The number of electric cars on the road grew to 3 million worldwide between 2016 and 2017. This is an expansion of 56%. With further expected exponential growth, the number of electric cars on the roads will reach between 125 and 220 million by 2030 according to the International Energy Agency (International Energy Agency, 2018).

The proposed development intends to support the uptake of low-emissions and electric vehicles. The development includes infrastructure for car park EV charging.

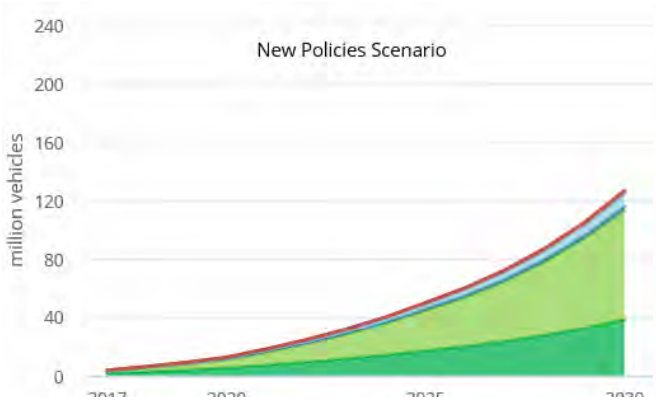


Figure 7-1 Global Electric Vehicle Deployment by 2030

8.0 Urban ecology

With continuously growing cities, urban ecology plays a large role in conserving biodiversity and improving life quality for urban residents. Well planned buildings and landscape architecture protects and enhances biodiversity, provides sustainable landscaping such as low water use, low fertiliser requirements and local native and indigenous plant species selection. If possible, remnant endemic plant communities should be managed and protected.

The following table summarises the specific initiatives included in the design in relation to urban ecology:

Table 8-1 Urban ecology initiatives

Item	Proposed design initiatives
Connection to nature	Extensive landscaping surrounding the development will enliven the frontage and pedestrian route along Joondalup Drive including areas for rest and contemplation by passing cyclists, pedestrians, staff, and customers. The majority of the existing trees along Joondalup drive are to be retained providing connection to nature and shading.
Mitigation of Light Pollution	95% of all external light fittings point downwards to mitigate the effect of urban light pollution.
Heat Island Effect Reduction	Use of vegetation, Solar PV, green spaces and roofing and hard landscaping finishes with a suitable Surface reflective index will actively reduce the heat island effect.
Water Quality	The development will investigate the installation of oil separators in the car park storm water drainage system.

8.1 Connection to nature

Connection to nature is a key design element for the project and will ensure that occupants can interact with nature either inside the building or externally through landscaped outdoor areas.

8.2 Light pollution

Light pollution is an environmental issue that is becoming more of a problem every year as cities continue to grow in size and density. Excessive amounts of light being projected upwards is not only a waste of energy and resources but has also been proven to make a negative impact on the local wildlife by affecting various species' vision, mating, nesting, and built-in migration instincts.

Similar effects have been found in humans, with some people struggling to sleep and relax with prolonged exposure to artificial daylight and glare from poorly fitted external lights. The idea of reducing light pollution through sensible light fittings can save the site owners financially by reducing wasted energy and increasing lighting efficiency whilst simultaneously contributing positively to the health and wellbeing of the surrounding natural environment.

The project will investigate the use of all external light fittings pointing downwards, mitigating the effects of light pollution.



Figure 8-1 Light and energy usage of external lighting

8.3 Minimising heat island effect

The heat island effect describes the condition where urban areas have a higher average temperature than their rural surroundings owing to the make-up of the built environment. The use of light roof materials combined with shaded and landscaped areas can reduce the heat island effect significantly and contribute to further energy savings.

The development includes enhanced landscaping along Joondalup Drive and on the car park roof mitigating the heat island effect. In addition, the proposed 244 solar panels, light coloured roof extension (to have a three-year surface reflective index more than 63) and hard landscaping (are to have a three-year surface reflective index more than 39 (i.e., Light grey / white concrete).

9.0 References

Australian Bureau of Statistics. (2017). *4610.0 - Water Account, Australia 2015-16*. Retrieved 10 05, 2018, from http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4610.0Main%20Features32015-16?opendocument&tabname=Summary&prodno=4610.0&issue=2015-16&num=&view=

City of Melville. (2018). *Sustainability Policy.* Melville: City of Melville.

Department of Planning, Lands and Heritage. (2016). *City of Melville, Local Planning Scheme No. 6.* Perth: Department of Planning, Lands and Heritage, Original Town Planning Scheme Gazettal.

Department of Water and Environmental Regulation. (2020). *Western Australian Climate Policy.* Retrieved from https://www.wa.gov.au/system/files/2020-12/Western_Australian_Climate_Policy.pdf

International Energy Agency. (2018). *Global EV Outlook 2018*. (International Energy Agency) Retrieved 10 05, 2018, from https://www.iea.org/gevo2018/

International Energy Agency. (2020). *Global EV Outlook 2020*. Retrieved from International Energy Agency: https://iea.blob.core.windows.net/assets/af46e012-18c2-44d6-becd-bad21fa844fd/Global_EV_Outlook_2020.pdf

Pickin, J., & Randell , P. (2017). *Australian National Waste Report 2016.* Docklands, Vic 3008: Department of the Environment and Energy and Blue Environment Pty Ltd.

Waste Authority WA. (2019). *Waste Avoidance and Resource Recovery Strategy 2030.* Government of Western Australia. Retrieved from https://www.wasteauthority.wa.gov.au/images/resources/files/Strategic_Direction_Waste_Avoidance_and_Resource_Recovery_Strategy_2030.pdf

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PART C – CITY OF MANDURAH

1. Declarations of Due Consideration

Any member who is not familiar with the substance of any report or other information provided for consideration at the DAP meeting must declare that fact before the meeting considers the matter.

2. Disclosure of Interests

3. Form 1 DAP Applications

3.1 Lots 11-13 (117-121) Mandurah Terrace, Mandurah – Proposed "Recreation Private" (Gym) & "Shop" Development – DAP/24/02652

4. Form 2 DAP Applications

Nil

5. Section 31 SAT Reconsiderations

Nil

PART C – ITEM 3.1 - LOTS 11-13 (#117 - 121) MANDURAH TCE, MANDURAH – PROPOSED "RECREATION PRIVATE" (GYM) & "SHOP" DEVELOPMENT

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Metro Outer	
Local Government Area:	City of Mandurah	
Applicant:	Hidding Urban Planning	
Owner:	Tranmere No 1 Pty Ltd	
Value of Development:	$2 million ☐ Mandatory (Regulation 5) ☒ Opt In (Regulation 6)	
Responsible Authority:	City of Mandurah	
Authorising Officer:	Chief Executive Officer	
LG Reference:	DA-10753	
DAP File No:	DAP/24/02652	
Application Received Date:	23/02/2024	
Report Due Date:	08/08/2024	
Application Statutory Process Timeframe:	90 Days	
Attachment(s):	1. Development Plans 2. Acoustic Report 3. Traffic Impact Statement 4. Landscaping Plan 5. Sustainability Strategy Report 6. Planning Report 7. Design Review Panel Report	
Is the Responsible Authority Recommendation the same as the Officer Recommendation?	☒ Yes ☐ N/A	Complete Responsible Authority Recommendation section
	☐ No	Complete Responsible Authority and Officer Recommendation sections

Responsible Authority Recommendation

That the Metro Outer DAP resolves to:

1. **Approve** DAP Application reference DAP/24/02652 and accompanying plans (Plan Nos DA00, DA01, DA02, DA03, DA04, DA05, DA06, DA07, L-1100 Rev 2) 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 Mandurah Local Planning Scheme No. 12, subject to the following conditions:

Conditions

1. The development shall be carried out and fully implemented in accordance with the details indicated on the stamped approved plan(s) unless otherwise required or agreed in advance in writing by the City of Mandurah, including the following modifications illustrated in red ink:

    1a. Additional windows are to be added to the ground floor east elevation to ensure passive surveillance over the parking bays to the satisfaction of the City of Mandurah.

    1b. At least 3 ACROD bays are to be installed into the parking plan to the satisfaction of the City of Mandurah.

2. 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.

3. Construction hours are limited to 7:00am to 7:00pm Monday to Saturday, unless otherwise agreed in writing with the City of Mandurah.

4. All uncovered car parking bays to be in accordance with Australian Standard AS2890.1. Any bays adjacent to kerbs or for those bays that are to be used for disabled parking, shall be in accordance with Australian Standards AS1428.1.

Prior to Construction

5. Prior to construction, a waste management plan shall be submitted to and approved by the City of Mandurah. The waste management plan shall be implemented at all times to the satisfaction of the City of Mandurah and is to be created in line with WALGA Waste Management Guidelines.

6. A Drainage Management Plan that meets the requirements of the Department of Water and Regulations specified below, is required to be submitted and approved by the City of Mandurah prior to construction and thereafter implemented to the satisfaction of the City of Mandurah.

    The proponent is required to manage stormwater in accordance with the Decision Process for Stormwater Management in WA (DWER, 2017) and the Stormwater Management Manual for Western Australia (DWER, 2022).

    Consistent with these documents, the Department of Water and Environmental Regulation (DWER) recommends that the first 15mm of stormwater runoff passed through a water quality treatment process before infiltration. This biofiltration treatment to be landscaped rain gardens, trees pits or swales with waterwise plant species.

7. Prior to construction an amended Landscaping Plan is to be submitted to and approved by the City of Mandurah with the following modifications;

   7a. The plant species, Carpobrotus virescens, are not supported and shall be substituted for myoporum parvifolium.

   7b. There shall be a 1.5m mulch offset from the footpath to where the planting starts to ensure this space is not encroached.

   7c. An irrigation plan is required for all landscaping areas.

8. The approved landscaping is to be fully implemented, at all times maintained to the satisfaction of the City of Mandurah.

9. The proposed developments earthworks and access is to be completed in a manner compatible with the geometry of the Mandurah Terrace road carriageway, to the specifications of the local government and satisfaction of the WAPC.

10. Prior to the commencement of site works, a Construction Management Plan shall be submitted to and approved by the City of Mandurah. The Plan must detail how the site will be managed during and after works are completed, in order to minimise issues associated with dust/sand, erosion, noise, vibration, traffic and general construction issues. The approved plan must thereafter be implemented to the satisfaction of the City of Mandurah.

Prior to Occupancy

11. Prior to the commencement of the development/use, the proposed development shall be connected to sewer to the satisfaction of the City of Mandurah.

12. Prior to occupation, lots 11, 12 and 13 shall be amalgamate through the WAPC. As part of the amalgamation process, the lot boundary encroaching into the road reserve shall be amended to follow the existing alignment of the footpath to the satisfaction of the City of Mandurah.

13. Prior to occupation, a vehicle crossover is to be constructed to the specification and satisfaction of the City of Mandurah. Once constructed, the vehicle cross over shall be maintained at all times to the satisfaction of the City of Mandurah. During construction, the existing landscaping, footpaths, infrastructure and associated brick paved areas within the road reserve shall be protected and/or re-instated to the satisfaction of the City of Mandurah.

14. Prior to occupation, a bin storage area shall be provided and screened from public view to the satisfaction of the City of Mandurah.

15. Prior to occupation, vehicle parking, manoeuvring and circulation areas shall be suitably constructed, sealed, drained, kerbed, marked (including loading and disabled bays), and thereafter maintained to the specification and satisfaction of the City of Mandurah.

16. Prior to occupation security, building, signage and carpark lighting must be located, designed and installed to prevent excess light spillage from the development and must comply with AS4282 Control of the Obtrusive Effects of Outdoor Lighting and other relevant lighting standards.

17. Prior to occupation, the external finish of the parapet wall hereby permitted shall be finished with the same materials as the proposed development to the satisfaction of the City of Mandurah.

18. Prior to occupation, where it is proposed to use pre-cast concrete or tilt-up wall construction, all exposed, external wall faces are to be painted to the satisfaction of the City of Mandurah. The development shall thereafter be implemented in accordance with the approved schedule of colours, materials and particulars.

19. Prior to occupation, the external finish of the parapet wall shall be painted with anti-graffiti coating to a maximum height of 4m, unless otherwise agreed upon in writing by the City of Mandurah.

20. Prior to occupation all services shall be screened from the primary street and surrounding properties to the satisfaction of the City of Mandurah.

21. Prior to occupation any recommendations for sound attenuation/minimisation practices shall be installed in accordance with the *Environmental Noise Impact Report by Reverberate Consulting (Reference: P191287RP1) dated 9 February 2024* to the specification of the City of Mandurah.

22. Within 3 months of occupation, a noise verification report shall be submitted to the City of Mandurah by a suitably qualified acoustic consultant to assess compliance with the Environmental Protection (Noise) Regulations 1997.

Ongoing Conditions

23. All signage shall be kept clean and maintained free of dilapidation at all times to the satisfaction of the City of Mandurah.

24. All glazed surfaces shall be clear and free of posters, decals, heavy tinting or any other visual obscuring which prevents a clear view into the building, unless otherwise agreed in writing by the City of Mandurah.

25. The illuminated sign must not be moving, pulsating, flashing, incorporate animation or movement into their design or structure and is to be backlit to the satisfaction of the City of Mandurah.

26. All delivery and service vehicles must be located entirely on the site and have their engines and refrigeration units turned off during loading and unloading of goods associated with the use of the site and shall only access the site during the ‘day period’ of 7:00am to 7:00pm Monday to Saturday or 9:00am to 7:00pm Sundays and public holidays.

27. The proponent is required to manage lot 12 in accordance with the ongoing site management plan as detailed in the document, ‘Former Caltex Mandurah Service Station (55598s) Ongoing Site Management Plan’ (Coffey, July 2019).

28. The proponent is to ensure excavations to a depth of greater than 2.5m below ground level across Lots 11,12 and 13 are to be undertaken in accordance with an appropriate health, safety and environmental management plan.

Advice Notes

1. Application for Building Permit to be submitted and approved prior to commencing any building work.

2. Application for Occupancy Permit to be submitted and approval obtained prior to occupancy of the building.

3. Lots to be amalgamated prior to submission of the Building Permit Application.

4. Prior to the commencement of site works, the applicant shall schedule a start-up meeting with the City of Mandurah.

5. The proponent is advised that due to the nature and extent of groundwater contamination beneath Lots 11 and 12, the abstraction of groundwater for any purpose is not recommended.

6. The proponent is advised that acid sulfate soils (ASS) risk mapping indicates that the site is located within an area identified as representing a low to moderate risk of ASS occurring within 3 metres of the natural soil surface. Please refer to Department of Water and Environmental Regulation's acid sulfate soil guidelines for information to assist with the management of ground and/or groundwater disturbing works.

7. As it is intended to use the premises as a "public building" as defined in Section 173 of the Health (Miscellaneous Provisions) Act 1911 (as amended), it is necessary to make application for a Certificate of Approval from the City of Mandurah Environmental Health Services before commencing as a public building.

8. In addition to planning and building requirements, the development must comply with Health (Aquatic Facilities) Regulations 2007. Requirements of the Regulations must be incorporated into the detailed design of the premises.

9. The applicant must submit an application for registration of a food business as required by the Food Act 2008. The business must not trade in food until a Registration certificate has been issued by the City's Health Services.

Details: outline of development application

Region Scheme	Peel Region Scheme
Region Scheme - Zone/Reserve	Other regional roads and Urban
Local Planning Scheme	Local Planning Scheme No 12
Local Planning Scheme - Zone/Reserve	Strategic Centre

Structure Plan/Precinct Plan	Draft Mandurah Strategic Centre – Precinct Structure Plan
Structure Plan/Precinct Plan - Land Use Designation	Commercial Mixed Use
Use Class and permissibility:	Recreation – Private: P Use Shop: P Use
Lot Size:	3198m^2
Existing Land Use:	Vacant Land
State Heritage Register	No
Local Heritage	☒ N/A ☐ Heritage List ☐ Heritage Area
Design Review	☐ N/A ☒ Local Design Review Panel ☐ State Design Review Panel ☐ Other
Bushfire Prone Area	No
Swan River Trust Area	No

Proposal:

The application proposes a gym/shop premises including a double storey façade and associated parking facing Mandurah Terrace. The development consists of:

- Gym/shop development with a net lettable floor area of 201m^2 of retail and 1609m^2 of gym space;
- Proposed hours of operation are to be 24/7 for the gym;
- Up to 60 members on site at any one time, and;
- 53 car parking bays and 2 bike racks (for 4 bikes).

Proposed Land Use	Recreation Private and Shop
Proposed Net Lettable Area	1810m^2
Proposed No. Storeys	Double Storey
Proposed No. Dwellings	Not Applicable

Background:

The subject sites, 117-121 Mandurah Terrace, are located within the draft Mandurah Strategic Centre – Precinct Structure Plan area. The Mandurah Strategic Centre – Precinct Structure Plan has been advertised and was approved by the Western Australian Planning Commission (WAPC) subject to modifications and can be considered as a seriously entertained planning document. The City of Mandurah is currently working towards modifying the structure plan to create development expectations and requirements for lots zoned "Commercial Mixed Use". The sites were recently rezoned to Strategic Centre under the City's Town Planning Scheme No 12 in the April of 2022 gazettal.

The lots proposed for development are marked as contaminated sites due to previous land uses. Lots 11 and 12 are zoned as 'Remediated for Restricted Use' while lot 13 is 'Decontaminated' under the *Contaminated Sites Act 2003*.

Since the initial lodgement, the proposed plans have changed significantly as a result of cooperation between the City and applicant to ensure the outcome was more aligned

with the requirements of the Precinct Structure Plan. Once amended plans were received, the proposal was presented to the Design Review Panel at the City of South Perth. On July 9th 2024, final amended plans were received that the City of Mandurah.

Surrounding Context

The subject lots back onto existing residential properties to the south-east, it includes a single house and grouped dwellings which are lower density development. The neighbouring properties to the north-east of these lots are currently vacant and the property to the south-west has an existing restaurant development.

Under the draft Mandurah Strategic Centre – Precinct Structure Plan, the properties on either side of these subject lots are zoned 'Commercial Mixed Use' and the rear residential properties to the south-east are zoned as 'Commercial'.

Mandurah Terrace is zoned as 'Other Regional Roads' under the Peel Region Scheme and is a key entrance route to central Mandurah.

The current streetscape of Mandurah Terrace is older in style with a lot of the surrounding properties having already been developed. Due to Mandurah Terrace and the proposed development sites being an important entry gateway to Mandurah, the City is attempting to create an interesting and well-designed area through the development requirements of the Mandurah Strategic Centre – Precinct Structure Plan.

Existing Site

The properties, 117-121 Mandurah Terrace, are currently vacant with little vegetation across the sites. These lots front onto Mandurah Terrace and are zoned 'Commercial Mixed Use' under the draft Mandurah Strategic Centre – Precinct Structure Plan.

The sites slopes down from the street (north-west) to the rear of the properties (south-east), with the highest level of the property being 5.79m AHD falling to 1.86 AHD at the lowest point.

Legislation and Policy:

Legislation

Planning and Development (Local Planning Schemes) Regulations 2015
Contaminated Sites Act 2003
Environmental Protection (Noise) Regulations 1997
City of Mandurah Local Planning Scheme 12

State Government Policies

State Planning Policy 7.0 – Design of the Built Environment
State Planning Policy 7.3 – Residential Design Codes

Structure Plans/Activity Centre Plans

Mandurah Strategic Centre – Precinct Structure Plan.

Local Policies

Local Planning Policy No 2: Signage

Consultation:

Public Consultation

Public consultation was not undertaken by the City of Mandurah for the proposed gym and shop development. The proposed land uses are permitted for lots 11-13 Mandurah Terrace, while the proposed built form and site layout results in no variations impacting neighbouring properties.

Referrals/consultation with Government/Service Agencies

Department of Water and Environmental Regulation

The application was referred to the Department of Water and Environmental Regulation (DWER) as the sites proposed for development were identified as contaminated and the City received the following feedback:

Lots 11 and 12 have been classified as 'Remediated for Restricted Use' and Lot 13 has been classified as 'Decontaminated' under the *Contaminated Sites Act 2003*.

Based on available information, the site is considered suitable for the proposed commercial development. Therefore, the Department has no objection to the proposed development of Lots 11, 12 and 13 and recommends that the approval should not include a contamination condition.

The feedback provided by DWER has been included in the advice notes of this report.

Department of Planning, Lands and Heritage

The application was referred to the Department of Planning, Lands and Heritage (DPLH) as the sites proposed for development are situated along Mandurah Terrace which is zoned "Other Regional Roads". The City of Mandurah received the following feedback:

There are no objections to the proposed development subject to earthworks and access being completed in a manner compatible with the geometry of the Mandurah Terrace Road carriageway, to the specifications of the local government and satisfaction of the WAPC.

Design Review Panel Advice

During the assessment process, the proposal was taken to the Design Review Panel at the City of South Perth on the 11th June 2024.

Main concerns held by the Design Review Panel included the following:

- The built form setback from the street resulted in the development not engaging with Mandurah Terrace.
- Recommend relocating parking to the rear of the development, in order to provide additional landscaping opportunities between the building and street.
- Landscaping and tree canopy within the car parking area to be reviewed by a landscape architect.

- Additional fenestration to the undercroft and to the rear elevation is required to improve articulation and safety.

In summary:

The Design Review Panels support is contingent on relocating the built form to engage with Mandurah Terrace and sleeving the car parking behind the built form and within the undercroft. This single move has the capacity to unlock the site and address all the primary issues raised in this report. In addition to that, the Proponent is recommended to consider appointing an Environmentally Sustainable Design and Landscape professional to address Principles 2 - Landscape Quality and Principle 5 – Sustainability.

Other Advice

Health Services (City of Mandurah)

The City's Health Services department reviewed the submitted application alongside the Environmental Noise Impact Assessment. The Noise Management Plan supplied in the appendix of the Environmental Noise Impact Assessment report outlined recommendations that are to be implemented to ensure compliance with the *Environmental Protection (Noise) Regulations 1997*.

The Health Services department stipulated that the City was required to liaise with the Department of Water and Environmental Regulation regarding the suitability of the proposal on the sites as they fall within the *Contaminated Sites Act 2003*.

Health Services also provided recommended conditions regarding the Environmental Noise Impact Assessment, Section 173 of the *Health (Miscellaneous Provisions) Act 1911* and the *Health (Aquatic Facilities) Regulations 2007.*

Engineering Services (City of Mandurah)

The proposed application was referred to the Engineering team who provided standard conditions surrounding drainage, waste management and parking to be included. Engineering feedback relating to access, was that the access point was located in the optimal location and there were no concerns regarding traffic impact.

Landscaping (City of Mandurah)

The landscaping team provided guidance and conditions regarding the proposed landscaping plan as detailed within proposed conditions.

Planning Assessment:

Land Use

Land Use:	Permissibility:
Recreation – Private	Permitted
Shop	Permitted

Under Local Planning Scheme No. 12, Recreation – Private and Shop are defined as the following:

"Recreation – Private: means premises that are - used for indoor or outdoor leisure, recreation or sport; and not usually open to the public without charge."

"Shop: means premises other than a bulky goods showroom, a liquor store - large or a liquor store - small used to sell goods by retail, to hire goods, or to provide services of a personal nature, including hairdressing or beauty therapy services."

Built Form and Design

Provision	Requirement	Proposal	Assessment
Mandurah Strategic Centre – Precinct Structure Plan. **Clause 3.2 – Street Setbacks**	• Setbacks in accordance with the R-Codes if not identified on Plan 7. • R100 would require a 2m Primary Street setback.	Setback from the primary street to the building's facade is 1.95m at the closest point. The property has an angled front boundary, the largest setback achieved is 5.5m.	While the development proposes a setback variation of 0.05m which is considered minor in nature. The angled frontage of the property allows for majority of the build to achieve the required 2m. The Precinct Structure Plan seeks street orientated development, the amended building location is considered to address the street appropriately.
Mandurah Strategic Centre – Precinct Structure Plan. **Clause 3.3 – Non-street Setbacks**	• A 15m minimum separation distance, between building elements higher than 21m above ground level, is required. • All other setbacks shall be determined as per the Residential Design Codes: • Boundary wall only permitted on one boundary and shall not exceed 2/3 length. (2 Storey Indicative Building Height is 9m). • Average side setback where building length	The proposed boundary wall is 28.85m long at a height of 10.17m on the southwestern boundary which is less than 2/3 of the property's length. However, the building proposes a 10.17m height in lieu of the specified 9m under the R-Codes. The northeastern 28.85m two storey wall is setback 21.046m from the side boundary and is compliant. The southeastern 38.34m two storey wall is setback 21.8m from the rear boundary and is compliant.	The boundary wall exceeds the 9m / two storey height limit for a total length of 21.78m. This variation affects 38.65% of the lots boundary length and is situated behind the primary street setback line. Due to the north-south lot orientation resulting in minimal overshadowing, and if the adjacent lot were redeveloped it would likely result in similar boundary wall dimensions given the requirement to address the street as well as the secondary street to the west, the impact on the neighbouring lot is minimal. The highest portion of the boundary wall is abutting car parking on the neighbouring property which has little impact on amenity. The applicant is attempting to respond to the natural ground level which has resulted in the boundary wall exceeding

	exceeds 16m is 3.5m.		the height limit due to the lots natural sloping ground. The City is in a position to support the proposed variation.
Mandurah Strategic Centre – Precinct Structure Plan. **Clause 3. 6 – Landscaping**	• A minimum of 10% of the site shall be landscaped. • A minimum of one shade tree per 4 uncovered car parking bays shall be provided. • Landscaped areas should be at least 1 m wide with a minimum area of $2m^2$ to ensure enough space for plants to grow and to be of any landscape value. • All landscaped areas shall be reticulated unless the applicant can provide satisfactory evidence that reticulation is not necessary. A minimum of 75mm of mulch (gravel not permitted) is to be applied to all landscaping beds.	459.13m2 proposed across the whole site. 17 trees shown on landscaping plan. Landscaping areas meet these minimum requirements. Irrigation is noted on landscaping plan.	The proposed landscaping plan for the lots is appropriate and meets the requirements of the Precinct Structure Plan.
Mandurah Strategic Centre – Precinct Structure Plan. **Clause 3.10 – Built Form**	• The street façade shall be designed to promote surveillance of the street and include windows, doors and balconies at upper levels and have their main entrance clearly visible	The development is a modern two storey development with architectural elements that creates a well-designed building for such a prominent area. The proposal incorporates a range of articulation features, a mix of materials such as	The proposed building has been designed to a high standard that addresses the street with a defined and accessible entrance. The street façade is well designed, offering articulation through a large number of windows, different depths of the facade and the upper storey mezzanine over

	and directly accessible from the street. • Quality architecture with articulation, varied colours (coastal), and materials. • Services to be screened from view from the street. • A variety of roof form is encouraged. • Cantilevered veranda/awning for ground floor tenancies.	glass, concrete, timber slates and more. The colours chosen for the development is well chosen to meet the coastal vibes Mandurah offers. The services are to be screened from the street and there is a form of cantilevered awning across the street façade.	some of the car parking acts as a feature element. Most services will be hidden from the primary street, a flat roof is proposed which offers a unique design. Cantilevered coverage is proposed across most of the street façade, covering the entrance point and the second storey floor extends over the footpath down the eastern side of the development which offers down that side.

Car Parking

Provision	Requirement	Proposal	Assessment
Mandurah Strategic Centre – Precinct Structure Plan. **Clause 3.5 – Vehicle Parking and Access** **Local Planning Scheme No. 12** **Schedule 2 – Parking Requirements**	3.5.3 Car Parking Ratios Under the provisions of the structure plan sets out a standard of 3 bays per 100m^2 of retail. Recreation – Private is not stated under the Draft ACP Plan, refer to scheme requirements. 201m^2/100x3=6.03 car bays required. Recreation -Private falls within the Dining and Entertainment parking schedule which is 1 parking bay per 4 patrons. The proposed development will be able to accommodate up to 60 patrons at any one time. 60/4=15 bays minimum would be required.	53 bays are proposed.	53 Parking bays proposed, achieves the required 21 bay requirement. A minimum number of ACROD bays has been included in the conditions, still results in an abundance of parking.

	6 + 15 bays = 21 bays required.		

Signage

Provision	Requirement	Proposal	Assessment
Local Planning Policy No. 2 – Signage	Wall Sign All zones except Residential • Maximum of one wall sign per elevation. • Sign is attached or directly painted on the external wall of the building. • The height of the sign does not exceed 1.2 metres and the length does not exceed two thirds of the length of the frontage of the building or tenancy, whichever is less. • The sign does not protrude past the limits of the façade or fascia of a building or tenancy portion.	The proposed development will have 2 wall signs on the street elevation, and both will be mounted directly to the wall. Illuminated surface mounted logo sign: 4.4m tall and 4.16m wide. Non-illuminated surface mounted brand name sign: 6.52m tall and 1.29m wide.	The proposed signage for the development is considered to be compatible with the proposed land use and is appropriate for a 'Commercial Mixed Use' property. While there are two signs proposed for one elevation and both exceed the accepted heights allowed in the policy, the signage proposed will have little impact on the existing streetscape and is supported for the following reasons: - The signage is static and simple in its nature and as such does not cause undue distraction. - While large, the signage proposed is considered to be appropriate given the scale of the development and reducing signage size is likely to result in it being lost on an expansive wall. - There is no additional signage proposed, and as a result the aggregation of signage for a site of this size and scale is considered acceptable.

Noise

Given the proximity of the gym development to residential property, noise attenuation is considered to be important in preserving residential amenity. The proposal is

required to comply with the Noise Management Plan in Appendix A of the Acoustic Report and Appendix B Determination of Assigned Level. Key recommendations of the Noise Management Plan include but aren't limited to:

- General deliveries and operation permitted during the day between 7am and 7pm Monday to Saturday or 9:00am to 7:00pm Sundays and public holidays.
- Waste collection to occur between 7 am and 7 pm Mon-Saturday, unless the contractor has a Noise Management Plan approved by Council.
- Signage is to be installed in the carpark to remind patrons to keep noise to a minimum at night due to the proximity of neighbouring areas.
- Noise control for building services plant to be reviewed at the detailed design stage, after the selection of final mechanical plant, to ensure compliance with the acoustic requirements in this report.
- Music at 80 dB to be limited to between 7am and 10pm – Monday to Saturday, 9am to 10pm on Sunday and public holidays.

Conclusion:

The proposal is considered to be acceptable from a land use perspective for the subject site, which is classified as 'Commercial Mixed Use'. The design is sympathetic to residential land uses surrounding the property. The development is well thought out with street-oriented features, a modern design and a large focus on accessibility. The applicant has responded to the City's initial site layout concerns and has presented amended plans which address the street, screen car parking to the rear and provide greater landscaping opportunities within the street setback area. Overall, the City of Mandurah is satisfied with the proposal and design outcomes for the development.

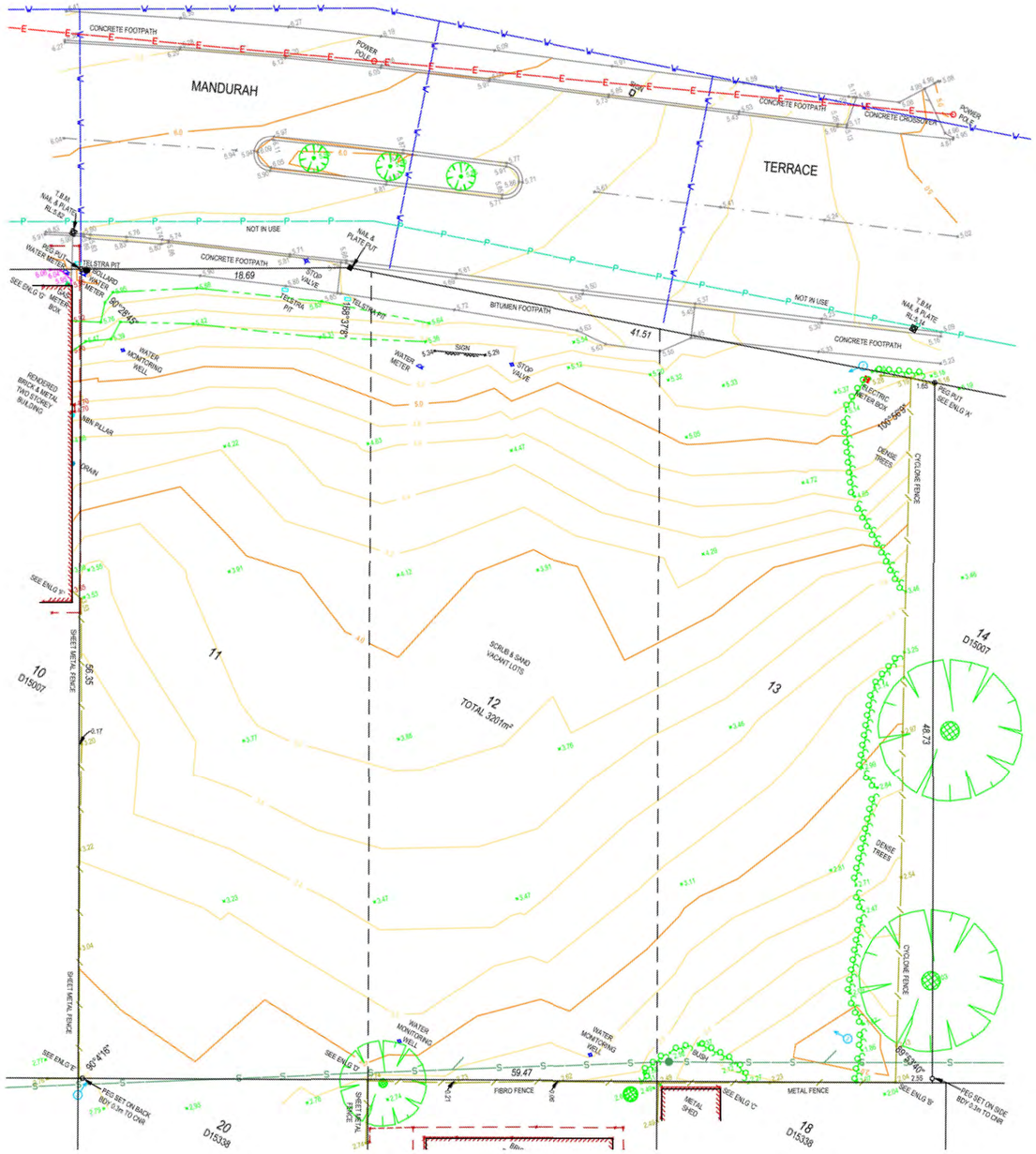
RYDERWEAR GYM MANDURAH

117 - 121 MANDURAH TERRACE, MANDURAH WA 6210

DEVELOPMENT APPROVAL DRAWINGS



Document Set ID: 6493352
Version: 1, Version Date: 30/07/2024



LEGEND

- Centre of Road
- Kerb
- Edge of Driveway/Concrete
- Edge of Bitumen
- Major Contour (1m)
- Minor Contour (0.2m)
- Building
- Awning/Eaveline/Gutter
- Wall
- Fence Line
- Line of Levels
- Tree Canopy Line/Bush Line
- Sewer Main (from Water Corp data)
- Sewer Pressure Main (from Water Corp data)
- Water Main (from Water Corp data)
- Overhead Power
- Significant Tree
- Bollard
- Spot Height
- Photo Position & Direction

NOTES:

1. THE INFORMATION SHOWN ON THIS DRAWING IS FOR FEATURE SURVEY PURPOSES ONLY AND WAS CORRECT AT DATE OF SURVEY.
2. FOR BOUNDARY INFORMATION, EASEMENTS AND OTHER INTERESTS / ENCUMBRANCES REFER TO CERTIFICATE OF TITLES AND PLAN / DIAGRAM.
3. SEWER / DRAINAGE LOCATION MAY VARY FROM SCHEMATIC PRESENTATION. CLEARANCES TO BE CHECKED ON SITE.
4. SERVICES INFORMATION TO BE CONFIRMED WITH RELEVANT AUTHORITIES. FOR UNDERGROUND SERVICES CONTACT "DIAL BEFORE YOU DIG" FOR CONFIRMATION OF THOSE SERVICES.
5. AHD CONNECTION DETERMINED FROM CONNECTIONS MADE TO SSM MANDURAH NW 4A RM10.
6. SOME LEVELS ARE FROZEN FOR CLARITY.

SURVEYOR'S RESURVEY CERTIFICATE (Reg 25A)

I, P. Incerti, Licensed Surveyor, certify that on the 3rd day of November 2023, I re-established the boundaries of Lots 11-13 on Dia 15007 as shown on the attached plan and that the survey was performed in accordance with all relevant written laws.

Paul Incerti
2023.11.08 15:53:27 +08'00'

Licensed Surveyor

5 0 5 10 15 20

SCALE: 1:200 @ A1
ALL DISTANCES ARE IN METRES

SURVEYOR:	VH/PI		
SURVEY DATE:	23/10/2023, 3/11/2023		
FILE:	224098A.see		
HOR. DATUM:	LOCAL		
VERT. DATUM:	AHD71		
DRAWN:	BC	CHECKED:	PI/SM

JUROVICH SURVEYING
ABN 60 146 230 944
3/47 MONASH AVE COMO, WA 6152
PO BOX 3066 SHELLEY, WA 6148
1300 57 00 00
info@jurovichsurveying.com.au
www.jurovichsurveying.com.au

RE-ESTABLISHMENT AND FEATURE & LEVEL SURVEY
LOTS 11, 12, 13 ON D 15007
C/T 1129-732, 1128-435 & 1928-954
117, 119, 121 MANDURAH TERRACE, MANDURAH
CITY OF MANDURAH

CLIENT: BELLA BUILD & DESIGN

A1 SCALE: 1 : 200	JS JOB No: 24098	DWG Name: 24098-01	REV: A

EXISTING FEATURE SURVEY

DA01

PROPOSED GYM
117 - 121 MANDURAH TERRACE, MANDURAH, WA 6210
REVISION H PROJECT NO. 94.23 DATE 26.07.2024

Hodge Collard Preston ARCHITECTS

Document Set ID: 6493352
Version: 1, Version Date: 30/07/2024



1 - LOCATION PLAN
1 : 500

N

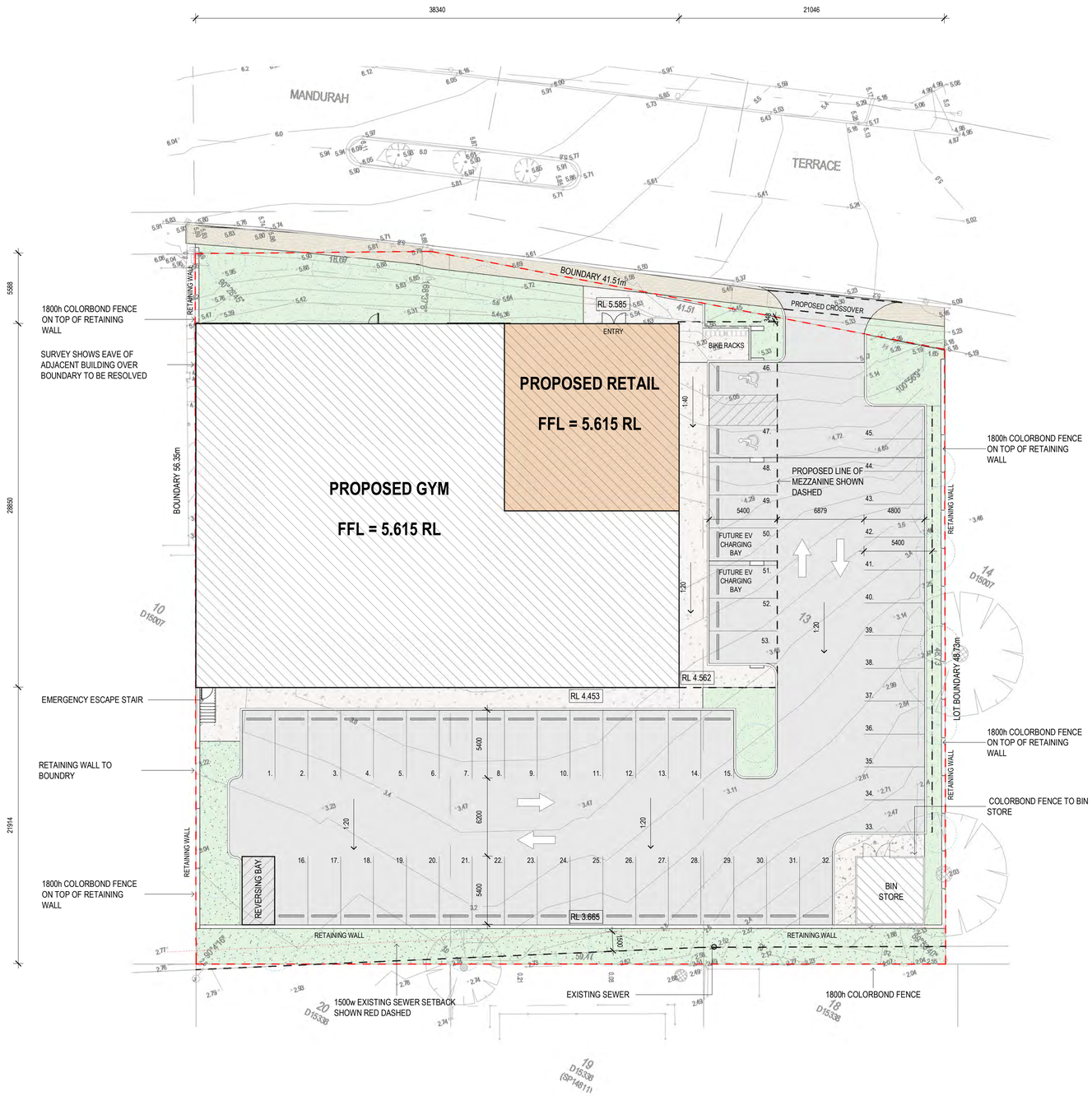
LOCATION PLAN

DA02

PROPOSED GYM
117 - 121 MANDURAH TERRACE, MANDURAH, WA 6210
REVISION H PROJECT NO. 94.23 DATE 26.07.2024

Hodge Collard Preston
ARCHITECTS

Document Set ID: 6493352
Version: 1, Version Date: 30/07/2024



1 - PROPOSED SITE PLAN
1 : 200

AREA SUMMARY	
TOTAL LOT AREA AS PER FEATURE SURVEY	= 3201m^2
TOTAL MEZZANINE	= 758m^2
TOTAL BUILDING FOOTPRINT	= 1106m^2
TOTAL BUILDING AREA (INCLUSIVE OF MEZZANINE)	= 1864m^2

GBA - MEASURED TO OUTSIDE FACE OF EXTERNAL WALS

TOTAL BIKE RACKS - 10

TOTAL CAR BAYS - 53

NOTES:
NEIGHBOURS EAVE ON WEST BOUNDRY OVERHANG TO BE REVIEWD
LEVELS TO BE CONFIRMED

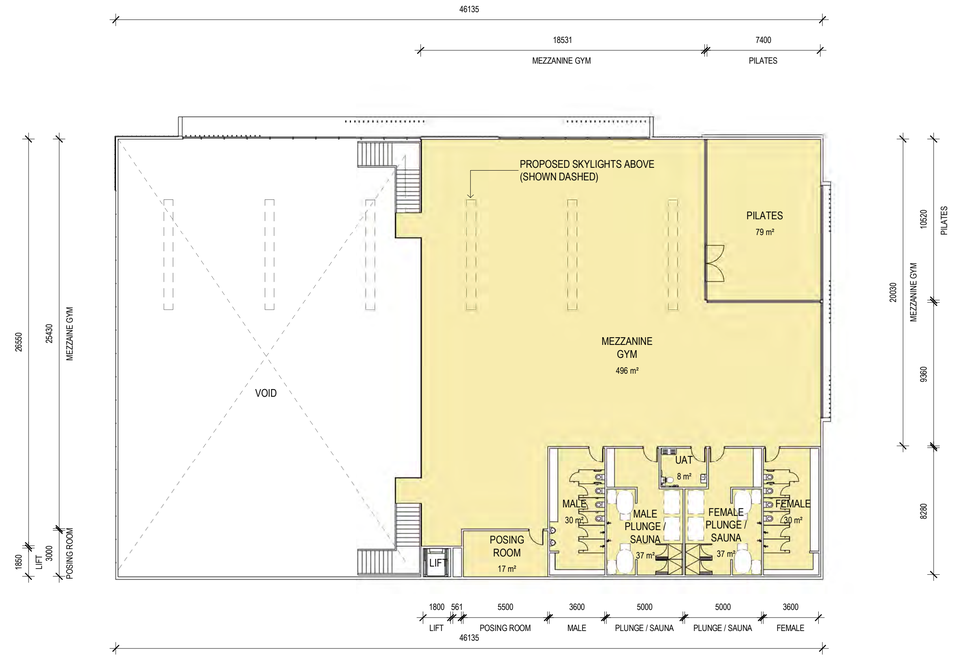
Document Set ID: 6493352
Version: 1, Version Date: 30/07/2024

AREA SUMMARY	
TOTAL LOT AREA AS PER FEATURE SURVEY	= 3201m²
TOTAL MEZZANINE	= 758m²
TOTAL BUILDING FOOTPRINT	= 1106m²
TOTAL BUILDING AREA (INCLUSIVE OF MEZZANINE)	= 1864m²

NOTES:
NEIGHBOURS EAVE ON WEST BOUNDRY OVERHANG TO BE REVIEWD
LEVELS TO BE CONFIRMED

GBA - MEASURED TO OUTSIDE FACE OF EXTERNAL WALS





INTERNAL AREAS MEASURED TO INTERNAL FACE

1 / - PROPOSED GROUND FLOOR PLAN
1 : 200

2 / - PROPOSED MEZZANINE FLOOR PLAN
1 : 200

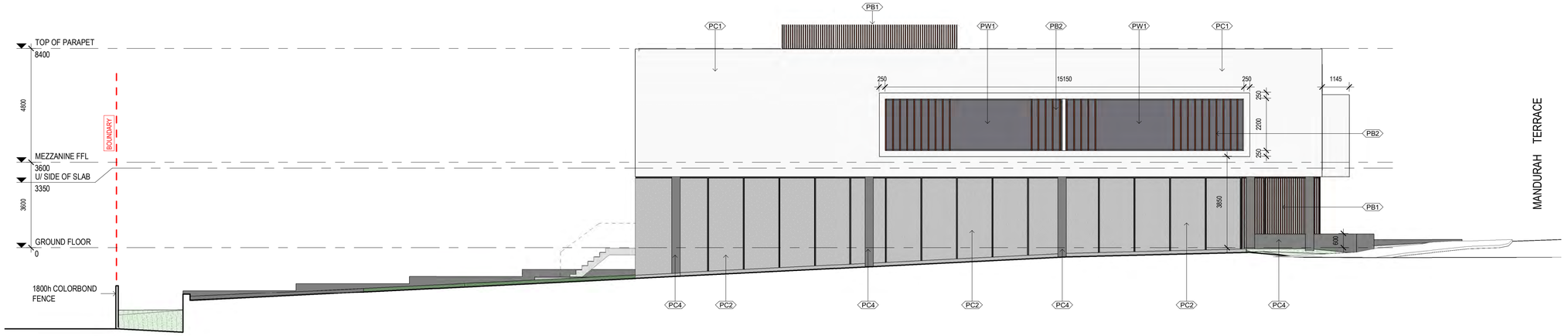
FLOORPLANS

DA04

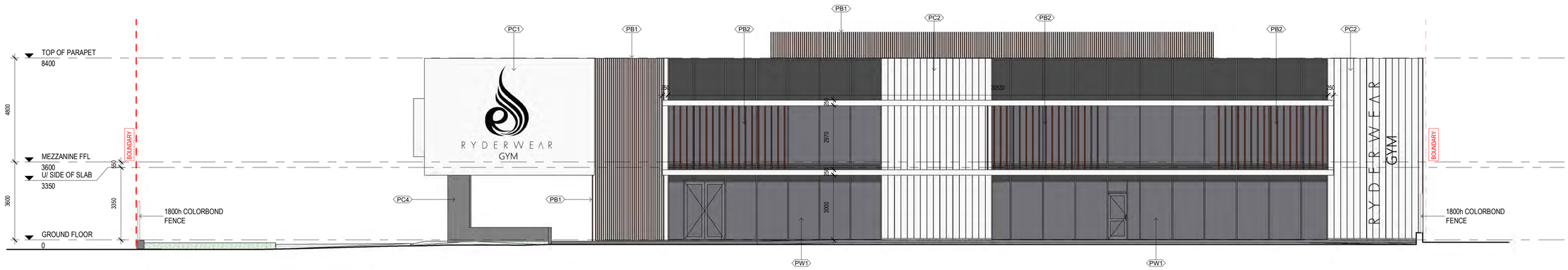
PROPOSED GYM
117 - 121 MANDURAH TERRACE, MANDURAH, WA 6210
REVISION Q PROJECT NO. 94.23 DATE 26.07.2024

Hodge Collard Preston ARCHITECTS

Document Set ID: 6493352
Version: 1, Version Date: 30/07/2024



1 - EAST ELEVATION
1 : 100



2 - NORTH ELEVATION
1 : 100

MATERIALITY LEGEND

PC1 PC4 PW1
PC2 PC5 PB1
PC3 PB2

PC1	CAST ON SITE CONCRETE PANEL WHITE PAINT FINISH
PC2	CAST ON SITE CONCRETE PANEL W/- VERTICAL METAL CLADDING
PC3	CAST ON SITE CONCRETE PANEL W/- FEATURE JOINS GREY PAINT FINISH
PC4	CAST ON SITE CONCRETE PANEL DARK GREY PAINT FINISH
PC5	CAST ON SITE CONCRETE PANEL LIGHT GREY PAINT FINISH
PB1	CAST ON SITE CONCRETE PANEL W/- 30 X 30 FEATURE BATTENS
PB2	FEATURE LOUVERS TO AWNINGS W/- 300 X 100 FEATURE BATTENS
PW1	BLACK POWDERCOATED ALUMINIUM FRAMES WITH RYDERWEAR GRAY TONED GLASS AND SPANDREL

NOTES:
SIGNAGE TO BE CONFIRMED AND TO COMPLY WITH THE CITY'S REQUIREMENTS

RYDERWEAR GYM

NON-ILLUMINATED SURFACE MOUNTED LETTERING SIGNAGE - REFER TO ELEVATIONS FOR LOCATION AND NOM. SIZING

RYDERWEAR GYM

ILLUMINATED SURFACE MOUNTED PROFILE CUT LOGO SIGNAGE - REFER TO ELEVATIONS FOR LOCATION AND NOM. SIZING

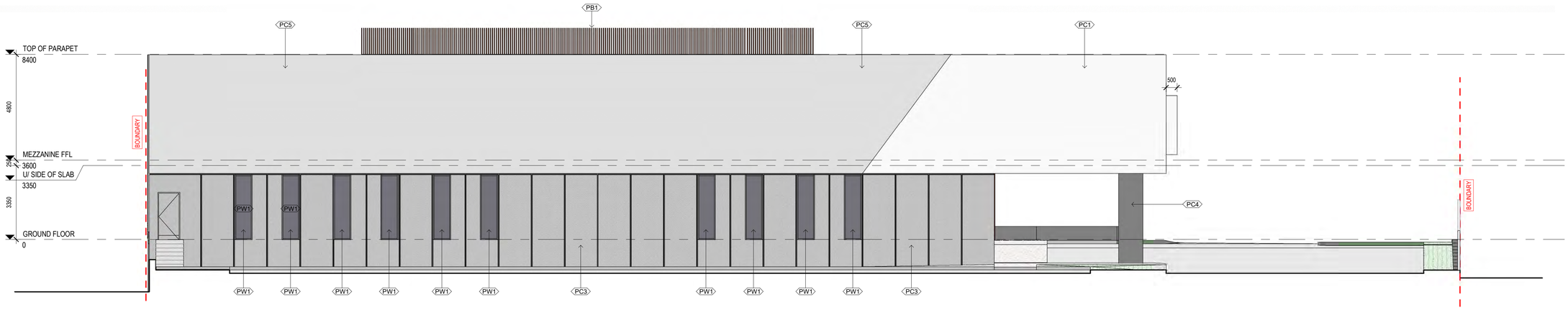
ELEVATIONS

DA05

PROPOSED GYM
117 - 121 MANDURAH TERRACE, MANDURAH, WA 6210
REVISION K PROJECT NO. 94.23 DATE 26.07.2024

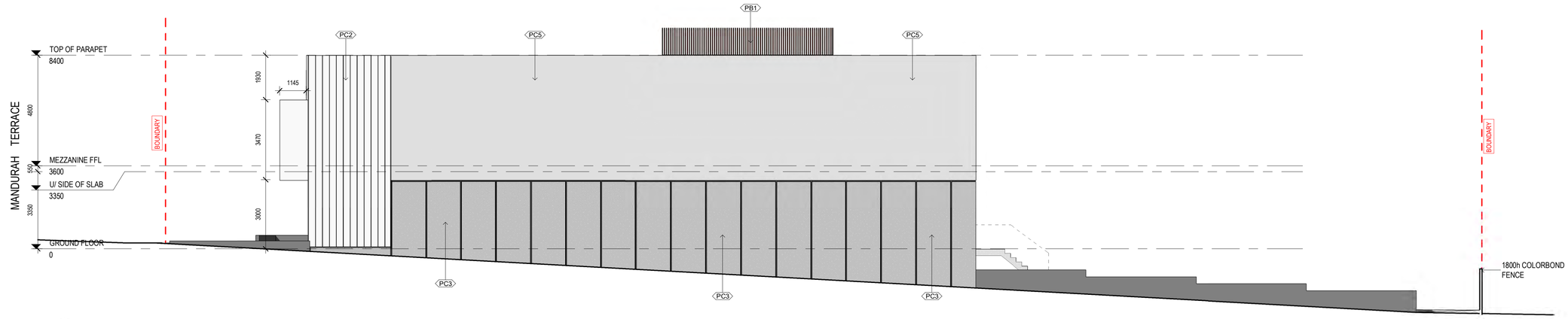
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Document Set ID: 6493352
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1 - SOUTH ELEVATION

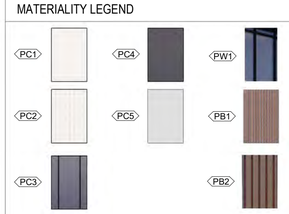
1 : 100



3 - WEST ELEVATI0N

1 : 100

MATERIALITY LEGEND



PC1	CAST ON SITE CONCRETE PANEL WHITE PAINT FINISH
PC2	CAST ON SITE CONCRETE PANEL W/- VERTICAL METAL CLADDING
PC3	CAST ON SITE CONCRETE PANEL W/- FEATURE JOINS GREY PAINT FINISH
PC4	CAST ON SITE CONCRETE PANEL DARK GREY PAINT FINISH
PC5	CAST ON SITE CONCRETE PANEL LIGHT GREY PAINT FINISH
PB1	CAST ON SITE CONCRETE PANEL W/- 30 X 30 FEATURE BATTENS
PB2	FEATURE LOUVERS TO AWNINGS W/- 300 X 100 FEATURE BATTENS
PW1	BLACK POWDERCOATED ALUMINIUM FRAMES WITH RYDERWEAR GRAY TONED GLASS AND SPANDREL

NOTES:
SIGNAGE TO BE CONFIRMED AND TO COMPLY WITH THE CITY'S REQUIREMENTS

RYDERWEAR GYM

NON-ILLUMINATED SURFACE MOUNTED LETTERING SIGNAGE - REFER TO ELEVATIONS FOR LOCATION AND NOM. SIZING

RYDERWEAR GYM

ILLUMINATED SURFACE MOUNTED PROFILE CUT LOGO SIGNAGE - REFER TO ELEVATIONS FOR LOCATION AND NOM. SIZING

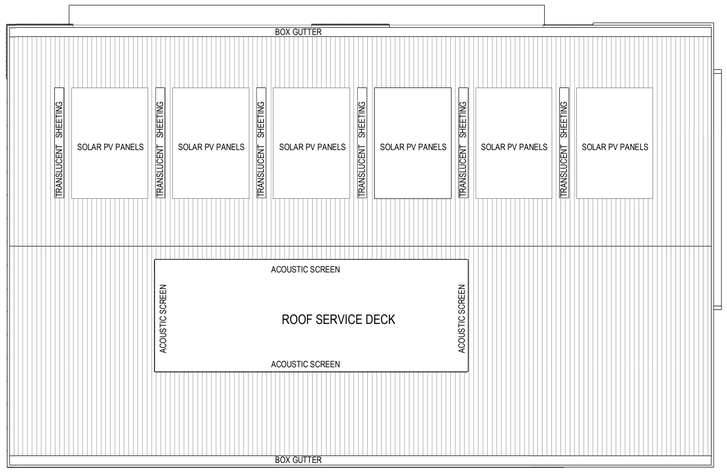
ELEVATIONS

DA06

PROPOSED GYM
117 - 121 MANDURAH TERRACE, MANDURAH, WA 6210
REVISION K PROJECT NO. 94.23 DATE 26.07.2024

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1 / - DA ROOF PLAN
1 : 200

PROPOSED ROOF PLAN

DA07

PROPOSED GYM
117 - 121 MANDURAH TERRACE, MANDURAH, WA 6210
REVISION A PROJECT NO. 94.23 DATE 26.07.2024

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Version: 1, Version Date: 30/07/2024

REVERBERATE
CONSULTING

Proposed Ryderwear Gymnasium
117 - 121 Mandurah Terrace, Mandurah
Environmental Noise Impact

Reference: P191287RP1

Document Set ID: 5250507
Version: 1, Version Date: 16/02/2024

REVERBERATE CONSULTING

Document Information

Project	Proposed Ryderwear Gymnasium - 117 - 121 Mandurah Terrace, Mandurah	
Client	Bella Build and Design WA	
Report title	Environmental Noise Impact	
Project Number	P191287	
Author	Martti Warpenius Director p+61 8 9468 7888 m+61 414 394 220 martti@reverberate.consulting	

Revision Table

Report revision	Date	Comments
0	9 February 2024	Draft for client review

Document Set ID: 5250507
Version: 1, Version Date: 16/02/2024

Glossary

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

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REVERBERATE CONSULTING

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1. Introduction

Reverberate Consulting has been engaged by Bella Build and Design WA to prepare a planning stage environmental noise impact assessment for the proposed Ryderwear Gymnasium development at 117 - 121 Mandurah Terrace, Mandurah, WA 6210.

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

- car park and customer vehicle activity
- Activity within the Gymnasium
- mechanical plant and equipment at the site

The purpose of this report is to present the findings of potential noise emissions from the site.

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2. Site and Surrounds

The proposed gymnasium is located on a parcel of land at 117 - 121 Mandurah Terrace, Mandurah. Refer to the Site Plan Figure 1, and the floorplan in Appendix C. The site is bounded on the immediate east and west by current/future commercial premises. The nearest and potentially most-affected noise sensitive residential premises are located to the south of the site, on Hall St. Other residential/hotel/motel accommodation is located the north side of Mandurah Tce, and on the east side of Stewart St.

The activities at the site are proposed to operate 24/7, with deliveries and rubbish removal between 7am and 7pm Monday to Saturday.

The dominant noisy activity for the Gymnasium is caused by

- car movements in the carpark
- music inside the gym
- mechanical services plant on the roof of the gymnasium

Mandurah Tce and Sutton St have both been measured by the DMR for traffic flow. Respectively they were measured to have 14,019 (2022-2023) and 7,308 (2023) vehicles per day. On this basis both roads are classified as *secondary roads* in accordance with the requirements of the Environmental Protection (Noise) Regulations 1997.

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Figure 1 – Site Plan with nearest neighbours

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3. Noise Assessment Criteria

3.1 Environmental Protection Act

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

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

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

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

Other types of noises from the site, such as that generated by vehicles driving, or manoeuvring in the gym carpark, have not been assessed under the Regulation. Reference is drawn to Section 3 (3) (b) of the Act which requires the assessment to have regard to the nature, duration, and time of day of such noise emissions and the frequency of similar noise emissions from the same source. It is noted that the adjoining road, Mandurah Tce, already has close to 15,000 vehicles daily. The movement of vehicles on site, per se, is therefore not considered characteristically different to that already in the area.

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3.2 Environmental Protection (Noise) Regulations 1997

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

The Assigned Levels have been calculated for all properties using the method shown in Appendix B. The resultant Assigned Levels are presented for a representative premises below in Table 1.

Due to the proposed hours of operation, the night-time period is the critical assessment period with the most stringent noise criteria to meet.

Table 1 – Assigned Levels - 24 Hall St

Receiving Premises	Time of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise Sensitive Premises - Highly Sensitive	0700 to 1900 hours Monday to Saturday	50	60	70
	0900 to 1900 hours Sunday and public holidays	45	55	70
	1900 to 2200 hours all days	45	55	60
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays	40	50	60

The Assigned Levels in Table 1 apply to residential/hotel receivers within 100m of the Sutton St road reserve. Dwellings further from Sutton St, i.e. at 26-30 Hall St, 118-120 Mandurah Tce, and along Stewart St have Assigned Levels 2 dB lower than those published above. These Assigned Level criteria have been applied against the environmental noise emission from the sources outlined in Table 2 below.

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4.Noise Assessment

4.1 Noise Sources

Noise emission sources, buildings and ground contours were used to develop a 3-D SoundPLAN noise model as shown below in Figure 2. This figure has general site details including site buildings and surrounding buildings, boundary fences, and the locations of modelled noise sources at the gymnasium site.

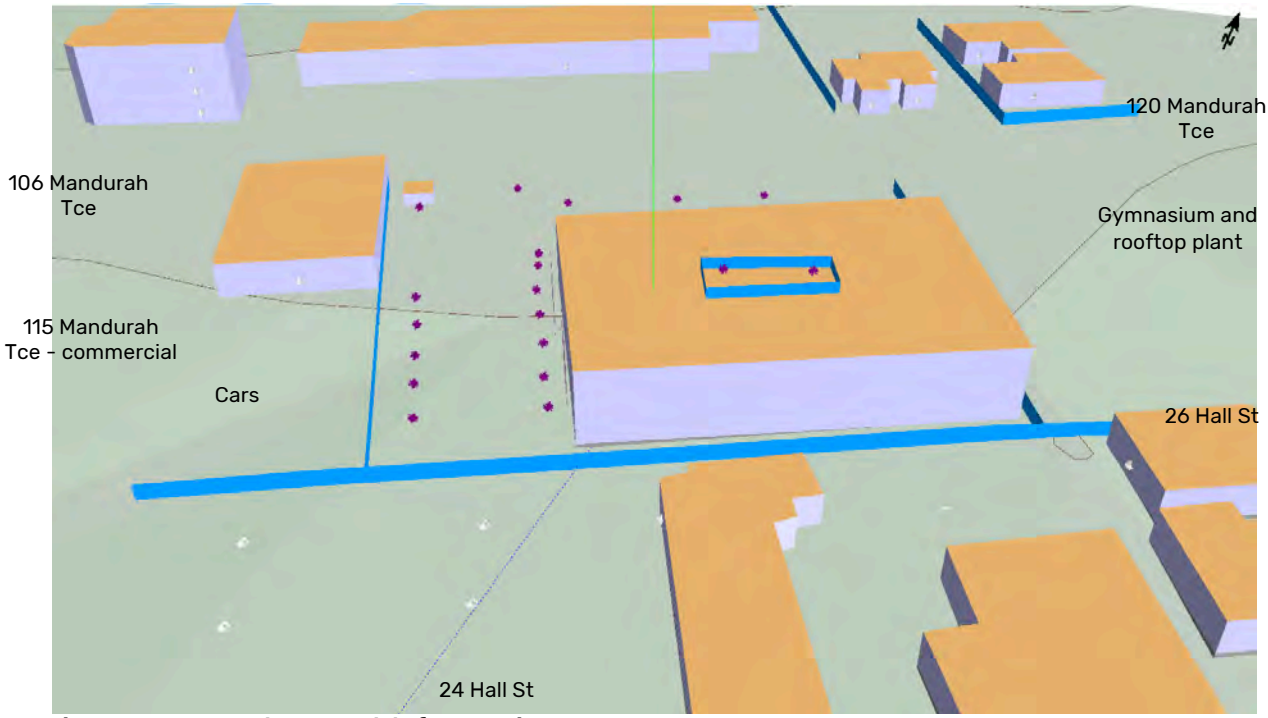


Figure 2 – 3-D SoundPLAN model of Gymnasium

The noise emission levels for the project noise sources are summarised below in Table 2.

Table 2 Summary of Sound Power Levels

Summary of Sound Power Levels (dB)			
Noise Source	**L_{A10}**	**L_{A1}**	**L_{Amax}**
Passenger car: door close	-	-	84
Roof top Air conditioning	87/82[1]	-	-
3 Exhaust fans (total)	71	-	-
Music inside	80	85	90

[1] Note – maximum day/night noise levels from each of two units

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4.2 Noise Forecast and Impact

Computer noise modelling was used to forecast the noise impacts to locations around the site. The software used was SoundPLAN Version 8.2, with the ISO9613 algorithms selected. These algorithms have been used as they allow for the influence of wind, atmospheric stability, barriers, building shielding and ground absorption. It is appropriate for the current configuration of noise sources and for the nearest receiver locations.

The Input data used in modelling includes

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

The following parameters were used in modelling as needed for night-time operations i.e. between 10pm and 7am.

- Pasquil Stability Factor F
- Temperature 15 ^{O}C
- Wind Speed 3 m/s
- Wind Direction Worst case – i.e. all directions
- Relative Humidity 50%
- Ground Absorption 0.65 in grassed areas
- 0.10 for paved areas such as roads and carparks

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

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

The forecast noise levels at sensitive receivers are summarised in Table 3 to Table 5 below. These forecasts are based on the maximum Sound Power Levels in Table 2 and the successful implementation of the Noise Management Plan in Appendix A.

The forecast noise levels at sensitive receivers are also shown in the noise contour plots in Figure 3 through to Figure 5

Table 3 shows that the roof top air-conditioning units emit night-time noise received at 118 Mandurah Tce at levels equal to the Assigned Level criterion. Mechanical services noise forecasts at other residences, at all times of day are a minimum of 1 dB below the corresponding criterion.

The forecast noise from cars in the carpark in Table 4 is shown to be a minimum of 2 dB below the night-time criterion at 118 Mandurah Tce. This forecast is considered an unrealistically stringent assessment as it is highly likely that night-time vehicular activity will concentrate on the parking spaces near the front door. Nevertheless, the analysis has shown that activity in all parking bays complies with the night-time assigned level criteria.

The forecast noise at other residences, from all activities, is lower again compared to their respective Assigned Level criteria.

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Table 3 Forecast Night-time $L_{A10,adj}$ noise emission (dB)

	Receiver										
	20 Hall	22 Hall	24 Hall	26 Hall	28 Hall	106 Mandurah	114 Mandurah	118 Mandurah	120 Mandurah	18 Stewart	20 Stewart
Noise Source	Grnd Fl	Grnd Fl	Grnd Fl	Grnd Fl	Grnd Fl	2nd fl	Grnd Fl	Grnd Fl	Grnd Fl	Grnd Fl	Grnd Fl
AC Package A*	29	29	32	32	27	35	35	34	33	29	28
AC Package B*	27	28	32	33	30	34	34	34	32	32	31
Exhaust Fans*	26	27	30	33	34	28	28	29	29	30	30
Overall*	**32**	**33**	**36**	**37**	**36**	**38**	**38**	**38**	**36**	**35**	**35**
Assigned Level	40	40	40	38	38	40	40	38	38	38	38
Compliance	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Note * Tonality adjustment applied

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Table 4 Forecast Night-time $L_{Amax,}$adj noise emission (dB)

	Receiver										
	20 Hall	22 Hall	24 Hall	26 Hall	28 Hall	106 Mandurah	114 Mandurah	118 Mandurah	120 Mandurah	18 Stewart	20 Stewart
Noise Source	Grnd Fl	Grnd Fl	Grnd Fl	Grnd Fl	Grnd Fl	2nd fl	Grnd Fl	Grnd Fl	Grnd Fl	Grnd Fl	Grnd Fl
Car door 01	25	24	30	28	36	49	53	56	42	39	38
Car door 02	25	23	27	25	29	48	52	55	44	39	29
Car door 05	25	25	28	25	26	49	52	54	46	40	21
Car door 08	25	30	28	25	29	49	52	53	46	40	34
Car door 11	27	30	30	28	36	49	52	56	45	39	38
Car door 13	28	30	30	28	30	46	53	55	45	40	29
Car door 14	27	25	27	28	27	48	53	55	46	40	38
Car door 18	27	30	27	28	32	48	54	54	45	40	38
Car door 23	35	38	27	27	26	50	54	53	44	39	27
Car door 24	35	38	27	25	25	51	54	53	44	39	37
Car door 27	40	43	28	26	25	39	52	56	46	40	39
Car door 35	42	42	33	26	29	37	50	55	43	40	39
Car door 37	42	43	39	25	24	37	49	53	42	39	35
Car door 39	43	44	44	29	26	40	48	52	40	39	38
Car door 41	43	46	47	32	25	43	47	51	39	40	30
Car door 43	44	48	51	37	24	45	47	49	39	20	21
Car door 44	41	44	48	25	24	45	50	52	44	38	28
Car door 45	42	44	49	25	24	44	50	51	44	27	29
Car door 47	44	46	50	32	34	46	50	44	36	20	27

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Car door 49	45	49	50	35	41	45	50	42	33	20	24
Car door 51	44	45	35	25	24	45	50	52	41	24	27
Car door 53	45	47	36	27	25	44	49	50	41	22	26
Car door 55	46	48	37	27	27	44	49	44	33	20	26
Assigned Level	60	60	60	58	58	60	60	58	58	58	58
Compliance	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Note Impulsive adjustment applied to all forecasts

Table 5 Forecast Sunday LA10,adj noise emission (dB)

	Receiver										
	20 Hall	22 Hall	24 Hall	26 Hall	28 Hall	106 Mandurah	114 Mandurah	118 Mandurah	120 Mandurah	18 Stewart	20 Stewart
Noise Source	Grnd Fl	Grnd Fl	Grnd Fl	Grnd Fl	Grnd Fl	2nd fl	Grnd Fl	Grnd Fl	Grnd Fl	Grnd Fl	Grnd Fl
Music Noise***	31	35	26	17	18	35	37	39	31	23	18
AC Package A*	35	34	37	37	34	40	40	39	38	34	34
AC Package B*	32	33	37	38	36	39	39	39	38	37	37
Exhaust Fans*	26	27	31	33	34	28	28	29	29	30	30
Overall*	37	37	40	41	39	43	42	42	42	39	39
Assigned Level	45	45	45	43	43	45	45	43	43	43	43
Compliance	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Note * Tonality adjustment applied

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Figure 3 – Forecast L_{A10} night-time noise contours at 1.5m above ground level
(Assigned Level 38/40 dB)

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Figure 4 – Forecast L_{Amax} night-time noise contours at 1.5m above ground level
(Assigned Level 58/60 dB)

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Figure 5 – Forecast L_{A10} Daytime noise contours at 1.5m above ground level
(Assigned Level 43/45 dB on Sundays, 48/50 dB on Mon- Sat)

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5. Conclusions

An assessment of environmental noise emission from the proposed Gymnasium has been undertaken.

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

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

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Appendix A: Noise Management Plan

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

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Noise Source or Activity	Requirement
General Deliveries	• General Deliveries and operation permitted during the day between 7am and 7pm Mon - Sat • Reversing of trucks to be minimised to avoid the unnecessary activation of the reversing beeper.
Refuse Collection	• Refuse collection is to be carried out in the quietest reasonable and practicable manner; • Equipment used for refuse collection is the quietest reasonably available • Collection to occur between 7 am and 7 pm Mon-Saturday, unless the contractor has a Noise Management Plan approved by Council.
Grilles, Storm water grates & other metal covers in carpark	• To be installed so as to be tight fitting. Where this cannot be achieved, hard rubber or other durable materials are to be used for cushioning such grates/covers
Signage	• To be installed in the carpark to remind patrons to keep noise to a minimum at night due to the proximity of neighbouring areas
Outdoor Building Services plant	• Rooftop plant to have noise levels which do not exceed the night-time emissions outlined in Table 2 above. • Daytime and evening emissions from air conditioning compressors can be up to 5 dB louder • Noise control for building services plant to be reviewed at the detailed design stage, after the selection of final mechanical plant, to ensure compliance with the acoustic requirements in this report
Internal Gymnasium activity	• Music within the Gym to be limited to 'background' only, with the L_{A10} noise level not exceeding 80 dB • Music at 80 dB to be limited to between 7am and 10pm – Monday to Saturday, 9am to 10pm on Sunday and public holidays • All openable windows to have acoustic seals. All openable and fixed windows to use minimum 6mm glass with a minimum rating of Rw 29. Windows and doors to be kept closed during internal activities. • Access doors to have acoustic seals. Entire assembly to be rated Rw 29 • Rubber matting to be used under all sources weights likely to fall, or be subject to impact or vibration
Overall	• Noise Emission from all sources not to exceed the levels in Table 2 of this report, for the treatments outlined in this Section to be sufficient

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Appendix B: Determination of Assigned Level

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

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

The baseline assigned levels from the Regulations are shown below in Table 6.

Table 6 – Baseline Assigned Levels

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

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

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

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

Example Influencing Factor calculations are shown below. These factors have been added to the baseline Assigned Levels to produce the Assigned Levels in Section 3.2 in the body of this report.

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Property = #24 Hall St

Type of Land	450m Radius	100m radius	Total	
Industrial Land	0.0%	0.0%	0.0	dB
Commercial Land	2.5%	22.1%	1.23	dB
Transportation Factor			4	dB
TOTAL Influencing Factor			**5**	**dB**

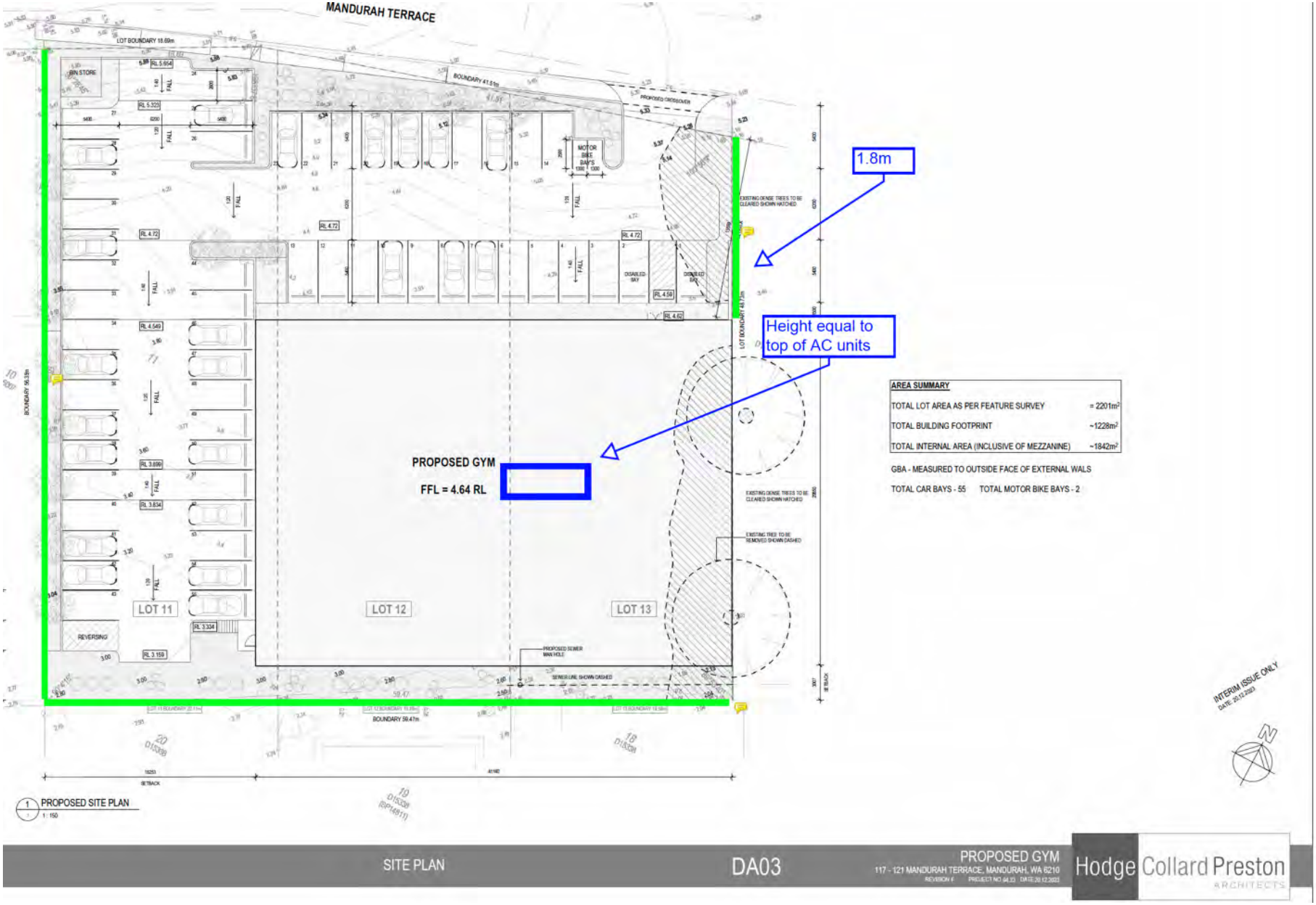
Property = #26 Hall St

Type of Land	450m Radius	100m radius	Total	
Industrial Land	0.0%	0.0%	0.0	dB
Commercial Land	2.5%	22.1%	1.23	dB
Transportation Factor			2	dB
TOTAL Influencing Factor			**3**	**dB**

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Appendix C: Gymnasium Floor Plan & Barriers

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Engineering a better future for over 20 years!

Proposed Gym Development

117-121 Mandurah Terrace, Mandurah

Transport Impact Statement

PREPARED FOR:
Bella Build & Design

December 2023

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1 Introduction

This Transport Impact Statement (TIS) has been prepared by Transcore on behalf of Bella Build & Design with regard to the proposed gym development at 117-121 Mandurah Terrace, Mandurah in the City of Mandurah.

The subject site is located to the south of Mandurah Terrace and is currently vacant land. The subject site is proposed to be developed into a gym with associated carpark. The subject site is bounded by Mandurah Terrace to the north, existing residential developments to the south, existing commercial development to the west, and vacant land to the east as shown in **Figure 1**.



Figure 1: Location of the subject site

The Transport Impact Assessment Guidelines (WAPC, Vol 4 – Individual Developments, August 2016) states: "A Transport Impact Statement is required for those developments that would be likely to generate moderate volumes of traffic[1] and therefore would have a moderate overall impact on the surrounding land uses and transport networks".

[1] *Between 10 and 100 vehicular trips per hour*

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Section 6.1 of Transcore's report provides details of the estimated trip generation for the proposed development. Accordingly, as the total peak hour vehicular trips are estimated to be less than 100 trips, a Transport Impact Statement is deemed appropriate for this development.

Key issues that will be addressed in this report include the proposed development traffic generation, distribution of the traffic associated with the proposed development, circulation and access/egress movement patterns, parking layout and parking demand and supply.

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2 Development Proposal

As part of the development proposal, the subject site will be developed into a gym facility. The breakdown of floor space for each component of the proposed development is detailed in **Table 1**.

Table 1: Proposed Development Floor Area

Type	Area (m^2)
Gym Ground Floor	1,228
Mezzanine	614
Total Internal Area (incl. of Mezzanine)	**1,842**

As part of the development proposal, a full-movement crossover on Mandurah Terrace is proposed to serve the proposed gym facility. The access arrangements of the proposed development are further detailed in **Section 3.1** of this report.

The development entails 55 parking bays to address the parking demand of the proposed gym facility as detailed in **Section 3.2** of this report.

Refer to **Appendix A** for the plan of the proposed development.

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3 Vehicle Access and Parking

3.1 Access

The subject site currently doesn't entail any crossover. The proposed development will be served by a full-movement crossover on Mandurah Terrace which will provide direct access to the carpark. The location of the crossover is shown in **Figure 2**.



Figure 2: Subject site with proposed crossover location

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3.2 Parking

Based on the City of Mandurah's Town Planning Policy, the parking provision applicable to the proposed development is:

- Health Studio: 1 bay per 35m^2 of GFA.

The GFA of the proposed gym (inclusive of Mezzanine) is approximately 1,842m^2. According to the City's policy, the proposed gym facility requires a parking provision of 53 bays.

The proposed development provides a total of 55 bays (inclusive of two ACROD bays) which complies with and exceeds the parking requirements specified in the City's town planning scheme. Additionally, two motorbike parking bays are also provided at the site.

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4 Provision for Service Vehicles

A bin storage area is located at the northwest corner of the carpark as shown in the development plan in **Appendix A**.

Waste collection and deliveries will take place within the site. A private contractor will collect waste using an 8.8m service vehicle. The waste collection truck will enter the site via the proposed full-movement crossover on Mandurah Terrace in forward gear, park in a suitable position adjacent to the bin store for rubbish collection and then, make a 3-point turn within the car park and exit the site via the same crossover in forward gear.

It is proposed that servicing occurs outside of the peak operating period of the proposed gym facility. It is expected that the development will generate a small volume of additional service vehicle traffic primarily associated with the deliveries. It is recommended that smaller vehicles such as vans or trucks up to a size of 8.8m should be used for deliveries.

Turn path analysis undertaken for an 8.8m service vehicle and included in **Appendix B** shows satisfactory access, egress, and circulation within the site.

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5 Hours of Operation

The proposed development is a gym facility and as such the hours of operation will be consistent with other similar developments which operate 24 x 7, Monday to Sunday.

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6 Daily Traffic Volumes and Vehicle Types

6.1 Proposed Development Trip Generation

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

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

- Weekday daily: (10x(1.40+3.92)/2)vpd per 1000sqft GFA/0.929 = 28.63vpd/ 100m^2 GFA;
- Weekday AM peak hour: 1.40vph per 1000sqft GFA/ 0.929 = 1.51vph/ 100m^2 GFA; and,
- Weekday PM peak hour: 3.92vph per 1000sqft GFA/ 0.929 = 4.22vph/ 100m^2 GFA.

Accordingly, it is estimated that the traffic generations for the proposed gym development with an overall GFA of 1,842m^2 are:

- Weekday daily: [28.63 x 1,842/100 (GFA)] = 528vpd; and,
- Weekday AM peak hour: [1.51 x 1,842/100 (GFA)] = 28vph; and,
- Weekday PM peak hour: [4.22 x 1,842/100 (GFA)] = 78vph.

Thus, it is estimated that the proposed development would generate a total of approximately **528** daily vehicle trips with about **28** and **78** trips during the typical weekday AM and PM peak hours. These trips include both inbound and outbound trips.

The peak hour split for inbound/ outbound traffic generation detailed in **Table 2** was based on the following directional split assumptions for peak hours referenced from the ITE Trip Generation Manual:

Health/ Fitness Club (492):

- The morning (AM) peak hour split - 46%/54% for inbound/outbound trips respectively; and,
- The afternoon (PM) peak hour split - 52%/48% for inbound/outbound trips respectively.

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Table 2. Estimated trip generation for the proposed development

Land Use Type	Direction	Weekday Daily Traffic	Weekday AM Peak Hour Traffic	Weekday PM Peak Hour Traffic
Health/ Fitness Centre	Inbound	264	13	41
	Outbound	264	15	37
Overall		**528**	**28**	**78**

6.2 Traffic Flow Forecasts

With respect to the location of the development, the access/egress arrangement and the road network connectivity, as well as the location of local and regional trip generators (i.e., residential zones), the anticipated directional trip distribution of the development-generated traffic is assumed to be as follows:

- 50% of trips to/from the northeast via Mandurah Terrace;
- 50% of trips to/from the southwest via Mandurah Terrace.

Accordingly, the directional AM/ PM peak hour and total daily trip distribution of the development-generated traffic are illustrated in Figure 3.



Figure 3: Estimated traffic movements for the proposed development

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6.3 Impact on Surrounding Roads

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

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

As per the traffic volumes shown in **Section 6.2**, it is clear that the traffic increase from the proposed development would be less than the critical threshold (100vph per lane). Therefore, the impact on the surrounding road network does not warrant any further assessment.

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7 Traffic Management on the Frontage Streets

Mandurah Terrace, north of the subject site, is constructed as a 14m wide dual carriageway two-lane divided road. The opposing traffic lanes are separated by a 2m wide painted median with frequent kerbed traffic islands.

Mandurah Terrace is classified as a *Distributor A* in the Main Roads WA Metropolitan Functional Road Hierarchy and operates under the speed limit regime of 60km/h.

According to the traffic counts obtained from the Main Roads WA traffic map, Mandurah Terrace, south of Anstruther Road, carried about 14,019 vehicles per day (vpd) on a typical weekday in 2022/23. The morning and afternoon peaks were recorded between 8:00 AM to 9:00 AM and 3:00 PM to 4:00 PM with a total of 1,249vph and 1,147vph respectively.

Mandurah Terrace forms a roundabout intersection with Sutton Street to the southwest of the development and priority controlled T-intersection with Stewart Street to the northeast of the development. Refer to **Figure 4** and **Figure 5** for more details.



Figure 4: Northeast-bound view along Mandurah Terrace



Figure 5: Southwest-bound view along Mandurah Terrace

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8 Public Transport Access

According to the current Transperth bus network map, the closest bus route to the subject site is Transperth Route 584 operating on Mandurah Terrace. The nearest bus stop is located approximately 20m walking distance from the subject site.

This bus route provides direct links to the Madurah and Lakelands train stations. Existing public transport services in the vicinity of the subject site are shown in **Figure 6**.

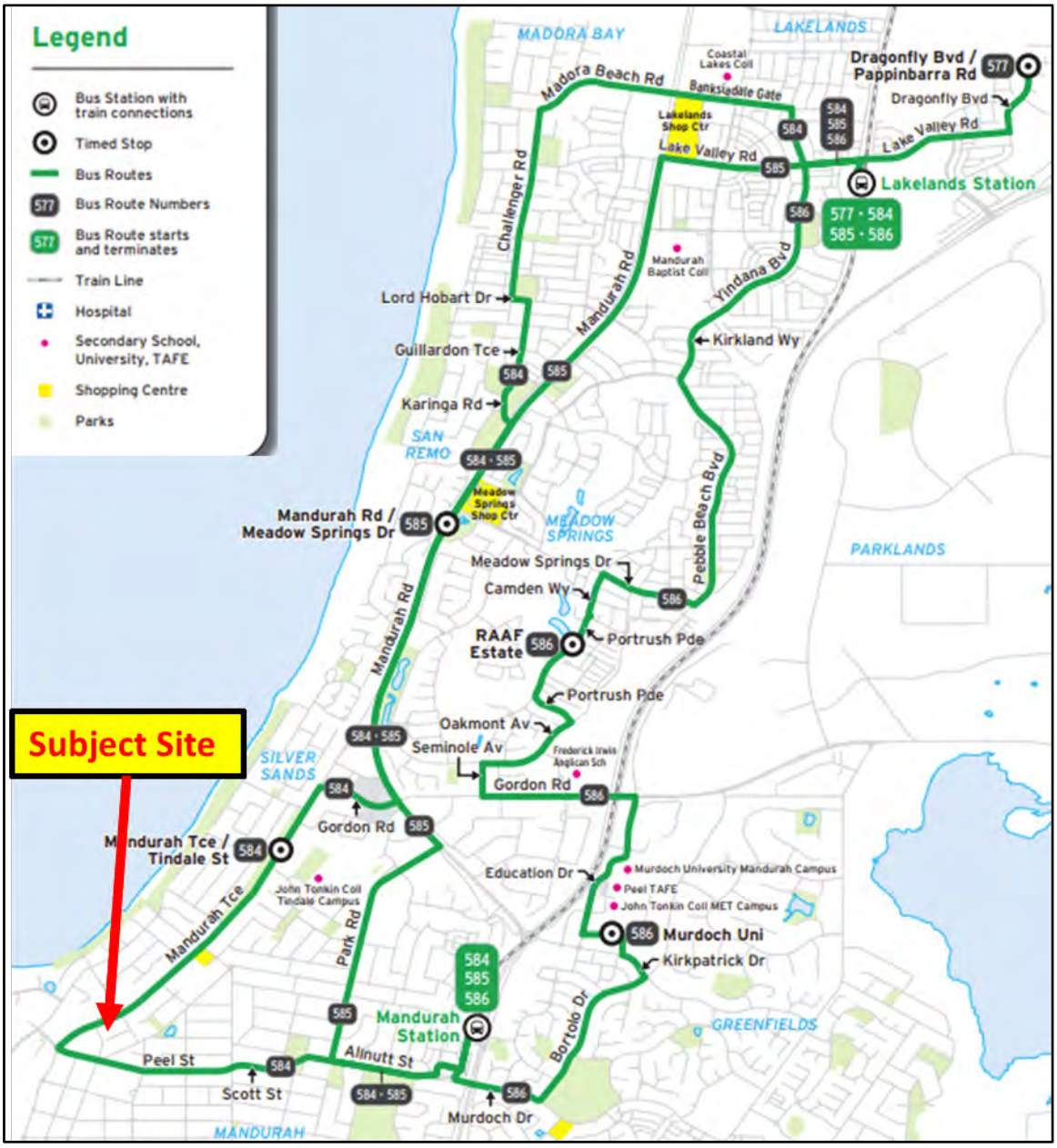


Figure 6: Public transport services (Transperth Maps)

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9 Pedestrian Access

Pedestrian access to the subject site is available via the existing external footpath network along Mandurah Terrace. Pedestrian crossing facilities, including drop kerbs and refuge islands, are available at the roundabout intersection of Mandurah Terrace and Sutton Street.

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10 Cycle Access

The Department of Transport Bike Maps shows the bicycle access to the subject site via existing 'Bicycle Lanes or Sealed Shoulder Either Side' and 'High Quality Shared Path' along Mandurah Terrace (north of the site). The Perth Bicycle Network Map illustrated in **Figure 7** shows the cyclist connectivity in the vicinity of the subject site.

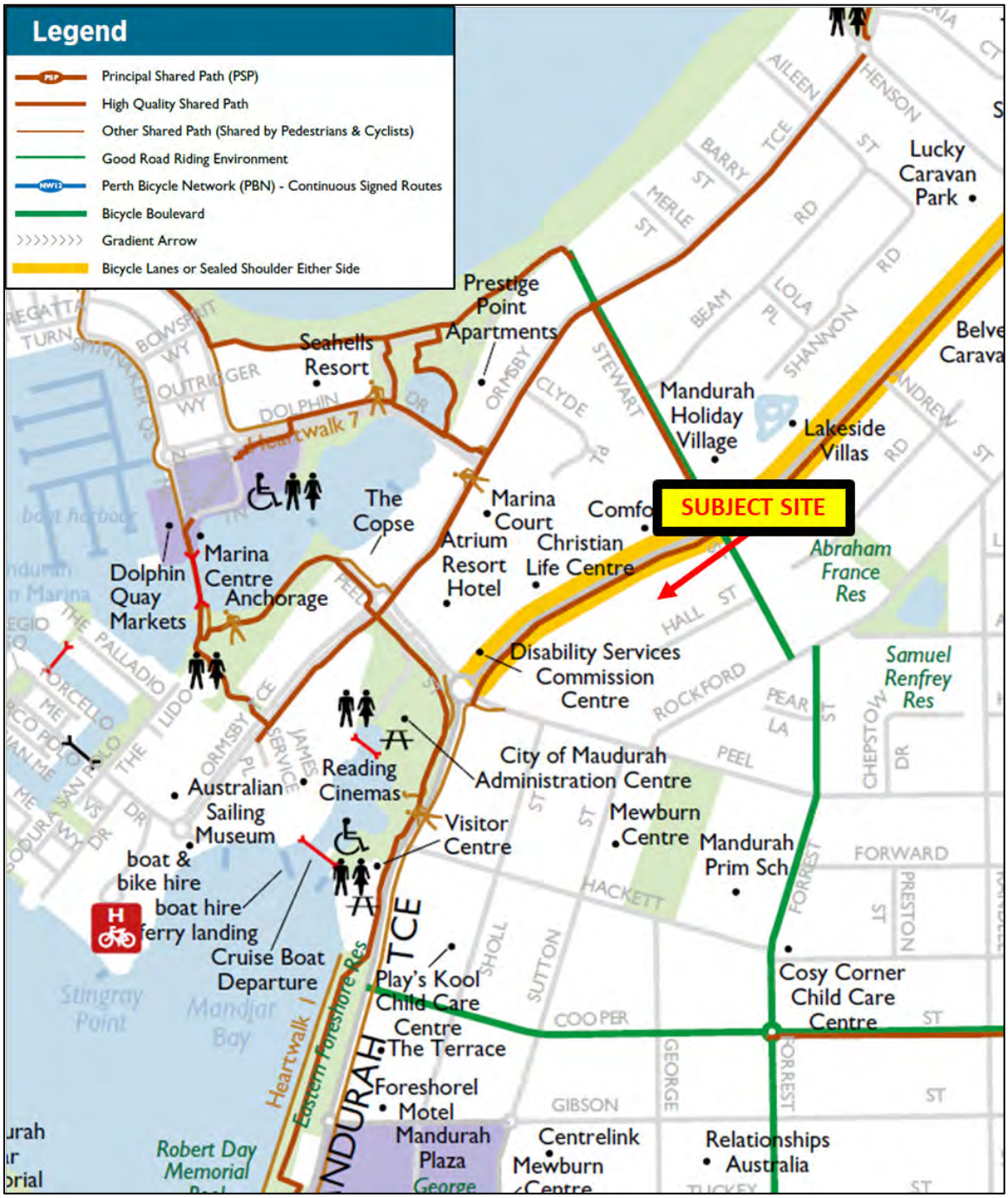


Figure 7: Extract from Perth Bike Map (Source: Department of Transport)

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11 Site Specific Issues

No site-specific issues have been identified within the scope of this assessment for the proposed development.

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12 Safety Issues

No safety issues have been identified within the scope of this assessment for the proposed development.

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13 Conclusions

This Transport Impact Statement (TIS) has been prepared by Transcore on behalf of Bella Build & Design with regard to the proposed gym development at 117-121 Mandurah Terrace, Mandurah in the City of Mandurah. The subject site is located to the south of Mandurah Terrace and is currently vacant land.

As part of the development proposal, the subject site will be developed into a gym facility. The overall, GFA of the proposed gym facility is approximately 1,842m^2 including Mezzanine.

The subject site currently doesn't entail any crossover. As part of the development proposal, a full-movement crossover on Mandurah Terrace is proposed to serve the subject site.

The proposed development currently provides a total of 55 bays (inclusive of two ACROD bays) which complies with the parking requirements specified in the City's town planning scheme.

A bin storage area is located at the northwest corner of the carpark. Waste collection and deliveries will take place within the site. A private contractor will collect waste using an 8.8m service vehicle.

Turn path analysis undertaken for an 8.8m service vehicle shows satisfactory access, egress, and circulation within the site. It is recommended that service vehicles should access the site outside of peak operating periods.

The traffic analysis undertaken in this report shows that the proposed development is estimated to generate a total of approximately **528** daily vehicle trips with about **28** and **78** trips during the typical weekday AM and PM peak hours. These trips include both inbound and outbound trips. Thus, the impact of the traffic generation of the proposed development would not be significant on the surrounding road network.

No particular transport or safety issues have been identified for the proposed development within the scope of this assessment.

Accordingly, it is concluded that the traffic-related issues should not form an impediment to the approval of the proposed development.

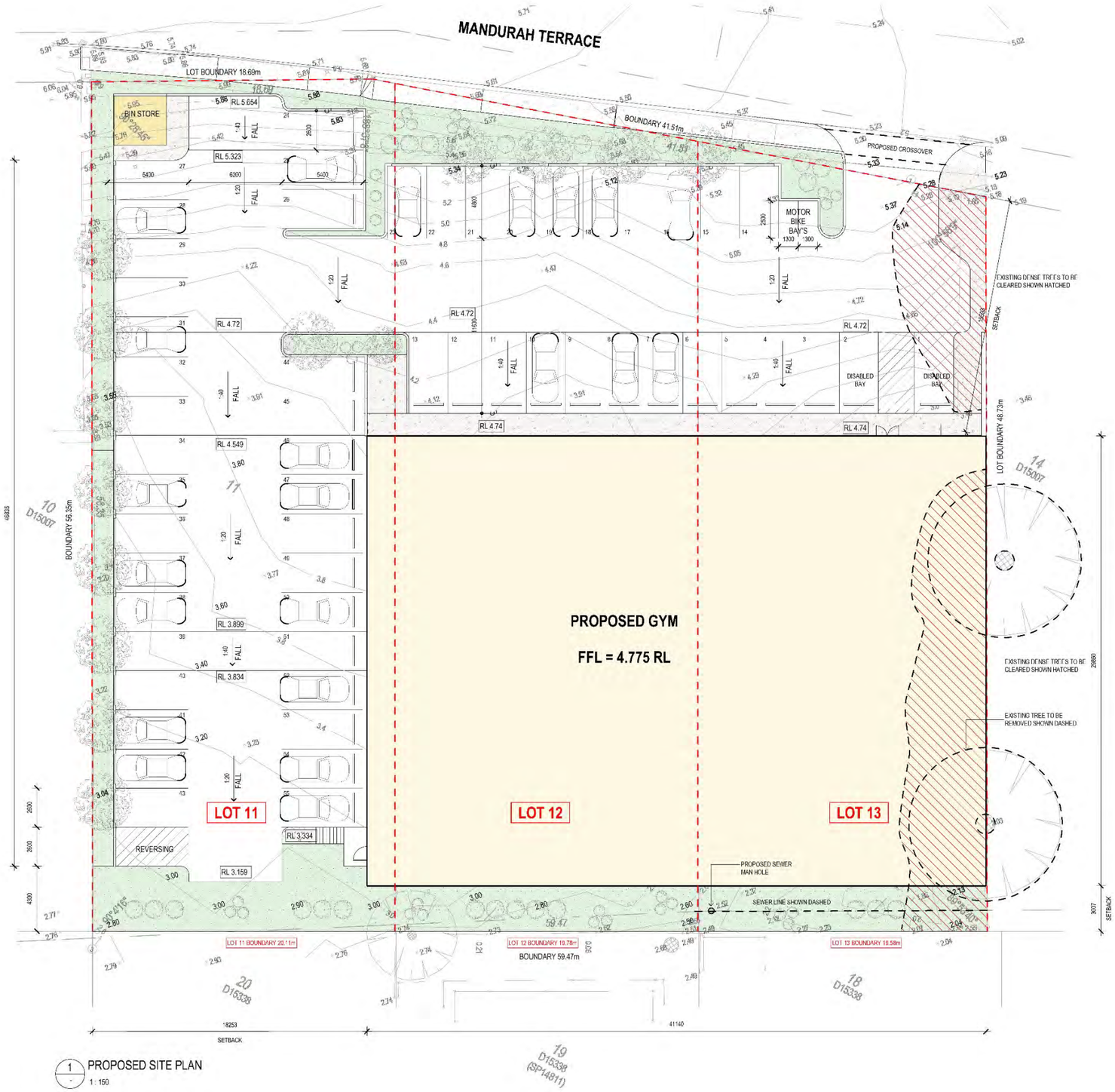
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Appendix A

Proposed Development Plans

Engineering a better future for over 20 years!

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AREA SUMMARY	
TOTAL LOT AREA AS PER FEATURE SURVEY	= 2201m²
TOTAL BUILDING FOOTPRINT	~1228m²
TOTAL INTERNAL AREA (INCLUSIVE OF MEZZANINE)	~1842m²

GBA - MEASURED TO OUTSIDE FACE OF EXTERNAL WALS

TOTAL CAR BAYS - 55 TOTAL MOTOR BIKE BAYS - 2

INTERIM ISSUE ONLY
DATE: 19.12.2023

SITE PLAN | SK 16 | PROPOSED GYM
117 - 121 MANDURAH TERRACE, MANDURAH, WA 6210
REVISION E PROJECT NO 94 23 DATE 19.12.2023

Hodge Collard Preston ARCHITECTS

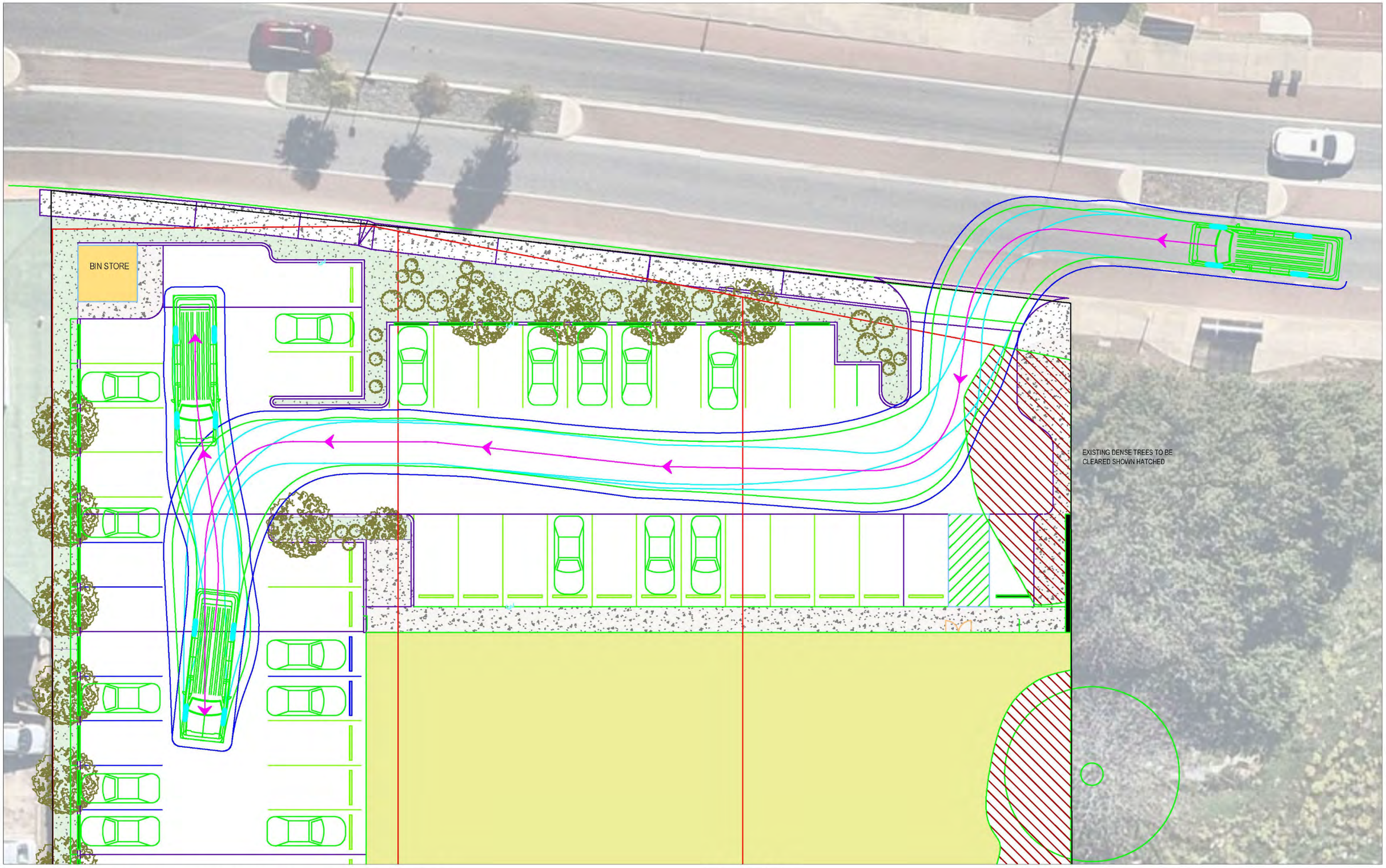
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Appendix B

Turn Path Plans

Engineering a better future for over 20 years!

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117- 121 Mandurah Terrace, Mandurah

Austroads 2013: 8.8m Service Vehicle

Service Vehicle Entry

LEGEND

Vehicle Body

Wheel Path

500mm Clearance

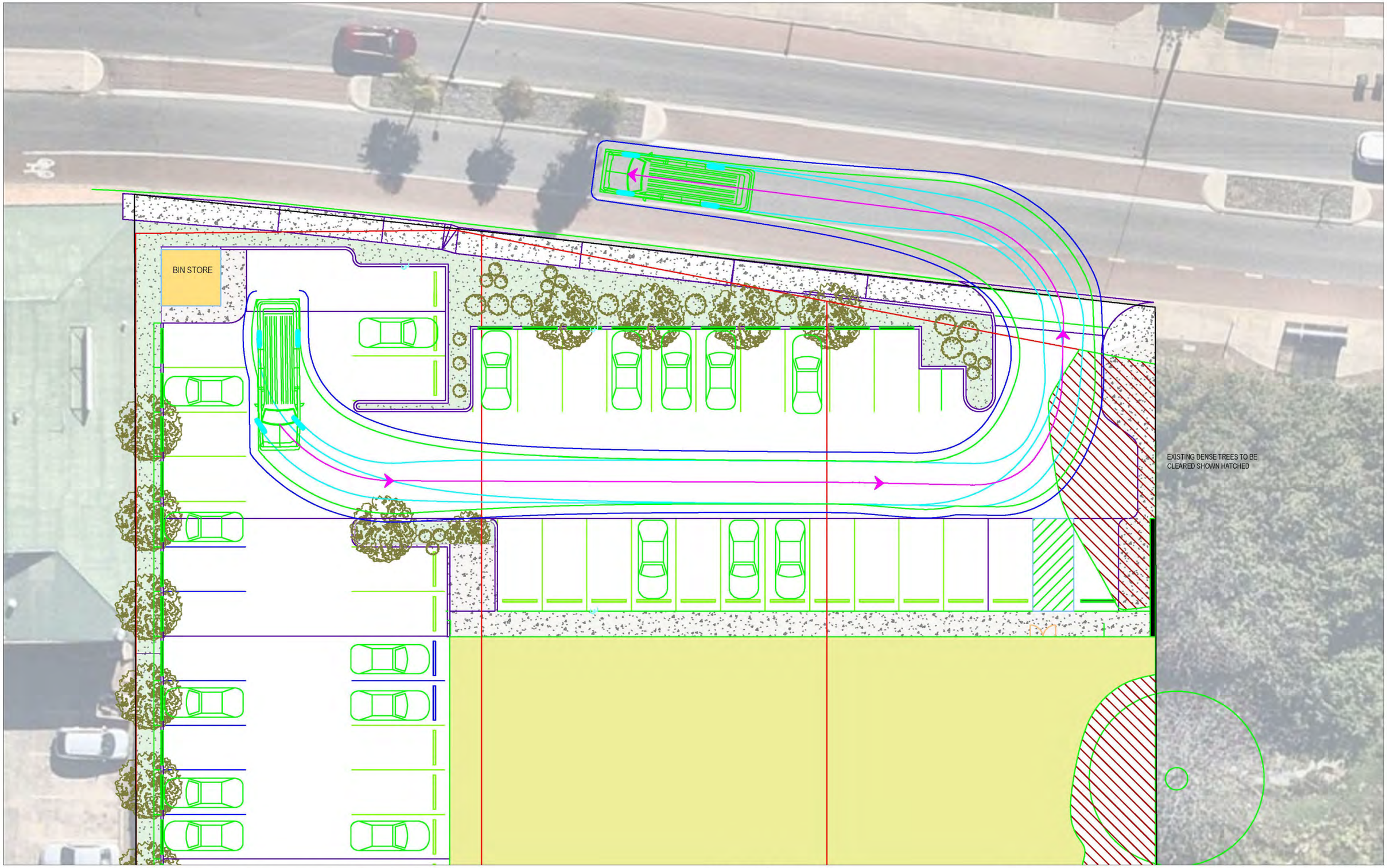
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Version: 1, Version Date: 16/02/2024



117- 121 Mandurah Terrace, Mandurah

Austroads 2013: 8.8m Service Vehicle
Service Vehicle Exit

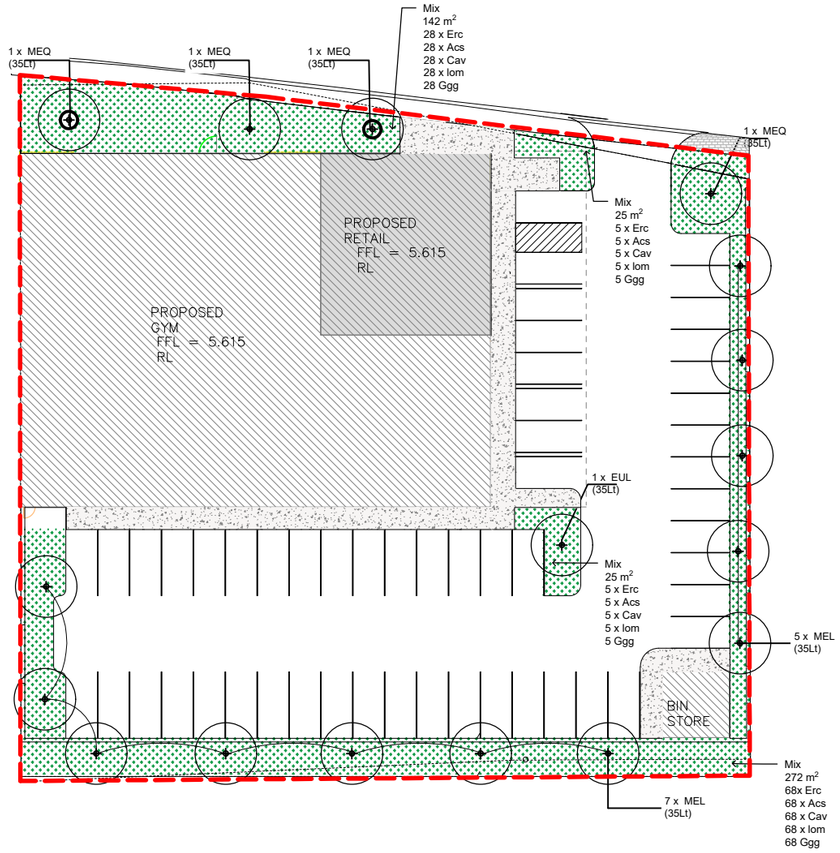
LEGEND

Vehicle Body
Wheel Path
500mm Clearance

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20/12/2023
Scale: 1:200 @ A3

transcore

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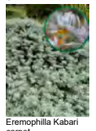
	PLANTING SCHEDULE					
GARDEN BED	CODE	BOTANICAL NAME	POT SIZE	QUANTITY	MATURE SIZE (APPROX)	REVISION
GB01						
MIX 1 1p/m²						
	Erc	Eremophila kalbari carper	140mm	158	H 0.4m x W 0.1m	
	Con	Conastylis candicans	140mm	158	H 0.5m x W 0.5m	
	Asc	Acacia saligna prostrate	140mm	158	H 0.3m x W 1m	
	Hib	Lomandra Tanika	140mm	158	H 0.4m x W 1m	
	Cav	Carpobrotus virescens	140mm	158	H 0.2m x W 1m	
TREES						
	MEL	Melaleuca Leucodendron	35L	13	H 10m x W 4m	
	MEQ	Melaleuca quinqenervia	35L	4	H 10m x W 4m	
	EUL	Eucalyptus leucoxylon ssp. megalocarpa	35L	1	H 8m x W 7m	

Trees



Melaleuca lucadendra

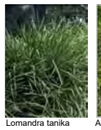
Ground covers



Eremophilla Kabari carpet



Carpobrotus virescens



Lomandra tanika



Acacia saligna prostrate



Grevillia gin gin gem



Eucalyptus leucoxylon ssp. megalocarpa



Melaleuca quinquenervia

LANDSCAPE LEGEND

SURFACE FINISHES PLANS

Mix 1 100mm mulch to Imported topsoil to Garden Bed
To be drip line Reticulated 1 x 140MM Pots p/ms

Proposed native tree species

Site boundary

PLANTING NOTES:

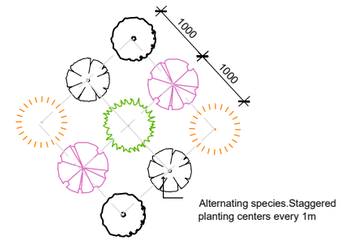
1. REMOVE NURSERY STAKES AND LABELS AT THE TIME OF PLANTING. PLANTS ARE TO BE SELF-SUPPORTING.
2. JARRAH WOODCHIP MULCH
3. CONDITIONER @20mm TO ALL PLANTING AREAS

IRRIGATION NOTES:

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

TYPICAL IRRIGATION SPECS:

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



Staggered Planting
Plan Scale 1:100

REV	DATE	DESCRIPTION	REV	DATE	DESCRIPTION
0	24/06/2024	ISSUE FOR PERMIT APPROVAL			
1	03/07/2024	ISSUE FOR PERMIT APPROVAL			
2	08/07/2024	ISSUE FOR PERMIT APPROVAL			

PROJECT: RYDERWEAR MANDURAH
17 - 121 MANDURAH TERRACE, MANDURAH, WA 6210

CLIENT: BELLA BUILD AND DESIGN

DRAWING: **LANDSCAPE PLANTING PLAN**

DWG NO: L-1100

DRAWN: EQ | REVIEWED: EQ | PROJECT NUMBER: 2406

SCALE: 1:300 @ A3

DATE: 08/07/2024

REV: 2

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

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SUMMATION

Ryderwear Mandurah

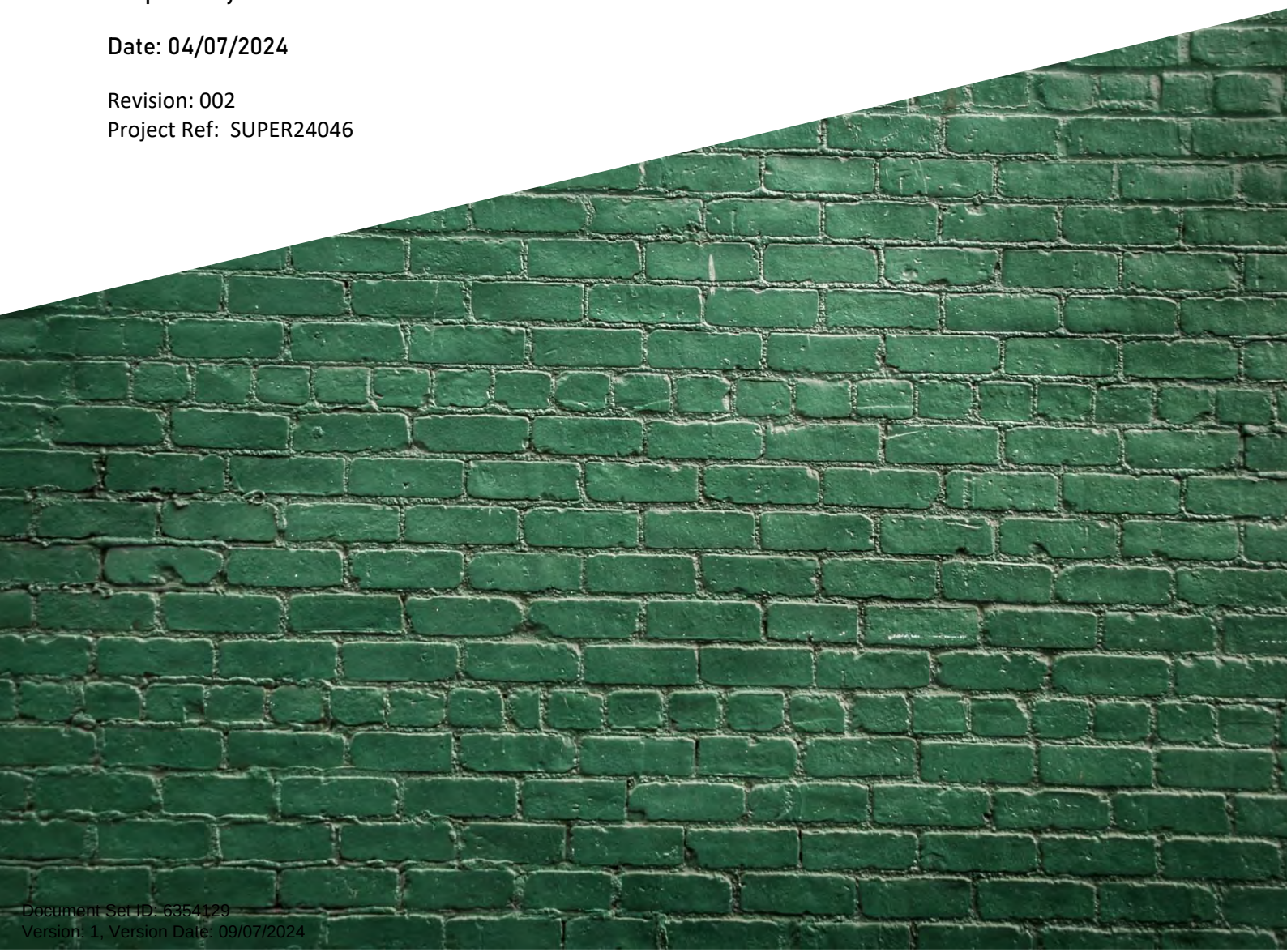
Sustainability Strategy

Prepared for: Bella Build & Design

Prepared by: Prasanna Suraweera

Date: 04/07/2024

Revision: 002
Project Ref: SUPER24046



Document Set ID: 6354129
Version: 1, Version Date: 09/07/2024

Executive Summary

This Sustainability Strategy has been prepared to outline the initiatives that are being incorporated in the Ryderwear Development located in Mandurah, WA.

In accordance with Principal 5 – Sustainability of the Design Quality Evaluation requirements, this report addresses the following:

"Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes."

The project will commit to the adoption of a robust set of sustainability initiatives which is in keeping with the above aspiration and current industry practice. Summary of the key sustainability initiatives targeted for the project are outlined below:

- Energy Efficiency and Operational Carbon
- Water Sensitive Design
- Waste Minimisation
- Sustainable Transport

Refer to Section 2 for further discussion of the proposed initiatives.

Summation Pty Ltd has been engaged as the sustainability consultants for the project and will be responsible for the delivery of the sustainability objectives. The sustainability team for this project will be led by Prasanna Suraweera, who is a Director with Summation and a Green Star Accredited Professional with over 20 years of experience in delivery of sustainable developments. It is confirmed that Summation has been engaged during the planning stage.

REF: HTTPS://SUMMATIONPTYLTD-MY.SHAREPOINT.COM/PERSONAL/PRAS_SUMMATION_AU/DOCUMENTS/SHARED/002_PROJECTS/SUPER24046_RYDERWEAR MANDURAH/SU_SUSTAINABILITY STRATEGY_002_RYDERWEAR MANDURAH.DOCX

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Abbreviations/Glossary

Abbreviation	Description
ESD	Environmentally Sustainable Design
GBCA	Green Building Council of Australia
GSAP	Green Star Accredited Professional
KPI	Key Performance Indicators
EOT	End of Trip
NCC	National Construction Code
BMS	Building Management System

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1 Introduction

1.1 Project Background

The proposed Ryderwear project is located 117 -121 Mandurah Terrace, Mandurah, WA. The site location is shown in Figure 1 below.



Figure 1 - Site Location and Context

The project consists of a gym and retail facility with a total building footprint of 1,864 sqm, including the mezzanine floor.

1.2 Disclaimer

This report provides high level guidance regarding the sustainability commitments targeted for this project and the preliminary strategies and initiatives to be adopted therein.

The purpose of this report is to articulate the sustainability initiatives being committed by the project. Due care has been taken to ensure the initiatives are coordinated and achievable for the project, however, note that the specific strategies mentioned in this report are indicative and may evolve throughout the futures stages of design.

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2 Proposed Initiatives

2.1 Summary of Initiatives

A summary and discussion of the key initiatives proposed are outlined below:

- Energy Efficiency and Operational Carbon
- Water Sensitive Design
- Waste Minimisation
- Sustainable Transport

2.2 Energy Efficiency and Operational Carbon

Energy efficiency requires combination of high-performance building envelope together with efficient servicing strategy. The following fundamental concepts will be considered in the design of this development:

- Exceed minimum NCC Section J compliance with high performance envelope including low window-to wall ratios and external shading.
- Efficient HVAC Services – Reverse cycle AC systems
- High efficiency LED light fittings - LED hi bay lights to the gym area and LED linear / Spot lights to the retail store area.
- Heat Island Mitigation
- Future provision for EV Charging Bays

2.3 Water Sensitive Design

Water efficiency will be targeted through careful consideration of end uses for the development. The following initiatives will be targeted:

- Waterwise landscaping to minimise dependence on potable water.
- High efficiency fittings and fixtures – High Water Efficiency Labelling and Standards (WELS) rated fittings:
    - Taps – 5 Star
    - Toilet – 5 Star
    - Showers – 3 Star (7.5 l/min)
    - Urinals – 5 Star

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2.4 Electrification

Electrification is a key strategy for ongoing emissions improvement as the electricity grid continues to improve its carbon intensity. This is due to the ongoing 'greening' of the grid as the additional renewable's capacity is realised. As an example, over the past 15 years, the grid emissions have improved by approximately 40% to 50% on the South-West Interconnected System (SWIS). This trend is expected to continue with further investment into renewable projects planned for the SWIS.

The site will be fully electrified for all services including space heating and hot water demands. This will ensure the site will reduce its carbon emissions in future as the grid electricity continues to decarbonise over time.

2.5 Solar PV

Provision of renewables is critical to the sustainability performance of buildings. It is a key initiative for reducing carbon emissions and will also provide operating cost benefits.

It is proposed to provide a 30kW Solar PV system. This approach will ensure the Solar utilisation is maximised and achieve the highest carbon and cost savings possible. The proposed system will yield ~ 45,000kWh per annum with an estimates carbon saving of 23,000kgCO2e per annum.

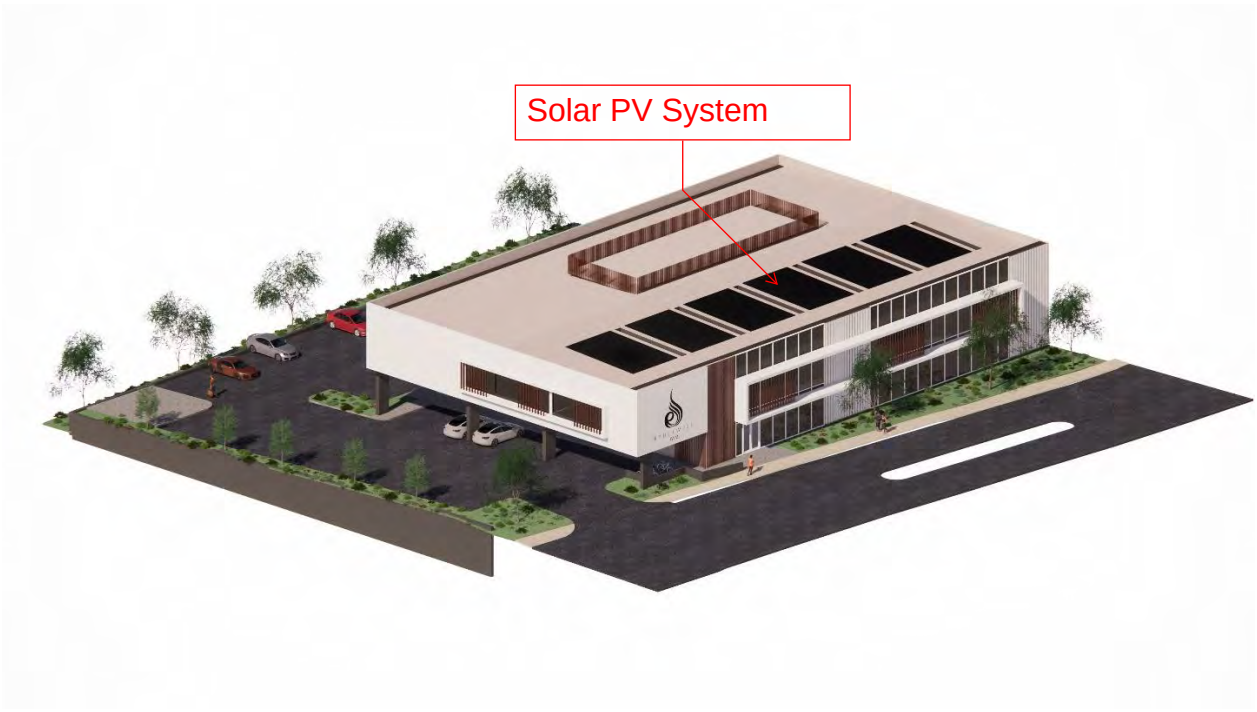


Figure 2 – Roof top Solar PV – 30kW (45,000kWh per annum)

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2.6 Heat Island Mitigation

The external colour of roof and landscape elements can have significant impact on the local microclimate, specifically temperature. Dark surfaces will absorb heat and can increase ambient temperatures by 5+ degrees. Light coloured roofs and surfaces will assist in minimising this impact.

This development will adopt this strategy to minimise its impact on the local microclimate.

2.7 Waste Minimisation

- The waste storage areas have sufficient allowance to enable effective waste separation and recycling to occur. Appropriate waste sorting area has been determined based on the expected throughput of each waste streams, these have been located with safe efficient access by staff and waste vehicles. Specific waste streams targeted include the following:
    - General
    - Comingled Recycling

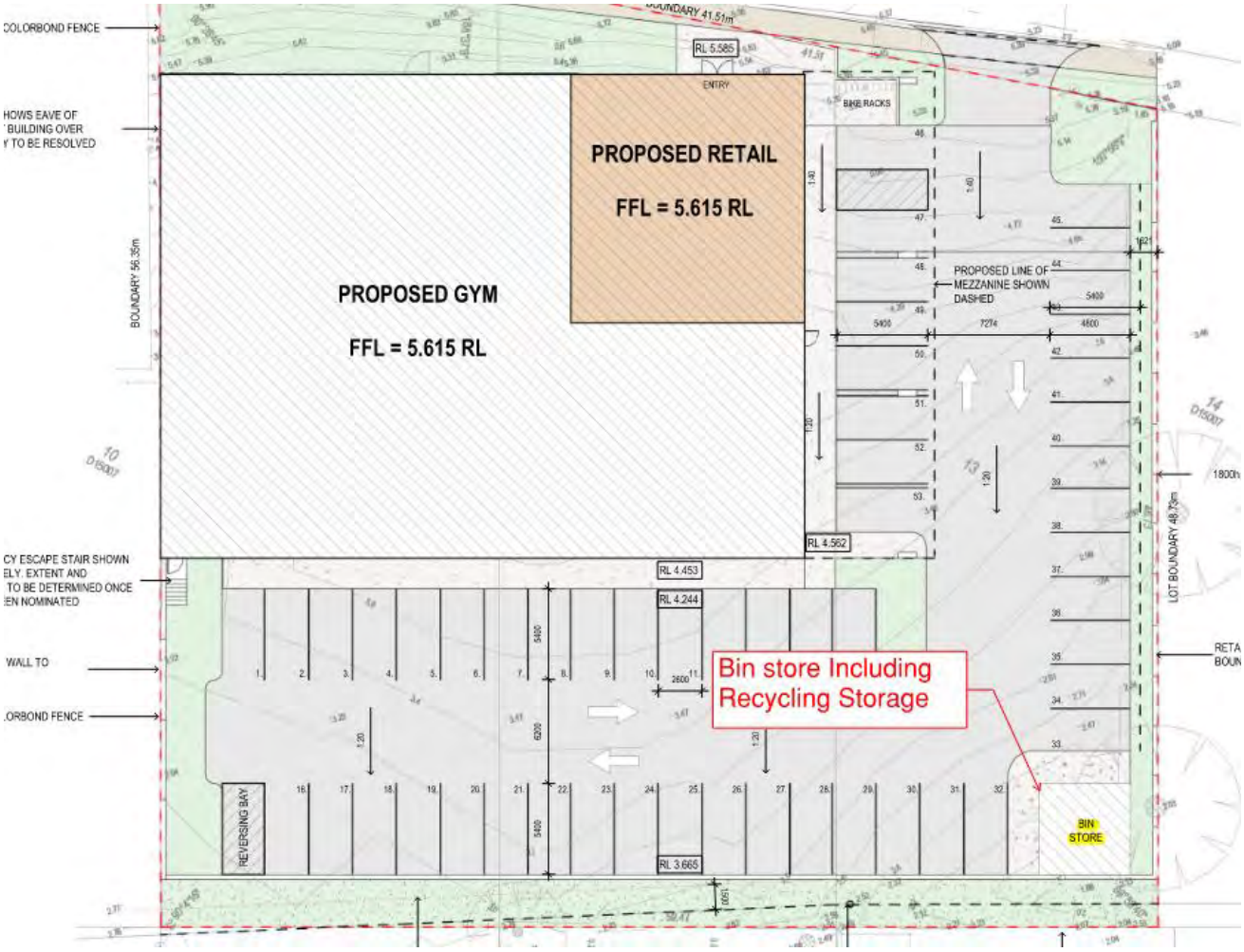


Figure 3 – Bin Store location.

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2.8 Promoting EV Transition – Future Provision

The Electric Vehicle transition is a key strategy for reducing global emissions. Facilitating the EV transition for residential projects is a key enabler for the adoption of EV's.

The project commitment includes for the following:

- Future provision for take up of EV Chargers including switchboard capacity/load management system and conduits for wiring.

2.9 Vehicle Use Modal Shift -Bike Racks

Reducing reliance on vehicle use is a key strategy for a low emission future. Provision of bike racks will also promote healthy activities for occupants and visitors. Provision of bike store facilities will promote this modal shift. The site is in close proximity to numerous bike and pedestrian paths.

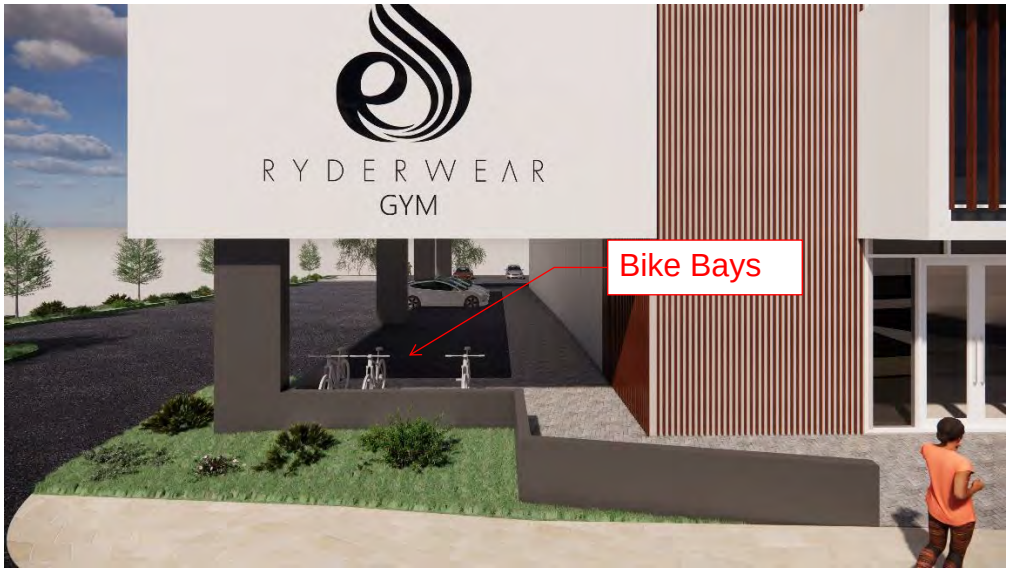


Figure 4 – Bike Store Facilities

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PLANNING REPORT

PROPOSED "RECREATION PRIVATE" (GYM) & "SHOP" DEVELOPMENT

LOTS 11-13 (#117 - 121) MANDURAH TCE, MANDURAH

APPLICATION TO CITY OF MANDURAH / METRO OUTER JDAP

30 JANUARY 2024

Hidding.
URBAN PLANNING

This Planning Report has been prepared by **Hidding Urban Planning** for a proposed "Recreation Private" (Gym) & "Shop" Development at Lots 11-13 (#117-121) Mandurah Terrace, Mandurah

No part of this report may be reproduced, electronic or otherwise, without the prior written consent of **Hidding Urban Planning**

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DOCUMENT HISTORY & DETAILS

AUTHOR	REVISION	DATE	REVISION TYPE
Nik Hidding	R01	30/01/2024	Final

File No. C2557
Client: Bella Build & Design
Project: Ryderwear Mandurah
File Name: C2557appln01
Document Revision: R01

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Annexure 2: Development Plans

Annexure 3: Transport Impact Statement

Annexure 4: Stormwater Management Plan

Annexure 5: Acoustic Assessment

APPLICATION DETAILS

Table 1: Application Details

Property Location	Lots 11-13 (#117-121) Mandurah Terrace, Mandurah
Applicant	Hidding Urban Planning
Landowner	Tranmere No 1 Pty Ltd
Proponent	Bella Build & Design
Local Government	City of Mandurah
Planning Scheme	City of Mandurah Local Planning Scheme No. 12 (LPS12)
City of Mandurah LPS12 Zoning	Strategic Centre zone
Draft Activity Centre Plan Zoning	Commercial Mixed Use zone
Proposed Uses	Recreation Private & Shop ("P" Permitted Uses in Commercial Mixed Use zone
Existing Use	Vacant Land
Total Site Area	3198m^2
Estimated Construction Value	$2 million

1.0 INTRODUCTION

Hidding Urban Planning has prepared this Planning Report on behalf of Bella Build & Design as part of an Application for Development Approval for a proposed "Recreation Private" (Gym) & "Shop" Development at Lots 11-13 (#117-121) Mandurah Terrace, Mandurah (**Subject Land**).

This report provides a detailed Town Planning assessment of the proposed development against the relevant State and local Planning framework. The information contained in this report confirms that the proposed development is appropriate for the site and reflects the applicable planning framework.

1.1 DEVELOPMENT ASSESSMENT PANEL (DAP) DETERMINATION

As the anticipated construction cost of the project is **$2 million**, this applicant has "opted in" to the Development Assessment Panel (DAP) process.

Accordingly, please find ***attached*** the completed City of Mandurah Application for Development Approval Form, Peel Region Scheme Form 1 and DAP Form 1, all signed and authorised by the landowners (Tranmere No 1 Pty Ltd).

1.2 PRE-LODGEMENT DISCUSSIONS

The applicant has discussed the project with the City's Planning Department prior to designing the proposal.

2.0 SITE DETAILS

2.1 LEGAL DESCRIPTION OF LAND

This Development Application is made in respect of Lots 11-13 (#117-121) Mandurah Terrace, Mandurah. The specific Title details for each of the properties is provided in **Table 2** below.

Table 2: Legal Description of Land

Lot	Plan	Vol/Folio	Area	Address	Proprietors
11	15007	1129/732	1138m^2	117 Mandurah Terrace, Mandurah	Tranmere No 1 Pty Ltd
12	15007	1128/435	1092m^2	119 Mandurah Terrace, Mandurah	Tranmere No 1 Pty Ltd
13	15007	1928/954	968m^2	121 Mandurah Terrace, Mandurah	Tranmere No 1 Pty Ltd

The Certificates of Title are attached at **Annexure 1**.

2.2 SITE DETAILS

The subject land has a total land area of 3198m^2 and is currently vacant. The three existing lots will be amalgamated into a single lot post development approval.

The site is bound by Mandurah Terrace to the north, with short stay motel accommodation development further to the north, existing residential developments to the south, vacant land to the east and a commercial premises to the west.

An Aerial Photograph of the subject land and its surrounds is included at **Figure 1** below**.**



Figure 1: Aerial Photograph (PlanWA)

3.0 THE PROPOSAL

Development Approval is sought for a new "Recreation Private" (Gym) & "Shop" Development on the subject land.

The proposed development is depicted on the attached plans prepared by Hodge Collard Preston (HCP) at **Annexure 2**. The plans include Site Plan, Floor Plans, Elevations and 3D Perspectives.

3.1 SUPPORTING PLANS & REPORTS

Plans, consultant reports and other supporting information have been prepared to assist in the assessment of this application and these are detailed in **Table 3** below.

Table 3: Supporting Plans & Reports

Consultant	Plan/Document	Annexure
Hodge Collard Preston	Development Plans	**2**
Transcore	Transport Impact Statement	**3**
JCCE	Stormwater Management Plan	**4**
Herring Storer Acoustics	Acoustic Assessment	**5**

3.2 DEVELOPMENT SUMMARY

The proposed development includes a building footprint of 1128m^2 with a total internal area (inclusive of mezzanine level) of 1842m^2.

The layout of the building on the ground floor will include a 936m^2 gym space area and a 224m^2 entry and retail shop space. The shop floor will accommodate the sale of fitness clothing, accessories and supplements.

There will be a lift and stairs to the mezzanine level, which will have a gym space (386m^2), pilates room (54m^2), male and female and UAT amenities and male and female plunge and saunas.

There are 55 car parking bays proposed on the subject site (inclusive of disabled bays), as well as two (2) motorcycle bays. The car parking area is located along the front of the site and along the western side of the building. A new crossover is proposed to Mandurah Terrace at a position furthest away possible from the Sutton Street roundabout to the west. The crossover is also in a position that does not conflict with the vegetated island in the middle of Mandurah Terrace, allowing full movement in and out of the site.

The site will have large areas of landscaping around the car parking area, allowing for the planting of trees and shrubs.

The main building façade addressing Mandurah Terrace will include extensive glazing to the ground and upper floors, together with patterned concrete panels.

The proposed building will be set back 15.593m from Mandurah Terrace.

The proposed building will be built up to the eastern side boundary (nil setback). The side boundary wall will be painted with a dark grey and light grey painted finish, as detailed on the Elevation Plans.

The proposed building will have a rear setback of 3.00m to account for the sewer line that traverses the subject land.

The proposed building (at the main façade addressing Mandurah Terrace) will have a building height of 8.18m - 8.48m, extending up to 9.50m height at the feature entry area, as shown in the Elevations.

Advertising signage locations for the proposed development are shown on the Elevation Plans and 3D Perspectives and includes an illuminated “Ryderwear Gym” logo sign and a non-illuminated “Ryderwear Gym” lettering sign on the northern elevation only.

The proposed development is supported with a Traffic Impact Statement (**TIS**) prepared by Transcore, which is included at **Annexure 3**.

In terms of waste, the operator (Ryderwear – who has many other gym developments across WA and in SA) will have two (2) 1100L wheelie bins, one for general waste and one for recycling that will get emptied weekly by private contractor at a low-peak time.

The proposed development is supported with a Stormwater Management Plan, given the fall across the site. The Stormwater Management Plan is provided at **Annexure 4**.

An Acoustic Assessment has been prepared to assess and address noise impacts associated with the proposed development – refer **Annexure 5**.

The proposed development will be operated 24 hours a day, seven days a week (24/7). There will be a maximum of four (4) staff on site across three (3) shifts in a 24-hour period. The Shop use will operate Mon-Fri 8am-9pm and Sat/Sun 9am-5pm. The Shop will have one (1) staff member, with a two-hour cross over during the day with two (2) staff members (weekdays only).

The proposed development has been designed to have a capacity of approximately 60 members on site at any one time.

4.0 PLANNING ASSESSMENT

4.1 PEEL REGION SCHEME

The subject land is zoned "Urban" under the Peel Region Scheme (**PRS**) as shown in **Figure 2** below. The subject land fronts Mandurah Terrace which is an "Other Regional Roads" Reserve.

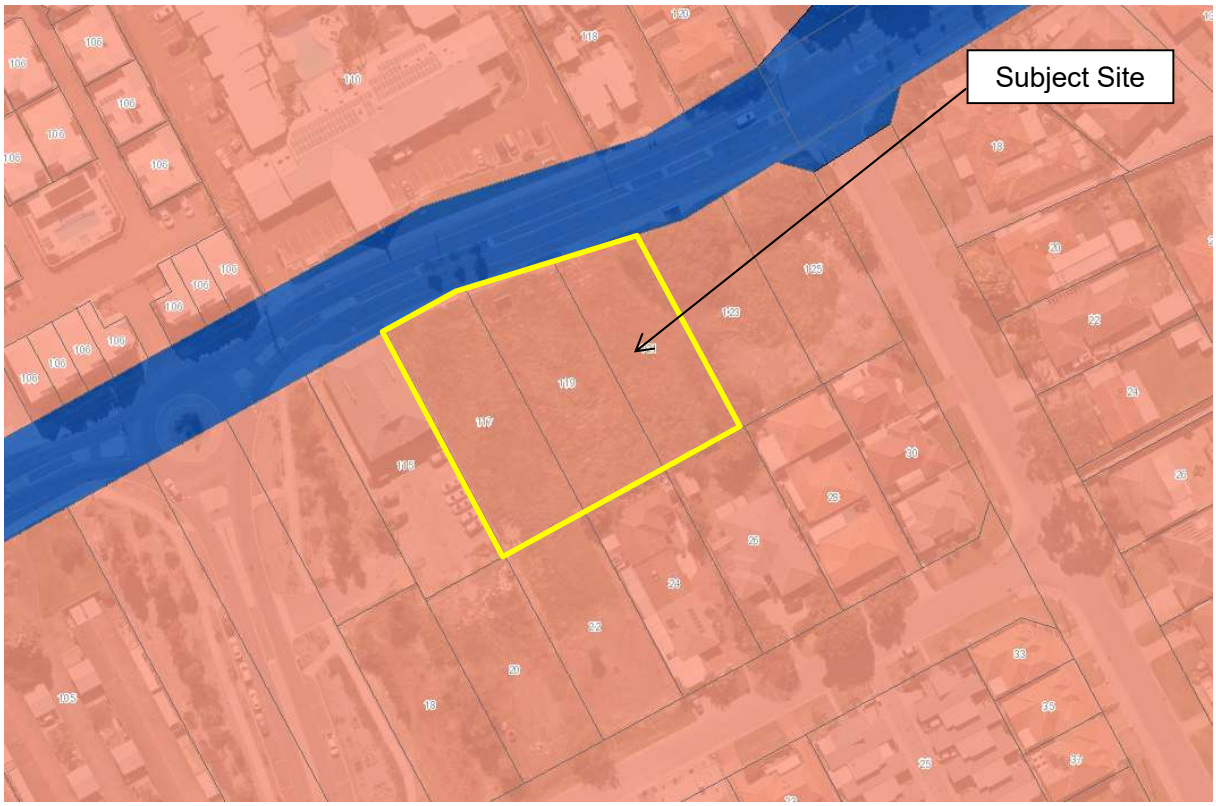


Figure 2: **Peel Region Scheme Map Extract (PlanWA)**

4.2 CITY OF MANDURAH LOCAL PLANNING SCHEME NO. 12

4.2.1 Zoning & Land Use

The subject land is zoned "Strategic Centre" in the City of Mandurah Local Planning Scheme No. 12 (**LPS12**) as shown in **Figure 3**.

Table 2 of LPS12 sets out the objectives of the Strategic Centre zone, which are —

- *Provide a range of services and uses to cater for both the local and regional community, including but not limited to specialty shopping, restaurants, cafes and entertainment.*
- *To ensure that there is provision to transition between the uses in the strategic centre and the surrounding residential areas to ensure that the impacts from the operation of the regional centre are minimised.*

- *Provide a broad range of employment opportunities to encourage diversity and self-sufficiency within the Centre.*

- *Encourage high quality, pedestrian- friendly, street-orientated development that responds to and enhances the key elements of the Strategic Centre, to develop areas for public interaction and support the provision of public transport.*

- *Ensure the provision of residential opportunities within the Strategic Centre including high density housing and tourist accommodation that supports the role of the regional centre and meets the needs of the community.*

- *To provide a basis for future detailed planning in accordance with a precinct structure plan and the Activity Centres State Planning Policy.*

The proposed development is considered to accord with the Objectives by providing new services and uses to the local community, increasing employment opportunities within the Centre, and providing high quality development within the Centre.

Further, detailed planning has occurred with the Draft Activity Centre Plan 1 (ACP1) Central Mandurah having been recently prepared. The proposed development accords with the Draft ACP1, as set out in Part 4.3 of this Report.

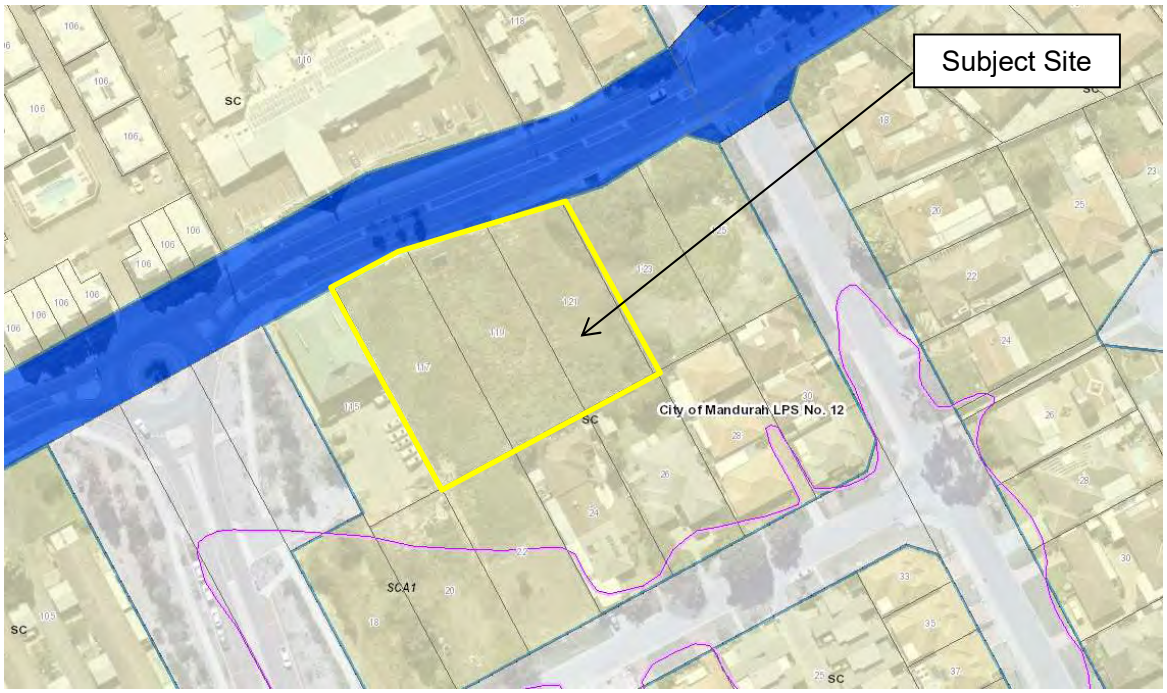


Figure 3: LPS12 Scheme Map Extract (PlanWA)

Table 3 'Zoning Table' of LPS12 does not set out any land use permissibility for the Strategic Centre zone. Clause 3.3.6 of LPS12 sets out:

> *If the zoning table does not identify any permissible uses for land in a zone the local government may, in considering an application for development*

approval for land within the zone, have due regard to any of the following plans that apply to the land:

(a) a structure plan;
(b) a local development plan.

Accordingly, a Structure Plan is required to provide guidance on the permissibility of uses within the "Strategic Centre" zone.

Part 4.3 of this Report details how the proposed development accords with the Draft ACP1 Central Mandurah Activity Centre Plan.

The proposed land uses are defined in Clause 6.2 of LPS12 as follows:

"Recreation Private" *means premises that area –*

(a) used for indoor or outdoor leisure, recreation or sport, and
(b) not usually open to the public without charge."

"Shop" *means premises other than a bulky goods showroom, a liquor store - large or a liquor store - small used to sell goods by retail, to hire goods, or to provide services of a personal nature, including hairdressing or beauty therapy services;*

4.2.2 Matters to be Considered

Clause 67 - Part 2 - Schedule 2 (**Deemed Provisions**) of the *Planning and Development (Local Planning Schemes) Regulations 2015* (Regulations) outlines matters to be given due regard by local government when assessing development applications.

Table 4 below provides an assessment against matters relevant to this proposal.

Table 4: Clause 67 Matters to be Considered

Relevant Matters to be Considered	Response
(a) The aims and provisions of this Scheme and any other local planning scheme operating within the Scheme area;	The proposed use and development is consistent with the aims and provisions of the City's LPS12 for the following reasons: • The proposal seeks approval for land uses which are capable of approval in the Strategic Centre zone. • The proposed development is in general compliance with the provisions of LPS12.
(b) The requirements of orderly and proper planning including any proposed local planning scheme or amendment to this Scheme that has been advertised under the Planning and Development (Local Planning Schemes) Regulations 2015 or any other proposed planning instrument	This report demonstrates the proposed development is in general compliance with the local planning framework applicable to the subject site.

Relevant Matters to be Considered	Response
that the local government is seriously considering adopting or approving;	
(c) Any approved State Planning Policy	This report demonstrates the proposed development is in compliance with the relevant State Planning Policies.
(d) Any environmental protection policy approved under the Environmental Protection Act 1986 section 31 (d);	This matter is not relevant to this proposal.
(e) Any policy of the Commission	This matter is not relevant to this proposal.
(f) Any policy of the State	This matter is not relevant to this proposal.
(fa) Any local planning strategy for this Scheme endorsed by the Commission	The City of Mandurah Local Planning Strategy formulated the preparation of the recent LPS12. Accordingly, it is considered that the proposed development aligns with the objectives of the Local Planning Strategy.
(g) Any local planning policy for the Scheme area;	This report demonstrates the proposed development is in general compliance with the local planning policies applicable to the subject site.
(h) Any structure plan or local development plan that relates to the development.	A Draft Activity Centre Plan has been prepared. The proposed development has been considered against the provisions – refer Part 4.3 of this Report.
(i) Any report of the review of the local planning scheme that has been published under the Planning and Development (Local Planning Schemes) Regulations 2015.	This matter is not relevant to this proposal.
(j) In the case of land reserved under this Scheme, the objectives for the reserve and the additional and permitted uses identified in this Scheme for the reserve.	This matter is not relevant to this proposal as the subject land is not reserved under the Scheme.
(k) The built heritage conservation of any place that is of cultural significance.	This matter is not relevant to this proposal.
(l) The effect of the proposal on the cultural heritage significance of the area in which the development is located.	This matter is not relevant to this proposal.
(m) The compatibility of the development with its setting, including - *(i) the compatibility of the development with the desired future character of its setting; and* *(ii) the relationship of the development to development on adjoining land or on other land in the locality including, but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the development;*	The proposed development is entirely compatible with its setting for the following reasons: • The proposed development is suitably located within a Centre precinct • The scale of the development does not impact any adjacent properties, and is similar in its scale to other developments in the precinct. Having regard to the above, the nature of the proposed development is entirely compatible with its surroundings.

Relevant Matters to be Considered	Response
(n) The amenity of the locality including the following – *(i) Environmental impacts of the development;* *(ii) The character of the locality;* *(iii) Social impact of the development;*	Environmental Impacts: The proposed development is not anticipated to result in any adverse environmental impacts. Character of the Locality: The character of the area, particularly along Mandurah Terrace, is a mix of commercial and residential uses. The proposed development is considered to align with the future character of the area. Social Impacts: The proposed development will not have any adverse social impacts on the surrounding locality, but will provide a positive social impact through the creation of jobs through construction and operation of the facility.
(o) The likely effect of the development on the natural environment or water resources and any means that are proposed to protect or to mitigate impacts on the natural environment or the water resource.	This matter is not relevant to this proposal.
(p) whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved.	The development proposal provides large areas of landscaping, allowing the planting of trees to beautify the site.
(q) the suitability of the land for the development taking into account the possible risk of flooding, tidal inundation, subsidence landslip, bush fire, soil erosion, land degradation or any other risk.	A stormwater management plan has been prepared.
(r) The suitability of the land for the development taking into account the possible risk to human health or safety.	This matter is not relevant to this proposal.
(s) The adequacy of – *(i) the proposed means of access to and egress from the site; and* *(ii) arrangements for the loading, unloading, manoeuvring and parking of vehicles;*	As outlined in this Report and the supporting Transport Impact Statement (TIS) prepared by Transcore **(Annexure 3)**, the proposed access arrangements to and from the site are satisfactory. The development has been appropriately designed, including appropriate arrangements for manoeuvring and parking of vehicles.
(t) The amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety;	The Transport Impact Statement **(Annexure 3)** indicates that the proposed development will not have an unacceptable level of impact on the surrounding road network.
(u) the availability and adequacy for the development of the following — *(i) public transport services;* *(ii) public utility services;* *(iii) storage, management and collection of waste;*	The Transport Impact Statement **(Annexure 3)** addresses these matters.

Relevant Matters to be Considered	Response
(iv) access for pedestrians and cyclists (including end of trip storage, toilet and shower facilities); *(v) access by older people and people with disability;*	
(v) The potential loss of any community service or benefit resulting from the development other than potential loss that may result from economic competition between new and existing businesses.	No loss of any community service or benefit is expected to occur as a result of the proposed development.
(w) The history of the site where the development is to be located.	No significant historical matter is relevant to this proposal.
(x) The impact of the development on the community as a whole notwithstanding the impact of the development on particular individuals.	The proposed development is not anticipated to impact the community.
(y) Any submissions received on the application.	The City is able to advertise the application for public comment and assess any relevant submission made, although, being "P" Permitted uses, it is not mandatory to advertise the proposal.
(za) The comments or submissions received from any authority consulted under clause 66.	The City can refer the application to any authority it considers appropriate, and to assess any relevant submissions/comments made.
(zb) Any other planning consideration the local government considers appropriate.	The City can determine whether there are any other planning considerations that are relevant.

Having regard to **Table 4** above, the proposal appropriately addresses the relevant matters to be given due regard as set out in the Deemed Provisions.

4.3 DRAFT CENTRAL MANDURAH ACTIVITY CENTRE PLAN 1

The subject land is subject to the Draft ACP1 Central Mandurah Activity Centre Plan (**Draft ACP1**) and sits within the "Commercial Mixed Use" as shown in **Figure 4** below.

The Draft ACP1 is a document that is to be given due regard in the assessment of the application but is not ultimately binding on a decision-maker.

Land use permissibility is to be guided by Table 2 'Land Use Table' of the Draft ACP1.

A "Recreation Private" use falls under the 'Dining & Entertainment' Grouped Land Uses within Table 2 'Land Use Table' of Draft ACP1 and is a "P" Permitted Use in the "Commercial Mixed Use" zone. It is, therefore, capable of approval.

A "Shop" use falls under the "Retail" Grouped Land Uses within Table 2 'Land Use Table' of Draft ACP1 and is a "P" Permitted Use in the "Commercial Mixed Use" zone. It is, therefore, capable of approval.

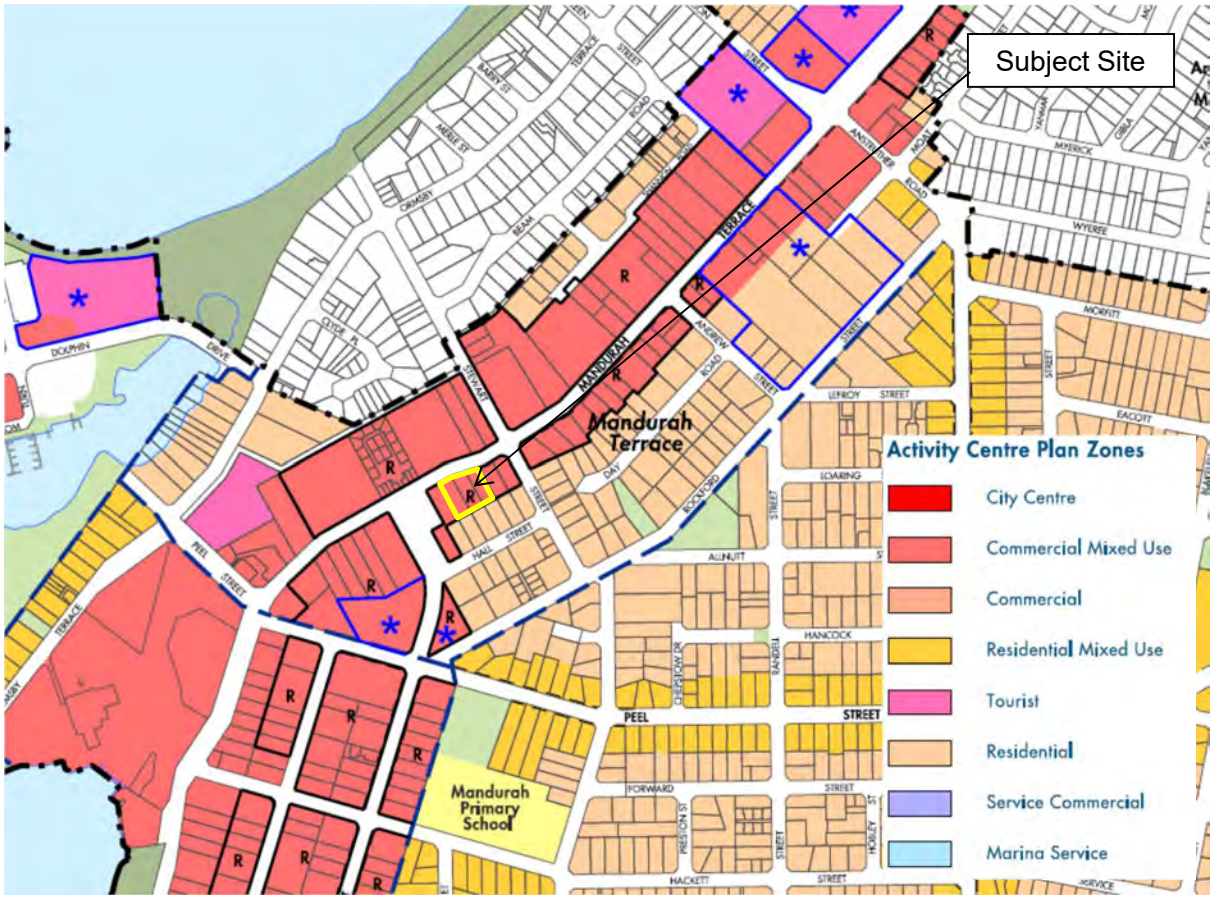


Figure 4: **Draft ACP1 Map Extract (supplied by City of Mandurah)**

Table 5 below provides an assessment against the relevant development standards of the Draft ACP1.

Table 5: Development Standards of Draft ACP1

Development Standard	Response
Street Setback *as per Plan 7 Street Setbacks Plan*	The subject land does not have any prescribed street setback on Plan 7 Street Setbacks Plan. The proposed setback is considered appropriate. **Complies**
Building Height *Minimum and maximum building heights shall be determined as per Plan 5.* *21m (5 storey) maximum* *2 storey minimum*	The proposed development accords with the minimum and maximum building height requirements of the Draft ACP1. **Complies**
Vehicle Parking & Access *Restricted Vehicle Access/Crossover as per Plan 8.* *Where a crossover location has not been identified within Plan 8, only one vehicle crossover per lot shall be permitted except where it can be demonstrated that no adverse effects on pedestrian and vehicle movement would result.*	The subject land does not have any restricted vehicle access/crossover requirements in Plan 8. The proposed crossover location is considered the best location, being the furthest possible position away from the Sutton Street roundabout and at a position where it does not conflict with the vegetated island in the middle of Mandurah Terrace.

Development Standard	Response
	The proposal only involves one (1) crossover location, in compliance with the Draft ACP1. **Complies**
Car Parking Ratios *Car Parking to be provided as per Table 3 of the Draft ACP1.* *Retail (incl restaurants, music venues) 3 bays per 100m2.*	The proposed Recreation Private use is not specifically listed in Table 3 of the Draft ACP1. It is considered appropriate to utilise the 3 bays per 100m^2 ratio for the entire development. The car parking requirement is therefore: 1842m^2 NLA / 100 x 3 = **55.25 car parking bays**. The site has been designed to provide 55 car parking bays (plus 2 motorcycle bays) and is considered to comply with the Draft ACP1 requirements. It should be noted, for comparison purposes, that ordinarily, Schedule 2 of LPS12 requires 1 parking bay per 4 patrons for a Recreation Private use. As the proposed development has been designed for a capacity of approximately 60 members on site at any one time, this would require (60/4) 15 car parking bays. Evidently, the proposed development far exceeds this requirement. In the experience of the operator (Ryderwear), providing additional car parking is necessary, as almost always, each patron drives their own vehicle, and it would be more appropriate for car parking spaces to be available for each patron, based on the anticipated maximum occupancy at peak times. **Complies**
*Bicycle **Parking*** *1 space per 500m2 above 1000m2 of floorspace* *4 parking spaces required*	A bike rack is provided outside the development enabling the parking of 4 bikes. **Complies**
Landscaping *A minimum of 10% of the site shall be landscaped.* *A minimum of 1 shade tree per 4 bays.* *Landscaped areas to be at least 1m wide with a minimum area of 2m2.* *Landscaped areas to be reticulated.* *Street trees may be required where none exist.*	The proposal provides for 13% of the site area as landscaping and will allow for 1 shade tree per 4 bays to be provided where possible. All landscaped areas are at least 1m wide and comprise more than 2m^2 in area. All landscaping areas will be reticulated. There is no room for street trees to be planted given the unusual street boundary and verge situation. **Complies**
Noise Attenuation *For commercial uses, measures are required to control noise emissions generated by a use.* *The City of Mandurah may require a detailed acoustic report to be submitted along with the development application.*	An Acoustic Assessment has been completed – refer **Annexure 5**. **Complies**

Development Standard	Response
Built Form *Street Interface* *The street façade of the development shall be designed to promote surveillance of the street and include windows, doors and balconies at upper levels and have their main entrance clearly visible and directly accessible from the street.*	The proposed development includes a façade which promotes surveillance of the street by way of large windows and main door entry facing Mandurah Terrace. **Complies**
Articulation and Detailing *Buildings are to be articulated, particularly at pedestrian level.* *Colour, texture, material and detail are important to provide scale and visual interest.* *A quality architectural design is to be provided.*	The proposed development has a quality design with a range of building materials and colours and articulation. **Complies**
On Site Services *External ducting, air conditioners, plants, pipes, lift over-runs, service doors and similar building services must be screened from public view and adjacent properties and incorporated into the building at the initial design stage.* *Service areas shall be discrete with rubbish bins, clothes drying areas, plant and equipment screened from view.*	All site services will be incorporated into the building and have been considered. The bin store will be screened by proposed vegetation/landscaping. **Complies**
Verandahs and Awnings *A cantilevered verandah, canopy or awning shall be provided to all ground floor tenancies adjacent to an identified active or semi-active street, and to all commercial development, to a minimum height of 3m above the pedestrian footpath, with a minimum width of 2.5m.*	The proposed development has a small awning over the main entry area, and there are fins proposed along the windows for sun protection.
Materials and Colours *Mandurah is a coastal town in a climate with hot summer days, therefore the choice of external materials should take this into consideration; and* *A schedule of proposed exterior colours and materials is to accompany applications for development approval.*	The proposed development will have materials and colours consisting of light grey concrete panels with vertical rib pattern, white painted finish concrete and some darker grey painted finish concrete to provide contrast. Overall, the materials and finishes selection has taken the Mandurah climate into consideration. Materials and Colours Schedule is included on the Elevation Plans. **Complies**
Public Art *Commercial and mixed-use developments with an estimated cost of construction of over $1,000,000 are required to provide a public art contribution to the value of 1% of the total cost of development.*	The development approval is expected to be conditioned with a requirement to provide a 1% public art contribution. **Complies**
Front Fencing *Front fencing shall not exceed 1.20m height.*	No front fencing is proposed. **Complies**

Development Standard	Response
Signage *All signage is to be in accordance with the relevant Scheme or Local Planning Policy requirements.*	The proposed signage complies with the City's signage policy – refer Part 4.4 of this Report. **Complies**
Crime Prevention Through Environmental Design *Building and landscape design is to avoid the formation of 'blind' spaces, corners or alleys that cannot be seen from within the most used rooms of a building or from approach paths.*	The proposed car park is in full view of the building which has large windows as well as upper floor active spaces. The car park is also in view of Mandurah Terrace which is a main road in the locality. **Complies**

4.4 LOCAL PLANNING POLICIES

4.4.1 Local Planning Policy No. 2 - Signage

Table 1 'Exempt Signage' of the City's Local Planning Policy No. 2 – Signage sets out the following requirements for Wall Signs:

- *Maximum of one wall sign per elevation;*
- *Sign is attached or directly painted on the external wall of the building;*
- *The height of the sign does not exceed 1.2 metres and the length does not exceed two thirds of the length of the frontage of the building or tenancy, whichever is less;*
- *The sign does not protrude past the limits of the façade or fascia of a building or tenancy portion.*

The proposed signs vary the Table 1 requirements of the City's Signage Policy as follows:

- There are two (2) Wall Signs proposed on the main (northern) elevation, exceeding the requirement of one wall sign per elevation.
- The height of the Wall Signs exceed the maximum height of 1.2m.

However, given that there are no other signs proposed on the other facades, the proposed two signs on the main (northern) façade are considered appropriate. The sign sizes are also considered appropriate given the scale of the development and building frontage.

Part 3 of the Signage Policy advises that Development Approval is required for all signage that varies the requirements of Table 1. The assessment criteria for signs that vary the requirements of Table 1 are as follows:

a) The scale and design of the proposed signage is compatible with the character of the locality and the general land use of the area.

b) The scale and design of the proposed signage is in keeping with the scale and design of the building and does not obscure architectural features.

c) *The proposed signage does not block views, does not interfere with the safe movement of pedestrian traffic, or affect the amenity of adjoining properties.*

d) *The proposed signage represents a cohesive and attractive visual statement.*

e) *The proposed signage ensures that visual surveillance of the street is maintained or enhanced.*

The proposed Wall Signs are considered to be compatible with the character of the locality and is considered to be in keeping with the scale and design of the proposed building.

The proposed signage does not block views or interfere with the safe movement of vehicles or pedestrians or affect the amenity of adjoining properties.

The proposed signage is balanced and limited, and results in an attractive outcome.

Accordingly, it is considered that the proposed Wall Signs comply with the assessment criteria of the Signage Policy and are capable of approval.

4.5 STATE PLANNING POLICIES

4.5.1 WAPC SPP 7.0 – Design of the Built Environment

Table 6 below provides a response to the 10 Design Principles of State Planning Policy 7.0 Design of the Built Environment (**SPP7.0**).

Table 6: Assessment of Design Principles of SPP7.0

SPP 7.0 Design Principles	Response
1. Context and character *Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.*	The context of the area can be described as a mix of residential and commercial uses on a main-street providing access to the main Mandurah foreshore area. The area has a generally average level of amenity with some good development and some in need of redevelopment. The proposed development is considered to align with the future intentions of the area. The proposed development is modern in its design, with large glazing areas, tilt-up concrete construction that will be painted and articulated with rebate and groove features, with an appropriate colour/material finish.
2. Landscape quality *Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.*	The proposed landscaping of the site will contribute to the site's overall amenity and will provide for tree planting and shading along with beautification. This provides a quality setting and periphery to development within the precinct.
3. Built form and scale *Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between*	The proposed two- storey development height aligns with the built form of other developments within the precinct and conforms to the minimum built form height requirement of the planning framework.

SPP 7.0 Design Principles	Response
existing built form and the intended future character of the local area.	The built form, scale and height of the proposed development is appropriate to its setting and appropriate for the development type.
4. Functionality and build quality *Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life-cycle.*	The design of the development is functional for its purpose, with large areas devoted to open plan gym space. The car park area is functional and easy to navigate.
5. Sustainability *Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.*	The proposed building has been designed to support solar panels on the roof and this is intended to ensure sustainable electricity consumption. The development has been designed with large windows on northern and western facades for the purpose of natural light and natural ventilation.
6. Amenity *Good design provides successful places that offer a variety of uses and activities while optimising internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.*	The proposed development will contribute to the variety of attractive uses and activities in the area. The proposed building will also contribute to an attractive streetscape along Mandurah Terrace through an attractive building design and landscaping areas. Extensive glazing is also featured on the main building facades that face the public realm to provide natural light for the facility while also contributing to passive surveillance.
7. Legibility *Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.*	Clearly identifiable pathways are provided to the development from the car parking areas. The proposed crossover to Mandurah Terrace will be easily identifiable and is in an appropriate location.
8. Safety *Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.*	The building design maximises opportunities for casual surveillance over the adjacent roadways and car parking areas through the use of large window areas on the building. The 24/7 operation of the facility also promotes safety as there will be a level of activity on-site at all hours. The car park will be appropriately lit at night time.
9. Community *Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.*	The development responds to a growing need for additional fitness facilities and will provide a high-quality environment for those that use the facility.
10. Aesthetics *Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.*	Significant effort has been put into the design of the facility to ensure that it presents aesthetically and results in an attractive and inviting building that has interesting design elements and varying colours and materials. Overall, it is considered that the proposed development provides a positive contribution to the visual amenity of the streetscape and public realm.

As a result, it is considered that the proposed development complies with the Design Principles of SPP7.0.

5.0 CONCLUSION

Hidding Urban Planning seeks Development Approval for a proposed “Recreation Private” (Gym) and “Shop” Development at Lots 11-13 (#117-121) Mandurah Terrace, Mandurah.

In summary, the proposed development warrants approval for the following reasons:

- The proposed development is generally compliant with the development standards and requirements of the City of Mandurah Local Planning Scheme No. 12.
- The proposed “Recreation Private” and “Shop” uses are capable of approval under the Draft Central Mandurah Activity Centre Plan 1.
- The proposed development provides for the new development of the existing site, which is currently vacant.
- The proposed development is supported with expert traffic and acoustic assessments and stormwater design, demonstrating compliance with the relevant technical requirements.

Having regard to the above, the proposed development should be supported and approved.

For these reasons, and considering the assessment contained within this report, we respectfully request that the City of Mandurah have regard to the merits and broader benefits of the proposal when undertaking its assessment of the application and to recommend approval to the Metro Outer JDAP, subject to reasonable conditions.

Hidding.
URBAN PLANNING

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PO Box 920 Subiaco WA 6904
hidding.com.au

ANNEXURES

ANNEXURE 1

CERTIFICATES OF TITLE

ANNEXURE 2
DEVELOPMENT PLANS

ANNEXURE 3

TRANSPORT IMPACT STATEMENT

ANNEXURE 4

STORMWATER MANAGEMENT PLAN

ANNEXURE 5

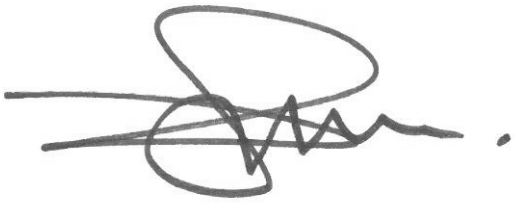
ACOUSTIC ASSESSMENT

Design Review Report

117-121 Mandurah Terrace, Mandurah
Design Review 01

June 2024

Document Set ID: 6291595
Version: 1, Version Date: 14/06/2024

Design Review Report		
Subject	117-121 Mandurah Terrace, Mandurah – **Design Review 01**	
Date	2024-04-02	
Time		
Location	City of South Perth	
Design Reviewers	Name Dominic Snellgrove Simon Venturi Steven Smyth Denise Morgan	 Chair Panel Member Panel member Panel Member
Proponent	Hidding Urban Planning	
Project Team	Nic Hidding	
Planning Authority	City of Mandurah	
Stakeholders		
Declarations	None	
Briefings		
Relevant Authorities Project Team	City of Mandurah Aaron Lucas Paige Paskov Tom Foulds	
Design Review Report endorsement		
Reviewer's signature	 (Name) Dominic Snellgrove	

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Introductory Comments		
Design quality evaluation		
		Supported
		Pending further attention
		Not yet supported
		Yet to be addressed
Strengths of the Proposal		• A comprehensive and instructive submission and presentation. • Comprehensive site context study • An important entry gateway site to Mandurah • Contemporary and distinctive architectural expression and materiality. • High levels of ground floor streetscape transparency. • Community focused health and fitness provided 24/7 • Suitable and appropriate 2 storey-built form presence with an emerging contemporary aesthetic • Functional floor space arrangement • 30kw roof solar proposed
Principle 1 **Context and character**		*Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.*
		a) Whilst the proposed design is contemporary and attractive it is located in a set back position from the street with the front set back dominated by parking and the entry door remotely accessed rom the public domain across a path that traverses the car park vehicle lane. b) The set back nature of the built form with car parking situated in front is not consistent with the City of Mandurah's vision for the street.
Recommendations		**1. Panel support is contingent on relocating the built form to engage with Mandurah Terrace and sleeving the car parking behind the built form and within the undercroft.** **2. Removing the car parking from the front of the building and setting the built form forward to engage with the public realm will allow for a more generous landscape zone, in the place of the car bays, to frame the building more successfully.** **3. Setting the built form forward towards the public domain will also result in a more visible and legible entry.**
Principle 2 **Landscape quality**		*Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.*
		a) The landscape plan is preliminary. b) There is no indication that a landscape professional has been appointed. c) The set back built form and the location of car parking in front of the building limits the extent of landscape that can be deployed across the front of the building to frame it. d) There is no tree canopy proposed within the car park.
Recommendations		**1. Consider appointing a landscape professional** **2. Removing the car parking from the front of the building and setting the built form forward to engage with the public realm will allow for a more generous landscape zone to frame the building more successfully.** **3. Consider additional tree canopy within the car park bays to the rear.**

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Principle 3 **Built form and scale**		*Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.*
		a) The built form and scale are supported. c) However, whilst the proposed design is contemporary and attractive it is located in a setback position from the street with the front set back dominated by parking and the entry door remotely accessed from the public domain across a path that traverses the car park vehicle lane.
Recommendations		**1. Panel support is contingent on relocating the built form to engage with Mandurah Terrace and sleeving the car parking behind the built form and within the undercroft.**
Principle 4 **Functionality and build quality**		*Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life-cycle.*
		a) The proposal is function and well arranged b) However, the way in which the built form is arranged on site results in a duplication of single sided vehicle aisles with a resulting excess of vehicle roadway. c) The absence of a roof plan and section makes it difficult to assess the impact of plant equipment.
Recommendations		**1. Consider relocating the built form to engage with Mandurah Terrace and sleeving the car parking behind the built form and within the undercroft. This will result in a double loaded vehicle aisle at the rear which will halve the amount area of internal road proposed.** **2. Illustrate where the HVAC plant/condensers are to be located and confirm they are fully screened from the public and private domain.**
Principle 5 **Sustainability**		*Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.*
		a) An ESD professional does not appear to have been consulted. b) Whilst the initiatives outlined in the presentation have the capacity to offer a successful ESD outcome it is not clear what commitments are being considered. c) The roof plan does not illustrate the location and extent of solar PV's.
Recommendations		**1. The Proponent is encouraged to engage an ESD professional and develop a preliminary concept proposal with quantifiable commitments including PV's, EV chargers, electrification and energy reduction initiatives**
Principle 6 **Amenity**		*Good design optimises internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.*
		a) The project offers the capacity for high levels of visitor amenity. b) Bicycle parking does not appear to have been considered
Recommendations		**1. Consider providing bicycle parking**
Principle 7 **Legibility**		*Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.*
		a) Whilst the proposed design is contemporary and attractive it is located in a setback position from the street with the front set back dominated by parking and the entry door remotely accessed from the public domain across a path that traverses the car park vehicle lane.
Recommendations		**1. Setting the built form forward towards the public domain will result in a more visible and legible entry.**

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Principle 8 **Safety**		*Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.*
		a. The front of the building enjoys high levels of passive surveillance. b. However, the rear and undercroft car park lack any real or perceived surveillance.
Recommendations		**1. Consider introducing additional fenestration to the undercroft and to the rear elevation.**
Principle 9 **Community**		*Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.*
		a) In a project of this scale the best thing that can be done for the community is to provide an active and engaged streetscape with effective passive surveillance.
Recommendations		**1. Consider shifting the built form towards thew public realm and engaging with the streetscape to provide high levels of streetscape engagement and passive surveillance.**
Principle 10 **Aesthetics**		*Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.*
		a) The Panel are generally supportive of the aesthetic considerations including built form and materiality. b) The proposal has the capacity to offer an attractive and distinctive presence at the street. c) The Panel are supportive of the 'flat roof' approach. However, some variation in the parapet height may provide some benefit.
Recommendations		**1.** Consider some modest modification to areas of the parapet facing the street.

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Concluding Remarks

- The design proposal has real potential to create a positive impact on the streetscape and provide an effective presence on a gateway and entry site to Mandurah.
- The architectural expression is contemporary and well managed.
- However, Panel support is contingent on relocating the built form to engage with Mandurah Terrace and sleeving the car parking behind the built form and within the undercroft. This single move has the capacity to unlock the site and address all the red flag issues raised in this report.
- In addition to that, the Proponent is invited to consider appointing an ESD and landscape professional to address Principles 2 and 5

Design Review progress

	Supported
	Pending further attention
	Not yet supported
	Yet to be addressed

	DR1	*DR2*	*DR3*
Principle 1 - **Context and character**			
Principle 2 - **Landscape quality**			
Principle 3 - **Built form and scale**			
Principle 4 - **Functionality and build quality**			
Principle 5 - **Sustainability**			
Principle 6 - **Amenity**			
Principle 7 - **Legibility**			
Principle 8 - **Safety**			
Principle 9 - **Community**			
Principle 10 - **Aesthetics**			

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PART D – OTHER BUSINESS

1. State Administrative Tribunal Applications and Supreme Court Appeals

The DAP notes the status of the following State Administrative Tribunal Applications and Supreme Court Appeals:

Current SAT Applications				
File No. & SAT DR No.	**LG Name**	**Property Location**	**Application Description**	**Date Lodged**
DR193/2023 DAP/23/02545	Shire of Serpentine Jarrahdale	Lot 218 (No.575) Abernethy Road, Oakford	Proposed Educational Establishment	19/12/2023
DR94/2024 DAP/23/02623	City of Cockburn	Lot 9501 Gaebler Road, Hammond Park	Mixed Use Commercial Development	27/06/2024

Current Supreme Court Appeals				
File No.	**LG Name**	**Property Location**	**Application Description**	**Date Lodged**
DAP/23/02496 CIV 2251 of 2023	City of Swan	Lot 2 & 67 (No.163) and Lot 18 (No.159) James Street, Guildford	Proposed redevelopment of Vaudeville Theatre	03/11/2023

2. General Business

3. Meeting Closure

In accordance with Section 7.3 of the DAP Standing Orders 2024 a DAP member must not publicly comment on any action or determination of a DAP.