Metro Inner Development Assessment Panel Agenda

Meeting Date and Time: Thursday, 19 December 2024; 9:30am
Meeting Number: MIDAP/53
Meeting Venue: 140 William Street, Perth

A live stream will be available at the time of the meeting, via the following link:
MIDAP/53 - 19 December 2024 - City of Nedlands - City of Stirling

PART A – INTRODUCTION

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

PART B – CITY OF NEDLANDS

1. Declarations of Due Consideration
2. Disclosure of Interests
3. Form 1 DAP Applications
   3.1 Lots 3, 4 & 5 (No.90) Stirling Highway, Nedlands - Commercial, Development – DAP/24/02769
4. Form 2 DAP Applications
5. Section 31 SAT Reconsiderations

PART C – CITY OF STIRLING

1. Declarations of Due Consideration
2. Disclosure of Interests
3. Form 1 DAP Applications
   3.1 Lot 6 (308) Main Street, Balcatta – Child Care Premises – DAP/24/02749
   3.2 Lot 15 (118) Flora Terrace, North Beach – Mixed use development – DAP/24/02744
4. Form 2 DAP Applications
5. Section 31 SAT Reconsiderations

PART D – OTHER BUSINESS

1. State Administrative Tribunal Applications and Supreme Court Appeals
2. 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)
Eugene Koltasz (Deputy Presiding Member)
John Syme (Specialist Member)

Part B – City of Nedlands
Cr Fergus Bennett (Local Government DAP Member, City of Nedlands)
Cr Kerry Smyth (Local Government DAP Member, City of Nedlands)

Part C – City of Stirling
Cr Suzanne Migdale (Local Government DAP Member, City of Stirling)
Cr Michael Dudek (Local Government DAP Member, City of Stirling)

Minute Secretary

Laura Simmons (DAP Secretariat)

Officers in Attendance

Ashlee Kelly (DAP Secretariat)

PART A – INTRODUCTION

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PART B – CITY OF NEDLANDS

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3. Form 1 DAP Applications

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4. Form 2 DAP Applications

Nil.

5. Section 31 SAT Reconsiderations

Nil.

Part B – item 3.1 - LOTS 3, 4 AND 5 (No. 90) STIRLING HIGHWAY, NEDLANDS – COMMERCIAL DEVELOPMENT

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Metro Inner Development Assessment Panel	
Local Government Area:	City of Nedlands	
Applicant:	Urbis	
Owner:	Aldi Foods Pty Ltd	
Value of Development:	$ 12 million ☒ Mandatory (Regulation 5) ☐ Opt In (Regulation 6)	
Responsible Authority:	City of Nedlands	
Authorising Officer:	Tony Free	
LG Reference:	DA24-98329	
DAP File No:	DAP/24/02769	
Application Received Date:	2 October 2024	
Report Due Date:	24 December 2024	
Application Statutory Process Timeframe:	90 Days	
Attachment(s):	1. Location Plan 2. Development Plans 3. Schedule of Submissions 4. Referral Response (Main Roads WA) 5. DRP Minutes 6. Applicant Planning Report 7. Waste Management Plan (18 November 2024) 8. Acoustic Report (18 November 2024) 9. Sustainable Design Management Plans (18 November 2024) 10. Landscaping Plan (18 November 2024) 11. Traffic Impact Assessment & Sightline Assessment (28 October 2024)	
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

It is recommended that the Metro Inner DAP resolves to:

1. **Defer** the determination of DAP Application DAP/24/02769 for a period of up to 100 days to address the following matters:

   i. In accordance with Clause 67(2)(t) of the Deemed Provisions of the Planning and Development (Local Planning Schemes) Regulations 2015, insufficient information has been provided to comprehensively assess whether the traffic generated by the proposal is likely to have a negative effect on traffic flow and safety within the local road network.
   ii. It is unclear if the proposal satisfies the objective of Local Planning Policy 4.1: Parking as insufficient information has been provided to justify and assess the adequacy of the amount of vehicle parking bays on site.
   iii. Allow time to receive and consider transport planning related comments and recommendations pertaining to the development from Main Roads Western Australia.
   iv. In accordance with Clause 32.4(5) of the City of Nedlands Local Planning Scheme 3, Element O4.12.2 is considered to be achieved where a total of 50% of the trees are endemic. Further time is required to allow for the preparation of an amended landscaping plan that includes 50% endemic tree species.

Reasons for Responsible Authority Recommendation

N/A

Details: outline of development application

Region Scheme	Metropolitan Region Scheme
Region Scheme - Zone/Reserve	Urban (zone) Primary Regional Road (reserve)
Local Planning Scheme	City of Nedlands, Local Planning Scheme 3
Local Planning Scheme - Zone/Reserve	Mixed Use (R-AC1)
Structure Plan/Precinct Plan	N/A
Structure Plan/Precinct Plan - Land Use Designation	N/A
Use Class and permissibility:	Shop – P Liquor Store – Small – P Consulting Rooms – P Office – P Restaurant/Café – P Convenience Store – P Medical Centre - D
Lot Size:	Lot 3: 1,264.6m^2 Lot 4: 1,656.7m^2 Lot 5: 1,737.6m^2 Total: 4,658.9m^2
Existing Land Use:	Vacant
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 the development of a single storey commercial building with an undercroft carpark. The development site is comprised of three lots with a total frontage of 60m to Stirling Highway. The eastern most lot (Lot 5) is located on the corner of Florence Road and Stirling Highway, providing the development site with an 86m frontage to Florence Road. The proposal includes the following:

- A shop tenancy (ALDI – supermarket) with a retail floor space of 1,100m^2.
- A 415m^2 'back of house' area for the shop tenancy.
- Six separate commercial tenancies with a gross floor area of 783m^2, these tenancies will operate separate from the shop (supermarket) use.
- An undercroft vehicle parking area providing 94 car parking bays and eight bicycle parking spaces.
- A 'pocket park' in the north-east corner intended for public use.
- Vehicle access is proposed from Florence Road, with no access available from Stirling Highway.
- A 6.1m wide strip of land along the southern boundary that is proposed as a vehicle access area and future easement area for a laneway connecting Florence and Dalkeith Roads.

The application has been assessed using the development plans submitted 18 November 2024 (Attachment 2).

Proposed Land Use	Shop – P Liquor Store – Small – P Consulting Rooms – P Office – P Restaurant/Café – P Convenience Store – P Medical Centre - D
Proposed Net Lettable Area	Shop - 1,461.3m^2 Commercial tenancies – 783m^2 Total: 2,244m^2
Proposed No. Storeys	One storey (with an undercroft)
Proposed No. Dwellings	Nil

Background:

<u>Previous Approvals</u>

On 14 November 2018, the Metro West Joint Development Assessment Panel approved a development application at 90 Stirling Highway for "Retail and Restaurant".

The proposal was similar in scope to the subject development application and included a large supermarket with smaller retail tenancies.

The approved development comprised the following:

- A shop tenancy (ALDI – supermarket) with a retail floor space of 1,213m^2.
- A 400m^2 'back of house' area for the shop tenancy.
- Six separate commercial tenancies with a gross floor area of 624m^2, these tenancies were to operate separate from the shop (supermarket) use.
- An undercroft vehicle parking area providing 90 car parking bays.
- A 'pocket park' in the north-east corner intended for public use.

At the time, the City initially recommended the application be refused due to insufficient information and lack of clarity regarding the development's traffic generation and impact on the road network. Subsequent to the recommendation, the City and the applicant "co-engaged" a third-party traffic engineering consultant to review information and contentions from the City and the applicant. Highlighted by this third-party review were issues related to the traffic movements from Florence Road into the site and the need for the contemplation and commitment of a rear laneway between Florence and Dalkeith Road. After the third-party traffic engineering review, the DAP resolved to approve the development subject to traffic related conditions that would address the traffic issues raised.

On 11 November 2019, the Metro West Joint Development Assessment Panel approved an amendment to the development application at 90 Stirling Highway for "Retail and Restaurant". The amendment was purely administrative as it sought to rationalise the substantial commencement condition between the approval issued under the City's (then) Town Planning Scheme 2 and the MRS.

Site Context

The development site comprises three lots within the street block bound by Dalkeith Road and Florence Road. The site accommodated the Captain Stirling Shopping Centre, which was demolished in June 2023. The demolition of the site resulted in the removal of a mature Moreton Bay fig tree. The site is currently vacant and no other notable trees or vegetation are present on site. The proposal involves the removal and replacement of four street trees on Stirling Highway that were planted in early 2019.

The subject site has two road frontages. It has a 60m primary frontage to Stirling Highway to the north, and a secondary 86m frontage to Florence Road to the east. Stirling Highway has strategic significance as a recognised 'urban corridor' by the Perth and Peel @3.5 million planning framework and is a high frequency transport route. There are five bus stops on Stirling Highway within 170m of the site.

The property has a notable slope across the site, falling 2m from the northeast to the southwest. A 3m wide strip of land within the lots across the entire Striling Highway frontage is reserved for 'Primary Regional Road' purposes under the MRS. The southwest portion of the site is bound by a drainage sump and the southwest is bound by lots with a Residential R160 zoning. The lot to the southwest accommodates a single storey dwelling.

The immediate locality along Stirling Highway is characterised primarily by commercial buildings up to three storeys in height. The buildings have a range of architectural styles and usually feature prominent commercial signage.

80 Stirling Highway (Woolworths)

An application for a commercial development at 80 Stirling Highway, Nedlands was submitted in August 2019. The application proposes a large, two storey shop use (Woolworths supermarket) and several, separate commercial tenancies. After multiple iterations of the development plans, the Metro Inner North Joint Development Assessment Panel approved the development in February 2023. The development proposes to retain the State Heritage listed Captain Stirling Hotel and create a town centre precinct on the site.

Traffic and access was a fundamental consideration for the development. Significant negotiation was undertaken to create a southern laneway on the 80 Stirling Highway site to be used as a public vehicle accessway. The laneway would facilitate movement of traffic and provide a dedicated entry and exit point for delivery vehicles and waste management. It would also address overall concerns related to traffic safety and existing congestion issues along Stirling Highway and address Main Roads' original concerns that direct access from individual lots to the Highway should be removed.

Due to overall traffic generation and an increase in right turns into Stanley Street from Stirling Highway, a key condition of the 80 Stirling Highway development approval involved the ceding of land from the 80 Stirling Highway site to facilitate the widening of Stirling Highway.

Legislation and Policy:

Legislation

- Planning and Development Act 2005
- Planning and Development (Local Planning Schemes) Regulations 2015
- Planning and Development (Development Assessment Panels) Regulations 2011
- Metropolitan Region Scheme
- City of Nedlands Local Planning Scheme No.3

State Government Policies

- State Planning Policy 4.2 – Activity Centres
- State Planning Policy 7.0 – Design of the Built Environment (SPP7.0)

Planning Codes

- Residential Design Codes Volume 2 – Apartments (R-Codes)

Local Policies

- Local Planning Policy – Waste Management
- Local Planning Policy – Consultation of Planning Proposals
- Local Planning Policy – Parking
- Local Planning Policy – Dalkeith Road to Stanley Street Laneway

Strategies

- City of Nedlands Local Planning Strategy
- Nedlands Stirling Highway Activity Corridor Strategy

Consultation:

Public Consultation

In accordance with the City's Local Planning Policy 7.3 Consultation of Planning Proposals (LPP 7.3), the plans received 25 September 2024 were advertised for a period of 28 days, from 27 September 2024 to 25 October 2024, in the following manner:

- Letters sent to all City of Nedlands and City of Perth landowners and occupiers within a 200m radius of the site;
- A sign on site was installed at the site's street frontage for the duration of the advertising period;
- An advertisement was published on the City's website with all documents relevant to the application made available for viewing during the advertising period;
- An advertisement was placed in The Post newspaper published on 4 October 2024; and
- A community information session was held by City Officers on 9 October 2024, no community members attended this session.

At the close of the advertising period, the City received 19 submissions, 13 in support, three objecting and three making general comment. A full schedule of submissions and applicant responses are provided at **Attachment 3**. A summary of the objections is provided below in **Table 1**. All submissions on this proposal have been given due regard in this assessment in accordance with Clause 67(y) of the *Planning and Development (Local Planning Schemes Regulations) 2015.*

Table 1: Public Consultation	
Matter Raised	**Officer Comment**
The proposal does not satisfy the objectives of the Mixed Use zone or NSHAC Strategy as it does not provide a residential component.	The absence of dwellings included in the proposal is supported as the retail and commercial opportunities provided are complementary to and will ultimately help facilitate the development of additional dwellings in close proximity to the site. The primary goal of the NSHAC Strategy is the activation of the Neighbourhood Centre. The development proposes eight commercial tenancies, all with visible and direct street access. The design results in attractive, activated and accessible spaces that reinforce the strategic importance of the Neighbourhood Centre. See below for further discussion.
The height of the building is insufficient in response to the desired medium and high rise character of the locality.	Regarding the height of the development, the proposal is, on balance, an appropriate response to the existing and emerging character of the area. The building presents at a human scale which

	makes it approachable. Furthermore, there are other approved developments within the Neighbourhood Centre which provide additional height to compensate for the low-rise nature of the development. See below for further discussion.
Parking is insufficient.	It is unclear if the parking bays provided are adequate for the commercial development proposed. Further information regarding parking bay provision is requested.
The two-storey tower element is excessive in height.	The RAC-1 density coding and NSHAC Strategy contemplate a preferred height of at least four storeys for the site. The two storey tower element of the development is consistent with the existing built form in the area, which is characterised by commercial buildings one to three storeys in height.
The signage location proposed is too prominent and does not respect the mixed use nature of the street.	The scale and nature of the proposed signage is consistent with commercial tenancies and supermarket developments. Commercial signage is an expected and accepted feature of activity centres and is important for legibility and wayfinding. The size and placement of the signage is not distracting and will not impact vehicle safety or sightlines.
The parking lot should be serviced by a travelator in addition to lifts.	The development remains accessible through the provision of two lifts from the undercroft car park to the upper forecourt and shop tenancy. A travelator is not a required feature of the development.
The development should include further planting and/or space for the community.	The site is proposed to be 9.6% deep soil area, virtually consistent with the expected landscaping provision for developments in the R-AC1 density code. The pocket park in the north-east corner of the site has been reconfigured to be more open and provide bench seating to encourage use.
The traffic issues related to entry and exit from Stirling Highway, Florence Road and Dalkeith Road will create congestion and reduce safety.	The TIA provided with the development application may be missing fundamental information to accurately assess the provision of car parking bays and traffic generation from the development. As such the proposal is not supported in its current form without the provision of additional information to verify that there will be no unreasonable adverse impact on the locality. See below for further discussion.
6.1m is too narrow for the future laneway between Florence and Dalkeith Road.	While 6.1m is not consistent with the 10m envisioned by LPP 4.2 Dalkeith to Stanley Street Laneway, 6.1m is sufficient width to provide a single carriageway with two lanes.
The development is supported.	Noted.

Amended plans were provided on 18 November 2024 which included the following changes:

- Alteration to the lift tower and troller bay location

- Reconfiguration of the pocket park with additional bench seating
- Relocation of the tenancy 7 entrance
- Additional windows added to the back of house office

The amendments were minor in nature and did not trigger the need for formal re-advertising of the proposal.

Referrals/consultation with Government/Service Agencies

Main Roads WA

As the lots are affected by a Primary Regional Road (PRR) reservation, the application was referred to Main Roads WA (MRWA) for comment in accordance with Instrument of Delegation DEL 2022/03. MRWA provided comment on 9 October 2024 requesting additional information related to an updated Traffic Impact Assessment (TIA) and the provision of SIDRA Intersection data (**Attachment 4**). A response to this additional information request was provided by the applicant on 28 October 2024 with the provision of an updated TIA (Attachment 11). At the time of writing, MRWA has not provided a formal response to this additional information, nor has MRWA made a recommendation for the determination of the development application.

Design Review Panel Advice

The development was reviewed by the City's Design Review Panel on two occasions with a final review conducted by the Chair of the DRP. Full DRP Minutes are provided at **Attachment 5**. A summary of the Panel's evaluation of the proposal at each stage of the review process is provided in **Table 2** below.

Table 2: DRP Design Quality Evaluation			
	Supported		
	Further Information Required		
	Not supported		
SPP 7.0 Principles	1 July 2024	21 October 2024	Chair Review 22 November 2024
1. Context and Character			
2. Landscape Quality			
3. Built Form and Scale			
4. Functionality and Built Quality			
5. Sustainability			
6. Amenity			
7. Legibility			
8. Safety			
9. Community			
10. Aesthetics			

The DRP Chair provided the following comment on conclusion of the final review:

*Overall, the applicant has responded very constructively and positively to the DRP advice. I **support** the current proposal but with the qualification that the proposal*

seems to be low rise supermarket shopping with small scale commercial tenancies. From a DRP perspective the proposal is supportable for this reason, yet the pre-eminence of the applicable planning scheme may outweigh this support.

On balance, the proposal responds appropriately to the desired land use and built form character envisioned for the locality. The development's response to the requirements of the City's planning scheme and strategic planning framework are discussed further below.

Planning Assessment:

State Planning Policy 4.2 – Activity Centres

The site is within an area that is identified as a 'Neighbourhood Centre' by the City's Local Planning Strategy. The role of a neighbourhood centre as outlined in SPP 4.2 is to provide for daily and weekly household shopping needs and facilitate a small range of other convenience services. The preparation of a structure plan for a neighbourhood centre is not expected as stated by the State Planning Policy 4.2 Activity Centres Implementation Guidelines. The development is considered to be consistent with the objectives of a neighbourhood centre for the following reasons:

- All land uses proposed are consistent with desired land uses outlined in SPP 4.2, including: large and small shop, liquor store, office, convenience store, restaurant/café and medical centre.
- The built form of the development reflects the typical urban form for a neighbourhood centre as highlighted by SPP 4.2. The proposal is a compact and cohesive one storey building with a two-storey tower element that complements the surrounding scale of existing buildings.
- The development contributes to the immediate locality as it interacts with and activates the streetscape through a pocket park that integrates seamlessly with the public realm. Further planting of landscaping and street trees along the Stirling Highway frontage contributes to the established green character of the area.

Local Planning Strategy

The City's Local Planning Strategy establishes the Stirling Highway precinct and outlines the vision for this corridor. The development is responsive to the strategies envisioned for the Stirling Highway precinct as:

- The development proposes land uses that are compatible with a broader mixed use zone. The commercial land uses proposed form an agglomeration with the development sites to the immediate east and west of 90 Stirling Highway to create a 'non-residential pocket' as envisioned by the strategy. The strategy acknowledges that the intensity of redevelopment will vary along the Highway and will be dependent on the predominant land use. In this case, the predominant land use is shop (supermarket) with smaller scale shops and offices that are usually no more than two storeys in height, consistent with the proposed development.
- The strategy calls for development along the Highway to incorporate the investigation or consideration of a rear laneway for access to development sites. The proposal includes a 6.1m wide strip of land along the southern

boundary to serve as half of the future Dalkeith Road to Florence Road laneway.

More specifically, as outlined above, 90 Stirling Highway essentially forms part of the identified Captain Stirling neighbourhood centre. This centre is described in the Local Planning Strategy as the Town Centre and the most significant Centre in the City. The Strategy identifies that this centre is to be the largest and most complex mixed-use activity centre in the hierarchy of centres. As a Neighbourhood Centre, the strategy envisions that it is to fulfill a significant local convenience or mixed-use residential anchor role.

A development that includes a large grocery store, such as the one proposed, is consistent with the aims of the Strategy. It is designed to provide significant local convenience in the form of grocery shopping, small administrative and office services, outpatient medical care, and other local retail opportunities. Given the considerable size of the subject site, it is an appropriate location in the Town Centre to accommodate the mix of uses and significant local convenience retail envisaged by the Strategy. Further, the Strategy envisages that the Town Centre will provide an increase of 5500m^2 of retail floor space, with a total of 8000m^2 provided. The proposal provides approximately 2200m^2 of retail floor space, which combines with the approved commercial development at 80 Stirling Highway for a total of approximately 7800m^2 of retail floor space between the two developments. This figure is consistent with the 8000m^2 envisioned and ensures that the development can contribute effectively to the Town Centre function.

<u>Nedlands Stirling Highway Activity Corridor Strategy</u>

The NSHAC Strategy was adopted by the City of Nedlands in March 2024. It applies to land adjacent to and in proximity of Stirling Highway. The NSHAC Strategy is a document used to guide the application of discretion for new development within the area. The Strategy sets broad objectives for the corridor based on the vision and values created by community reference groups. It also incorporates a range of contextual built form analysis and background work carried out by the City over a number of years.

The NSHAC Strategy reinforces the identification and location of the ‘Town Centre’ / Neighbourhood Centre sub-area, which includes the subject development site. The vision for the sub-area is to be commercially focused with a concentration of retail, dining and entertainment uses. It is anticipated that the Town Centre’s built form on the southern side of Stirling Highway will be a maximum of 10 storeys with a ‘preferable’ minimum of four storeys. The sub-area includes objectives for new development that contemplate the creation of engaging and inclusive spaces that underscore the Neighbourhood Centre's significance, emphasising dynamic retail and commercial ground-floor uses. The objectives call for innovative, sustainable designs that integrate with the area's heritage and residential surroundings while encouraging varied high-density developments that maintain the urban canopy.

The proposal achieves the objectives of the Neighbourhood Centre sub-area for the following reasons:

- The development proposes eight commercial tenancies, all with visible and direct street access. The design results in attractive, activated and accessible spaces that reinforce the strategic importance of the Neighbourhood Centre.

- The building features environmentally sensitive design, most notably in the form of a 250kw solar panel system that is projected to provide 100% of the supermarket tenancy's energy needs. The maximum two storey building height and inclusion of the 'chapel red' feature brickwork reflect the character and scale of nearby residential development.
- The development provides a range of intended complementary land uses such as shops, restaurant/cafés, offices and consulting rooms that are compatible with, and provide service to, the surrounding suburb.
- 9.6% of the site is provided as deep soil area to support landscaping and tree growth. Five on-site trees along with an additional feature tree in the north-east corner of the site will contribute to the overall tree canopy and leafy feel of the area.

There is a potential, ostensible conflict between the proposed development and the vision set out in the NSHAC Strategy related to intensity, height and composition of development. More specifically, it could be asserted that the Strategy calls for mixed-use development that is ideally a minimum of four storeys and contains a significant residential component, whereas the development proposed is purely commercial with isolated two storey elements.

A more in-depth inspection of the Strategy suggests that the primary goal of the Neighbourhood Centre sub-area is the activation of the space – as demonstrated by an excerpt from the sub-area vision: "this zone will be the focal point for daily shopping, entertainment and dining along Stirling Highway and will accommodate a broad range of retail and entertainment uses including supermarkets, restaurants, cafes, speciality shops and recreation venues." The Strategy highlights that the key to the activation of the Town Centre is "well-integrated residential development located *nearby,* preferably above and/ or *adjacent* to compatible land uses" (emphasis added).

As above, the Strategy contemplates that residential uses may be located close to the Neighbourhood Centre. As the Strategy proposes the rezoning of nearby land to Residential (see Figure 1 below) there will be an abundance of residential development in proximity to the development. In this scenario, the development site is located 30m from the nearest Residential zoned land to the south, 150m to the east and 180m to the west. These distances are well within the 400m walkable catchment for the future residential development.

Figure 1 - Projected zoning in the NSHAC

Regarding the height of the development, the proposal is, on balance, an appropriate response to the existing and emerging character of the area. The one storey building with a two-storey tower element complements the surrounding structures in the area which are a maximum of three storeys in height. One of the key values of the NSHAC Strategy is to provide developments that are a "human scale and fine grain which makes them approachable". At one storey in height, with at-grade access to the main shop tenancy through the pocket park, the proposal represents human-scale development.

Finally, the lack of a residential component provided through additional height can be considered to be compensated elsewhere in the Neighbourhood Centre. It could be argued that the development approval of three towers at 97-105 Stirling Highway in July 2023 (also referred to as the Chellingworth development) provides the additional height and dwellings that are required for the Neighbourhood Centre. The Chellingworth development features three towers ranging in height from 17 to 24 storeys, containing a total of 332 dwellings. As the now-envisioned height for the Neighbourhood Centre is a maximum of 12 storeys, the postulation is that the Chellingworth development height above 12 storeys has been transferred from the site at 80 Stirling Highway, providing an overall balance in terms of dwelling provision and scale within the Neighbourhood Centre.

Scheme Amendment No. 13

The City is currently progressing Scheme Amendment 13 to LPS 3. Scheme Amendment 13 would formally rezone land within the NSHAC to be consistent with the zoning identified in the NSHAC Strategy, depicted above in Figure 1. Scheme Amendment 13 was presented to Council at its meeting of 26 March 2024 where Council resolved to support the Scheme Amendment subject to modifications. The proposed Scheme Amendment was considered for determination by the Statutory Planning Committee on 21 August 2024 where a recommendation was presumably made to the Minister for Planning who has the final decision. There is no predicted timeframe by which the Minister may make a final decision, therefore proposed Scheme Amendment 13 is not considered to be certain nor imminent at this stage. Notwithstanding this, the urban planning purpose and intent of Scheme Amendment 13 is essentially included in the NSHAC Strategy which has been discussed above. In this regard, limited weight has been given to the consideration of Scheme Amendment 13 within this assessment.

Local Planning Scheme 3

The development site is zoned mixed use. Table 3 sets out the objectives from LPS 3 for development within mixed use zones. The proposed development largely achieves the objectives of the development for the reasons described below.

Table 3	
Zone Objectives	Development Response
To provide for a significant residential component as part of any new development.	Though the development does not directly provide a residential component, a commercial offering that includes a major supermarket and a variety of other retail and commercial opportunities is complementary to and will ultimately help facilitate the development of

	additional dwellings in close proximity to the site by creating an attractor for higher density residential developments in the immediate locality.
To facilitate well designed development of an appropriate scale which is sympathetic to the desired character of the area.	The development is of an appropriate scale and sympathetic to the area. The street facing portion of the development provides a continuous urban fabric along Stirling Highway, while the setback of the main structure from the grouped dwellings to the south is at least 15m. The height of the development, at a maximum of two storeys, is not imposing on the streetscape or adjoining dwellings and is below the 'default' heights within the Residential Design Codes.
To provide for a variety of active uses on street level which are compatible with residential and other non-active uses on upper levels.	A variety of active uses are provided to both street fronts. These active uses are compatible with nearby residential development.
To allow for the development of a mix of varied but compatible land uses such as housing, offices, showrooms, amusement centres and eating establishments which do not generate nuisances detrimental to the amenity of the district or to the health, welfare and safety of its residents.	The development is consistent with the City's Local Planning Strategy, which envisages a retail capacity of approximately 8,000m^2 within this Town Centre location and a mix of uses to support nearby higher density residential development. The 2200m^2 of retail floor space provided by the development is comprised of compatible land uses such as shops, offices and restaurant/cafes. The development is setback appropriately and adequately managed (through an acoustic report and an operational noise management plan) to ensure that the direct impact on the amenity of adjoining lots is negligible. The impact of the traffic generated by the development on the wider district is still unknown. It is unclear if the TIA provided is irrefutably accurate and the state's road authority has not provided substantive comment on the proposal.

Clause 32.4 of LPS 3 sets out the statutory development requirements for land zoned mixed use. The applicable requirements and the development's response are set out below in Table 4.

	Table 4	
Clause	Zone Objectives	Development Response
32.4 (2)	*Residential uses are not permitted on the ground floor facing primary or secondary*	No residential uses are proposed.

	streets, except where the use faces a right-of-way or laneway in the Mixed Use zone, or where identified in an approved local planning policy.	
32.4 (3)	*Buildings are to have active frontages to the primary and/or secondary street, except where a use faces a rightof-way or laneway.*	The development provides an active frontage to the primary and secondary street. The Stirling Highway frontage includes the legible entrance to the pocket park, forecourt and tenancies 2 and 3. The Florence Road frontage provides access to commercial tenancies 4, 5, 6 and 7.
32.4 (4)	*Minimum tenancy depth facing a street is 10m.*	All tenancies have a minimum depth of at least 10.5m where facing a street.
32.4 (5)	*In relation to developments that are not subject to the RCodes, where development standards are not specified in an approved structure plan, local development plan, local planning policy and/or activity centre plan, the development standards are subject to the applicable RCode.*	It is acknowledged that the R-Codes are not necessarily a suitable way of evaluating non-residential development. However, the development achieves the Element Objectives for built form design such as height, street, side and rear setbacks, plot ratio, façade design, orientation, etc. The building is set back sufficiently from adjoining boundaries, is relatively low in scale, and presents an active frontage to the street, thereby achieving the Element Objectives.

Clause 32.4 (5) requires development be assessed against the R-Codes where there are no other relevant development controls. As above, the development satisfies most of the acceptable outcomes and element objectives. Items requiring further discussion and/or conditions of any approval granted include landscaping, sustainability, and waste management. Assessment of these items is below:

Landscaping

The Acceptable Outcomes of the R-Codes Volume 2 call for 10% of the total lot as deep soil area. The development achieves 9.6% deep soil, though 3.8% of this deep soil is within the Stirling Highway road reservation. Given that the entire development is non-residential, there are limited opportunities for additional landscaping. R-Codes Acceptable Outcomes for landscaping are not necessarily appropriate or feasible for non-residential development. However, the Element Objectives have been used to guide a design assessment.

There are no existing trees on site. As part of the demolition of the previous structures, a mature Moreton Bay fig tree was removed. At the time of demolition, the City attempted to negotiate the retention of the tree, however, the landowner asserted through an arborist report that the tree had experienced a significant decline in health and had a remaining lifespan of 10-15 years. Given the health of the tree, it was unlikely it would survive the approved development. The proposal now includes a replacement

feature tree, the species of which will be selected with guidance from the City's parks team. The landscaping plan (Attachment 10) provided by the applicant suggests that the tree could be a Jacaranda mimosaefolia. In the event of approval, a condition is recommended to require an amended landscaping plan that includes (amongst other items) the specific species of the feature tree.

Trees within the road widening reserve are located relatively close to the boundary, with the potential that they may be able to remain should the road widening and footpath works eventually occur. Notwithstanding this, any road widening would likely result in the loss of five new street trees and five trees on site. In this event, there is still 130m^2 of deep soil area left on site adjacent to Stirling Highway that can accommodate the growth of new trees. The trees provided as part of the development are broadly consistent with the objectives of maximising appropriate trees and contributing to the existing tree canopy.

The large majority of the proposed landscaping is located within or adjacent to the public realm, where it is much more beneficial for visitors to the site. Landscaping around the edges of the site helps soften the appearance of the development and further reinforces the existing leafy aspect of the neighbourhood. The planters along Florence Road have a sufficient dimension to facilitate healthy ornamental vegetation growth to contribute to the overall aesthetic and greening of the development along the secondary street.

Sustainability

The development does not propose to achieve a minimum five star Green Star rating as the construction cost is below $15 million. However, a sustainable management plan (Attachment 9) has been submitted which outlines all sustainability measures that will be included in the development. Notable inclusions are the 250kw solar panel array proposed for the roof. These solar panels are projected to supply 100% of the building's energy consumption. All water fixtures and fittings within the large shop tenancy are proposed to be either four or five star WELS rated. Additionally, the development is proposed to be an all-electric site with no gas connections. A condition is recommended in the event of approval requiring that all recommendations and design solutions contained in the management plan are implemented to the City's satisfaction.

Waste Management

The Waste Management Plan (Attachment 7) specifies that waste collection will be conducted by a private waste collection contractor and will occur three times per week. The waste will be collected directly from the bin storage area located in the south-east portion of the site near the loading dock. In the event of approval, an updated Waste Management Plan is recommended to incorporate several changes such as the updated version of the development plans and further specifics regarding the size of the bin stores.

Noise

The acoustic report provided (Attachment 8) demonstrates that noise can generally be managed appropriately. There are several outstanding issues on which the City requires further information and are recommended as conditions in the event of approval. These items are:

- The amount of noise produced by the waste compactor and the assurance that this machinery will comply with the Noise Regulations.
- The provision of a detailed noise management plan which will provide specification that deliveries should only occur during operational hours.
- Further information required on the overall impact of delivery noise, including noise associated with truck reversing, broadband beepers, closing of truck doors and unloading of goods. The cumulative impact of noise sources may warrant further noise modelling.

Traffic and Parking

The City's Local Planning Policy 4.1: Parking sets out the parking provisions as shown in Table 5 below:

Table 5			
Land Use	**LPP Requirement**	**Provided**	**Difference**
Shop and Liquor Store	8.3 bays per 100m^2 NLA 1330m^2 = 111 bays	94 bays	62 bay shortfall
Medical Centre	12 bays		
Office	4.75 bays per 100m^2 NLA 145m^2 = 7 bays		
Restaurant/Café	1 bay per 2.6m^2 = 26 bays		
TOTAL	156 bays	94 bays	62 bay shortfall

*For calculation purposes it is assumed there is one medical centre use, two office uses, one restaurant/café use and three shop uses.

It is unclear if the 62 car parking bay shortfall can be supported. It is acknowledged that the development may benefit from reciprocal car bay usage resulting from the fact that visitors are likely to visit more than one tenancy per trip, as well as the proximity to public transport options. However, the overall number of parking bays required to ensure the development is functional and will not result in an adverse impact to the surrounding road network is unclear. The specific parking information required to conduct an assessment is discussed further below.

The application is accompanied by a Traffic Impact Assessment (TIA) (Attachment 11) which presents the results of a multi-modal transport impact and parking assessment for the development with a focus on traffic, circulation and intersection operation within the locality. The TIA concludes that there will be no significant impact on the intersections in the locality, specifically the Stirling Highway / Florence Road intersection and the Dalkeith Road / Stirling Highway intersection. The Assessment asserts that swept paths of the delivery vehicles have been appropriately assessed and are acceptable.

The City's Technical Services contends that there may be fundamental errors or omissions within the TIA. The City's concerns are listed below:

- Section 2.5 of the TIA provides a review of vehicle crash history along Stirling Highway. The signalised intersection (Dalkeith Road / Stirling Highway) the

traffic will be redirected to has had 42 recorded crashes in the past five-year period. The intersection also operates with a banned right turn movement from Stirling Highway in the peak hour. The claim that the traffic redistribution will reduce the crash risk factor for the corridor is disputed.

- Section 5.3 of the TIA states that physical truck manoeuvring tests were performed to verify the feasibility of access and egress for Florence Road and observed that no changes will be required to the existing road infrastructure. More detail and evidence is required for this contention as the diagrammatic swept paths suggest that the trucks will consistently mount kerbs and islands.
- Section 5.4 of the TIA indicates that the car parking bay provision rate is satisfactory as it aligns with the historically approved car parking provision. Justification beyond this logic is required. It is unclear how this parking rate compares to similar developments. Justification should be provided as if there was no previous approval.
- Only eight bicycle bays have been provided on site. An increase in bicycle bays should be considered along with end of trip facilities.

Further to the above issues, at the time of writing, the state government agency responsible for the planning and management of the major road network, Main Roads Western Australia, has not provided formal comments and recommendations on the proposal. Given the proposal is adjacent to and interacts directly with a Primary Regional Road, it is imperative that Main Roads WA comments and recommendations are considered.

As the TIA may be missing fundamental information to accurately assess the provision of car parking bays and traffic generation from the development, the proposal is not supported in its current form. Additional information and analysis relating to traffic and parking is required to confirm that the development will not have an unreasonable or adverse impact on the locality.

<u>Southern Laneway</u>

The development includes a 6.1m strip of land along the southern boundary of the site that has been set aside to facilitate a future laneway connecting Florence Road and Dalkeith Road. The proposed laneway involves the use of the lots at 56 Dalkeith Road, Nedlands. These lots are owned by the City of Nedlands and are currently being used as a drainage sump. The creation of this laneway will facilitate the movement of traffic, provide an entry and exit for vehicles from Dalkeith Road and shift some of the vehicle movements from Florence Road and Edward Street. It is recommended that any approval include a condition requiring that this accessway area be made publicly accessible in perpetuity through provision of an easement or other appropriate arrangement with the City.

Conclusion:

The proposed development is of a scale and use consistent with the expected pattern of urban growth in the locality. The proposal responds appropriately to the significance of the Town Centre site in which it is located, as identified within the Local Planning Strategy and NSHAC Strategy. The development provides local convenience retail that caters for the existing population and will service future residential growth in proximity to the development site. On balance, the provision of a significant local convenience retail offering outweighs the immediate lack of residential units within the site.

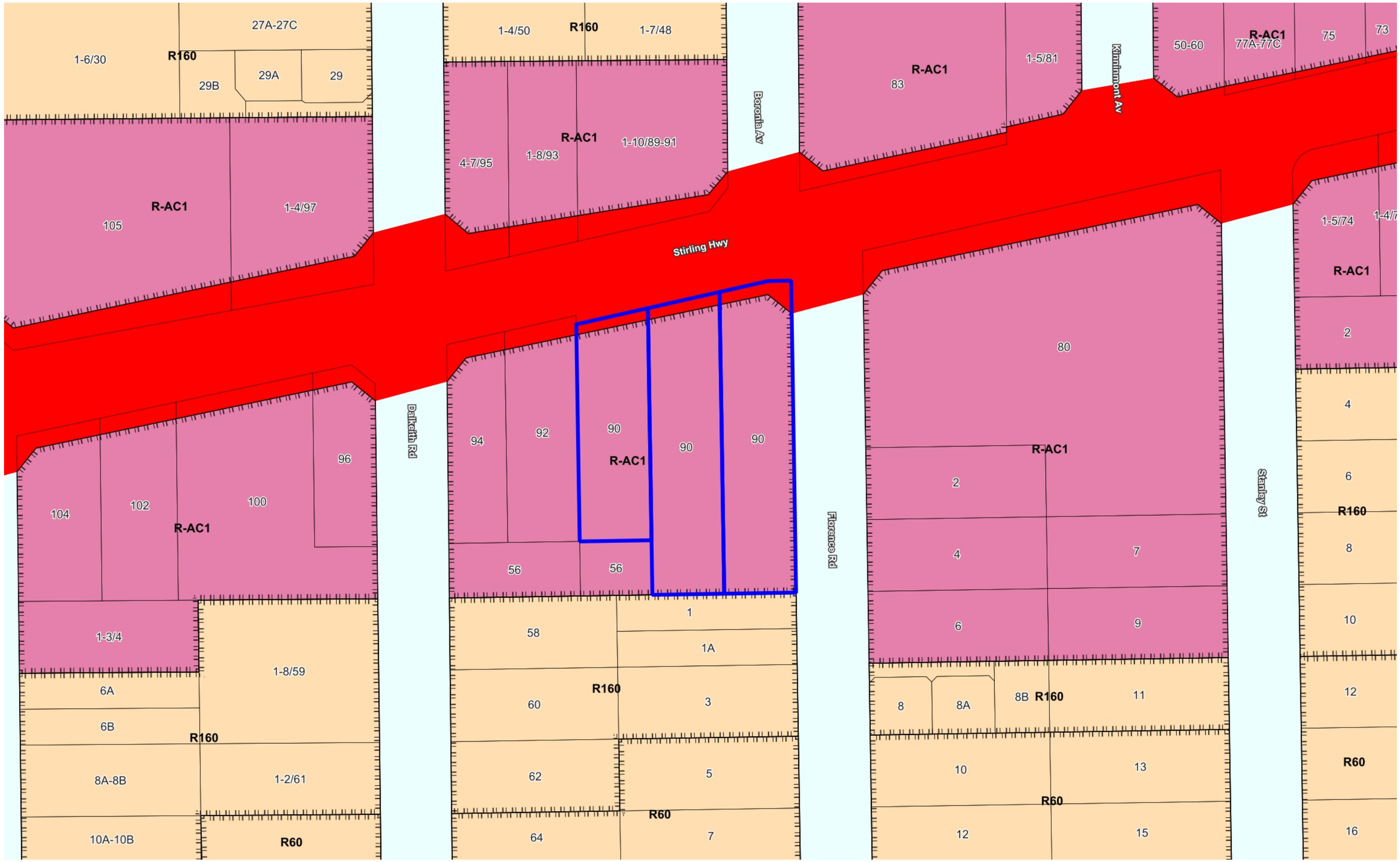
Notwithstanding the supportability of the proposal from a land use planning and built form perspective, insufficient information has been provided to comprehensively assess the parking and traffic generation of the development. Furthermore, Main Roads Western Australia has not provided formal comments and recommendations on the proposal. Main Roads WA comments are imperative given the location of the development site is directly adjacent to a Primary Regional Road. For these reasons, the proposal is not supported in its current form, and it is recommended that the development application determination is deferred by approximately 100 days to allow time for the provision and assessment of additional information related to traffic and parking as well as the receipt and consideration of formal Main Roads WA comment.

Officer Recommendation

It is recommended that the Metro Inner DAP resolves to:

2. **Defer** the determination of DAP Application DAP/24/02769 for a period of up to 100 days to address the following matters:

    i. In accordance with Clause 67(2)(t) of the Deemed Provisions of the Planning and Development (Local Planning Schemes) Regulations 2015, insufficient information has been provided to comprehensively assess whether the traffic generated by the proposal is likely to have a negative effect on traffic flow and safety within the local road network.
    ii. It is unclear if the proposal satisfies the objective of Local Planning Policy 4.1: Parking as insufficient information has been provided to justify and assess the adequacy of the amount of vehicle parking bays on site.
    iii. Allow time to receive and consider transport planning related comments and recommendations pertaining to the development from Main Roads Western Australia.



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PROPOSED ALDI NEDLANDS

LOTS 3, 4 & 5 CORNER OF STIRLING HIGHWAY AND FLORENCE ROAD

NEDLANDS, WESTERN AUSTRALIA

City of Nedlands
Amended Plans
Received
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PROPOSED ALDI
NEDLANDS

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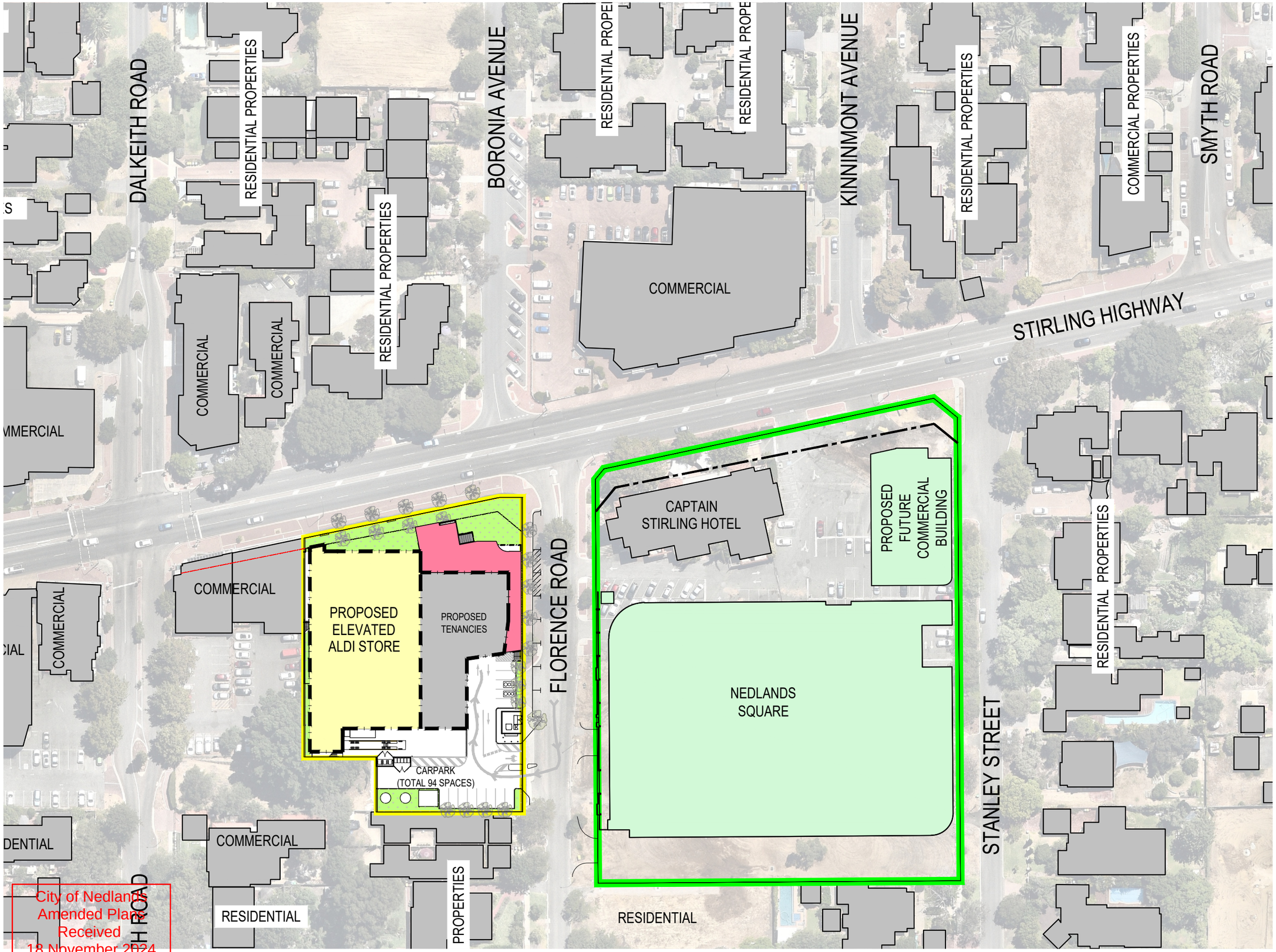

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1 - LOCALITY PLAN
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A	18.11.24	REVISED PLANNING	LT	TB

PROPERTY DESCRIPTION	
TOTAL ALDI DEVELOPMENT AREA	4438m²
ALDI SITE BOUNDARY	
NEDLANDS SQUARE SITE BOUNDARY	
PROPOSED ALDI STORE	
PROPOSED TENANCIES	
PROPOSED SHARED ZONE	

N

CLIENT
ALDI STORES

PROJECT
ALDI NEDLANDS
CORNER OF STIRLING HWY & FLORENCE ROAD
NEDLANDS W.A.

DRAWING
LOCALITY PLAN

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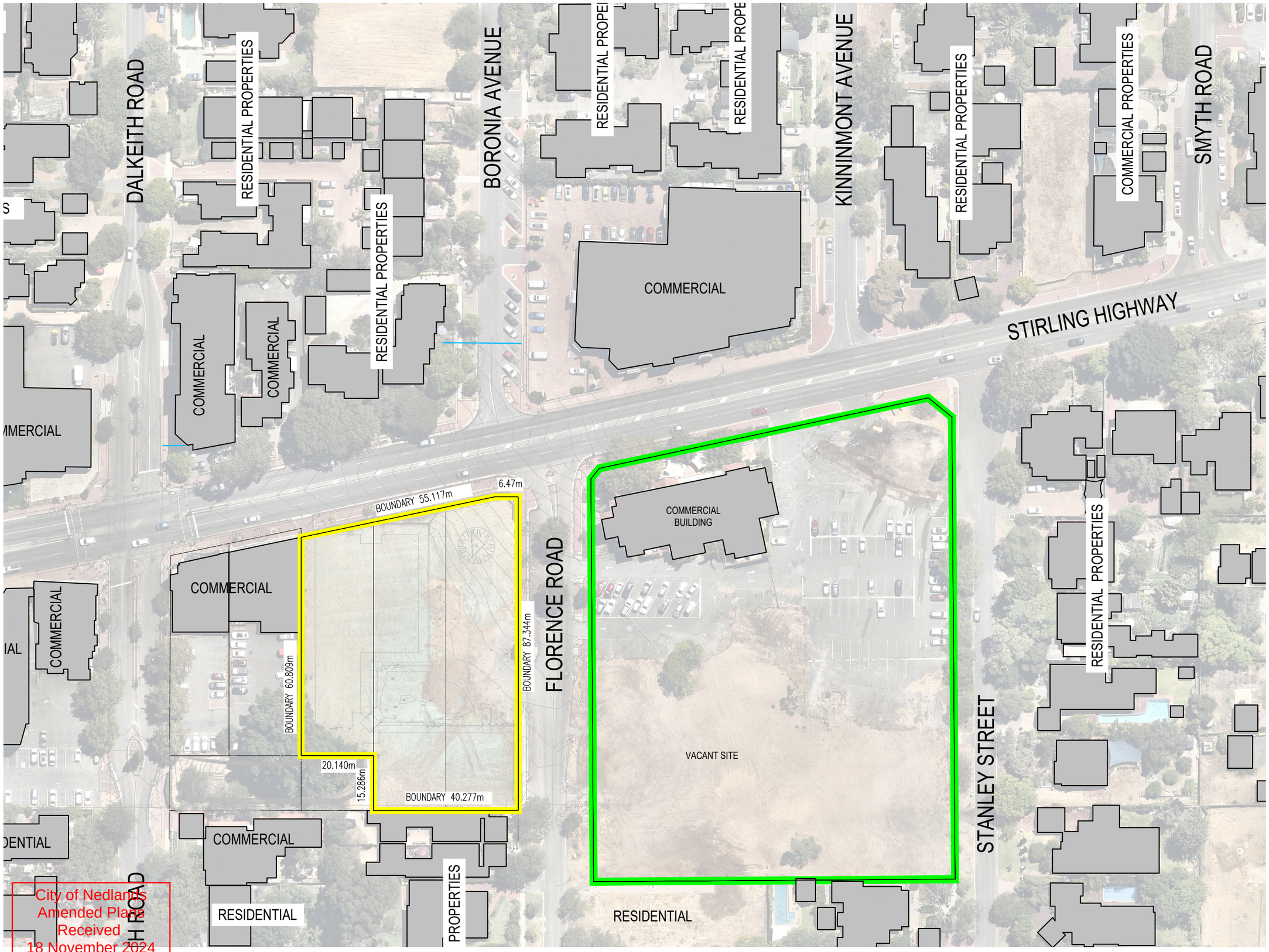

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PROPERTY DESCRIPTION	
TOTAL ALDI DEVELOPMENT AREA	4438m²
ALDI SITE BOUNDARY	
NEDLANDS SQUARE SITE BOUNDARY	
PROPOSED ALDI STORE	
PROPOSED TENANCIES	
PROPOSED SHARED ZONE	

N

CLIENT
ALDI STORES

PROJECT
ALDI NEDLANDS
CORNER OF STIRLING HWY & FLORENCE ROAD
NEDLANDS W.A.

DRAWING
TITLE PLAN

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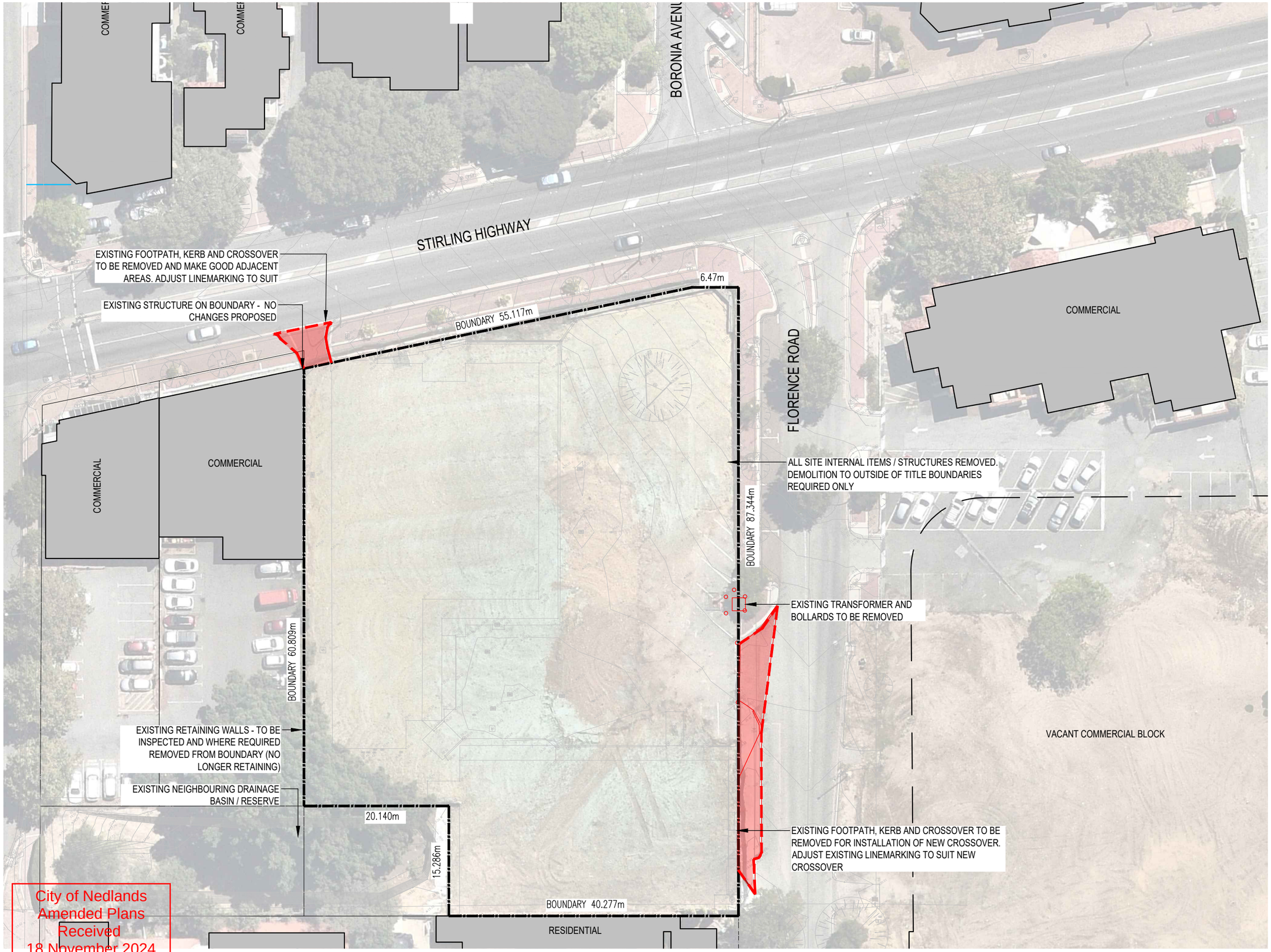

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1 / - EXISTING & DEMOLITION PLAN
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DEMOLITION LEGEND	
ITEMS TO BE DEMOLISHED	
EXISTING NEIGHBOURING STRUCTURES	
FUTURE NEIGHBORING DEVELOPMENT	
DEVELOPMENT BOUNDARIES	

N

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ALDI STORES

PROJECT
ALDI NEDLANDS
CORNER OF STIRLING HWY & FLORENCE ROAD
NEDLANDS W.A.

DRAWING
EXISTING & DEMOLITION SITE PLAN

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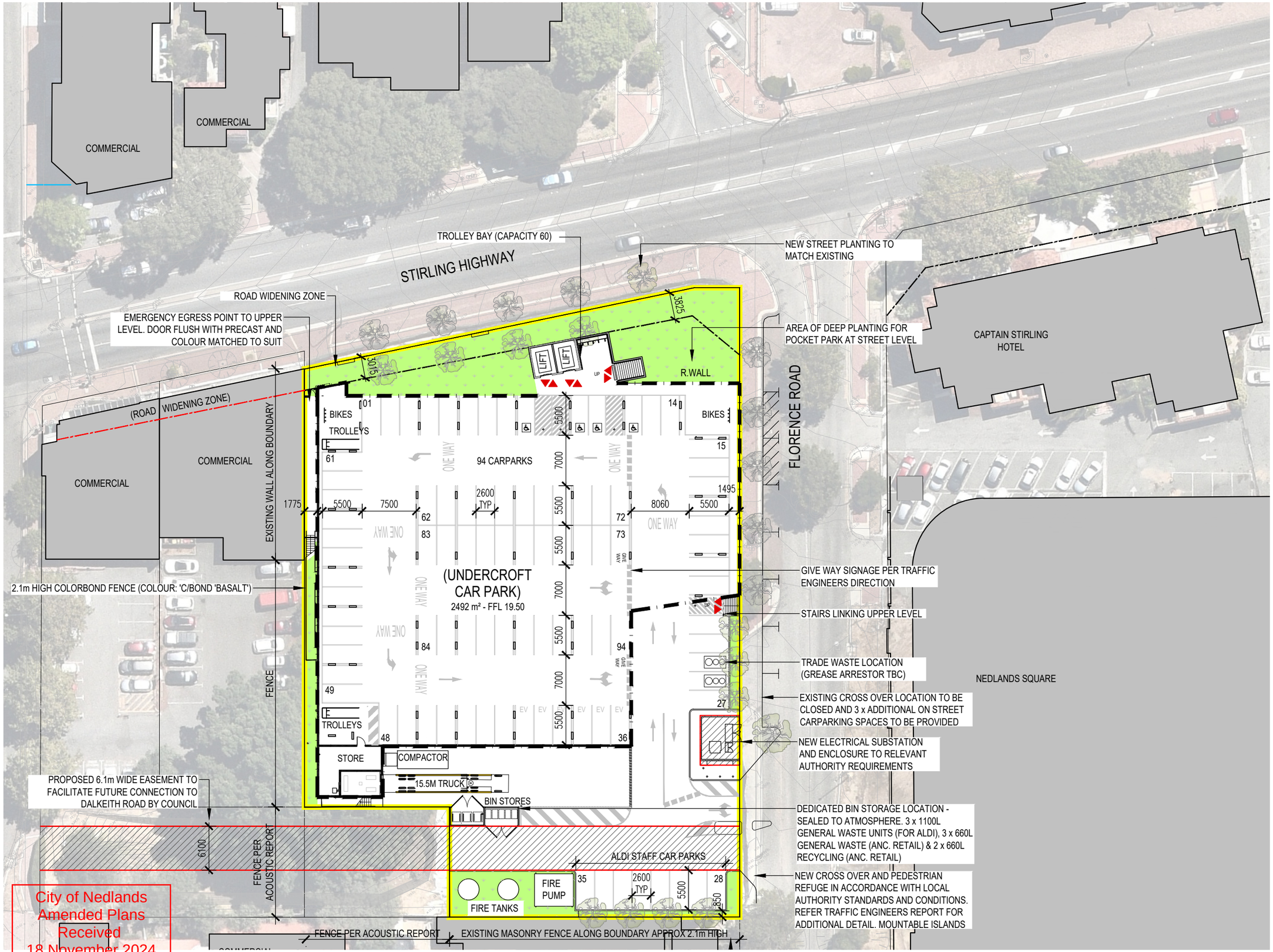

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1 - PROPOSED SITE & GROUND FLOOR PLAN
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REV	DATE	DESCRIPTION	DRN	CHKD
A	18.11.24	REVISED PLANNING	LT	TB

PROPERTY DESCRIPTION	AREA m^2
TOTAL SITE AREA	4438m^2
BUILDING GROSS FLOOR AREA	2739m^2
BUILDING NETT FLOOR AREA	2665m^2
ALDI RETAIL NETT AREA	1099m^2
ALDI BOH NETT AREA	360m^2
ALDI AMENITIES NETT AREA	60m^2
TOTAL ALDI NETT AREA	1519m^2
TRUCK LENGTH	15.50m
CHILLER LENGTH	40m
FORECOURT/BALCONY AREA	363m^2
TENANCY 02	124m^2
TENANCY 03	124m^2
TENANCY 04	74m^2
TENANCY 05	74m^2
TENANCY 06	71m^2
TENANCY 07	316m^2
TOTAL ANCILLARY TENANCIES	783m^2
NUMBER OF CAR SPACES	94

PROPOSED ALDI BOUNDARY	
EXISTING STRUCTURES	
DEVELOPMENT BOUNDARIES	

N

CLIENT
ALDI STORES

PROJECT
ALDI NEDLANDS
CORNER OF STIRLING HWY & FLORENCE ROAD
NEDLANDS W.A.

DRAWING
PROPOSED SITE & GROUND FLOOR PLAN

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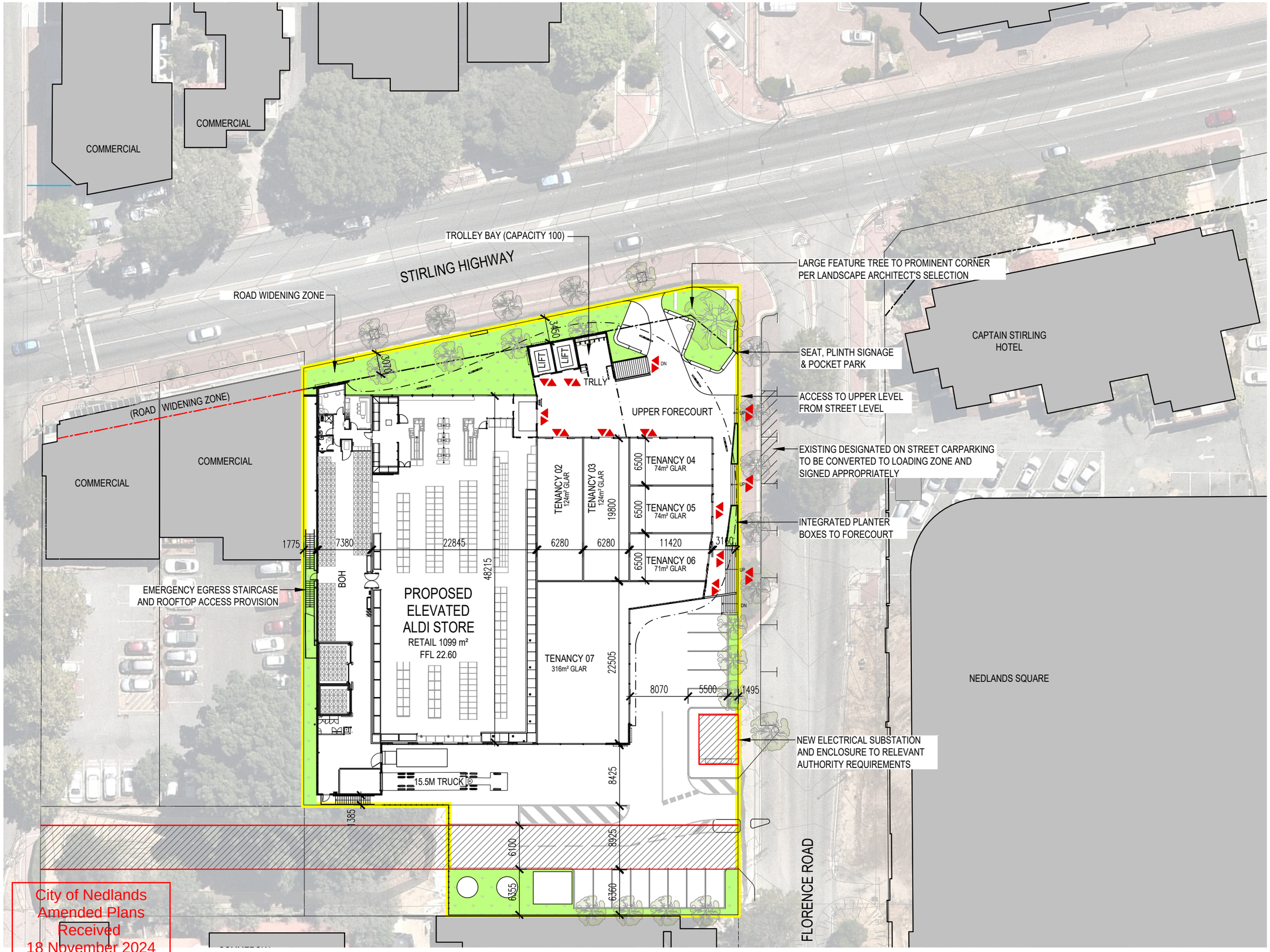

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TENANCY 07	316m^2
TOTAL ANCILLARY TENANCIES	783m^2
NUMBER OF CAR SPACES	94

PROPOSED ALDI BOUNDARY	
EXISTING STRUCTURES	
DEVELOPMENT BOUNDARIES	

N

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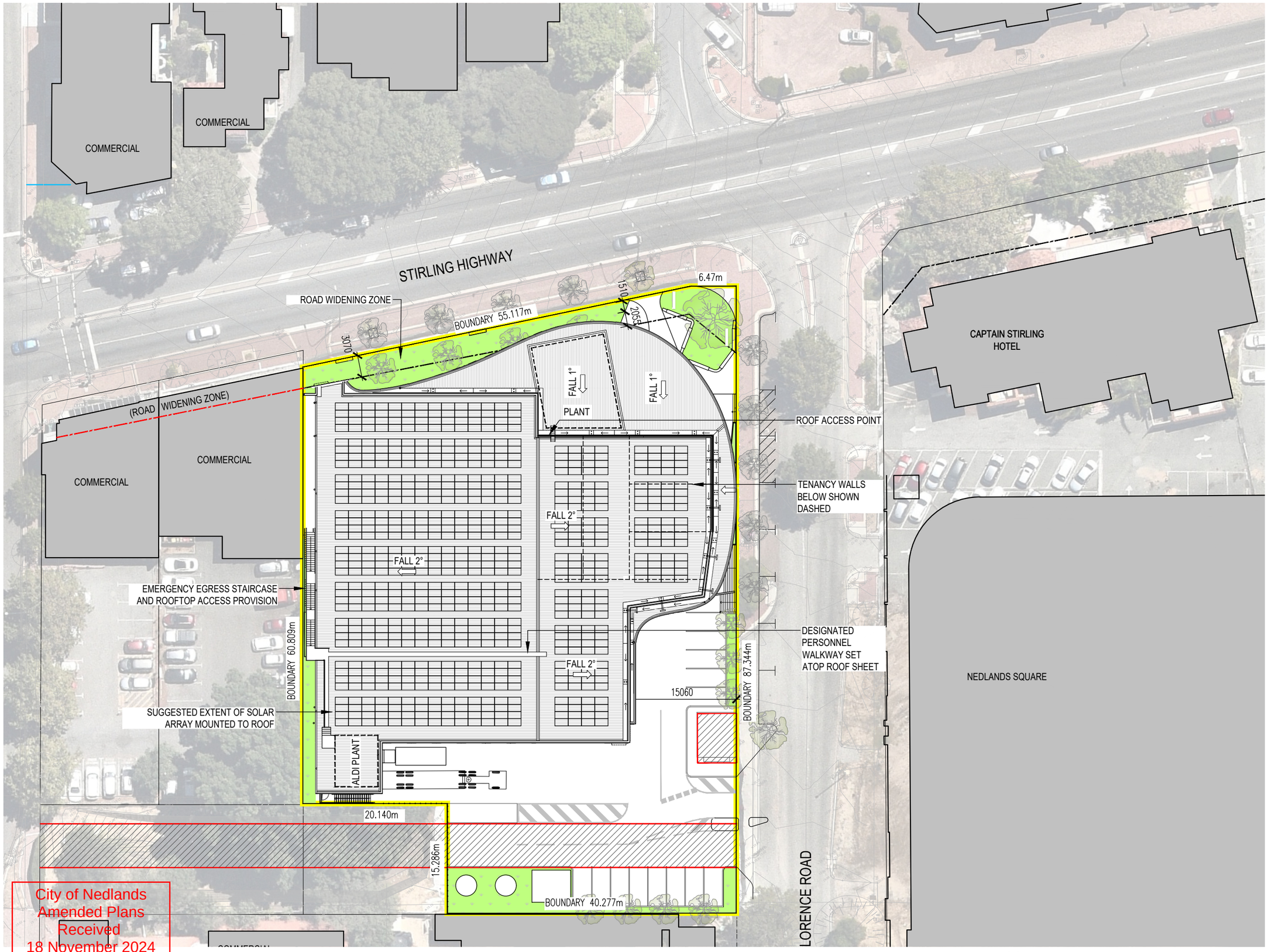

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1 - ROOF PLAN
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ALDI STORES

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DRAWING
PROPOSED ROOF PLAN

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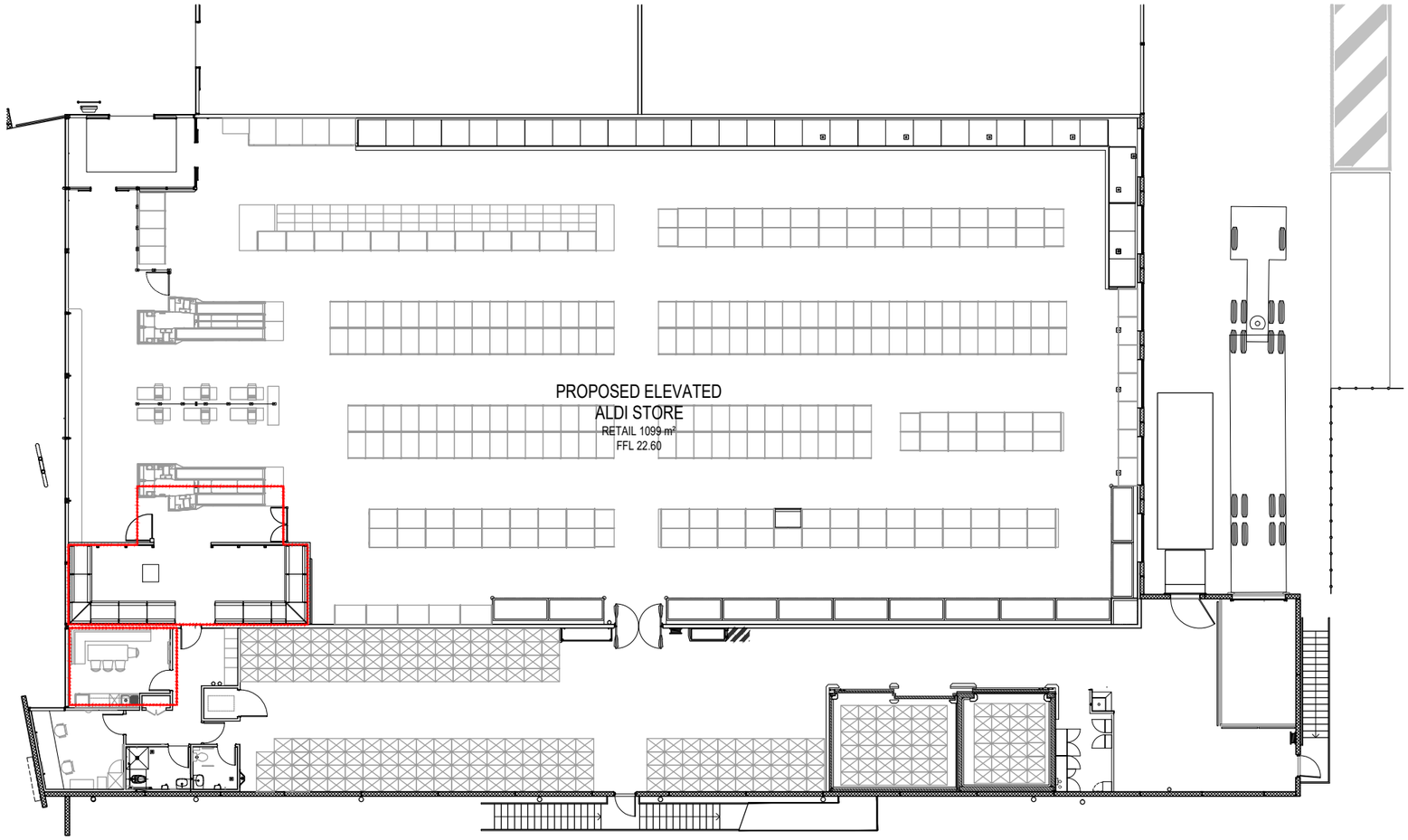

1 - FURNITURE PLAN WITH LIQUOR

1:250

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ALDI STORES

PROJECT
ALDI NEDLANDS
CORNER OF STIRLING HWY & FLORENCE ROAD
NEDLANDS W.A.

DRAWING
FURNITURE PLAN WITH LIQUOR

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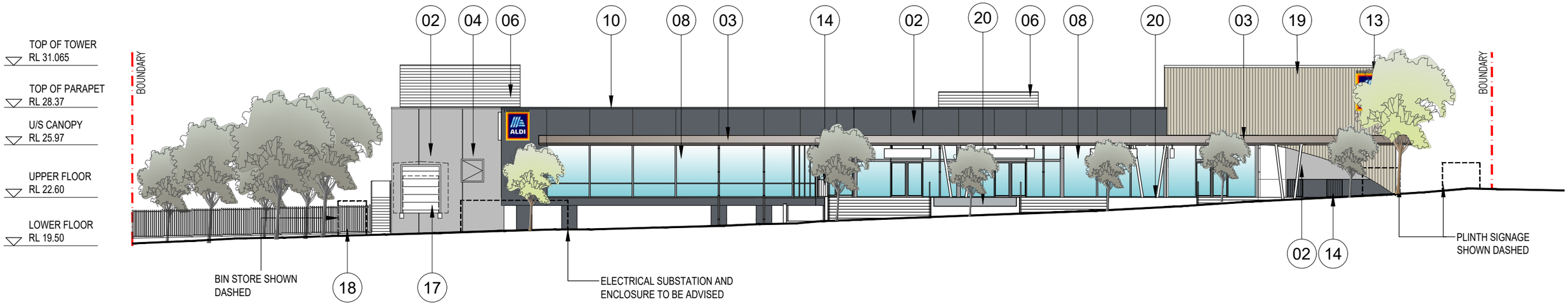

1 - FLORENCE ROAD - EAST ELEVATION

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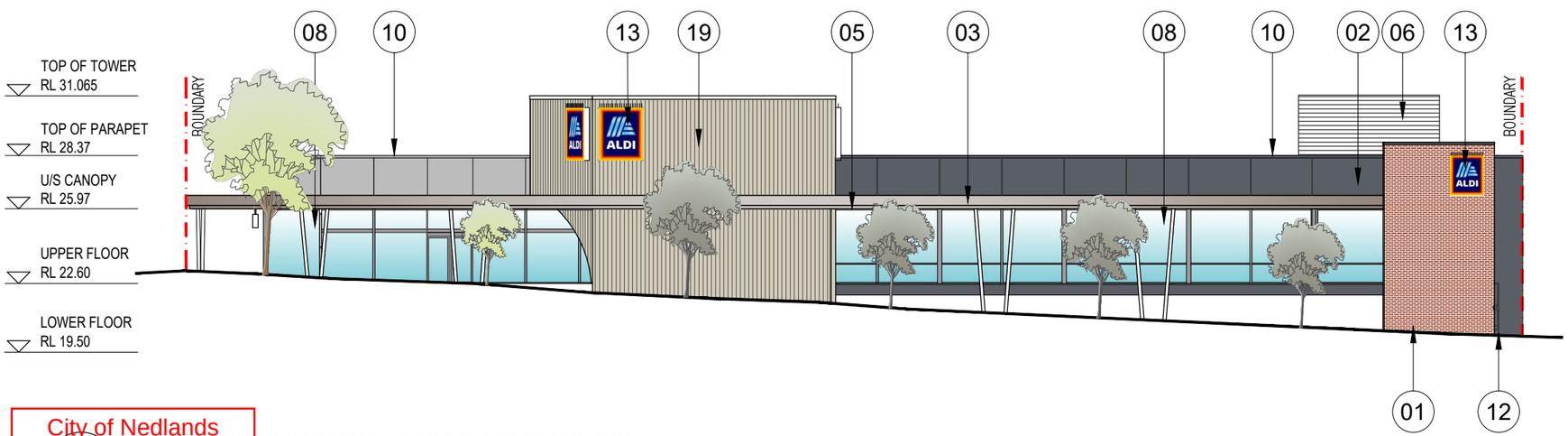

2 - STIRLING HIGHWAY - NORTH ELEVATION

1:250

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COLOURS AND MATERIALS SCHEDULE

01 - SELECTED FACE BRICKWORK AUSTRAL 'CHAPEL RED'

02 - PRECAST RC PANEL, PAINT FINISH DULUX 'DRIVETIME'

03 - FIBRE CEMENT CLADDING, FLUSHED COLORBOND 'DOVER WHITE'

04 - COMPACTOR DOOR & FRAME DULUX 'BASALT'

05 - EXPOSED METALWORK TO CANOPY COLORBOND 'DOVER WHITE

06 - POWDERCOATED PLANT LOUVERS & FRAME DULUX 'BASALT'

07 - ANODISED ALUMINIUM WINDOW FRAMES NATURAL FINISH

08 - SHOPFRONT, ANODISED ALUMINIUM FRAMES NATURAL FINISH

09 - COLORBOND PROFILED ROOF SHEETING COLORBOND 'SURFMIST'

10 - COLORBOND CAPPING COLOUR PER ADJACENT PRECAST PANEL

11 - COLORBOND RAIN HEAD AND DOWNPIPES COLORBOND 'BASALT'

12 - DOOR & FRAME COLORBOND 'BASALT'

13 - ALDI ILLUMINATED SIGNS

14 - POWDERCOATED STEEL BALUSTRADING DULUX 'DESIGNER WHITE'

15 - SOLAR PANELS MOUNTED ON ROOF FORM

16 - GALVANISED STEEL HANDRAIL AND BALUSTRADE

17 - PANEL LIFT DOOR COLORBOND 'BASALT'

18 - PRECAST PANELS TO BIN STORE, PAINTED DULUX 'DRIVETIME'

19 - ARCHITECTURAL WALL CLADDING STRATCO 'NINELINE PLEAT CLADDING' OR SIMILAIR

20 - INTEGRATED OFF FORM CONCRETE PLANTERS 1100mm AFL. PAINTED WHITE

21 - PRECAST RC PANEL, PAINT FINISH DULUX 'FLUORESCENT FIRE'

CLIENT
ALDI STORES

PROJECT
ALDI NEDLANDS
CORNER OF STIRLING HWY & FLORENCE ROAD
NEDLANDS W.A.

DRAWING
PROPOSED ELEVATIONS

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
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2912	DA03.01	DA	A

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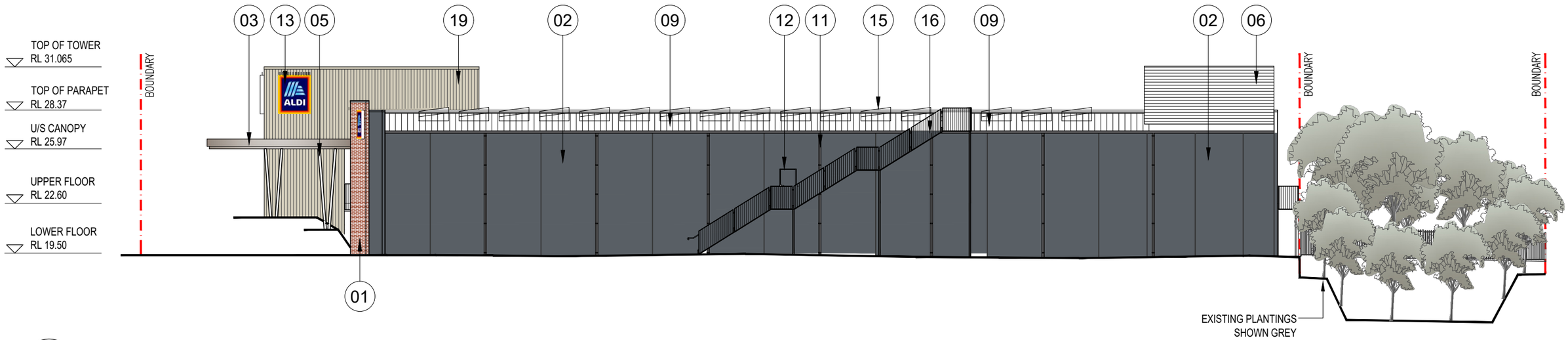
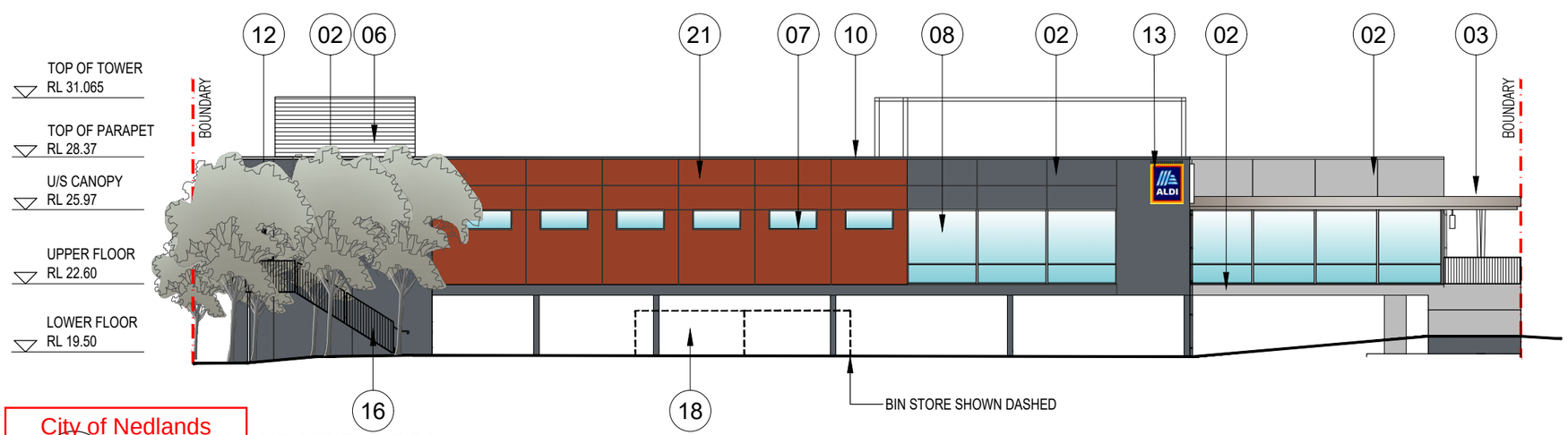


1 - SIDE - WEST ELEVATION
1:250



2 - REAR - SOUTH ELEVATION
1:250

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COLOURS AND MATERIALS SCHEDULE

01 - SELECTED FACE BRICKWORK AUSTRAL 'CHAPEL RED'

02 - PRECAST RC PANEL, PAINT FINISH DULUX 'DRIVETIME'

03 - FIBRE CEMENT CLADDING, FLUSHED COLORBOND 'DOVER WHITE'

04 - COMPACTOR DOOR & FRAME DULUX 'BASALT'

05 - EXPOSED METALWORK TO CANOPY COLORBOND 'DOVER WHITE

06 - POWDERCOATED PLANT LOUVERS & FRAME DULUX 'BASALT'

07 - ANODISED ALUMINIUM WINDOW FRAMES NATURAL FINISH

08 - SHOPFRONT, ANODISED ALUMINIUM FRAMES NATURAL FINISH

09 - COLORBOND PROFILED ROOF SHEETING COLORBOND 'SURFMIST'

10 - COLORBOND CAPPING COLOUR PER ADJACENT PRECAST PANEL

11 - COLORBOND RAIN HEAD AND DOWNPIPES COLORBOND 'BASALT'

12 - DOOR & FRAME COLORBOND 'BASALT'

13 - ALDI ILLUMINATED SIGNS

14 - POWDERCOATED STEEL BALUSTRADING DULUX 'DESIGNER WHITE'

15 - SOLAR PANELS MOUNTED ON ROOF FORM

16 - GALVANISED STEEL HANDRAIL AND BALUSTRADE

17 - PANEL LIFT DOOR COLORBOND 'BASALT'

18 - PRECAST PANELS TO BIN STORE, PAINTED DULUX 'DRIVETIME'

19 - ARCHITECTURAL WALL CLADDING STRATCO 'NINELINE PLEAT CLADDING' OR SIMILAIR

20 - INTEGRATED OFF FORM CONCRETE PLANTERS 1100mm AFL. PAINTED WHITE

21 - PRECAST RC PANEL, PAINT FINISH DULUX 'FLUORESCENT FIRE'

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NEDLANDS W.A.

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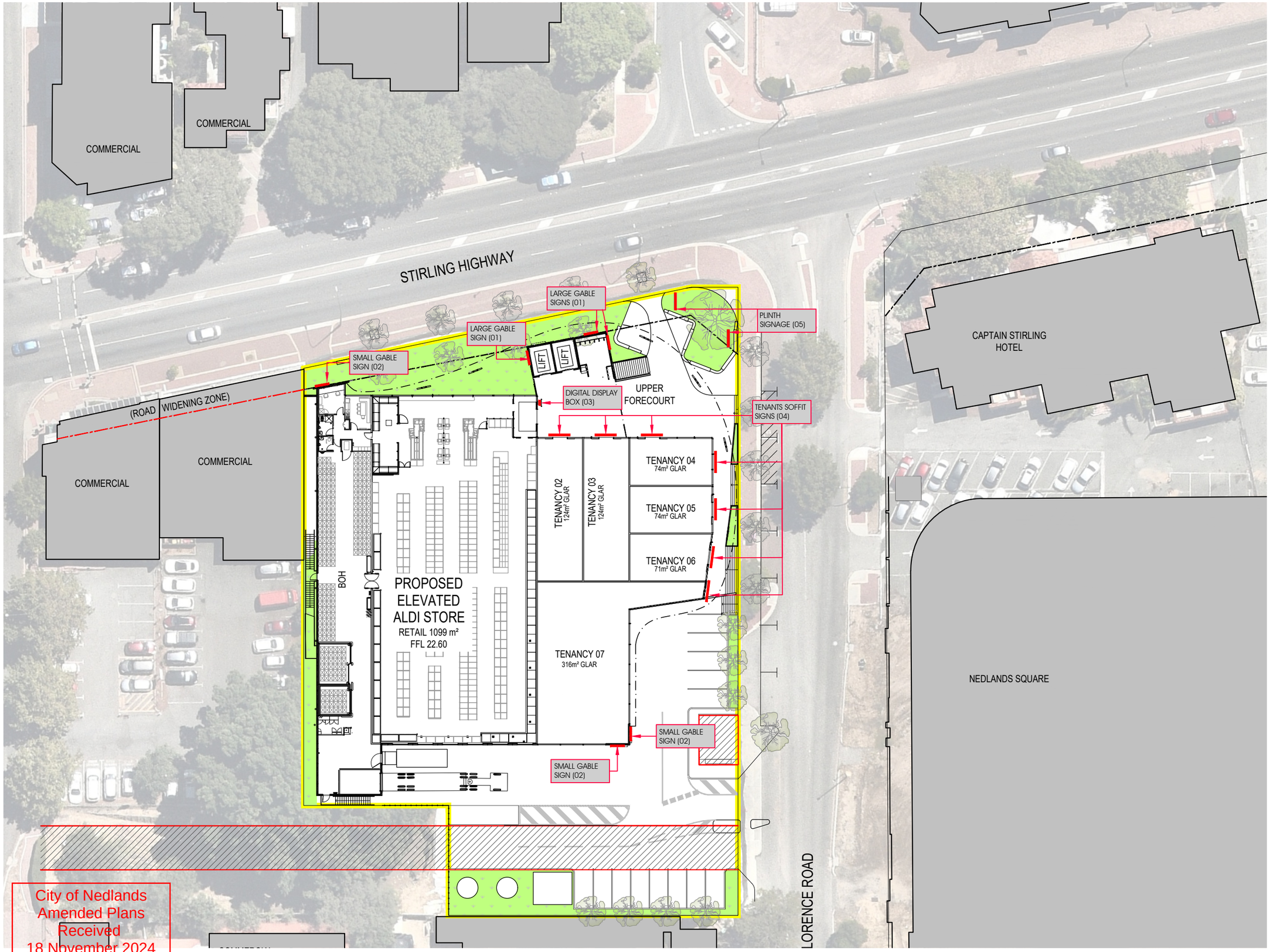

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1 - PROPOSED SIGNAGE PLAN
1:500

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CLIENT
ALDI STORES

PROJECT
ALDI NEDLANDS
CORNER OF STIRLING HWY & FLORENCE ROAD
NEDLANDS W.A.

DRAWING
PROPOSED SIGNAGE PLAN

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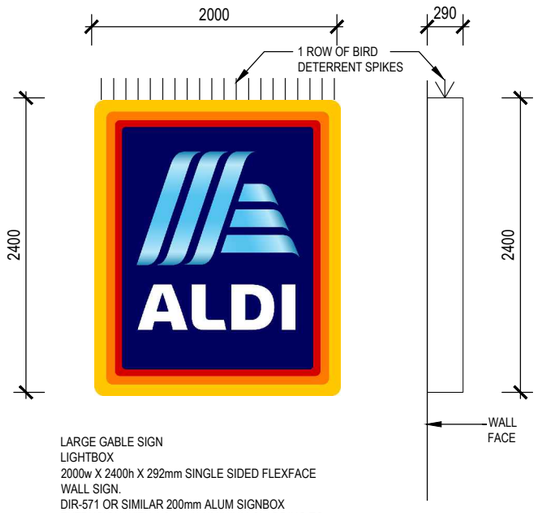
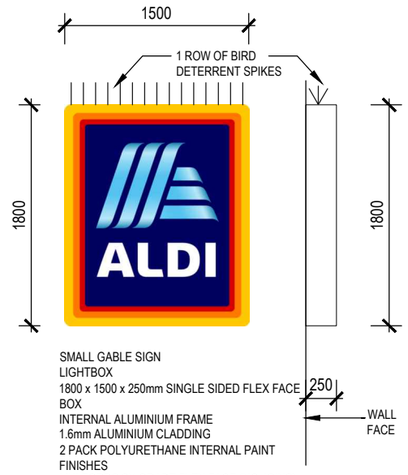


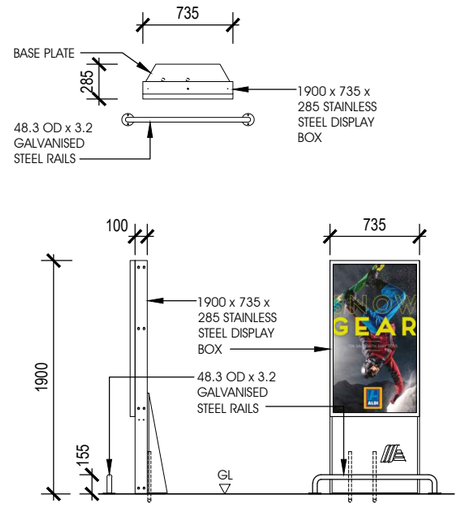
LARGE GABLE SIGN
LIGHTBOX
2000w X 2400h X 292mm SINGLE SIDED FLEXFACE WALL SIGN.
DIR-571 OR SIMILAR 200mm ALUM SIGNBOX EXTRUSION WITH 1.6mm ALUMINIUM CLADDING TO BACK
PAINT FINISH EXTERNAL: DULUX OLD PEWTER 50243 70% GLOSS IN 2 PACK POLYURETHANE OR POWDERCOAT FP964
PAINT FINISH INTERNAL: FLAT WHITE
INTERNAL ILLUMINATION: 'DAYLIGHT' FLUORESCENT TUBES SPACED EVENLY
LIGHT OUTPUT: CALVIN - 40,000 LUMENS 16,500

1 LARGE GABLE SIGN (01)
1:50

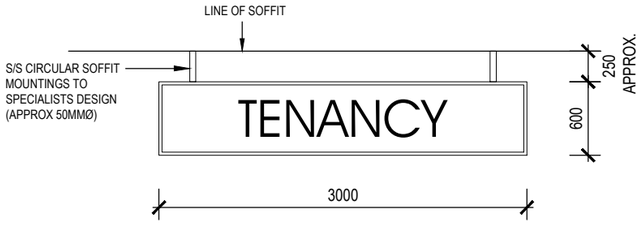


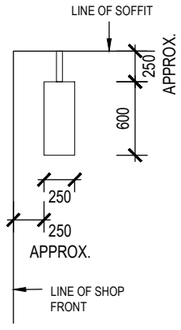
SMALL GABLE SIGN
LIGHTBOX
1800 x 1500 x 250mm SINGLE SIDED FLEX FACE BOX
INTERNAL ALUMINIUM FRAME
1.6mm ALUMINIUM CLADDING
2 PACK POLYURETHANE INTERNAL PAINT FINISHES
MULFORDS SX GRADE FLEX FACE (NO JOINS)
TECHNOGRAPH SX 3m SELF-ADHESIVE VINYL
INTERNAL 'DAYLIGHT' FLUORESCENT LIGHTING
LIGHT OUTPUT; CALVIN - 40,000 LUMENS 16,500

2 SMALL GABLE SIGN (02)
1:50



3 DIGITAL POSTER BOX (03)
1:50





TENANT SOFFIT SIGN - TBC
LIGHTBOX
3500 x 1500 x 250mm SINGLE SIDED FLEX FACE BOX
INTERNAL ALUMINIUM FRAME
1.6mm ALUMINIUM CLADDING
2 PACK POLYURETHANE INTERNAL PAINT FINISHES
MULFORDS SX GRADE FLEX FACE (NO JOINS)
TECHNOGRAPH SX 3m SELF-ADHESIVE VINYL
INTERNAL 'DAYLIGHT' FLUORESCENT LIGHTING
LIGHT OUTPUT; CALVIN - 40,000 LUMENS 16,500

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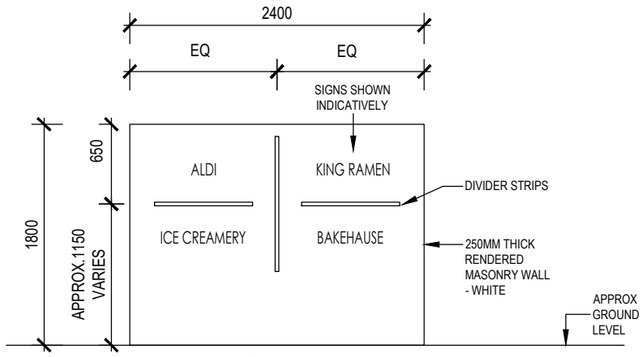
4 TENANT SOFFIT SIGN (04)
1:50



BLADE WALL SIGNS (TYPICAL)

BLADE WALL:
1500 x 2400 x 250mm WHITE RENDERED MASONRY w/- 4No. SIGNS ON FRONT AND BACK AND DIVIDER STRIPS AS ABOVE

SIGNS & DIVIDER STRIPS:
LETTER APPROX. 100MM HIGH
LETTERS AND DIVIDERS STRIPS TO BE RAISED W/- POLISHED CHROME TYPE FINISH
TO SPECIALISTS DETAILS

5 BLADE WALL SIGNS-TYPICAL (05)
1:50

CLIENT
ALDI STORES

PROJECT
ALDI NEDLANDS
CORNER OF STIRLING HWY & FLORENCE ROAD
NEDLANDS W.A.

DRAWING
SIGNAGE DETAILS

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1 - PROPOSED 3D VISUAL RENDER
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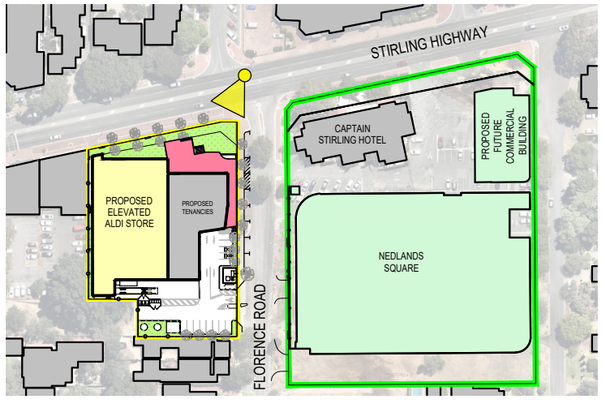
Amended Plans
Received
18 November 2024



2 - KEY PLAN
NTS

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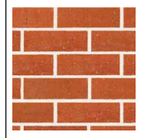
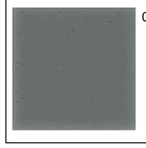
MATERIAL SCHEDULE

01 ARCHITECTURAL WALL CLADDING STRATCO 'NINELINE PLEAT CLADDING' OR SIMILAIR'



02 FEATURE BRICKWORK, FACE FINISH. AUSTRAL 'CHAPEL RED'



03 PRECAST RC PANEL, PAINT FINISH DULUX 'DRIVETIME'

CLIENT
ALDI STORES

PROJECT
ALDI NEDLANDS
CORNER OF STIRLING HWY & FLORENCE ROAD
NEDLANDS W.A.

DRAWING
PROPOSED 3D VISUAL RENDER

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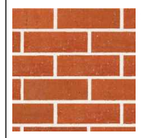
1 / - PROPOSED 3D VISUAL RENDER

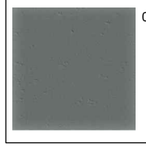
NTS

MATERIAL SCHEDULE

01 ARCHITECTURAL WALL CLADDING STRATCO 'NINELINE PLEAT CLADDING' OR SIMILAIR'



02 FEATURE BRICKWORK, FACE FINISH. AUSTRAL 'CHAPEL RED'



03 PRECAST RC PANEL, PAINT FINISH DULUX 'DRIVETIME'

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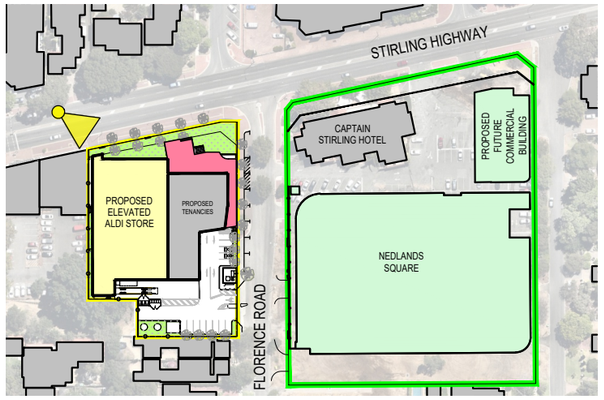

2 / - KEY PLAN

NTS

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1 - PROPOSED 3D VISUAL RENDER
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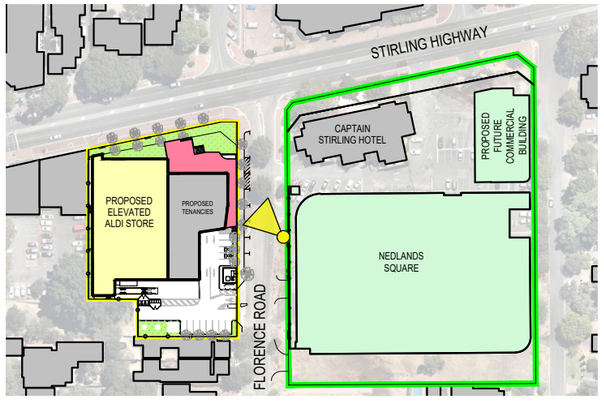

2 - KEY PLAN
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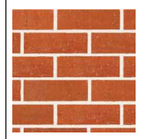
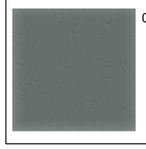


02 FEATURE BRICKWORK, FACE FINISH. AUSTRAL 'CHAPEL RED'



03 PRECAST RC PANEL, PAINT FINISH DULUX 'DRIVETIME'

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No.	Submission	Applicant Response
1	The proposal is not supported in its current form nor scale due to the reasons outlined below: 1. Planning Scheme Objectives- a. The proposal does not satisfy the provide a significant residential component which is a key objective of the current zoning being mixed use, as the proposal does not provide or allow for any residential dwellings in its current form. b. the proposal will not satisfy the objectives of the 'neighbourhood centre' zoning, if approved by the minister, as it does not provide a range of 'medium- to high-density' residential dwellings. c. This proposal falls short of the objectives outlined in the scheme and the planning strategy, and therefore does not merit support. It reinforces a suburban typology that hinders urban infill and fails to establish a vibrant town centre. By relying on car-dependent activity generated solely by those traveling to the shops, it further restricts activity along Stirling Highway. This limitation prevents the proposal from realizing its full potential as a bustling hub for residents and visitors. 2. Strategic alignment	1. Planning Scheme Objectives a. It is noted that the proposal is seeking a variation on the objective of the current 'Mixed 'Use' zone. The proposal for the shopping centre, anchored by ALDI, will service the local community through the access of fresh food and other supermarket items. Whilst not providing residential uses, the proposal is a Mixed-Use development that contributes to the diversification of the NSHAC and widens the availability of services to the community for their day-to-day needs. It will increase the amenity of the precinct, providing greater access to services for residents and improving the liveability and diversity of the locality. It is the proponents view that the ALDI store will, in partnership with the neighbouring Nedlands Square development, will act as a catalyst for the local area. This catalytic provision of amenity will improve the viability of residential development by increasing residential access to goods and services – and ultimately result in a holistic mixed use precinct. It cannot be expected in good planning principle that every development in the mixed-use zone must include residential uses.

	a. The proposal does not align with the strategic direction as outlined within Perth and Peel @ 3.5 million, the City of Nedlands Local Planning Strategy, and the Nedlands Stirling Highway Activity Centre (NSHAC) Strategy. i. Stirling Highway is identified as an urban corridor which "provide locations for increased (densities) and diversified places for people to live and work.." This implies a need for higher-density residential development with a mix of compatible commercial and community uses to create a vibrant and active urban environment. The Aldi development is therefore undermining the strategic role of the Stirling highway activity corridor, and its potential to aid in creating a vibrant 'town centre' whilst also aiding urban consolidation. ii. The common theme across each strategy is the requirement for further housing in activity centres and urban corridors, the proposal does not acknowledge its role in providing housing, which is becoming increasingly important. The CoN Local Planning Strategy and NSHAC Strategy outline that the 'town centre' is to have the highest housing density along Striling Highway, and thus a lack of housing provided by the development. Therefore, the development is not in keeping	It is this perspective that the adjacent Nedlands Square development (Woolworths) was approved in the Mixed-Use zone, without a residential component. There has also been a substantial shift in the planning by the City with a request to the Minster for Planning to rezone most of the sites along Stirling Highway from 'mixed use' to 'residential' with a clear objective to limit the spread of non-residential uses, and reinforce the neighbourhood centre as the focus and consolidation of activity. b. The proposal is in direct alignment with the 'Neighbourhood Centre' zone under the proposed Nedlands Stirling Highway Activity Centre (NSHAC) scheme amendment. Documented in detail in **Table 4** of the lodged planning report, the proposal meets all relevant elements of the zone's objectives. It is important to note that the draft scheme amendment, at current, does not stipulate a mandatory residential component. Whilst an objective is for the provision of 'medium and high-density residential development', it does not preclude development that does not contain residential development. As discussed above in response a), the proposal provides critical amenity to in a walkable catchment for future residential uses, when they become viable.

	with the future character of the area which is strongly identified across both state and local guiding documents. iii. As outlined by *Aldi Foods Pty Ltd and Shire of Serpentine-Jarrahdale [2024] WASAT 27* the local planning strategy must be considered in accordance with item (m) of s67 of the *Planning and Development (Local Planning Schemes) Regulations 2015.* The development is inconsistent with the planning framework as it does not satisfy the objectives of clause 5.9.10 within the Local Planning Strategy. Just as the shutters in *WASAT 27* were inconsistent with Serpentine-Jarrahdale local planning scheme, the building height and lack of residential dwellings is inconsistent with the City of Nedlands local planning scheme, and thus the planning framework and desired future character. In order for the proposal to be supported it must increase its height to a minimum of 4 stories in accordance with the NSHAC strategy and the intent of the Local Planning Strategy and provide residential dwellings. This is necessary in order for the town centre to achieve its potential, whilst also developing the Stirling highway activity corridor in accordance with Perth and Peel @ 3.5 million. Therefore, I urge the City to defer or refuse application based on its non-	c. As identified in the above responses a) and b), a successful mixed use precinct involves a mix of uses across the identified centre. Forcing the incorporation of residential development when it is unviable or impractical prevents the development of catalytic uses such as this proposal. When developed in conjunction with the adjacent Nedlands Square, a definitive town centre will be established assisting in the future development of medium to higher density residential. Public space is proposed in both developments to encourage pedestrian activation. 2. Strategic Alignment i. Refer above responses in 1(a), 1(b), and 1(c) addressing how the proposal will attract greater mix of densities. ii. The proposal aligns with the NSHAC Strategy's vision of transforming the site into a 'Town Centre' and a focal point for shopping, entertainment, and dining. The proposed ALDI store will contribute significantly to the retail and socialisation uses within the area, enhancing the vibrancy and attractiveness of the locality. The strategy's objective of providing a mix of complementary uses is also met by the ALDI proposal. The store will offer a variety of products and services

	compliance with the planning framework and the future character of the area.	that are compatible with nearby residential uses, thereby contributing to the diversity of the wider Neighbourhood Centre. The land use proposed by ALDI aligns with the strategy's focus on concentrating retail, dining, entertainment, and other socialisation uses on the lots south of the Highway. The ALDI store will contribute to the creation of a distinctive active edge along the southern side of the Stirling Highway, enhancing the streetscape and the overall appeal of the area. The proposal has been conceived in concert with the Landscape Architect to holistically consider character and provide canopy cover, street edge buffers, and a useable pocket park. iii. The proposal aligns with the relevant components of the Local Planning Strategy, specifically under section 5.9.10 where the reference to a 'focus (on) compatible development around identified residential and non-residential pockets'. This proposal is both compatible with its adjacent residential designations, as well as provide supportive amenity for higher density residential. Notwithstanding, the Local Planning Strategy makes reference to the 'upkeep and growth of the Captain Stirling Neighbourhood Centre (also known as

		Nedlands Town Centre) as the primary town centre in the area.' This proposal aligns with this strategy provision. The Strategy has further pinpointed the subject site as part of the Captain Stirling Neighbourhood Centre. The City's vision for the site includes retail development, with an objective to increase activity centres by 37% or 5,500m2. The Captain Stirling Centre, strategically located, holds the most significant potential for expansion. Whilst this submission is noted, it is clear through the above that the development proposal aligns with the intent of the wider precinct and plays a **strategic role** in the activation of the precinct itself. The amenity it will bring will, in partnership with Nedlands square, will generate a Town Centre that will provide services and amenity to support the desired residential density across the wider locality.
2	Insufficient parking allocation, non-compliant with relevant design codes and planning policies.	Parking has been provided at a rate that has been proven to meet the requirements of an ALDI store. There are currently 598 ALDI store in operation and the specific operational requirements are well known.
3	1. I think the proposal would be okay if it was just a single storey height, without the clad part above it (which displays the Aldi sign). They are already elevating the site and this second storey would	1. This comment is noted, however, the design response have been balanced with the feedback that has been provided via the Design Review Panel process.

	presumably be office space, which they could put on the ground level or move into one of their own tenancies. 2. I don't think they should be allowed to display their Aldi sign. People will come to know where the shop is and anyone looking for an Aldi on Stirling Highway will easily find it, I do not think they should be allowed signage like this, it is so 'in your face'. It is part of the whole Supermarket controlling things which is a sore point at the moment with the way they have been behaving with reducing package sizes and charging more. In my humble opinion these big retailers need to have the reins tightened. If you are in an industrial area or inside a shopping mall, signage isn't an issue, but on the street, it is just continuous advertising that we can't escape and there is no practical need for it.	2. The signage as been developed through the guidance of the City's planning framework. The signage is restrained and reflects the signage strategy that is applied to ALDI and other supermarkets. It is important that the signage is well positioned to assist drivers making decisions to turn or changes lane so that the movements are considered well in advance of approaching the site.
4	I am in support of the Aldi development on 90 Stirling Highway, Nedlands.	**Noted.**
5	I have read relevant documents relating to the above Development Application. I strongly support this, inter alia, for the following reasons: 1. ALDI is a popular and reliable retail outlet. Residents should be afforded the opportunity of shopping at an ALDI store in the vicinity of Nedlands and not be required to travel unreasonable distances to do so; 2. Currently Nedlands residents leave the Nedlands area to shop at ALDI stores in either Dog Swamp or Palmyra. This deprives Nedlands of a commercial opportunity and associated employment.	**Noted.**

	It also contributes to increased traffic (with resultant congestion, pollution etc) for no benefit; 3. A core retail business like ALDI (especially when located close to a Woolworths competitor) will attract customers to Nedlands, to the benefit of surrounding small businesses, thereby increasing employment opportunities and making Nedlands a more vibrant area in which to live and work; 4. Competition between Australia's large entrenched supermarket businesses (such as Woolworths, Coles and IGA) is to be encouraged and will benefit Nedlands residents, thereby making it a more attractive place to live and work; 5. Increased residential density requires more retail outlets to serve more residents; 6. Parking, access, traffic noise etc appear to have been properly considered and dealt with.	
6	We support the Aldi development proposed for Nedlands wholeheartedly. We have been waiting a long time for Aldi to arrive in Nedlands and hope that the development can be completed without further delay.	**Noted**

7	We're supportive of the proposed development, and satisfied that its impact on noise, traffic flow and the aesthetic of the area has been sufficiently considered and accounted for. The City of Nedlands guidelines and regulations on these kinds of developments ensures that these things are well thought through and the requirements to ensure additional trees are planted and that the space is attractive and accessible are appreciated by us as residents. Ideally, even more consideration would be given to the way the development fits in to a longer term vision of an aesthetically pleasing centre for Nedlands, which depends on a strong feeling of community. This feeling comes from vibrant spaces that people want to linger in - rather than just passing through as a functional necessity. It doesn't appear that the development would strongly enhance this sense of community or the aesthetic of the Stirling Highway - and we'd support any improvements on this front. However, we are also satisfied that it doesn't strongly detract from the atmosphere or aesthetic of the area, which is currently somewhat fragmented anyway. Overall we're keen to see the development progress, noting that we would likely support any improvements that emphasise the sense of community in the space, or contribute to the formation of a distinctive 'Nedlands' design aesthetic - adding character and 'local' appeal.	**Noted**

8	I welcome the extensive landscaping (13% of site) that has been proposed across the site, including establishing a pocket park centred around a large feature tree and the additional planting that has been provided along the site's boundaries.	**Noted**
9	It has been too long that the City of Nedlands has had minimal facilities for residents with large blocks of land in what should be the heart of Nedlands left vacant. I support the proposal which appears to have considered the close by residents by directing traffic onto Dalkeith Road.	**Noted**
10	We'd be delighted with the Aldi store going ahead, especially if the urban amenity is thoughtful, green and the impact on local traffic well managed. The store would add a great alternative to Coles/Woolworths/Jacks and IGA in the local area, and it brings an Aldi to the area whereas existing opportunities to shop at Aldi are currently ~25min drive away north or south.	**Noted**
11	This undeveloped area has been both a nidus for crime and an eyesore for far too long. This plan for the Aldi and Woolworths looks reasonable and will provide excellent amenity in an area unserviced by supermarkets and retail and will bring vitality and residents back to the area from the Claremont and Subiaco areas. Please expedite this process-we are sick of delays and poor fiscal policy from City of Nedlands.	**Noted**
12	Nedlands does not have any major supermarkets especially in around the Melvista ward. This will bring in convenience and options for the residents of nedlands. Very relevant when there are so many high rises and influx of people moving in to them. This will also bring in job opportunities in the area for students	**Noted**

13	Fully supportive - this is missing in the area and will create lots of value for the residents - with the growth in the population driven by new zoning which has been a great idea, this facility is absolutely required for the suburb. so fully supportive of it.	**Noted**
14	I would love aldi near me	**Noted**
15	The area of Nedlands and surrounds needs an Aldi to add competition to the duopoly of Coles and Woolworths. I am a big fan of Aldi, lived in Sydney for 30 years and had several ALDIs near me. They are genuinely cheaper every day. At present I have to travel to Innaloo or South Fremantle to shop at Aldi which is a fair way.	**Noted**
16	As someone in close proximity to the proposed development, I would like to see the development at 90 Stirling Hwy go ahead as currently planned. Having shops and other facilities within a short walk will not only be convenient for those in our complex but will also be important as further medium-density housing is built along the Stirling Hwy corridor.	**Noted**
17	**General:** I think the development design is good and it will be good to have trading retail back on the unused site. The design however in my opinion is flawed in that the majority of the car parking is basement only and is serviced by 2 lifts; in my opinion they shops should be primarily accessed via a travelator as it is much more efficient and will suit the vast majority of shoppers using the centre. I would have also thought it would attract more shoppers and also be a benefit to Aldi's trade. Lifts (especially with trolleys of food) are very inefficient and as we saw during COVID even more inefficient when numbers are capped on occupancy. There appears to be sufficient room for a	**Noted.**

	travelator and I would encourage council (even if it meant reducing car bay numbers and conceding on that in terms of the planning scheme) to encourage this outcome for the demographic of the area and performance of the centre. **<u>Traffic & Loading:</u>** Dalkeith Road is a busy road which cars speed down; Both this development and the Woolworths development will cause a large spike in the traffic on Dalkeith Road with people looking to exit via traffic lights for safety and as such I would encourage the council to push for a developer contribution to a new roundabout on the corner of Dalkeith Road and Edward Street, as exiting these future retail sites will become a nightmare to exit and get back onto Dalkeith Road (let alone a nightmare for the residents and potential increased danger for drivers and pedestrians). This initiative should slow traffic coming from the south along Dalkeith Road and a safer exit from Edward Street than the current T junction. I was pleased to see that Aldi's loading / truck delivery plan was for the trucks to enter in Florance Road, and exit Florance Road (see below 5.3 from the traffic report). I think this is an excellent outcome which should be formally imposed as a DA condition on both the Aldi site and Woolworths development, as keeping trucks off Dalkeith Road and limiting that the passenger vehicles will make a big impact for residents.	

	I am keen to see this as a formal DA condition and embedded for the future as under 5.2 of the same report (below), they suggest that when the future laneway is completed, they will then use that for service, delivery and waste access. That is a concern, as demonstrated below the traffic regularly backs up to the day care centre, and it is proposed to have a laneway with another cross over onto Dalkeith Road carrying traffic, service vehicles, delivery & waste for both the Aldi and Woolworths developments. This outcome and strategy is fanciful, it'll simply become chaotic and dangerous – you don't need modelling to tell you that. The final and major traffic issue will come when those wanting to access Aldi and Woolworths from drivers approaching from the west down Stirling Highway. As they outline in 3.1 Main Roads has plans to limit right hand turns into certain roads in the future including Florence Road. Thus any shopper coming from the west will need to turn right at Dalkeith Road (or earlier). As it currently stands there is no right arrow are Dalkeith Road so you are typically sitting waiting for a car to drive into you from behind, and at peak periods you cannot turn right as that is prohibited, so it is likely drivers will start to turn earlier than the lights at Mountjoy or Louise Streets, down Jenkins (a safe, active street by name – but in reality one of the most dangerous creations ever invested for both drivers and cyclists), then down Dalkeith Road. I've made submissions on density, Aldi and the Woolworths developments in the past, and without a traffic study and strategy that is broader than a single site analysis it is all a waste of time. Traffic is	

cumulative, council should do the work, work with main roads and work out both the impact and a solution for the retail sites, as well as the forecast growth in residential traffic given the zoning changes / developments and plan and develop the network for the next 20 years, not a piecemeal approach that appears the be the current thinking.

No one seems to account for the fact that every R60 block can easily develop and go from typically 2 cars to 8 to 10 vehicles. Extrapolate that out across the rezoned land and see what happens to the model – ouch.

Extracts:

5.3 Provision for Service Vehicles

The loading area for the ALDI supermarket is located to the rear of the subject site. Trucks will enter from Stirling Highway onto Florence Road and accessible from the rear laneway. Trucks will then exit onto Florence Road back onto Stirling Highway. This route minimises the impact of service vehicles on residential amenity to the south.

It is understood that the largest service vehicle expected is a 15.0m semi-trailer (18 pallet Aldi truck). Swept path diagrams for this service vehicle accessing and egressing from the loading dock are provided in Appendix B.

As shown in this swept path analysis, the proposed service/loading facility is adequate to accommodate turning movements, with all reversing manoeuvres contained on-site.

Further to the swept path analysis, the client advised that physical truck manoeuvring tests were performed for access in and out of Florence Road from Stirling Highway and observed that no changes will be required for any existing infrastructure and is considered satisfactory.

Loading for the office and retail tenancies will be provided via two on-street spaces proposed to be converted to 'Loading Zone' along the site's frontage to Florence Road. This arrangement is consistent with the previously approved ALDI proposal and is considered satisfactory.

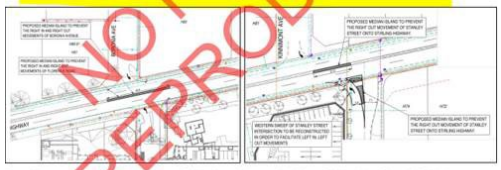
NOT TO BE REPRODUCED

5.2 Access Arrangements

Vehicle access is proposed to be via the proposed crossover on Florence Road, with provision for future connection to Dalkeith Road via a rear laneway. This access point will accommodate all vehicular movements, including general customer/employees, service, delivery and waste collection vehicles.

Redundant crossovers across Stirling Highway and Florence Road will be consolidated and reinstated. Accordingly, an additional three on-street car spaces will be provided as part of the streetscape amendments.

Pedestrian access will be via the existing footpaths along Stirling Highway and Florence Road to the forecourt area fronting Florence Road.

	3.1 Road Network It is understood that the following changes are proposed to the road network in the vicinity of the site: – Boronia Avenue restricted to left-in and left-out – Florence Road restricted to left-in and left-out – Stanley Street restricted to left-in, left-out, and right-in These changes are reflected in Figure 3.1 below – The potential for a rear laneway on the southern boundary of the subject site - connecting Florence Road and Dalkeith Road as per Local Planning Policy 4.2: Dalkeith Road to Stanley Street Laneway Main Roads WA has a long-term plan to upgrade Stirling Highway (Stirling Highway Access Corridor Study – SHACS), including installing signals at Stirling Highway and Smyth Road intersection. – As part of these future upgrades, Main Roads WA have plans for rationalisation of the Stirling Highway road reserve. The proposed turning restrictions Florence Road and Stanley Street are consistent with this plan.  Figure 3.1 Proposed modifications to Stirling Hwy / Florence St (left) and Stirling Hwy / Stanley St (right) *Source: Nedlands Square TIA (Cardno now Stantec, 2022)* NOT TO BE REPRODUCED	
18	6.1m is too narrow for the laneway link through to Dalkeith Road. This should be at least 7.0m wide, preferably wider, to allow for the eventual closure of Florence Road access to Stirling Highway, when the laneway would become the main entry and exit to the property. Pity about the decrease in planting and open space.	Noted. The rear carriageway as been provided in accordance with the as advertised NSHAC Scheme Amendment. This amendment will require the provision of 6m wide carriageway at the rear of the property. The proposal provides an appropriate amount of open space and planting for a shopping centre development of this scale. The Pocket Park has been designed to provide a place for visitors to the subject site and the adjoining commercial land to utilise. This park has been expanded in response to Design Review 2, and as such includes greater places for rest and use on the site.
19	Thank you for the opportunity to comment on this proposal, which we are very pleased to see. We support this proposal for a satisfactorily-	Additional planting and bicycle parkign has been included in the proposal since the advertised plans. The public meeting

	scaled amenity that is much needed to replace the old Captain Stirling Shopping Centre. We would like to express our thanks to the Aldi development team for preparation of a clear and honest proposal. Some aspects of the proposal that we feel might be improved if feasible: bicycle parking (no. and location), some additional public meeting space to the south or under cover, deep planting on Stirling Hwy that is outside the Stirling Hwy expansion zone.	space has also been significantly enhanced by the spatial re-planning of the pocket park. This area has been designed to be safe and welcoming, and will encourage causal and planned interactions of the community.

Enquiries: Michelle Doherty on (08) 9323 6390
Our Ref: 14/8766 (D24#1266733)
Your Ref: DA24-98329

9 October 2024

Dillon Reid
City of Nedlands
PO Box 8
NEDLANDS WA 6909

Email: planning@nedlands.wa.gov.au (via email)

Dear Sir/Madam,

INFORMATION REQUEST - COMMERCIAL DEVELOPMENT - LOTS 3, 4 AND 5 (90) STIRLING HIGHWAY NEDLANDS - REF DA24-98329 - DAP/24/02769

In response to your correspondence received on 7 October 2024, Main Roads has reviewed the application and is unable to provide a recommendation at this point in time.

Please provide the following items:

- Applicant's submitted planning report/written statement detailing how this development will function.
- An updated Transport Impact Assessment (TIA) prepared in accordance with Transport Impact Assessment Guidelines (August 2016) and electronic SIDRA Intersection files (.sip) in Version 9.
- Provide any existing DA approvals the City of Nedlands may have relating to this development.

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

As stated above, Main Roads is unable to provide a recommendation on the subject proposal until the above information has been received and assessed.

Please forward all emails, including the requested information relating to the proposal to planninginfo@mainroads.wa.gov.au. If you have any further queries, please do not hesitate to contact Michelle Doherty on (08) 9323 6390.

Yours sincerely

MDoherty

Michelle Doherty
Planning Assessment Officer

Architectural Design Review Assessment *City of Nedlands Design Review Panel*	
Design quality evaluation	**Date: 21 October 2024**
Application: 90 Stirling Highway, Nedlands	
Review No.: 2	**Time:** 2pm – 3pm

Panel:

- **Simon Anderson – Chair**
- Simon Venturi – Deputy Chair
- Dominic Snellgrove
- Walter Van Der Loo

City of Nedlands Representatives:

- Chantel Weerasekera – A/Coordinator Planning Approvals
- Dillon Reid – Senior Urban Planner

Apply the applicable rating to each Design Principle		
		Supported
		Further information required
		Not supported
		Yet to be addressed

Summary

Site Context

The site comprises 3 lots with a total area of 4,675m2. The site is zoned Mixed Use with a density coding of R-AC1. The site is impacted by an MRS Primary Regional Road reservation to its northern boundary which occupies approximately 230m2 of land area.

On 14 November 2018 the JDAP approved the demolition of the existing shopping center complex and the construction of a new ALDI supermarket and restaurant tenancies. This approval will lapse on 11 November 2024. This proposal is being considered as a new application.

Application History

The application proposes a commercial development comprising shop and office tenancies. The application is being assessed by the City. This is the second time this proposal has been presented to the DRP.

Strengths of the proposal

- Comprehensive presentation to the panel.
- The proposed land uses, including smaller commercial tenancies are beneficial for the locality and are supported.
- The lowered ground and basement levels have improved streetscape interactivity on Florence Road.
- The floor plan re-arrangement has resulted in some improved functionality and supermarket windows facing Stirling Highway.
- Glazing generally presents to the street on Florence Road.
- The pocket park has the potential to contribute to a sense of place.
- Removal of the ramp structure is positive and increases streetscape connectivity.
- Nil setback to the western boundary allows for a continuous streetscape with future development on the adjoining lot.
- Landscaping selection is generally positive with good native species inclusion.
- The addition of new street trees is positive.

		• ESD initiatives such as solar panels, electric vehicle charging and an all-electric development (no gas) add value • Inclusion of a signage strategy is helpful for this typology. • HVAC plant is located on the roof and screened.
Principle 1 - **Context and character**		*Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.*
		<u>1a. Comments</u> • While improvements have been made, the design may still be too 'generic'. • Streetscape interactivity to Stirling Highway and on the corner can be improved. • The proposal may not satisfy the local planning framework vision for the area as a high-rise, mixed use centre. <u>1b. Suggested amendments/improvements</u> • Further inclusion of design elements that reflect the local Nedlands context and unique sense of 'place' should be considered. • Prepare further detailed plans, including sections that provide more information about the development spatially. • Further streetscape interactivity and community benefits / amenity are needed to justify the development's role as a key feature of the future Neighbourhood Centre.
Principle 2 - **Landscape quality**		*Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.*
		<u>2a. Comments</u> • Some deep soil areas may not have sufficient dimensions to properly accommodate larger tree sizes. • The pocket park design should be improved beyond just landscaping and alfresco seating to encourage public use. <u>2b. Suggested amendments/improvements</u> • Deep soil zone provision is adequate but DSZ areas should be increased in width to accommodate larger trees. • The pocket park can be increased in size by occupying more space back towards the lift walls and the inclusion of public space infrastructure such as bench seating is encouraged.
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.*
		<u>3a. Comments</u> • Trolley and lift core have increased in size which encloses the entrance forecourt concealing the main entrance and further obscures northern light. • The building footprint does not address Stirling Highway effectively. • A relocation of the trolley collection bay, stairwell and lift core away from Stirling Highway should be considered. <u>3b. Suggested amendments/improvements</u>

		• Consider 'slanting' the building footprint adjacent to Stirling Highway so it is parallel to the lot boundary and addresses the streetscape. This could improve streetscape interactivity. This is an important aspect in providing exemplary outcomes for all design principles which should also include increasing the amount of deep soil area and internal resident amenity. • Consider relocating the trolley store, lift and stair well to improve the quality of the main entrance forecourt.
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.*
		<u>4a. Comments</u> • Nil. Supported. <u>4b. Suggested amendments/improvements</u> • Nil
Principle 5 - **Sustainability**		*Good design optimises the sustainability of the built environment, delivering positive environmental, social, and economic outcomes.*
		<u>5a. Comments</u> • The applicant has built an ESD narrative for the project but is encouraged to engage an ESD professional on the project to ensure a comprehensive and co-ordinated approach / outcome is achieved. <u>5b. Suggested amendments/improvements</u> • An ESD consultant should be engaged and an ESD report prepared.
Principle 6 - **Amenity**		*Good design optimises internal and external amenity for occupants, visitors, and neighbours, providing environments that are comfortable, productive and healthy.*
		<u>6a. Comments</u> • Nil. Supported. <u>6b. Suggested amendments/improvements</u> • Nil
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.*
		<u>7a. Comments</u> • The entrance to tenancy 7 is recessed and not particularly legible. • The legibility of the main entrance to the supermarket is concealed by the trolley store, lift and stair core. <u>7b. Suggested amendments/improvements</u> • Materiality of the basement car park could be improved to delineate between pedestrian and vehicle spaces and movement. • Consider the addition of a strip window to the office/administration spaces near the western boundary facing Stirling Highway. • Consider bringing forward the entry to tenancy 7 further toward Florence Road to increase tenancy size and reduce the long 'dead' space pathway to the entrance. • Relocate and re-organise the trolley store, lift and stair core to improve the legibility of the main entrance to the supermarket.

Principle 8 - **Safety**		*Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.*
		<u>8a. Comments</u> • The location and solid building elements of the trolley store, stairwell and lift core currently create opportunities for concealment. <u>8b. Suggested amendments/improvements</u> • Further glazing or relocation of the trolley store, stairwell and lift core should be considered.
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.*
		<u>9a. Comments</u> • The design of the pocket park renders it quite singular in function. The alfresco seating in the pocket park may contribute to a 'commercialisation' of the space. • Engagement with Stirling Highway is not sufficient. • The blank trolley store, lift and stairwell walls adjacent to Stirling Highway does not provide adequate outlook and interactivity to the main entrance to the development on the streetscape. <u>9b. Suggested amendments/improvements</u> • Consider more dynamic and varied amenity features for the pocket park such as integrated seating walls or bench seats. • Relocate and re-organise the trolley store, lift and stair core to improve the legibility of the main entrance to the supermarket. • Convert the stairwell wall from solid building material to glazing to provide an outlook and visual connectivity with Stirling Highway.
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.*
		<u>10a. Comments</u> • The troller store, lift and stairwell wall adjacent to Stirling Highway is solid and does not provide adequate articulation or visual interest when viewed from the public realm. • Too much of the building addressing Stirling Highway is a blank painted concrete façade such as the southern end of this façade. Consider introducing textual and contextual materiality derived from the local context on this façade. <u>10b. Suggested amendments/improvements</u> • Consider a 'hit and miss' face brick wall design for parts of the building façade addressing Stirling Highway.
SUMMARY		Streetscape interaction with Florence Road is sufficient, however, the Stirling Highway frontage interactivity could be improved. The inclusion of the pocket park and general site landscaping is positive, but the design could be improved to increase the significance and contribution of these elements to the locality. Given that the scale and land use of the development may not accord with the local planning vision, further redesign which increases streetscape engagement and community benefit is required, for example by increasing deep soil zones to allow large trees to

	be incorporated.
OVERALL RECOMMENDATION	Not yet supported. Requires Further Attention.

Design Review progress			
	Supported		
	Further information required		
	Not yet supported		
	Yet to be addressed		
	DR1 – 1 July 2024	*DR2 – 21 October 2024*	*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**			

From: Simon Anderson
To: Dillon Reid
Subject: Re: 90 Stirling Highway, Nedlands - DRP Chair Review
Date: Friday, 22 November 2024 12:48:30 PM
Attachments: image001.png
image002.png
image003.png
image004.png

Dillon

Thank you for the opportunity to keep helping with this project.

I have now had a chance to study the amended plans and supporting documents and the response to the comments of the last DRP review.

Our last Review identified a number of relatively minor yet significant issues that we recommended needed attention. In no particular order I would offer these comments on the amended submission.

- The addition of red brick to the material palette without compromising the important Aldi brand image helps better situate the project within its local context.
- The reorganisation and reorientation of the lift/stair/trolley bay zone improves the relationship of the project to the Stirling Highway street frontage.
- The enlarged and consolidated deep soil zone in the pocket park on the corner will allow for a more significant tree to flourish. Bench seating will greatly extend the hours of use for the park for the community.
- Maintaining the deep soil zone to Stirling Highway will allow for medium scale planting that will help the project respond and add to Nedlands landscape character.
- The ESD report and its initiatives are a welcome addition to the proposal.
- The relationship of the proposal to the planning scheme remains curious to me. However the emerging character of the precinct containing the proposal seems to be low rise supermarket shopping with small scale commercial tenancies fronting landscaped and shaded terraces all served by concealed parking. In this sense the proposal strengthens the precinct by providing retail variety and choice within the City of Nedlands. From a DRP perspective the proposal is supportable for this reason, yet the preeminence of the applicable planning scheme may outweigh this support at other points in the decision-making process.

Overall the applicant has responded very constructively and positively to the DRP advice. When asked to undertake a Chair review of amended plans I have always closed my comments with a statement of support or otherwise for the proposal in its current form. In this case and for the reasons outlined above, I **support** the current proposal but with the qualification outlined in the previous paragraph. Following is the updated DRP Design Quality Evaluation.

Simon

Emeritus Professor Simon Anderson LFRAIA
Senior Honorary Research Fellow
M433 School of Design
The University of Western Australia
35 Stirling Hwy, Crawley, Western Australia 6009
Mobile 0405 381 408

Hello Simon,

Revised plans and supporting documentation for the above application for a commercial development, dated 18 November 2024, have been submitted to the City for consideration.

This application has previously been to the Design Review Panel twice on 1 July 2024 and 21 October 2024 **(see attached DRP Minutes).** The changes include:

- Reconfiguration of the lift 'tower' to address the street at an angle.
- Increased size of tenancy 07
- Reconfiguration of the pocket park.

- Bench seating provided to the pocket park.
- Increase in size of the Deep Soil Zone.
- ESD report prepared (attached).
- Brickwork now included in the façade.

DRP Design Quality Evaluation			
	Supported		
	Further Information Required		
	Not supported		
SPP 7.0 Principles	1 July 2024	21 October 2024	**Revision 3 (pending Chair Review)**
1. Context and Character			
2. Landscape Quality			
3. Built Form and Scale			
4. Functionality and Built Quality			
5. Sustainability			
6. Amenity			
7. Legibility			
8. Safety			
9. Community			
10. Aesthetics			

From a City staff assessment perspective, the proposal is somewhat supportable. No section drawings have been provided and it is unclear if the pocket reconfiguration is a significant improvement from the last design. No tables and chairs are shown on the plans within the forecourt area but they are shown on the renders.

The applicants have also provided a DRP response document (attached).

If you can please review the amended plans and supporting documents and provide a response ideally on or before **Friday 22 November 2024.**

Thank you,
Dillon Reid
Senior Urban Planner

City of Nedlands

Administration Centre
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ALDI NEDLANDS DEVELOPMENT APPLICATION REPORT

Lots 3, 4 & 5 (No.90) Stirling Highway, Nedlands

Prepared for
ALDI FOODS PTY LTD
20 September 2024

URBIS

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director	Tim Dawkins
Senior Consultant	Jackson Tomich
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Project Code	P0000554
Report Number	FINAL

Acknowledgement of Country

Urbis acknowledges the Traditional Custodians of the lands we operate on.

We recognise that First Nations sovereignty was never ceded and respect First Nations peoples continuing connection to these lands, waterways and ecosystems for over 60,000 years.

We pay our respects to First Nations Elders, past and present.

The river is the symbol of the Dreaming and the journey of life. The circles and lines represent people meeting and connections across time and space. When we are working in different places, we can still be connected and work towards the same goal.

Title: Sacred River Dreaming
Artist Hayley Pigram
Darug Nation
Sydney, NSW

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It shall only be used in this context and shall not be made available to third parties without client authorisation.
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INTRODUCTION

This report has been prepared by Urbis, in collaboration with Nielsen Architects and a project design team of specialist technical consultants, in support of a mixed-use development application over Lots 3, 4, and 5 (No. 90) Stirling Highway, Nedlands (**subject site**).

The subject site was acquired by ALDI in August 2015 as part of its strategic expansion into Western Australia, driven by desire to assist to provide increased customer choice and enhance the quality and reduce the cost of daily and weekly shopping grocery experience.

ALDI, a global leader in the retail sector, is renowned for its efficient operations and commitment to providing high-quality products at affordable prices. The proposed development in Nedlands will not only house an ALDI supermarket but also include a variety of other supporting tenancies that will contribute to the growth of the Florence Road precinct. This diverse mix of uses will further strengthen ALDI's presence in Western Australia and continue its tradition of serving local communities.

The proposed development features a prominent commercial building fronting Stirling Highway and Florence Road complemented by landscaped areas and onsite semi-basement car parking. The spatial resolution of the site and architectural design of the building and landscaping is thoughtful and considered, utilising materials that reflect the broader context of the subject site's location in Nedlands. Sustainability considerations have been integrated into the design of the proposal, ensuring it is built to last, and serves its purpose in delivering essential services to community members. This new mixed-use development will not only provide a convenient shopping destination for residents but also offer a range of essential services, contributing to the vibrancy and economic vitality of the Nedlands area.

1.1. THE ALDI CONCEPT

ALDI, a 'hard discount' supermarket with over 12,000 stores worldwide, entered the Australian market in 2001 and opened the first Western Australian stores in 2016. It offers a limited range of mostly private label products at the lowest possible price, investing extensively in product development to ensure quality and adaptability to consumer tastes. ALDI provides staple groceries and weekly special buys for general merchandise, contributing to reducing the cost of living for households. The company's presence in Australia has grown in response to global economic conditions affecting household spending. ALDI uses a 'set floor plan' model for its stores, creating efficiencies that offer consumers an alternative shopping experience.

1.2. PREVIOUS APPROVALS

ALDI has previously attained planning approval for a retail development over the subject site in 2018. The proposed development included an ALDI store, six specialty stores, and associated car parking, access, and landscaping. The specialty stores were intended to be a mix of shops and restaurants, subject to finding the appropriate tenants.

The development was designed to be consistent with the State and local planning framework, provide a clear focal point within the Nedlands area, and expand the amenities offered to local residents. The built form was planned to have a strong address to both Stirling Highway and Florence Road, with stores and alfresco areas addressing the street to provide a high level of activity.

The then Metro West JDAP granted approval for this development under the City of Nedlands Local Planning Scheme No. 2. However, due to external market pressures the proposal was unable to be constructed. ALDI have revisited the site under the current planning and development context and are seeking to deliver a development that integrates with the renewed precinct strategy and recent approvals in the nearby locality.

1.3. NEDLANDS SQUARE DEVELOPMENT CONTEXT

The subject site is adjacent to the site of the Nedlands Square Retail Redevelopment by Woolworths. This project was approved in February 2023 after many years of uncertainty and will provide a key retail and commercial outlets, including Woolworths as an anchor tenant. The ALDI development will be complimentary to the retail offerings at the Nedlands Square development, allowing the precinct to operate and cohesive centre.

2. SITE CONTEXT

2.1. LOCATION AND CONTEXT

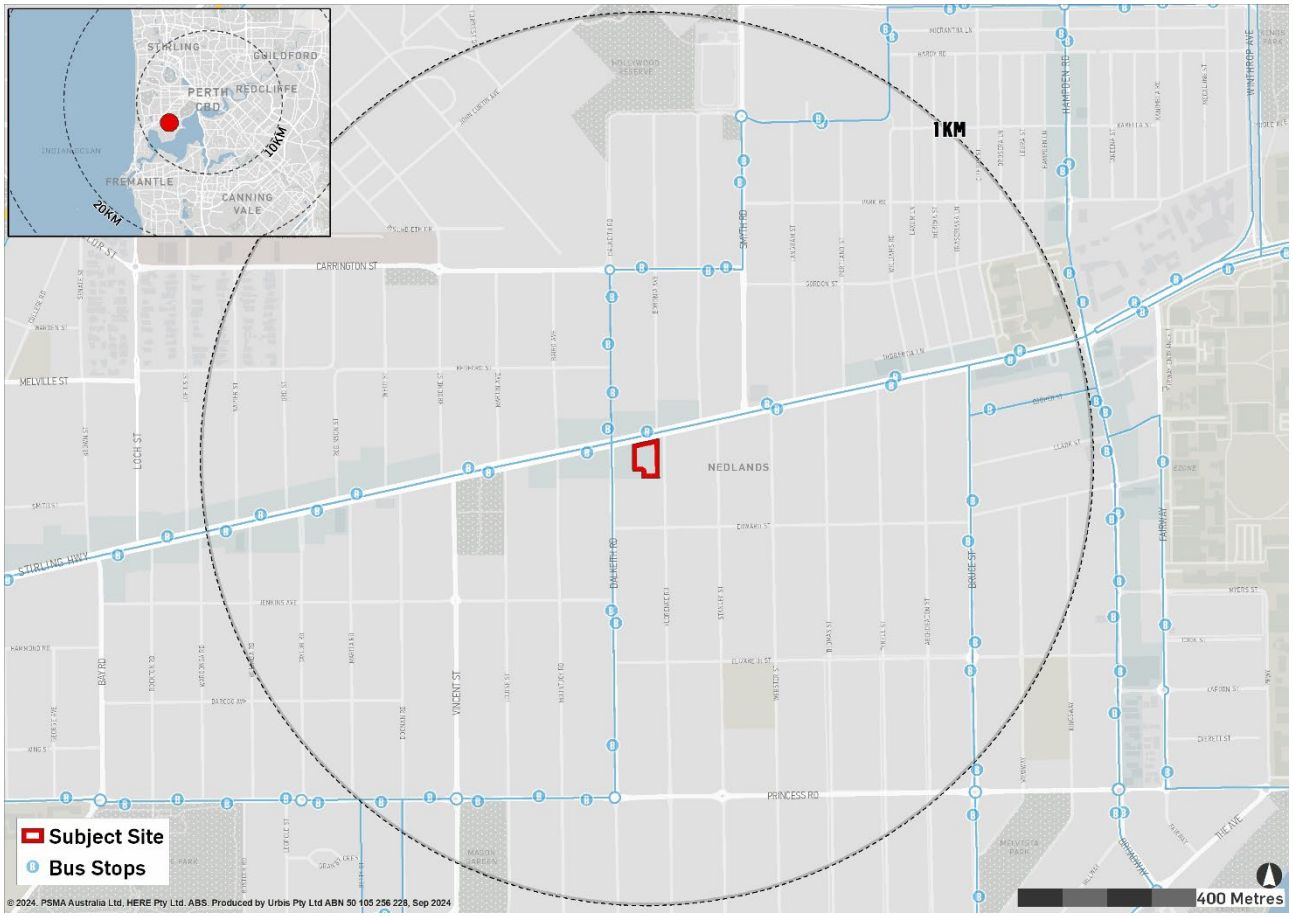
The subject site is located one the corner of Stirling Highway and Florence Road in the City of Nedlands local government area. The site is approximately 5km west of the CBD and approximately 1km west of the University of Western Australian (UWA). The site has a high level of pedestrian connectivity to Stirling Highway and surrounding streets, and further had vehicle connectivity to Stirling Highway and to the south via Florence Road. The immediate locality is characterised by commercial, office and entertainment development along Stirling Highway, with residential development transitioning away from the Stirling Highway corridor. Adjoining the site to the west is an existing post office and veterinary clinic.

The site is currently vacant, having previously been occupied by the Captain Stirling Shopping Centre, containing various retail speciality stores and tenancies.

Vehicular access into the site is currently provided via existing crossovers from Florence Road and Stirling Highway. A portion of the site is subject to a Primary Regional Road Reserve for future acquisition to accommodate the widening of Stirling Highway in line with the boundaries. The proposed development remains clear of the portions of Lots 3, 4 and 5 subject to the future resumption. To the east of the site is the State and local heritage listed Captain Stirling Hotel and the site of the holistic Nedlands Square development.

Refer to **Figure 1** below for a locational context map.

Figure 1 - Locational Context



2.2. LOT PARTICULARS

The following table and below **Figure 2** outlines the lot details comprising the subject site.

Table 1 - Lot Particulars

Lot	Plan	Vol/Folio	Proprietor	Area	Street Address
3	1747	1287/76	ALDI FOODS PTY LTD	1,265	90 Stirling Highway Nedlands
4	1747	1287/76		1,657	
5	1747	1287/76		1,738	

Figure 2 - Cadastral Plan

2.3. EXISTING ACCESS ARRANGEMENTS

The subject site has a street frontage to Stirling Highway to the north and Florence Road to the east. Stirling Highway is a Primary Regional Road ('Red Road'), and the reservations extends into the subject site along Stirling Highway, with the incursion ranging from 2.9 metres to 3.6 metres. There is an existing vehicular access directly onto Stirling Highway which is used to service a number of the commercial tenancies. Primary vehicular access into the customer car park is currently from Florence Road as depicted in **Figure 3**. An on-street loading bay is currently provided within Florence Road which can also be seen in **Figure 3**.

Florence Road intersects Stirling Highway with a left in-left out intersection. A painted median divides Stirling Highway preventing right turn movements into Florence Road Further detail around traffic and access is provided within **Report Section 6.1** and the Traffic Impact Assessment (**Appendix D**).

Figure 3 - Site Aerial

The site benefits from high-frequency bus services with Stirling Highway which connect to the Perth CBD,UWA, QEII Medical Centre, Fremantle and Claremont Activity Centre. Routes 105, 995 and 999 service areas north of the site including the Shenton Park train station, Innaloo Shopping Centre and Stirling train station. The above Locational Context Plan in **Figure 1** demonstrates this bus services.

Currently, safe pedestrian crossing opportunities across Stirling Highway are limited in the area to the signalised intersection at Dalkeith Road, 130m west of the site.

3. PROPOSAL

The proposed development includes an ALDI store, six specialty stores (separate tenancies to the ALDI store), and associated semi-basement car parking, access, and landscaping. The specialty stores are intended to be a mix of shops and restaurants/cafes. The proposed ALDI store is designed to provide a greater level of convenience and choice for the local community and create local employment opportunities.

The proposed works are summarised in **Table 2** below and detailed on the proposed development plans and concepts in **Appendix B**.

3.1. OVERVIEW OF THE PROPOSED DEVELOPMENT

The following table outlines the proposals main components.

Table 2 - Proposal Overview

Component	Description	Area/Size
Anchor Tenant (ALDI)		
Supermarket	ALDI store	1,512sq.m (incl. BOH)
Rear Laneway	Area for future easement to facilitate laneway between Florence Road and Dalkeith Road.	6.1m rear access
Landscaping	Extensive landscaping (13% of site) has been proposed across the site. The landscaping has been concentrated to the north of the site, establishing a pocket park centred around a large feature tree. Additional planting has been provided along the site's boundaries, establishing street buffers and contributing to urban greening.	Approximately 629 sq.m
Car/Bicycle Parking		

Component	Description	Area/Size
Semi-basement car parking	93 car parking bays	2,402sq.m
Associated Tenancies		
Speciality	For various tenancies	752 sq.m

4. PLANNING ASSESSMENT

4.1. STATE PLANNING FRAMEWORK

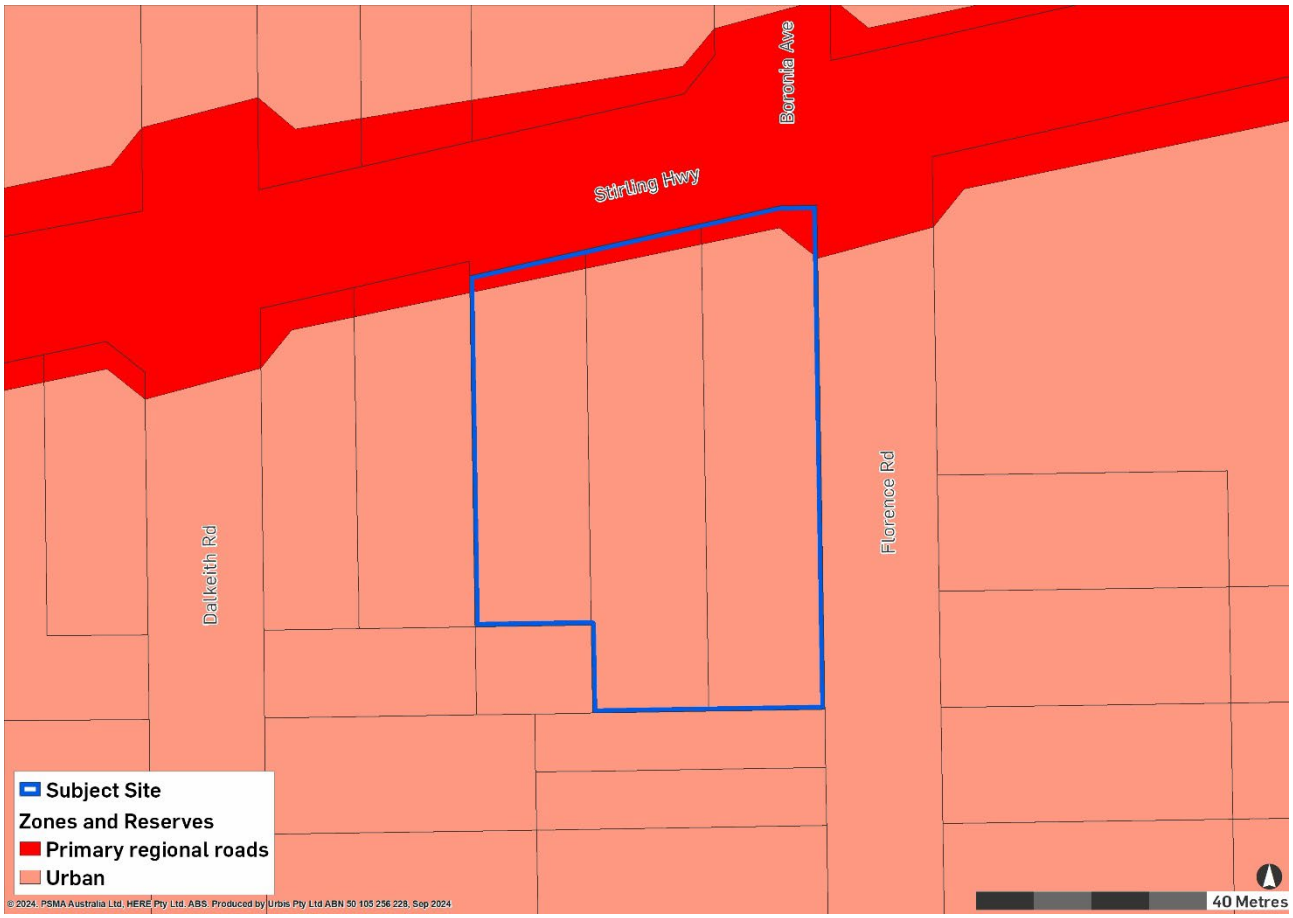
4.1.1. Metropolitan Region Scheme

Under the Metropolitan Region Scheme, the subject land is predominately located within the 'Urban' zone – allowing for a range of activities including residential, commercial, recreational and light industry. A small portion of the Stirling Highway frontage is included within the 'Primary Regional Road' reserve.

The proposed ALDI store is consistent with the intent and contemplated land uses of the 'Urban' zone under the MRS. No structures are proposed within the Primary Regional Road reserve, through considerations to the future road widening of Stirling Highway have been made in the proposed design. In particular, a row of trees have been proposed along the Stirling Highway frontage to replace those within the road reservation if/when they are removed to make way for widening – thereby allowing for the coherent transition of the locality over time.

Refer below to **Figure 4** for map of the subject site in the MRS area.

Figure 4 - MRS Map



4.1.2. Perth and Peel @ 3.5 Million – Central Sub-Regional Framework

The subject site is located between designated specialised and secondary activity centres Claremont and the UWA QE II precinct. As such, the proposed development is in an advantageous location and will provide an essential service which aligns with the State Government's goals along the Stirling highway urban corridor, specifically for locations with multiple interfaces with a main corridor.

4.1.3. State Planning Policies

Table 3 - State Planning Policy Assessment

State Planning Policy	Assessment
State Planning Policy No. 5.4 – Road and Rail Noise This policy aims to protect the community from unreasonable levels of transport noise and to ensure that transport corridors can exist in urban areas.	Whilst the subject site is within trigger distance of Stirling Highway, the policy does not apply to this development as the proposed land use is not considered a noise sensitive land use under SPP 5.4.
State Planning Policy 7.0 – Design of the Built Environment This policy elevates the importance of design quality across the whole built environment. This State Planning Policy includes 10 principles for good design and establishes the framework for integrating design review as a part of the evaluation process.	Please see section 5.0 below for assessment against the 10 principles of good design.

4.2. LOCAL PLANNING FRAMEWORK

4.2.1. Local Planning Strategy

The site has been identified as an Urban Growth Area in the Strategy, which is deemed a prime infill area in the vicinity. This area is primarily intended for the development of commercial spaces, and mixed-use buildings.

Moreover, the proposed plan aims to support the upkeep and growth of the Captain Stirling Neighbourhood Centre (also known as Nedlands Town Centre) as the primary town centre in the area. This centre is expected to evolve into an extensive and intricate mixed-use activity hub. The redevelopment of properties within Urban Growth Areas is strongly encouraged, with a focus on incorporating residential, retail, office, and other commercial land uses. Developments along Stirling Highway should be diverse, high-intensity, and predominantly medium-rise.

The City is expected to play an active role in promoting and facilitating enhancements to existing activity centres through initiatives aimed at improving the public domain of the existing neighbourhood and local centres. The City of Nedlands Local Planning Strategy has also pinpointed the subject site as part of the Captain Stirling Neighbourhood Centre. The City's vision for the site includes retail development, with an objective to increase activity centres by 37% or 5,500m2. The Captain Stirling Centre, strategically located, holds the most significant potential for expansion.

The proposed project will contribute and be a valuable addition to the retail floorspace composition within the locality.

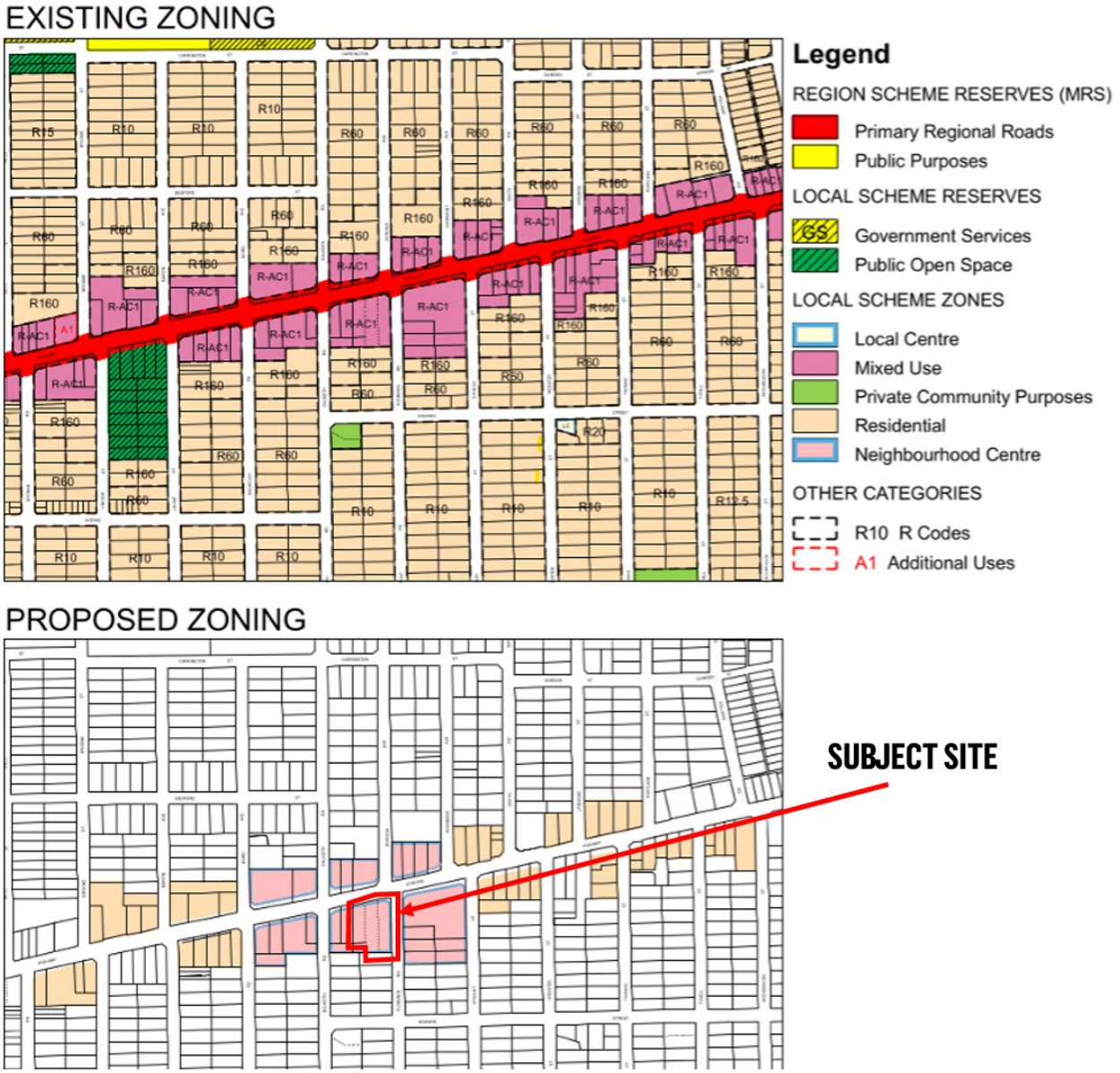
4.2.2. Draft Nedlands Stirling Highway (NSHAC) Strategy and Scheme Amendment No. 13

The City of Nedlands is currently progressing multiple planning framework changes pertaining to the Nedlands Stirling Highway Activity Corridor (**NSHAC**), of which the subject site is located. Specifically, the City is progressing a NSHAC Strategy and a subsequent Scheme Amendment No. 13.

4.2.2.1. Scheme Amendment No. 13

Scheme Amendment No. 13 (**the Amendment**) will remove the blanket R-AC1 Mixed Use zoning along the corridor and replace it with a consolidated Neighbourhood Centre zoning and surrounding Residential zoning. The subject site is located within the future 'Neighbourhood Centre' zone. This is shown in the below **Figure 5**. Further, the Amendment is to introduce a new table, Table 6, into Clause 32 Scheme which provides new provisions for land having frontage to Stirling Highway.

Figure 5 - Scheme Amendment No. 13 Map



The proposal has been designed to align with the Amendment as publicly available, with the below Table demonstrating its conformity.

Table 4 - Amendment 13 Assessment

Relevant Council Resolved Clause	Relevant Council Resolved Provision	Proposal Alignment
Clause 16, Table 2 – Zone Objectives; 'Neighbourhood Centre' Zone	▪ To provide a community focal point for people, services, employment and leisure that are highly accessible and do not adversely impact on adjoining residential areas. ▪ To provide for daily and weekly household shopping needs, community facilities and a small range of other convenience services. ▪ To encourage diversity of land uses within the Centre to provide a broad range of employment opportunities. ▪ To facilitate a mix of commercial and residential development, which provides for activity and accessibility at the street level and supports the provision of public transport and pedestrian links. ▪ To provide for a range of quality medium and high-density residential development, to meet the diverse needs of the community. ▪ To ensure non-residential uses are located at street level and are compatible with adjoining residential uses.	▪ The ALDI store and associated tenancies will service the local community through the access of fresh food and other supermarket items. The proposal is within the central precinct of the NSHAC, and compliments the approved Captain Stirling development. ▪ ALDI and its associated tenancies will provide daily and weekly household shopping needs, and subject to leasing and tenant interest can accommodate convenience services and community services such as consulting rooms and other allied health. ▪ The proposal is a Mixed-Use development that contributes to the diversification of the NSHAC and widens the availability of services to the community for their day-to-day needs. ▪ The proposal provides for services that will greatly increase the amenity of the precinct, providing greater access to services for residents and improving the liveability and diversity of the NSHAC. ▪ This proposal is to provide complimentary uses to current a future residential development of NSHAC. By increasing the service offering of the precinct, higher density residential uses increase in appeal due to the increase in amenity and relevant destinations.
Clause 32, Table 6, Item 32.7	All new development shall provide 1 medium, or 1 large tree as defined by the R-Codes located adjacent to and outside of the Stirling Highway road reservation per 12 metres of Stirling Highway street frontage, measured at the future street boundary post-road widening.	1 Large Tree has been proposed along the Stirling Highway Frontage. 5 medium trees planted along this same frontage to replace those that will be removed through any eventual Stirling Highway Road Widening.

Relevant Council Resolved Clause	Relevant Council Resolved Provision	Proposal Alignment
Clause 32, Table 6, Item 32.8	Development shall not have vehicle access to Stirling Highway where the lot has legal access to a public street or right-of-way other than Stirling Highway.	No proposed access directly to Stirling Highway, and the existing crossover is proposed to be removed.
Clause 32.9,	Carriageway network: 1. All development and subdivision is to allow a boundary setback sufficient to facilitate a minimum 6m wide carriageway in the location shown in Schedule 4. 2. All development and subdivision is to take vehicle access from the carriageway shown in Schedule 4 where it connects, either directly or via another carriageway, to a public street other than Stirling Highway. 3. Where the carriageway for the street block shown in Schedule 4 does not yet connect to a public street other than Stirling Highway, the development is to be designed to be modified in the future to take vehicle access from a rear carriageway once it connects to a public street other than Stirling Highway. 4. The local government shall not approve development or support subdivision that: 4.1. prevents any new or existing lot within the same street block from obtaining access from a public street or carriageway other than Stirling Highway; or 4.2. prevents any new or existing lot within the same street block from obtaining access to the carriageways shown in Schedule 4; or 4.3. creates a new lot with sole vehicle access to Stirling Highway. 5. All development must account for any ground level differences in order to facilitate a carriageway across a street block 6. The total 6m width may include portions of any existing public carriageway. 7. Prior to issue of a building permit or subdivision clearance, suitable arrangements are to be made with the local government ensuring the 6m wide carriageway described in the above subclauses is burdened with public access rights in perpetuity.	1. Complies 2. Complies 3. Complies. Proposal has been designed to utilise the rear carriageway in future with no direct street access. 4. N/A 5. Complies 6. Noted. 7. Noted.

4.2.2.2. Nedlands' Stirling Highway Activity Corridor Strategy

Prepared by the City of Nedlands, the NSHAC Strategy is intended to be used as a guide to the desired future scale and character of the area, and act as a blueprint for changes to the existing legislative framework.

The Strategy establishes five (5) sub-areas for the NSHAC precinct, these being the Neighbourhood Centre Zone; Western Mixed-Use Zone; Eastern Mixed-Use Zone; Stirling Highway Residential Zones; and Medium Density Residential Zones. The subject site is situated within the 'Neighbourhood Centre Zone'.

Neighbourhood Centre Zone has the following objectives under the Strategy:

1. *Create attractive, active and accessible spaces that reflect the strategic importance of the Neighbourhood Centre and have an emphasis on ground floor retail, commercial and entertainment land uses.*
2. *Promote high quality and environmentally sensitive design that respects and reflects the character of nearby traditional historical and landmark buildings while also being compatible with nearby residential neighbourhoods.*
3. *Provide for a mix of complementary uses including retail, commercial, entertainment, recreation, socialisation, leisure and dining that are designed to be compatible with nearby residential uses.*
4. *Support diverse and well-designed high density development compatible with its setting to turn the Neighbourhood Centre into a key lifestyle hub.*
5. *Maintain large mature trees while enhancing the overall tree canopy and vegetation cover to preserve the leafy feel of the area.*

The ALDI proposal aligns well with the NSHAC Strategy's vision of transforming the site into a 'Town Centre' and a focal point for shopping, entertainment, and dining. The proposed ALDI store will contribute significantly to the retail and socialisation uses within the area, enhancing the vibrancy and attractiveness of the locality.

The strategy's objective of providing a mix of complementary uses is also met by the ALDI proposal. The store will offer a variety of products and services that are compatible with nearby residential uses, thereby contributing to the diversity of the wider Neighbourhood Centre.

The land use proposed by ALDI aligns with the strategy's focus on concentrating retail, dining, entertainment, and other socialisation uses on the lots south of the Highway. The ALDI store will contribute to the creation of a distinctive active edge along the southern blocks, enhancing the streetscape and the overall appeal of the area. The proposal has undergone detailed landscaping to provide canopy cover, street edge buffers, and a useable pocket park.

The proposal itself seeks to provide amenity and services to the precinct through its uses and high design standards. As a result, this development will be catalytic in nature by providing trunk amenity to support and encourage the medium to high density residential in the immediate locality and surround desired by the City's strategy.

4.2.3. Local Planning Scheme

4.2.3.1. Zoning and Permissibility

Under the City of Nedlands Local Planning Scheme No.3 (**LPS3**), the subject site is zoned 'Mixed Use'. The Mixed Use zone has the following objectives under the scheme:

- *To provide for a significant residential component as part of any new development.*
- *To facilitate well designed development of an appropriate scale which is sympathetic to the desired character of the area.*
- *To provide for a variety of active uses on street level which are compatible with residential and other non-active uses on upper levels.*
- *To allow for the development of a mix of varied but compatible land uses such as housing, offices, showrooms, amusement centres and eating establishments which do not generate nuisances detrimental to the amenity of the district or to the health, welfare and safety of its residents*

The proposed ALDI development aligns with the objectives of the Mixed Use zone in the Captain Stirling neighbourhood precinct of Nedlands. It is designed as a convenience development intended to serve the current and future local community, acknowledging its inner urban location and its role to a high level of visitor and passing trade along Stirling Highway.

The variety of uses proposed, including a supermarket, a small liquor store (located within the ALDI store and managed by ALDI), consulting rooms, convenience store, a medical centre, office spaces, and a restaurant/café, align with the commercial nature and function of Stirling Highway and the Nedlands Town Centre. These uses are compatible and complementary to the surrounding residential area, particularly to the south of the site.

The development features active uses at all street frontages, with a particular emphasis on the Florence Road interface, given the location of the adjacent Nedlands Square development. The design is also sensitive to the Stirling Highway frontage, considering its predominant traffic function.

The proposed scale of the development reflects the site's location within the town centre and its position abutting a major regional road. The design ensures a softened interface with adjacent residents to the south, allowing for incremental integration.

Refer to **Figure 6** for a map of the subject site in the Local scheme area.

Figure 6 - LPS Map

Under the land use definitions of LPS3, the proposed uses within the site is best described as ‘Consulting Rooms’, ‘Convenience Store’, ‘Liquor Store – Small’, ‘Medical Centre’, ‘Office’, ‘Restaurant/Café’ and ‘Shop’.

The definitions of each use and how they relate to the subject site are outlined in the table overleaf.

Table 5 – Land Use Permissibility

Land Use	Definition	Permissibility
ALDI		
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.	Permitted 'P' Use
Liquor Store – Small	Means premises the subject of a liquor store licence granted under the Liquor Control Act 1988 with a net lettable area of not more than 300m^2.	Permitted 'P' Use *(A Liquor License is already approved on site)*
Associated Tenancies (Ancillary Uses)		
Consulting Rooms	Means premises used by no more than 2 health practitioners at the same time for the investigation or treatment of human injuries or ailments and for general outpatient care	Permitted 'P' Use
Convenience Store	Means premises - ▪ Used for the retail sale of convenience goods commonly sold in supermarkets, delicatessens or newsagents; and ▪ Operated during hours which include, but may extend beyond, normal trading hours; and ▪ The floor area of which does not exceed 300m2 net lettable area.	Permitted 'P' Use
Medical Centre	Means premises other than a hospital used by 3 or more health practitioners at the same time for the investigation or treatment of human injuries or ailments and for general outpatient care.	Discretionary 'D' use meaning that the use is not permitted unless the local government has exercised its discretion by granting development approval
Office	Means premises used for administration, clerical, technical, professional or similar business activities	Permitted 'P' Use
Café/Restaurant	Means premises primarily used for the preparation, sale and serving of food and drinks for consumption on the premises by customers for whom seating is provided, including premises that are licenced under the Liquor Control Act 1988.	Permitted 'P' Use

The table above lists the permissibility within the Mixed Use (R-AC1) zone of the land uses proposed, demonstrating the proposals compliance in accordance with Table 3 of LPS 3.

4.2.3.2. Additional Development Requirements

The following provisions from Clause 32 of LPS3 further relate to the site:

Table 6 - Clause 32 of LPS Requirements

Provision	Assessment
Residential uses are not permitted on the ground floor facing a primary and secondary street.	No residential uses are proposed on the ground floor.
Buildings are to have active frontages to the primary and secondary street	The building has been carefully designed to ensure that the frontages to both Stirling Highway and Florence Road are activated through the use of glazing, landscaping, materials and the inclusion of architectural details which are complementary to the surrounding locality. Entrances to the development are also proposed on both frontages, facilitating activity and pedestrian interest on both Stirling Highway and Florence Road.
Minimum tenancy depth facing a street is 10m	A minimum depth of 10m is achieved for all tenancies that are street facing, including those fronting Florence Road.

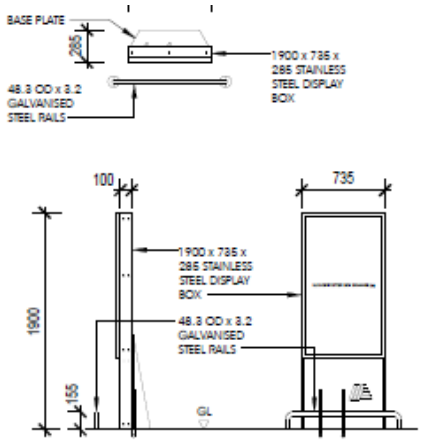
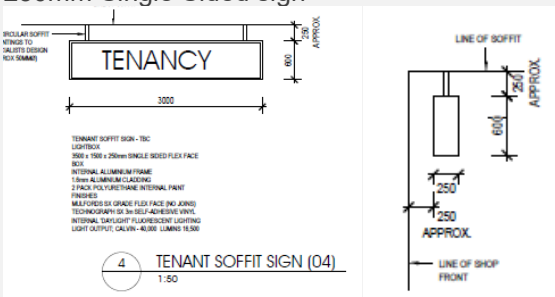
4.2.4. Local Planning Policies

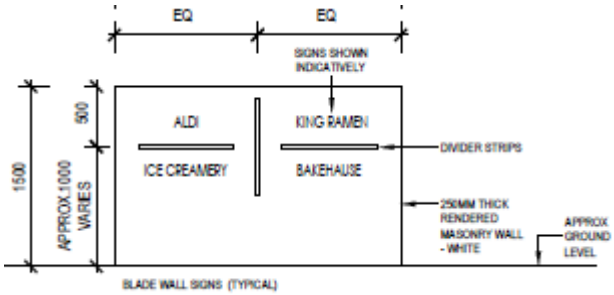
The following section provides an assessment against the City's local planning polices applicable to the subject site and the proposed development.

4.2.4.1. LPP 2.1 - Signage and Advertisements

LPP 2.1 establishes the requirements and provides guidance for different types of advertising applications and seeks to ensure advertisements don't adversely impact on the amenity of surrounding areas and to ensure the safety of vehicles, pedestrians and cyclists. An assessment of the proposed signage against the policy provisions are outlined in Table 7.

Table 7 - LPP 2.1 Assessment

Signage Typology	Assessment	Complies
• 4 x Large Gable Sign Lightbox – ○ 2000w X 2400h X 292mm Single Sided Wall Sign • 2 x Small Gable Sign Lightbox ○ 1800 X 1500 X 250mm Single Sided Wall Sign 	The proposed wall signs are located wholly within the property boundaries; and do not project more than 300mm from the wall. The wall signs pertain only to the proposed ALDI shop and occupy do not extend above or below the wall on which it is placed. The proposed signage is consistent with ALDI national signage as depicted in the signage site plan enclosed within the Development Plans (**Appendix B**). These signs are designed to be integrated into the theme of the overall built form.	✓
Digital Sign Box 	The proposed single digital sign is wholly located within the building envelope and does not impose any undue risk to passing traffic or pedestrian. The sign features an illuminated display and is not visible from the street.	✓
Han Illuminated Tenant Soffit Sign 3500 X 1500 X 250mm Single Sided sign 	The proposed illuminated projecting tenant sign is located wholly within the property boundaries, with one sign per tenancy being located on the tenancy entrance wall. The signs will be internally illuminated during the operating hours of the use to which each tenancy relates	✓

Signage Typology	Assessment	Complies
Blade Wall Sign  	The proposed wall signs are located wholly within the property boundaries at the corner of Stirling Highway and Florence Road The wall signs pertain only to the proposed ALDI shop and ancillary uses/tenants and do not extend above or below the wall on which it is placed.	✓

4.2.4.2. LPP 3.1 - Landscaping Plans

The Landscaping Plans LPP encourages provision and subsequent maintenance of landscaping within non-residential development. It will provide guidance on Council's expectations, encourage creative landscaping options and plant types and encourage the retention of trees and vegetation of environmental culturally significant landscape design. **Table 8** establishes how the proposed development responds to the purpose of a landscape plan and further responds to the requirements outlined for non-residential development.

Table 8 - LPP 3.1 Assessment

Requirement	Assessment	Complies
The portion of the lot between the street boundary and the setback line, and the portion of the lot between any adjoining residential lot and the setback line from the rear lot boundary shall be designed and developed as landscaping or natural planting. The City may approve the paving or drainage of the area in order to provide vehicular access.	The proposal incorporates detailed landscaping that has been design by landscape architecture firm *Plan E*. The landscaping is located along each of the street frontages belonging to the site, with significant attention provided to the Stirling Highway and Florence Road corner where a 'pocket park' has been provided. The site currently has no existing vegetation, with the proposal incorporating 14 new trees of medium and large sizes.	✓
At least 50% of street setback areas are using soft landscaping treatments.	Complies. Over 50% of the street frontages are landscaped.	✓
1 shade tree for every 4 continuous open car parking bays.	Seven (7) Trees are proposed to shade the 13 open car parking bays, exceeding this provision.	✓
Where car parking is not proposed in street setback areas, at least 1 tree for every 10m lot frontage is to be provided.	Six (6) trees are proposed along to 55m long Stirling Highway Frontage where no car parking is proposed.	✓

Requirement	Assessment	Complies
Plants to not obstruct driver and/or pedestrian sightlines, and avoidance of landscaping which fully obstruct streetscape surveillance.	Plants to not obstruct driver and/or pedestrian sightlines, with landscaping avoiding the obstruction of streetscape surveillance.	✓
Retention of mature trees where practicable. Where the removal of significant trees is not practicable, equivalent trees to be planted elsewhere on the site	There are currently no trees located on site. The proposal seeks the planting of 14 new trees on site, as well as the retention of 10 existing street trees.	✓
Not provide concealment or entrapment areas	The building has been carefully designed to remove opportunities for concealment, entrapment or anti-social behaviour.	✓
Variety of landscaping to create interesting built environments.	Landscaping includes a variety of species and spaces. Spaces are either dedicated to canopy coverage, streetscape buffers or an open space for customers to rest and utilise.	✓

4.2.4.3. LPP 4.1 - Parking

Table 9 - LPP 4.1 Assessment

Parking Requirement / Land Use	Provided	Complies
Consulting Rooms/Medical Centre: *12 or 1 per every 4 beds (whichever is greater).*	93 bays for both	As part of the historically approved application (DAP/18/01444) and stamped plans undertaken for the subject site, a total of 90 car parking spaces were proposed to be provided including 2 DDA bays for a total floor area of approximately 2,184m². This results in a car parking provision rate of 4.12 spaces per 100m². A total of 93 car spaces are proposed to be provided within an at-grade carpark for the current proposal, inclusive of 4 ACROD bays for approximately 2,264m² of retail/commercial floor area. This is equivalent to a car parking provision rate of 4.15 spaces per 100m². Accordingly, the proposed development is generally consistent with the historically approved car parking provision rate and is considered satisfactory.
Convenience Store/Shop/ Liquor Store – small: *8.3 per 100m2 of net lettable area. 1 space in every 5 to be set aside for employees*		
Restaurant/Café:1 *1 per 2.6m2 of restaurant seating area or 1 per 2 persons (whichever is greater).*		
Office:		

Parking Requirement / Land Use	Provided	Complies
4.75 per 100m2 of net lettable area. 2 spaces in every 3 to be set aside for employees		

5. DESIGN RESPONSE

5.1. DESIGN REVIEW

The proposal underwent a review via the City's DRP, in which panel members provided feedback through grading the application against the 10 principles of good design from SPP 7.0. The proposal will undergo a second DRP review following the lodgement of this application.

A full assessment on the 10 Principles of Good Design is provided in the below section.

5.2. SPP 7.0 ASSESSMENT

5.2.1. Context and Character

Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.
The subject site's location in Nedlands forms part of an area that has heritage character that contributes to the areas identity. This character is a reflection of the area's rich history, cultural significance, and architectural diversity.The area is home to several heritage-listed sites, including the Captain Stirling Hotel, a local landmark that has served the community for decades.

The architectural character features contemporary styles which complement the style of buildings in the area – some of which date back to the early 20th century - showcasing period architecture with features such as high ceilings, wide verandas, and intricate detailing. These buildings stand alongside more modern structures, creating a unique blend of old and new that adds to the area's charm.

The streetscape is characterised by street trees and well-maintained gardens, contributing to the precinct's leafy, suburban feel. The area also boasts a high level of pedestrian connectivity, with well-established paths and close proximity to key amenities and public transport.

The proposed development in this precinct is designed to respect and enhance this heritage character. The design is minimalistic in its materiality and aesthetic, ensuring it integrates cohesively into the existing streetscape.

5.2.2. Landscape Design

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context

The development has undergone a rigorous landscaping process in which canopy cover and public accessibility principles have been on focus.

Fourteen (14) new trees are to be planted on site, establishing green buffers with the surrounding highly trafficked road network. These trees will increase the canopy cover for the precinct and will provide shade over the publicly accessible areas, particular the link to Nedlands square.

In response to the Design Review Process, a ‘pocket park’ centred around a new large tree has been proposed at the prominent street corner of Stirling Highway and Florence Road. This will establish a communal place for the wider community to stop, sit and rest whilst moving between the precinct, whilst also reaffirming a soft edge to the harsh road environment.

5.2.3. 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.

The development features a building that aligns with the predominantly low-rise architectural context of the precinct. This scale ensures that the new development integrates into the existing streetscape, allowing for the developed of taller buildings in the surrounding area.

The built form of the development is minimalistic in its design and materiality, reflecting a thoughtful balance between modern functionality and aesthetic compatibility with the surrounding architectural styles. The design incorporates clean lines and simple forms, using materials that echo those found in the precinct, ensuring the development complements rather than competes with the existing built environment.

Furthermore, the development's built form has been designed to enhance the pedestrian experience, with well-defined entrances, clear signage, and a layout that encourages easy navigation. The inclusion of

landscaped areas and undercroft car parking further contributes to the functionality and aesthetic appeal of the development.

Overall, the proposed ALDI development's built form and scale demonstrate a deep respect for the Captain Stirling neighbourhood precinct's unique heritage character, ensuring the new development not only serves the community's needs but also contributes to preserving and celebrating the area's distinct identity.

5.2.4. Functionality and Design 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 functionality and design quality of the proposed ALDI development in the Captain Stirling neighbourhood precinct of Nedlands have been meticulously planned to ensure the development serves the community effectively while enhancing the area's aesthetic appeal.

The functionality of the development is evident in its diverse mix of uses, including an ALDI supermarket, a small liquor store, consulting rooms, a convenience store, a medical centre, office spaces, and a restaurant/café. This mix of uses not only caters to the daily needs of the local community but also contributes to the area's economic vitality.

The development also features well-defined entrances, clear signage, and a layout that encourages easy navigation, enhancing the overall user experience. The inclusion of landscaped areas and under croft car parking adds to the development's aesthetic appeal while also improving its functionality.

The proposed ALDI anchored development provides a functionality and design quality demonstrate a commitment to serving the community effectively and enhancing the Captain Stirling neighbourhood precinct's unique heritage character.

5.2.5. Sustainability

Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.

The proposed ALDI development in the Captain Stirling neighbourhood precinct of Nedlands is designed with a strong emphasis on sustainability, reflecting ALDI's global commitment to environmental responsibility.

The design incorporates several innovative features aimed at reducing energy consumption and promoting renewable energy. A key feature is the transcritical CO2 refrigeration system, a natural refrigerant with zero ozone depletion potential that is expected to save over 15% in energy compared to traditional systems. Additionally, all vertical refrigeration chillers will be fitted with doors to trap cold air more effectively, improving energy efficiency and reducing refrigeration energy usage by approximately 30%.

The development also includes a 250 kW PV solar system installed over the entire roof area. This system is designed to generate renewable energy, offsetting approximately 25% of the site's daily electricity usage and significantly reducing the store's carbon footprint.

In addition to energy efficiency, the design also focuses on promoting sustainable transport options. The inclusion of EV charging infrastructure in the car park encourages the use of electric vehicles, further contributing to the reduction of greenhouse gas emissions.

The store's waste management strategy is another key aspect of its sustainable design. The implementation of waste separation measures within the store will ensure the diversion of waste from landfill, promoting recycling and reducing environmental impact.

Overall, the sustainable design of the proposed development not only aligns with ALDI's global sustainability commitments but also contributes to the broader sustainability goals of the Nedlands community and the Captain Stirling neighbourhood precinct.

5.2.6. Amenity

Good design optimises internal and external amenity for occupants, visitors, and neighbours, providing environments that are comfortable, productive and healthy.

The development will provide a range of essential services, including a supermarket, a small liquor store, consulting rooms, a convenience store, a medical centre, office spaces, and a restaurant/café. These diverse offerings will cater to the daily needs of the local community, enhancing convenience and contributing to the area's economic vitality.

The design of the development also prioritises the creation of a pleasant and welcoming environment. The single-storey building, with its clean lines and simple forms, will add to the aesthetic appeal of the streetscape. The inclusion of landscaped areas that allows for meeting and quiet contemplation will further enhance the visual appeal of the development, creating a green and inviting space for the community.

5.2.7. 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.

The proposed ALDI development in the Captain Stirling neighbourhood precinct of Nedlands is designed with a strong emphasis on legibility, ensuring that the site is easily navigable and accessible for all users. The development's location on the prominent Stirling Highway enhances its visibility and ease of access. The well-defined entrances and clear signage further contribute to the site's legibility, guiding visitors effortlessly through the site.

The configuration of the development is intuitive and user-friendly, with the ALDI supermarket, small liquor store, consulting rooms, convenience store, medical centre, office spaces, and restaurant/café all easily identifiable and accessible. The undercroft car parking is conveniently located and clearly signposted, further enhancing the site's legibility.

The inclusion of landscaped areas not only enhances the site's aesthetic appeal but also contributes to its legibility, providing clear visual cues and creating a pleasant and welcoming environment. Overall, the legibility of the proposed ALDI development ensures a seamless and enjoyable experience for all users, contributing to the site's functionality and enhancing its contribution to the Captain Stirling neighbourhood precinct.

5.2.8. Safety

Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.

The proposal optimises safety through the implementation of Crime Prevention Through Environmental Design (**CPTED**) principles, particularly in relation to site access (vehicle and user). The building is designed in a manner that minimises the potential for harm to come to users, through ensuring and training rooms are appropriately sized to accommodate the number of user and to ensure that access/user interface is clearly defined throughout the site.

5.2.9. 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 proposed ALDI development in Nedlands is a prime example of how good design can respond to local community needs and the wider social context. The diverse mix of uses, including a supermarket, liquor store, consulting rooms, convenience store, medical centre, office spaces, and a restaurant/café, will not only cater to the needs of the local community but also contribute to the vibrancy and economic vitality of the Nedlands area. The thoughtful and considered design of the building, landscaping, and car parking, utilising materials that reflect the broader context of the subject site's location in Nedlands, is commendable. The integration of sustainability into the design of the proposal ensures that it is built to last and serves its purpose in delivering essential services to community members.

5.2.10. 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.

The proposal is complemented by landscaped areas and onsite under croft car parking which has been designed utilising materials that reflect the broader context of the subject site's location in Nedlands. This thoughtful design not only enhances the aesthetic appeal of the development but also contributes to its functionality and usability.

The integration of sustainability into the design of the proposal further enhances its aesthetic appeal. The development is designed to be energy-efficient and environmentally friendly, aligning with the community's values and contributing to the overall attractiveness of the area.

The diverse mix of uses within the development, including a supermarket, liquor store, consulting rooms, convenience store, medical centre, office spaces, and a restaurant/café, also contributes to its aesthetic appeal. These varied uses create a vibrant and dynamic environment that is visually appealing and engaging for visitors.

6. TECHNICAL CONSIDERATIONS

6.1. TRAFFIC AND PARKING

A Transport Impact Assessment (**TIA**) has been prepared by WSP and is located in **Appendix D** and is summarised below.

Vehicle access is proposed to be via the proposed crossover on Florence Road, with provision for future connection to Dalkeith Road via a rear laneway. This access point will accommodate all vehicular movements, including general customer/employees, service, delivery and waste collection vehicles. Pedestrian access will be via the existing footpaths along Stirling Highway and Florence Road to the forecourt area fronting Florence Road

Redundant crossovers across Stirling Highway and Florence Road will be consolidated and reinstated. Accordingly, an additional three on-street car spaces will be provided as part of the streetscape amendments.

Loading of the site will be from the rear of the subject site, with trucks entering from Stirling Highway onto Florence Road and accessible from the rear laneway. Trucks will then exit onto Florence Road and back onto Stirling Highway, reducing any impact on residential amenity to the south.

Car parking, as discussed in above section **4.2.4.3**, has been modelled on previous and existing ALDI developments and the parking required to support their operation. 93 bays are proposed, following a rate of 4.15 bays per 100sq.m. A total of 8 bicycle parking spaces are provided on-site in the form of horizontal rails within the basement carpark. This is determined to be suitable for both employees and customer use.

From a traffic generation and overall network impact point of view, the adjacent and approved Nedland's square development considered the subject site's traffic impacts as part of its analysis. This determined that that the intersections along Stirling Highway will perform at satisfactory levels post-development once modifications are made. As a result, the proposed development would have no significant impact on the operation of the nearby road network and intersections. It is therefore considered to be acceptable from a transport perspective.

6.2. WASTE MANAGEMENT

A Waste Management Plan (**WMP**) has been prepared and is located in **Appendix E** and summarised below.

Waste on site is split into ALDI waste and Retail/Commercial Tenancy waste.

ALDI Waste

- To ensure the diversion of waste from landfill, separation of waste will occur at the store level and be undertaken by the ALDI store staff, all of whom are trained to do so.
- The main waste management facilities are located externally to the store in a dedicated and contained facility in the loading dock area. Provisions are made to facilitate general garbage disposal together with recyclable materials and cardboard resources, increasing efficiency.
- General waste bin will be emptied by a front lift vehicle, which will park in the loading dock area to load.
- The collection frequency will be subject to the volume of waste generated and collection times will typically be between 7:00am and 8:00pm Monday to Friday. Should a weekend collection be required, it is most likely that these services will be between 9:00am to 8:00pm.
- ALDI proudly donates food that can no longer be sold (due to use by dates etc) to a variety of charities, including Foodbank, Oz Harvest and Second Bite. These companies collect the fresh food daily from the ALDI Store loading dock during trading hours and provide the food to charities supporting disadvantaged people living in at-risk communities.

Retail/Commercial Tenancy Waste

- It is estimated that the retail/commercial tenancies at the proposal will generate less than 5000L of refuse and less than 5000L of recyclables each week.
- The Proposal will have a minimum of two bins to facilitate the separate disposal of refuse and recycling within each retail/commercial tenancy. The bins will then be transferred by the tenant, staff or cleaners to the Bin Storage Area and be deposited into the appropriate bin as required.
- The Bin Storage Area has been sized to accommodate the following capacity:
  - 6 x 360L refuse bins; and
  - 6 x 360L recycling bins.
- A private contractor will service the site and supply the retail/commercial tenancies. They will collect refuse and recyclables three times each week utilising a rear loader waste collection vehicle directly from the Bin Storage Area.

6.3. LANDSCAPING

A detailed landscaping strategy has been developed by PlanE, of which has been appended to this document through **Appendix C**. The strategy is summarised below.

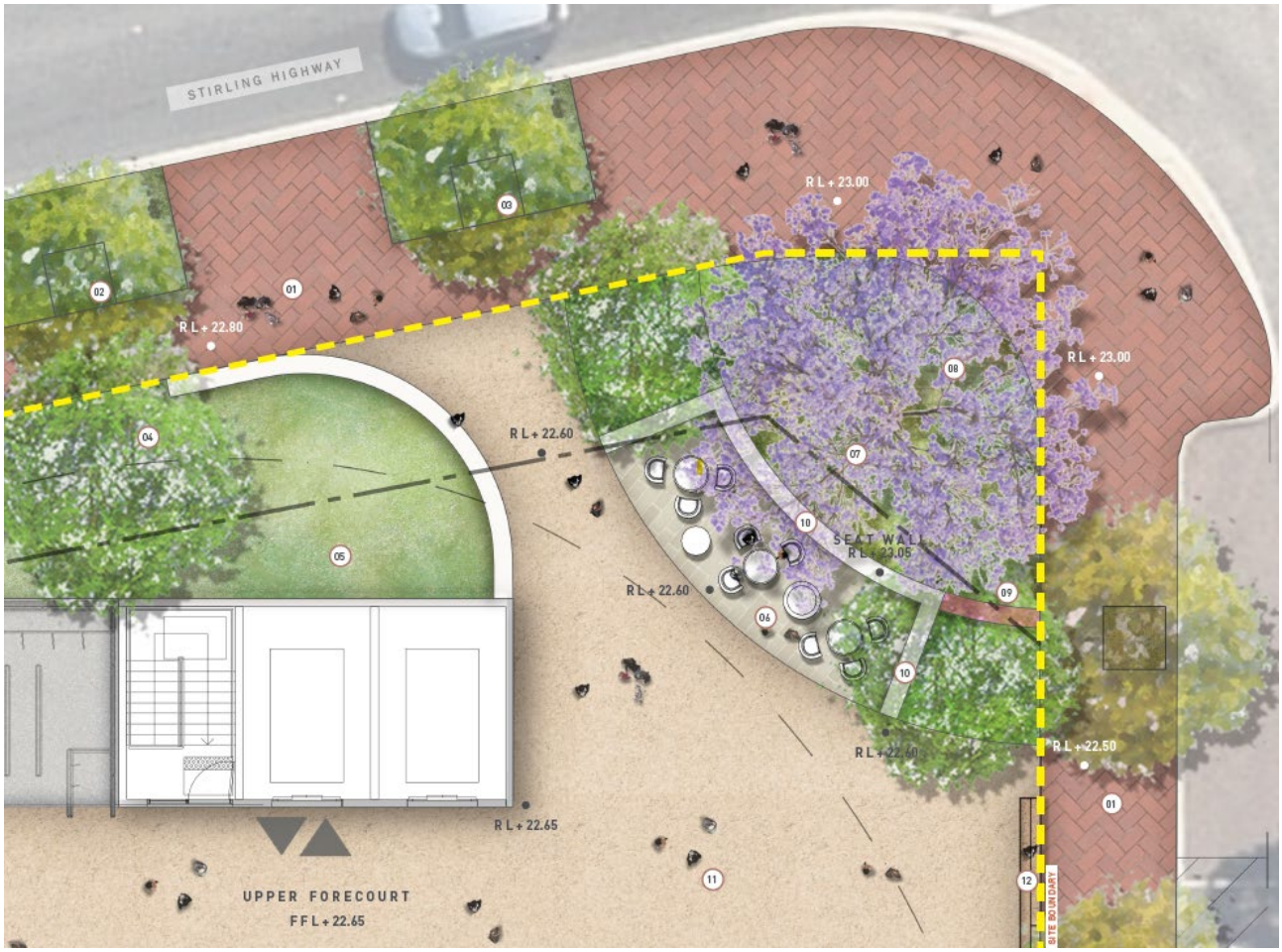
The Landscape Strategy has been informed by the prevailing planning framework, the Design Review process, and the surrounding context. Firstly, the landscaping plan has had a key directive to soften the edges of the proposal and assist in the mitigation of the highly trafficked Stirling Highway corridor environment. This has been successfully managed through the doubling of street trees along the Stirling highway frontage, increasing canopy coverage and the overall impact of the green buffer.

This has been carried through to the Florence Road frontage on a reduced scale, seeking to create a green buffer whilst also opening up the frontage to cross visitation across the Nedlands Square precinct.

These landscape frontages however join together at the Florence Road and Stirling highway corner, a prominent corner within the precinct. It is here where the establishment of a pocket park, or community parklet, has been proposed. This parklet reestablishes the corners as both a key wayfinding point for the precinct, whilst also encouraging use and activation of the site for customers of the wider precinct. Areas to rest and site have been catered for, whilst all being centred around a large feature tree to provide shade and a sense of enclosure.

Permanent irrigation to all garden beds and tree planting has been catered for, with native tree selection/low water use requirements being selected in its design. A full plant schedule is located within the appended Strategy.

Figure 7 - Community Parklet



6.4. ACOUSTICS

An Acoustic Report has been prepared by Herring Storer Acoustics and is available through **Appendix F**. this report is summarised below.

The objective of the acoustic report was to assess noise emissions from delivery vehicles and mechanical services at the noise sensitive premises surrounding the proposed site for compliance with the requirements of the Environmental Protection (Noise) Regulations 1997.

Following the calculations undertaken by Herring Storer, noise emissions from truck movements, being present for less than 10% of the time, would not be considered tonal and do not exceed the maximum decibel (dB) allowance as prescribed under the aforementioned regulations.

In a similar vein, the assessable noise level for mechanical plant does not exceed the assigned noise level for all times of day as per the regulations.

As such, the proposal will have no undue acoustic impact on the surrounding amenity.

6.5. SUSTAINABILITY AND SERVICING

All ALDI products and goods provided by independent suppliers are delivered from the central ALDI distribution centre. At the distribution centre, all products are packaged into pallets and loaded onto logistics vehicles (owned and operated by ALDI) for delivery to the ALDI stores. No suppliers are permitted to deliver directly to the store. This significantly reduces the number of service vehicles accessing the site and ensures complete control over the timing of deliveries.

One delivery would typically be made to the ALDI store each day. The development provides an adequate servicing area for the store to accommodate the manoeuvring of trucks and the loading and unloading of goods without impacting on adjoining land uses. All vehicle movements can be undertaken in a safe manner utilising a truck turn table, ensuring trucks can easily drive straight onto the turn pad and be manoeuvred

safely into the unloading/loading position and finally into a forward gear to exit the site. Delivery vehicles will enter via the one crossover from Florence Road, turning left towards Stirling Highway. No direct access is proposed off Stirling Highway.

6.6. SUSTAINABILITY

ALDI operate their store through a variety of sustainability measures. These are summarised in the below table.

Table 10 - Sustainability Targets

Measure	Performance
Retail Development Density	
Business Model: Embodied Impacts	As a 'Hard Discount' store, ALDI's retail model is for compact store buildings with sales densities ($/sq.m) notably higher than that of their Australian competitors. Sustainability benefits of hard discount supermarkets stores vs others include: ▪ Compact stores have less embodied energy in construction. ▪ Compact stores utilise smaller sites reducing ecological impacts and increasing potential for urban infill. ▪ Compact stores use less heating, cooling, lighting, refrigeration for a given sales turnover. ▪ ALDI business model requires lower staff densities than conventional supermarkets meaning less ongoing operational ecological impacts of staff-related transport, and resource consumption (housing, food flights etc.).
Water	
Water Efficiency	The following water efficient fittings and appliance will be specified: ▪ WELS 4-star toilets and urinals ▪ WELS 5-star kitchen taps ▪ WELS 5-star basin taps ▪ WELS 5-star dishwashers
Water Efficient Landscaping	Where appropriate, water sensitive landscape design will be incorporated into the development by specifying a combination of drought tolerant and/or indigenous plant species that are best suited to local climate, and do not require watering after an initial plant establishment period.
Heat-rejection	Water-based heat-rejection plant is not incorporated within this development.
Energy	
Renewable Energy System	A solar photovoltaic system will be installed to offset greenhouse emission and will provide a total peak generation capacity of 250 kW.

Measure	Performance
Gas Free Development	The project will not have gas services connected, supporting the transition to renewables.
Thermal Performance Energy	Roof and floor insulation specification will be a10% improvement in Section J 109 requirements. Walls and window performance will meet NCC 2019 J1.5 façade requirements.
Heating and Cooling	Space heating and cooling for the ALDI store will be provided by reverse cycle variable refrigerant flow heat pumps from the manufactures high-CoP range. Retail and back of house spaces will operate as independent heating/cooling zones.
Domestic Hot Water	Domestic hot water will be generated by point-of-use electric hot water systems to avoid standing heat losses and be within one star of the best available at time of tender.
Lighting	Energy efficient lighting systems will be installed throughout the development including: ▪ LED internal external lighting. ▪ An energy efficient car park lighting system comprising LED lamps. Lighting will be designed to meet the lighting power density requirement in TablJ6.2a of the NCC 2019 Vol 1.
Energy Efficient Fridges	All supermarket retail display cabinets will incorporate automatically activated night blinds to minimise energy consumption associated with product refrigeration out of operating hours combined with an alarm which signals remotely when night blinds were not used.
Energy Efficient Freezers	All supermarket retail freezers will have glazed covers, LED lighting will have an energy efficiency index better than the high efficicnecy performance stands (HEPS) for Retail Display Cabinets in Australian & New Zealand.
Stormwater	
Stormwater Quality	The ALDI site will be incorporated into a development wide stormwater management strategy, approved by council.
Construction Stormwater Pollution Reduction Plan	A construction phase stormwater pollution reduction plan will be prepared and implemented during construction to ensure that litter, sediments and other pollution are prevented from entering the stormwater system.
Transport	
Bicycle Facilities	A total of 8 bicycle parking spaces are provided on-site in the form of horizontal rails within the basement carpark. This is considered to be suitable for both employees and customer use.

Measure	Performance
Electric Vehicle Charging	Electrical infrastructure to ensure car parking areas are 'electric vehicle ready' including EV charging infrastructure.
Waste	
Operational Waste Management	The site will operate will three bins for soft plastics, general waste, and food waste.
Construction Waste Minimisation	A target recycling rate of 80% of construction and demolition waste has been adopted for the construction phase of the development to minimise the volume of waste to landfill. This will be achieved by the development of a comprehensive waste minimisation strategy including: • Separation of all commercially viable recyclable waste streams; • Training in waste minimisation for all site staff and contractors to form part of site induction training. • Record keeping of landfill waste and cyclable stream volumes to track performance against the 80& recyclable target. • Quarterly reporting of volumes and percentages for each waste stream. A dedicated recycling contractor will be engaged to facilitate separation of commercially viable recyclable waste streams in accordance with the target adopted.
Urban Ecology	
Planting	Additional landscaped verges will incorporate drought-tolerant species planting.
Roofing	To reduce the Urban Heat Island impact, light coloured roofing will be installed, as per the classification in NCC 2019, with a maximum Solar Absorptance of 0.40.

7. CONCLUSION

The proposed development seeks approval to establish a ‘Shop’ for the purpose of an ALDI store and six (6) specialty tenancies stores (‘Shop’, Liquor Store -Small’ and ancillary uses) in the Nedlands Neighbourhood Centre. The development is consistent with the existing planning framework that applies to the subject site. A comprehensive analysis of the site and relevant planning documents has revealed that the proposal satisfies the requirements of local and state planning documents.

This proposal complies with the planning framework set out by the City of Nedlands and State Government and it is therefore respectfully requested that the application be approved subject to relevant and reasonable conditions

DISCLAIMER

This report is dated 20 September 2024 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Ltd **(Urbis)** opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of ALDI Foods Pty Ltd **(Instructing Party)** for the purpose of Development Application **(Purpose)** and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

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All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

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This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

DRP Principle & Given Colour	DRP #2 Suggested Improvement	Response
Context and Character	Further inclusion of design elements that reflect the local Nedlands context and unique sense of 'place' should be considered.	A finer grain has been applied to the architecture of proposal since DRP 2. This is evident through the revised materiality of the 'Tower' element, and the introduction of Nedlands-style brickwork on the Stirling Highway Frontage. These changes have been made following further studies of the Nedlands' area, specifically the brickwork from surrounding residential development, and the detail design elements of the tower from Art Deco heritage along Stirling Highway. The proposal has a more refined context and character following this review.
	Prepare further detailed plans, including sections that provide more information about the development spatially.	Noted. This has been prepared in the revised set.
	Further streetscape interactivity and community benefits / amenity are needed to justify the development's role as a key feature of the future Neighbourhood Centre.	As referenced below in 'Landscape Quality', the community pocket park has been expanded to provide greater benefit to visitors and those passersby. Additional seating areas have been provided along with more landscaping, promoting activity and a place to stay. Further, this has significant wayfinding benefits for the neighbourhood centre, with its visibility and use providing a definitive 'centre point' for the growing town centre,
Landscape Quality	Deep soil zone provision is adequate but DSZ areas should be increased in width to accommodate larger trees.	DSZ has been expanded within the pocket park area.
	The pocket park can be increased in size by occupying more space back towards the lift walls and the inclusion of public space infrastructure such as bench seating is encouraged.	The pocket park has been expanded to occupy a larger area on the site, and now offers greater variety of use by passing through visitors. Bench seating has been provided, and now

DRP Principle & Given Colour	DRP #2 Suggested Improvement	Response
		is more directly linked the to Centre's forecourt.
Built Form and Scale	Consider 'slanting' the building footprint adjacent to Stirling Highway so it is parallel to the lot boundary and addresses the streetscape. This could improve streetscape interactivity. This is an important aspect in providing exemplary outcomes for all design principles which should also include increasing the amount of deep soil area and internal resident amenity.	Building elements have now been 'slanted' to align parallel with the lot boundary fronting Stirling Highway. Specifically, these are the lift tower/forecourt entrance and the architectural element infront of the ALDI amenities room. This provides articulation to the primary street frontage, breaking up the built form and introducing a greater mix of materiality.
	Consider relocating the trolley store, lift and stair well to improve the quality of the main entrance forecourt.	Lifts, stairwell and trolley store have been shifted to open the library forecourt and create a larger 'plaza'/public realm. The stairs have been relocated outside of the 'tower' to encourage greater interaction between customers arriving from the car park and the pocket park.
Functionality and Build Quality	Nil.	N/A
Sustainability	An ESD consultant should be engaged and an ESD report prepared.	An ESD report has been prepared and is located in **Appendix E**.
Amenity	Nil	N/A
Legibility	Materiality of the basement car park could be improved to delineate between pedestrian and vehicle spaces and movement.	Noted. Appropriate line marking has been proposed to delineate between movement areas.
	Consider the addition of a strip window to the office/administration spaces near the western boundary facing Stirling Highway.	3 new windows have been provided within the articulation of the building in this section (articulation discussed above). This is specifically in the shopfront and the amenities room. This provides a connection to the landscaped frontage and Stirling highway heading east.

DRP Principle & Given Colour	DRP #2 Suggested Improvement	Response
	Consider bringing forward the entry to tenancy 7 further toward Florence Road to increase tenancy size and reduce the long 'dead' space pathway to the entrance.	The entry to tenancy 7 has been brought forward to the Florence Road street front.
	Relocate and re-organise the trolley store, lift and stair core to improve the legibility of the main entrance to the supermarket.	This has been completed as articulated in above responses.
Safety	Further glazing or relocation of the trolley store, stairwell and lift core should be considered.	This has been completed as articulated in above responses. The revised tower has been opened and the stairs are no longer located within it.
Community	Consider more dynamic and varied amenity features for the pocket park such as integrated seating walls or bench seats.	Seating walls now line the pocket park, with various forms of other seating proposed. The pocket park has also been designed to occupy the entire corner of the site. This results in it now being a place to walk through, rather than past.
	Relocate and re-organise the trolley store, lift and stair core to improve the legibility of the main entrance to the supermarket.	Lifts, stairwell and trolley store have been shifted to open up the library forecourt and create a larger 'plaza'/public realm. This has been articulated in more detail in above responses.
	Convert the stairwell wall from solid building material to glazing to provide an outlook and visual connectivity with Stirling Highway.	The stairwell has been removed from the 'tower'. However, the tower has been redesigned to provide a more refined architectural element. The stairwell is now viewed as open and delivers visitors directly into the activity of the forecourt, allowing for immediate interaction and connection with the activity provided by the park and forecourt itself.
Aesthetics	Consider a 'hit and miss' face brick wall design for parts of the building façade addressing Stirling Highway.	Brick work materiality has now been added to the primary frontage along Stirling Highway. This specifically has been added to the articulated wall infront of the amenities room.

Waste Management Plan

Lots 3, 4 & 5 Corner Stirling Highway and Florence Road, Nedlands

Prepared for ALDI Stores

18 November 2024

Project Number: WMP24129

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Name	Position	File Reference
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Executive Summary

ALDI Stores is seeking development approval for the proposed commercial development located at Lots 3, 4 & 5 Corner of Stirling Highway and Florence Road, Nedlands (the Proposal).

This Waste Management Plan (WMP) has been prepared for the City of Nedlands (the City) to identify how waste is to be stored and collected as part of the day-to-day operations of the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements

A summary of the bin size, numbers, collection frequency and collection method is provided in the below table.

Proposed Waste Collection Summary

Waste Type	Generation (L/week)	Bin Size (L)	Number of Bins	Collection Frequency	Collection
Refuse	4,994	660	Three	Three times each week	Private Contractor
Recycling	3,454	660	Two	Three times each week	Private Contractor

A private contractor will service the Proposal onsite, directly from the Bin Storage Area. The private contractor's waste collection vehicle will enter and exit the Proposal in forward gear via Florence Road.

A building manager will oversee the relevant aspects of waste management at the Proposal.

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1 Introduction

ALDI Stores is seeking development approval for the proposed commercial development located at Lots 3, 4 & 5 Corner of Stirling Highway and Florence Road, Nedlands (the Proposal).

This Waste Management Plan (WMP) has been prepared for the City of Nedlands (the City) to identify how waste is to be stored and collected as part of the day-to-day operations of the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements

The Proposal is bordered by Stirling Highway to the north, Florence Road to the east, residential properties to the south and commercial properties to the west, as shown in Figure 1.

1.1 Objectives and Scope

The objective of this WMP is to outline the equipment and procedures that will be adopted to manage waste (refuse and recyclables) at the Proposal. Specifically, the WMP demonstrates that the Proposal is designed to:

- Adequately cater for the anticipated volume of waste to be generated;
- Provide an adequately sized Bin Storage Area, including appropriate bins; and
- Allow for efficient collection of bins by appropriate waste collection vehicles.

To achieve the objective, the scope of the WMP comprises:

- Section 2: Waste Generation;
- Section 3: Waste Storage
- Section 4: Waste Collection;
- Section 5: Waste Management; and
- Section 6: Conclusion.

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2 Waste Generation

The following section shows the waste generation rates used and the estimated waste volumes to be generated at the Proposal.

It should be noted that this WMP does not include the ALDI. Please refer to Appendix A for the ALDI Nedlands Waste Management Plan.

2.1 Proposed Tenancies

The anticipated volume of refuse and recyclables is based on the floor area (m^2) of the commercial tenancies at the Proposal. The Proposal consists of the following:

- Tenancy 1: Office/Medical/Consulting – 285m^2;
- Tenancy 2: Office/Medical/Consulting – 124m^2;
- Tenancy 3: Office/Medical/Consulting – 124m^2;
- Tenancy 4: Café – 74m^2;
- Tenancy 5: Café – 74m^2; and
- Tenancy 6: Café – 72m^2.

2.2 Waste Generation Rates

In order to achieve an accurate projection of waste volumes for the Proposal, consideration was given to the City of Melbourne's *Guidelines for Waste Management Plans* (2021).

It should also be noted that a conservative approach has been taken with regards to waste generation across the Proposal by overestimating the potential waste volumes for the commercial tenancies. This WMP has also been drafted for the worst case scenario based on the owners proposed list of uses for each tenancy. Seven days of operation has been assumed for all commercial tenancies. This is considered to be an over estimation as it is not uncommon for food and beverage tenancies to close operations post weekend trading therefore resulting in an over estimation of waste volumes generated.

Table 2-1 shows the waste generation rates which have been applied to the Proposal.

Table 2-1: Waste Generation Rates

Tenancy Use Type	City of Melbourne's Guideline Reference	Refuse Generation Rate	Recycling Generation Rate
Tenancy 1: Office/Medical/Consulting	Office	10L/100m^2/day	10L/100m^2/day
Tenancy 2: Office/Medical/Consulting	Office	10L/100m^2/day	10L/100m^2/day
Tenancy 3: Office/Medical/Consulting	Office	10L/100m^2/day	10L/100m^2/day
Tenancy 4: Café	Café	300L/100m^2/day	200L/100m^2/day
Tenancy 5: Café	Café	300L/100m^2/day	200L/100m^2/day
Tenancy 6: Café	Café	300L/100m^2/day	200L/100m^2/day

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2.3 Waste Generation Volumes

Waste generation is estimated by volume in litres (L) as this is generally the influencing factor when considering bin size, numbers and storage space required.

Waste generation volumes in litres per week (L/week) adopted for this waste assessment is shown Table 2-2. It is estimated that the commercial tenancies at the Proposal will generate 4,994L of refuse and 3,454L of recyclables each week.

Table 2-2: Estimated Waste Generation

Tenancy Use Type	Area (m^2)	Waste Generation Rate (L/week)	Waste Generation (L/week)
Refuse			
Tenancy 1: Office/Medical/Consulting	285	10L/100m^2/day	200
Tenancy 2: Office/Medical/Consulting	124	10L/100m^2/day	87
Tenancy 3: Office/Medical/Consulting	124	10L/100m^2/day	87
Tenancy 4: Café	74	300L/100m^2/day	1,554
Tenancy 5: Café	74	300L/100m^2/day	1,554
Tenancy 6: Café	72	300L/100m^2/day	1,512
		Total	**4,994**
Recyclables			
Tenancy 1: Office/Medical/Consulting	285	10L/100m^2/day	200
Tenancy 2: Office/Medical/Consulting	124	10L/100m^2/day	87
Tenancy 3: Office/Medical/Consulting	124	10L/100m^2/day	87
Tenancy 4: Café	74	200L/100m^2/day	1,036
Tenancy 5: Café	74	200L/100m^2/day	1,036
Tenancy 6: Café	72	200L/100m^2/day	1,008
		Total	**3,454**

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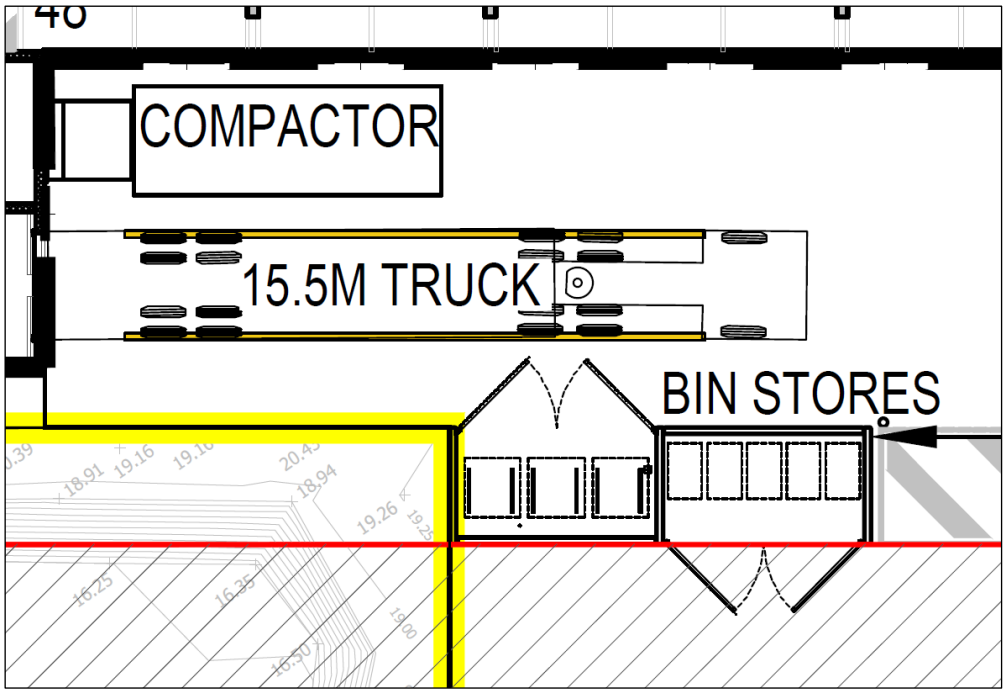
3 Waste Storage

Waste materials generated within the Proposal will be collected in the bins located in the Bin Storage Area, as shown in Diagram 1, and discussed in the following sub-sections.

Diagram 1: Bin Storage Area



3.1 Internal Transfer of Waste

To promote positive recycling behaviour and maximise diversion from landfill, internal bins will be available throughout the Proposal for the source separation of refuse and recycling.

These internal bins will be collected by the staff/cleaners at least once each day and transferred to the Bin Storage Area for consolidation into the appropriate bins.

All bins will be colour coded and labelled in accordance with Australian Standards (AS 4123.7) to assist visitors, staff and cleaners to dispose of their separate waste materials in the correct bins.

3.2 Bin Sizes

Table 3-1 gives the typical dimensions of standard bins sizes that may be utilised at the Proposal. It should be noted that these bin dimensions are approximate and can vary slightly between suppliers.

Table 3-1: Typical Bin Dimensions

Dimensions (m)	Bin Sizes		
	240L	660L	1,100L
Depth	0.8	0.8	1.4
Width	0.6	1.3	1.3
Height	1.1	1.2	1.5

Reference: City of Nedlands LPS3 – 4.0 Bin Size and Colour – Table 3.

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3.3 Bin Storage Area Size

To ensure sufficient area is available for storage of the bins, the amount of bins required for the Bin Storage Area was modelled utilising the estimated waste generation in Table 2-2 bin sizes in Table 3-1 and based on collection of refuse and recyclables three times each week.

Based on the results shown in Table 3-2 the Bin Storage Area has been sized to accommodate:

- Three 660L refuse bins; and
- Two 660L recycling bins.

Table 3-2: Bin Requirements for Bin Storage Area

Waste Stream	Waste Generation (L/week)	Number of Bins Required		
		240L	660L	1,100L
Refuse	4,994	7	3	2
Recycling	3,454	5	2	2

The configuration of these bins within the Bin Storage Area is shown in Diagram 1. It is worth noting that the number of bins and corresponding placement of bins shown in Diagram 1 represents the maximum requirements assuming three collections each week of refuse and recyclables.

3.4 Bin Storage Area Design

The design of the Bin Storage Area will take into consideration:

- Smooth impervious floor sloped to a drain connected to the sewer system;
- Taps for washing of bins and Bin Storage Area;
- Adequate aisle width for easy manoeuvring of bins;
- Doors to the Bin Storage Area self-closing and vermin proof;
- Doors to the Bin Storage Area wide enough to fit bins through;
- Ventilated to a suitable standard;
- Appropriate signage;
- Undercover where possible and be designed to not permit stormwater to enter the drain;
- Located behind the building setback line;
- Bins not to be visible from the property boundary or areas trafficable by the public; and
- Bins are reasonably secured from theft and vandalism.

Bin numbers and storage space within the Bin Storage Area will be monitored by the building manager during the operation of the Proposal to ensure that the number of bins and collection frequency is sufficient.

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4 Waste Collection

A private waste collection contractor will service the Proposal and provide three 660L bins for refuse and two 660L bins for recyclables.

The private contractor will collect refuse and recyclables three times each week utilising a rear loader waste collection vehicle.

The private contractor's rear loader waste collection vehicle will service the bins onsite, directly from the Bin Storage Area. The private contractors rear loader waste collection vehicle will travel with left hand lane traffic flow on Florence Road and turn into the Proposal in forward gear, and pull up directly opposite the Bin Storage Area for servicing.

It is proposed that servicing will be conducted outside of normal operating hours to allow the waste collection vehicle to utilise the empty carpark for manoeuvring and mitigate impacts on local traffic movements during peak traffic hours.

Private contractor's staff will ferry bins to and from the rear loader waste collection vehicle and the Bin Storage Area during servicing. The private contractor will be provided with key/PIN code access to the Bin Storage Area and security access gates to facilitate servicing, if required.

Once servicing is complete the private contractor's rear loader waste collection vehicle will exit in a forward motion, turning onto Florence Road moving with traffic flow.

The above servicing method will preserve the amenity of the area by removing the requirement for bins to be presented to the street on collection days. In addition, servicing of bins onsite will reduce the noise generated in the area during collection. Noise from waste vehicles must comply with the Environmental Protection (Noise) Regulations and such vehicles should not service the site before 7.00am or after 7.00pm Monday to Saturday, or before 9.00am or after 7.00pm on Sundays and Public Holidays.

4.1 Bulk and Speciality Waste

Bulk/specialty waste materials will be removed from the Proposal as they are generated. These may include items such as:

- Refurbishment wastes from fit outs;
- Batteries and E-wastes;
- White goods/appliances;
- Used cooking oil;
- Cleaning chemicals; and
- Commercial light globes.

Bulk/specialty waste collection will be monitored by the building manager who will organise their transport to the appropriate waste facility, as required.

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5 Waste Management

A building manager will be engaged to complete the following tasks:

- Monitoring and maintenance of bins and the Bin Storage Areas;
- Cleaning of bins and Bin Storage Areas, when required;
- Rotation of empty and full bins in the Bin Storage Area to ensure staff/cleaners will always have access to forward facing bins for easy disposal of waste;
- Ensure all staff/cleaners at the Proposal are made aware of this WMP and their responsibilities thereunder;
- Monitor staff/cleaners behaviour and identify requirements for further education and/or signage;
- Monitor bulk and speciality waste accumulation and assist with its removal, as required;
- Regularly engage with staff/cleaners to develop opportunities to reduce waste volumes and increase resource recovery; and
- Regularly engage with the private contractors to ensure efficient and effective waste service is maintained.

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6 Conclusion

As demonstrated within this WMP, the Proposal provides a sufficiently sized Bin Storage Area for storage of refuse and recyclables, based on the estimated waste generation volumes and suitable configuration of bins. This indicates that an adequately designed Bin Storage Area has been provided, and collection of refuse and recyclables can be completed from the Proposal.

The above is achieved using:

- Three 660L refuse bins, collected three times each week; and
- Two 660L recycling bins, collected three times each week.

A private contractor will service the Proposal onsite, directly from the Bin Storage Area. The private contractor's waste collection vehicle will enter and exit the Proposal in forward gear via Florence Road.

A building manager will oversee the relevant aspects of waste management at the Proposal.

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Appendix

Appendix A: ALDI Nedlands Waste Management Plan

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WASTE MANAGEMENT PLAN

NEDLANDS

AUGUST 2024

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ALDI STORES

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ABOUT ALDI

With a network of more than 9000 stores, ALDI is a leader in the international grocery industry, serving Europe, USA and Australia.
While ALDI has been operating internationally for over 50 years, the first Australian store opened its door in January 2001 and Australia now has over 500 Stores operating in the country.

The majority of products sold by ALDI Stores includes exclusive brands owned by ALDI. There are three main product ranges including;

1. Core Range — The main grocery lines include food, beverages, personal care and cleaning products. These products are generally sourced centrally for all stores across Australia.
2. Fresh Produce - products such as bread, milk, fruit and vegetables are mostly sourced locally in each region.
3. Special Buys - products that appear for only one or two weeks each year linked to a season or a theme. This range predominantly includes non-food general merchandise as well as seasonally relevant specialty foods.

ALDI has a constant focus on working as efficiently as possible, reducing their overheads and passing on savings to customers. ALDI also supports Australian growers and producers and works closely to nurture these relationships.

ALDI WASTE MANAGEMENT PLAN

INTRODUCTION

ALDI's Philosophy is that all people, wherever they live should have the opportunity to buy fantastic everyday groceries of the highest quality at the lowest possible price.

This is partly achieved through the distribution and presentation of the products in store. ALDI's products are delivered to the store on reusable plastic pallets, bottle trays, produce baskets, milk dollies and bread trays and are generally presented within the store on these pallets, trays, boxes etc. ALDI has a stated commitment to environmental sustainability and therefore waste management reduction.

ALDI is proud to be a signatory to the 'Australian Packaging Covenant' and is committed to reducing its environmental impacts.

WASTE GENERATED

The model of presenting products on pallets, trays etc minimizes the need for packaging and significantly reduces the amount of waste generated on site. Given that there is no on-site preparation of food, waste is also reduced.
There are three types of waste generated within an ALDI Store and they are removed from site as follows:

1. General — Waste disposed of in the general/waste bin is limited to waste generated by staff on their lunch breaks (food packaging) and office-based waste. These products are placed in a 1.5m3 bin and are collected every 5-7 days by ALDI's nominated garbage contractor. The collection will be managed at ALDI's request at specified times. The bins are fully contained and equipped with a hinged lid and contained in the Bin Enclosure in the loading dock. Each bin is located within a secure enclosure as per the attached photo below.

2. Cardboard and Paper — This store has a 40 cubic metre cardboard compactor provided as standard. The transportable compactor is connected to the back of house (BOH) area store via a chute, allowing for easy access to manage cardboard and paper waste as it is produced in the store. Typically, the compactor bin is collected from the store every 2 or 3 weeks with the waste sent for recycling.

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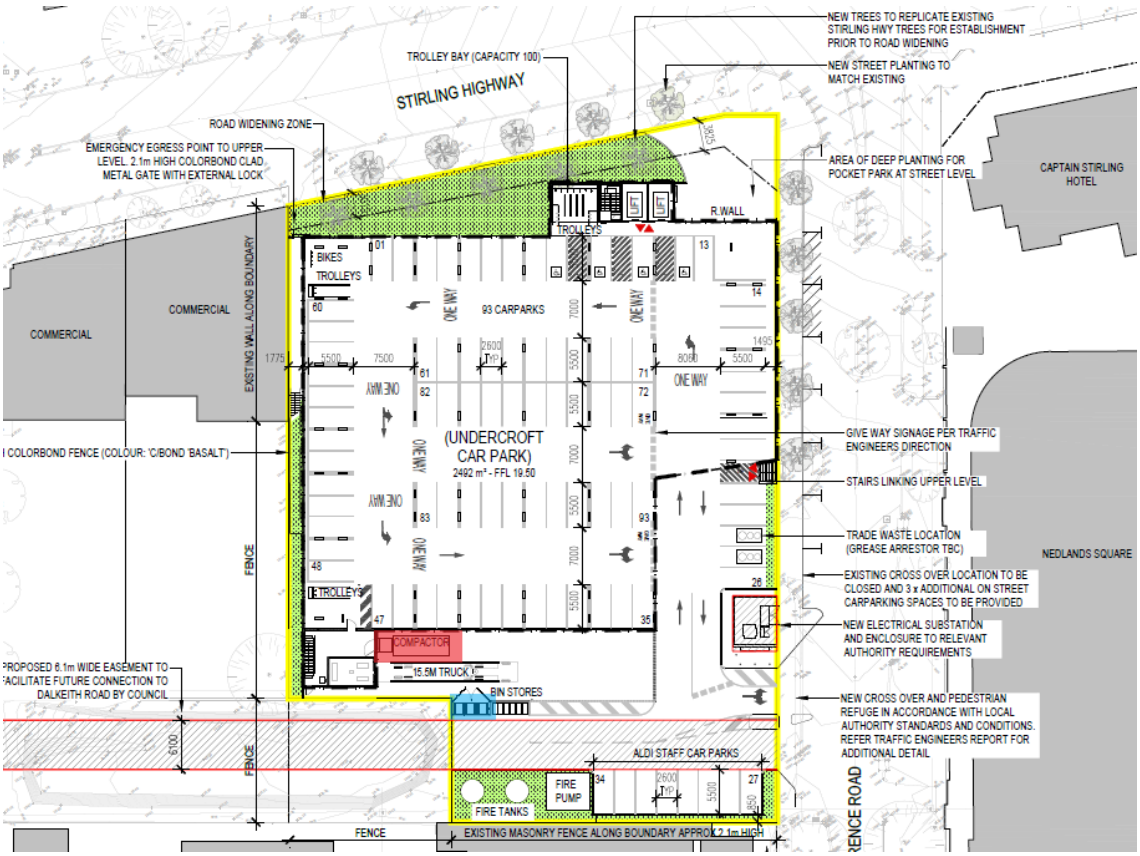
3. Empty pallets, bottle trays, milk dollies, produce baskets and some plastic (pallet wrapping etc) once used are collected from the store by the ALDI delivery truck (following a delivery) and returned to the ALDI distribution centre for reuse/ recycling. The used bread trays are collected by the bread truck and returned to their warehouse for reuse.

ALDI uses a new generation reusable plastic crate that allows for fresh produce to be delivered directly to the shop floors. This crate allows for products to be packed directly on farm/ factory before being delivered to the distribution centre and then on to the stores. This reduces the amount of repacking and speeds up the process. The crate has a reduced fold down height by 25mm allowing for 29% more crates to fit into truck than previous generation crates have allowed resulting in fewer truck movements.

VOLUMES OF WASTE GENERATED

To ensure the diversion of waste from landfill, separation of waste will occur at the store and be undertaken by the ALDI Store staff, all of whom are trained to do so. Empirical evidence from a typical ALDI Store suggests that approximately 5.0m3 of general waste and 3 to 4 tonnes of cardboard packaging are created each week. General waste is collected by a nominated ALDI contractor, who must adhere to the WA State Government legislation relating to being a transporter of waste.



LOCATION OF WASTE MANAGEMENT FACILITIES AND EQUIPMENT

As shown on the above plan, the main waste management facilities are located externally to the store in the loading dock area

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In order to facilitate an effective waste management service, provision must be made to address general garbage disposal together with recyclable materials and cardboard resources. As a result, each store will have one (1) x 1.5m3 bin for general waste and (1) x 40 cubic metre cardboard compactor for recyclable paper and cardboard. The bin enclosure is a dedicated bin enclosure (photo 1 shows a typical design).

Photo 1 – Typical ALDI bin enclosure.

Photo 2 – Typical cardboard compactor provision.

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CLEARANCE FREQUENCIES & TIMES

It is estimated that the ALDI store will produce 5.0m^3 of general and 3-4 tonnes of cardboard waste per week. Typically, a compactor will be collected every 2 to 3 weeks and general waste bins will be emptied every 5-7 days.

General waste bin will be emptied by a front lift vehicle, which will park in the loading dock area to load. The bin will be rolled from the bin enclosure and moved in front of the loading dock door in order to facilitate the clearances. The collection frequency will be subject to the volume of waste generated and collection times will typically be between 7:00am and 8:00pm Monday to Friday. Should a weekend collection be required it is most likely that these services will be between 9:00am to 8:00pm.

ENVIRONMENTAL CONSIDERATIONS

The general waste bin for an ALDI store is located in the bin enclosure, which is roofed. The ground slab is graded with falls to a drain. A tap is provided within the enclosure to assist with cleaning. Bins are stored with the lids closed, coupled with the frequency of collections and natural air dispersion factors, fugitive odour emissions are not considered to be an issue for the immediate environment at this development. However, noting the above ALDI does engage an external contractor to clean and sanitise the bins on a regular basis.

Noise emissions from both the ALDI delivery trucks and garbage collection trucks will comply with Environmental Protection Authority requirements.

FOOD DONATIONS

ALDI proudly donates food that can no longer be sold (due to use by dates etc) to a variety of charities, including Foodbank, OzHarvest and Second Bite. These companies collect the fresh food daily from the ALDI Store loading dock during trading hours and provide the food to charities supporting disadvantaged people living in at-risk communities.

ALDI ENVIRONMENTAL ENDORSEMENTS & IMPLEMENTATIONS

Since ALDI Stores commenced operations in Australia in 2001, the company has introduced a range of initiatives that have allowed the environmental impacts of its packaging to be minimised.

- In June 2010, ALDI became the first company to join Planet Ark's Carbon reduction Label (CRL) Program in Australia. The CRL informs customers of the total carbon footprint of a product, from raw material and manufacturing right through to disposal or recycling of the packaging. The label assists people to understand how they can reduce their own carbon footprint.

- ALDI, with support of Planet Ark, became the first supermarket in Australia to offer a free recycling service for household batteries in every store and combat the amount of battery waste ending up in landfill. The program allows ALDI customers to simply drop used household batteries, including AA, AAA, C, D and 9V into recycling bins located in their local store.

- ALDI is a participant in the Standardized Packaging Recyclability Labelling Reference Group (SPRLRG) governed by the Australian Food and Grocery Council (AFGC). The purpose of the SPRLRG is to reach agreement on a standardized packaging recyclability logo and label system to be used on Australian packaging.

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- We have announced the national phase out of our reusable 15c plastic bag and the introduction of a paper bag alternative, which is now available in all stores. The paper bags are Forest Stewardship Council (FSC) certified and 100 per cent recyclable. ALDI is saying goodbye to single-use and problematic plastics. We have removed tableware such as plastic bowls, plates, cutlery, and cups from our shelves. By no longer selling plastic tableware, we have been able to save 322 tonnes of plastic from landfill each year. In place of plastic products, we have introduced a new range of plates and bowls that are made entirely of sugar cane, as well as cutlery made from birchwood.

- ALDI has also prioritised the reduction or replacement of difficult to recycle black plastic packaging. Status at the end of 2022: we have removed 55.3% of black plastic packaging across our range. ALDI has also removed all microbeads from our entire beauty product range.

- ALDI has never provided free-of-charge plastic carrier bags. Our reusable plastic bag, The Le Bag Recycle, is 80% recycled plastic, 60% of which is pallet wrap from ALDI warehouses. By not providing single-use carrier bags, we have saved an estimated 9.4 billion plastic bags from entering the market.

- Our everyday range of standard batteries are now packaged in paper instead of plastic. That is approximately seventeen tonnes of plastic waste avoided each year.

- Our flow-wrap mince packaging trial has produced a 70% reduction in plastic packaging for ALDI Jindurra Station mince. This packaging was a Finalist for the 2023 Design Innovation of the Year Award by the Australian Institute of Packaging.

- In December 2021, we became the first Australian supermarket to begin replacing plastic straws on drink cartons, with paper versions. ALDI is currently in the process of rolling out juice boxes that have a paper straw, resulting in the removal of more than 40 million plastic straws a year. The roll-out to all products is due to be complete by mid-2022.

- Our cotton buds have also switched from a plastic to a paper stem. By making the change from plastic to paper, we are avoiding 357 million plastic stems from ending up in landfill each year.

- Following collaboration with our suppliers, all Styrofoam noodle cup packaging will be phased out by late-2023, with production of new paper-based cups already underway.

- ALDI's master artwork information guidelines continue to promote responsible disposal of packaging including the Tidyman logo/ Mobius loop on all products.

- ALDI has eliminated the use of Styrofoam boxes and packaging throughout its entire range. ALDI has also partnered with an asset recovery agent to re-use or recycle all damaged specials that would have otherwise gone to landfill. A recent six-month trial diverted 150 tonnes of waste from landfill.

- 100% of ALDI's toilet tissue, paper towels, facial tissues and paper napkins come from responsibly managed sources.

- ALDI continues to not offer free plastic bags to its shoppers. ALDI encourages its customers to bring their own shopping bags, or alternatively, they can purchase a reusable bag from the store. ALDI's heavy-duty plastic bags are made from 85% recycled materials.

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Figures

Figure 1: Locality Plan

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LEGEND

- Site Boundary

Cadastre

- Freehold
- Road
- Strata Plan or Lot
- Easement

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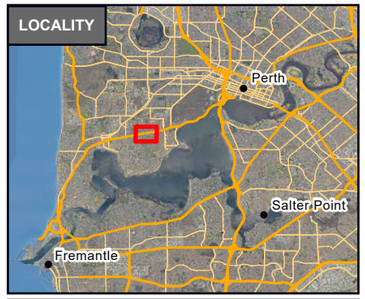
LOCALITY



0 5 10 15 20 km

LOCALITY

90 Stirling Highway
Nedlands WA 6009

ALDI Stores

N

0 10 20 30 m

Coordinate System: GDA2020 MGA Zone 50
Scale @ A3: 1:700

Prepared:	B Roelofse	Date:	15/11/2024
Reviewed:	A Brouwer	Revision:	A
Project:	WMP24129		

talis consultants

Figure 01

Assets | Engineering | Environment | Noise | Spatial | Waste

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ALDI STORES

ALDI STORE
NEDLANDS

ENVIRONMENTAL ACOUSTIC ASSESSMENT
DEVELOPMENT APPROVAL SUBMISSION REPORT

NOVEMBER 2024

OUR REFERENCE: 33352-5-24324

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ENVIRONMENTAL ACOUSTIC ASSESSMENT

ALDI STORE – NEDLANDS

Job No: 24324

Document Reference: 33352-5-24324

FOR

ALDI STORES

DOCUMENT INFORMATION			
Author:	George Watts	**Checked By:**	Tim Reynolds
Date of Issue :	12 September 2024		

REVISION HISTORY

Revision	Description	Date	Author	Checked
1	Revision following feedback from ALDI	19/9/2024	GW	
2	Revision incorporating City of Nedlands feedback	6/11/2024	GW	
3	Further revision incorporating ALDI feedback	15/11/2024	GW	PLD
4	Revised DA Drawing	18/11/2024	GW	

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6.	METHODOLOGY	5
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APPENDICES

A DEVELOPMENT PLANS

B NOISE CONTOUR PLOTS

C TRUCK REFRIGERATION UNIT DATA

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1. INTRODUCTION

Herring Storer Acoustics were commissioned by ALDI Stores to undertake an acoustic assessment of noise emissions associated with the proposed Aldi Store to be located in Nedlands, on the corner of Stirling Highway and Florence Road.

The objective of this study was to assess noise emissions from delivery vehicles and mechanical services at the noise sensitive premises surrounding the proposed site for compliance with the requirements of the *Environmental Protection (Noise) Regulations 1997*.

The assessment was undertaken to inform the design development team of the store and address a likely development approval condition.

The site plan is attached in Appendix A.

2. SUMMARY

Noise emissions associated with the proposed Aldi store have been determined to comply with the *Environmental Protection (Noise) Regulations 1997*.

3. CRITERIA

3.1 ENVIRONMENTAL PROTECTION (NOISE) REGULATIONS 1997

The *Environmental Protection (Noise) Regulations 1997* stipulate the allowable noise levels at any noise sensitive premises from other premises. The allowable noise level is determined by the calculation of an influencing factor, which is added to the baseline criteria set out in Table 1 of the Regulations. The baseline assigned noise levels are listed in Table 3.1.

TABLE 3.1 – ASSIGNED NOISE LEVELS

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		$L_{A\ 10}$	$L_{A\ 1}$	$L_{A\ max}$
Noise sensitive premises within 15 metres of a dwelling (Highly Sensitive Areas)	0700 - 1900 hours Monday to Saturday	45 + IF	55 + IF	65 + IF
	0900 - 1900 hours Sunday and Public Holidays	40 + IF	50 + IF	65 + IF
	1900 - 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

Note: The L_{A10} noise level is the noise that is exceeded for 10% of the time.
The L_{A1} noise level is the noise that is exceeded for 1% of the time.
The L_{Amax} noise level is the maximum noise level recorded.

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It is a requirement that noise from the site be free of annoying characteristics (tonality, modulation and impulsiveness) at other premises, defined below as per Regulation 9.

"impulsiveness" means a variation in the emission of a noise where the difference between L_{Apeak} and $L_{Amax\ Slow}$ is more than 15dB when determined for a single representative event;

"modulation" means a variation in the emission of noise that –

(a) is more than 3dB $L_{A\ Fast}$ or is more than 3dB $L_{A\ Fast}$ in any one-third octave band;
(b) is present for more at least 10% of the representative assessment period; and
(c) is regular, cyclic and audible;

"tonality" means the presence in the noise emission of tonal characteristics where the difference between –

(a) the A-weighted sound pressure level in any one-third octave band; and
(b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands,

is greater than 3 dB when the sound pressure levels are determined as $L_{Aeq,T}$ levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as $L_{A\ Slow}$ levels.

Where the above characteristics are present and cannot be practicably removed, the following adjustments are made to the measured or predicted level at other premises.

TABLE 3.2 – ADJUSTMENTS FOR ANNOYING CHARACTERISTICS

Where tonality is present	Where modulation is present	Where impulsiveness is present
+ 5 dB	+ 5 dB	+ 10 dB

The following locations have been determined to require an assessment of noise level emissions.

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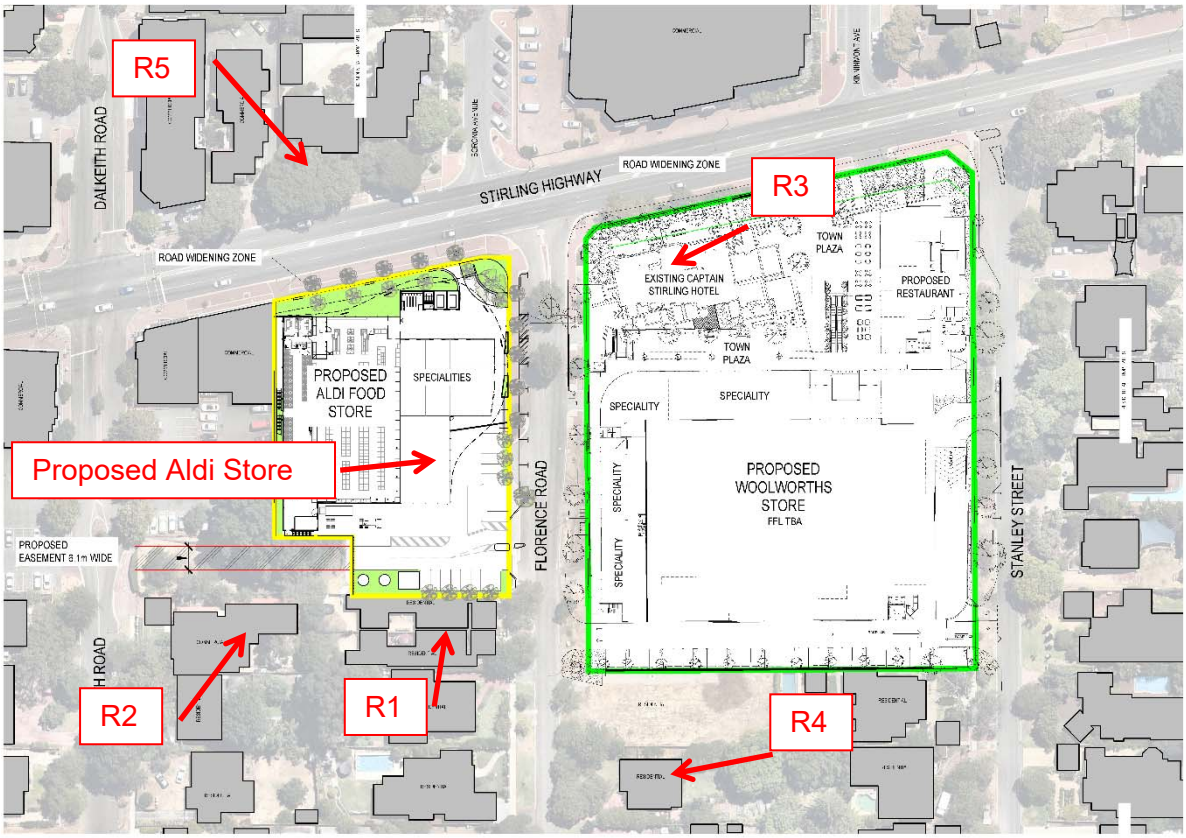

FIGURE 3.1 – RECEIVER POINTS

The influencing factor at the identified noise sensitive premises has been estimated as follows :

Major Road within the inner circle;
Stirling Highway + 6 dB

Commercial Premises within the inner circle;
40 % + 2 dB

Commercial Premises within the outer circle;
10 % + 0.5 dB

Hence, the influencing factor is estimated at 8 dB (rounded down).

Based on the above influencing factor, the assigned outdoor noise levels are listed in Table 3.3.

TABLE 3.3 - ASSIGNED OUTDOOR NOISE LEVEL FOR R1 TO R7

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		$L_{A\ 10}$	$L_{A\ 1}$	$L_{A\ max}$
Noise sensitive premises	0700 - 1900 hours Monday to Saturday (Day)	53	63	73
	0900 - 1900 hours Sunday and Public Holidays (Sundays)	48	58	73
	1900 - 2200 hours all days (Evening)	48	58	63
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	43	53	63

Note: L_{A10} is the noise level exceeded for 10% of the time.
L_{A1} is the noise level exceeded for 1% of the time.
L_{Amax} is the maximum noise level.

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4. PROPOSED DELIVERIES

The use of the delivery dock is understood to accommodate 19m articulated delivery trucks, and have been assumed to be refrigerated trucks (i.e worst case scenario). In addition to the larger deliveries a bakery delivery occurring between 5am and 7am each morning has been assumed to be a 13m rigid truck.

It is understood that a 19m truck would not be able to be accommodated at this ALDI store – hence our assessment is conservative as it assumes a larger/noisier truck than would service this store.

The truck types assumed in our assessment have been determined through consultation with ALDI stores.

It is noted that the carpark area leading to the delivery dock is a public place, hence we have only considered delivery truck noise levels as they enter the dock itself– outside of this space the trucks are in a public area and therefore compliance with the Regulations are not applicable and hence have not been considered.

It is noted that the barrier to the south of the proposed development (to the south of the loading dock in particular) has been assumed to be a minimum of 2.2 metres in height above ground level.

The fencing/barrier to the rear of the loading dock area – shown in Figure 4.1 below – is to be a minimum of 3m in height above ground level.

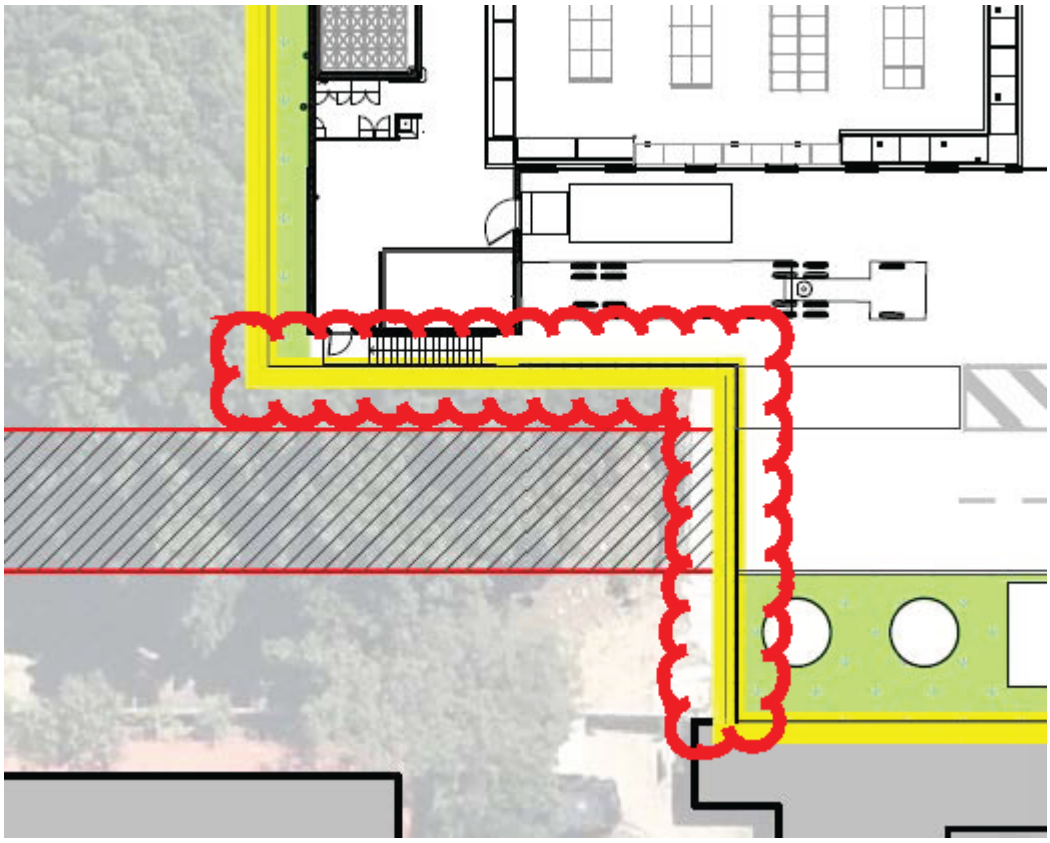

FIGURE 4.1 – LOADING DOCK WALL

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The construction of the barrier assumed loading dock area is immaterial to the acoustic assessment, provided that the density of the barrier is 12kg/m^2 or greater and of solid construction (i.e. no gaps). It is understood that the likely construction of the barrier would be pine-lap fencing, brick or concrete – both of which would be acoustically acceptable.

The existing barrier to the south of the proposed development is understood to be double brick construction – which is sufficient density.

Reversing alarms, and the use of them on ALDI delivery trucks, is not known. In accordance with the *Environmental Protection (Noise) Regulations 1997* noise from a reversing alarm is exempt if:

- The alarm is required under another written law; and
- It is not practicable to fit an alarm that complies with both the law which requires it and the Noise Regulations.

Reversing alarms, either beepers or broadband alarms, are considered likely to be required to be present when reversing to comply with Occupational Health and Safety Requirements. Herring Storer Acoustics are not qualified to suggest that beepers can be removed and replaced with broadband alarms – as this is outside our area of expertise and professional qualifications.

However, we understand that the ALDI fleet of trucks are now all fitted with "NARVA Broadband Self-Adjusting Reversing Alarms". These are broadband reversing alarms which self adjust to the ambient noise environment, automatically adjusting to within 5 dB of the surrounding noise environment. Whilst compliance with the Regulations is not specifically required, a comparison of the noise impact of the reversing alarms with the Regulations has been undertaken to consider any affect on the amenity of the area. The noise impact that has been considered in this assessment is the lowest noise level that the alarm can reduce to (77 dB(A) at 1m distance). This would have the most potential impact upon neighbouring premises, as this noise level would occur at times when background noise levels are at an absolute minimum, and the intrusive nature of the noise at its highest.

5. MECHANICAL PLANT

Mechanical plant details have been based on information provided for previous Aldi stores and provided information are located on the roof as shown in the drawings in Appendix A, housed within a walled enclosure to three sides. Acoustic data is contained in Table 6.3.

6. METHODOLOGY

Noise modelling of the noise propagation from the site was carried out using the environmental noise modelling computer program, "SoundPlan". Single point calculations were undertaken.

Input data for computer modelling included:

- Design of store as per drawings in Appendix A.
- EPA standard weather condition for the day and night periods (see Table 6.1).
- Sound power levels, as summarised in Table 6.2- 6.4. The truck refrigeration unit data is included in Appendix C.

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TABLE 6.1 - WEATHER CONDITIONS

Condition	Day Period	Night Period
Temperature	20 °C	15 °C
Relative humidity	50%	50%
Pasquil Stability Class	E	F
Wind speed	4 m/s*	3 m/s*

* From source to receiver

TABLE 6.2 – SOUND POWER LEVELS OF DELIVERY VEHICLES

DESCRIPTION	dB(A)
19m articulated delivery truck with refrigeration unit	97
Refrigeration Unit Only	75
13m rigid delivery truck	85

TABLE 6.3 – NOISE LEVELS OF MECHANICAL PLANT

DESCRIPTION	dB(A)
Condenser Unit (Daikin RXYQ54TNY1A(E))	67 dB(A) @ 3m
Refrigeration Plant	61 dB(A) @ 3m
R134A Aldi Pack	61.8 dB(A) @ 3m

TABLE 6.4 – NOISE LEVELS OF BROADBAND REVERSING ALARM

DESCRIPTION	dB(A)
Ambient + 5 dB	77 @ 1m

For the above sound power levels, single point calculations were undertaken for the following scenarios :

Scenario 1 : One large refrigerated truck delivery.

Scenario 2 : One 13m rigid truck delivery (bakery delivery).

Scenario 3 : Mechanical Plant.

Scenario 4 : Large refrigerated truck refrigeration unit operating (truck engine off).

Scenario 5 : Broadband Reversing Alarm.

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Notes :

1 For the noise to be less than 10% of the time and be assessed under the L_{A1} assigned noise levels, the truck engines and refrigeration units would need to be turned off while unloading is occurring. This is understood to be able to be accommodated and presents as standard practice in many supermarket delivery docks in Western Australia. The requirement to do so would be expected to be incorporated into the supermarkets operational noise management plan once constructed. The operational noise management plan would also include the management of delivery times such that only one truck is able to use the loading dock at any one time – noting that it would appear highly unlikely that two loading trucks of size would actually be able to fit in the loading dock concurrently. Based on more recent information, it is understood that compliance with switching the refrigeration unit off during delivery has not been possible in some instances, hence, whilst the truck engine is turned off – the refrigerator continues to operate. Hence, the refrigeration unit running during the delivery has been considered in our assessment.

2 The L_{A1} assigned noise level would be the pertinent prescribed noise level in this instance (for delivery truck movements) as the duration of time that the noise of the truck manoeuvring is present is less than 10% of a representative time period. The noise associated with the delivery is the manoeuvring of the truck into place, upon which the truck is switched off – hence – even if the delivery takes sometime (i.e. 30 – 60 minutes) the noise level associated with the truck is not present throughout the duration of the delivery. This is also applicable to the assessment of amenity impact of the broadband reversing alarm associated with the manoeuvring of the truck. The refrigeration unit continuing to operate would be considered against the L_{A10} parameter, as, in the event the unit cannot be switched off, this noise source could be present for greater than 10% of the representative time period.

3 The representative time period for deliveries has been considered in this context to be reasonable to be in the order of 1 hour – as this is the typical duration of a delivery.

4 It is noted that this also means the noise assessment is more “realistic” as if the L_{A10} parameter was to be used as the noise level associated with the truck is not present for more than 10% of a representative time period, the L_{A10} noise level would be at the ambient noise level of the area, rather than the truck noise – with the exception of the refrigeration unit if that is unable to be switched off.

The meteorological conditions utilised for our assessment are those stipulated by the Department of Water Environment Regulation Noise Branch as being representative of maximum propagation conditions. The wind directions utilised in the model are all directions at once.

Notwithstanding the above, it is noted that in this instance, with the relatively short distances between sources and receivers, the wind direction and speed effect on the modelled noise levels is marginal, with the direction and speed more of an impact for noise level emissions over distances in the order of 1km or more.

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Mechanical noise sources have been assumed to be located on the roof of the proposed building above the loading dock area, as is typical of ALDI stores., with barriers to provide for both sight lights and noise attenuation. The equipment noise levels are based upon what is understood and provided as the standard for ALDI stores and utilised for all standard ALDI store developments.

Noise sources associated with the movement of goods from the delivery trucks have not been included in our assessment, as based upon our experience with ALDI loading dock methods, the delivery truck driver also typically unloads the truck – and this is undertaken directly from the back of the truck which directly abuts the supermarket building. Hence, there is no avenue/area for unload noise to be present in the loading dock area (as the noise is internal to the building).

Noise sources associated with cars idling in the car park area has not been included in our assessment, as these locations are a public place and open to anyone to use – however – it is also noted that being an undercroft carpark, the noise levels associated with this space would – for obvious reasons – be well attenuated. Additionally, it is noted that the carparking adjacent to any residential areas is significantly reduced to what is in place at the present, hence, there would be a reduction in any noise impact from these sources.

7. RESULTS

Single point calculations were undertaken for all locations shown in Figure 3.1, with the results of the modelling listed in Table 7.1. Noise contour plots are also included in Appendix B for information purposes.

TABLE 7.1 – RESULTANT NOISE LEVEL

Receiver Location	Scenario / Calculated Noise Level, (dB(A))				
	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
R1	39	26	30	31	39
R2	33	20	28	19	29
R3	47	35	34	28	38
R4	45	25	34	28	33
R5	20	5	32	2	8

Based on the definitions of tonality, noise emissions from truck movements, being an L_{A1}, being present for less than 10% of the time, would not be considered tonal.

The broadband reversing alarm would also not be considered tonal as it is a broadband noise source by definition.

Noise levels associated with mechanical services and the refrigeration unit on the large delivery truck could contain tonal characteristics, hence, a + 5 dB adjustment would be applicable.

Therefore, the assessable noise levels for each of the noise sources are listed below in Table 7.2.

TABLE 7.2 – ASSESSABLE NOISE LEVELS

Receiver Location	Scenario / Calculated Noise Level, (dB(A))				
	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
R1	39	26	35	36	39
R2	33	20	33	24	29
R3	47	35	39	33	38
R4	45	25	39	33	33
R5	20	5	37	7	8

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Tables 7.3 and 7.4 compares the assessable noise level for large truck deliveries and small truck deliveries against the relevant L_{A1} Assigned Noise Levels for the day, evening (and Sundays) and night periods. Noise levels that are calculated to exceed the relevant criteria are listed in red.

TABLE 7.3 – ASSESMENT OF NOISE LEVEL – SCENARIO 1 – LARGE TRUCK DELIVERIES

Receiver Location	Assessable Noise Level, dB(A)	Assigned Noise Level, L_{A1} dB		Exceedance to Assigned Noise Level
	Scenario 1	Time of Day	L_{A1} dB	
R1	39	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies
R2	33	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies
R3	47	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies
R4	45	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies
R5	20	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies

TABLE 7.4 – ASSESMENT OF NOISE LEVEL – SCENARIO 2 – SMALL TRUCK DELIVERIES

Receiver Location	Assessable Noise Level, dB(A)	Assigned Noise Level, L_{A1} dB		Exceedance to Assigned Noise Level
	Scenario 2	Time of Day	L_{A1} dB	
R1	26	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies
R2	20	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies
R3	35	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies
R4	25	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies
R5	5	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies

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Table 7.5 and 7.6 compares the assessable noise level for mechanical plant and the large truck refrigeration unit against the relevant L_{A10} Assigned Noise Levels for the day, evening (and Sundays) and night periods. Noise levels that are calculated to exceed the relevant criteria are listed in red.

TABLE 7.5 – ASSESMENT OF NOISE LEVEL – SCENARIO 3 – MECHANICAL PLANT

Receiver Location	Assessable Noise Level, dB(A)	Assigned Noise Level, L_{A10} dB		Exceedance to Assigned Noise Level
	Scenario 3	Time of Day	L_{A10} dB	
R1	35	Day	53	Complies
		Sundays	48	Complies
		Evening	48	Complies
		Night	43	Complies
R2	33	Day	53	Complies
		Sundays	48	Complies
		Evening	48	Complies
		Night	43	Complies
R3	39	Day	53	Complies
		Sundays	48	Complies
		Evening	48	Complies
		Night	43	Complies
R4	39	Day	53	Complies
		Sundays	48	Complies
		Evening	48	Complies
		Night	43	Complies
R5	37	Day	53	Complies
		Sundays	48	Complies
		Evening	48	Complies
		Night	43	Complies

TABLE 7.6 – ASSESMENT OF NOISE LEVEL – SCENARIO 4 – LARGE TRUCK REFRIGERATION UNIT

Receiver Location	Assessable Noise Level, dB(A)	Assigned Noise Level, L_{A10} dB		Exceedance to Assigned Noise Level
	Scenario 4	Time of Day	L_{A10} dB	
R1	36	Day	53	Complies
		Sundays	48	Complies
		Evening	48	Complies
		Night	43	Complies
R2	24	Day	53	Complies
		Sundays	48	Complies
		Evening	48	Complies
		Night	43	Complies
R3	33	Day	53	Complies
		Sundays	48	Complies
		Evening	48	Complies
		Night	43	Complies
R4	33	Day	53	Complies
		Sundays	48	Complies
		Evening	48	Complies
		Night	43	Complies
R5	7	Day	53	Complies
		Sundays	48	Complies
		Evening	48	Complies
		Night	43	Complies

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Table 7.7 compares the assessable noise level for the broadband reversing alarm against the relevant L_{A1} Assigned Noise Levels for the day, evening (and Sundays) and night periods. Noise levels that are calculated to exceed the relevant criteria are listed in red.

TABLE 7.7 – ASSESMENT OF NOISE LEVEL – SCENARIO 5 – BROADBAND REVERSING ALARM

Receiver Location	Assessable Noise Level, dB(A)	Assigned Noise Level, L_{A1} dB		Exceedance to Assigned Noise Level
	Scenario 1	Time of Day	L_{A1} dB	
R1	39	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies
R2	29	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies
R3	38	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies
R4	33	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies
R5	8	Day	63	Complies
		Sundays	58	Complies
		Evening	58	Complies
		Night	53	Complies

Truck deliveries (both refrigerated and bakery delivery trucks) have been calculated to comply at all times. This includes if the refrigeration unit of the large delivery truck remains operating during the delivery period.

Noise levels associated with the mechanical plant has also been calculated to comply at all times. The calculated noise levels associated with the mechanical plant are such that any cumulative effect with other noise sources in the area do not need to be considered.

Noise levels associated with the broadband reversing alarms affixed to ALDI delivery trucks, whilst not requiring to comply with the Assigned Noise Levels stipulated by the Regulations, have been determined to comply with the relevant Assigned Noise Level parameter.

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APPENDIX A

DEVELOPMENT PLANS

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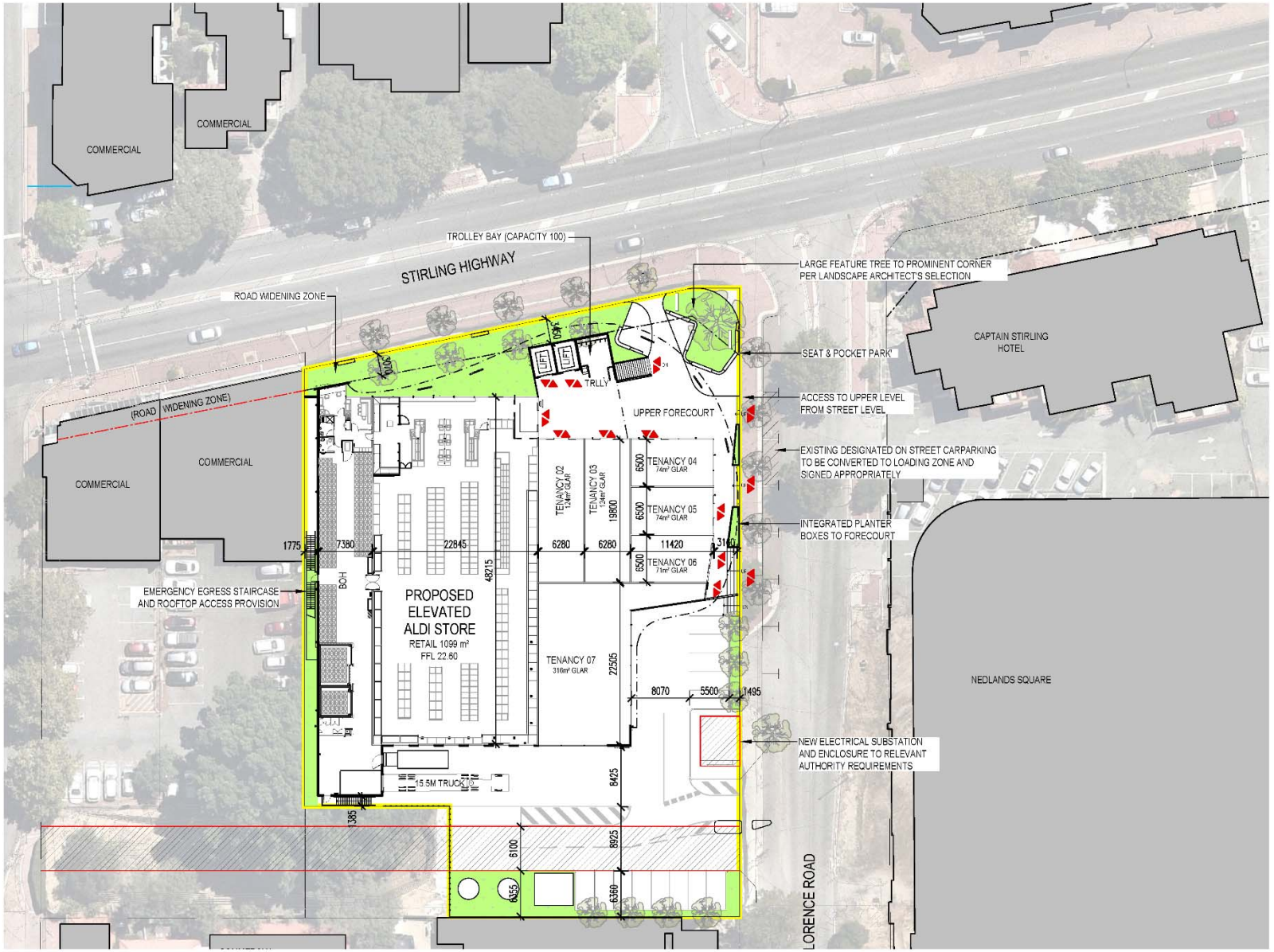

1 - PROPOSED SITE & FIRST FLOOR PLAN
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NOTES

ORIGINAL A3

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REV	DATE	DESCRIPTION	DRN	CHKD
-	-	-	-	-

PROPERTY DESCRIPTION	AREA m²
TOTAL SITE AREA	4438m²
BUILDING GROSS FLOOR AREA	2739m²
BUILDING NETT FLOOR AREA	2665m²
ALDI RETAIL NETT AREA	1099m²
ALDI BOH NETT AREA	360m²
ALDI AMENITIES NETT AREA	60m²
TOTAL ALDI NETT AREA	1519m²
TRUCK LENGTH	15.50m
CHILLER LENGTH	40m
FORECOURT/BALCONY AREA	363m²
TENANCY 02	124m²
TENANCY 03	124m²
TENANCY 04	74m²
TENANCY 05	74m²
TENANCY 06	71m²
TENANCY 07	316m²
TOTAL ANCILLARY TENANCIES	783m²
NUMBER OF CAR SPACES	94

PROPOSED ALDI BOUNDARY	
EXISTING STRUCTURES	
DEVELOPMENT BOUNDARIES	

N

CLIENT
ALDI STORES

PROJECT
ALDI NEDLANDS
CORNER OF STIRLING HWY & FLORENCE ROAD
NEDLANDS W.A.

DRAWING
PROPOSED SITE & FIRST FLOOR PLAN

NIELSEN ARCHITECTS
108 Mt Barker Road Stirling
South Australia 5152
P: 08 8339 8008
F: 08 8339 2004
P.O. Box 891 Stirling SA 5152
admin@nielsenarchitects.com.au
www.nielsenarchitects.com.au

SCALE	DATE	DRAWN	CHECKED
1:500	NOV 2024	LT	TB

PROJECT No	DRAWING No	STATUS	REV
2912	DA02.03	DA	-

APPENDIX B

NOISE CONTOUR PLOTS

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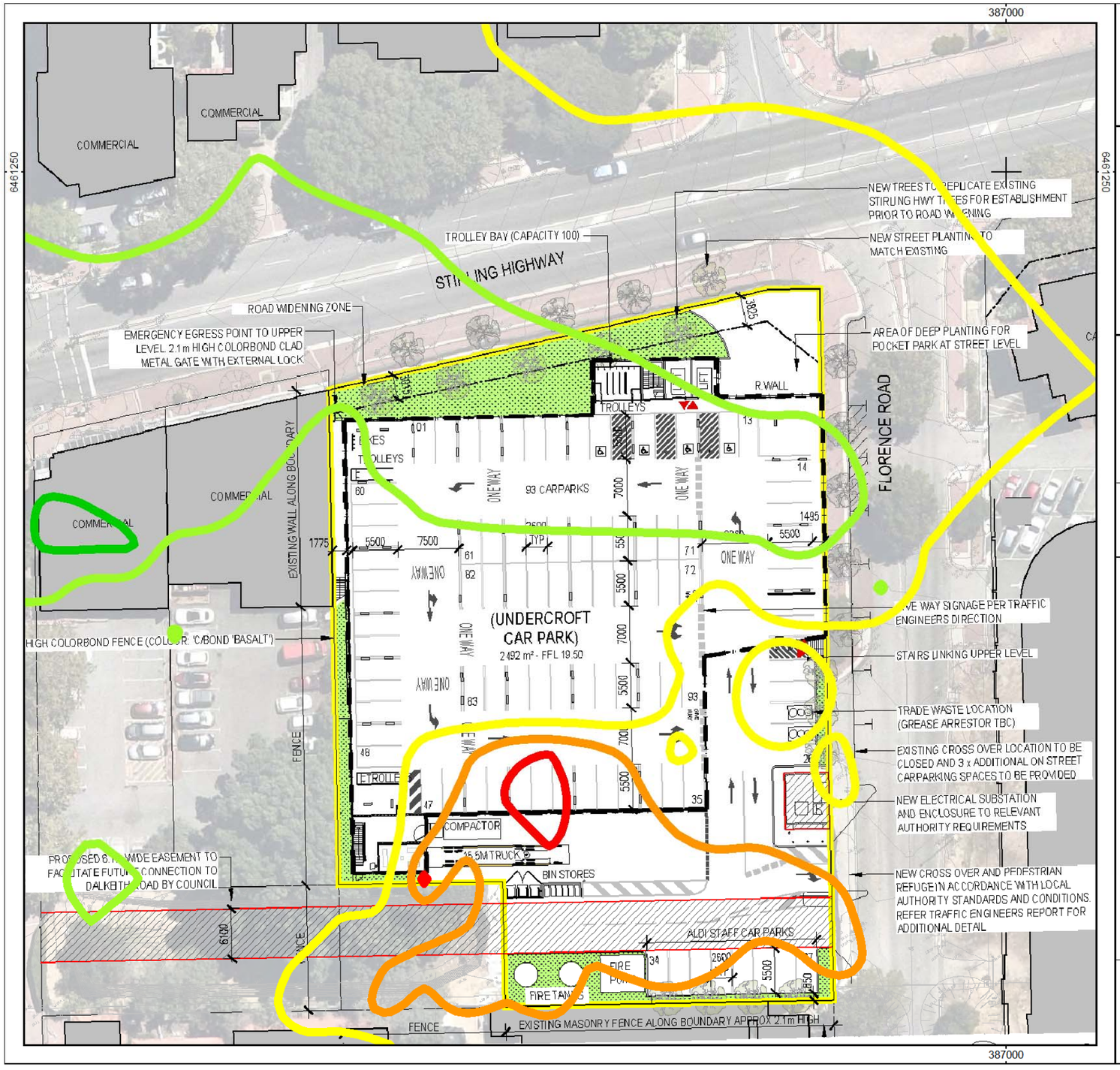
2024



Customer: ALDI
Project: ALDI Nedlands
Project-No. 24324

Map
1

Mechanical Services GNM
Result number 5
Calculation in 2 m above ground

Project engineer: George Watts
Created: 6/11/2024
Processed with SoundPLAN 9.1, Update 14/11/2024

Levels L10
in dB(A)

- = 20
- = 25
- = 30
- = 35
- = 40
- = 45
- = 50
- = 55
- = 60

N

0 4 8 16 24 32 m

HERRING STORER ACOUSTICS

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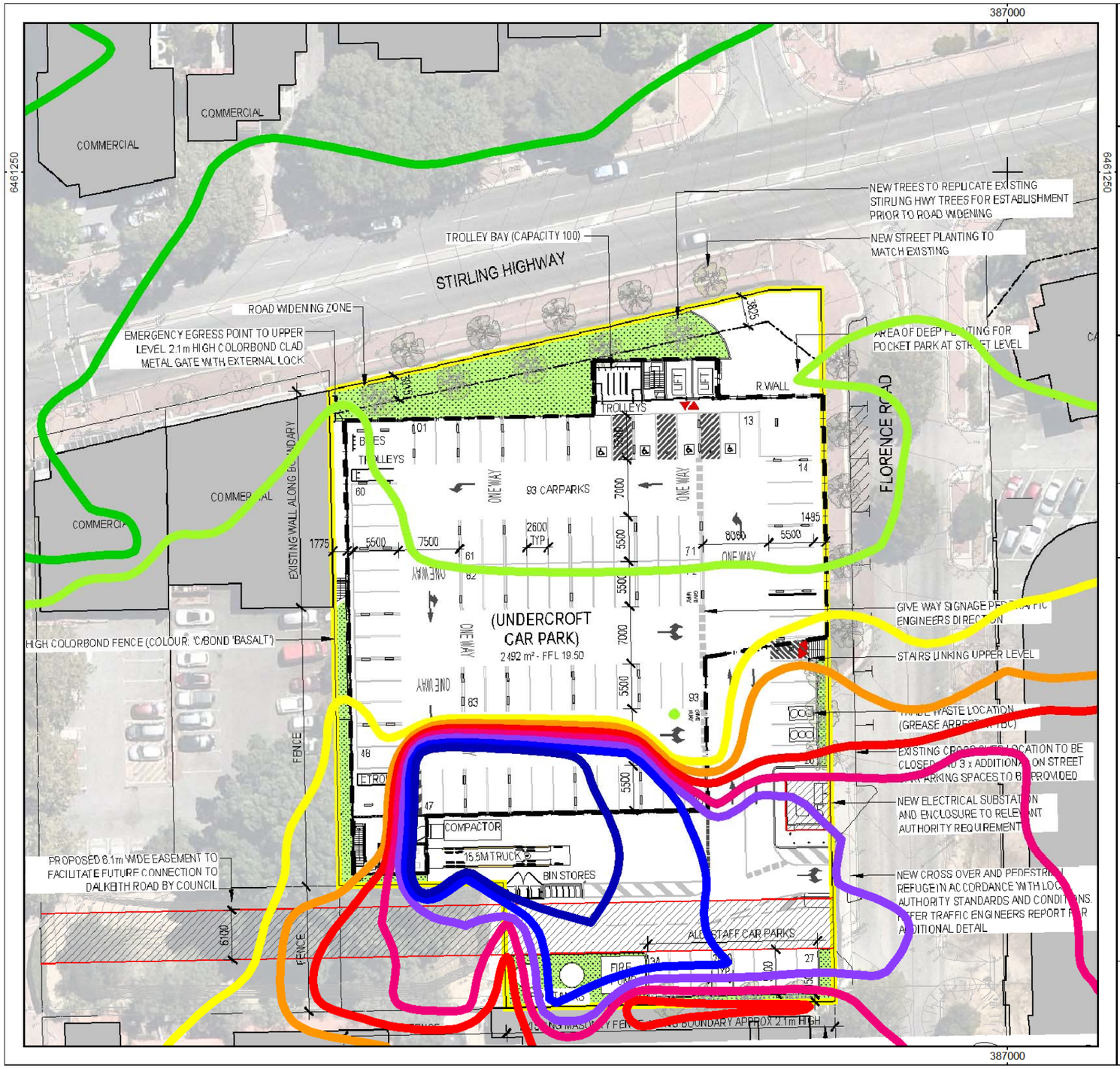
Received
18 November
2024

SoundPLANnoise 9.1 C:\DATA\ActiveProjectsGW\24324 - ALDI Nedlands Sept 2024\ALDI Nedlands - SP 91\MechPlant.sgs



Customer: ALDI
Project: ALDI Nedlands
Project-No. 24324

Map
2

Refrigerated Truck GNM
Result number 6
Calculation in 2 m above ground

Project engineer: George Watts
Created: 6/11/2024
Processed with SoundPLAN 9.1, Update 14/11/2024

Levels LA1
in dB(A)

= 20
= 25
= 30
= 35
= 40
= 45
= 50
= 55
= 60

0 4 8 16 24 32 m

N

HERRING STORER ACOUSTICS

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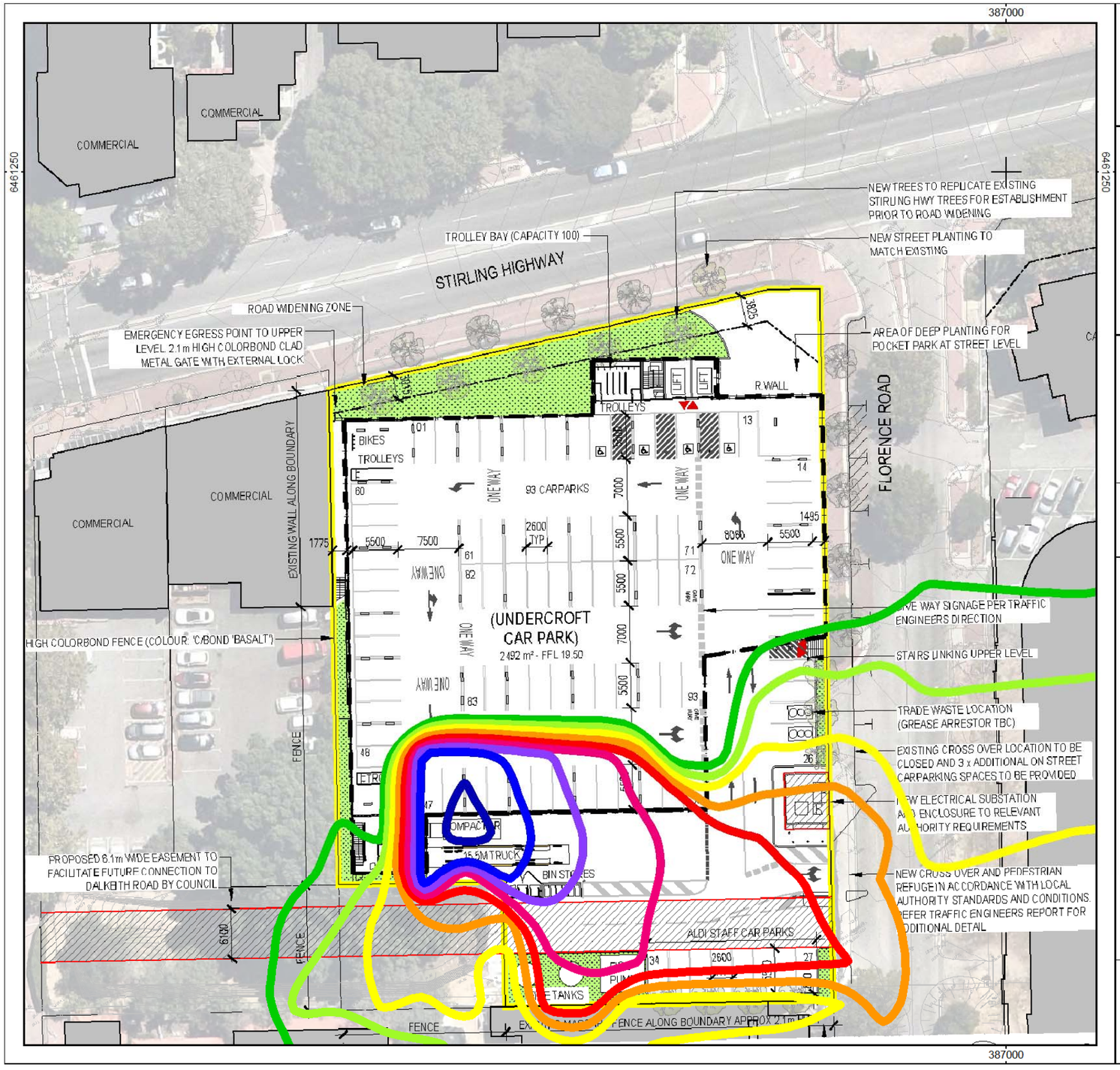
SoundPLANnoise 9.1 C:\DATA\ActiveProjectsGW\24324 - ALDI Nedlands Sept 2024\ALDI Nedlands - SP 91\RefrigTruck.sgs



Customer: ALDI
Project: ALDI Nedlands
Project-No. 24324

Map
3

Bakery Truck GNM
Result number 7
Calculation in 2 m above ground

Project engineer: George Watts
Created: 6/11/2024
Processed with SoundPLAN 9.1, Update 14/11/2024

Levels LA1
in dB(A)

- = 20
- = 25
- = 30
- = 35
- = 40
- = 45
- = 50
- = 55
- = 60

0 4 8 16 24 32 m

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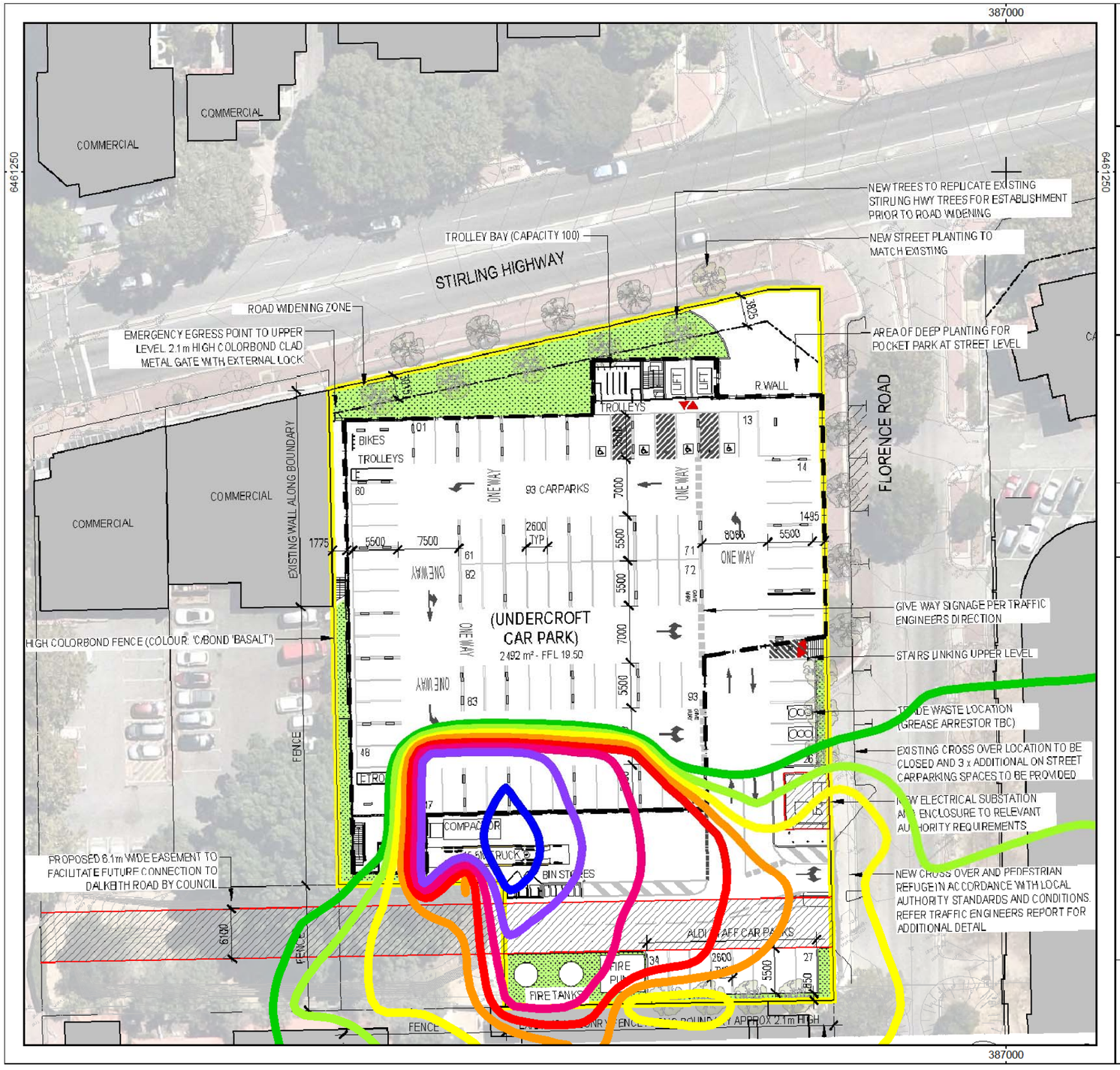
SoundPLANnoise 9.1 C:\DATA\ActiveProjectsGW\24324 - ALDI Nedlands Sept 2024\ALDI Nedlands - SP 91\BakeryTruck.sgs



Customer: ALDI
Project: ALDI Nedlands
Project-No. 24324

Map
4

Truck Refrigeration Unit Running Only GNM
Result number 9
Calculation in 2 m above ground

Project engineer: George Watts
Created: 15/11/2024
Processed with SoundPLAN 9.1, Update 14/11/2024

Levels L10
in dB(A)

- = 20
- = 25
- = 30
- = 35
- = 40
- = 45
- = 50
- = 55
- = 60

0 4 8 16 24 32 m

HERRING STORER ACOUSTICS

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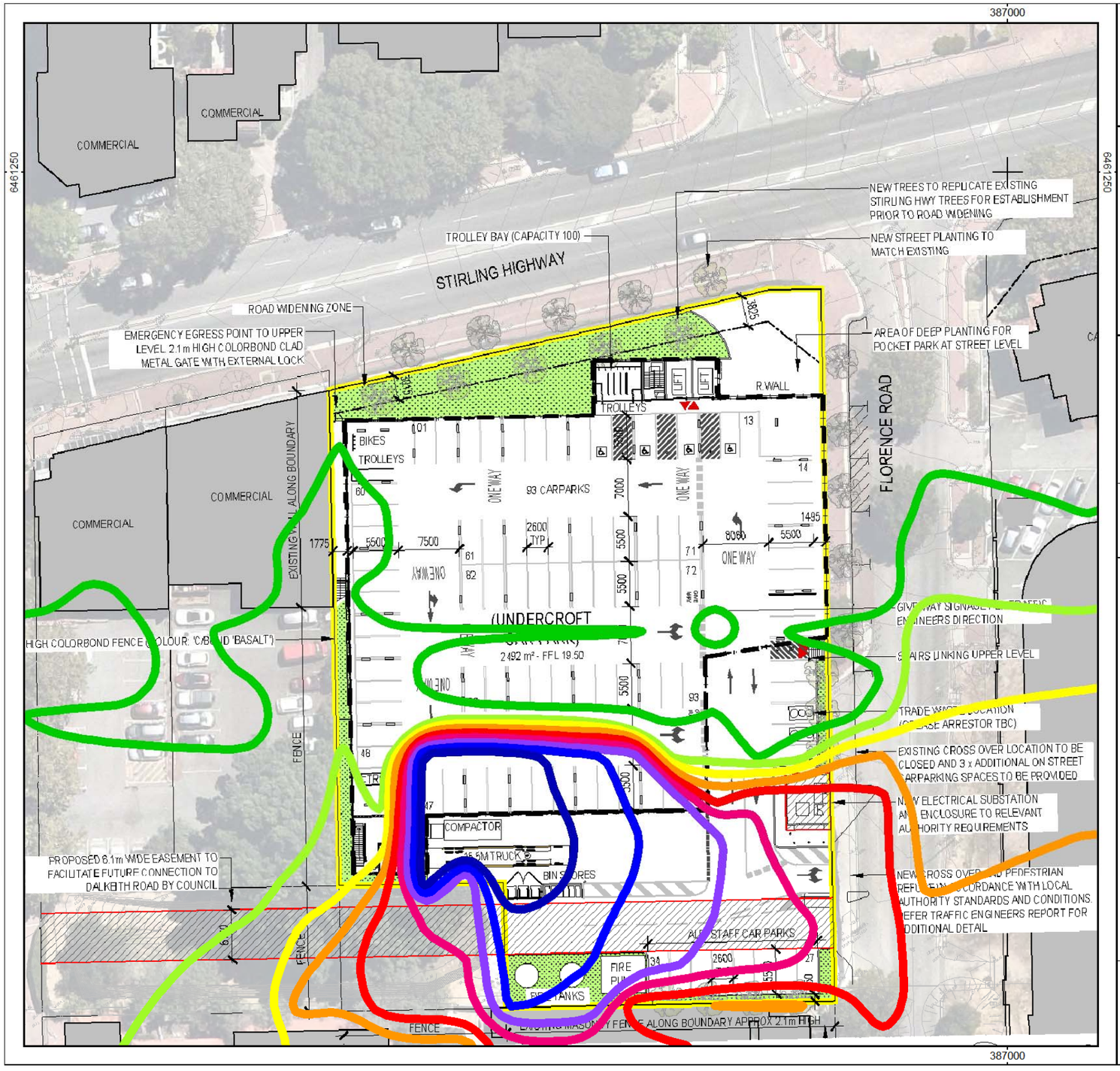
SoundPLANnoise 9.1 C:\DATA\ActiveProjectsGW\24324 - ALDI Nedlands Sept 2024\ALDI Nedlands - SP 91\RefrigPlantRunning.sgs



Customer: ALDI
Project: ALDI Nedlands
Project-No. 24324

Map
5

Broadband Reversing Alarm GNM
Result number 11
Calculation in 2 m above ground

Project engineer: George Watts
Created: 15/11/2024
Processed with SoundPLAN 9.1, Update 14/11/2024

Levels LA1
in dB(A)

- = 20
- = 25
- = 30
- = 35
- = 40
- = 45
- = 50
- = 55
- = 60

0 4 8 16 24 32 m

HERRING STORER ACOUSTICS

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SoundPLANnoise 9.1 C:\DATA\ActiveProjectsGW\24324 - ALDI Nedlands Sept 2024\ALDI Nedlands - SP 91\BroadbandReversingAlarm.sgs

APPENDIX C

TRUCK REFRIGERATION UNIT DATA

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THERMO KING

ADVANCER™ SPECTRUM

MASTERING MULTI-TEMP

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MULTI-TEMPERATURE REFRIGERATION SOLUTIONS
FOR TRAILERS

TRANE TECHNOLOGIES

CONTENT

THE MOST FLEXIBLE ADVANCER **P. 4**
Unlock the full potential of your fleet

TAILORED TEMPERATURE CONTROL **P. 6**
Two distinct cooling modes to optimise every journey

CONNECTED INTELLIGENCE **P. 8**
Keep an eye on your cargo, anytime, anywhere

COMPATIBLE POWER SOURCES **P. 9**
Futureproof your fleet

TECHNICAL SPECIFICATIONS **P. 10**
Details & zone plans

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Built from ambition

Advancer was built from ambition. Our ambition to push the boundaries of what was possible and your ambition to push your business to the next level.

ADVANCER IS A LANDMARK IN THE TRAILER REFRIGERATION LANDSCAPE

- Fastest pulldown on the market **to keep you moving**
- Fuel-efficiency never before seen **to keep your costs down**
- Unrivalled temperature control **to make sure you can deliver every load in perfect condition**

Ambition evolves

Introducing the Advancer A-500 Spectrum: thanks to its multi-temp configuration, you can unlock the full potential of your fleet.

COMPLETE CONTROL

All cargo is different and has different transport requirements. Multi-temp units allow your fleet to run as optimized and flexible as possible. Designed with your real-world applications in mind, Spectrum means you can deliver what you need to, no matter how varied the load. Single temp always, multi-temp whenever you need it.

The most flexible Advancer

Whatever you need, A-500 Spectrum can provide. A-500 Spectrum makes sure your box is used to its fullest capabilities. Whatever mix of cargo you need to transport, Spectrum makes sure it can all be shipped in a single trailer, so you can respond to peak-demands easily and quickly.

INVEST IN TOMORROW

A-500 Spectrum is not just any multi-temp unit.
It's our landmark Advancer unit, built for the future, to allow your fleet to access all parts of the supply chain. A-500 Spectrum, the greenest and most fuel efficient cooling unit on the market, fully compliant with today's regulations and prepared for whatever is yet to come.

COMPLETE TEMPERATURE CONTROL

Precise temperature control is your number one priority. It's ours too. The Advancer Spectrum features all the innovations of Advancer, plus a little more.

Bespoke multi-temp A-Series controller
allowing for superior temperature control across all zones

Temperature control tailored to your needs
Take an agile approach to cargo configuration, with two modes to match unit performance with your load's requirements

Fastest pulldown on the market
to get your trailer on the road as quickly as possible

CUT DOWN ON FUEL COSTS AND MAINTENANCE

Keep your costs down **with Advancer's proven fuel efficiency** and dramatically lowered service schedule.

- The controller lets you **keep track of your fuel consumption** and with the data also made available on our TracKing platform
- Up to **30% less overall servicing required**, thanks to fewer and better placed parts
- Up to **60% reduction in unscheduled servicing**

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Flexibility was our goal with Spectrum: giving you total control of your cargo and your fleet. To that end, Spectrum has two different cooling modes, each one fully tailored to you and your cargo's needs.

Tailored temperature control

TWO NEW REMOTE EVAPORATORS TO LEVEL UP YOUR REMOTE ZONES

EXPANDING EVER FURTHER WITH S3A & S6A

- Higher zone cooling capacity
- Faster pulldown
- More precise temperature management
- Superior system balance between zones

- **Continuous mode**
  Tight temperature control for sensitive cargo, such as pharma and fresh produce.
- **Cycle sentry mode**
  Maximum fuel saving for products that require less strict temperature control.

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Connected intelligence

Keep an eye on your unit while it's out on the road. With our Connected Solutions, you stay updated on every part of your unit. Track temperature, fuel usage and more in real-time, right from your desktop. Thanks to the two-way connectivity, you can respond to any challenges immediately and remotely change settings when needed.

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Compatible power sources

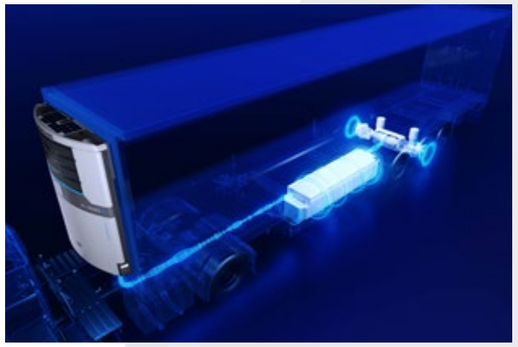
FULLY COMPATIBLE WITH

When we said Spectrum is future proof, we meant it. Spectrum is fully compatible with alternative power sources like **AxlePower** and **HybridDrive**. It helps you prepare your fleet for a more sustainable future, without compromising on cooling capacity or operational performance.

AXLEPOWER

POWERED BY THE ROAD

A smart power recovery system that lets you run your cooling unit with recaptured, zero-emission energy, generated by your vehicle's axle.



HYBRIDDRIVE

BEST OF BOTH WORLDS

A more sustainable, hybrid unit that seamlessly switches between diesel and electric, thanks to the combination of Thermo King's industry-leading cooling technology and FRIGOBLOCK's electric ingenuity.

Technical specifications

REFRIGERATION CAPACITY	
Capacity on engine power 0°C	18600
Capacity on engine power -20°C	10000
Capacity on electrical stand by 0°C	15400
Capacity on electrical stand by -20°C	7600
AIRFLOW	
Airflow volume @ 0 Pa static pressure - Default @ Pull Down:	5300
Airflow volume @ 0 Pa static pressure - Default @ Set Point:	3400
WEIGHT (INC BATTERY)	
Model Standard	840kg
ENGINE	
Maintenance Interval	3000 hrs
Number of cylinders	4
Displacement	2,1
ELECTRICAL STAND BY MOTOR	
Voltage / Phase / Frequency	400/3/50
	460/3/60
Rating	9.3 kW
SOUND PRESSURE LEVEL (STANDARD UNIT)	
High Speed Diesel	67 dB(A)
Electric Standby	64 dB(A)
GENERIC (BOXLENGTH, REFRIGERANT, ...)	
Boxlength	15 m
Refrigerant	R-452A
Controller	A-Series Controller
DIMENSIONS	
Host Unit Height	2270 mm
Host Unit Width	2076 mm
Host Unit Depth	440 mm
Evaporator S3A Width	1100 mm
Evaporator S3A Depth	1000 mm
Evaporator S3A Height	200 mm
REMOTE EVAPORATOR CAPACITY	
S3A 0/30°C	8900
S6A 0/30°C	14200

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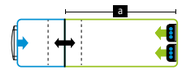
ZONE PLAN

2-ZONE ADJUSTABLE

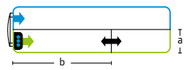
B

E



2-ZONE LANE

I



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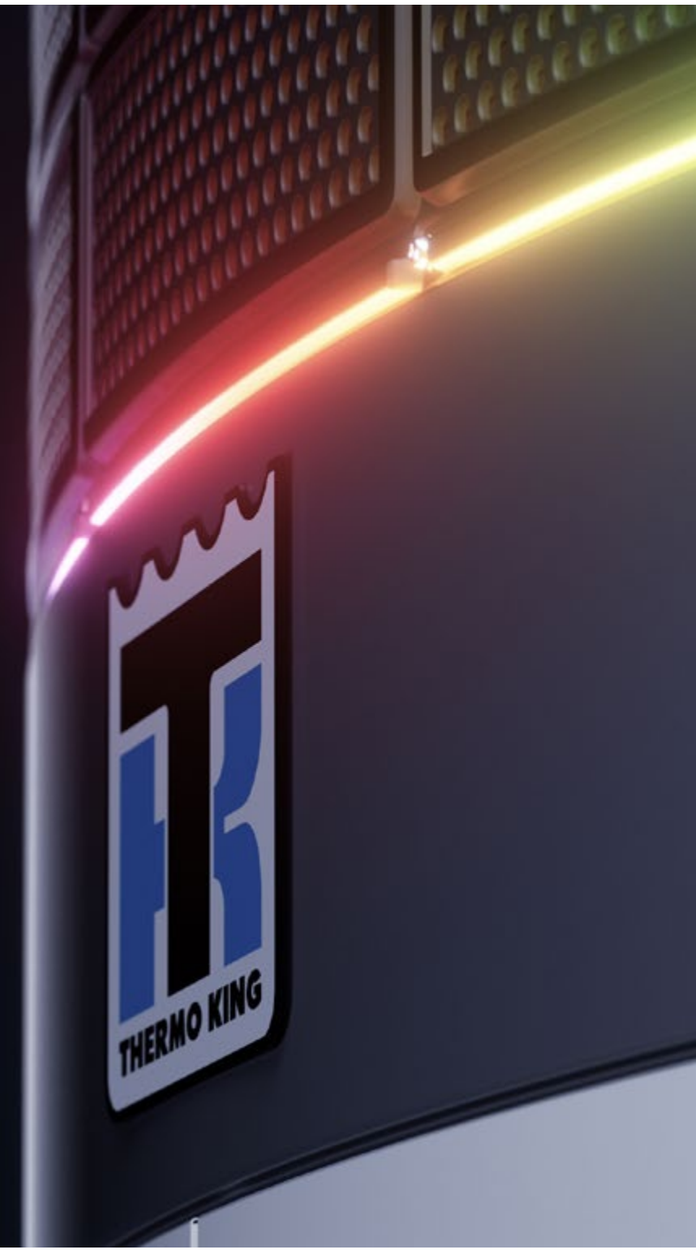

MASTERING MULTI-TEMP WITH **ADVANCER SPECTRUM**

- **Proven Advancer performance**
  Fastest pulldown on the market, unrivalled fuel-efficiency and exceptional temperature control
- **Unlock the full flexibility of your fleet**
  Easily adjust your vehicle usage to respond to changes in the market
- **Invest in tomorrow**
  Sustainable, power-agnostic multi-temp cooling that can access ULEZs
- **Capture unrivaled temperature control**
  Highest cooling capacity with added flexibility
- **Cut down on costs and maintenance**
  With unrivalled electrical & fuel efficiency and lower maintenance costs

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Thermo King – by Trane Technologies (NYSE: TT), a global climate innovator – is a worldwide leader in sustainable transport temperature control solutions. Thermo King has been providing transport temperature control solutions for a variety of applications, including trailers, truck bodies, buses, air, shipboard containers and railway cars since 1938.

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TRANE TECHNOLOGIES

Thermo King Europe – Lenneke Marelaan 6, B-1932 Sint-Stevens-Woluwe, Belgium
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EDISON
CONSULTANTS PTY LTD

BUILDING SERVICES ENGINEERS

ALDI NEDLANDS
CORNER OF STIRLING HIGHWAY & FLORENCE ROAD
NEDLANDS, WA 6009

Sustainable Management Plan

File: 4321/ESD
Issue: 1
Date: 18/11/2024

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Edison Consultants Pty Ltd ACN 144 644 806
261 Victoria Street Abbostford 3067 Australia **tel:** 03 9419 0855 **email:** mail@edisonconsultants.com.au

SUSTAINABLE MANAGEMENT PLAN

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7.3 NCC 2022 Wall-Glazing Calculator 29

Rev	Date	Description	By	Approved	Signature
1	18-11-2024	Initial Issue	PE		

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1 INTRODUCTION

1.1 Scope

Edison Consultants have been engaged by ALDI Foods Pty Ltd to provide advice in relation to environmentally sustainable development outcomes for the proposed retail development ALDI Nedlands at the corner of Stirling Highway and Florence Road, Nedlands, Western Australia.

This report contains a summary of:

- Environmental objectives adopted for the development
- Sustainable design initiatives integrated into the design of the project

Performance outcomes in this report are based on:

- Discussions and correspondence with:
  - Neilsen Architects – Architects
  - ALDI Foods – Client
  - Urbis - Town Planning
  - WSP - Traffic
  - Herring Storer Acoustics - Acoustic
  - Plan E - Landscape Design

#

- Architectural plans prepared by Neilsen Architects set out below:

Description	Drawing No	Revision	Date
Locality Plan	DA00.01	A	15.11.24
Title Plan	DA01.01	-	-
Existing & Demolition Site Plan	DA02.01	-	-
Proposed Site & Ground Floor Plan	DA02.02	A	15.11.24
Proposed Site & First Floor Plan	DA02.03	A	15.11.24
Proposed Roof Plan	DA02.04	A	15.11.24
Proposed Elevations	DA03.01	A	15.11.24
Proposed Elevations	DA03.02	A	15.11.24
Proposed Signage Plan	DA06.01	A	15.11.24
Signage Details	DA06.02	A	15.11.24
Proposed 3d Visual	DA08.01	A	15.11.24

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Render			
Proposed 3d Visual Render	DA08.02	A	15.11.24
Proposed 3d Visual Render	DA08.03	A	15.11.24

- Landscape plans prepared by Plan E Landscape Architects set out below:

Description	Drawing No	Revision	Date
Landscape Concept Plan – Site Plan & Car Park	C1.102	C	September 2024
Landscape Concept Plan – Upper Level	C1.103	C	September 2024
Landscape Concept Plan – Detail – Community 'Parklet'	C1.104	C	September 2024
Landscape Theme / Character	C1.105	C	September 2024
Planting Palette	C1.106	C	September 2024

- Traffic Impact Assessment rev C dated 19.09.2024 prepared by WSP
- Environmental Acoustic Assessment ref 33352-2-24324 prepared by Herring Storer Acoustics

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2 SITE DESCRIPTION

2.1 Site Information

The proposed development is summarised below:

Municipality:	City of Nedlands
Site Address:	Corner of Stirling Highway & Florence Road, Nedlands WA
Lot Number:	Lot 3 Plan 1747 Vol/Folio 1287/76 90 Stirling Highway Nedlands Lot 4 Plan 1747 Vol/Folio 1287/76 90 Stirling Highway Nedlands Lot 5 Plan 1747 Vol/Folio 1287/76 90 Stirling Highway Nedlands
Total Site area:	4,438m2
Gross Building Area:	2,744m^2

The site is located in Nedlands, Western Australia which is located approximately 7km from Perth CBD and is located within the City of Nedlands local government area.

The land is currently developed. The proposed Retail Development is a direct response to the City of Nedlands 'Our Plan for the Future' Council Plan 2023 – 33 and addresses councils aspiration of:

9.1 Revitalise commercial areas to retain, support and attract businesses.

Subject Site and its Environs (source: Google Maps)

2.2 Building Information

The proposed development comprises of the ALDI Store with a total gross area of 1,512m^2 and retail area of 1,099m^2 and six (6) off retail tenancies with a total area of 783m^2. Also provided is onsite car parking for a total of 94 vehicles and bicycle parking for 8 bikes.

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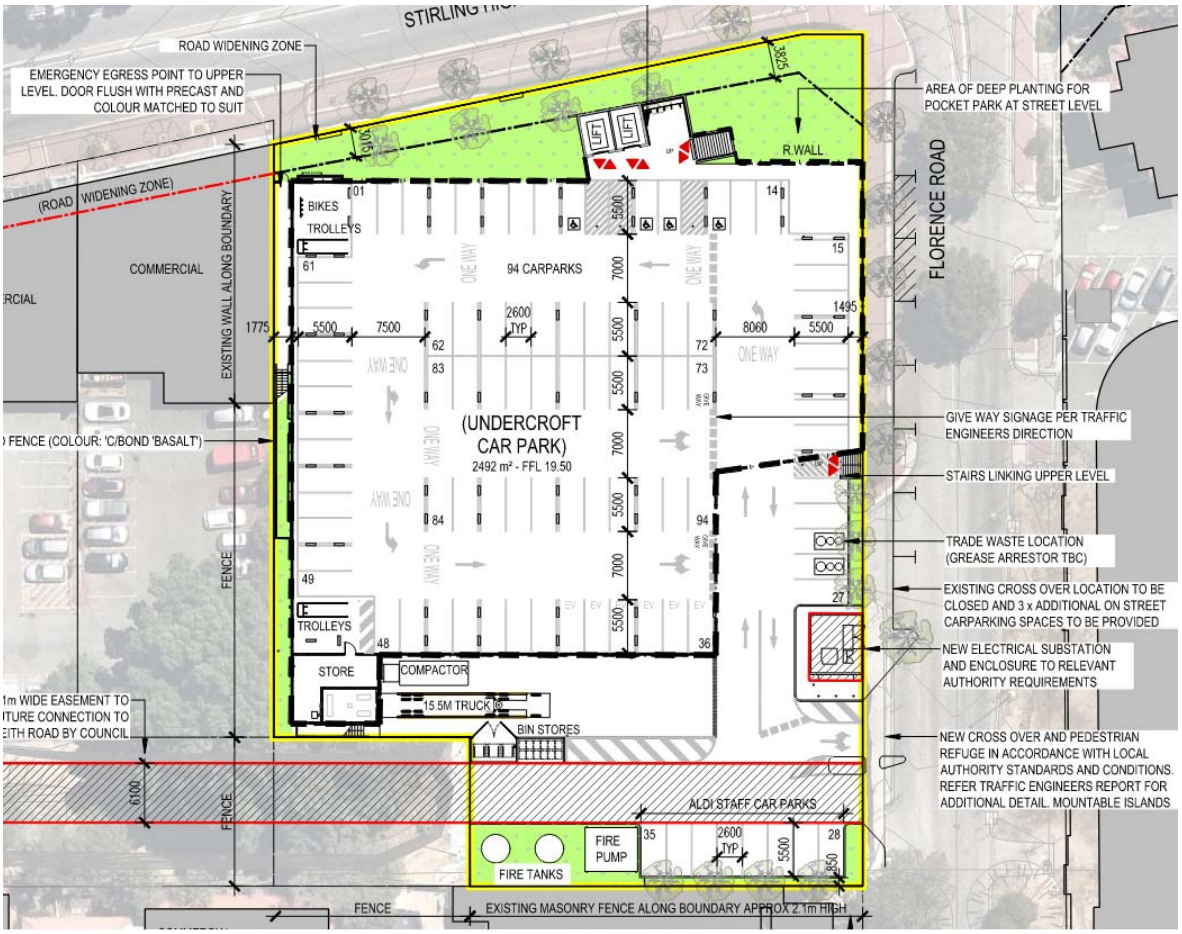

Proposed Undercroft Car Park (source: Nielsen Architects)

3 PLANNING REQUIREMENTS

3.1 City of Nedlands – LPP 1.3 Sustainable Design - Residential

The City of Nedlands is committed to achieving high sustainability standards in new developments. Critical to achieving this commitment is for developments to incorporate appropriate environmentally sustainable design standards.

However, the City of Nedlands has no clear ESD policy regarding mixed use developments as per ALDI Nedlands, but does has have – LPP 1.3 Sustainable Design – Residential as a guideline. However, this only applies to "new development where it includes single houses, grouped dwellings, and/or multiple dwellings" but we are using this tool to show compliance with the City of Nedlands expectations that this project should achieve best practice in environmentally sustainable development.

To comply with the City's Planning Scheme including – LPP 1.3 Sustainable Design - Residential, this project is required to satisfy the following objectives:

4.1 To ensure that new development is constructed and functions in an environmentally sustainable manner, with a focus on minimizing environmental impact, maximising resource efficiency and reducing or eliminating reliance on non-renewable energy without undue detrimental impact on the amenity of the locality.

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4.2 To require design features that assist in reducing the urban heat island effect, provide alternate forms of transportation, and positively impact occupant health.

3.2 Project Specific Requirements

This assessment has been prepared in response to LPP 1.3 Sustainable Design – Residential and addresses the Table 1 Sustainability Criteria for all Types of Developments noted "All development", "Development with a non-residential component" and "Non-residential".

Please note that as the proposed project budget is less than $15 million we are not targeting 5 star Green Star.

Exhaust of Pollutants

Provide ducted exhaust for all kitchens, laundries and toilets to the outside of the building. No recirculating hoods to be used.

Toxicity and Indoor Environment

Select products for internal finishes with low volatile organic compounds (VOC) and formaldehyde ratings.

Urban Heat Island

Utilise light finishes, incorporate landscape within the design, and avoid unshaded parking areas.

Energy Source

Avoid any fossil fuel use on site.

Water Use

Utilise low flow taps, toilets and showers for all sanitary tapware (kitchen sinks and laundries are excluded).

Irrigation Efficiency

Waterwise landscaping to be implemented, including:

a) Avoiding large areas of turf.

b) Using sub-soil drip irrigation for all planting requiring irrigation.

c) Providing automatic moisture sensing for irrigation control.

d) Diverting rainfall to irrigate any planting in rain shadows or under-cover.

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Active Living Support

Provide secure bike parking, showers and lockers for commercial staff on site.

Sustainable Transport – Infrastructure

Comply with NCC 2022 provisions for electric vehicle parking now.

Sustainable Transport – Car Share

Provide a vehicle and bay for ride share scheme.

The proposed development is targeting the items raised by the council as well as other items which we believe contribute to meeting the sustainability targets for this project.

- Improve the energy performance of buildings through siting and design measures that encourage:
    - Passive design responses that minimise the need for heating, cooling and lighting;
    - On-site renewable energy generation and storage technology
- Ensure the layout and design of development supports resource recovery, including separation, storage and collection of waste, mixed recycling, glass, organics and e-waste.
- Encourage use of recycled and reusable materials in building construction and undertake adaptive reuse of buildings, where practical.
- Encourage water efficiency.
- Minimise stormwater discharge through site layout and landscaping measures that support on-site infiltration and stormwater reuse.

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4 PROPOSED INITIATIVES

4.1 Overview

The project shall meet the following minimum criteria:

- Comply with the National Construction Code (NCC) 2022 Volume 1, Section J.
- Design the built form to maximise the performance of the building envelope by exceeding NCC minimum performance criteria
- Create a healthy environment, including reduction in the use of harmful VOCs in glues, sealants and paints, and protection from dust and other external airborne pollutants
- Minimise consumption of natural resources, including water and raw materials
- Minimise environmental impacts through construction, including embodied energy and the ecological cost of materials
- Minimise environmental impacts through operation, including energy consumption, waste creation and discharge of pollutants
- Provide sustainable, integrated, convenient travel options

To assist in understanding the sustainable initiatives for this project we have used the following categories to show compliance with councils planning requirements. The credits have been laid out in a Sustainable Management Plan (SMP) format as per SDAPP (Sustainable Design Assessment in the Planning Process) regulations.

- Management
- Potable Water Demand Reduction
- Indoor Environment Quality
- Energy Efficiency
- Stormwater Management
- Indoor Environment Quality
- Sustainable Transport
- Waste Management
- Urban Ecology

4.2 Management

Metering - Common Areas

To provide the development with information on energy and water consumption separate metering for central / common services for electricity and water will be provided.

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4.3 Potable Water Demand Reduction

Water in Australia is a critical resource and as such the ability of any project to not only harvest and store water onsite but also reduce demand with water efficient fixtures and fittings is essential for any forward-thinking development.

Listed below are a number of water efficiency solutions proposed for the development.

Water Efficient Fixtures and Fittings

Potable water demand shall be reduced within the development by using water efficient fixtures and fittings. The architectural specification shall nominate Water Efficient Labelling Scheme (WELS) rated fittings with the following minimum star ratings:

>= 4 Star WELS Toilets

>= 5 Star WELS Bathroom taps

>= 5 Star WELS Kitchen taps

>= 5 Star WELS Dishwashers

>= 4 star WELS (>=6.0 but <=7.5) Showerheads

No urinals are proposed for the development, and the WELS ratings above are only for fixtures included in the base building and ALDI development. Taps and fixtures installed as part of tenancy fitouts are not included in the calculations below for potable water reduction..

Landscape Irrigation

To assist in the reduction in water consumption for the development it is proposed to use a drip irrigation system. A drip irrigation system is considered the most efficient water and nutrient delivery system generally available.

Potable Water Reduction

Using the analysis of the proposed building design against a NCC 2022 DTS reference building, the proposed fixtures & fittings design is providing a 29% reduction in potable water consumption.

Reference	3858
Proposed (excluding rainwater and recycled water use)	2723
Proposed (including rainwater and recycled water use)	2723
% Reduction in Potable Water Consumption	29%
Performance	

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Building Systems Water Use Reduction

To assist in the reduction in water consumption for the development it is proposed that all HVAC air-conditioning systems will be air-cooled systems with no water based heat rejection systems proposed for the site.

Water Efficient Landscaping

To assist in the reduction in water consumption for the development the Landscape documentation is specifying native plants across the site which are either drought tolerant or drought tolerant once established so the water requirements for irrigation will decrease significantly after 1-2 years from completion of the proposed works.

4.4 Energy Efficiency

Energy and more specifically, energy efficiency and reductions in Greenhouse Gas Emissions, remains a key driver for sustainability.

This development has sought to include several sustainable initiatives designed in order to maximise the energy efficiency of the development. Energy efficiency initiatives proposed for inclusion within the development are outlined below:

Building Envelope

The building will be targeting performance of walls, roofs, windows and floor to meet or exceed NCC 2022 Part J4-5 requirements. Additionally, the standard ALDI design criteria for the roof and floor elements of the building will considerably exceed the minimum requirements under NCC 2022

The improvement in the building envelope performance will reduce energy loads for heating and cooling of the building and reduce the overall power demand for the site during its operation.

Shading is provided to the front entry, northern and eastern facades of the new building to reduce the heat loads into the building.

For the 6 tenancies it is proposed to provide DTS compliant walls and glazing to meet NCC 2022 requirements as per the attached wall glazing calculators.

Efficient HVAC Services

The design of the HVAC services for the project will include MEPS compliant air-cooled air conditioning systems for all buildings. To assist in minimizing the energy consumption for the HVAC systems, the air-conditioning systems fresh air is based on maintaining CO_2 targets within the ALDI store so that fresh air for the building is based on actual occupancy within the store. ALDI setpoint for CO_2 control is 800 Parts Per Millions which is considered the approximately equivalent of a 50% increase in fresh air over NCC and Australian Standard minimum airflows.

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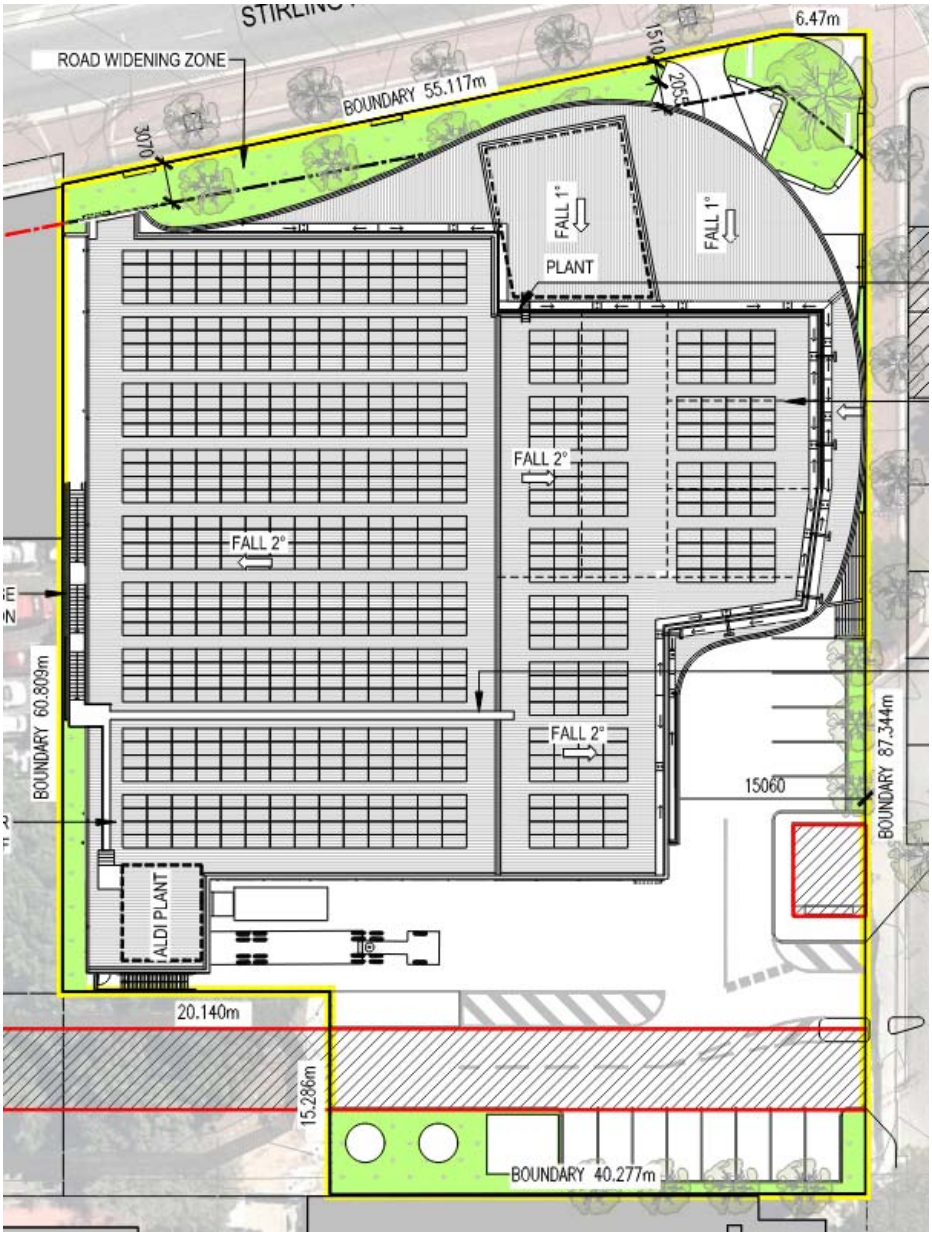
Renewable Energy

A 250kW solar Photo Voltaic (PV) system shall be installed on the roof of the development to reduce electrical demand and thereby reduce the overall impact of the local power infrastructure for the ALDI store.

Based on preliminary calculations the 250kW solar PV system should provide approximately 112% of the buildings energy consumption.

Solar Power - Energy Generation per year	291,557
% of Building's Energy	112%

Indicative layout of the solar panels shown below.



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Internal Lighting

It is proposed that 90% all lighting proposed will meet the maximum illumination power density (W/m^2) for the relevant building class requirements as per Table J7D3a of the NCC 2022 Vol 1.

Metering and Control

Electrical metering and sub-metering will be provided as part of the ALDI tenancy design and will be monitored by the Building Management System (BMS) for the ALDI store.

Fossil Fuels

The development is proposed to be an all-electric site with no gas connections to the development.

4.5 Stormwater Management

The project acknowledges that Council's guidelines recommend a project achieve Best Practice Water Sensitive Urban Design (WSUD) strategy.

A site-specific stormwater strategy and management plan will be developed for the site to accommodate a 1% AEP (Annual Exceedance Probability) rainfall event fully on site without any overflow into the road reserve or adjacent properties.

4.6 Indoor Environment Quality

Where practical, the design includes commitment to managing impacts to IEQ via façade design, passive thermal design response and hazardous materials management.

Façade Design

The building is designed with the entries and external glazed elements facing in a primarily North and Easterly direction but with canopies over. This allows for the storefront to have improved natural daylight entering the buildings with a reduction in solar load due to the awnings over and also a reduction in glare within the buildings.

To help achieve this result, glazing selection has been on achieving compliance with NCC 2022 Section J4-5 performance regarding U and SHGC values and also selecting glazing with a high visible light transmittance (VLT) to maximise daylight and thermal performance of the façade. An initial wall-glazing calculation has been completed for the building based on its location, orientation, building design and shading, and construction and glazing selections as per the ALDI generic G6 documentation. A copy of the preliminary Part J wall-glazing calculation is attached.

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Passive Thermal Design

The building design criteria will exceed the minimum performance criteria specified under the NCC 2022 requirements for the building fabric.

The proposed building will exceed minimum wall and glazing performance as specified under NCC 2022 Part J4-5. The standard construction of the floor and roof in the building will be a minimum 10% improvement over minimum NCC requirements.

The building is effectively shaded as follows for the proposed East, North and West glazing:

Class 6 (retail) 81% effectively shaded

The shading effectiveness is based on the depth of the external shading to glazing on these facades exceeding 25% of the height from the bottom of the glazing elements to the underside of the external shading. As the external glazing heights to the underside of the canopies are 3.4m the depth of the external shading needs to be a minimum of 0.85m. Please refer to the shading sketch in the Appendices for details on shading coverage.

Fresh Air Ventilation

To minimize energy consumption for the building, ALDI stores use CO2 sensors located on the selling floor to adjust fresh air levels within the building to ensure that fresh air levels are based on the occupancy within the building. ALDI maintains a CO2 level of 800 PPM CO_2 which equates to approximately a 50% increase in fresh air over NCC and Australian Standard minimums.

Exhaust of Pollutants

Ducted exhaust for all kitchens, laundries and toilets to the outside of the building will be provided and no recirculating hoods will be used.

Air Quality – Non-Residential

All paints, sealants and adhesives to be low VOC (Volatile Organic Compounds) to meet GBCA (Green Building Council of Australia) Green Star requirements and not contain Teflon.

All carpets to be low VOC (Volatile Organic Compounds) to meet GBCA (Green Building Council of Australia) Green Star requirements and not contain Teflon.

All engineered wood to meet maximum total indoor pollutant emission limits.

The reduction in VOC's within the building is to reduce off-gassing within the building and issues such as "sick Building syndrome" by improvement in the Indoor Air Quality of the building.

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Paints, Adhesives, Sealants, and Carpets

At least 95% of internally applied paints, adhesives, sealants (by volume) and carpets (by area) must meet stipulated 'Total Volatile Organic Compounds (TVOC) Limits' below.

Compliance can be demonstrated in the following ways:

- The product(s) are certified under a Recognised Product Certification Scheme listed in the 'Exposure to Toxins Product Certifications Schemes Index'. The certificate must be current at the time of purchase
- The product(s) are tested in a laboratory
- There are no paints, adhesives, sealants, and carpets in the building at practical completion

Total VOC limits

Paints, Adhesives and Sealants

Product category	Max. Total Volatile Organic Compounds (TVOC) content in grams per litre (g/L) of ready to use product
General purpose adhesives and sealants	50
Interior wall and ceiling paint, all sheen levels	16
Trim, varnishes, and wood stains	75
Primers, sealers, and prep coats	65
One and two pack performance coatings for floors	140
Acoustic sealants, architectural sealant, waterproofing membranes and sealant, fire retardant sealants and adhesives	250
Structural glazing adhesive, wood flooring and laminate adhesives and sealants	100

Carpets

Compliance option	Test protocol	Limit
ASTM D5116	ASTM D5116 - Total VOC limit*	limit* 0.5mg/m^2 per hour
	ASTM D5116 - 4-PC (4-Phenylcyclohexene) *	0.05mg/m^2 per hour
ISO 16000 / EN 13419	ISO 16000 / EN 13419 - TVOC at three days	0.5 mg/m^2 per hour
ISO 10580 / ISO/TC 219 (Document N238)	ISO 10580 / ISO/TC 219 (Document N238) - TVOC at 24 hours	0.5mg/m^2 per hour

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Engineered Wood Products

Either no new engineered wood products are used in the building, or at least 95% (by area) of all engineered wood products meet specified formaldehyde emission limits, as per the following page.

Where there are engineered wood products, compliance to emission limits can be demonstrated in two ways:

- The product(s) are certified under a recognised Product Certification Scheme. The certificate must be current at the time of purchase
- The product(s) are tested in a laboratory.

Formwork, car parking applications, and non-engineered wood products (such as milled timber) are excluded from the credit.

Test protocol	Emissions Limit / Unit of Measurement
AS/NZS 2269:2004, testing procedure AS/NZS 2098.11:2005 method 10 for Plywood	≤1mg/L
AS/NZS 1859.1:2004 - Particle Board, with use of testing procedure AS/NZS 4266.16:2004 method 16	≤1.5 mg/L
AS/NZS 1859.2:2004 - MDF, with use of testing procedure AS/NZS 4266.16:2004 method 16	≤1mg/L
AS/NZS 4357.4 - Laminated Veneer Lumber (LVL)	≤1mg/L
Japanese Agricultural Standard MAFF Notification No.701 Appendix Clause 3 (11) - LVL	≤1mg/L
JIS A 5908:2003- Particle Board and Plywood, with use of testing procedure JIS A 1460	≤1mg/L
JIS A 5905:2003 - MDF, with use of testing procedure JIS A 1460	≤1mg/L
JIS A1901 (not applicable to Plywood, applicable to high pressure laminates and compact laminates)	≤0.1 mg/m²hr*

Test protocol	Emissions Limit / Unit of Measurement
ASTM D5116 (applicable to high pressure laminates and compact laminates)	≤0.1 mg/m²hr
ISO 16000 part 9, 10 and 11 (also known as EN 13419), applicable to high pressure laminates and compact laminates	≤0.1 mg/m²hr (at 3 days)
ASTM D6007	≤0.12mg/m³**
ASTM E1333	≤0.12mg/m³***
EN 717-1 (also known as DIN EN 717-1)	≤0.12mg/m
EN 717-2 (also known as DIN EN 717-2)	≤3.5mg/m²hr

** The test report must confirm that the conditions of Table above comply for the particular wood product type, the final results must be presented in EN 717-1 equivalent (as presented in the table) using the correlation ratio of 0.98.

*** The final results must be presented in EN 717-1 equivalent (as presented in the table), using the correlation ratio of 0.98.

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Daylight Access

Based on Daylight calculations as per the Green Star Daylight Hand and Views Calculation Guide the building has the following percentage of the regularly used floor area with greater than 2% daylight.

Class 6 (retail) 28% with greater than 2% daylight

Calculations for the refurbishment have been undertaken in accordance with Green Star Daylight and Views Hand Calculation Guide.

This guide provides a hand calculation methodology for identifying areas within buildings which have high levels of daylight. To use the daylight hand calculation method the project must meet the following requirements:

- *The project must not overshadowed, in accordance with the overshadowing requirements outlined in section 2.1 of this guide;*

  And

- *The building glazing must have a visual light transmittance (VLT) of equal to or greater than 40% as outline in section 2.2 of this guide.*

  The foundation for this method of hand calculation is taken from the DETR Good Practice Guide 245, Desktop guide to daylighting - for architects.

  For this hand calculation method the glazing must have a visible light transmittance equal to, or greater than, 40%.

  The zone of compliance is an area (in the horizontal plane) that is the width of the window by a depth which is twice the height of the window head above desktop/table top level as illustrated in the Figure 2 below.

  $Depth\ of\ the\ Zone\ of\ Compliance = h \times 2$

  $'w'width\ of\ the\ Zone\ of\ Compliance = Width\ of\ the\ glazing$

  $Zone\ of\ Compliance = h \times 2 \times w$

  Additional Notes:

- *When plotting the depth of the Zone of Compliance the zone may not be drawn past permanent solid or glazed partitions.*
- *Any column or mullion < 0.5m in width can be disregarded and the glazing can be considered to be continuous in width.*
- *For the purposes of this hand calculation desktop/table top level is set at 700mm AFFL for all rating tools.*

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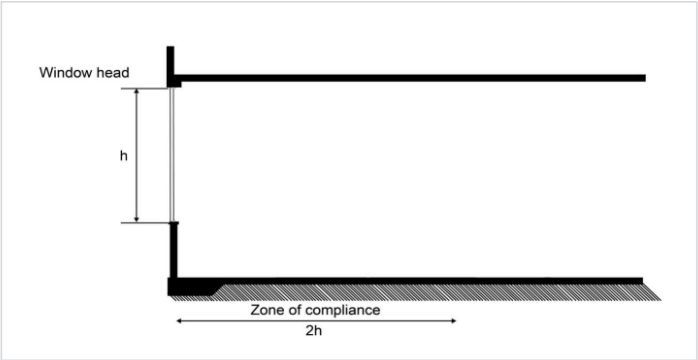
Figure 2: Dimensions for calculating the zone of compliance.



4.7 Sustainable Transport

As part of the sustainable developments for the site the following works are proposed for the site.

Cyclist Facilities

As part of the site development and to promote bicycle transport to the site it is proposed to provide eight (8) bicycle parking for the site. Also provided is one (1) shower and twenty lockers located within the ALDI tenancy which achieves compliance with councils aspirations of cyclist facilities for the ALDI store.

Electric Vehicle Charging

It is proposed to provide a minimum of six (6) electrical vehicle charging points for the development.

4.8 Waste Management

As part of the operation of the site the following specific waste streams have been identified as well as general waste and space for separation of the streams will be included onsite:

- General Waste
- Recycling Waste (Empty pallets, bottle trays, milk dollies, produce baskets and some plastic)
- Cardboard & Paper

4.9 Urban Ecology

Ecological Value

The ecological value of the site will not be any further diminished than is currently onsite.

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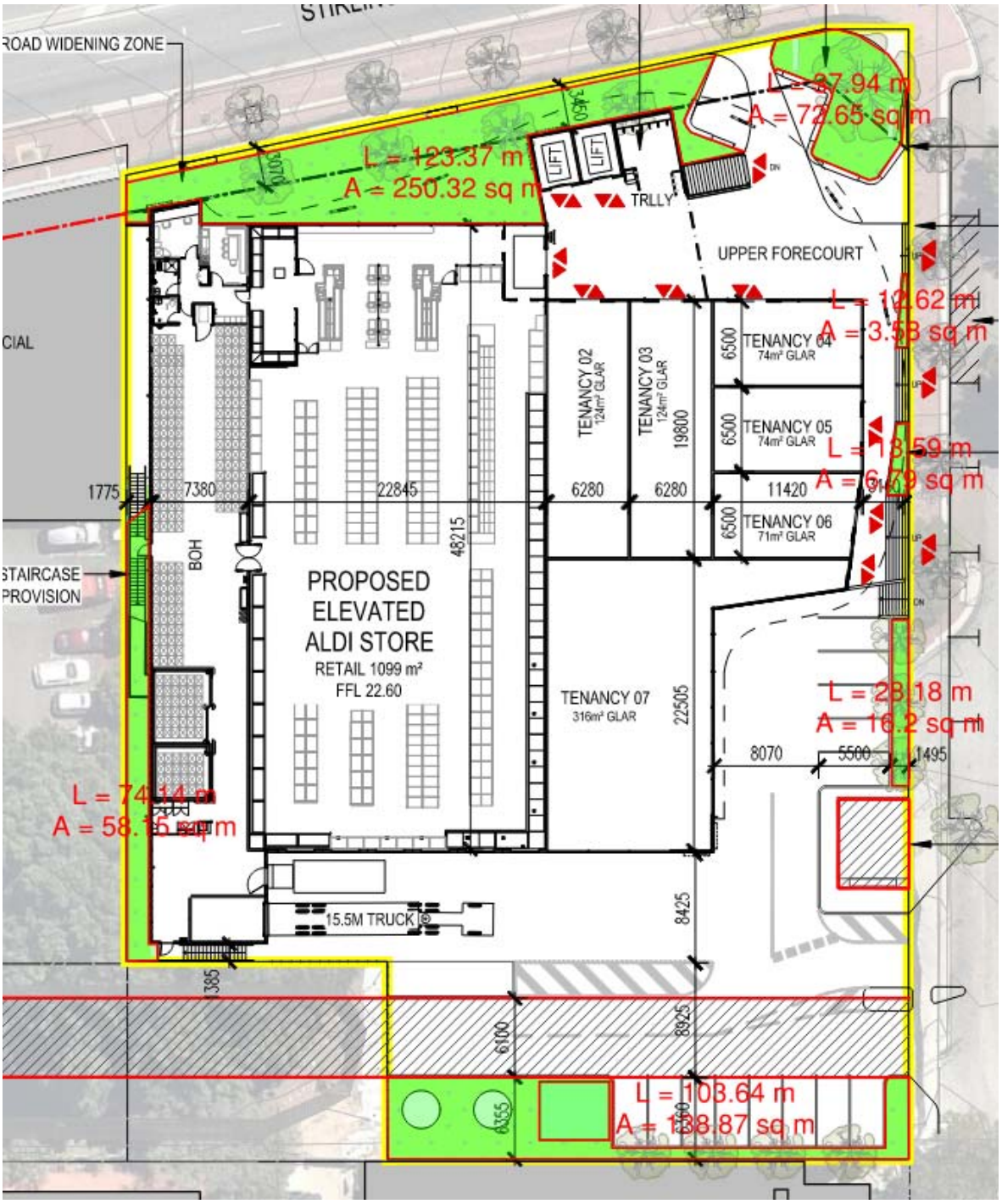
Vegetation Coverage

The development includes selection of native plant species and planter landscape in order to suit local ecology and reduce potable water demands and the site is proposing 11% vegetation over the entire site.



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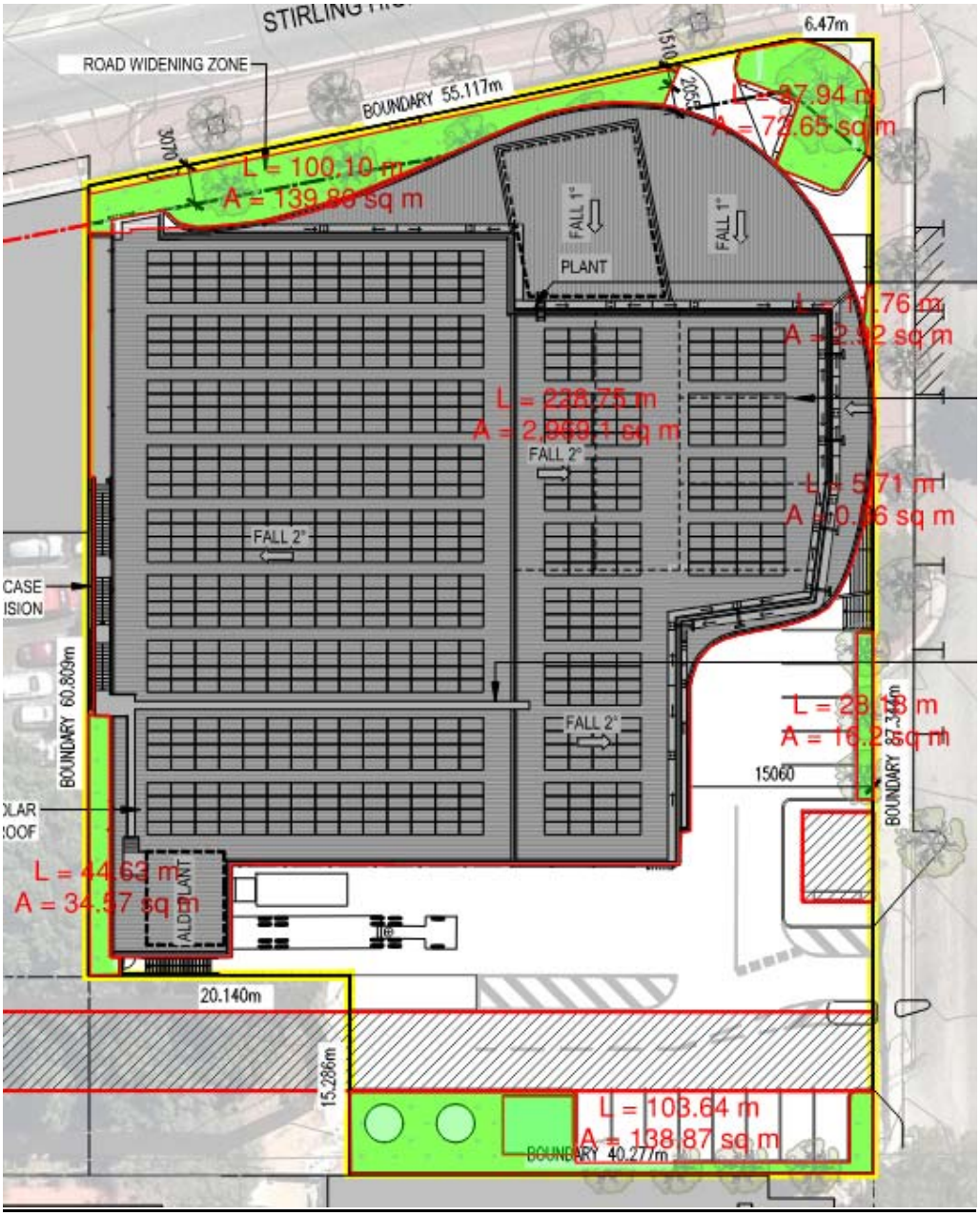
Urban Heat Island

To assist in the reduction of heat island effect 76% of the site is either landscaping, flat roof painted surfmist with a solar reflectivity index of 81 and solar PV panels.



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5 SUMMARY

This report sets out a range of sustainable design features, which are integrated into the design and specification of the proposed development, in order to improve environmental outcomes during occupation.

In terms of performance outcomes, the analysis presented in this report demonstrates that, based on the combination of design features and services initiatives documented, the proposed development addresses the items raised the City of Nedlands response and demonstrates that a holistic ESD review has been undertaken during this project's design development stage.

Accordingly, the sustainable design outcomes from the proposed development are considered to be consistent with the ESD objectives of the City of Nedlands Planning Policies for a development of this scale and type.

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6 RESPONSIBILITY MATRIX

The matrix below provides a format showing the responsibility for each item proposed as part of the SMP response and how these initiatives will be maintained over time.

6.1 Management

	Implementation	Ongoing Management	Maintenance	Monitoring
Metering	Services engineers to document, Builder to install as per documentation.	Tenant	Tenant	ALDI
Daylight	Architect to document, Builder to install as per documentation.	Tenant	Tenant	No monitoring required.

6.1 Water Efficiency

	Implementation	Ongoing Management	Maintenance	Monitoring
WELS Rated Fittings	Architect to document, Builder to install as per documentation.	Tenant to ensure the WELS rating are maintained in the development	Tenant	No monitoring required.
Landscape Irrigation	Landscape architect to document, Builder to install as per documentation.	Tenant to ensure the operation is maintained in the development	Tenant	Tenant
Water Efficient Landscaping	Landscape architect to document, Builder to install as per documentation.	Tenant to ensure the plant selection are maintained in the development	Tenant	Tenant

6.2 Energy Efficiency

	Implementation	Ongoing Management	Maintenance	Monitoring
Lighting	Builder to document and install as per AS	Tenant to ensure that all new lighting is	Tenant	Tenant

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	1680	designed to AS 1680		
Windows and shading to Building	Architect to document, Builder to install as per documentation.	No ongoing management required	Tenant	No monitoring required.
Building Insulation	Architect to document, Builder to install as per documentation.	No ongoing management required	Tenant	As part of maintenance works Tenant to ensure that insulation meets documentation.
Door & Window Seals	Architect to document, Builder to install as per documentation.	No ongoing management required	Tenant	Tenant to monitor condition of seals
High Performance Windows	Architect to document, Builder to install as per documentation.	No ongoing management required	Tenant	Tenant to ensure that any new glazing does not compromise the performance of the existing.
HVAC Systems	Mechanical engineer to document, Builder to install as per documentation.	Tenant to ensure that the HVAC design criteria is maintained.	Tenant	Tenant to ensure that any new HVAC works does not compromise the performance of the existing systems.
Photo Voltaic System	ALDI to document and install as proposed.	ALDI to ensure that the ongoing system meets the design capacity.	ALDI	ALDI
Metering	Services engineers to document, Builder to install as per documentation.	ALDI to ensure that the metering design is maintained.	ALDI	ALDI to ensure that any new works does not compromise the performance of the existing systems.

6.3 Stormwater Management

	Implementation	Ongoing Management	Maintenance	Monitoring
Stormwater Works	Builder to document and install as per	Tenant to ensure documented works are	Tenant	Tenant to ensure documented works are

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	documentation.	maintained in the development		maintained in the development
Site Permeability	Architects to document. Builder to install as per documentation	No ongoing management required	Tenant	As part of maintenance works, the tenant's landscaping / permeability is maintained.

6.4 Indoor Environmental Quality

	Implementation	Ongoing Management	Maintenance	Monitoring
Heat Island	Architect to document, Builder to install as per documentation.	Tenant	Tenant	No monitoring required.
Shading	Architect to document, Builder to install as per documentation.	Tenant	Tenant	No monitoring required.
Fresh Air	Mechanical engineer to document, Builder to install as per documentation.	Tenant	Tenant	Tenant
Low VOC	Architect to document, Builder to install as per documentation.	Tenant	Tenant	No monitoring required.
Daylight	Architect to document, Builder to install as per documentation.	Tenant	Tenant	No monitoring required.

6.5 Transport

	Implementation	Ongoing Management	Maintenance	Monitoring
Cyclist Facilities	As per traffic report. Architect to document and Builder to install.	Tenant	Tenant	Tenant
Electric Vehicle Charging	Electrical engineer to	Tenant	Tenant	Tenant

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	document, Builder to install as per documentation.			

6.6 Waste Management

	Implementation	Ongoing Management	Maintenance	Monitoring
Waste Management During Operation	As per Waste Management Report. Tenant to implement	Tenant	No maintenance required	Tenant

6.7 Urban Ecology

	Implementation	Ongoing Management	Maintenance	Monitoring
Landscaping	Architects to document. Builder to install as per documentation	Tenant to maintain landscaping as per landscape design.	Tenant	Tenant to ensure that the landscape maintains the intent of the original design.
Tap and Drainage	Builder to document and install as per documentation	Tenant	Tenant	Tenant

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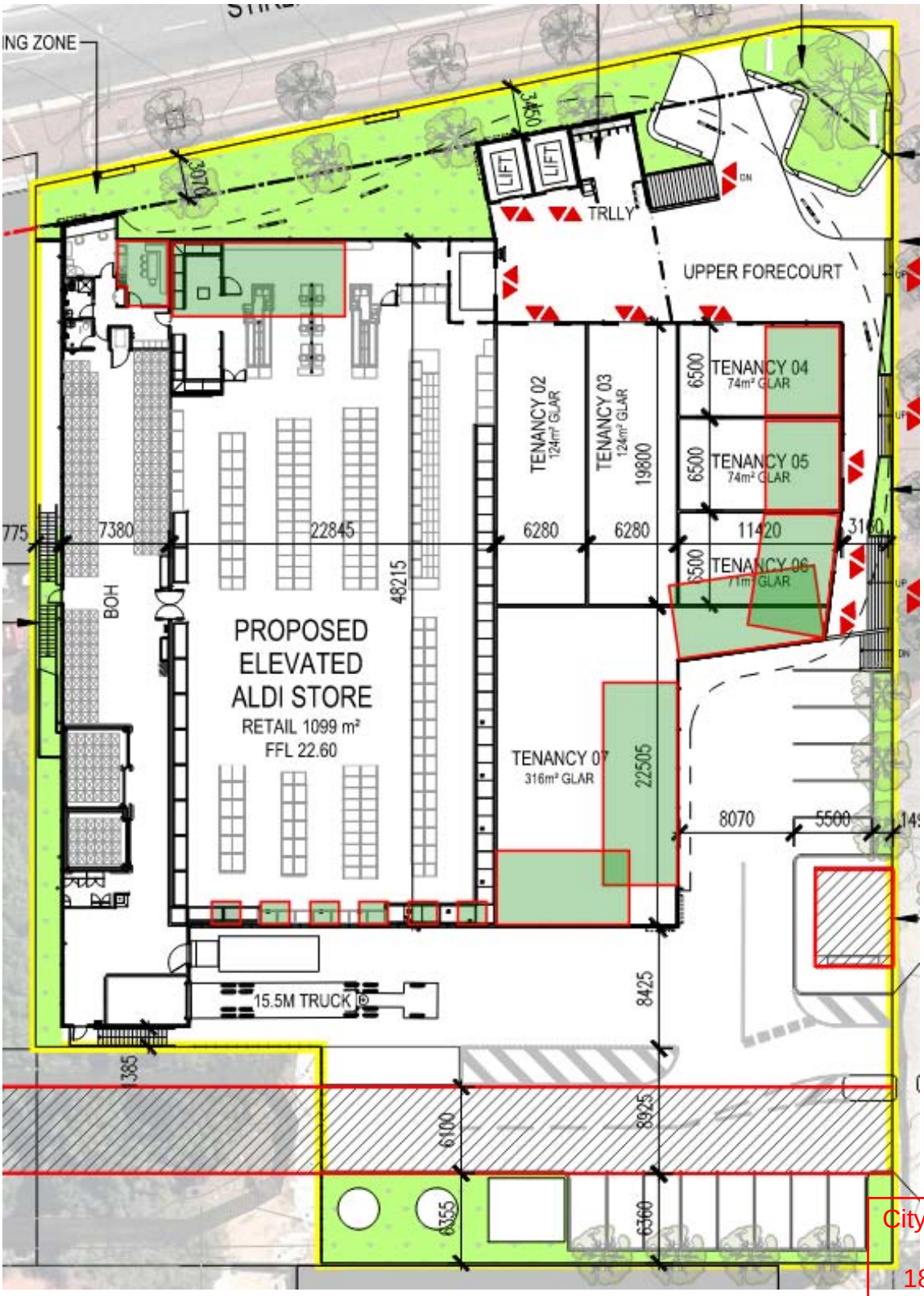
7 APPENDIX

7.1 Daylight Penetration Sketch



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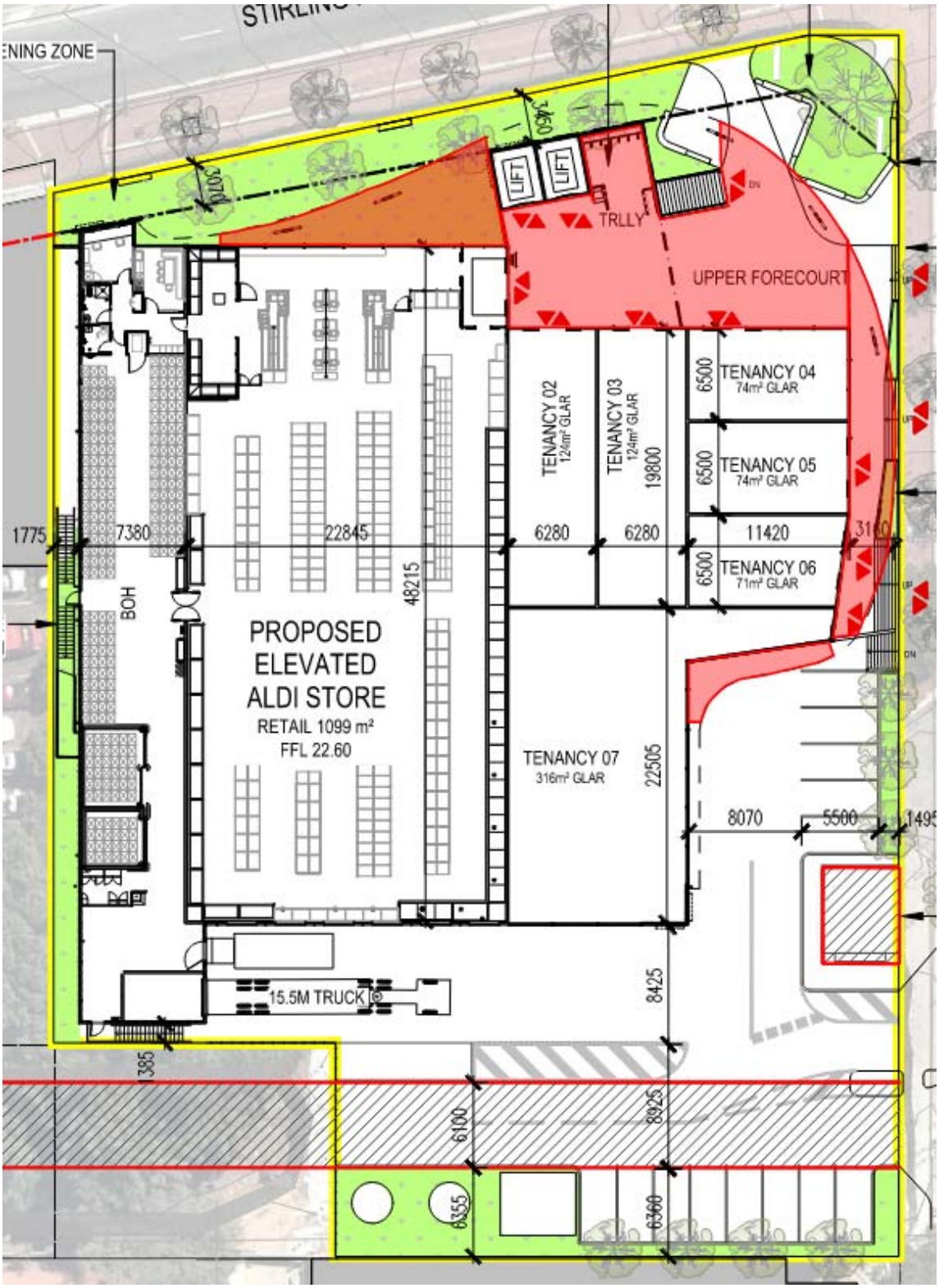
7.2 Effective Shading Sketch



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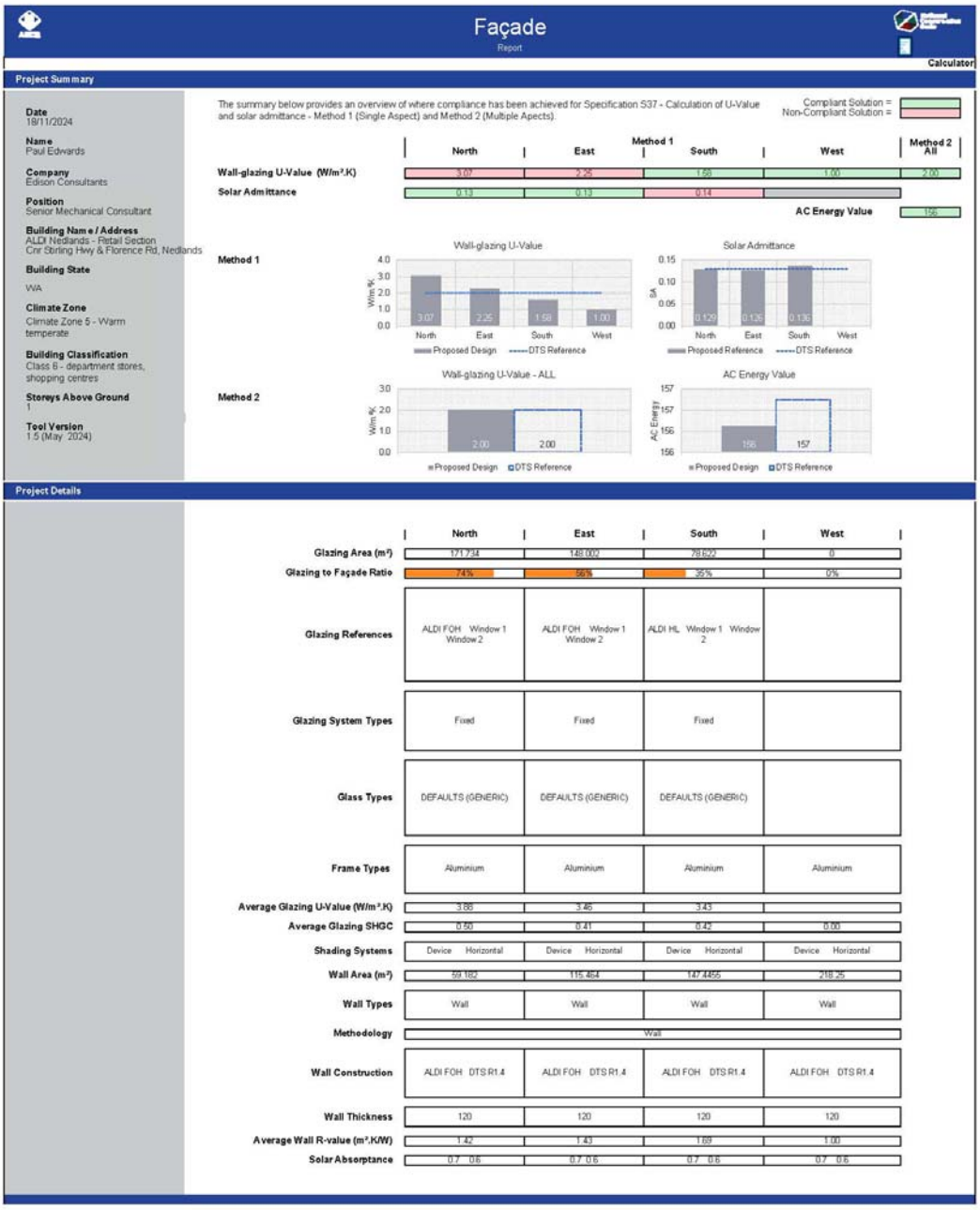
7.3 NCC 2022 Wall-Glazing Calculator



Façade

Report

Calculator

Project Summary

Date
18/11/2024

Name
Paul Edwards

Company
Edison Consultants

Position
Senior Mechanical Consultant

Building Name / Address
ALDI Nedlands - Retail Section
Cnr Stirling Hwy & Florence Rd, Nedlands

Building State
WA

Climate Zone
Climate Zone 5 - Warm temperate

Building Classification
Class 6 - department stores, shopping centres

Storeys Above Ground
1

Tool Version
1.5 (May 2024)

The summary below provides an overview of where compliance has been achieved for Specification S37 - Calculation of U-Value and solar admittance - Method 1 (Single Aspect) and Method 2 (Multiple Apects).

Compliant Solution =
Non-Compliant Solution =

	Method 1 North	East	South	West	Method 2 All
Wall-glazing U-Value (W/m².K)	3.07	2.25	1.58	1.00	2.00
Solar Admittance	0.13	0.13	0.14		
AC Energy Value					156

Method 1

Method 2

Project Details

	North	East	South	West
Glazing Area (m²)	171.734	148.002	78.622	0
Glazing to Façade Ratio	74%	56%	35%	0%
Glazing References	ALDI FOH Window 1 Window 2	ALDI FOH Window 1 Window 2	ALDI HL Window 1 Window 2	
Glazing System Types	Fixed	Fixed	Fixed	
Glass Types	DEFAULTS (GENERIC)	DEFAULTS (GENERIC)	DEFAULTS (GENERIC)	
Frame Types	Aluminium	Aluminium	Aluminium	Aluminium
Average Glazing U-Value (W/m².K)	3.88	3.46	3.43	
Average Glazing SHGC	0.50	0.41	0.42	0.00
Shading Systems	Device Horizontal	Device Horizontal	Device Horizontal	Device Horizontal
Wall Area (m²)	59.182	115.464	147.4455	218.25
Wall Types	Wall	Wall	Wall	Wall
Methodology	Wall			
Wall Construction	ALDI FOH DTS R1.4	ALDI FOH DTS R1.4	ALDI FOH DTS R1.4	ALDI FOH DTS R1.4
Wall Thickness	120	120	120	120
Average Wall R-value (m².K/W)	1.42	1.43	1.69	1.00
Solar Absorptance	0.7 0.6	0.7 0.6	0.7 0.6	0.7 0.6

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landscape concept | November 2024 [D]

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PLAN / E

01 | LANDSCAPE CONCEPT PLAN - SITE PLAN & CAR PARK

LEGEND

01 Existing Red Brick paving to streetscape retained.

02 Grey paving to emergency egress pathway.

03 New trees to replicate existing Stirling Highway trees for establishment, prior to road widening - located within planted green buffer with hardy native shrubs.

04 Shade tolerant, low water use species to garden bed beneath roof overhang.

05 Community 'Parklet' with 'on-grade' access, integrated signage wall, 'built-in' bench seating, outdoor furniture, and Feature Unit Paving.

06 Proposed additional verge greening to Stirling Highway - garden beds set back 500mm from back of kerb to increase root zone and water infiltration to street trees. Creates a buffer between Highway traffic and pedestrian footpath.

07 Poor quality existing street trees to Stirling Highway, to be replaced with new semi-mature trees from City of Nedlands preferred species list eg. *Cupaniopsis anacaroides*.

08 Additional street tree in new planted tree well to Stirling Highway.

09 Existing *'Chinese Tallow'* street trees along Florence Road, to be retained and protected.

10 Main pedestrian entry point - direct access from Florence Road.

11 New *'Chinese Tallow'* street tree to match existing.

12 New electrical substation and enclosure with matching red brick paving surrounds to 'embed' new development into existing streetscape.

13 Vehicular entry point from Florence Road with new concrete crossover and linemarking.

14 Existing retaining wall to western boundary of site, with new colorbond fence - Landscape opportunity for shade tolerant plant species at carpark ground level.

15 Proposed easement to facilitate future connection to Dalkeith Road.

16 Insitu concrete access to fire tanks and pump, with low native plants.

17 Existing neighbouring drainage basin with significant trees and vegetation.

18 Carpark landscaping opportunity - low native planting with evergreen trees, and area of structural and amended soil to carpark trees.

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PLAN E

LANDSCAPE ARCHITECTS

LEVEL 1 278 RAILWAY PDE WEST LEEDERVILLE WA 6007
T: (08) 9388 9566 E: mail@plane.com.au

ALDI, NEDLANDS / LANDSCAPE CONCEPT

PREPARED FOR ALDI STORES
NOVEMBER 2024

C1.101

REV D
1:500 @ A3

0 5 10 15 25m

© PLAN E

02 | LANDSCAPE CONCEPT PLAN - UPPER LEVEL

LEGEND

01 Existing Red Brick paving to streetscape retained.

02 Poor quality existing street trees to Stirling Highway, to be replaced with new semi-mature trees from City of Nedlands preferred species list eg. *Cupaniopsis anacaroides*.

03 Additional street tree in new planted tree well to Stirling Highway.

04 Proposed additional verge greening to Stirling Highway - garden beds set back 500mm from back of kerb to increase root zone and water infiltration to street trees. Creates a buffer between Highway traffic and pedestrian footpath.

05 New trees to replicate existing Stirling Highway trees for establishment, prior to road widening - located within planted green buffer with hardy native shrubs.

06 Shade tolerant, low water use species to garden bed beneath roof overhang.

07 Community 'Parklet' with integrated signage wall, seating and outdoor furniture, and Feature Unit Paving.

08 Plinth sign to prominent corner, enhanced with feature iconic native planting.

09 Large feature tree to prominent corner - landmark and orientation opportunity while creating shade for Community 'Parklet'. Species to be selected from City of Nedlands preferred list with open canopy to maintain sightlines eg. *Jacaranda mimosaefolia.*

10 Stair access between Upper Forecourt and undercroft carpark.

11 Insitu coloured concrete to Upper Forecourt.

12 Direct access from Florence Road to Upper Forecourt Level.

13 Integrated Planter Boxes to Upper Forecourt with shade tolerant, water wise plant species.

14 Stair access from Florence Road to Upper Forecourt and Retail opportunities - high quality insitu concrete (coloured).

15 Emergency egress staircase and rooftop access provision.

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PLAN E

LANDSCAPE ARCHITECTS

LEVEL 1 278 RAILWAY PDE WEST LEEDERVILLE WA 6007
T: (08) 9388 9566 E: mail@plane.com.au

ALDI, NEDLANDS / LANDSCAPE CONCEPT

PREPARED FOR ALDI STORES
NOVEMBER 2024

C1.102

REV D
1:500 @ A3

0 5 10 15 25m

© PLAN E

03 LANDSCAPE CONCEPT PLAN - DETAIL - COMMUNITY 'PARKLET'

LEGEND

01 Existing Red Brick paving to streetscape retained.

02 Poor quality existing street trees to Stirling Highway, to be replaced with new semi-mature trees from City of Nedlands preferred species list eg. *Cupaniopsis anacaroides*.

03 Additional street tree in new planted tree well to Stirling Highway.

04 New trees to replicate existing Stirling Highway trees for establishment, prior to road widening - located within planted green buffer with hardy native shrubs.

05 Shade tolerant, low water use species to garden bed beneath roof overhang.

06 Community 'Parklet' with integrated signage wall, 'built-in' beanch seating, outdoor furniture, and low seating walls to enclose and frame seating area. Feature Unit paving to respite area to distinguish from main pedestrian movement.

07 Large feature tree to prominent corner - landmark and orientation opportunity while creating shade for Community 'Parklet'. Species to be selected from City of Nedlands preferred list with open canopy to maintain sightlines eg. *Jacaranda mimosaefolia.*

08 WA Wildflower Display Garden to 'Parklet' corner to provide seasonal colour and texture.

09 Plinth sign to prominent corner, enhanced with feature iconic native planting to base.

10 Seat Wall RL+ 23.05.

11 Insitu coloured concrete to Upper Forecourt.

12 Direct access from Stirling Highway and Florence Road to Upper Forecourt Level.

LEGEND

- Permanent Irrigation to all garden beds and tree planting.
- Soil Conditioner to all garden beds and tree planting.
- Organic mulch to be coarse hardwood only.
- Organic soil to tree wells minimum 600mm deep amended soil below mulch.
- Native tree and plant species selection: Low water use requirements | Visual connection to existing Nedlands street character | Reinforce site context.

City of Nedlands
Received
18 November
2024

PLAN E

LANDSCAPE ARCHITECTS
LEVEL 1 278 RAILWAY PDE WEST LEEDERVILLE WA 6007
T: (08) 9388 9566 E: mail@plane.com.au

ALDI, NEDLANDS / LANDSCAPE CONCEPT
PREPARED FOR ALDI STORES
NOVEMBER 2024

C1.103
REV D
1:100 @ A3

0 1 2 3 5m

© PLAN E

04 | LANDSCAPE THEME / CHARACTER

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NOVEMBER 2024

C1.104

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NTS

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05 | PLANTING PALETTE

Myoporum parvifolium 'Yareena'

Grevillea 'Gin Gin Gem'

Acacia lasiocarpa prostrate

Grevillea 'Green Carpet'

Acacia cognata 'Limelight'

Westringia 'Low Horizon'

Casuarina 'Cousin It'

Calistemon 'Great Balls of Fire'

Lomandra 'Lime Tuff'

Anigozanthos 'Gold Velvet'

Adenanthos sericeus 'Compact'

Hibbertia scandens

Acacia 'Honey Bun'

Grevillea 'RSL Spirit of Anzac'

Ficus pumila

Anigozanthos 'Everlasting Red'

Viburnum 'Dense Fence' (Shade)

Liriope 'Just RIght' (Shade)

ALL TREES ARE NOT PREFERRED REPRODUCTIVE HOST OR SUSCEPTIBLE TO POLYPHAGOUS SHOT-HOLE BORER
(DEPARTMENT OF PRIMARY INDUSTRIES AND REGIONAL DEVELOPMENT - JUNE 2024)

Jacaranda mimosaefolia

Cupaniopsis anacaroides
(Carpark & Stirling Highway Trees)

Sapium sebiferum
(to match existing on Florence Rd)

City of Nedlands
Received
18 November
2024

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2024

PLAN E

1309520 ALDI, NEDLANDS - landscape concept

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Design
for a better
future /

Aldi Stores (a Limited Partnership)

Lots 3, 4 and 5 (90) Stirling Highway, Nedlands

Traffic Impact Assessment

October 2024

Question today
Imagine tomorrow
Create for the future

Lots 3, 4 and 5 (90) Stirling Highway, Nedlands
Traffic Impact Assessment

Aldi Stores (a Limited Partnership)

WSP
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Rev	Date	Details
D	23/10/2024	Revised Background Traffic Analysis

	Name	Date	Signature
Prepared by:	Fiona Banh	24/10/2024	
Reviewed by:	Jacob Martin	24/10/2024	
Approved by:	Agatha Yii	24/10/2024	

WSP acknowledges that every project we work on takes place on First Peoples lands.
We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

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1 Introduction

WSP has been commissioned by ALDI Stores (the 'Client') to prepare a Transport Impact Assessment (TIA) in support of the proposed redevelopment of Lots 3, 4 & 5 (90), Stirling Highway (the 'Site'), comprising a new retail centre (including an ALDI store).

This report describes the results of multi-modal transport impact and parking assessment for the proposed development, focusing on traffic operations, circulation, and car parking utilisation, and including intersection operations with the boundary road network.

This report has been prepared in accordance with the Western Australia Planning Commission (WAPC) *Transport Assessment Guidelines for Developments: Volume 4 – Individual Developments (2016).*

2 Site conditions

2.1 Site Location and Land Use

The subject site is a 4,660m² parcel of land historically occupied by a shopping centre, estimated to occupy approximately 1,617m^2 of retail floor area, and located on the south-west corner of the Stirling Highway / Florence Road intersection in Nedlands, and bounded by these two roads.

The site is also located immediately west of the existing Captain Stirling Hotel. The new retail centre replaces the Captain Stirling Shopping Centre which previously included an IGA supermarket and a range of specialty retail shops. This use has subsequently been cleared, and thus the Site is currently vacant.

The site is located within a 'Mixed Use' zone under City of Nedlands Planning Scheme.

Land uses surrounding the subject site comprise a mixture of residential, commercial and retail land uses.

The location of the subject site in the context of the surrounding road network is shown in Figure 2.1.

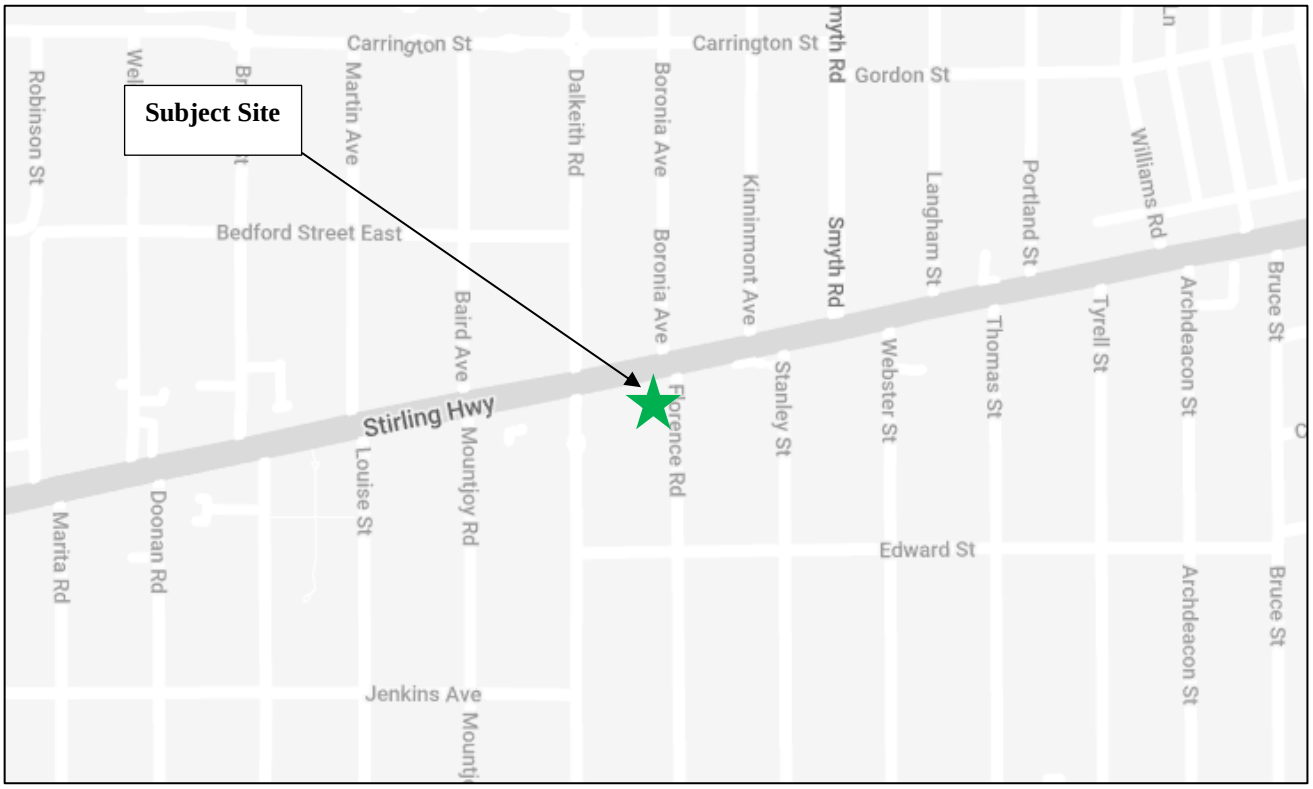


Figure 2.1 Site location

Source: https://travelmap.mainroads.wa.gov.au/

2.2 Road Network

A summary of the local road network and its key features is provided in Table 2.1 and shown in

Table 2.1 Local road network

	Stirling Highway	Florence Road
Jurisdiction	MRWA	Local Government
Hierarchy	Primary Distributor	Access Road
Speed limit (km/h)	60	50
Carriageway Width (m)	14.0m	6.2m
Number of lanes	4, with painted central median	2
Traffic controls	Signalised intersection at Dalkeith Road	Stop at Stirling Highway
On-street parking	None	Indented kerbside along west side and kerbside along east side
Pedestrian facilities	Footpath along both sides	Footpath along both sides
Bicycle facilities	None	None

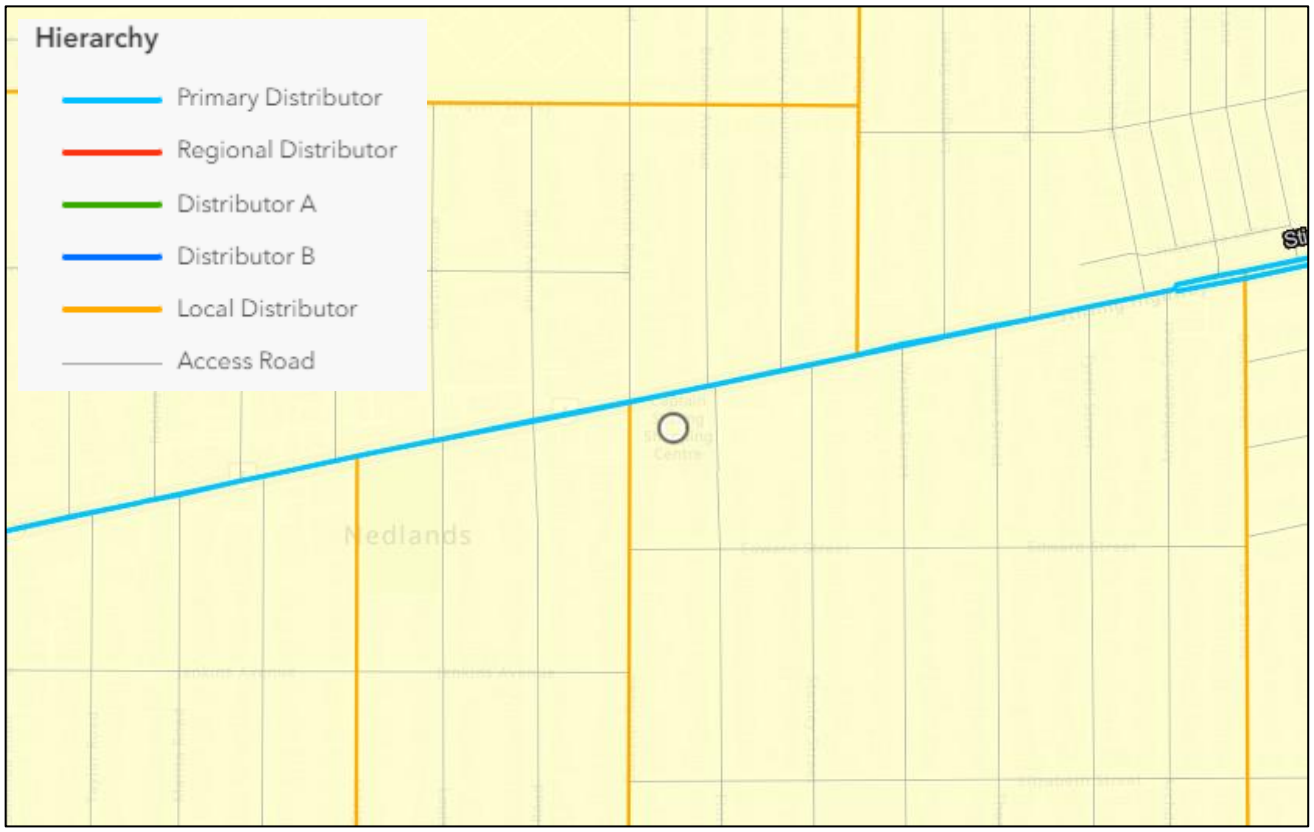


Figure 2.2 Existing road network

Source: MRWA Information Mapping System

2.3 Pedestrian and Cycle Networks

The existing road network within the vicinity of the subject site provides reasonable pedestrian accessibility in the form of footpaths, pram ramps and pedestrian crossings. This allows future building occupants and users to safely walk to the key nodes, including public transport stops.

Whilst there is no dedicated cycling facility in the vicinity of the site, there is a Safe Active Street that runs along Elizabeth Street and Jenkins Street to the south of the site, providing a high-quality on-road facility parallel to Stirling Highway.

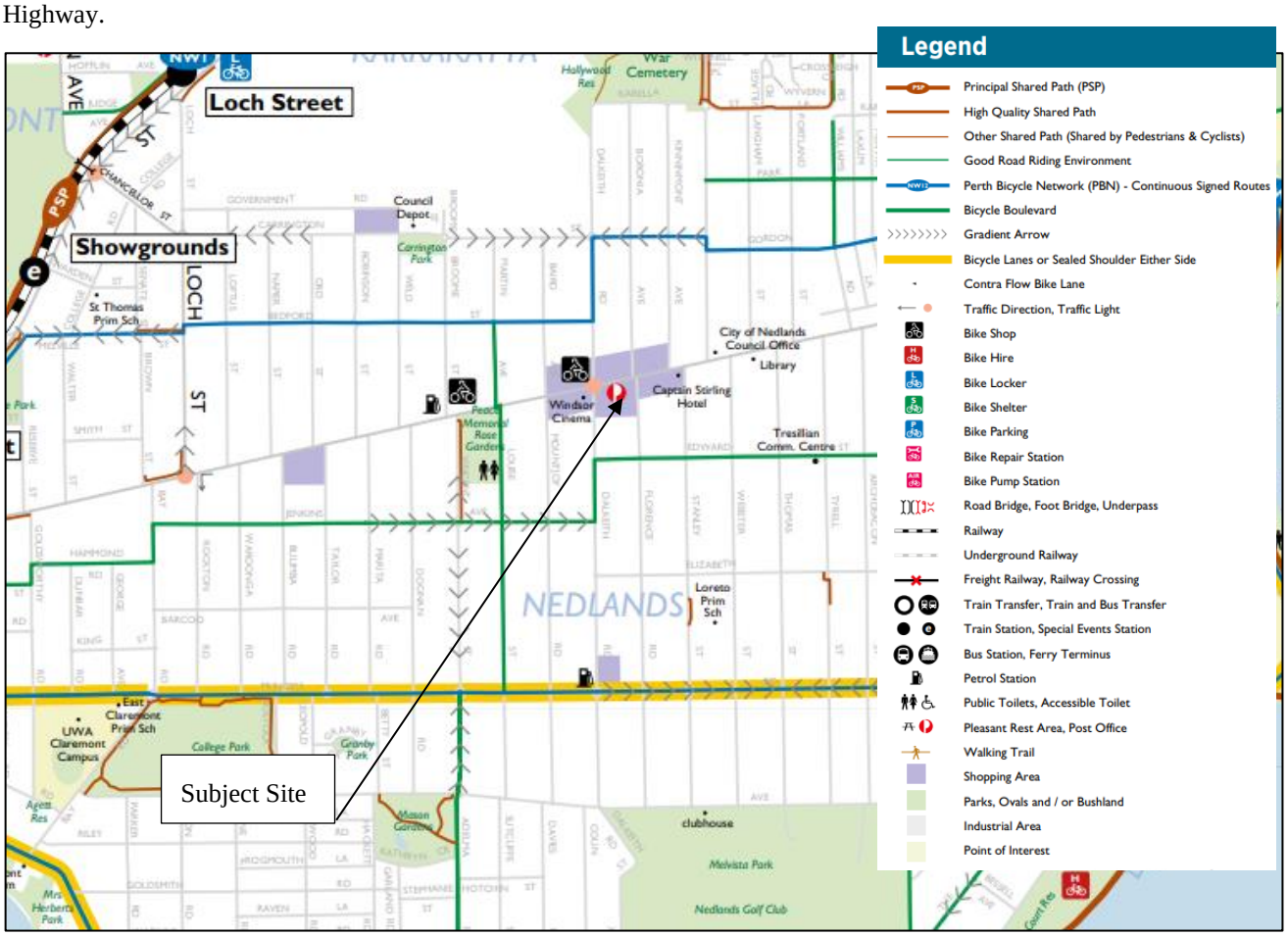


Figure 2.3 Perth, Fremantle and Stirling: Perth bike map

Source: Department of Transport

2.4 Public Transport Facilities

The subject site is well situated to take advantage of the local public transport network, including a number of bus services operating along Stirling Highway which provides a connection to the broader metropolitan public transport network.

Bus Routes 103, 995, 998 and 999 operates along Stirling Highway providing connectivity to Fremantle Bus Station, Murdoch Station, Curtin University Campus, Morley Train Station, Elizabeth Quay Bus Station and the wider network.

The nearest bus stop is located along Stirling Highway immediately opposite the subject site and services bus routes 103, 995 and 998.

2.5 Crash History

A review of crash history along Stirling Highway and Florence Road has been undertaken for the five-year period between 2019-2023, in the vicinity of the proposed access points. None of the crashes recorded within this period involved pedestrians or cyclists. A summary of the crashes is represented in the figure and table below.

Figure 2.4 Crash locations

Table 2.2 Crash location details

Location	Date	Time	Severity	Crash Type	Other Users Involved
Edward Street & Florence Road	04/05/2021	11:50	PDO Minor	Right Angle	Two vehicles
Stirling Highway between Florence Road and Kinninmont Avenue	12/03/2019	13:00	PDO Major	Rear End	Three vehicles
	20/03/2022	22:15	PDO Major	Sideswipe Same Direction	One vehicle
	06/06/2023	7:00	PDO Major	Sideswipe Same Direction	None
	21/11/2022	13:35	PDO Major	Sideswipe Same Direction – Involving Overtaking	Three vehicles
	22/10/2023	9:50	Medical	Rear End	Three vehicles
	13/03/2023	15:30	PDO Major	Sideswipe Same Direction – Involving Overtaking	Two vehicles

Location	Date	Time	Severity	Crash Type	Other Users Involved
Stirling Highway at Florence Road	09/08/2022	11:45	PDO Major	Right Angle	Two vehicles
	30/11/2021	16:00	PDO Major	Rear End	None
	13/02/2019	9:15	Medical	Rear End	Two vehicles
	05/07/2019	17:05	PDO Major	Right Angle	Two vehicles
	23/12/2019	16:40	PDO Major	Sideswipe Same Direction – Involving Overtaking	Two vehicles
	27/01/2021	1:30	Hospital	Rear End	Two vehicles
	19/06/20221	13:10	PDO Major	Right Angle	Two vehicles
	10/07/2021	9:00	PDO Minor	Rear End	Two vehicles
Stirling Highway between Boronia Avenue and Dalkeith Road	20/07/2021	17:35	PDO Minor	Sideswipe Same Direction – Involving Overtaking	Two vehicles
	31/08/2023	12:00	Medical	Sideswipe Same Direction – Involving Overtaking	Three vehicles

There are a total of 17 crashes within the crash review area; crashes on the Boronia Avenue approach to the Stirling Highway intersection are considered to be outside of the influence of the proposed development and have been excluded from the review.

The majority of the crashes involve sideswipe and rear ends which is typical along major roads of this nature.

While the incidence of crashes is not considered to be inconsistent with the local traffic environment, it is understood that future modifications to Stirling Highway (see section 3.1 below), including the construction of a solid median at Florence Road, would eliminate some of the more serious crash types at this location – namely the sideswipe and right-angle crashes.

Insofar as this will redistribute traffic to the controlled Stirling Highway / Dalkeith Road signalised intersection, this is expected to result in a reduced crash risk for the corridor.

3 Changes to surrounding transport networks

3.1 Road Network

It is understood that the following changes are proposed to the road network in the vicinity of the site:

- Boronia Avenue restricted to left-in and left-out
- Florence Road restricted to left-in and left-out
- Stanley Street restricted to left-in, left-out, and right-in

These changes are reflected in Figure 3.1 below

- The potential for a rear laneway on the southern boundary of the subject site - connecting Florence Road and Dalkeith Road as per Local Planning Policy 4.2: Dalkeith Road to Stanley Street Laneway

Main Roads WA has a long-term plan to upgrade Stirling Highway (Stirling Highway Access Corridor Study – SHACS), including installing signals at Stirling Highway and Smyth Road intersection.

- As part of these future upgrades, Main Roads WA have plans for rationalisation of the Stirling Highway road reserve. The proposed turning restrictions Florence Road and Stanley Street are consistent with this plan.

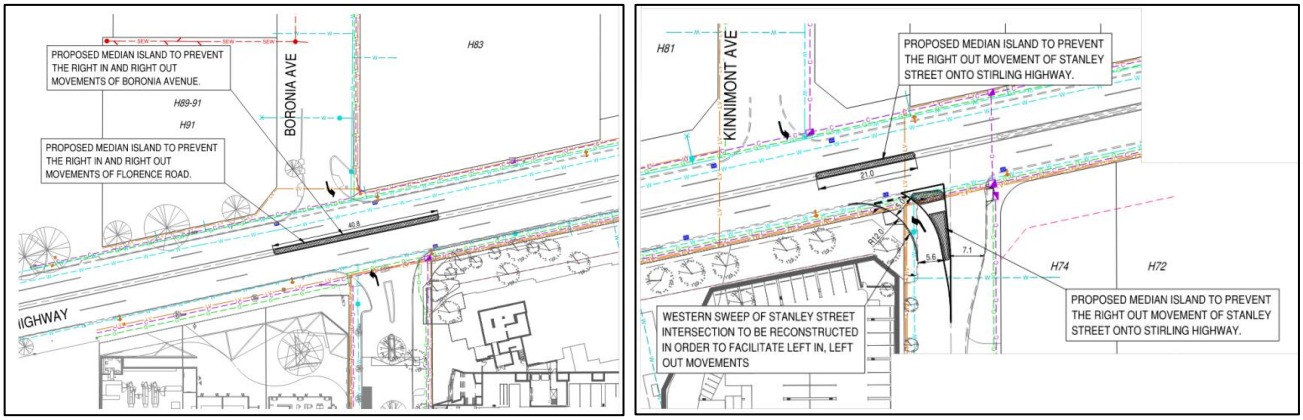


Figure 3.1 Proposed modifications to Stirling Hwy / Florence St (left) and Stirling Hwy / Stanley St (right)

Source: Nedlands Square TIA (Cardno now Stantec, 2022)

3.2 Public Transport

No changes to existing public transport services are currently proposed.

3.3 Pedestrian / Cycling Network

There are no changes proposed as part of the development, other than pedestrian access/connections from the subject site to the frontage roads (Florence Road and Stirling Highway).

The Department of Transport's Long Term Cycling Network (LTCN) defines the future planning for strategic cycling in Perth. While proposed links within the City of Nedlands have not been endorsed, a network has been proposed and its status evaluated by the DoT (Figure 3.2). All routes in the vicinity of the Site have been identified as Local Routes.

Figure 3.2 Route status (LTCN)

The LTCN shows the proposed Edward Street Safe Active Street (SAS) as 'Existing (needs significant improvement)'; to be completed in the future. North-south connection would ultimately be provided along Dalkeith Road. Access to the Site would therefore be improved in future once the rear laneway is complete (between Florence Road and Dalkeith Road) to the rear of the Site.

4 Integration with surrounding area

4.1 Surrounding Generators

The proposed development is retail/commercial use and as such is consistent with both former and future land uses proposed for the Precinct, as well as existing land uses in the immediate surroundings.

Most traffic generators will be the surrounding residential area, office employees, as well as activity from the nearby University of Western Australia.

4.2 Proposed Changes to Surrounding Land Uses

East of Florence Road, Nedlands Square is proposed to be developed with a number of mixed uses, including Hotel and retail specialty shops.

There are no other planned changes to land uses in the surrounding area in the short term, however the Site is located within a Mixed Use corridor with increased density permitted under the City's Local Planning Scheme No. 3. As such, development can be considered likely along Stirling Highway, to be introduced gradually over the coming years.

4.3 Level of Accessibility

The existing road network within the vicinity of the subject site provides a reasonably good road accessibility and pedestrian accessibility in the form of footpaths, pram ramps and pedestrian crossings. This allows for safe travel to key nodes, including public transport stops.

The existing bus routes are only a short walk from the site and will service the proposed development well; providing suitable travel alternatives, particularly for employees of the proposed development.

5 Development proposal

5.1 Proposed Land Uses

The proposal seeks to redevelop the subject site replacing the historical shopping centre with a new retail/commercial centre comprising ALDI store and a number of small-scale retail/commercial tenancies at Lots 3, 4 & 5 (90) Stirling Highway, Nedlands.

Based on drawings prepared by Nielsen Architects dated August 2024 (see Appendix A), the subject site is proposed to consist of the following summarised in Table 5.1. This represents a minor decrease in retail floor area (from 1,617m^2 to 1,566m^2), but with the addition of a commercial tenancy).

Table 5.1 Development summary

Uses	Yield
Supermarket (ALDI)	1,512m² (1,099m^2 retail floor area)
Retail (5 tenancies)	467m²
Office (1 tenancy)	285m²
Car Parking	93 car spaces (including 4 ACROD spaces)
Bicycle Parking	8 bicycle spaces

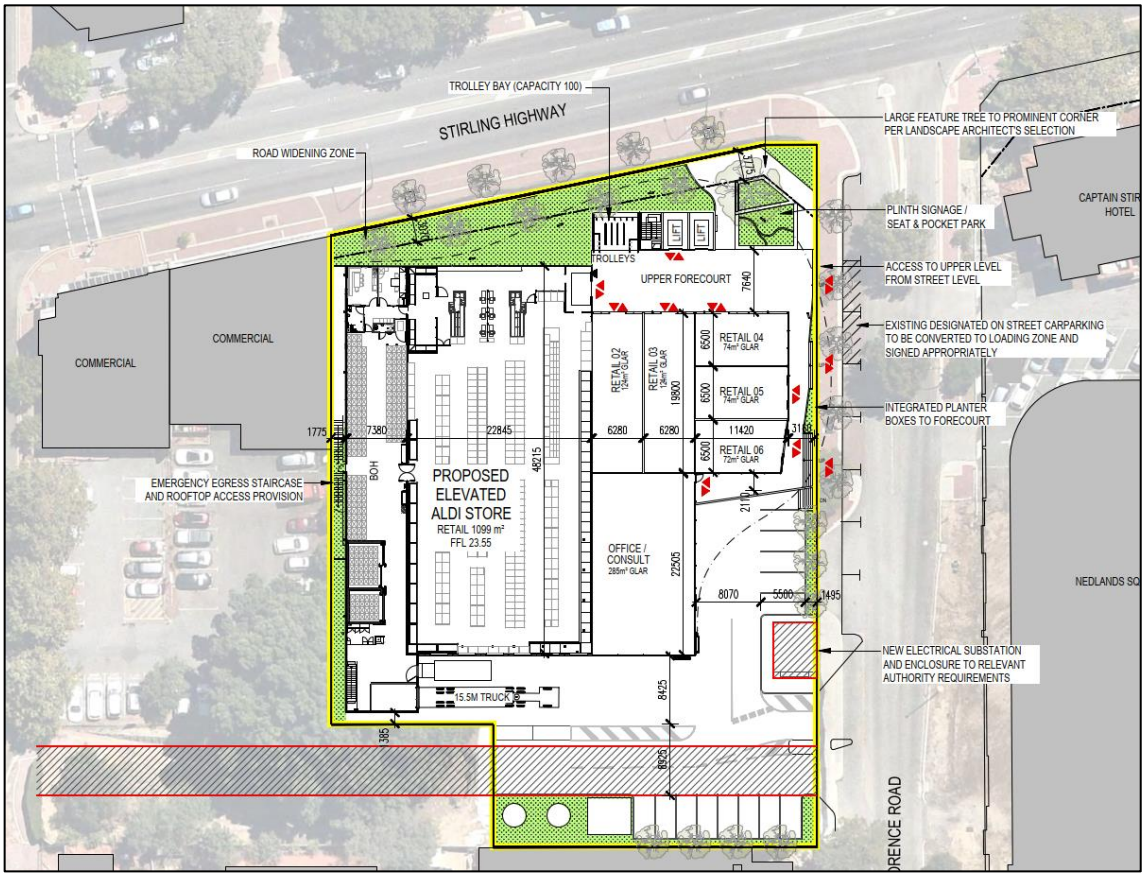


Figure 5.1 Development plan – ground floor

5.2 Access Arrangements

Vehicle access is proposed to be via the proposed crossover on Florence Road, with provision for future connection to Dalkeith Road via a rear laneway. This access point will accommodate all vehicular movements, including general customer/employees, service, delivery and waste collection vehicles.

Redundant crossovers across Stirling Highway and Florence Road will be consolidated and reinstated. Accordingly, an additional three on-street car spaces will be provided as part of the streetscape amendments.

Pedestrian access will be via the existing footpaths along Stirling Highway and Florence Road to the forecourt area fronting Florence Road.

5.3 Provision for Service Vehicles

The loading area for the ALDI supermarket is located to the rear of the subject site. Trucks will enter from Stirling Highway onto Florence Road and accessible from the rear laneway. Trucks will then exit onto Florence Road back onto Stirling Highway. This route minimises the impact of service vehicles on residential amenity to the south.

It is understood that the largest service vehicle expected is a 15.6m semi-trailer (18 pallet Aldi truck). Swept path diagrams for this service vehicle accessing and egressing from the loading dock are provided in Appendix B.

As shown in this swept path analysis, the proposed service/loading facility is adequate to accommodate turning movements, with all reversing manoeuvres contained on-site.

Further to the swept path analysis, the client advised that physical truck manoeuvring tests were performed for access in and out of Florence Road from Stirling Highway and observed that no changes will be required for any existing infrastructure and is considered satisfactory.

Loading for the office and retail tenancies will be provided via two on-street spaces proposed to be converted to ‘Loading Zone’ along the site’s frontage to Florence Road. This arrangement is consistent with the previously approved ALDI proposal and is considered satisfactory.

5.4 Car Parking

As part of the historically approved application (DAP/18/01444) and stamped plans undertaken for the subject site, a total of 90 car parking spaces were proposed to be provided including 2 DDA bays for a total floor area of approximately 2,184m². This results in a car parking provision rate of 4.12 spaces per 100m² GFA.

A total of 93 car spaces are proposed to be provided within an at-grade carpark for the current proposal, inclusive of 4 ACROD bays for approximately 2,264m² of retail/commercial floor area (including back of house). This is equivalent to a car parking provision rate of 4.15 spaces per 100m² GFA.

Accordingly, the proposed development is generally consistent with the historically approved car parking provision rate and is considered satisfactory.

5.5 Bike Parking

A total of 8 bicycle parking spaces are provided on-site in the form of horizontal rails within the basement carpark. This is considered to be suitable for both employees and customer use.

6 Traffic analysis

6.1 Assumptions

Nedlands Square is an approved development located on the east side of Florence Street which took into consideration the subject site's proposed development (ALDI outlet and five small-scale outlets combined).

It is to be noted that as part of the approved development for the ALDI outlet, the relevant floor areas included the following, with a total applicable floor area 80m² less than the current proposed development floor area.

- A ground level ALDI retail outlet totalling approximately 1,213m² (NLA), with a 347m² back of the house
- A total of six small-scale retail tenancies with a combined 624m² of GFA

On balance, the proposed development, which includes a 285m^2 commercial tenancy, is expected to generate marginally *less* traffic than the previous use.

The assessment as part of the approved Nedlands Square have been obtained (sourced from Cardno now Stantec's Transport Impact Assessment, dated 7 November 2022) for the nearby intersections and adopted for the proposed development is considered appropriate and consistent with anticipated demand, with the assessment replicated below.

6.2 Assessment Year and Time Period

The time periods selected for analysis/assessment are Thursday PM peak (5PM – 6PM) and Saturday peak (12PM – 1PM), which are typical peak periods for a shopping centre development, and which have potential to interact with background traffic along Stirling Highway.

6.3 Background Traffic

To obtain the background traffic turning movements at key intersections, data was collated from various sources including Riley Consulting TIA for Nedlands Square (September 2021), proposed ALDI TIA by Transcore (June 2018), Main Roads WA Traffic Map, and midblock traffic counts undertaken by City of Nedlands, specifically as per the following:

- **Dalkeith Road**

  Weekday PM peak hour volumes for Dalkeith Road is sourced from Main Roads WA Traffic Map 24-hour turning count in December 2019. Saturday Peak turning count was sourced from Riley Consulting TIA for Nedlands Square (September 2021). Daily volumes were sourced from September 2022 midblock counts by City of Nedlands.

- **Florence Road and Boronia Avenue**

  Weekday PM peak volumes for the Stirling Highway / Florence Road intersection were sourced from Main Roads WA Traffic Map for two alternative periods (December 2019 and September 2022). These counts allow for a comparison of intersection operation with and without the generation of the Captain Stirling Shopping Centre, which was closed in March 2020.

  Additional corroborating traffic data has also been used, sourced from Riley Consulting and Transcore's ALDI TIA (2019) to obtain the PM and Saturday turning proportions for retail trade to and from the location.

  As the proposed Aldi retail centre is replaces the previous IGA shopping centre (Captain Stirling Shopping Centre) and is of a similar scale, the traffic generation from the proposed Site development is expected to be similar in extent, see further discussion below.

- **Kinninmont Avenue, Stanley Street, and Smyth Road**

  September 2022 midblock counts by City of Nedlands were used for these roads. Due to lack of turn counts from the Nedlands 2022 midblock counts, turn movements proportion were determined from available data from Riley Consulting TIA and Main Roads WA Traffic Map 2019 turn counts.

6.4 Background Traffic Growth

Stirling Highway is currently operating at its practical capacity, and no growth is considered likely or even possible. Any demand growth along the corridor is therefore unlikely to occur during the peak, with congestion causing changes in driver behaviour to increase the peak period itself (peak spreading).

WSP has undertaken a broad review of traffic volumes as recorded by Main Roads WA and published in the Metropolitan Traffic Digest between 2003 and 2021 (see below Figure 6.1), to investigate historic patterns of daily movements along Stirling Highway.

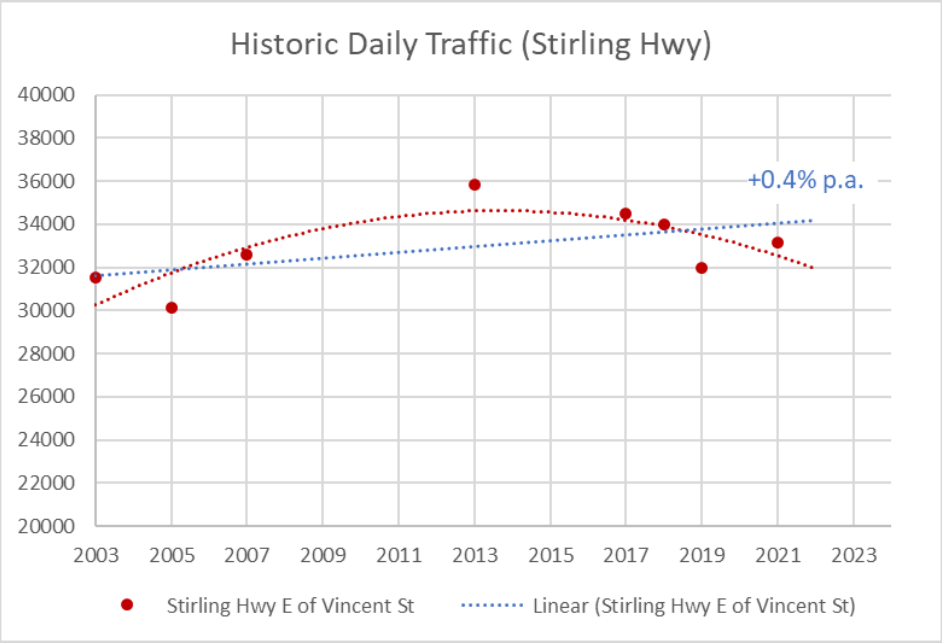


Figure 6.1 Historic traffic volumes – Stirling Highway, east of Vincent Street

This graph shows that daily traffic demands peaked between 2012 and 2016, and have been generally declining since then – including the sections of Stirling Highway closest to the Site (Stirling Hwy E of Vincent Street).

For this reason, a realistic projection for background traffic is an assumption of **zero growth** for peak period trip generation along Stirling Highway. As such, only existing traffic and background + development scenarios have been assessed in this TIA.

6.5 Key Intersections

The majority of traffic associated with the proposed development is expected to access the Site via the Stirling Highway / Florence Avenue intersection. This location is considered to be the critical intersection for assessment.

It is acknowledged that analysis of the Stirling Highway corridor between Dalkeith Road and Smyth Road was completed as part of the Nedlands Square development proposal (Cardno now Stantec, 2022). Given that the Aldi development was included in that work, the overall impact of the proposed development is considered to have been adequately assessed.

However, a comparison exercise has been completed to interrogate the validity of the traffic data used to assess intersection operation for the Nedlands Square Development, considering particularly the following:

1. Current traffic movements (2024) in the vicinity of the Site reflect a baseline traffic scenario that does not include either the Captain Stirling Hotel development (closed) or the Captain Stirling Shopping Centre development (closed). As such, using traffic data from 2024 would under-estimate the impact of the ALDI redevelopment of the Captain Stirling Shopping Centre site. **The use of 2024 data to assess traffic impact is therefore not recommended.**
2. Traffic data from 2022 captures the operation of the Captain Stirling Hotel, but does not include the Captain Stirling Shopping Centre traffic. This then provides a baseline that would allow the assessment of the proposed development without the impact of the Nedlands Square Development. **The use of 2022 data provides a reasonable metric for traffic impact by the ALDI retail centre in isolation.**
3. Traffic data from 2019 was used in the evaluation of the combined ALDI redevelopment and the Nedlands Square development. **The outcomes from the Nedlands Square TIA reflect a reasonable projection for the ultimate operation of the local road network, including all approved development.**

The following shows a direct comparison between the 2019 and 2022 traffic volumes observed at the Stirling Highway / Florence Road intersection. The primary difference between these periods is the operation of the Captain Stirling Shopping Centre. As such, the difference between these two datasets can be attributed to Shopping Centre traffic.

The extent of this difference is shown below. Figure 6.2 shows the change in approach volumes between 2019 and 2022, which shows a 71% average decrease in traffic on Florence Road, and a 2-5% decrease in traffic along Stirling Highway (see Appendix D).

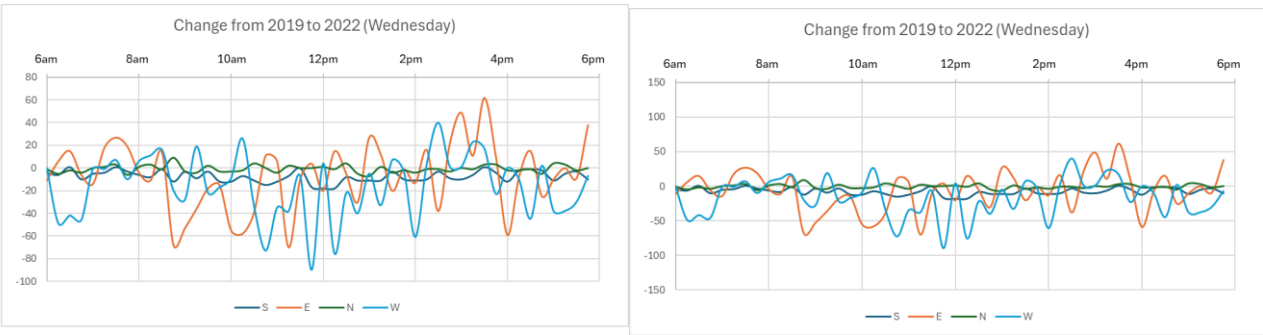


Figure 6.2 Change in traffic volumes – Stirling Highway / Florence Road approaches (2019 - 2022)

To investigate the change in traffic on Florence Road resulting from the closure of the Captain Stirling Shopping Centre, the following link count data was extracted from video surveys at the Stirling Highway / Florence Road intersection. This clearly shows the dramatic reduction in demand, with 2022 link volumes operating at approximately 30-35% of 2019 levels (a 65-70% *reduction* in traffic).

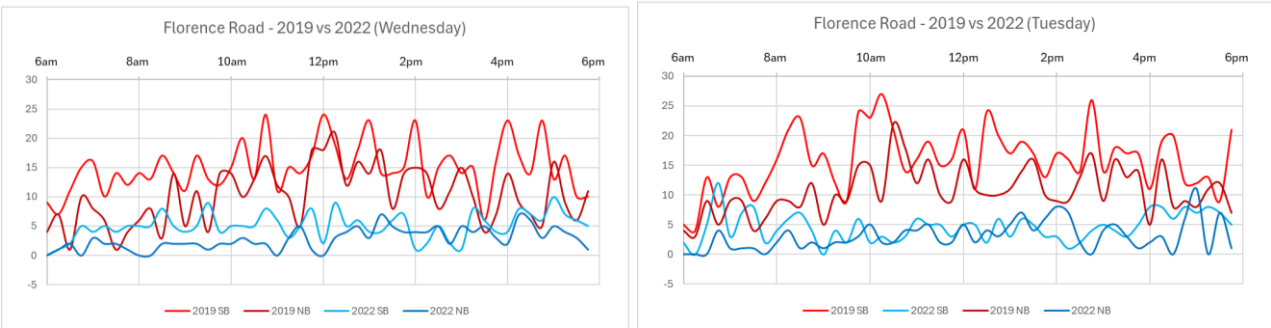


Figure 6.3 Link Volumes on Florence Road (2019 - 2022)

6.6 Trip Generation

The traffic generation for the approved Nedlands Square development was previously determined by SLR (August 2019) and Riley Consulting (September 2022), and included in the Cardno (now Stantec) TIA (November 2022). The trip generation rates referenced in this TIA have been retained from that previous work, for consistency. These trip generation estimates are considered to be generally appropriate for this application, and are summarised in Table 6.1 and Table 6.2.

The source for the trip generation rates are as follows:

- **Shopping centre:** Traffic Generation Data 2006-2018 Queensland Government Open Data was used as the source for shopping centre trip rates. Weekday PM and Saturday peak rates for 0 – 10,000m² shopping centres were adopted for this Site. Daily trips were assumed to be 10 times the PM peak rate.
- **Commercial:** Guide to Traffic Generating Developments: Updated Traffic Surveys by NSW Road and Maritime Services (RMS), 2013 was used for commercial component of the development for the PM and daily peak. The office PM peak and daily rate were adopted.

  Saturday rates for commercial uses were sourced from Guide to Traffic Generating Developments by NSW Roads and Traffic Authority (now Road and Maritime Services) 2002. For the Saturday peak, different trip rates were adopted in accordance with the different commercial use as office trip rates for Saturday are not available.

Table 6.1 Traffic generation rates

Land Use	PM Peak Rate	Saturday Peak Rate	Daily Rate
Shopping Centre			
Supermarket/ Retail	9.51 per 100m²	10.85 per 100m²	95 per 100m²
Commercial			
Office	1.2 per 100m²	0	11 per 100m²

Table 6.2 Directional distribution

Land Use	PM Peak		Saturday Peak		Daily	
	IN	OUT	IN	OUT	IN	OUT
Shopping Centre						
Supermarket	50%	50%	50%	50%	50%	50%
Shops	50%	50%	50%	50%	50%	50%
Commercial						
Office	15%	85%	-	-	50%	50%

Table 6.3 Total trip generation

Land Use	Yield	PM Peak Rate		Saturday Peak Rate		Daily Rate	
		IN	OUT	IN	OUT	IN	OUT
Shopping Centre							
Supermarket	1,512m²	72	72	82	82	718	718
Shops	467m²	22	22	25	25	222	222
Commercial							
Office	285m²	1	3	0	0	16	16
Total		**95**	**97**	**107**	**107**	**940**	**940**
		192		**214**		**1880**	

6.7 Pass-by Trips

Retail pass-by trip rates of 50% for the PM peak have been considered, from *Austroads Guide to Traffic Management Part 12*. For Saturday, a retail pass-by rate of 20% is assumed, as it is expected that the majority of trips on a Saturday would be new trips. These pass-by trips are only applied to movements to/from Stirling Highway.

These pass-by rates were previously presented to the City of Nedlands and are considered appropriate for the purpose of assessment.

6.8 Trip Distribution and Assignment

Development trip distribution adopted is shown in Figure 6.4. This distribution was previously considered appropriate by the City of Nedlands in their assessment of previous TIAs for the Nedlands Square development prepared by SLR (August 2019) and Riley Consulting (September 2021).

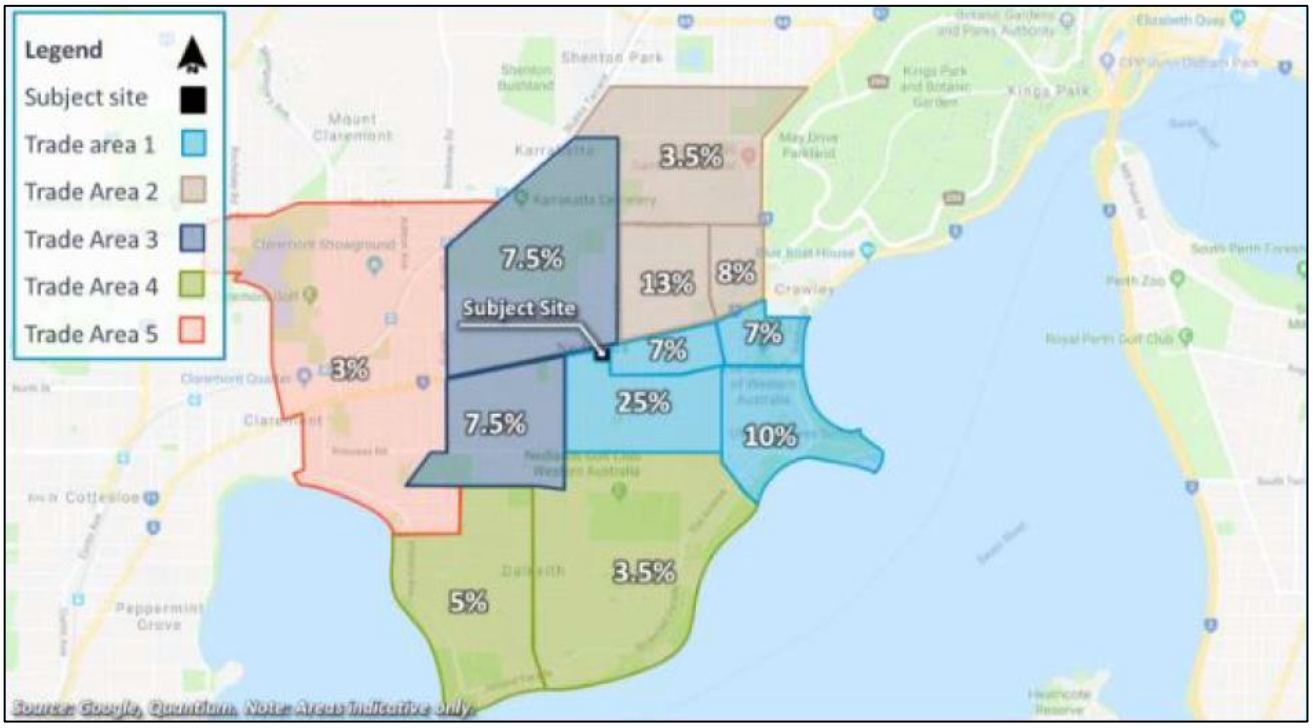


Figure 6.4 Adopted trip distribution

Source: Nedlands Square Development TIA by SLR August 2019

- All traffic movements to and from destinations to the south of Stirling Highway are considered to arrive and depart via Florence Road. This comprises the majority of vehicle trips generated (51-65% of all trips).
- Traffic movements approaching or departing from Stirling Highway will be impacted by the turning movement restrictions imposed at Florence Road (left-in/left-out only) and Stanley Street (right turn out banned).

  For this reason, traffic movements turning right out onto Stirling Highway are expected to deviate via Dalkeith Road, which provides controlled turning movements via the signalised intersection.

  Right turning inbound movements (prevented from direct access to Florence Road by the future raised central median) would access the Site via Dalkeith Road or Stanley Street. The Stanley Street approach could either use the car park access past the Captain Stirling Hotel, or navigate to the Site via Edward Street to Florence Road. It is noted that the total demand for this right-in movement is considered to be relatively small (approximately 15 vehicles per hour).

Access routes to and from Stirling Highway are depicted graphically in Figure 6.5. Note that this does not include the impact of the future laneway at the Site boundary (Florence Road to Dalkeith Road), which is likely to be constructed well after occupation.

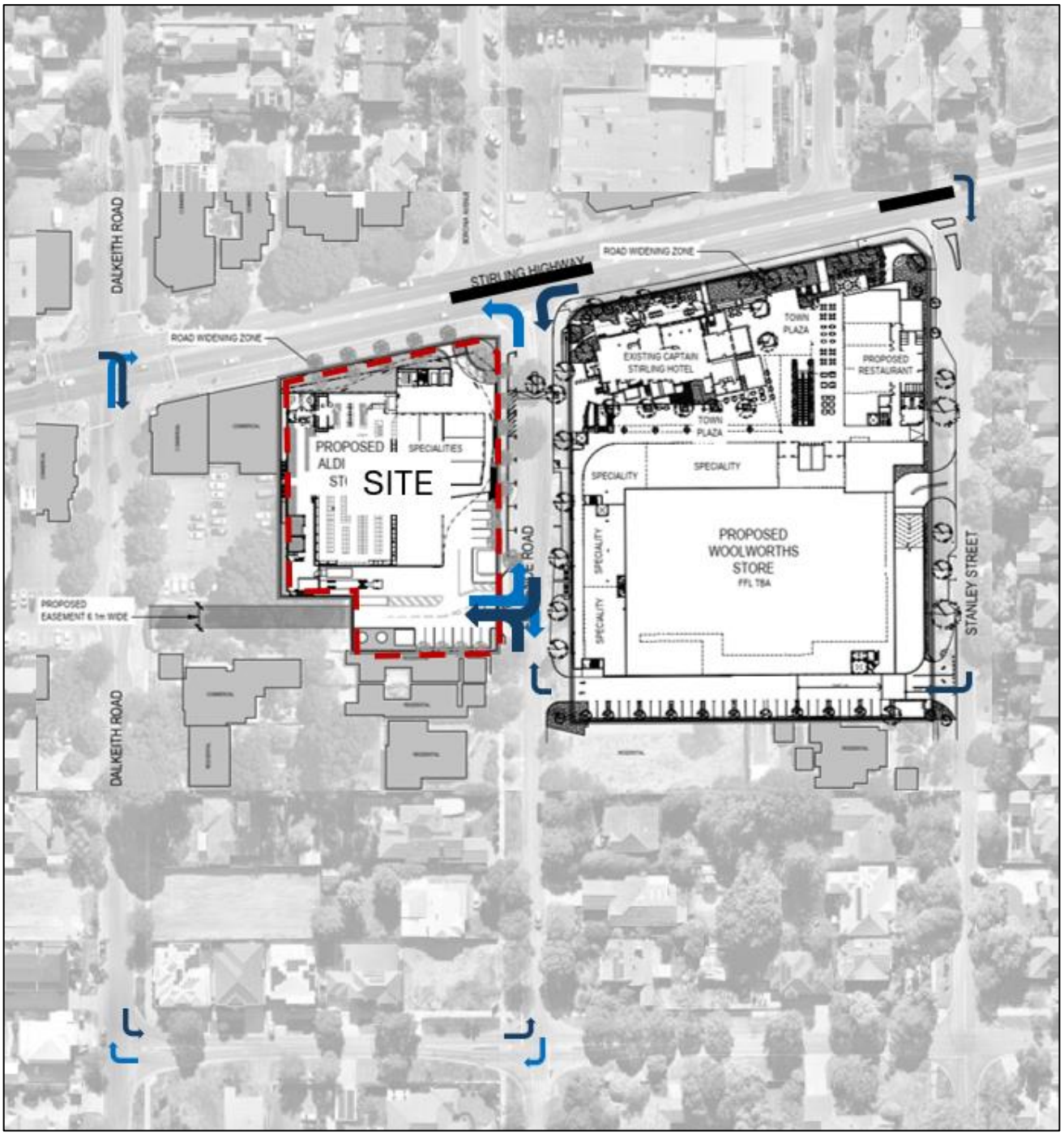


Figure 6.5 Assumed vehicle movements to and from Stirling Highway

6.9 Peak Hour Traffic Volumes

Peak hour traffic volumes diagrams produced and attached in the appendix of Cardno now Stantec's TIA are presented in Appendix C. These diagrams show:

- background traffic
- diversion of background traffic due to turn restrictions at Florence Road and Stanley Street
- development trips
- background and development trip

Note that there is no turn count data at intersections along Edward Street, hence no background turn volumes are provided at those intersections.

Within the above, the proposed ALDI shopping centre development contribution has been projected for the worst-case scenario – a typical Saturday midday peak hour, excluding the effects of pass-by trade (see Figure 6.6 below). Note that these traffic movements are *included* in the assessment completed for Nedlands Square and not in addition to those volumes.

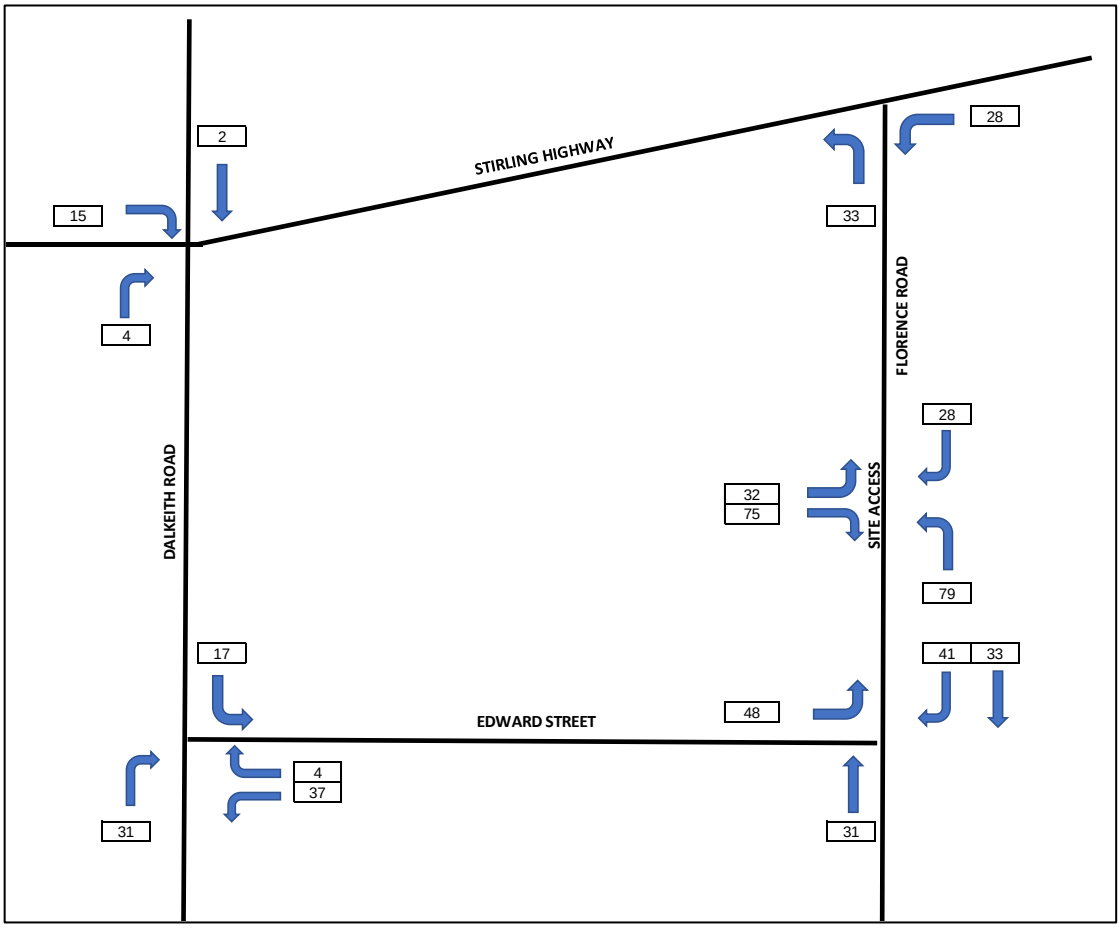
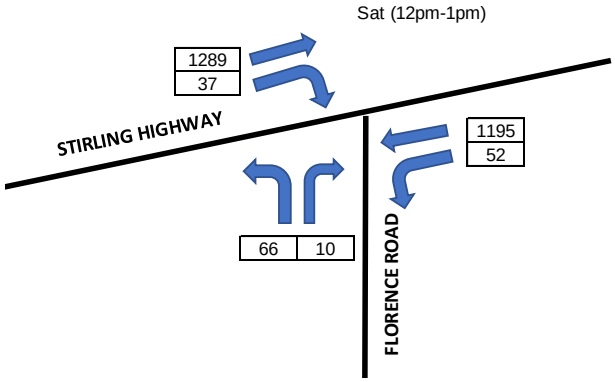


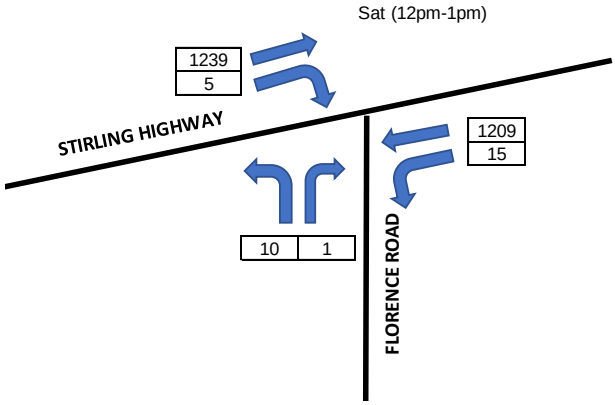
Figure 6.6 Estimated development traffic movements – Saturday mid-day peak hour

Turning movement data from 2022 for a typical peak Saturday has been extracted from Main Roads Traffic Map for consideration. This background traffic environment *excludes* the influence of the future Nedlands Square development.

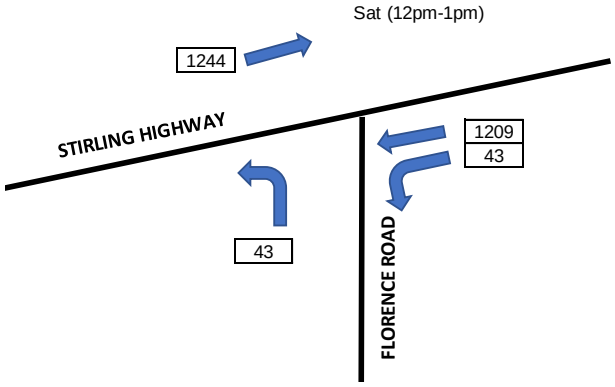
The background traffic volumes for the critical Saturday midday peak are shown below and compared against the projected 'with development' traffic volumes (Figure 6.6).



2019 Baseline Turning Movements
(inc. Captain Stirling Shopping Centre)



2022 Baseline Turning Movements
(without Captain Stirling Shopping Centre)



Projected 'with development' turning movements

(from 2022 baseline)

Figure 6.7 Observed and modelled turning movements – Stirling Highway / Florence Road

As this result shows, the turning movements at the Stirling Highway / Florence Road intersection under a 'with development' scenario (using the 2022 background traffic baseline) are anticipated to be *less than* the corresponding baseline traffic demand from 2019.

The above result suggests that the previous projections completed for the Nedlands Square, based on 2019 background data, provide a more conservative assessment of future intersection function (than the subsequent 2022 dataset) and have therefore been captured in the following analysis.

6.10 Analysis of Intersections

Consideration has been given to the future traffic impacts of the proposed development and how these are to be accommodated for within the key intersections from which the site is to gain access.

SIDRA analysis has been undertaken of the intersections identified. SIDRA is a computer program that is widely used to model the performance of intersections and provides information on the delays to motorists, queue lengths and the capacity of an intersection to accommodate traffic. For signalised and unsignalised intersections, the intersection degree of saturation (DoS) measures the degree to which a movement at an intersection approaches the capacity for that movement (i.e., the ratio of the demand flow/capacity).

These parameters are defined as follows:

- **Degree of Saturation (DOS):** the ratio of the arrival traffic flow to the capacity of the approach during the same period. The theoretical intersection capacity is exceeded for an un-signalized intersection where DOS > 0.80
- **95% Queue:** the statistical estimate of the queue length up to or below which 95% of all observed queues would be expected.
- **Average Delay:** the average of all travel time delays for vehicles through the intersection. An unsignalised intersection can be considered to be operating at capacity where the average delay exceeds 40 seconds for any movement; and
- **Level of Service (LOS):** is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. The different levels of service can generally be described as shown in Table 6.4.

Table 6.4 Level of Service (LoS) Performance Criteria

LoS	Description	Unsignalised intersection
A	Free-flow operations (best condition)	≤10 sec
B	Reasonable free-flow operations	10-15 sec
C	At or near free-flow operations	15-25 sec
D	Decreasing free-flow levels	25-35 sec
E	Operations at capacity	35-50 sec
F	A breakdown in vehicular flow (worst condition)	≥50 sec

A LoS exceeding these values indicates that the approach exceeds practical capacity; users of the intersection are likely to experience unsatisfactory queueing and delays during the peak hour periods.

6.10.1 Stirling Highway / Florence Road / Boronia Avenue

The following presents the results of the analysis of the Stirling Highway / Florence Road / Boronia Avenue intersection for the post-development scenario, as described in the approved Nedlands Square TIA. Figure 6.8 is a SIDRA layout representation of the intersection. Table 6.5 shows the results of the analysis completed.

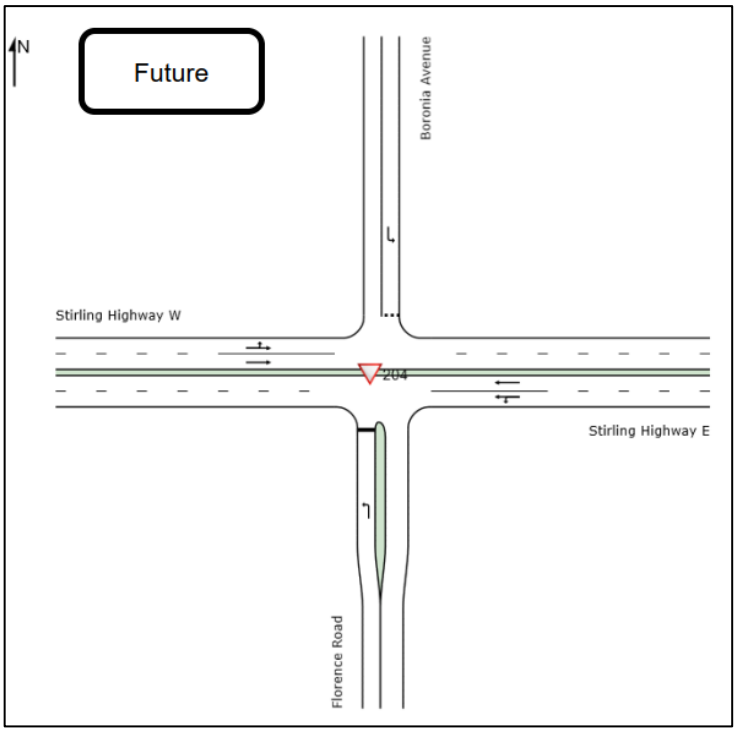


Figure 6.8 Stirling Highway / Florence Road / Boronia Avenue intersection SIDRA layout

Table 6.5 Stirling Highway / Florence Road / Boronia Avenue intersection SIDRA results

Intersection Approach	Movement	Thursday PM Peak				Saturday Peak			
		DoS	Delay	LoS	95% Queue (m)	DoS	Delay	LoS	95% Queue (m)
South: Florence Rd	Left	0.327	15.5	C	24.2	0.425	14.9	B	18
East: Stirling Highway	Left	0.399	5	A	122.4	0.369	5	A	95.2
	Through	0.399	0	A	122.4	0.369	0	A	95.2
North: Boronia Avenue	Left	0.047	8.4	A	1.4	0.034	8.9	A	1
West: Stirling Highway	Left	0.361	5.5	A	0	0.396	5.5	A	0
	Through	0.361	0	A	0	0.396	0	A	0

Post development, even with the inclusion of both the ALDI retail centre and the Nedlands Square development, the Stirling Highway / Florence Road / Boronia Avenue intersection is shown to perform satisfactorily. Note that the developed queue along the Stirling Highway eastern leg is as a result of queuing at Dalkeith Road intersection. This occurs only for a short period per cycle and is not anticipated to adversely impact function.

Notwithstanding, the introduction of the rear laneway as part of LPP 4.2 will provide an additional access point to the site. This will allow for better distribution of traffic to Dalkeith Road, reducing the likelihood of bypass movements through the Nedlands Square development via Stanley Street and reducing the traffic volumes along Edward Street and Florence Street.

6.11 Impact on Surrounding Roads

The WAPC *Transport Impact Assessment Guidelines Volume 4 – Individual Developments* (2016) provides guidance on the assessment of traffic impacts:

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

The proposed redevelopment will result in only a negligible impact on the adjacent road network and is therefore considered to be acceptable from a traffic perspective.

6.12 Impact on Neighbouring Areas

Based on the results of comparison (2019 vs 2022 survey data), the traffic generated by the proposed redevelopment is expected to generate a similar level of impact to that of the historical operation on the Subject Site (the Captain Stirling Shopping Centre). Accordingly, no significant impacts have been identified.

Modification of the access arrangement to/from Stirling Highway as a result of the Nedlands Square development *does* have a redirection effect on vehicles approaching from the west or departing to the east. This is expected to result in a small increase in demand at the Stirling Highway / Dalkeith Road signalised intersection.

The extent of this increase was previously investigated as part of the Nedlands Square redevelopment TIA. No required change to this assessment has been identified.

7 Conclusions

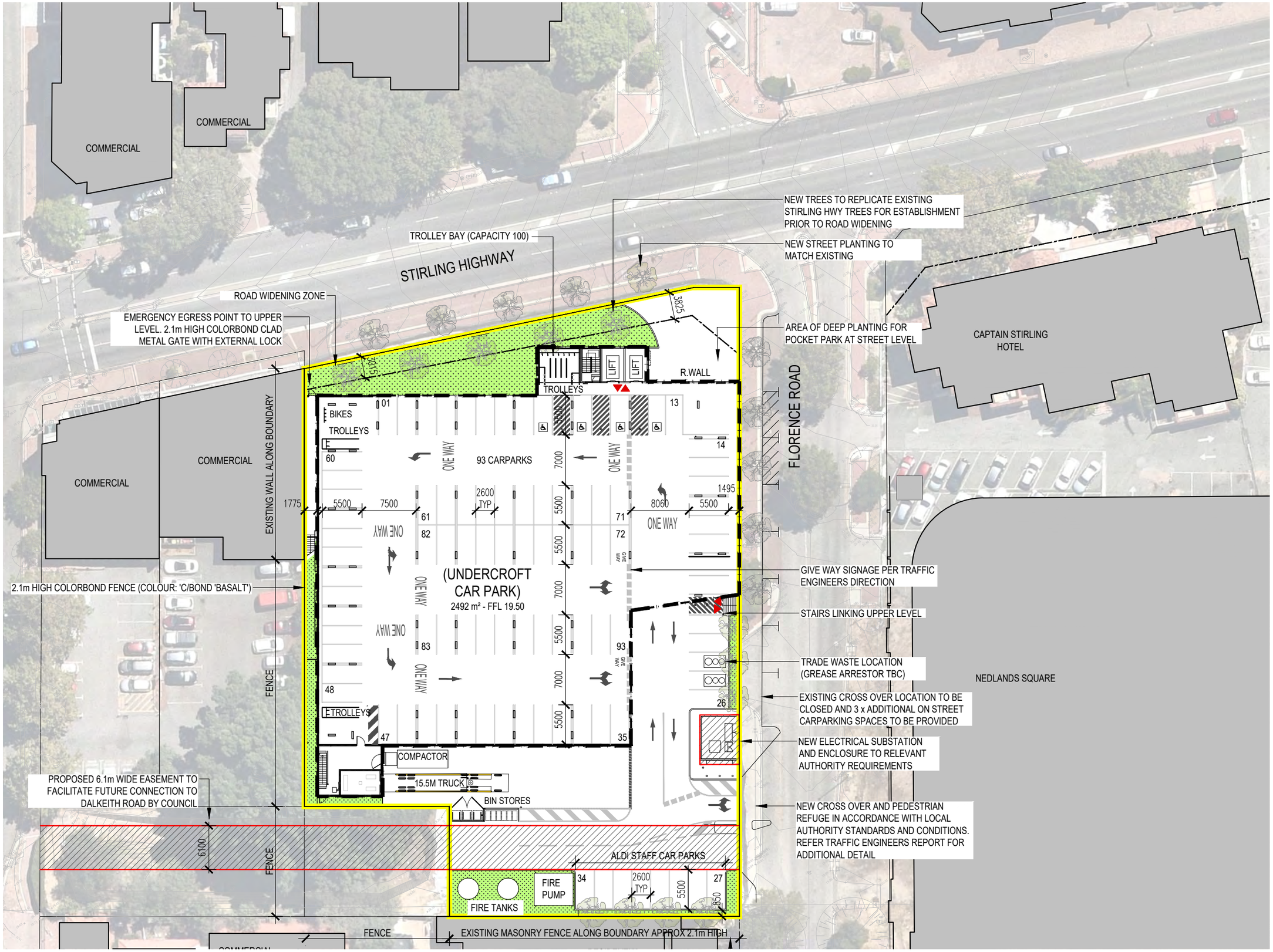
This Transport Impact Assessment has been prepared in accordance with the Western Australia Planning Commission (WAPC) *Transport Assessment Guidelines for Developments: Volume 4 – Individual Development*.

The following conclusions have been made in regard to the proposed development:

- The proposed development is to be redeveloped for a new retail centre comprising an ALDI store and five small-scale retail/commercial tenancies, in the jurisdiction of the City of Nedlands. This represents a marginal increase in retail floor area -
- The site has good access to local public transport, with several bus services terminating within the environs of the subject site.
- Vehicular access point is to be via Florence Road. An access easement has been provided, permitting a rear laneway connecting Florence Road and Dalkeith Road and providing an alternative access point in the future.
- There is good existing pedestrian access at this locality and the public transport services provides for an effective alternative mode of transport.
- Service/delivery vehicle movements have been assessed to and from the proposed loading dock and are considered to be acceptable.
- Modifications to intersection controls along Stirling Highway have been identified through the Nedlands Square Transport Assessment and the Stirling Highway Access Corridor Study (SHACS).
- SIDRA analysis undertaken as part of the approved Nedlands Square development considered the subject site's traffic impacts, and determined that the intersections along Stirling Highway will perform at satisfactory levels post-development once modifications are made.
- The proposed development would have no significant impact on the operation of the nearby road network and intersections. It is therefore considered to be acceptable from a transport perspective.

Development Plans

Appendix A



1 PROPOSED SITE & GROUND FLOOR PLAN
1:500

NOTES

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REV	DATE	DESCRIPTION	DRN	CHKD
-	-	-	-	-

PROPERTY DESCRIPTION	AREA m^2
TOTAL SITE AREA	4438m^2
BUILDING GROSS FLOOR AREA	2744m^2
BUILDING NETT FLOOR AREA	2670m^2
ALDI RETAIL NETT AREA	1099m^2
ALDI BOH NETT AREA	356m^2
ALDI AMENITIES NETT AREA	57m^2
TOTAL ALDI NETT AREA	1512m^2
TRUCK LENGTH	15.50m
CHILLER LENGTH	40m
FORECOURT/BALCONY AREA	406m^2
RETAIL 02	124m^2
RETAIL 03	124m^2
RETAIL 04	74m^2
RETAIL 05	74m^2
RETAIL 06	71m^2
OFFICE/CONSULT	285m^2
TOTAL ANCIL. RETAIL & OFFICE	752m^2
NUMBER OF CAR SPACES	93

PROPOSED ALDI BOUNDARY	
EXISTING STRUCTURES	
DEVELOPMENT BOUNDARIES	

N

CLIENT
ALDI STORES

PROJECT
ALDI NEDLANDS
CORNER OF STIRLING HWY & FLORENCE ROAD
NEDLANDS W.A.

DRAWING
PROPOSED SITE & GROUND FLOOR PLAN

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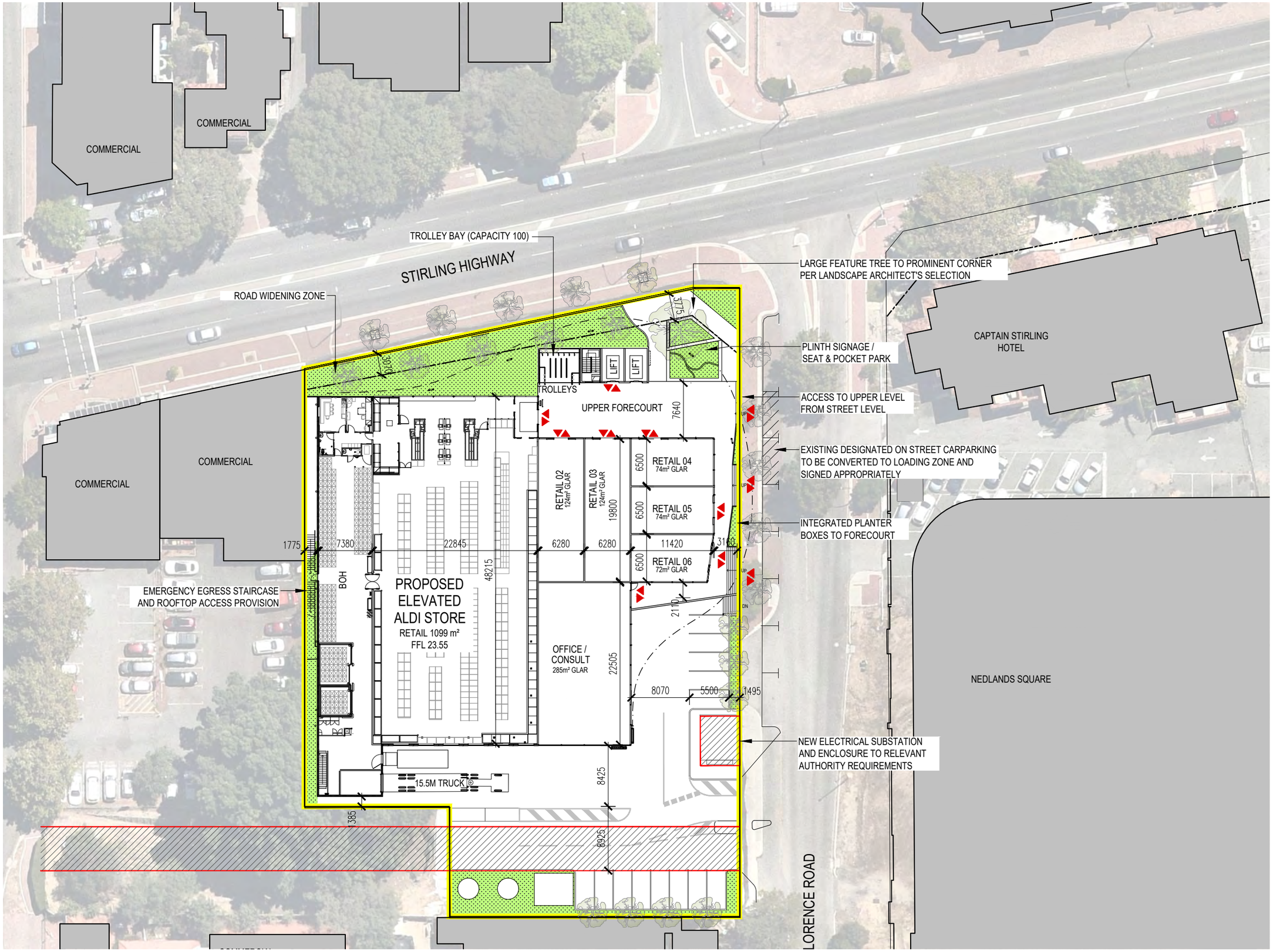

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NUMBER OF CAR SPACES	93

PROPOSED ALDI BOUNDARY	
EXISTING STRUCTURES	
DEVELOPMENT BOUNDARIES	

N

CLIENT
ALDI STORES

PROJECT
ALDI NEDLANDS
CORNER OF STIRLING HWY & FLORENCE ROAD
NEDLANDS W.A.

DRAWING
PROPOSED SITE & FIRST FLOOR PLAN

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1 / - PROPOSED SITE & FIRST FLOOR PLAN
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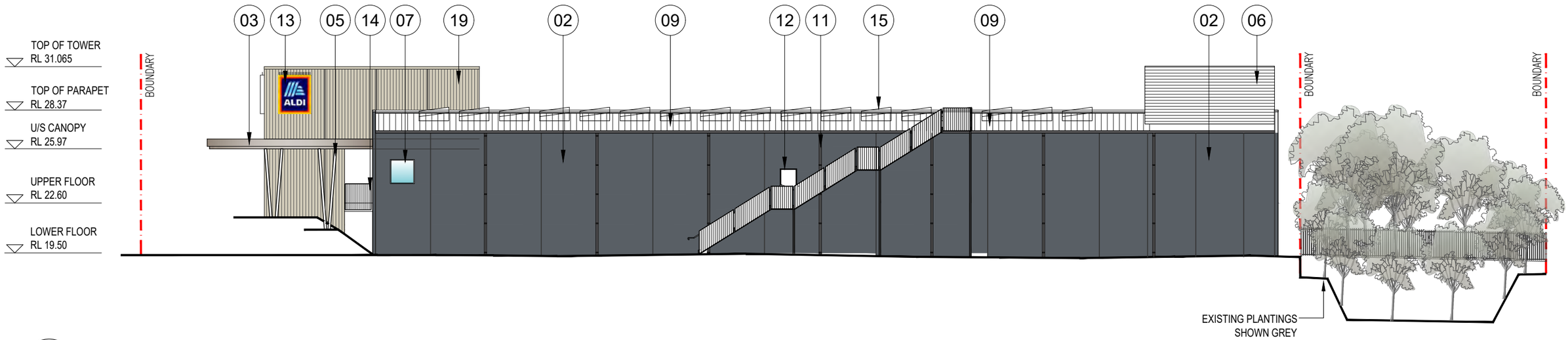
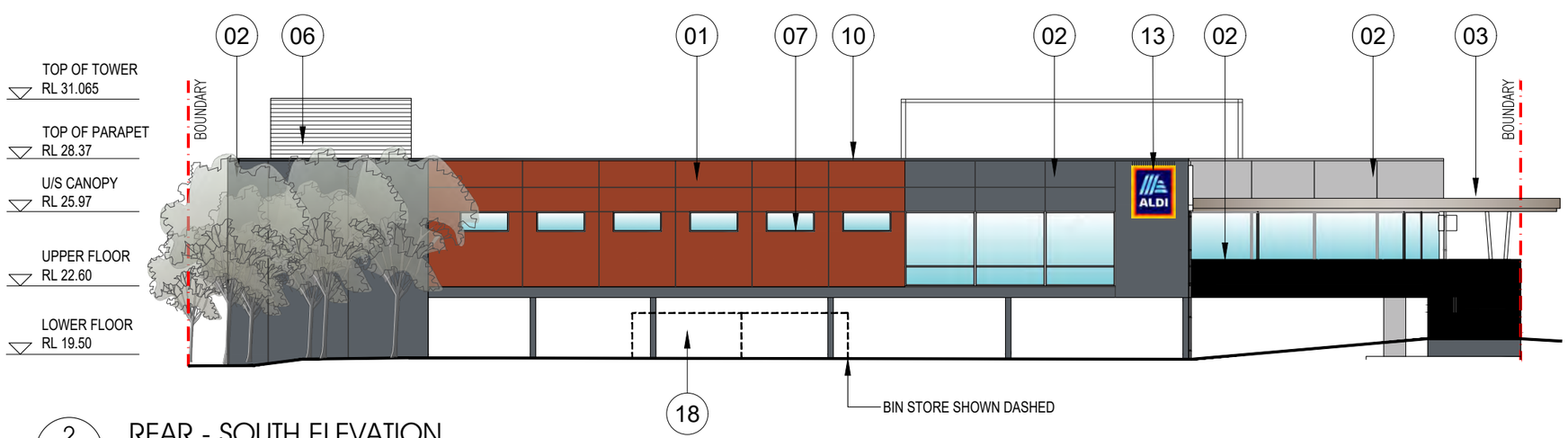


1 - SIDE - WEST ELEVATION
1:250



2 - REAR - SOUTH ELEVATION
1:250

COLOURS AND MATERIALS SCHEDULE

01 - PRECAST RC PANEL, PAINT FINISH DULUX 'FLUORESCENT FIRE'

02 - PRECAST RC PANEL, PAINT FINISH DULUX 'DRIVETIME'

03 - FIBRE CEMENT CLADDING, FLUSHED COLORBOND 'DOVER WHITE'

04 - COMPACTOR DOOR & FRAME DULUX 'BASALT'

05 - EXPOSED METALWORK TO CANOPY COLORBOND 'DOVER WHITE

06 - POWDERCOATED PLANT LOUVERS & FRAME DULUX 'BASALT'

07 - ANODISED ALUMINIUM WINDOW FRAMES NATURAL FINISH

08 - SHOPFRONT, ANODISED ALUMINIUM FRAMES NATURAL FINISH

09 - COLORBOND PROFILED ROOF SHEETING COLORBOND 'SURFMIST'

10 - COLORBOND CAPPING COLOUR PER ADJACENT PRECAST PANEL

11 - COLORBOND RAIN HEAD AND DOWNPIPES COLORBOND 'BASALT'

12 - DOOR & FRAME COLORBOND 'BASALT'

13 - ALDI ILLUMINATED SIGNS

14 - POWDERCOATED STEEL BALUSTRADING DULUX 'DESIGNER WHITE'

15 - SOLAR PANELS MOUNTED ON ROOF FORM

16 - POWDERCOATED STEEL HANDRAIL COLORBOND 'DOVER WHITE'

17 - PANEL LIFT DOOR COLORBOND 'BASALT'

18 - PRECAST PANELS TO BIN STORE, PAINTED DULUX 'DRIVETIME'

19 - ARCHITECTURAL WALL CLADDING STRATCO 'NINELINE PLEAT CLADDING' OR SIMILAIR

20 - INTEGRATED OFF FORM CONCRETE PLANTERS 1100mm AFL. PAINTED WHITE

CLIENT
ALDI STORES

PROJECT
ALDI NEDLANDS
CORNER OF STIRLING HWY & FLORENCE ROAD
NEDLANDS W.A.

DRAWING
PROPOSED ELEVATIONS
SHEET 02

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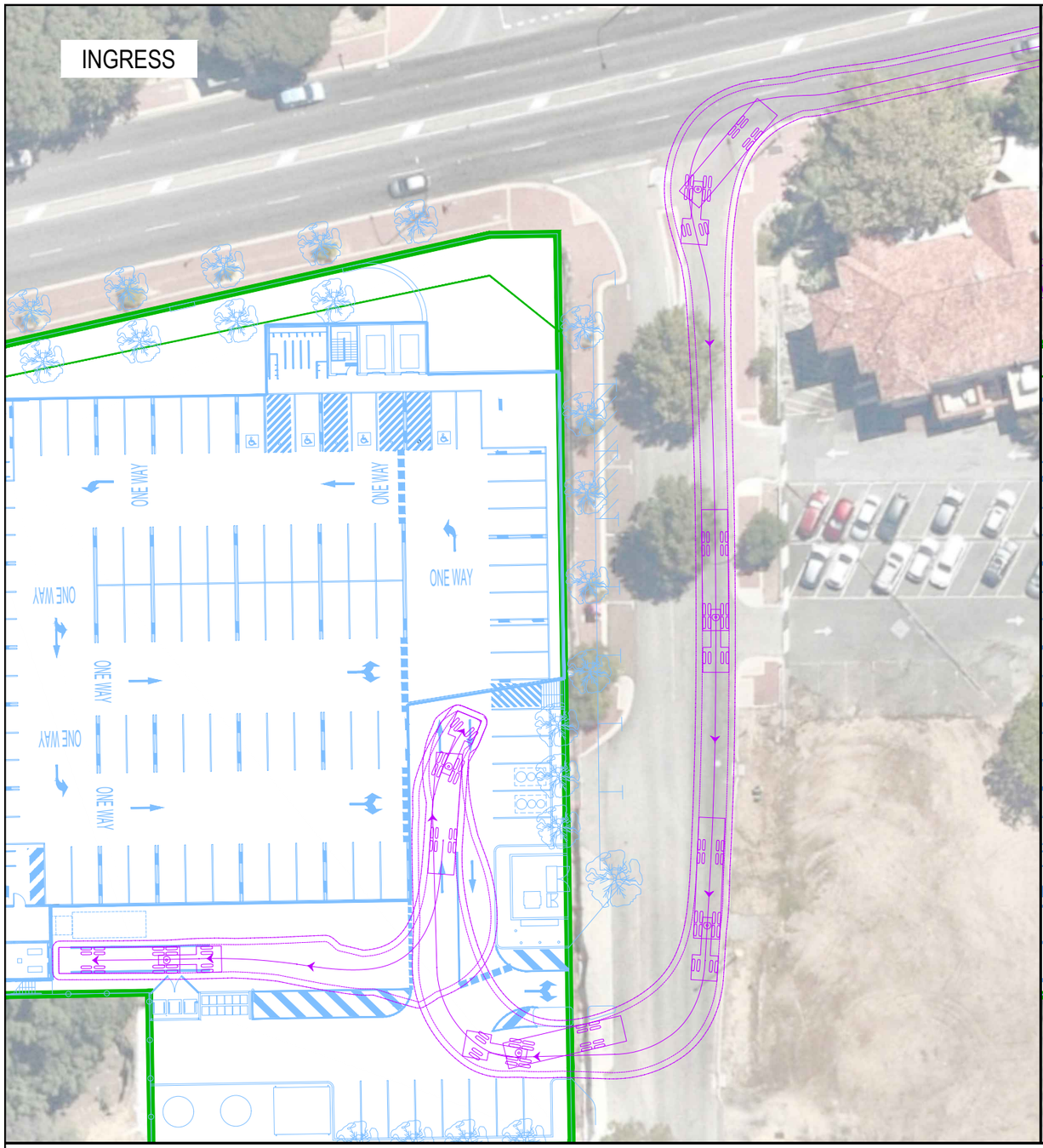
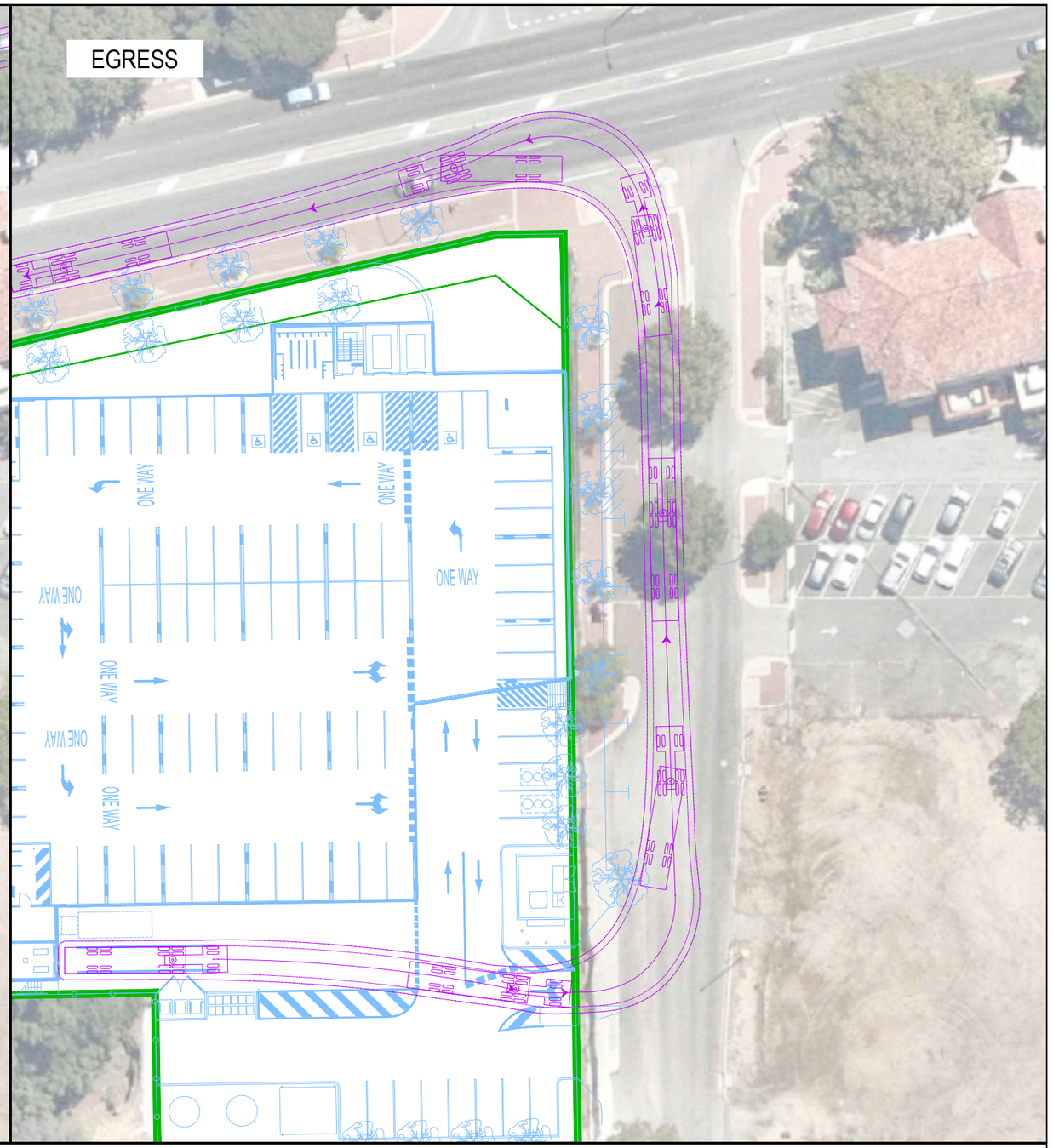
Appendix B

Swept Path Diagrams





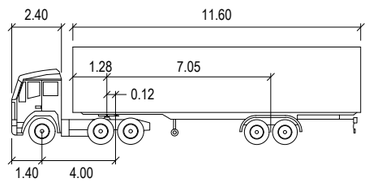
VEHICLE LEGEND

15.6m SEMI 600mm CLEARANCE

15.6m SEMI OVERHANG

15.6m SEMI CENTRELINE

15.6m SEMI (ALDI)



15.6m SEMI TRAILER (ALDI 18 Pallet)

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 25.0
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

PS214079 SK002

15.6m SEMI-TRAILER (ALDI 18 PALLET)
INGRESS / EGRESS MANOEUVRE
F.B. 19.09.2024

0 10 20m

SCALE 1:500 @A3

NORTH

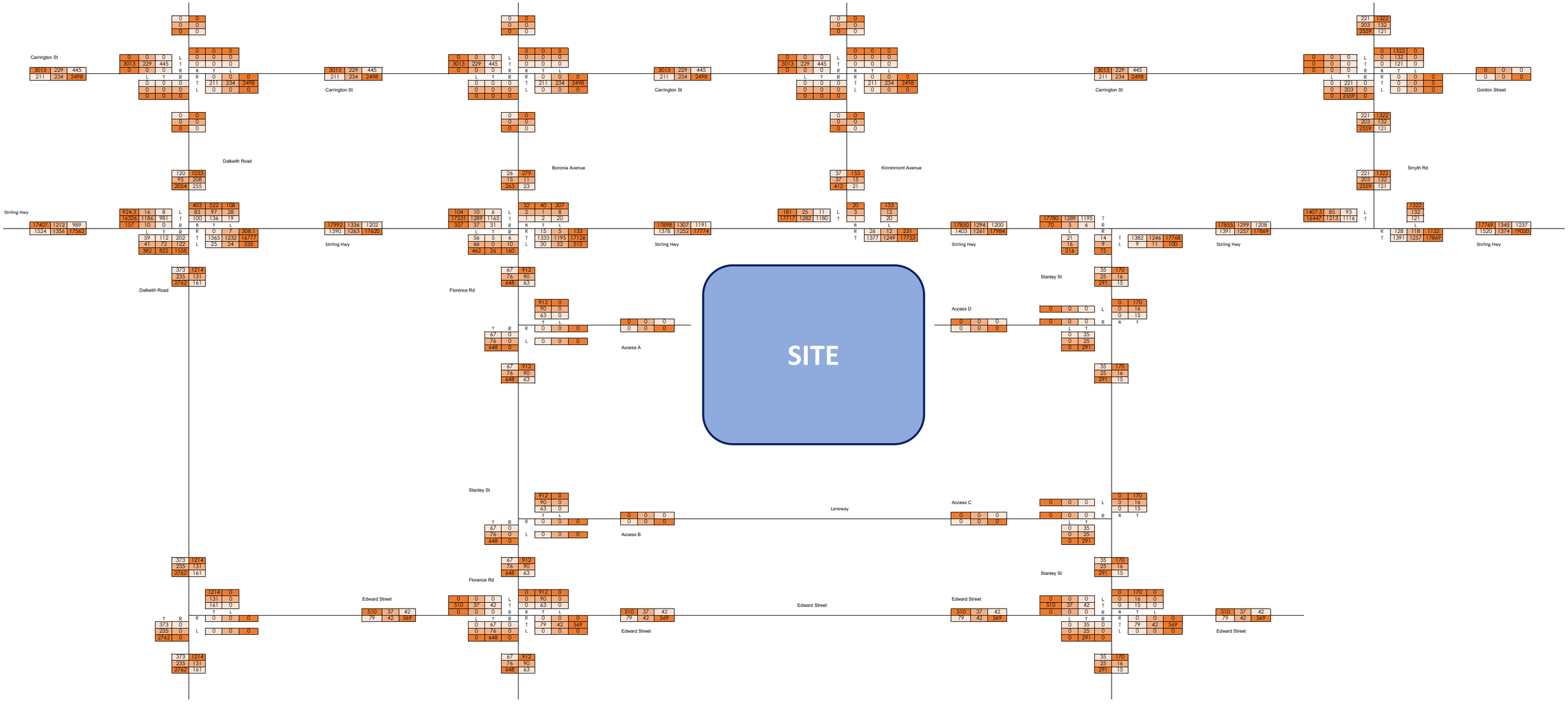
Appendix C

Peak Hour Volume

Background Traffic

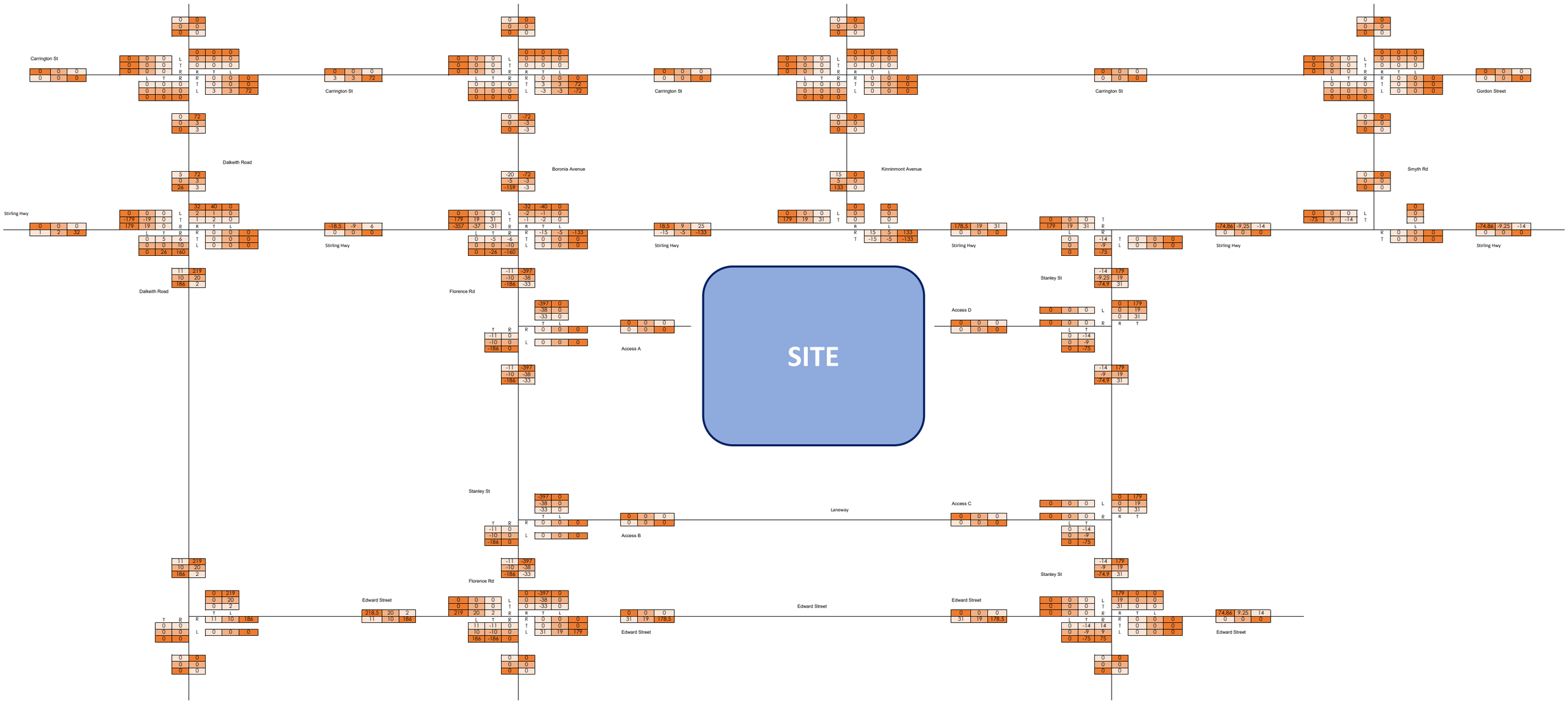
THU PM	17:00-18:00
SAT	12:00-13:00
Daily	

NOTE:
Turn counts are not avalable at intersections along Edward Street and Carrington Street



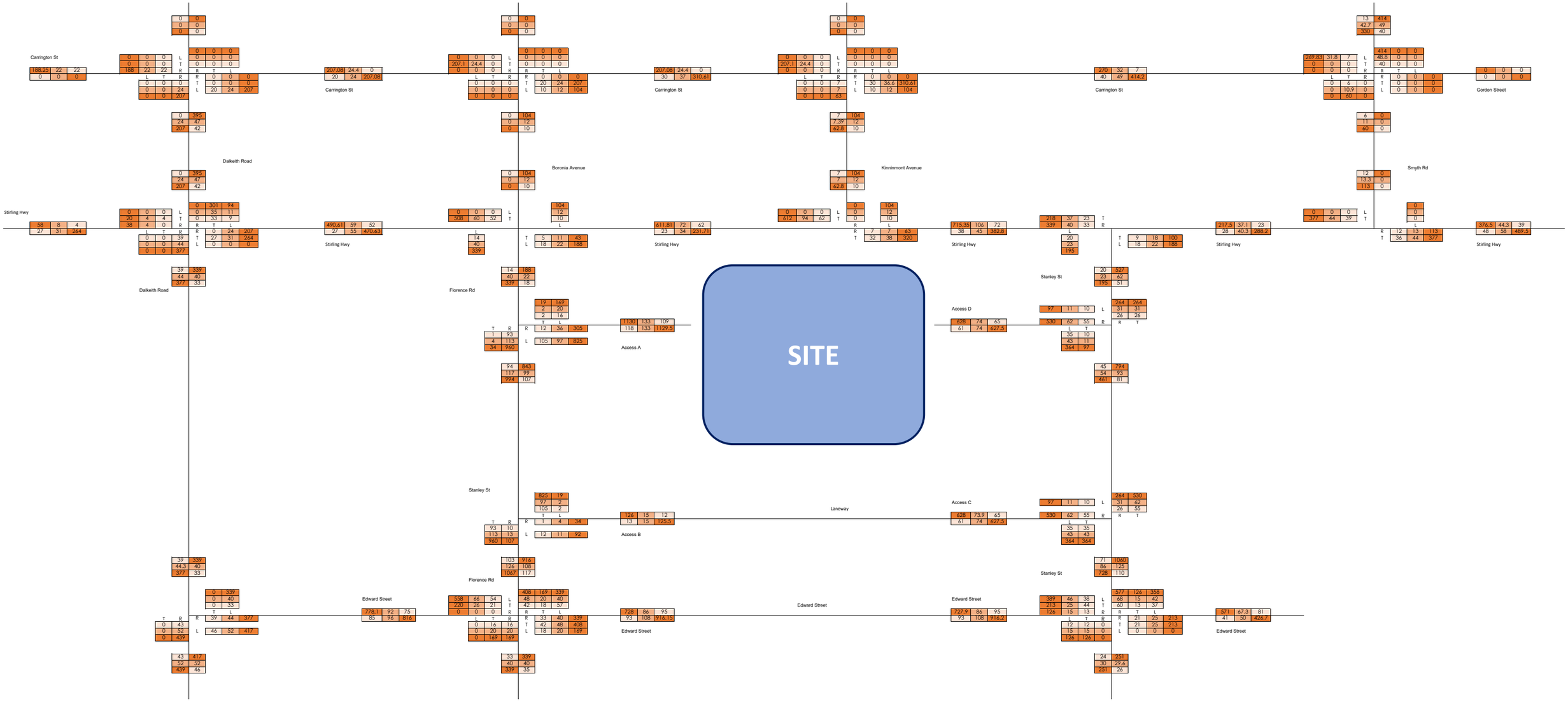
Background Traffic Diversion Due To Florence Road and Stanley Street Turn Restrictions

THU PM	17:00-18:00
SAT	12:00-13:00
Daily	



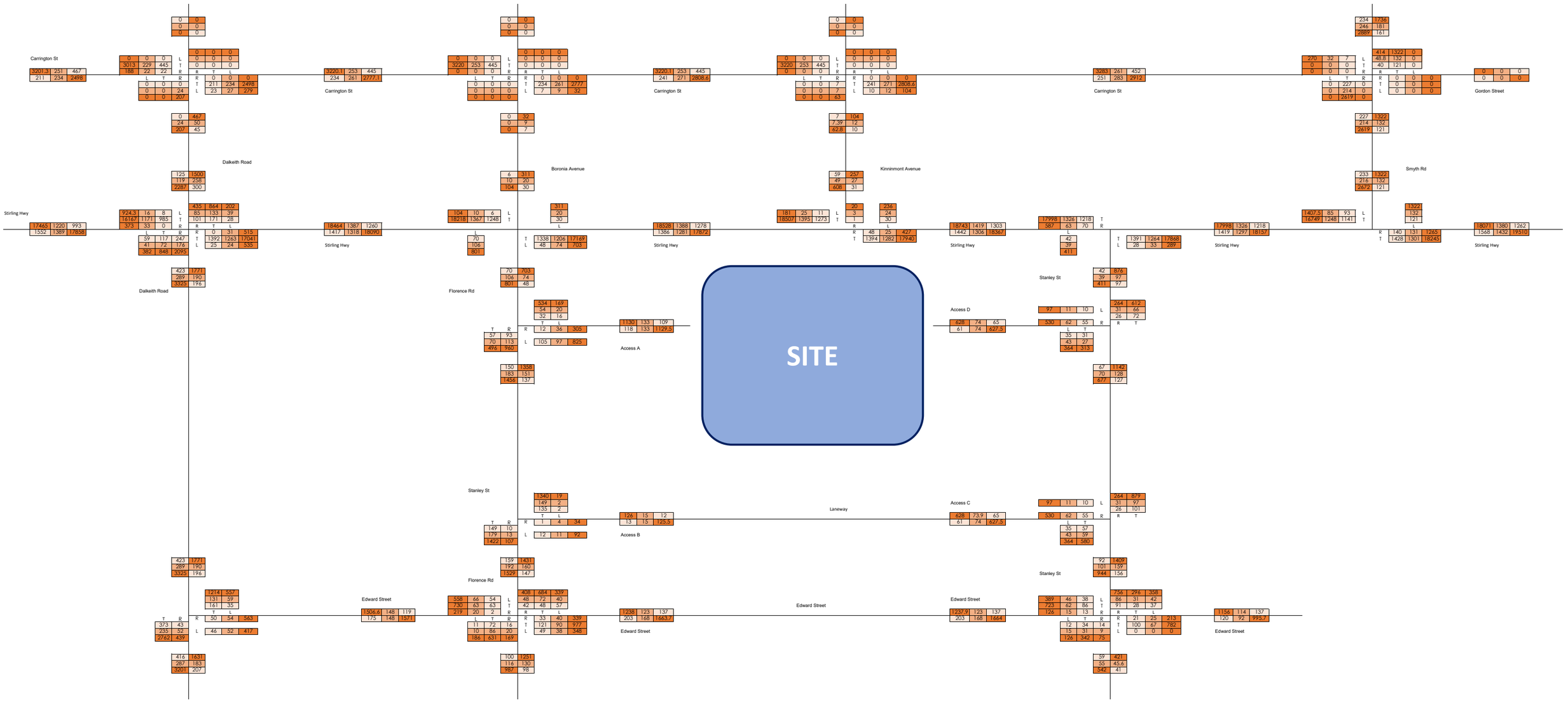
Development Traffic

THU PM	17:00-18:00
SAT	12:00-13:00
Daily	



Background + Development Traffic Total

THU PM	17:00-18:00
SAT	12:00-13:00
Daily	



Appendix D

Comparison of Background Traffic Data

D1 Difference in Turning Movements

Comparison of 2019 to 2022 (Tuesday)

Note that -ve values represent a decrease in traffic demand for that movement

	Florence (SOUTH)			Stirling (EAST)			Boronia (NORTH)			Stirling (WEST)		
Time	L	T	R	L	T	R	L	T	R	L	T	R
0600 - 0615	-3	0	-1	-2	-30	0	-1	0	0	0	-26	-1
0615 - 0630	-1	0	-2	-1	-15	1	0	-1	0	-1	5	-2
0630 - 0645	-6	0	-3	-7	-11	1	-2	0	0	-1	-46	-1
0645 - 0700	-1	0	0	2	-8	1	-3	0	2	1	11	2
0700 - 0715	-6	0	-2	-5	12	0	2	0	0	0	-31	-5
0715 - 0730	-8	0	0	-4	-1	2	1	0	0	-1	-16	-2
0730 - 0745	-2	0	-1	0	-7	2	0	0	1	1	-30	-1
0745 - 0800	-4	0	-2	-7	26	-3	-3	0	0	-1	25	-3
0800 - 0815	-5	0	-2	-6	0	0	-5	-2	1	-1	39	-4
0815 - 0830	-4	0	-1	-7	9	1	0	1	-2	1	53	-9
0830 - 0845	-3	0	-4	-9	-21	4	-3	-2	-1	2	108	-5
0845 - 0900	-8	1	-3	-9	-13	-3	2	0	0	1	100	-2
0900 - 0915	-2	0	-2	-10	-81	3	-1	0	0	0	31	-7
0915 - 0930	-8	0	0	-5	-33	3	-4	1	0	-4	-6	-4
0930 - 0945	-5	0	-2	-4	-20	2	6	0	0	-1	-29	-3
0945 - 1000	-11	0	-1	-5	-16	-1	1	-4	1	0	44	-9
1000 - 1015	-6	0	-4	-10	-41	0	-1	-3	1	-1	-24	-8
1015 - 1030	-8	0	1	-14	-2	-2	2	-1	-2	2	-57	-9
1030 - 1045	-16	0	-4	-9	-26	-1	2	-3	0	0	-12	-7
1045 - 1100	-9	-1	-4	-10	-30	-2	3	-1	2	2	47	0
1100 - 1115	-6	-1	-1	-7	-5	1	1	0	0	1	-10	-3
1115 - 1130	-9	0	-2	-6	-21	3	1	-1	0	0	-9	-7
1130 - 1145	-7	0	-1	-4	4	-2	2	0	0	-3	-6	-6
1145 - 1200	-6	0	-1	-2	10	4	0	0	2	1	4	-11
1200 - 1215	-9	0	-2	-9	29	0	-2	0	-1	-1	24	-7
1215 - 1230	-7	0	-2	-4	-15	-1	1	0	0	0	-28	-2
1230 - 1245	-6	0	0	-7	-4	-1	2	-2	1	-5	-22	-13
1245 - 1300	-5	0	-2	-9	-15	1	-2	0	1	-1	-42	-5
1300 - 1315	-4	0	-2	-4	-7	2	4	-1	0	-2	-52	-9
1315 - 1330	-9	0	2	-6	6	2	1	1	-1	-1	-8	-8
1330 - 1345	-9	0	-3	-4	-16	-3	3	-1	1	2	10	-7
1345 - 1400	-4	0	0	-8	37	0	2	0	-1	2	-6	-2
1400 - 1415	-2	0	1	-10	-1	2	0	0	1	-1	18	-4
1415 - 1430	-2	0	0	-10	-16	-1	3	0	-1	-1	-33	-5
1430 - 1445	-10	0	-1	-6	-10	0	-1	0	0	-6	-4	-6
1445 - 1500	-13	-2	-2	-7	-1	1	-1	-1	0	-1	10	-14
1500 - 1515	-4	0	-1	-6	25	1	3	0	0	2	16	-3
1515 - 1530	-9	-1	-1	-8	26	2	-1	0	0	0	-29	-6
1530 - 1545	-8	0	-2	-7	-15	2	4	-1	-1	2	-28	-6
1545 - 1600	-11	0	-2	-9	-14	5	0	0	0	-1	11	-3
1600 - 1615	-3	0	0	0	18	0	1	0	-1	2	-16	-3
1615 - 1630	-10	-1	-2	-6	-42	-2	1	0	0	-3	-40	-5
1630 - 1645	-8	0	0	-3	12	-7	-3	-2	0	-1	-23	-9
1645 - 1700	-3	0	0	-6	-13	3	3	0	0	-2	-13	2
1700 - 1715	4	0	-1	-4	61	1	-2	2	1	-3	-34	-3
1715 - 1730	-11	0	0	-1	-30	-1	0	-1	0	3	23	-3
1730 - 1745	-7	2	0	-5	6	-1	-4	0	0	3	-41	3
1745 - 1800	-6	0	0	-11	-17	5	-2	-1	0	-1	-22	-4

Comparison of 2019 to 2022 (Wednesday)

Note that -ve values represent a decrease in traffic demand for that movement

	Florence (SOUTH)			Stirling (EAST)			Boronia (NORTH)			Stirling (WEST)		
Time	L	T	R	L	T	R	L	T	R	L	T	R
0600 - 0615	-2	0	-2	-4	-8	1	0	-1	0	2	2	-4
0615 - 0630	-1	0	-5	-3	8	1	-3	0	-2	1	-47	-3
0630 - 0645	1	0	0	-6	21	0	0	-1	-1	0	-40	-2
0645 - 0700	-5	-1	-4	-2	-2	-2	-3	-1	0	0	-39	-7
0700 - 0715	-4	0	-1	-3	-10	-1	0	0	0	-1	9	-9
0715 - 0730	-1	0	-3	-1	18	1	1	0	0	2	1	-4
0730 - 0745	1	0	0	-7	33	1	0	2	1	-3	15	-5
0745 - 0800	-3	0	0	0	15	4	-6	-1	1	2	-6	-6
0800 - 0815	-4	0	-2	-4	-1	1	0	1	0	0	12	-6
0815 - 0830	-7	0	-1	-5	-11	5	3	0	0	-1	15	-3
0830 - 0845	0	0	-1	-5	18	1	0	-1	0	1	18	-3
0845 - 0900	-10	0	-2	-4	-64	0	10	0	-1	-2	-13	-5
0900 - 0915	-3	0	0	-4	-49	0	-2	-1	0	-1	-25	-2
0915 - 0930	-8	0	-1	-7	-28	-1	-4	0	0	2	22	-5
0930 - 0945	-1	0	-2	-4	-15	1	1	0	1	0	-22	0
0945 - 1000	-10	0	-2	-6	-10	1	-1	0	-2	-3	-12	-2
1000 - 1015	-8	0	-4	-7	-46	-2	-2	-1	0	0	-7	-2
1015 - 1030	-4	0	-3	-13	-44	-1	-4	2	0	0	30	-4
1030 - 1045	-7	0	-4	-5	-34	0	1	1	2	1	-31	-4
1045 - 1100	-11	-2	-2	-11	23	-1	0	0	0	4	-72	-5
1100 - 1115	-9	-1	-2	-2	7	1	-1	-1	-2	0	-33	-2
1115 - 1130	-6	0	-1	-9	-61	0	-1	0	3	-5	-30	-3
1130 - 1145	-1	0	1	-4	-5	-1	0	0	0	0	-2	-5
1145 - 1200	-15	0	-2	-3	9	-2	-4	0	4	-2	-82	-6
1200 - 1215	-17	0	-1	-15	-7	2	2	-1	0	0	10	-6
1215 - 1230	-15	0	-3	-5	21	-1	2	-2	-1	0	-73	-3
1230 - 1245	-4	-1	-3	-6	1	0	3	0	1	-1	-19	-2
1245 - 1300	-8	-1	-2	-6	-24	0	-3	-1	-1	2	-37	-5
1300 - 1315	-8	-2	-1	-14	41	0	-6	-1	0	1	-2	-4
1315 - 1330	-12	0	1	-4	16	0	3	-2	0	-2	-27	-4
1330 - 1345	-3	0	0	-3	-19	2	1	-2	-3	0	10	-3
1345 - 1400	-7	1	-4	-9	10	-2	0	0	-2	0	-4	1
1400 - 1415	-5	-1	-5	-11	-5	3	-1	-2	-1	-1	-51	-9
1415 - 1430	-6	0	-4	-2	19	-1	-1	0	0	0	10	-6
1430 - 1445	1	-1	-3	-7	-34	3	0	-1	0	1	41	-2
1445 - 1500	-8	0	-1	-7	28	1	-1	-2	0	-1	8	-6
1500 - 1515	-9	-1	0	-7	61	-5	1	0	-1	-1	8	-6
1515 - 1530	-4	0	-2	-1	12	0	-1	-1	1	-1	29	-5
1530 - 1545	1	0	0	-1	63	0	5	0	-2	1	15	1
1545 - 1600	-3	-1	0	-7	15	2	4	-1	0	2	-21	-4
1600 - 1615	-8	0	-4	-17	-43	1	-2	0	0	0	2	-2
1615 - 1630	-1	-1	0	-4	-2	-2	-3	1	0	-2	-2	-6
1630 - 1645	-1	-1	1	-3	17	1	1	-1	-1	-1	-41	-3
1645 - 1700	0	0	-2	-9	-13	-3	-4	0	-1	2	8	-8
1700 - 1715	-10	0	-1	-2	-6	-2	4	0	0	-1	-36	-1
1715 - 1730	-4	1	-2	-3	5	-2	2	0	1	1	-32	-7
1730 - 1745	2	-1	-4	0	-11	2	-3	1	0	2	-27	-5
1745 - 1800	-7	-1	-2	-4	41	1	1	0	-1	-1	-5	-1

ONE WAY
ONE WAY

PART C – CITY OF STIRLING

1. Declarations of Due Consideration

2. Disclosure of Interests

3. Form 1 DAP Applications

3.1 Lot 6 (308) Main Street, Balcatta – Child Care Premises – DAP/24/02749

3.2 Lot 15 (118) Flora Terrace, North Beach – Mixed use development – DAP/24/02744

4. Form 2 DAP Applications

Nil.

5. Section 31 SAT Reconsiderations

Nil.

LOT NO. 6 (HOUSE NUMBER 308), MAIN STREET, BALCATTA – CHILD CARE PREMISES

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Metro Inner DAP
Local Government Area:	City of Stirling
Applicant:	Lateral Planning
Owner:	Happy Felix Balcatta Pty Ltd
Value of Development:	$3 million ☐ Mandatory (Regulation 5) ☒ Opt In (Regulation 6)
Responsible Authority:	City of Stirling
Authorising Officer:	Amanda Sheers, Director Planning and Development
LG Reference:	DA24/1064
DAP File No:	DAP/24/02749
Application Received Date:	19 August 2024
Report Due Date:	5 December 2024
Application Statutory Process Timeframe:	90 Days, with an additional 34 days agreed between the Applicant and City of Stirling
Attachment(s):	1. Development Application Plans (received 22 October 2024) 2. Aerial Location Plan 3. Metropolitan Region Scheme Zoning Map 4. City of Stirling Local Planning Scheme No.3 Zoning Map 5. Applicant's Original Planning Report received on 19 July 2024 6. City of Stirling Planning Assessment 7. Applicant's Final Submission: a. Revised Submission received 22 October 2024 b. Transport Impact Statement prepared by Archer Consultants Pty Ltd received 23 August 2024 c. Acoustic Report prepared by Herring Storer Acoustics received 23 August 2024 d. Applicant's Landscaping Plans prepared by Nature Play Solutions received 22 October 2024

	8. City of Stirling Design Review Panel (DRP) Report dated 24 October 2024 9. External Agency Referral Responses a. Department Planning Lands and Heritage received 25 November 2024 b. Water Corporation 23 October 2024 10. Applicant's Response to Public Consultation received on 2 December 2024	
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 Inner Development Assessment Panel resolves to:

> **Approve** DAP Application reference DAP/24/02749 and accompanying plans as listed in Condition 3 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 Stirling Local Planning Scheme No. 3, for the proposed Child Care Premises on Lot 6, House Number 308, Main Street, Balcatta 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.

3. The development is to comply in all respects with the attached approved plans, as dated, marked and stamped, together with any requirements or modifications required as detailed thereon by the Metro Inner DAP. The plans approved as part of this application form part of the development approval issued are listed below:

DRAWING TITLE	Revision	Date	Drawing Number	Drawn By
Proposed Site Plan	C	26/09/2024	DA01	Hindley & Associates P/L

Survey Overlay/Levels/Demolition Plan	C	26/09/2024	DA02	Hindley & Associates P/L
Proposed Floor Plan	C	26/09/2024	DA03	Hindley & Associates P/L
Proposed Elevations	C	26/09/2024	DA04	Hindley & Associates P/L
Proposed Boundary Elevations & Sections	C	26/09/2024	DA05	Hindley & Associates P/L
Perspective Views	B	26/09/2024	DA06	Hindley & Associates P/L
Perspective Views	B	26/09/2024	DA07	Hindley & Associates P/L
Perspective Views	B	26/09/2024	DA08	Hindley & Associates P/L
Proposed Roof Plan	B	26/09/2024	DA09	Hindley & Associates P/L
Main Street Elevation	B	26/092024	DA10	Hindley & Associates P/L
Location Plan	C	Oct 2024	LS101	Nature Play Solutions
Concept Plan – 0 – 3 Years	C	Oct 2024	LS102	Nature Play Solutions
Concept Plan – 2 – 5 Years	C	Oct 2024	LS103	Nature Play Solutions
Shade Plan	C	Oct 2024	LS104	Nature Play Solutions

4. Where outdoor play areas abut residential properties, boundary fencing is to be of masonry construction or modular fencing to a height of 1.8m to minimise noise and vibration. Details of the proposed fencing construction shall be provided as part of the Building Permit submission, to the satisfaction of the City of Striling.

<u>Landscaping</u>

5. Prior to occupation of the development, 10 Advanced Trees must be planted on-site and maintained thereafter, to the satisfaction of the City of Stirling. All Advanced Trees are to be centrally located within the deep soil area free, of buildings, impervious surfaces and other fixed structure, and be open to the air.

6. Prior to occupation of the development, all landscaped areas are to be planted, reticulated and mulched in accordance with the approved landscaping plan

prepared by Nature Play Solutions dated October 2024 and thereafter maintained to the satisfaction of the City of Stirling.

7. Prior to occupation of the development, the Significant Trees indicated on the approved plans for retention must be retained on site with a minimum nine (9) square metres of soil space at ground level free of intrusions, a minimum dimension of two (2) metres around the tree. The tree must be protected during the demolition and construction phase of the development and thereafter maintained. Should the tree die or be removed, it shall be replaced by an advanced tree.

Parking and Access

8. Prior to the occupation of the development, all redundant crossovers shall be removed, and the kerbing and road reserve reinstated at the landowner's expense, to the satisfaction of the City of Stirling.

9. The crossover shall be designed and constructed to the satisfaction of the City of Stirling. Crossovers are to be installed prior to occupation of the development.

10. All parking bays, manoeuvring and circulation areas are to comply with Australian Standards AS/NZS2890.1:2004 Amendment 1 and AS2890.2:2018. The number of ACROD car parking bays and their design and layout are to comply with Australian Standards AS/NZS2890.6:2009 (Off-street Parking for People with Disabilities) and the Building Code of Australia (Volume 1 section D3.5), to the satisfaction of the City of Stirling.

11. Pedestrian pathways providing wheelchair accessibility to all entries to buildings to public footpath and car parking areas are to comply with Australian Standards AS/NZS1428.3-2009 (Design for access and mobility – General requirements for access – New building work), to the satisfaction of the City of Stirling.

12. Prior to the occupation of the development, the car parking areas as shown on the approved plans shall be laid out and made available for use. The car parking shall thereafter be retained and available for the life of the development. to the satisfaction of the City of Stirling.

13. Prior to the occupation of the development, a minimum of two (2) bicycle parking bays shall be provided on site. The design and construction of the bicycle bays shall be in accordance with Australian Standards AS 2890.3:2015 Parking Facilities Part 3: Bicycle Parking, to the satisfaction of the City of Stirling.

Acoustics and Operation

14. The operational details outlined in the Development Application Report prepared by Lateral Planning dated 15 May 2024 forms part of this approval, and shall be implemented for the life of the development, to the satisfaction of the City of Stirling, specifically:

    a. The Child Care Premises shall be limited to a maximum number of 94 children and 19 staff on-site at any one time.
    b. No part of the Child Care Premises shall operate outside of the hours of 6.30am and 7.00pm, Monday to Friday, or on Public Holidays.

c. Customer arrival and departure is limited between 7.00am to 6.30pm Monday to Friday.

15. The operational measures identified in the Environmental Acoustic Assessment prepared by Herring Storer Acoustics received 23 August 2024, which forms part of this approval, shall be implemented for the life of the development, to the satisfaction of the City of Stirling, specifically:

    a. Prior to the occupation of the development, certification from a qualified acoustic consultant is to be submitted to the City of Stirling confirming that the noise amelioration recommendations listed in the State Planning Policy 5.4 Noise Management Plan, prepared by Herring Storer Acoustics have been implemented, to the satisfaction of the City of Stirling.

16. All construction recommendations provided in the Environmental Acoustic Assessment prepared by Herring Storer Acoustics received 23 August 2024, are to be implemented and comply with the Environmental Protection (Noise) Regulations 1997.

17. Within three (3) months of the commencement of the Child Care Premises use a noise report prepared by an accredited noise consultant shall be submitted to and approved in writing by the City of Stirling. The noise report confirming noise from the development complies with the Environmental Protection (Noise) Regulations 1997, to the satisfaction of the City of Stirling.

General

18. A Construction Management Plan shall be submitted to and approved by the City of Stirling prior to the commencement of any works. The Construction Management Plan shall include specific details on the management of aspects including, but not limited to, dust, noise, vibration, tree protection zones, waste management, storage of materials, traffic, contractor parking, and site safety/security. The Construction Management Plan shall be complied with for the duration of the construction of the development, to the satisfaction of the City of Stirling.

19. Where located along the street frontage, air conditioning units, ducts and other services shall be screened from view to the satisfaction of the City of Stirling.

20. External lighting shall be positioned so as not to adversely affect the amenity of the locality in accordance with Australian Standard AS/NZS 4282:2019, to the satisfaction of the City of Stirling.

Colours and Materials

21. The colours, materials and finishes of the development shall be in accordance with the details and annotations as indicated on the approved plans which forms part of this approval, to the satisfaction of the City of Stirling.

Waste Management and Services

22. Prior to lodgement of the Building Permit, a detailed Delivery and Waste Management Plan is to be submitted to and approved in writing by the City of

Stirling. The development is to operate in accordance with the approved Waste Management Plan for the life of the development.

Public Art

23. Prior to the commencement of the development, a public art proposal to the value of 1.0% of the construction value shall be submitted to and approved in writing by the City of Stirling.

24. The approved public art proposal shall be completed and installed by the developer prior to the commencement of the use and maintained thereafter for the life of the development, to the satisfaction of the City of Stirling.

Advice Notes

General

1. If an applicant is aggrieved by this determination, there is a right of review under Part 14 of the Planning and Development Act 2005. Any appeal must be lodged within 28 days of the date of the determination with the State Administrative Tribunal.

2. This is a Development Approval under the City of Stirling Local Planning Scheme No.3 and related policies. It is not a Building Permit or an approval to commence or carry out development under any other law. It is the responsibility of the applicant to obtain any other necessary approvals, consents and licences required under any other law, and to commence and carry out development in accordance with all relevant laws.

3. This approval is not an authority to ignore any constraint to development of the land, which may exist through statute, regulation, contract or on title, such as an easement or restrictive covenant. It is the responsibility of the Applicant to investigate any such constraints before commencing development. This approval will not necessarily have regard to any such constraint to development, regardless of whether it has been drawn to the attention of the decision maker.

4. The applicant is responsible for ensuring that all lot boundaries as shown on the approved plans are correct.

5. The development is required to be connected to sewer.

6. All stormwater discharge shall be collected and contained on site. Stormwater must not affect or be allowed to flow onto or into any other property or road reserve.

7. The owner/applicant is advised the Water Corporation sewerage line running near the rear boundary of the site. Approval from Water Corporation may be required. For more information regarding the sewerage pipe please contact Water Corporation on 13 13 95.

Landscaping

8. In reference to the Advanced Trees, an Advanced Tree is defined in Local Planning Policy 6.11 - Trees and Development as: a tree which requires planting in at least a 90 litre container or greater size and which is at least two (2) metres in height and at least two (2) years of age.

Parking and Access

9. The proposed crossover configuration is subject to the approval of the City of Stirling Verge Control Business Unit. A “Crossover Installation Application” is required to be submitted and approved prior to the commencement of the crossover installation.

Public Art

10. In relation to the Public Art condition requirement, please refer to the City of Stirling Developer's Guide to Public Art, the City of Stirling Public Art Masterplan and City of Stirling Local Planning Policy 6.12 - Public Art on Private Land.

    Based upon the estimated cost of development identified on the development application forms, the 1.0% public art contribution will equate to $30,000.

Miscellaneous

11. The development shall operate in general compliance with Standard 3.3.1 – Food Safety Programs for Food Service to Vulnerable Persons.

12. Compliance in all respects with the Food Act 2008 and Food Standards Codes. Completion and submission of the City of Stirling Food Premises Notification Form prior to commencement of business.

13. The applicant must submit a Food Premises Notification-Registration form.

14. The applicant is to contact the City of Stirling Environmental Health Team to arrange a final inspection, prior to commencement of commercial food operations.

15. The premises shall operate in compliance with the *Environmental Protection Act 1986* and *Environmental Protection (Noise) Regulations 1997*.

16. Compliance with *Food Act 2008*, the *Food Regulations 2009*, the Australia New Zealand Food Standards Code and the Australian Standard AS4674:2004 Design, construction and fit-out of food premises.

17. Prior to the commencement of the use, details of the proposed kitchen fit out are to be submitted to and approved in writing by the City’s Environmental Health Team. The following details will be required to support the application:

    i. Two copies of scaled floor plans showing the position of all fixtures and equipment (scale 1:50);
    ii. Two copies of scaled sectional elevation plans showing the position of all fixtures and equipment;
    iii. Finishes of every wall, floor and ceiling;
    iv. Indication of hot and cold water supply and waste water services;

v. Location of all sinks including hand washbasin; and
vi. Details of ventilation and exhaust system servicing the kitchen area.

18. The development site is affected by a road widening requirement in accordance with Land Requirement Plan No. 1.3556. No buildings or structures are to be located within the road widening without the approval of the Department of Planning, Lands and Heritage.

19. Any future subdivision of the property must be consistent with this approval and the lot sizes demonstrated in the application.

Details: outline of development application

Region Scheme	Metropolitan Region Scheme (MRS)
Region Scheme - Zone/Reserve	Urban
Local Planning Scheme	City of Stirling Local Planning Scheme No.3 (LPS3)
Local Planning Scheme - Zone/Reserve	Residential R40
Structure Plan/Precinct Plan	No
Structure Plan/Precinct Plan - Land Use Designation	No
Use Class and permissibility:	Child Care Premises – 'A' use 'A' use means that the use is not permitted unless the Council, or in this instance the Metro Inner DAP, has exercised its discretion by granting planning approval after giving special notice in accordance with Clause 9.4 of LPS 3, which is to be read as a reference to Clause 64 of the *Planning and Development (Local Planning Schemes) Regulations 2015*.
Lot Size:	3,293m^2
Existing Land Use:	Residential
State Heritage Register	No
Local Heritage	☒ N/A ☐ Heritage List ☐ Heritage Area
Design Review	☐ N/A ☒ Local Design Review Panel ☐ State Design Review Panel ☐ Other
Bushfire Prone Area	No
Swan River Trust Area	No

Proposal:

The key components of the proposed development are summarised as follows:

- A single storey Child Care Premises with capacity for 94 children and 19 staff.
- Proposed operating hours of 6:30am to 7:00pm weekdays only.

- Vehicle access and egress proposed from Main Street.
- A total of 21 car parking bays on-site, including one ACROD parking bay and a manoeuvring bay.
- A total of 395m² of landscaping (all deep soil area), including the retention of six mature trees and the planting of 24 new trees onsite.

Background

The subject site is located at Lot 6, House Number 308, Main Street, Balcatta. The proposal is accompanied by an indicative subdivision application which seeks to create two lots, with one lot being the Child Care Premises comprising a 2,093m² lot and a residential lot with an area of 810m^2.

The development site directly abuts Main Street which is a 'District Distributor A' road. The site is subject to road widening requirements of approximately 5 metres, according to Land Requirement Plan No 1.3556. The surrounding properties are primarily one and two storey single and grouped dwellings. There is also a Nursing Home (Juniper St Andrew's Residential Care Facility) on the western side of Main Street.

Legislation and Policy:

The following legislation is applicable to the proposed development.

<u>Legislation</u>

- *Planning and Development Act 2005*
- *Planning and Development (Development Assessment Panels) Regulations 2011*
- *Planning and Development (Local Planning Schemes) Regulations 2015*
- *Metropolitan Region Scheme (MRS)*
- *City of Stirling Local Planning Scheme No. 3 (LPS3)*

<u>State Planning Policies</u>

- State Planning Policy 5.4 – Road and Rail Noise (SPP5.4)
- State Planning Policy 7.0 – Design of the Built Environment (SPP7.0)

<u>Planning Codes</u>

- Residential Design Codes Volume 1 – Part C

<u>Local Planning Policies</u>

The following Local Planning Policies are applicable to the proposed development.

- Local Planning Policy 6.1 – Advertising Signs (LPP6.1)
- Local Planning Policy 6.3 – Bin Storage Areas (LPP6.3)
- Local Planning Policy 6.4 – Child Care Premises (LPP6.4)
- Local Planning Policy 6.6 – Landscaping (LPP6.6)
- Local Planning Policy 6.7 – Parking and Access (LPP6.7)
- Local Planning Policy 6.11 – Trees and Development (LPP6.11)
- Local Planning Policy 6.12 – Public Art on Private Land (LPP6.12)
- Local Planning Policy 6.18 – Public Consultation (LPP6.18)

Consultation:

Public Consultation

The proposed development was advertised for a period of 28 days in accordance with the 'Complex Application' requirements of Clause 64(3) and (6)(a) of *the Planning and Development (Local Planning Schemes) Regulations 2015*.

The consultation period commenced on 16 October 2024 and concluded on 13 November 2024. During the consultation period a total of seven submissions were received all comprising objections. The submissions received during the consultation period and their relative locations are tabled below.

Submissions Received	Within 200m Radius	Greater than 200m Radius	Number of Submissions
SUPPORT	0 (0%)	(0%)	(0%)
OBJECT	4 (57.1%)	3 (42.9%)	7 (100%)
OTHER (Comment)	0 (0%)	0%	0 (0%)

All matters raised in submissions received during the advertising period have been summarised in the table below. Also provided is the number of submissions in which the matter was raised, and the City's response to the matter.

Public Consultation Submissions		
Number of Submissions to raise Issue	**Submission Comment**	**Officer Comment**
7	Concerns relating to traffic and congestion.	The Traffic Impact Statement (TIS) provided in support of the proposed development (refer to Attachment 7b) includes reference to traffic volumes and demonstrates that traffic associated with the use can be accommodated in principle and without prejudice, by the existing adjoining road network.
3	Concerns in relation to insufficient car parking on-site.	The TIS, Planning Report and Operational Management Plan submitted in support of the proposed development provides detailed information regarding the functionality of the proposed car parking arrangement which is supported by the City. This matter is discussed in detail later in this repot.
3	Concerns in relation to proximity to other Child Care Premises	A Child Care Premises use is capable of approval within the 'Residential Zone' subject to satisfying the relevant planning framework. The City's assessment concludes the

Public Consultation Submissions		
Number of Submissions to raise Issue	**Submission Comment**	**Officer Comment**
		development satisfies the provisions of the City's planning framework.
1	Concern regarding noise from the proposed development to surrounding properties.	The development application was accompanied by an Acoustic Report which concludes the use can operate without prejudice to the surrounding properties. Compliance with the submitted Acoustic Report forms part of the City's recommendation for approval. An additional condition of approval recommended to require confirmation that the use operates in accordance with the conclusions of the noise report, with additional confirmation as such to be provided within three months of the use becoming operational.
1	Concern relating to a housing shortfall.	A Child Care Premises use is capable of approval within the 'Residential Zone' subject to satisfying the relevant planning framework. The City's assessment concludes the development satisfies the provisions of the City's planning framework.

Consultation with Government/Service Agencies and Internal Referrals

The proposed development was referred to the following external agencies:

- Department of Planning, Lands and Heritage;
- Water Corporation; and
- Public Transport Authority (PTA).

Relevant responses are incorporated into the recommended conditions of approval and advice notes. Specific commentary regarding the response from the DPLH is provided below.

Department of Planning, Lands and Heritage (DPLH)

The application was referred to the DPLH for comment in accordance with the 'Notice of Delegation - Powers of Local Governments Metropolitan Region Scheme' as Main Street as a Category 2 Other Regional Road. The DPLH comments provided in response to the proposed development dated 25 November 2024 provide no objection to the proposed development, subject to consideration of the following matters:

- Provision for service, delivery, couriers and emergency vehicles.

- Implementation of noise amelioration measures to the proposed development as per SPP 5.4.
- Proximity of Child Care Premises to major roads and major intersections as per Western Australian Planning Commission (WAPC) Draft Position Statement: Child Care Premises.

The development provides suitable access arrangements to cater for service and emergency vehicles to service the development. Although the development does not provide a specific delivery bay, suitable justification has been provided, which is addressed later in the report.

In relation to SPP 5.4, the Applicant engaged Herring Storer Acoustics to undertake a Noise Management Plan. The Noise Management Plan outlined noise amelioration requirements which have been incorporated into the design and has been incorporated into the recommended conditions of approval.

The DPLH's comments refer to the WAPC Draft Position Statement Child Care Premises which states is not desirable for a Child Care Premises to obtain access from a major road or be located within proximity to a major intersection where there may be safety concerns for pedestrians and vehicles. In this regard, the Applicant submitted a TIS in support of the proposed development which concludes the development does not result in any safety concerns regarding the proposed access or traffic volumes on Main Street. The proposed development generates a maximum of 75 trips in the peak period with the proposed setback approximately 155m to the Main Street and Karrinyup Road intersection and therefore will not have any adverse impact on this intersection.

The City has reviewed and supports the submitted TIS, concluding that the development will not result in any adverse safety concerns for vehicles or pedestrians.

As the subject site is affected by road widening as per Land Requirement Plan No 1.3556, an advice note has been included in the City's recommendation to ensure the applicant is aware of the road widening requirements and to ensure no buildings or structures are located within the identified area.

Planning Assessment:

The following matters have been identified as key considerations in the assessment of this application:

1. Proposed Land Use
2. Primary Planning Controls
3. Local Planning Policy 6.4 - Child Care Premises (LPP 6.4)
4. Parking, Access and Waste
5. Public Art
6. City of Stirling Design Review Panel (DRP)

Attachment 6 – City of Stirling Planning Assessment includes an assessment of the proposal against the relevant planning framework where discretion is sought.

1. Proposed Land Use

LPS3 Clause 4.3 and Land Use Permissibility		
Land Use	**Use Class**	
Child Care Premises	A	An 'A' Use may be considered subject to advertising in accordance with the City of Stirling LPS3.

By virtue of the land use permissibility designation 'A', a Child Care Premises in the Residential zone is not permitted unless the decision-maker exercises its discretion by granting approval. The statutory requirement for the application to be advertised has been completed, with all relevant comments received during the public consultation period addressed as detailed in this report.

In considering the appropriateness of the land use, the development is considered against the objectives of the Residential zone as per LPS 3 below:

Residential Zone Objectives	
Objective	**Officer Comment**
a) To provide for residential development at a range of densities with a variety of housing type and size, to meet the current and future needs of the community.	The development is for a commercial use, however the proposed use complements the residential zone without prejudice to the overall supply of housing within the locality.
b) To provide for a range of non-residential uses, which are compatible with and complementary to residential development.	The Child Care Premises provides an essential service for residents within the immediate and wider area. The scale and built form of the proposed Child Care Premises complements the existing residential character of the surrounding area.

In addition it is noted that, the proposed development satisfies the preferred locational criteria of the City's Local Planning Policy 6.4 – Child Care Premises as the development is located fronting a Corridor Class 2 Road (Main Street) as identified by the Local Planning Strategy. The City's assessment concludes that the proposed Child Care Premises use is appropriate and satisfies all relevant provisions of the City's planning framework.

2. Primary Planning Controls

Element	Provisions	Proposed
Building Height	Permitted building height of 8m.	Proposed building height of 6.5m.
Street Setbacks	Primary Street Setback – 4m from the identified future road widening.	Proposed minimum street setback of 5.7m from the identified future road widening.
Side and Rear Setbacks	Minimum 1.5m setback to side and rear boundaries.	<u>Northern Boundary</u> Proposed minimum setback of 18.8m to the future internal northern boundary. <u>Eastern Boundary</u>

Element	Provisions	Proposed
		Proposed minimum setback of 1.5m to the eastern boundary. <u>Southern Boundary</u> Proposed minimum setback of 5m to the southern boundary.
Preferred Child Care Premises Location	• On a private or public-school site; • Within 100m of a Centre identified in the Local Planning Strategy; or • Fronting a Corridor Class 1, Class 2 and Class 3 road as identified in the Local Planning Strategy.	• Proposed Child Care Premises is fronting a Corridor Class 2 road as identified by the City's adopted Local Planning Strategy.
Landscaping and Trees	• 10% Deep Soil Area. • 1.5m landscaping buffer to adjoining properties. • 2m minimum landscaping buffer to the street setback area.	• 19% (395m²) Deep Soil Area provided. • Nil to 0.5m wide landscaping strip to the southern lot boundary – (discretion sought). • 0.9m to 4.8m wide landscaping strip to the western lot boundary – (discretion sought). • 1.6m to 2.4m landscaping buffer to the primary street – (discretion sought).
Parking	• 32 car parking bays.	• 21 car parking bays proposed in lieu of a Local Planning Policy car parking requirement for 32 bays (discretion sought).

Where discretion is sought by the development (as outlined in the table above) detailed commentary is provided within Attachment 6 to this RAR.

3. Local Planning Policy 6.4 - Child Care Premises (LPP 6.4)

The proposed Child Care Premises has been assessed against the provisions of the City's LPP 6.4 (refer to Attachment 6). The development generally satisfies the provisions of LPP 6.4, apart from the following matters for which discretion is sought:

- Fencing design and height within the front setback area
- Variations to the proposed landscape buffer around the site (refer to table above).
- The use of colorbond fencing to southern and eastern side and rear boundary

An assessment of the development against the Objectives of LPP 6.4 is provided below.

LPP 6.4 – Policy Objectives	
Objective	**Officer Comment**
Prioritise the location of Child Care Premises close to activity centres and along urban corridors.	The subject site is located along a District Distributor A category road as per the City's Functional Road Hierarchy and fronts a Corridor Class 2 Road (Main Street) as identified by the Local Planning Strategy.
Ensure new buildings respect the existing or future built form, scale and character of the area.	The proposed development satisfies the relevant built form controls and integrates well with both the existing and future context of the locality.
Provide landscaping to mitigate development impacts on the amenity of the surrounding area.	Significant landscaping and tree planting is proposed, with a detailed landscaping plan provided which includes the retention of six mature trees and the planting of 24 new trees. This landscaping amounts to 19% (395m²) of on-site landscaping, which exceeds the required minimum of 10% (209m²). The proposed landscaping is predominantly located to the street, internal northern and southern lot boundaries, providing a buffer from the development to adjoining properties and improving the visual appeal of the development from Main Street.
Ensure developments in residential areas are located along roads that can carry anticipated traffic volumes and minimises the impact on the function and safety of the local road network.	The proposed Child Care Premises abuts Main Street which is a District Distributor A Category Road with the capacity to accommodate the additional traffic associated with the use as demonstrated by the submitted TIS which has been reviewed and is supported by the City and DPLH.
Ensure Child Care Premises operate in a manner that mitigates the impacts of amenity on people living in nearby dwellings with regard to intensity of use, hours of operation, noise, traffic impacts, light spill, waste management and the provision of facilities. *Require buildings to be designed in a way which minimises the impacts of noise, overlooking, overshadowing, traffic, car parking and access.* *Provide a safe and connected environment for pedestrians both on and around the site.*	The proposed Child Care Premises has been designed to complement the residential character and scale of buildings in the locality. The capacity of the centre, staffing levels, car parking provision, noise attenuation, external lighting, waste management, and access for vehicles and pedestrians has been addressed by the development application and condition setting.

LPP 6.4 discourages the use of colorbond material style boundary fencing for Child Care Premises as this can result in adverse amenity impacts by virtue of noise and vibration from outdoor play activities to adjoining residential properties. To ensure such adverse amenity impacts are avoided to the adjoining residential properties a condition of development approval is recommended to require the construction of fencing of masonry or modular material to ensure the required noise attenuation is provided to not cause undue impact on amenity, consistent with LPP 6.4.

Figure 1 below indicates the sections of fencing which are to be constructed on this manner.

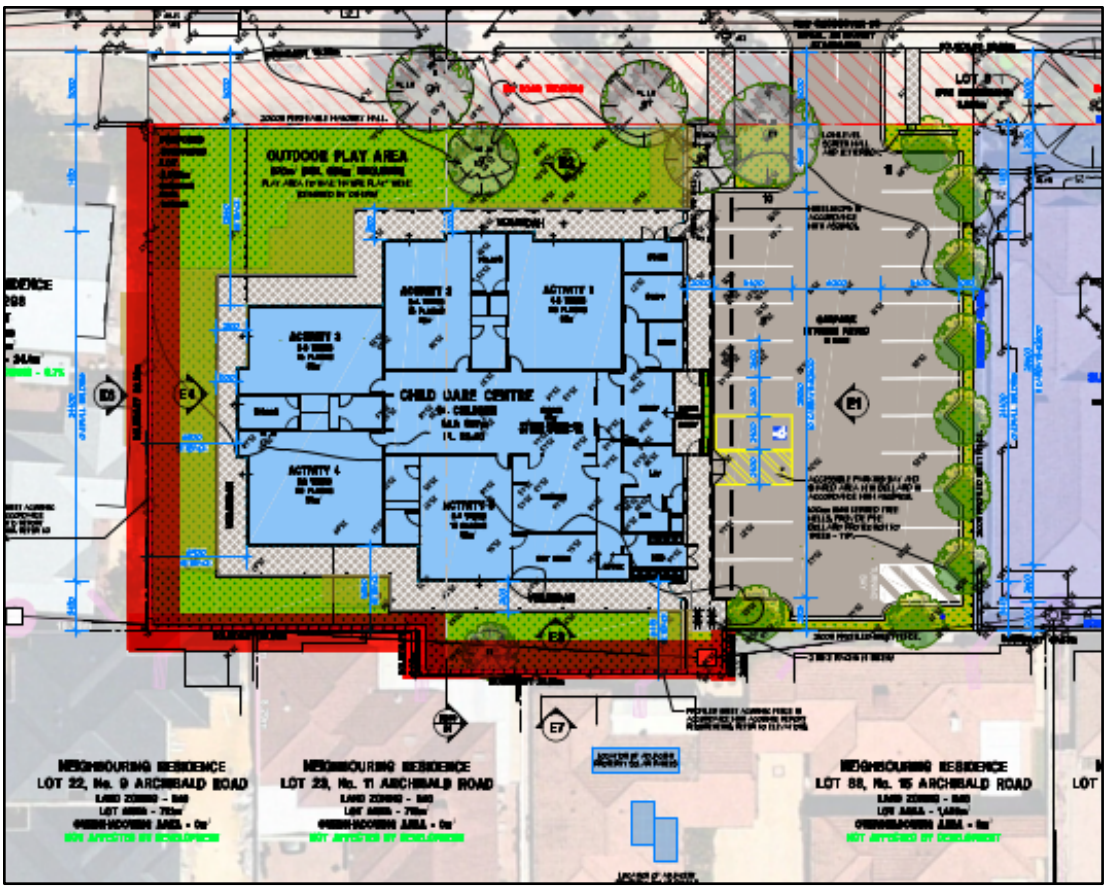


Figure 1 - Portion of dividing fence to be made of masonry or modular material shown in red.

This matter has been raised with the Applicant who has indicated agreement with this approach. As such, the City concludes that the proposed development satisfies the objectives of LPP 6.4.

4. Parking, Access and Waste

<u>Car Parking</u>

The table below provides a summary of the City's car parking requirements for Child Care Premises;

LPP 6.7 Parking and Access			
Land Use	**Policy Rate**	**Proposed**	**Bays Required**
Child Care Premises	1 bay per staff member	19 staff	19 bays
	1 bay per 7 children	94 children	13 bays (13.4)*
		Total Required	32 bays
		Total Provided onsite	21 bays
		Total Shortfall:	11 bays – Discretion sought
*All parking requirements for non-residential development are to be calculated by rounding to the nearest whole number. In the case of exactly 0.5, the requirement for non-residential development shall be rounded down.			

The proposed level of car parking is justified by the Applicant in the submitted TIS and Planning Report which states that nine of the 21 car parking bays proposed will be designated visitor car bays during the peak AM and PM periods. The Applicant's TIS considers that nine bays is sufficient given the assumed dwell time of patrons of 10 minutes per vehicle when attending the Child Care Premises, facilitating up to 54 drop offs and pickups an hour, which exceeds the maximum required drop offs/pickups of 38 and 33 in the morning and afternoon peak periods, respectively. The number of staff onsite will reach its maximums outside of the peak drop off and pick up periods. The DPLH provided comments in relation to the proposed parking and recommended that the parking provision be determined to the satisfaction of the City.

While this development does not propose a dedicated delivery bay, deliveries will be arranged outside of peak hours per the Applicant's Operational Management Plan as to not interfere with the management of parking in peak periods. Further discussion on deliveries is provided in the below Traffic Impact Statement section of this report.

The City has reviewed and supports the submitted TIS and Planning Report, concluding that the development will not result in any adverse safety concerns for vehicles or pedestrians An assessment of the development against the Objectives of LPP 6.7 is provided later in this report.

Traffic Impact Statement

The TIS estimates that the development will generate an additional 75 vehicle trips (in/out) in the morning peak period (8.00am - 9.00am) and 66 vehicle trips (in/out) in the afternoon peak period (3.00pm - 6.00pm).

The City supports the findings of the TIS in respect of traffic generation associated with the development and that the traffic generation can be accommodated by the sounding road network without detriment to road safety.

An assessment of the development against the Objectives of LPP 6.7 is provided below.

Local Planning Policy 6.7 – Parking and Access	
Objective	**Officer Comment**
To ensure development provides an appropriate level of car parking, reflecting supply and demand so that a major parking problem is unlikely to occur;	The Applicant's TIS and Planning Report has been reviewed by the City and provides suitable justification regarding the provision and allocation of customer and staff car parking bays for the development to accommodate the peak demands periods.
To ensure safe, convenient, and efficient access for pedestrians, cyclists, and motorists;	The proposed development has been designed to satisfy the relevant access and parking provisions to provide for safe convenient and efficient access for pedestrians, cyclists and motorists. Though the development does not incorporate a specific delivery bay, deliveries to the site are to be scheduled outside of peak hours as per the Applicant's Operational Management Plan which will allow for two available bays for deliveries. Additionally, given the nature of the development and available car parking bays, the provision of designated loading bay is not considered necessary in this instance. A condition of development approval is recommended for an amended detailed Delivery and Waste Management Plan to address the specific delivery and collection times to appropriately address any potential conflict between staff, visitors, deliveries and waste collection.
To prioritise access by public transport, walking and cycling;	It is considered that Child Care Premises do not generally benefit from alternative modes of transport, however the subject site abuts a bus stop and is located within a high frequency public transport route on Main Street with bicycle racks provided.
To facilitate the provision of adequate bicycle parking and end of trip facilities.	The development provides bicycle parking bays in accordance with LPP 6.7.
To provide a balanced parking supply that does not exceed the capacity of the road network, with sufficient publicly accessible parking;	As per the Applicant's TIS and Planning Report, the provision of car parking is deemed to be sufficient relative to the volume of traffic generated by the proposed development as accommodated by the surrounding road network.

Local Planning Policy 6.7 – Parking and Access	
Objective	**Officer Comment**
To ensure that an oversupply of parking does not occur that discourages alternative forms of transport; and	There is no car parking oversupply.
To ensure the amount of parking is not detrimental to the urban design and character of the locality.	The City's assessment concludes the siting, design and layout of the parking is sufficient and provides an acceptable urban design outcome.

Based on the above, the development satisfies the Objectives of LPP 6.7.

Waste

The Applicant has submitted a Waste Management Plan in support of the development which proposes waste collection options either on site or within the verge area. If waste collection is to be collected on site, it would require waste removal to occur between 7.00am and 7.00pm Monday – Saturday and 9.00am to 7.00pm Sunday in accordance with *Environmental Protection (Noise) Regulations 1997.* Should waste collection occur from the street, the submitted Waste Management Plan has not outlined provisions for a bin pad to facilitate verge pick up.

As both on-site or verge collection are capable of support, the City has recommended a condition of development approval to require an amended detailed Waste Management Plan to be provided which confirms the waste management provision for the development site. The Applicant is aware of this recommended condition setting.

5. Public Art

LPP 6.12 applies to all development with a cost of $2 million and above with a minimum 1% contribution cost of development provided as public art. The cost of the development is $3 million which will result in a requirement of $30,000 public art contribution.

The applicant has indicated the public art proposal will comprise a mural to be located on the solid masonry wall to the front of the proposed development, the final details of which will be managed via a recommended condition of approval.

6. City of Stirling Design Review Panel (DRP)

The role of the City's DRP is to provide design advice and is supplementary to City's planning assessment. The proposed development was reviewed by the City's DRP twice, being 29 August 2024 and on 24 October 2024. A summary of the revised submission against the DRP comments provided at its meeting on 24 October 2024 is in Attachment 8.

The amended plans received on 24 October 2024 address most of the items raised by the DRP. As such, further consideration of the proposed development by the DRP was not deemed to be required.

Conclusion:

The proposed built form satisfies the applicable primary controls, and the design is contemporary and is in keeping with both the existing context of one and two storey Single and Grouped Dwelling developments, whilst providing an essential service for residents within the local and wider area.

The location of the proposed Child Care Premises is consistent with the City's planning framework and the development has been appropriately designed to help mitigate any adverse impacts to the surrounding area.

The proposed development includes the provision of 24 new trees and the retention of six existing street trees, the proposed development provides for significant landscaping whilst providing a suitable buffer between it and the adjoining residential area.

The application is therefore recommended for conditional approval.

Attachment 1 - Development Application Plan recieved 22 October 2024

OVERSHADOWING NOTES

OVERSHADOWING CALCULATION

OVERSHADOWING CALCULATIONS HAVE BEEN BASED OFF THE R-CODES EXPLANATORY GUIDELINES CLAUSE 7.2 - SOLAR ACCESS FOR ADJOINING SITES.

PERTH - LATITUDE 32°S - VERTICAL SUN ANGLE 35°.

EXTENT OF OVERSHADOWING

IN ACCORDANCE WITH THE R-CODES PART 5, CLAUSE 5.4.2. - SOLAR ACCESS FOR ADJOINING SITES ADJOINING PROPERTIES SHALL NOT EXCEED THE FOLLOWING LIMITS:

ADJOINING PROPERTIES CODED R25 AND LOWER - 25% OF THE SITE AREA;
ADJOINING PROPERTIES CODED R30 TO R40 INCLUSIVE - 35% OF THE SITE AREA;
ADJOINING PROPERTIES CODED HIGHER THAN R40 - 50% OF THE SITE AREA.

LOT 501, No. 314 MAIN STREET	NOT AFFECTED BY DEVELOPMENT
LOT 204, No. 298 MAIN STREET	COMPLIANT
LOT 26, No. 17 ARCHIBALD ROAD	NOT AFFECTED BY DEVELOPMENT
LOT 88, No. 15 ARCHIBALD ROAD	NOT AFFECTED BY DEVELOPMENT
LOT 23, No. 11 ARCHIBALD ROAD	NOT AFFECTED BY DEVELOPMENT
LOT 22, No. 9 ARCHIBALD ROAD	NOT AFFECTED BY DEVELOPMENT

CARPARKING

USE	VALUE	CALC	REQUIRED
CHILD CARE	44 CHILDREN	1/5 PLACES	19
TOTAL PROVIDED			21

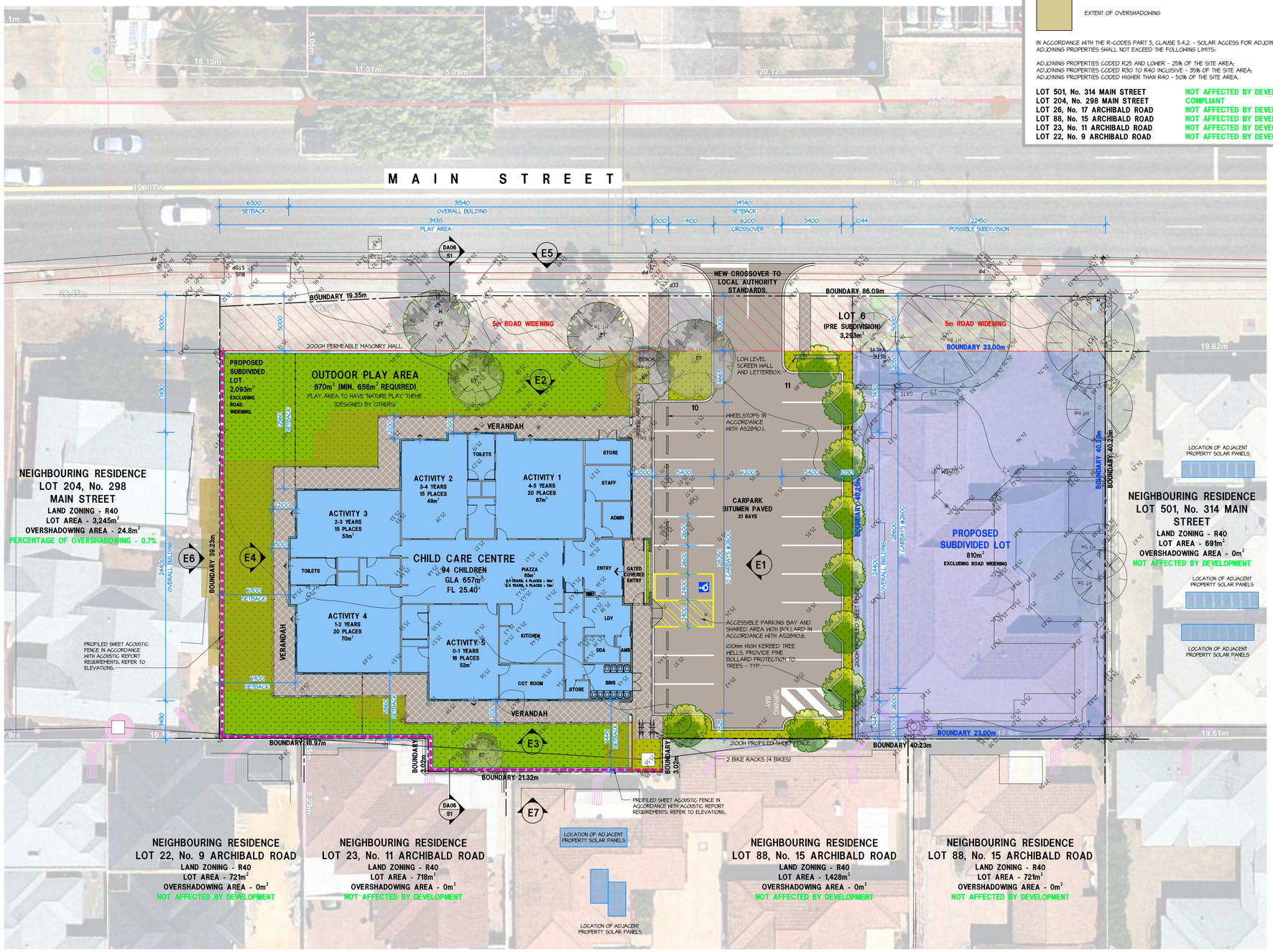
LEGEND:

- HARDSTAND PAVEMENT.
- PAVED FOOTPATHS.
- SELECTED LANDSCAPING. PLAY AREA TO BE DESIGNED BY OTHERS.
- NEW SELECTED SHADE TREE IN ACCORDANCE WITH LOCAL AUTHORITY GUIDLINES.
- EXISTING TREE RETAINED. REFER TO DEMO PLAN FOR EXTENT OF REMOVED TREES.
- EXTENT OF 2100mm HIGH PROFILED SHEET ACOUSTIC WALL. TO BE IN ACCORDANCE WITH ACOUSTIC REPORT REQUIREMENTS. REFER TO ELEVATIONS FOR MORE INFORMATION.

NOTES:

* FLOOR LEVEL AND STORM WATER IS INDICATIVE ONLY. FINAL DESIGN TO BE PREPARED BY A CIVIL ENGINEER AS PART OF BUILDING PERMIT APPLICATION.

* REFER TO SITE SURVEY PLAN FOR DETAILS ON ALL EXISTING INFRASTRUCTURE.



HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

PO BOX 199
NEDLANDS WA 6909

PHONE - 9386 6699
FAX - 9386 6700
admin@hindley.com.au

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HINDLEY & ASSOCIATES P/L AS TRUSTEE FOR HINDLEY TRUST ACN No. 088 989 904

BUILDING DESIGNERS ASSOCIATION OF WA INC

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH
B	08.08.24	REVISED FOR COMMENTS	JJR	CPH
C	26.09.24	ISSUED FOR DRP APPROVAL	CPH	CPH

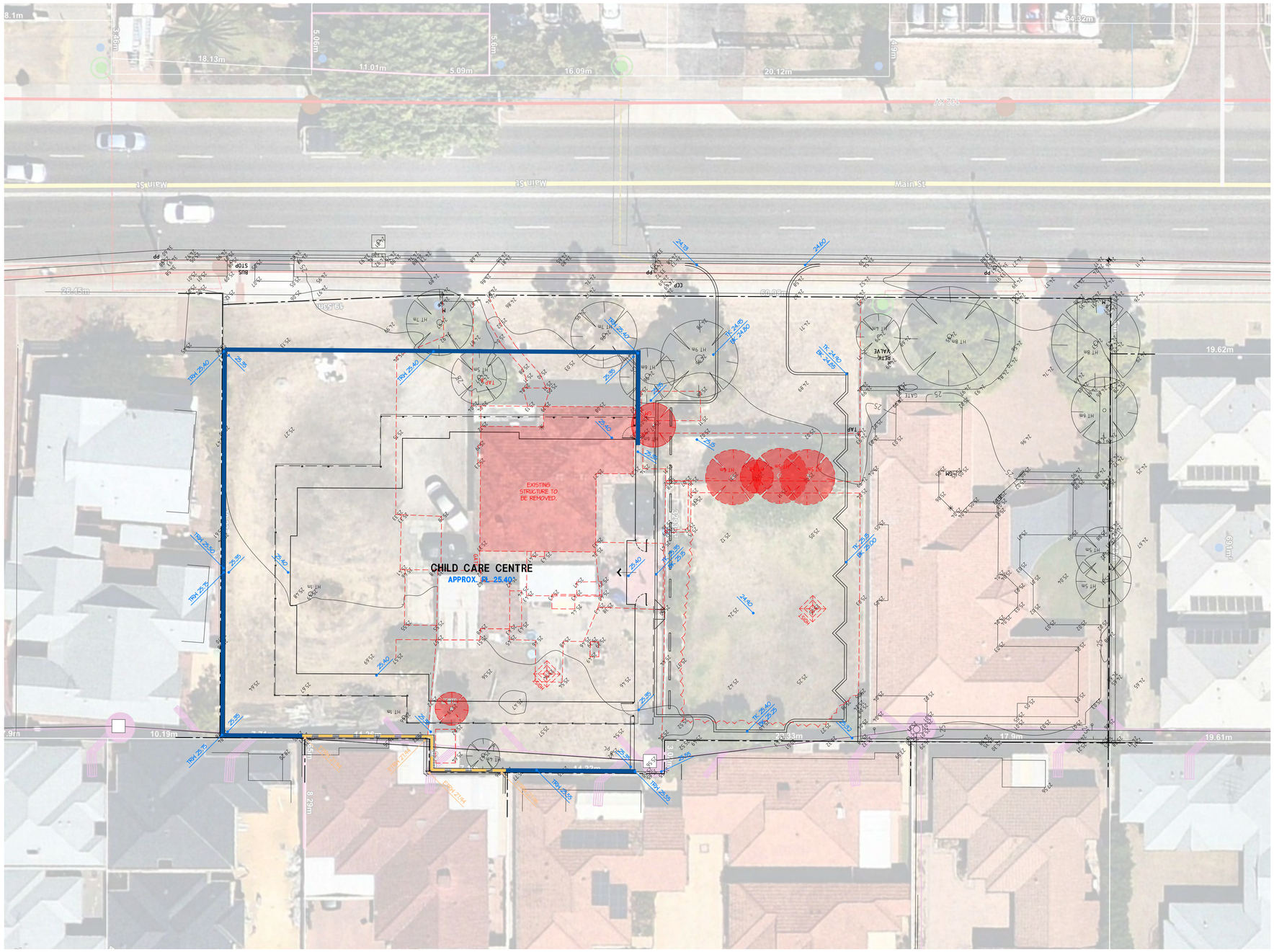
A1 SHEET

PROPOSED SITE PLAN

SCALE 1:200

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date -	30.05.24
Design -	JJR
Drawn -	JJR
Checked -	CPH
Scale -	1:200
Job No. -	0873
Dwg -	DA01
Rev -	C



NOTES:

1. *DESIGN LEVELS ARE INDICATIVE ONLY. FINAL LEVELS AND TO BE DESIGNED BY A CIVIL ENGINEER AS PART OF THE BUILDING PERMIT APPLICATION.
2. SURVEY INFORMATION PROVIDED BY TUSCOM SUBDIVISION CONSULTANTS PTY LTD. REFER TO FEATURE SURVEY DATED 26/11/2021 FOR IDENTIFICATION OF FEATURES AND DETAILS OF DATUM.
3. SEWER LOCATION IS PLOTTED FROM WATER CORPORATION PLANS AND IS TO BE CONSIDERED APPROXIMATE ONLY. ACCURATE LOCATION OF SEWER TO BE VERIFIED PRIOR TO CONSTRUCTION.
4. SURFACE FEATURES AND LEVELS HAVE BEEN SURVEYED TO MEET THE REQUESTED SCOPE OF WORKS ACCURACY. THE SURFACE MAY BE CONTOURED TO DEPICT TOPOGRAPHY OR DEFINED ONLY BY SPOT HEIGHTS. FOR CLARITY ON HARD COPY SOME LEVEL INFORMATION IS NOT SHOWN. REFER TO 3D DIGITAL FILE. ABOVE GROUND INDICATORS (MARKERS) OF UNDERGROUND SERVICES ARE LOCATED WHERE VISIBLE. THIRD PARTIES UTILISING THIS INFORMATION SHOULD CONFIRM THE CAPTURE ACCURACIES MEET REQUIREMENTS PRIOR TO USE.
5. PRIOR TO ANY CONSTRUCTION, EXCAVATION OR DEMOLITION THE RELEVANT SERVICE AUTHORITIES SHOULD BE CONTACTED TO CONFIRM LOCATION OF ALL UNDERGROUND AND NON-VISIBLE SERVICES. THE CONTRACTOR IS TO CARRY OUT A GROUND SCAN TO LOCATE ANY EXISTING SERVICES WITHIN THE SITE AND VERGE AREAS PRIOR TO WORKS.
6. THE DEPICTED PRECALCULATED BOUNDARIES SHALL BE TREATED AS PROPOSED ONLY AND MAY BE SUBJECT TO ALTERATIONS IN DIMENSIONS OR AREAS PRIOR TO DEPOSITED PLAN LODGEMENT AT LANDGATE. THE DEPICTED BOUNDARY LOCATIONS ARE A GRAPHICAL REPRESENTATION ONLY, THEREFORE THEIR POSITION IS NOT GUARANTEED BY MNG UNLESS STATED OTHERWISE. RE-ESTABLISHMENT OF LOT BOUNDARIES BY A LICENSED SURVEYOR IS RECOMMENDED FOR ANY WORKS ON OR ABOUT A BOUNDARY.
7. REFER TO CERTIFICATE OF TITLE FOR ENCUMBRANCES.

LEGEND:

ITEMS TO BE REMOVED / RELOCATED SHOWN IN RED.

TK 10.25
BK 10.00

PROPOSED DESIGN LEVEL.
PREFIX
- 'TK' - TOP OF KERB
- 'BK' - BOTTOM OF KERB
- 'TRW' - TOP OF RETAINING WALL
- 'BRW' - BOTTOM OF RETAINING WALL
- 'ETRW' - TOP OF EXISTING RETAINING WALL

ALL OTHER LEVELS ARE FROM SURFACE OF PAVEMENT.

LOW LEVEL MASONRY RETAINING WALL INCORPORATED INTO BOUNDARY FENCE. EXTENT AND TYPE TO BE CONFIRMED BY CIVIL ENGINEER DURING DETAILED DESIGN STAGE.

EXISTING NEIGHBOURING RETAINING.

HINDLEY & ASSOCIATES
PTY LTD
BUILDING DESIGNERS

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HINDLEY & ASSOCIATES P/L
AS TRUSTEE FOR
HINDLEY TRUST
ACN No. 088 989 904

BUILDING DESIGNERS ASSOCIATION OF WA INC

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH
B	08.08.24	REVISED FOR COMMENT	JJR	CPH
C	26.09.24	ISSUED FOR DRP APPROVAL	CPH	CPH
-				
-				
-				
-				

A1 SHEET

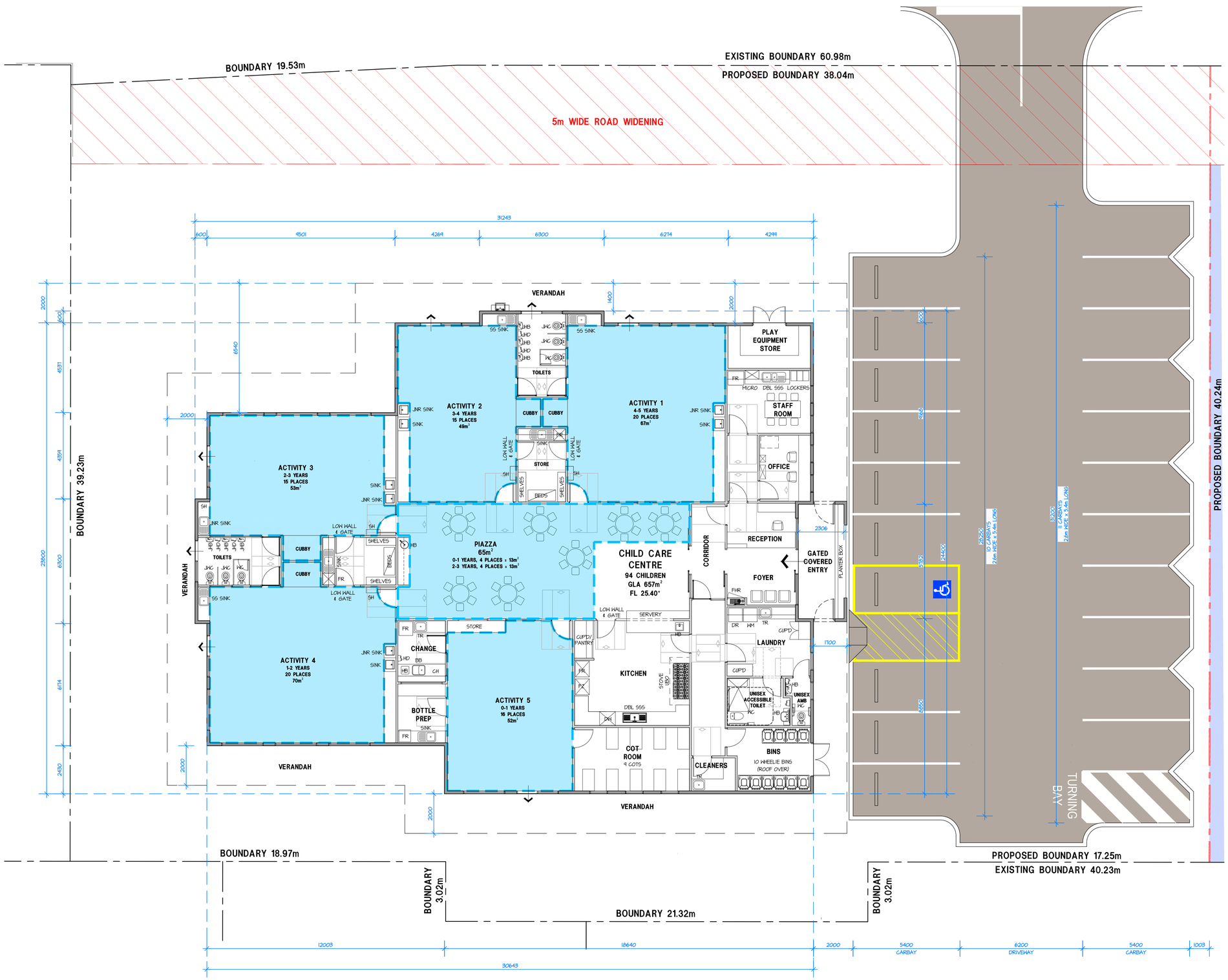
SURVEY OVERLAY/ LEVELS / DEMOLITION PLAN

SCALE 1:200

N

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
Design - JJR
Drawn - JJR
Checked - CPH
Scale - 1:200
Job No. - 0873
Dwg - DA02
Rev - C



LEGEND

FHR	FIRE HOSE REEL	SH	SHELF - INTERNAL - 700 L x 300 W EXTERAL - 900 L x 300 W
TR	WASH TROUGH	FR	FRIDGE
HB	HAND BASIN	FZ	FREEZER
JHB	JUNIOR HAND BASIN	MW	MICROWAVE
WC	TOILET PAN	WM	CLOTHES WASHING MACHINE (TOP LOADER)
JWC	JUNIOR TOILET PAN	DRY	CLOTHES DRYER (CONDENSING)
HD	HAND DRYER	DBL SSS	DOUBLE BOWL STAINLESS STEEL SINK
JHD	JUNIOR HAND DRYER	DW	DISHWASHER (COMMERCIAL)
BB	BABIES BATH	STOVE	STOVE TOP (900mm 6 ZONE)
CH	CHANGE TABLE	UBO	UNDER BENCH OVEN (900mm)

HINDLEY & ASSOCIATES
PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
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HINDLEY TRUST
ACN No. 088 989 904

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A1 SHEET

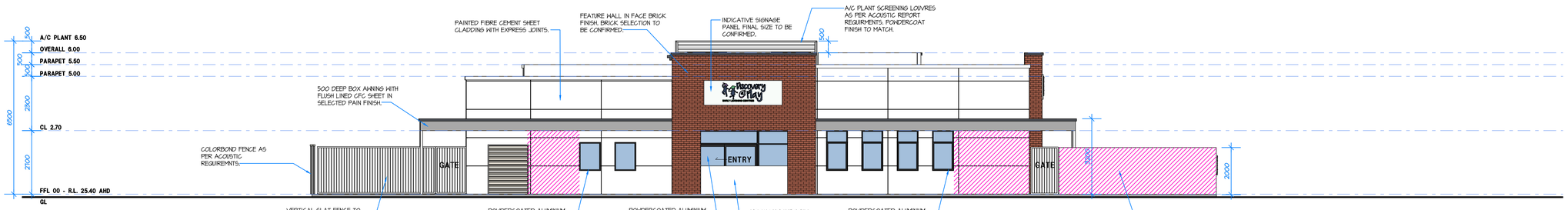
PROPOSED FLOOR PLAN

SCALE 1:100

N

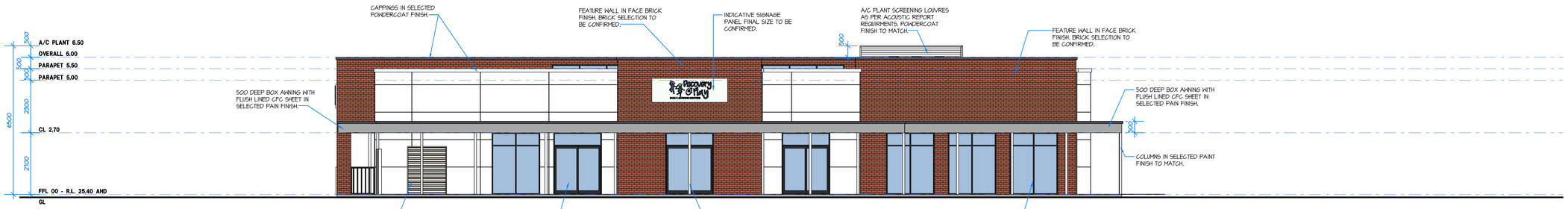
PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date -	30.05.24
Design -	JJR
Drawn -	JJR
Checked -	CPH
Scale -	1:200
Job No. -	0873
Dwg -	DA03
Rev -	C



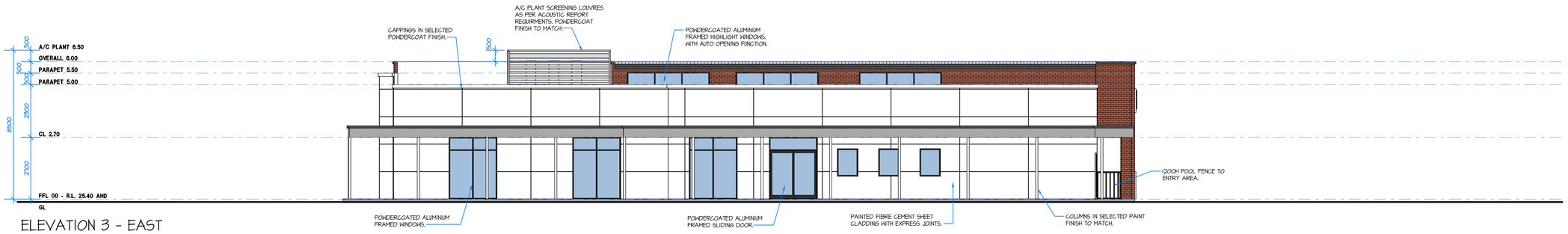
ELEVATION 1 - NORTH

SCALE 1:100



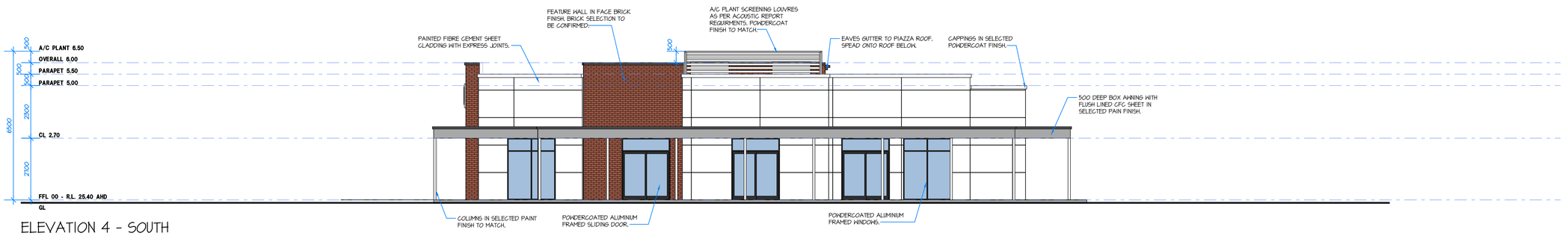
ELEVATION 2 - WEST

SCALE 1:100



ELEVATION 3 - EAST

SCALE 1:100



ELEVATION 4 - SOUTH

SCALE 1:100

COLOUR SCHEDULE:

- SELECTED GLAZING.
- SELECTED FACE BRICK. 'RESTORATION RED' OR SIMILAR.
- DULUX VIVID WHITE PAINT FINISH.
- COLORBOND SHALE GREY.
- COLORBOND BASALT.
- DURATEC BLACK POWDECOAT TO FRAMES.
- EXTENT OF ART MURAL. FINAL ARTIST AND STYLE TO BE CONFIRMED.

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

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A1 SHEET

PROPOSED ELEVATIONS

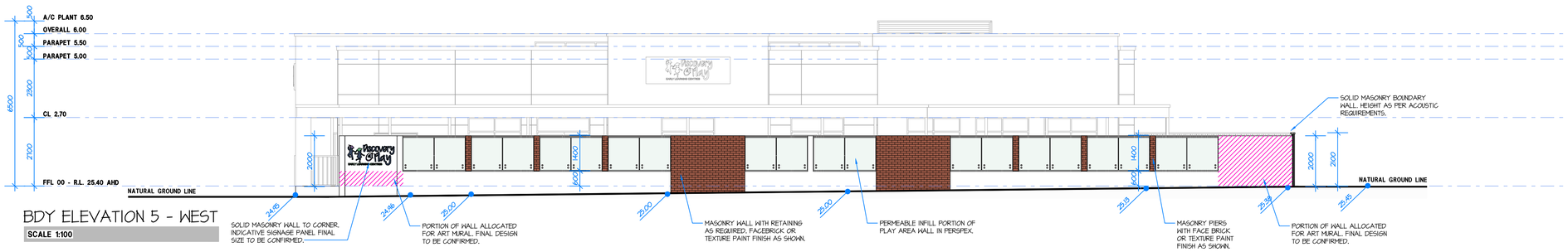
SCALE 1:100

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
Design - JJR
Drawn - JJR
Checked - CPH
Scale - 1:100
Job No. - 0873
Dwg - DA04
Rev - C

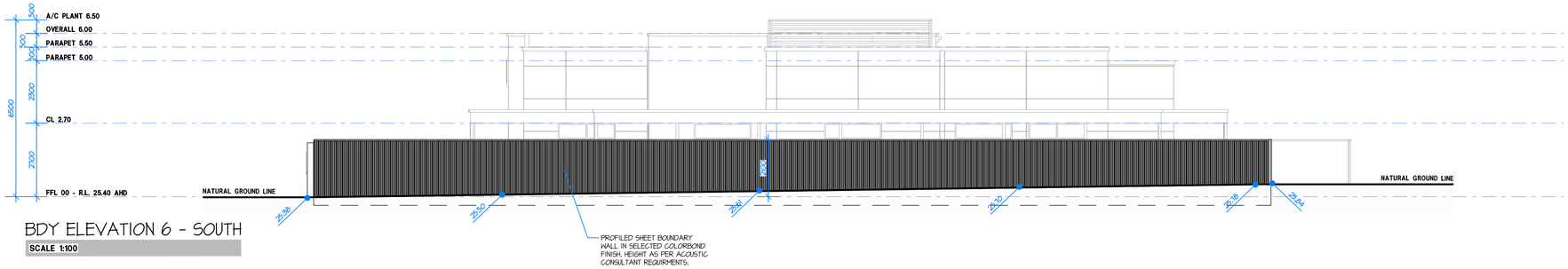
COLOUR SCHEDULE:

- SELECTED GLAZING.
- SELECTED FACE BRICK. 'RESTORATION RED' OR SIMILAR.
- DULUX VIVID WHITE PAINT FINISH.
- COLORBOND SHALE GREY.
- COLORBOND BASALT.
- DURATEC BLACK POWDERCOAT TO FRAMES.
- EXTENT OF ART MURAL. FINAL ARTIST AND STYLE TO BE CONFIRMED.



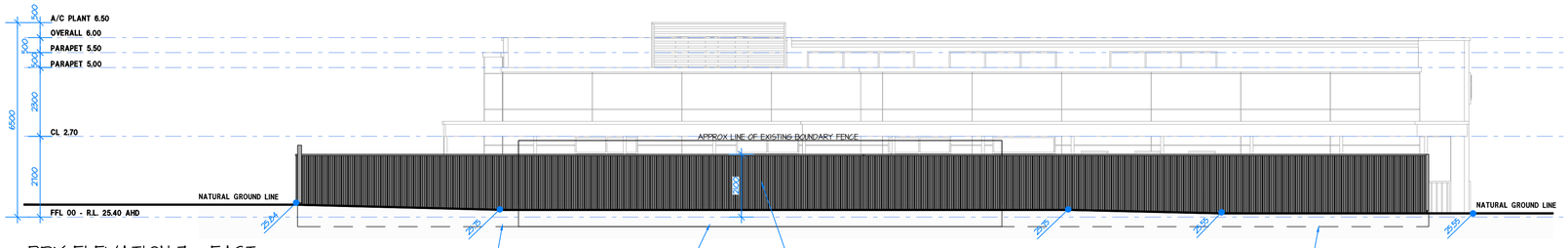
BDY ELEVATION 5 - WEST

SCALE 1:100



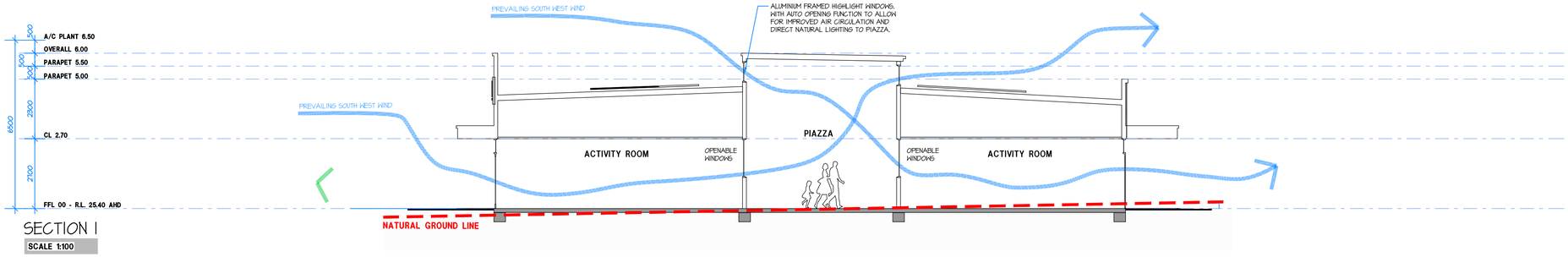
BDY ELEVATION 6 - SOUTH

SCALE 1:100



BDY ELEVATION 7 - EAST

SCALE 1:100



SECTION 1

SCALE 1:100

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A1 SHEET

PROPOSED BOUNDARY ELEVATIONS & SECTION

SCALE 1:100

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
Design - JJR
Drawn - JJR
Checked - CPH
Scale - 1:100
Job No. - 0873
Dwg - DA05
Rev - C

IMAGE 1
"PLAY AREA SHOWN INDICATIVELY ONLY"

IMAGE 2
"PLAY AREA SHOWN INDICATIVELY ONLY"

IMAGE 3
"PLAY AREA SHOWN INDICATIVELY ONLY"

IMAGE 4
"PLAY AREA SHOWN INDICATIVELY ONLY"

IMAGE 5
"PLAY AREA SHOWN INDICATIVELY ONLY"

IMAGE 6
"PLAY AREA SHOWN INDICATIVELY ONLY"

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PTY LTD
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A1 SHEET

PERSPECTIVE VIEWS

NOT TO SCALE

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
Design - JJR
Drawn - JJR
Checked - CPH
Scale - 1:100
Job No. - 0873

Dwg - DA06

Rev - B

IMAGE 7
"PLAY AREA SHOWN INDICATIVELY ONLY'

IMAGE 8
"PLAY AREA SHOWN INDICATIVELY ONLY'

IMAGE 9
"PLAY AREA SHOWN INDICATIVELY ONLY'

IMAGE 10
"PLAY AREA SHOWN INDICATIVELY ONLY'

IMAGE 11
"PLAY AREA SHOWN INDICATIVELY ONLY'

IMAGE 12
"PLAY AREA SHOWN INDICATIVELY ONLY'

HINDLEY & ASSOCIATES
PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
N E D L A N D S WA 6 0 0 9

PO BOX 199
N E D L A N D S WA 6 9 0 9

P H O N E - 9 3 8 6 6 6 9 9
F A X - 9 3 8 6 6 7 0 0
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H I N D L E Y T R U S T
ACN No. 088 989 904

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A1 SHEET

PERSPECTIVE VIEWS

NOT TO SCALE

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
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Checked - CPH
Scale - 1:100
Job No. - 0873
Dwg - DA07
Rev - B

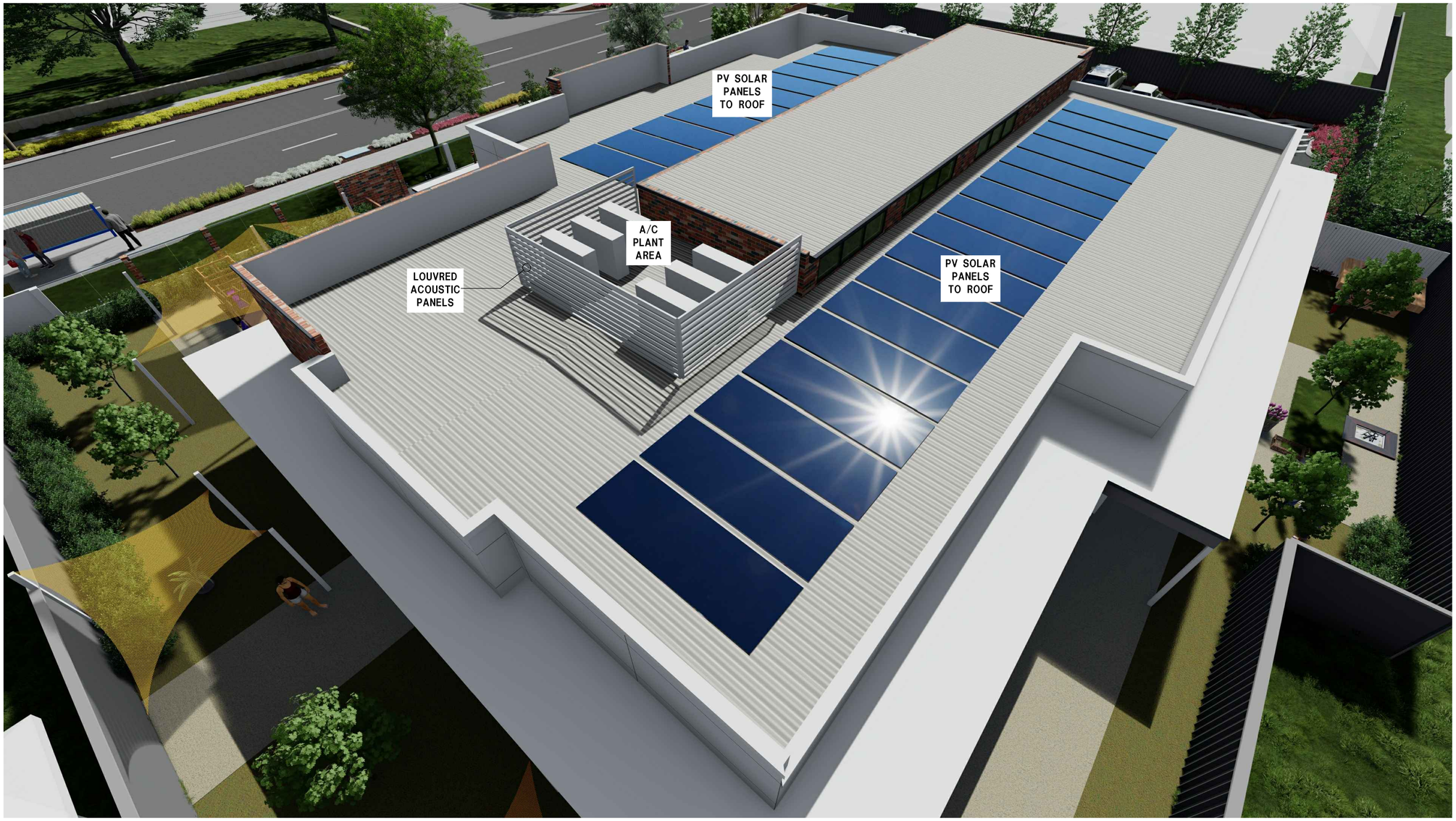

IMAGE 13
"PLAY AREA SHOWN INDICATIVELY ONLY"

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A1 SHEET

PERSPECTIVE VIEWS

NOT TO SCALE

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
Design - JJR
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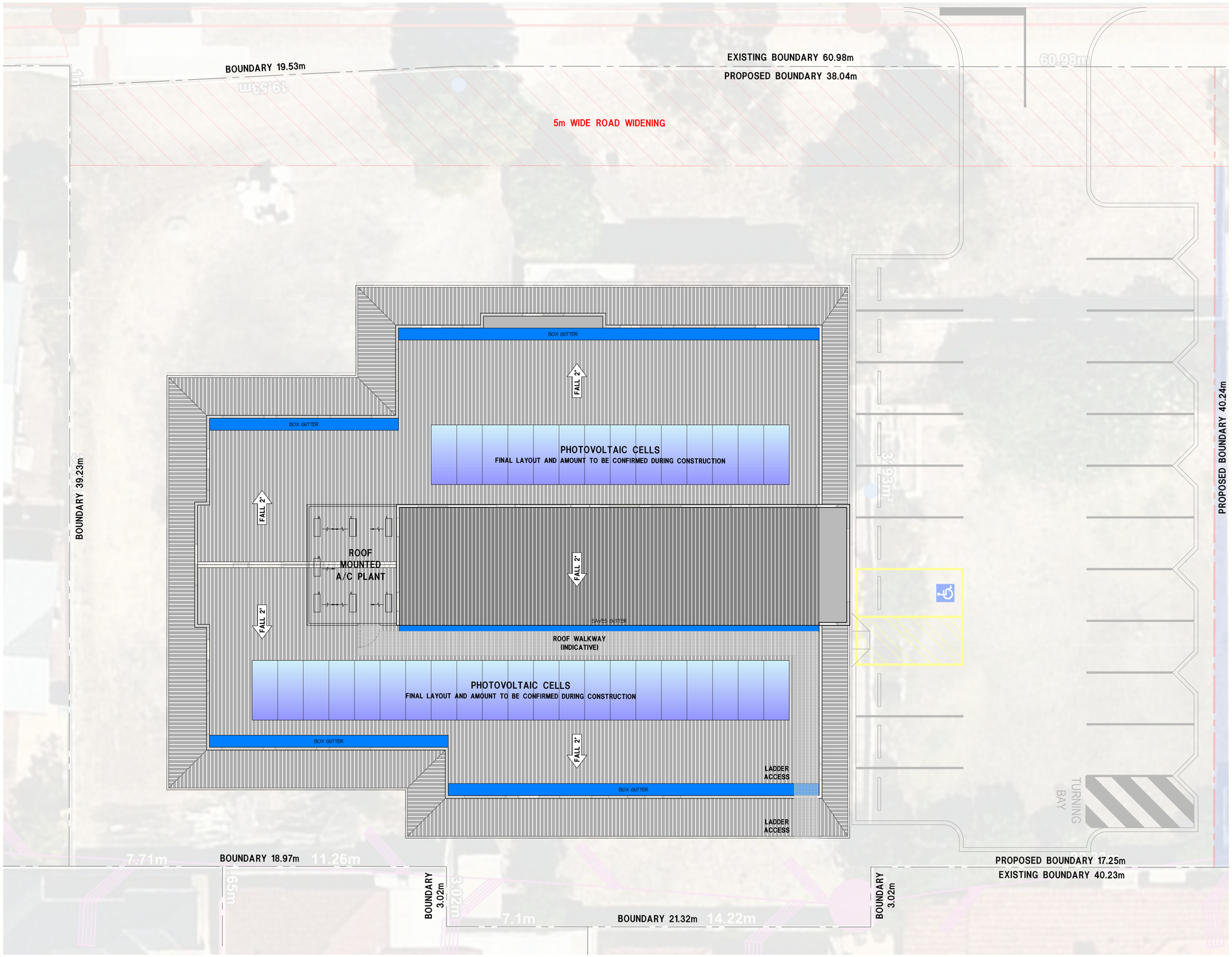
Scale - 1:100
Job No. - 0873
Dwg - DA08
Rev - B



ROOFING LEGEND

- SELECTED ROOF SHEETING WITH A "SURFMIST" COLORBOND FINISH OR SIMILAR.
- 600mm WIDE x 200mm DEEP ZINCALUME BOX GUTTER SUPPORTED ON SPANDEK SHEETING WITH PSI GUTTER STRAPS AT 600mm CENTRES.
- SELECTED EAVES GUTTER WITH SELECTED COLORBOND FINISH.

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

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ACN No. 088 989 904

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A1 SHEET

PROPOSED ROOF PLAN

SCALE 1:100

N

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
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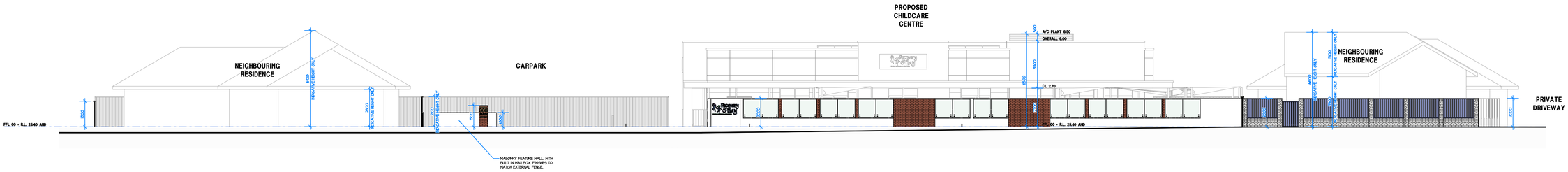
Scale - 1:200
Job No. - 0873
Dwg - DA09
Rev - B



MAIN STREET OVERALL ELEVATION

SCALE 1:150

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

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A1 SHEET

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
Design - JJR
Drawn - JJR
Checked - CPH
Scale - 1:100
Job No. - 0873
Dwg - DA10
Rev - B

Operational Management Plan

Child Care Centre

No.308 Main Street
Balcatta

LATERAL
PLANNING

Document Control

Reference	0326
Location	Lot 6 (No.308) Main Street, Balcatta
Client	Happy Felix Balcatta Pty Ltd
Document Title	Operational Management Plan
Document File Name	0326 Operational Management Plan.docx
Document Date	2 October 2024
Document Version	Revision 01
Author	Alan Stewart

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Overview 8

Noise Management 8

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Estimated Waste Generation 9

Bin Selection 10

Bin Store 10

Waste Collection 11

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1.0 Introduction

This Operational Management Plan ('OMP') has been prepared in support of an Application for Development Approval for a Child Care Centre at Lot 6 (No.308) Main Street, Balcatta ('site'). The purpose of the OMP is to document how the Child Care Centre will operate to minimise impacts on the locality.

2.0 Site Description

Local Authority	City of Stirling
Locality	Balcatta
Address	No.308 Main Street
Cadastral	Lot 6 on Deposited Plan 35267
Certificate of Title	Volume 2223 Folio 984
Registered Proprietor	Happy Felix Balcatta Pty Ltd
Proposed Site Area	2,093m^2

Figure 1: Site Location

3.0 Proposed Development

Operating Times

Business Days	Monday to Friday
Staff Arrival / Departure	6.30am to 7.00pm
Customer Arrival / Departure	7.00am to 6.30pm
External Play Areas ('EPA')	7.00am to 6.00pm

Capacity

Activity Room	Age Group	Places	Educators	Indoor Area	External Area
1	4 to 5	20	2	67m²	350m²
2	3 to 4	15	2	49m²	
3	2 to 3	15	3	53m²	215m²
4	1 to 2	20	5	70m²	
5	0 to 1	16	4	52m²	115m²
Piazza	0 to 1	4	1	65m²	
	2 to 3	4	1		
Total		**94**	**18**	**356m²**	680m²
Required Indoor Area: 3.25m² per child. Required Outdoor Area: 7m² per child.					

Staff

Educators	18
Centre Manager	1
Total	**19**

The minimum number of educators required to supervise children is:

- 0 to 2 age group: 1 supervisor per 4 children
- 2 to 3 age group: 1 supervisor per 5 children
- 3 to 5 age group: 1 supervisor per 10 children

The number of staff at the premises on any given day will vary depending on enrolments in each age group, with staff work times staggered to meet the needs of the centre throughout the day. Three (3) staff will typically be rostered to open the premises and commence work by 7am. No staff would arrive prior to 6.30am. For a full occupancy scenario, up to 10 staff would typically be rostered to commence work prior to 8.30am, increasing to a maximum of 19 staff during the day. Staff levels will gradually decrease as shifts finish and children are collected. No more than 10 staff would typically be working at the commencement of the afternoon peak (4.30pm), with 3 staff typically rostered to close the premises at 6.30pm. All staff would depart by 7pm latest.

4.0 Traffic and Parking

Overview

Car Parking

A total of 21 car bays will be provided for staff, parents / guardians and other visitors.

The proposed allocation of car bays is depicted in Figure 2 below.

Customer Parking

A total of nine (9) car bays will be set aside exclusively for customer use during the morning drop-off peak (7am to 9am) and afternoon pick-up peak (4pm to 6.30pm).

The customer car bays are positioned on the south side of the car park near the entry to the premises to enhance access. This also reduces customer vehicle movements in the northern part of the car park near the abutting residential property.

Staff Parking

A total of eleven (11) car bays will be set aside exclusively for staff use throughout the entire day, with an additional eight (8) car bays available for staff parking between 9am to 4pm, when customer parking demand is extremely low.

A total of 19 car bays will therefore be available for staff parking.

Other Visitors & Service Vehicles

Other visitors include service vehicles, suppliers and potential customers who may wish to meet with staff and / or inspect the centre. Such visitations are infrequent and will be scheduled to occur outside of peak times (between 9am and 4pm) when use of the car park is at its lowest.

One (1) car bay will be set aside for other visitors and service vehicles outside of peak times.

ACROD Parking

One (1) car bay will be available for ACROD permit parking, which may include customers, staff and other visitors.

Vehicle Access

Access is proposed from Main Street. No security gate is proposed to the car park, allowing vehicles to enter the site without having to wait on the road carriageway or verge.

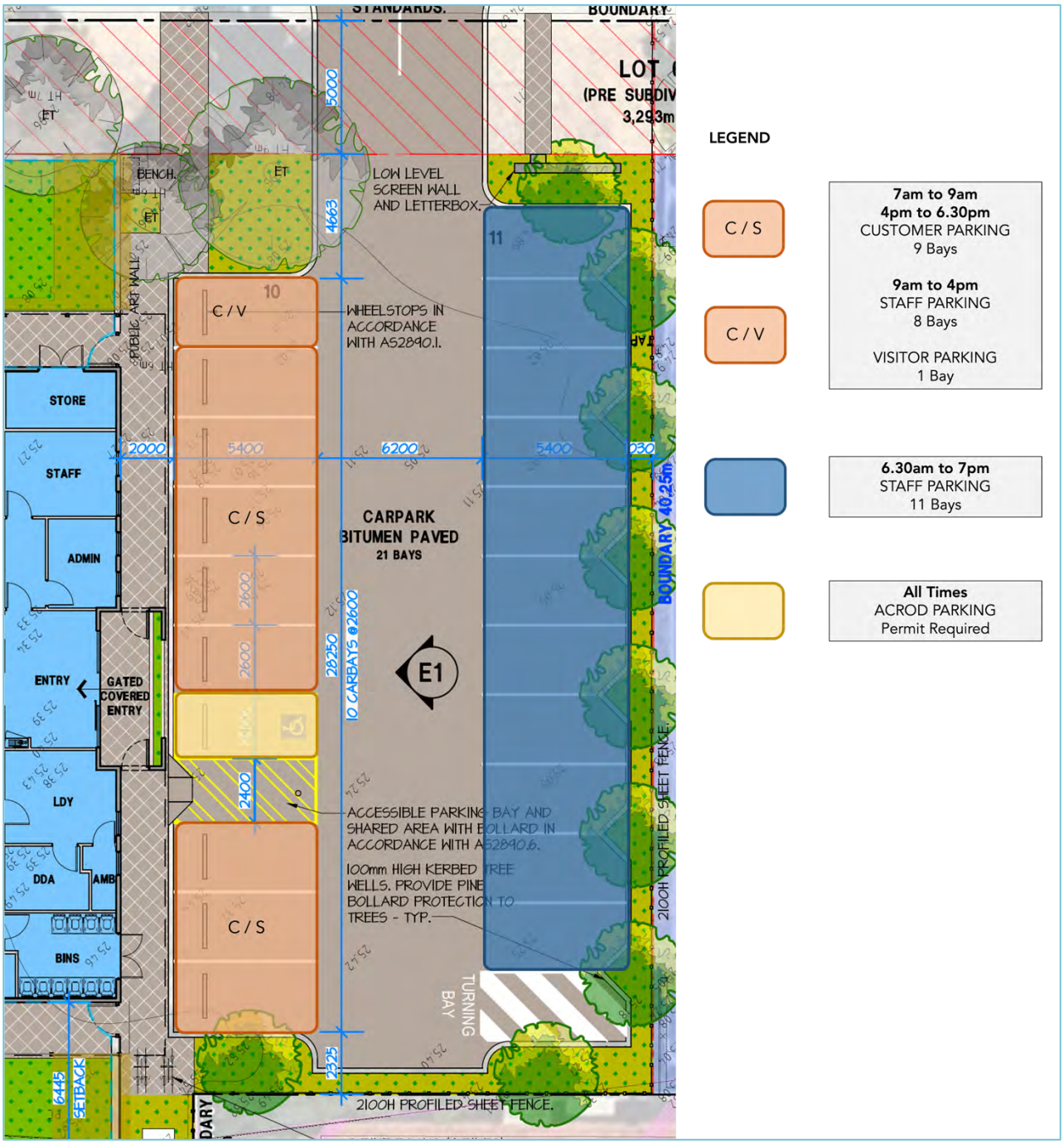


Figure 2: Car Park Allocation Plan

Bicycle Parking

A total of two (2) bike racks will be provided toward the rear of the car park, adjacent to the Child Care Centre. Staff will have access to a shower / change facility and secure lockers.

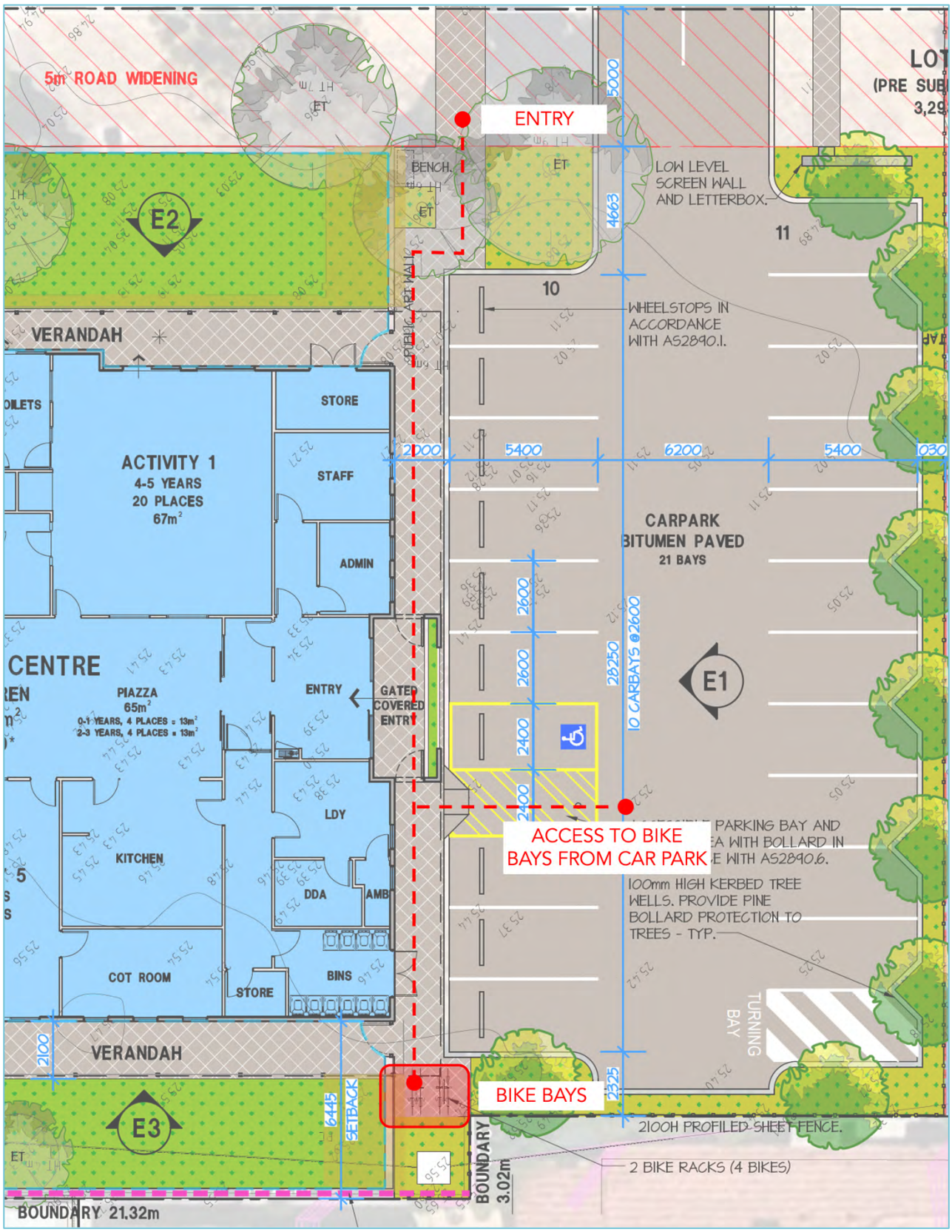


Figure 3: Bike Parking

Public Transport

The site is serviced by public transport (bus services).

Bus No.	Description	Bus Stops
414	Stirling Train Station – Glendalough Train Station	Main Street Stop No.12625 (<50 metres) Stop No.12643 (<50 metres)
998 & 999	High Frequency Route: Circle Route	Karrinyup Road / Morley Drive Stop No.11578 (<150 metres) Stop No.11419 (<150 metres)

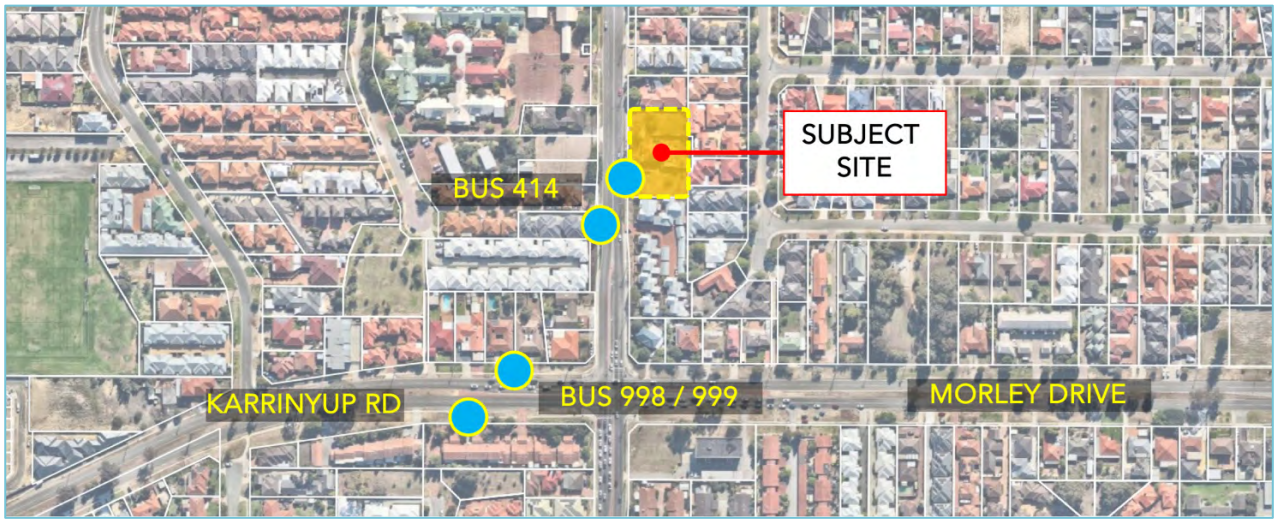


Figure 4: Bus Services

Traffic and Parking Management

Operational Measures

The following operational measures will be implemented to mitigate any potential adverse impacts associated with traffic and parking.

These measures will be implemented on an on-going basis by Child Care Centre management, pursuant to a condition of Development Approval that gives effect to this OMP.

Operational Measures – Traffic and Parking
Car Park
1. Line-marking and signage will be installed to depict the authorised use of each car bay throughout the day.
2. Staff, customers and other visitors will be advised of the requirement to park in designated car bays only.
3. Customers will be requested not to park or stand their vehicle in any roads surrounding the site and to observe on-street parking restrictions.
4. Staff will be responsible for monitoring use of the car park and customers will be reminded of the car park operation procedures on an as-required / as-needed basis.
5. Management of the Child Care Centre will endeavour to schedule non-urgent visitations and deliveries during non-peak times only (9am to 4pm).
6. All suppliers / contractors will be advised that access to the site during the morning drop-off (before 9.00am) and afternoon pick-up (after 4.00pm) will not be permitted (except for emergency maintenance).
7. Management will encourage deliveries to occur between 11.00am and 2.00pm, when vehicle movements at the Child Care Centre will typically be at their lowest.
8. Any car park security gate that might be provided in the future will remain open throughout the day.
Public Transport and Cycling
9. Staff will be advised of available bus services and encouraged to use public transport to access the premises.
10. Staff will also be advised of the provision of bike parking and end-of-trip facilities, which include a shower / change room and secure lockers.

5.0 Noise

Overview

Environmental Protection (Noise) Regulations

The Child Care Centre is required to satisfy the Environmental Protection (Noise) Regulations and will incorporate measures to mitigate the impacts of noise on nearby residential properties.

State Planning Policy 5.4 – Road and Rail Noise

State Planning Policy 5.4 – Road and Rail Noise ('SPP5.4') seeks to minimise the adverse impacts of road and rail noise on noise-sensitive land use. Herring Storer Acoustics has prepared an Acoustic Assessment that finds the premises is capable of satisfying SPP5.4.

Noise Management

The Acoustic Assessment recommends various noise mitigation measures relating to the construction and operation of the premises. The construction measures will be implemented prior to occupation of the premises, pursuant to a suitable condition of Development Approval. The operational measures will be implemented on an on-going basis by Child Care Centre management, pursuant to a condition of Development Approval that gives effect to this OMP.

Operational Measures

The following operational noise mitigation measures will be implemented.

Operational Measures - Noise Mitigation
Hours of Operation
1. The Child Care Centre is to be operational for customer use from 7am to 6.30pm Monday to Friday, excluding public holidays.
2. Staff will be instructed not to arrive prior to 6.30am and to be off-site by 7pm.
3. Typically, not more than three (3) staff will be rostered to arrive in time to commence work at 7am.
4. Typically, not more than three (3) staff will be rostered to close the premises at 6.30pm.
External Play Areas
5. Children are not permitted outdoors for play purposes prior to 7am.
6. Fixed play equipment should be non-metallic. If metal fixed play equipment is used then hollow metal sections shall be filled with expanding foam or sand.
7. Concrete or brick paved areas, if any, should be minimised and where practicable covered with synthetic grass to minimise noise of play equipment on hard surfaces.
Music
8. Keep external windows and doors closed when playing music indoors.
9. Do not play music outdoors (except light children's music if authorised by the Local Authority).
10. Avoid playing games requiring hand clapping on the eastern activity deck.
Car Park
11. Staff will be instructed to park in the designated staff parking bays only.
12. Signage will be placed in the car park advising staff / visitors not to slam doors or play music in the car park.

6.0 Waste

Waste Generation Rates

The Commercial and Industrial Waste Management Guidelines published by the Western Australian Local Government Association ('WALGA') include estimated waste generation rates for various land uses. The WALGA rates were derived from the Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities published by the New South Wales Environmental Protection Authority. Neither document includes a waste generation rate for Child Care Centres.

Waste generation rates published by the City of Melbourne and City of Casey in Victoria suggest a Child Care Centre generates 350 litres of General (including FOGO) waste and 350 litres of Recyclable waste per 100m^2 of floor area per week. A review of other Waste Management Plans indicates this rate is based on 7 days a week, equating to 50 litres per trading day per 100m^2.

A waste generation rate of 50 litres per trading day per 100m^2 has been applied, with floor area based on the total area of the Activity Rooms.

A separate FOGO waste collection service is not proposed. All FOGO waste will be included in the General waste collection service.

Estimated Waste Generation

General and Recyclable Waste

It is estimated the proposed Child Care Centre will generate the following amount of waste.

Item	General Waste	Recyclable Waste
Waste Generation Rate	50 litres / 100m^2 / day	50 litres / 100m^2 / day
Activity Room / Piazza Floor Area	291m^2	291m^2
Trading Days	5	5
Daily Waste	145 litres	145 litres
Weekly Waste	725 litres	725 litres

Other Waste Requirements

- Liquid or Hazardous Waste: Not Applicable
- Medical Waste: Not Applicable
- Food Processing: Not Applicable

Bin Selection

Bin Size and Collection Frequency

- General Waste: 240 litre bins collected weekly;
- Recyclable Waste: 240 litre bins collected fortnightly.

It is understood the City of Stirling offers a commercial waste collection service using 660 litre bins, which can be collected with the City's 'Urbin 11' bin truck. Should the City be engaged to collect waste, the 240 litre bins can be replaced by the required number of 660 litre bins.

Type and Number of Bins

Item	General Waste	Recyclable Waste
Collection Frequency	Weekly	Fortnightly
Waste per Week	725 litres	725 litres
Waste per Fortnight	n/a	1,450 litres
Number of Bins	4 x 240 litre bins	6 x 240 litre bins
Capacity of Bins	960 litres	1,440 litres
Total Bins Required	10 x 240 litre bins	

Bin Store

The Bin Store is of sufficient size to accommodate the required bins, as illustrated below.

The Bin Store is located adjacent to the car park and integrated into the design of the building to minimise its visual impact.

The Bin Store can be accessed from the car park via double doors of sufficient size to allow bins to be wheeled in and out. A door is also provided from within the Child Care Centre administration area to allow staff to carry rubbish to the Bin Store without exiting the building.

The Bin Store will be constructed of materials to match the building and is enclosed by a solid masonry wall. The Bin Store will be fitted with a tap and floor waste and all finished surfaces will be impervious.

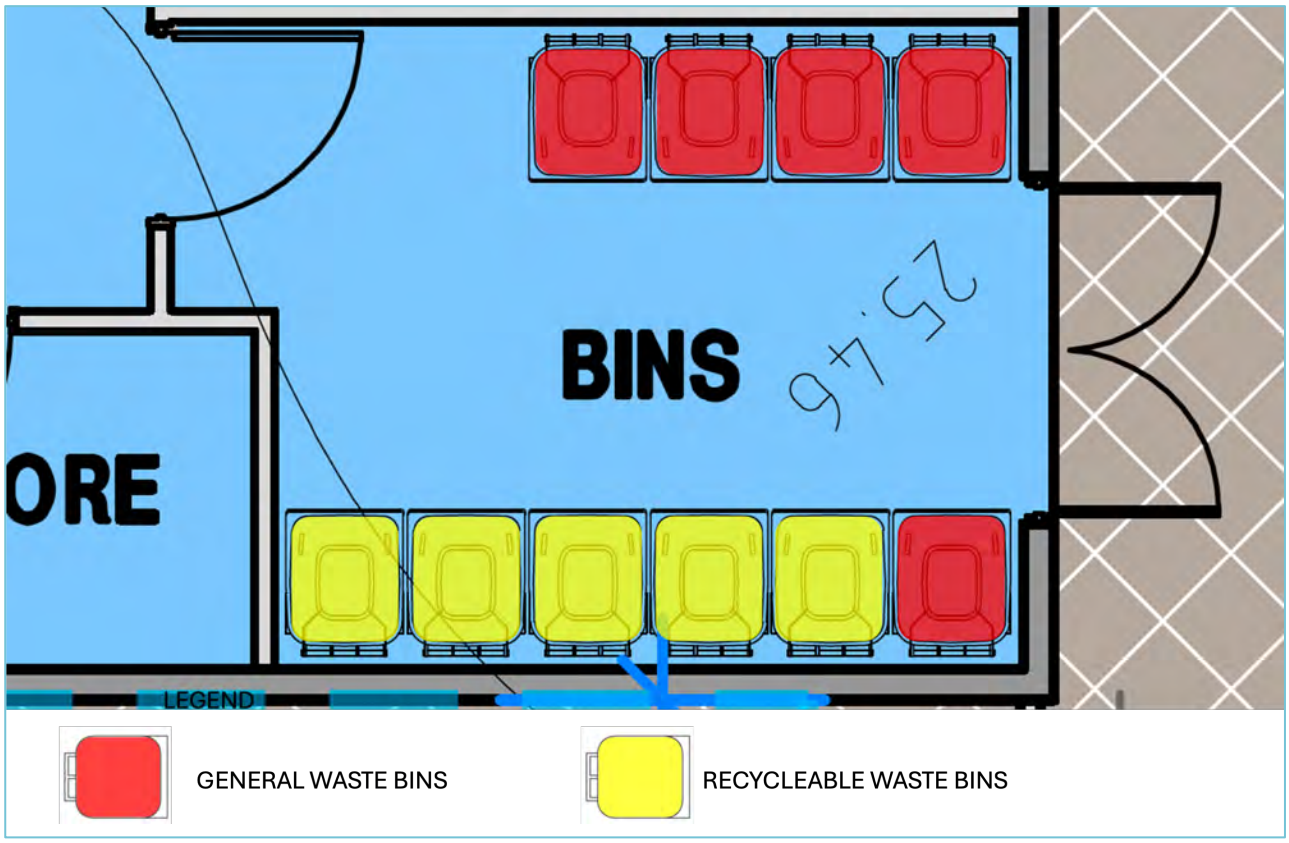


Figure 5: Bin Store

Waste Collection

Collector

Private Contractor or Local Authority.

Collection Point

It is intended that waste be collected from the car park. Waste collection will be scheduled to occur after business hours, to avoid conflicts with the peak drop-off and pick-up times of the Child Care Centre, and to ensure that sufficient area is available for the bin truck to turnaround and exit the car park in forward gear.

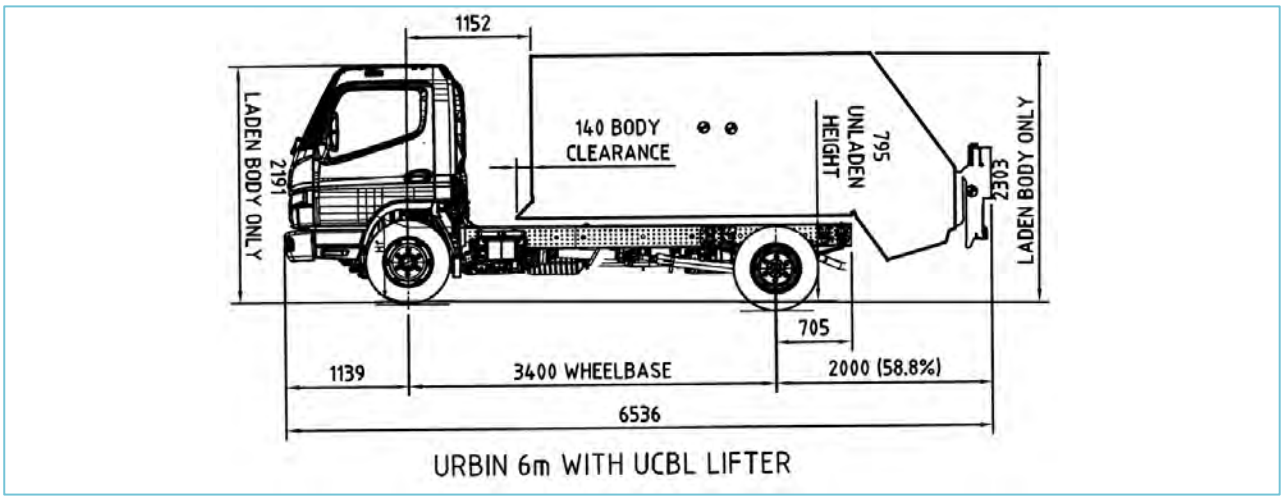


Figure 6: Specification of Local Authority Rear Loader Bin Truck (Urbin II)

7.0 Review of Operational Management Plan

Management of the Child Care Centre will review the OMP on an annual basis to ensure it remains effective and consistent with regulatory requirements.

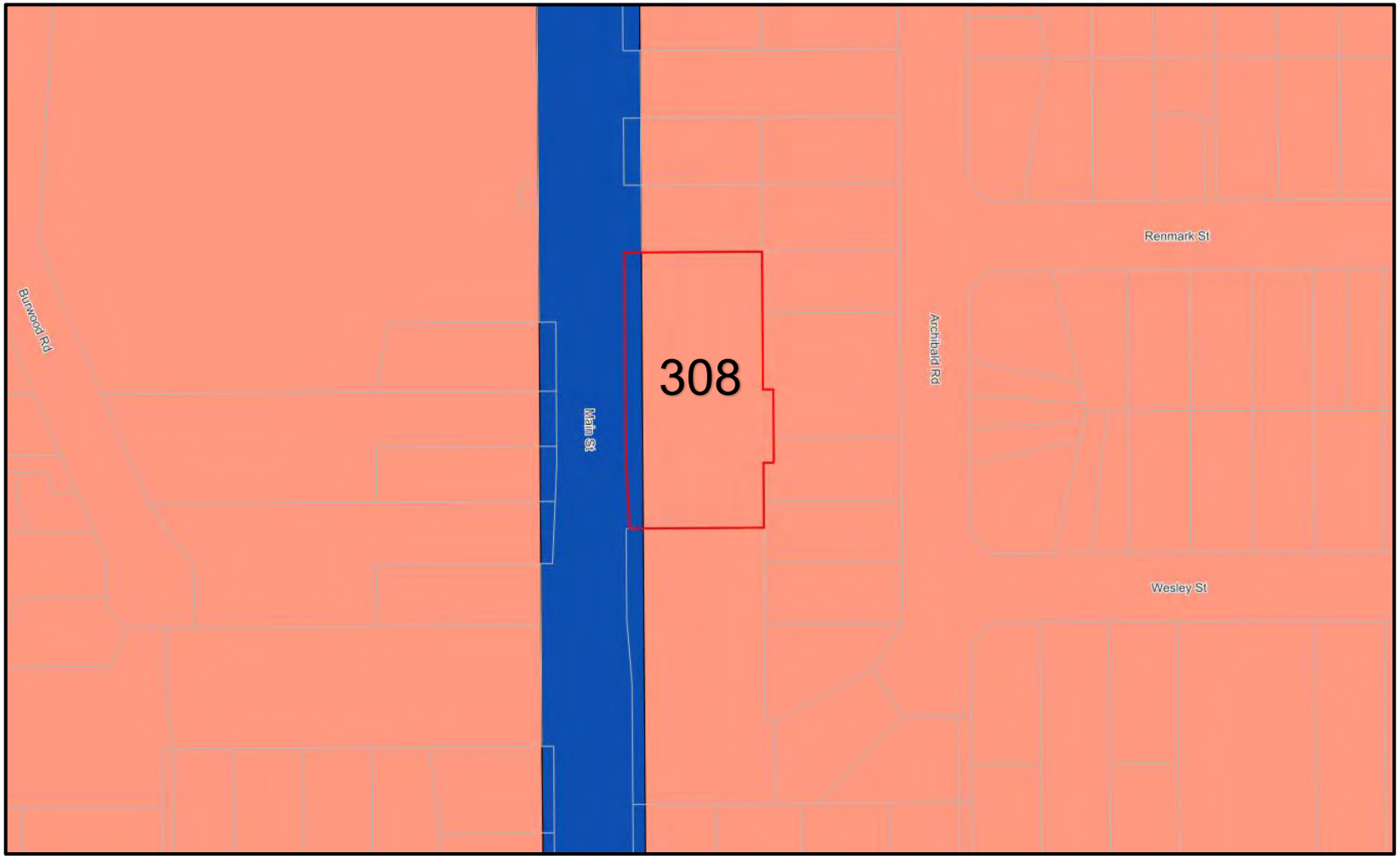
Complaints relating to the operation of the Child Care Centre should be directed to the Centre Manager, who will endeavour to respond in a timely manner.

The contact details of the Child Care Centre shall be included in this OMP prior to the Child Care Centre commencing operations, as per the details below (to be completed).

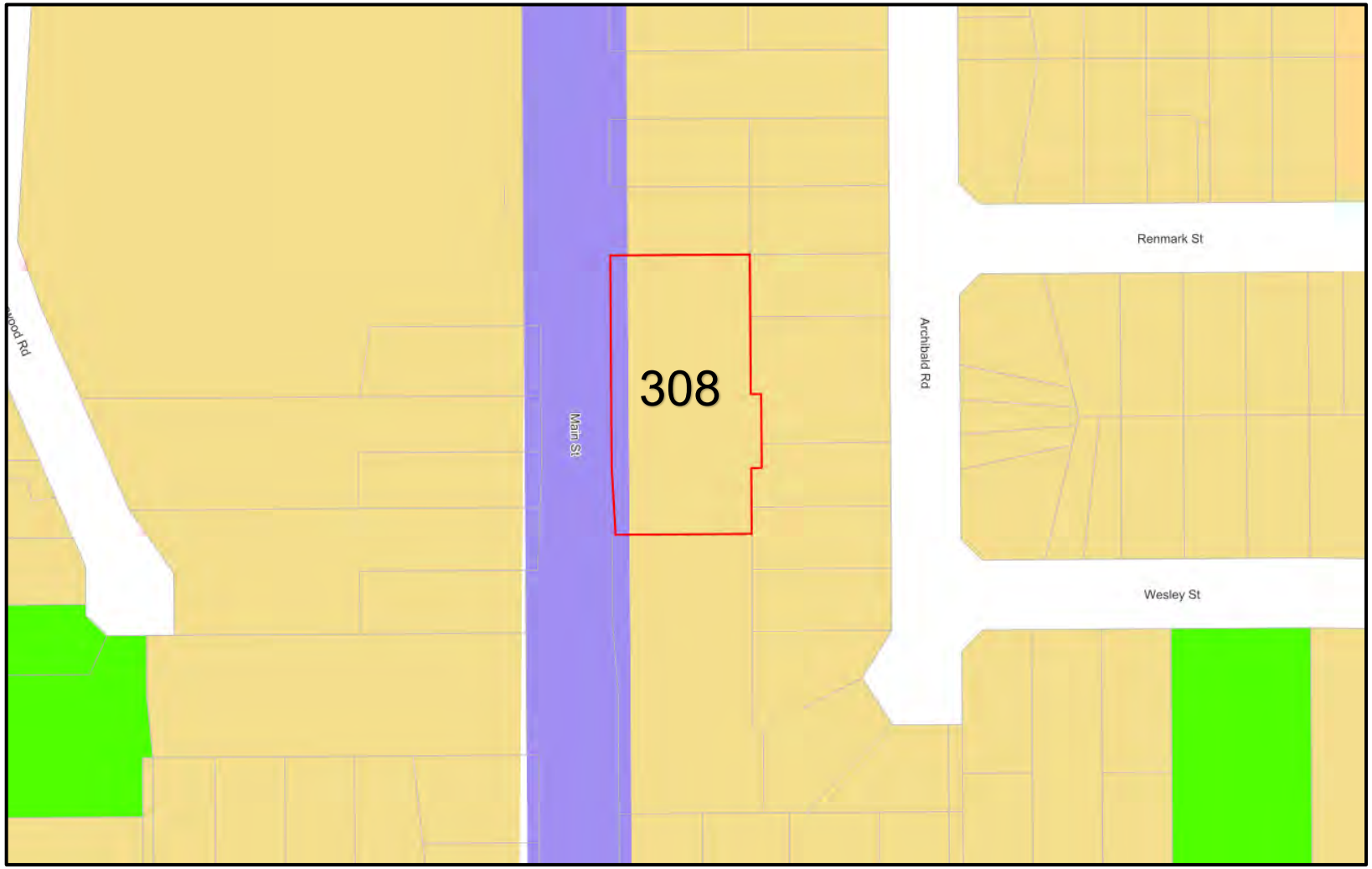
Contact Details	
Trading Name of Centre	
Name of Centre Manager	
Telephone Number – Business Horus	
Telephone Number – After Hours	
Email Address	

Attachment 2 – Aerial Location Plan

Attachment 3 – Metropolitan Region Scheme Zoning Map



Attachment 4 – City of Stirling Local Planning Scheme No.3 Zoning Map



Attachment 5 - Applicants Original Planning Report recieved 19 July 2024

SERVICE LEGEND

DRAINAGE
- GRATE
- SIDE ENTRY PIT
- STORM WATER MANHOLE

ELECTRICAL
- CABLE MANHOLE
- CABLE PIT / BOX — ECP ECB
- CABLE DOME
- CONSUMER POLE — CP
- LIGHT POLE — LP
- POWER POLE — PP
- STAY POLE — SP
- STAY WIRE ANCHOR — SWA
- O/H POWER LINE — 0.00

GAS
- GAS MANHOLE
- GAS MARKER — G
- GAS METER — GM
- GAS VALVE — GV

SEWERAGE
- SEWER MANHOLE
- PROPERTY CONNECTION — PC
- SEWER LINE — S

COMMUNICATIONS
- COMMS MANHOLE
- COMMS MARKER — C
- COMMS CABLE PIT — CCP

WATER
- FLUSH POINT — FP
- HYDRANT — HY
- STOP VALVE — SV
- TAP — TAP
- WATER MARKER — W
- WATER METER — M

UNDEFINED
- UNDEFINED MANHOLE — UM
- UNDEFINED PIT — UP
- UNDEFINED SERVICE — US

SURVEY
- DATUM
- PEG FOUND — PF
- SURVEY STATION
- TEMPORARY / BENCH MARK — TBM BM

OTHER
- AWNING / EAVES — 0.00
- ROOF RIDGE — 0.00
- FLOOR RL
- BOLLARD
- WINDOW / DOOR — 1ST
- BANK - BOTTOM
- BANK - TOP

LOT SERVICE RECORD

SERVICE \ STATUS	LOCATED	NOT FOUND	NO SERVICE	CONFIRM
WATER	✓			
SEWER CONN.	✓			
GAS	✓			
COMMS	✓			
POWER U/G				
POWER O/H	✓			

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

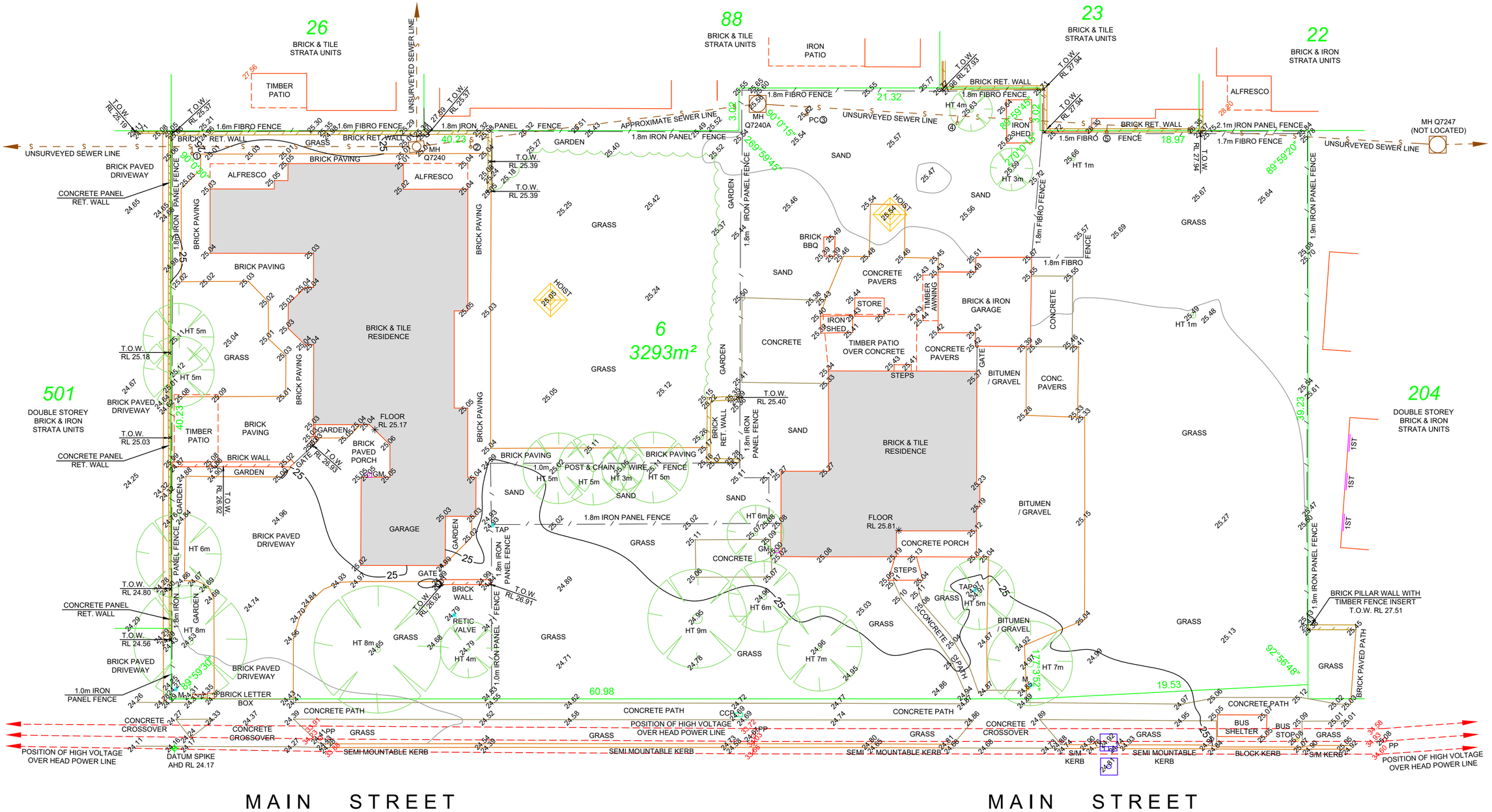
SEWER PROPERTY CONNECTION① APPROXIMATE ONLY
SEWER INVERT LEVEL 22.24
SEWER BROUGHT UP 1.0
DEPTH TO CONNECTION 1.8m
(PC NOT LOCATED)

SEWER PROPERTY CONNECTION② APPROXIMATE ONLY
SEWER INVERT LEVEL 22.38
SEWER BROUGHT UP 1.2
DEPTH TO CONNECTION 1.4m
(PC NOT LOCATED)

SEWER PROPERTY CONNECTION③ APPROXIMATE ONLY
SEWER INVERT LEVEL 22.53
SEWER BROUGHT UP 1.5
DEPTH TO CONNECTION 1.6m
(PC NOT LOCATED)

SEWER PROPERTY CONNECTION④ APPROXIMATE ONLY
SEWER INVERT LEVEL 22.60
SEWER BROUGHT UP 1.5
DEPTH TO CONNECTION 1.5m
(PC NOT LOCATED)

SEWER PROPERTY CONNECTION⑤ APPROXIMATE ONLY
SEWER INVERT LEVEL 22.67
SEWER BROUGHT UP 1.5
DEPTH TO CONNECTION 1.5m
(PC NOT LOCATED)



NOTE:
AHD LEVEL DERIVED FROM STANDARD SURVEY MARK YOKINE 52A - RL = 25.369

BOUNDARY INFORMATION DERIVED FROM DEPOSITED PLAN 35267 AND POSITIONED FROM LANDGATE SPATIAL CADASTRAL DATABASE (SCDB) BOUNDARY CORNER COORDINATES.

WARNING!
BOUNDARY RE-ESTABLISHMENT SURVEY REQUIRED TO CONFIRM LOT BOUNDARY POSITION AND DIMENSIONS.

REV	DESCRIPTION	DRN	DATE	APP

LOT : 6 (# 308) MAIN STREET
SUBURB : BALCATTA — DEPOSITED PLAN 35267
AUTHORITY : CITY OF STIRLING — C/T : 2223 / 984

BUILDERS / CLIENTS: SITE SURVEY only. The information shown on this plan is current at the time of survey. Verify boundary information, easements etc. from the Certificate of Title, Plan / Diagram or a Boundary Repeg. Boundary position approximate only. Location of boundary pegs or fences in relation to the boundary lines are not guaranteed. Utilities may vary from schematic presentation, clearances to be checked on site. Confirm service information with relevant Authorities. Refer to "Before You Dig Australia" for underground service confirmation. Consult Land Surveys on any anomaly before design and construction.

SCALE @ A2 : 1:200
ALL DISTANCES ARE IN METRES

CLIENT : PROJECT CONSTRUCTION WA
SURVEYED ON : 29/02/2024
SURVEYOR : DJ — DRAWN : MR

Land Surveys
19 Brennan Way
BELMONT WA 6104
Telephone (08) 9477 4477
Fax (08) 9477 4499
admin@landsurveys.net.au

JOB No : 2400174 - PLAN: FS - DRG: 001 - REV. A - SHEET 1 OF 1

OVERSHADOWING NOTES

OVERSHADOWING CALCULATION

OVERSHADOWING CALCULATIONS HAVE BEEN BASED OFF THE R-CODES EXPLANATORY GUIDELINES CLAUSE 7.2 - SOLAR ACCESS FOR ADJOINING SITES.

PERTH - LATITUDE 32°S - VERTICAL SUN ANGLE 35°.

EXTENT OF OVERSHADOWING

IN ACCORDANCE WITH THE R-CODES PART 5, CLAUSE 5.4.2. - SOLAR ACCESS FOR ADJOINING SITES ADJOINING PROPERTIES SHALL NOT EXCEED THE FOLLOWING LIMITS:

ADJOINING PROPERTIES CODED R25 AND LOWER - 25% OF THE SITE AREA;
ADJOINING PROPERTIES CODED R30 TO R40 INCLUSIVE - 35% OF THE SITE AREA;
ADJOINING PROPERTIES CODED HIGHER THAN R40 - 50% OF THE SITE AREA.

LOT 501, No. 314 MAIN STREET	NOT AFFECTED BY DEVELOPMENT
LOT 204, No. 298 MAIN STREET	COMPLIANT
LOT 26, No. 17 ARCHIBALD ROAD	NOT AFFECTED BY DEVELOPMENT
LOT 88, No. 15 ARCHIBALD ROAD	NOT AFFECTED BY DEVELOPMENT
LOT 23, No. 11 ARCHIBALD ROAD	NOT AFFECTED BY DEVELOPMENT
LOT 22, No. 9 ARCHIBALD ROAD	NOT AFFECTED BY DEVELOPMENT

CARPARKING

USE	VALUE	CALC	REQUIRED
CHILD CARE	44 CHILDREN	1/5 PLACES	19
TOTAL PROVIDED			21

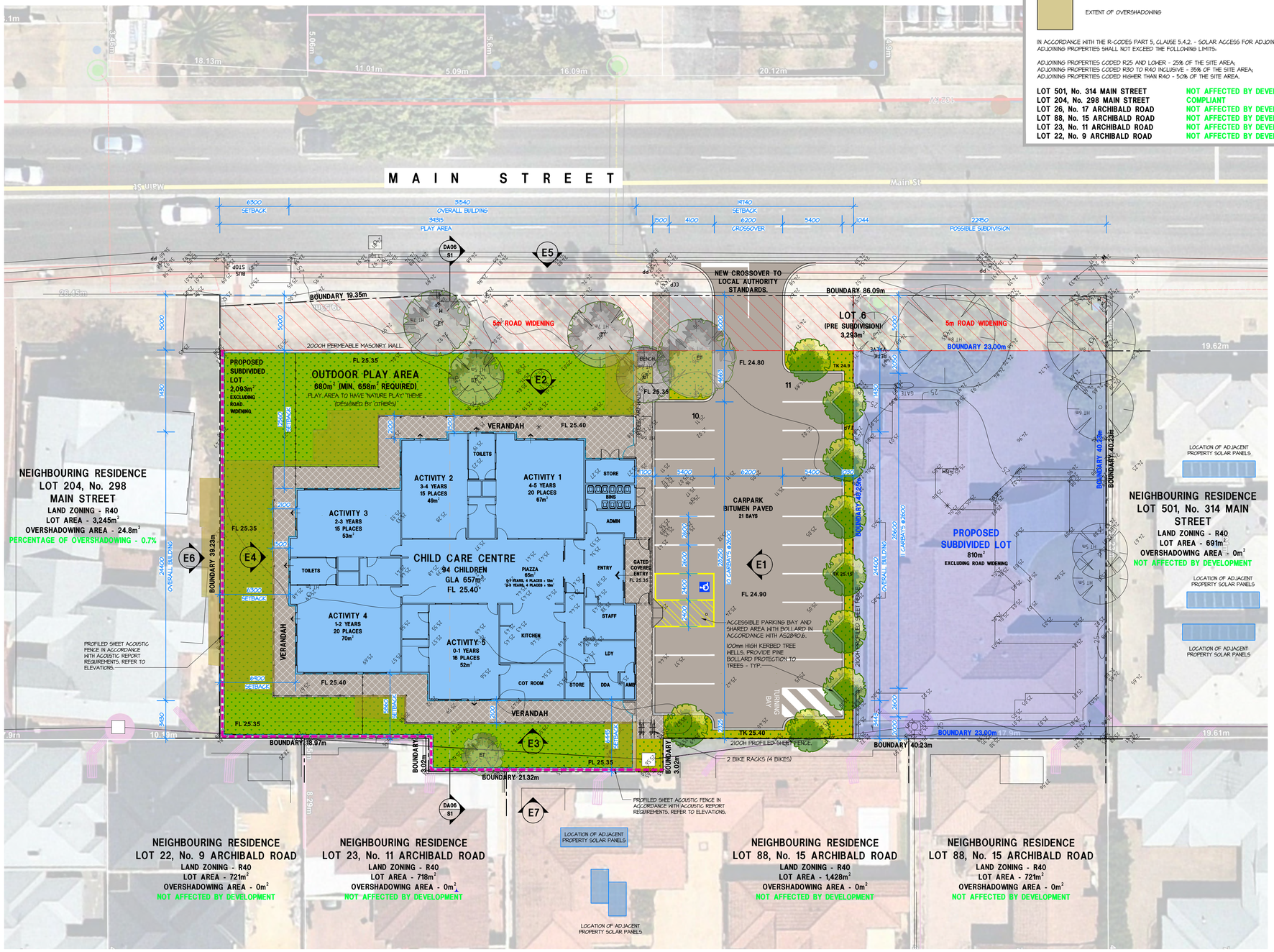
LEGEND:

- HARDSTAND PAVEMENT.
- PAVED FOOTPATHS.
- SELECTED LANDSCAPING. PLAY AREA TO BE DESIGNED BY OTHERS.
- NEW SELECTED SHADE TREE IN ACCORDANCE WITH LOCAL AUTHORITY GUIDLINES.
- ET — EXISTING TREE RETAINED. REFER TO DEMO PLAN FOR EXTENT OF REMOVED TREES.
- EXTENT OF 2100mm HIGH PROFILED SHEET ACOUSTIC WALL. TO BE IN ACCORDANCE WITH ACOUSTIC REPORT REQUIREMENTS. REFER TO ELEVATIONS FOR MORE INFORMATION.

NOTES:

* FLOOR LEVEL AND STORM WATER IS INDICATIVE ONLY. FINAL DESIGN TO BE PREPARED BY A CIVIL ENGINEER AS PART OF BUILDING PERMIT APPLICATION.

* REFER TO SITE SURVEY PLAN FOR DETAILS ON ALL EXISTING INFRASTRUCTURE.



HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

PO BOX 199
NEDLANDS WA 6909

PHONE - 9386 6699
FAX - 9386 6700
admin@hindley.com.au

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HINDLEY & ASSOCIATES P/L AS TRUSTEE FOR HINDLEY TRUST ACN No. 088 989 904

BUILDING DESIGNERS ASSOCIATION OF WA INC

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH
B	08.08.24	REVISED FOR COMMENTS	JJR	CPH
-				
-				
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-				
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A1 SHEET

PROPOSED SITE PLAN

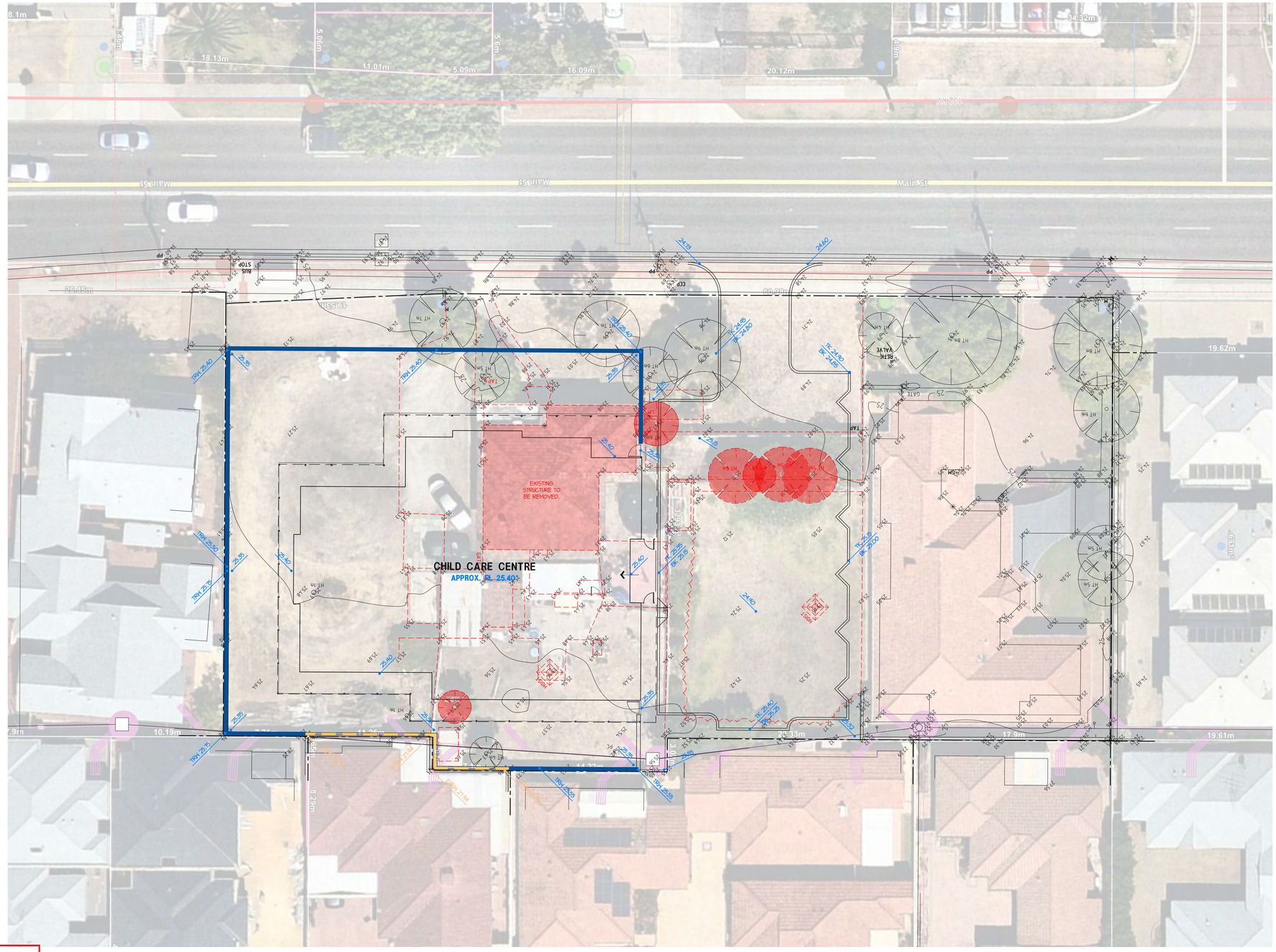
SCALE 1:200 @ A1 1:400 @ A3

N

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date -	30.05.24
Design -	JJR
Drawn -	JJR
Checked -	CPH
Scale -	1:200
Job No. -	0873
Dwg -	DA01
Rev -	B

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024



SUPERSEDED

NOTES:

1. *DESIGN LEVELS ARE INDICATIVE ONLY. FINAL LEVELS AND TO BE DESIGNED BY A CIVIL ENGINEER AS PART OF THE BUILDING PERMIT APPLICATION.
2. SURVEY INFORMATION PROVIDED BY TUSCOM SUBDIVISION CONSULTANTS PTY LTD. REFER TO FEATURE SURVEY DATED 26/11/2021 FOR IDENTIFICATION OF FEATURES AND DETAILS OF DATUM.
3. SEWER LOCATION IS PLOTTED FROM WATER CORPORATION PLANS AND IS TO BE CONSIDERED APPROXIMATE ONLY. ACCURATE LOCATION OF SEWER TO BE VERIFIED PRIOR TO CONSTRUCTION.
4. SURFACE FEATURES AND LEVELS HAVE BEEN SURVEYED TO MEET THE REQUESTED SCOPE OF WORKS ACCURACY. THE SURFACE MAY BE CONTOURED TO DEPICT TOPOGRAPHY OR DEFINED ONLY BY SPOT HEIGHTS. FOR CLARITY ON HARD COPY SOME LEVEL INFORMATION IS NOT SHOWN. REFER TO 3D DIGITAL FILE. ABOVE GROUND INDICATORS (MARKERS) OF UNDERGROUND SERVICES ARE LOCATED WHERE VISIBLE. THIRD PARTIES UTILISING THIS INFORMATION SHOULD CONFIRM THE CAPTURE ACCURACIES MEET REQUIREMENTS PRIOR TO USE.
5. PRIOR TO ANY CONSTRUCTION, EXCAVATION OR DEMOLITION THE RELEVANT SERVICE AUTHORITIES SHOULD BE CONTACTED TO CONFIRM LOCATION OF ALL UNDERGROUND AND NON-VISIBLE SERVICES. THE CONTRACTOR IS TO CARRY OUT A GROUND SCAN TO LOCATE ANY EXISTING SERVICES WITHIN THE SITE AND VERGE AREAS PRIOR TO WORKS.
6. THE DEPICTED PRECALCULATED BOUNDARIES SHALL BE TREATED AS PROPOSED ONLY AND MAY BE SUBJECT TO ALTERATIONS IN DIMENSIONS OR AREAS PRIOR TO DEPOSITED PLAN LODGEMENT AT LANDGATE. THE DEPICTED BOUNDARY LOCATIONS ARE A GRAPHICAL REPRESENTATION ONLY, THEREFORE THEIR POSITION IS NOT GUARANTEED BY MNG UNLESS STATED OTHERWISE. RE-ESTABLISHMENT OF LOT BOUNDARIES BY A LICENSED SURVEYOR IS RECOMMENDED FOR ANY WORKS ON OR ABOUT A BOUNDARY.
7. REFER TO CERTIFICATE OF TITLE FOR ENCUMBRANCES.

LEGEND:

ITEMS TO BE REMOVED / RELOCATED SHOWN IN RED.

TK 10.25
BK 10.00

PROPOSED DESIGN LEVEL.
PREFIX
- 'TK' - TOP OF KERB
- 'BK' - BOTTOM OF KERB
- 'TRW' - TOP OF RETAINING WALL
- 'BRW' - BOTTOM OF RETAINING WALL
- 'ETRW' - TOP OF EXISTING RETAINING WALL

ALL OTHER LEVELS ARE FROM SURFACE OF PAVEMENT.

LOW LEVEL MASONRY RETAINING WALL INCORPORATED INTO BOUNDARY FENCE. EXTENT AND TYPE TO BE CONFIRMED BY CIVIL ENGINEER DURING DETAILED DESIGN STAGE.

EXISTING NEIGHBOURING RETAINING.

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

PO BOX 199
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AS TRUSTEE FOR
HINDLEY TRUST
ACN No. 088 989 904

BUILDING DESIGNERS ASSOCIATION OF WA INC

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH
B	08.08.24	REVISED FOR COMMENT	JJR	CPH
-				
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-				
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A1 SHEET

SURVEY OVERLAY/ LEVELS / DEMOLITION PLAN

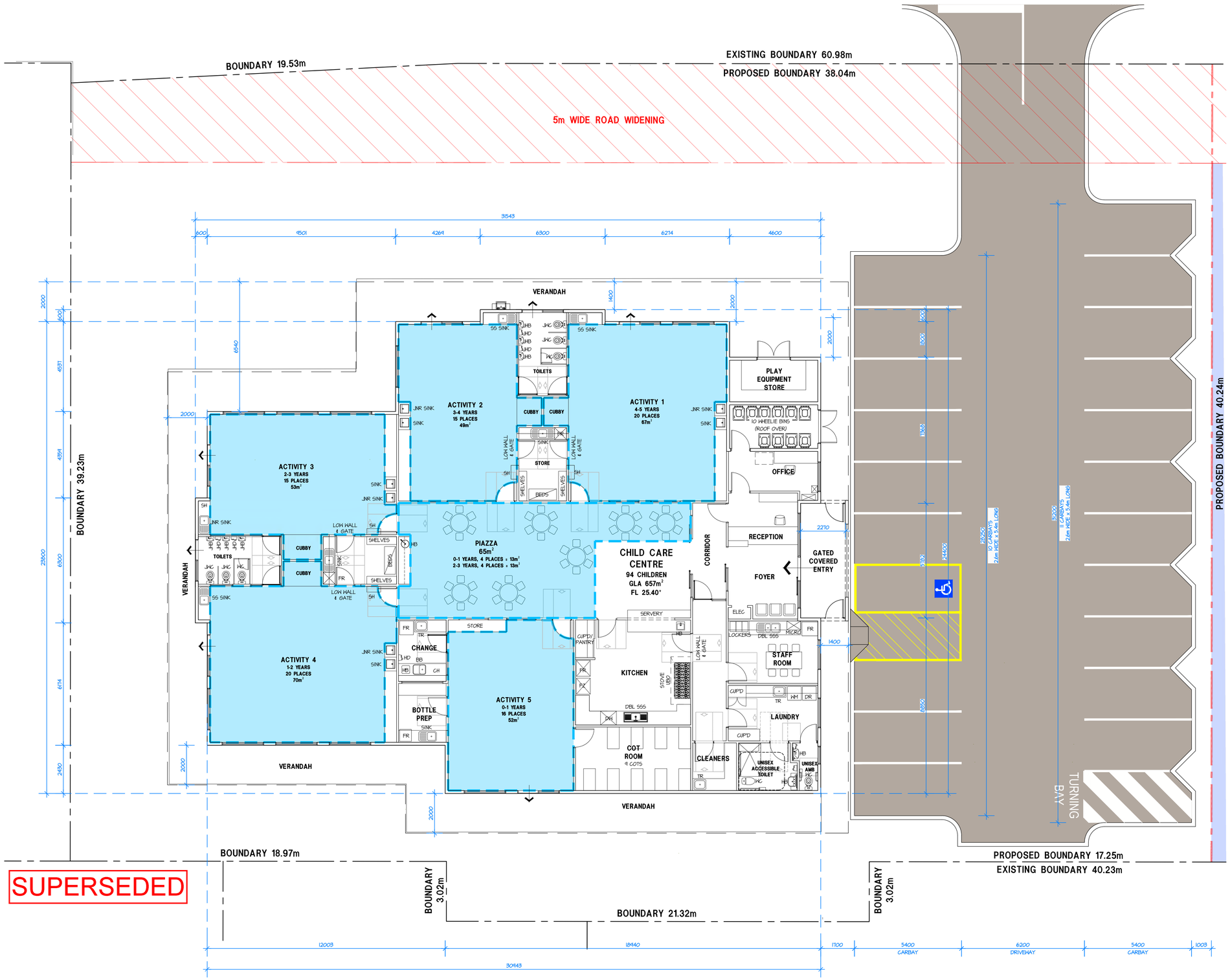
SCALE 1:200 @ A1 1:400 @ A3

N

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
Design - JJR
Drawn - JJR
Checked - CPH
Scale - 1:200
Job No. - 0873
Dwg - DA02
Rev - B

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024



LEGEND

FHR	FIRE HOSE REEL	SH	SHELF - INTERNAL - 700 L x 300 W EXTERAL - 900 L x 300 W
TR	WASH TROUGH	FR	FRIDGE
HB	HAND BASIN	FZ	FREEZER
JHB	JUNIOR HAND BASIN	MW	MICROWAVE
WC	TOILET PAN	WM	CLOTHES WASHING MACHINE (TOP LOADER)
JWC	JUNIOR TOILET PAN	DRY	CLOTHES DRYER (CONDENSING)
HD	HAND DRYER	DBL SSS	DOUBLE BOWL STAINLESS STEEL SINK
JHD	JUNIOR HAND DRYER	DW	DISHWASHER (COMMERCIAL)
BB	BABIES BATH	STOVE	STOVE TOP (900mm 6 ZONE)
CH	CHANGE TABLE	UBO	UNDER BENCH OVEN (900mm)

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

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AS TRUSTEE FOR
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ACN No. 088 989 904

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-				
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A1 SHEET

PROPOSED FLOOR PLAN

SCALE 1:100 @ A1 1:200 @ A3

N

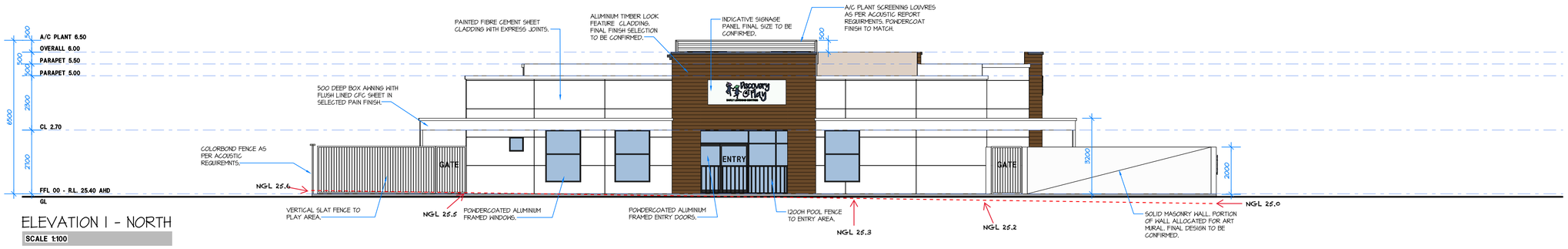
PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
Design - JJR
Drawn - JJR
Checked - CPH
Scale - 1:200
Job No. - 0873
Dwg - DA03
Rev - B

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024

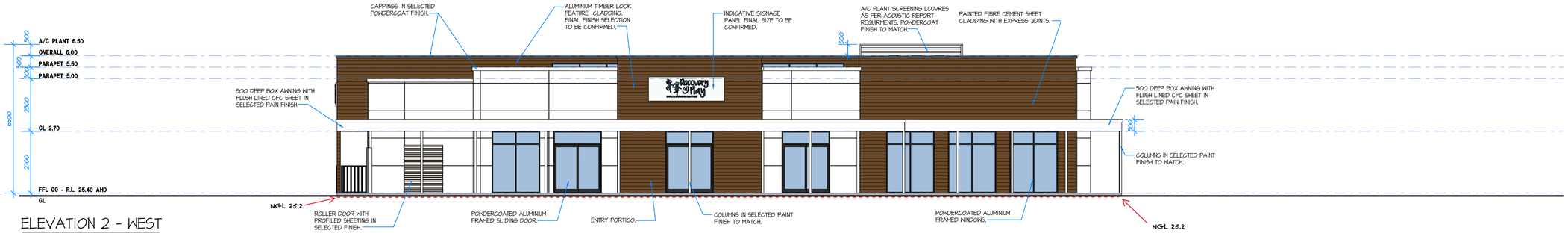
COLOUR SCHEDULE:

- SELECTED GLAZING.
- ALUMINIUM TIMBER LOOK CLADDING.
- DULUX VIVID WHITE PAINT FINISH.
- COLORBOND BASALT.
- DURATEC BLACK POWDECOAT TO FRAMES.



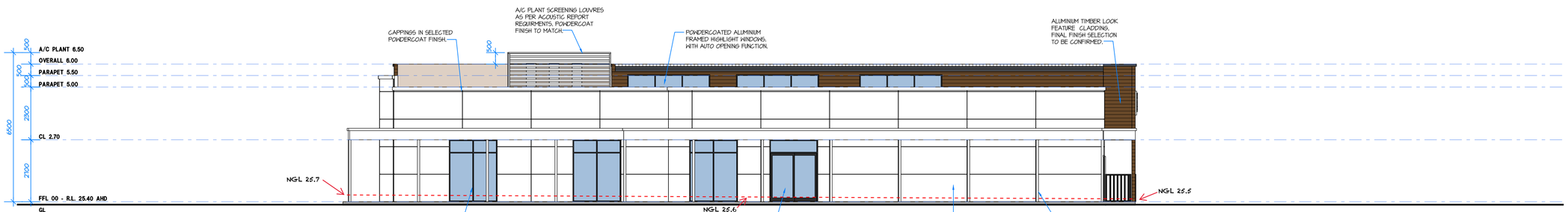
ELEVATION 1 - NORTH

SCALE 1:100



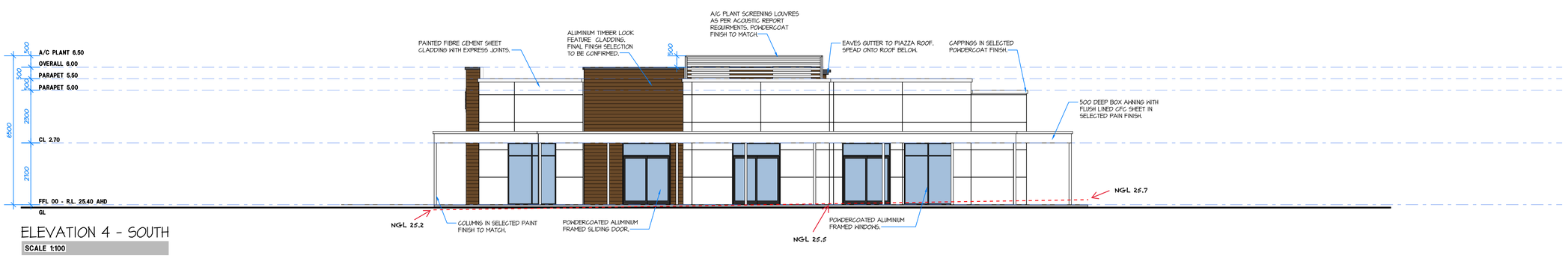
ELEVATION 2 - WEST

SCALE 1:100



ELEVATION 3 - EAST

SCALE 1:100



ELEVATION 4 - SOUTH

SCALE 1:100

SUPERSEDED

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

PO BOX 199
NEDLANDS WA 6909

PHONE - 9386 6699
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admin@hindley.com.au

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HINDLEY & ASSOCIATES P/L AS TRUSTEE FOR HINDLEY TRUST ACN No. 088 989 904

BUILDING DESIGNERS ASSOCIATION OF WA INC

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH
B	08.08.24	REVISED FOR COMMENT	JJR	CPH

A1 SHEET

PROPOSED ELEVATIONS

SCALE 1:100@ A1 1:200 @ A3

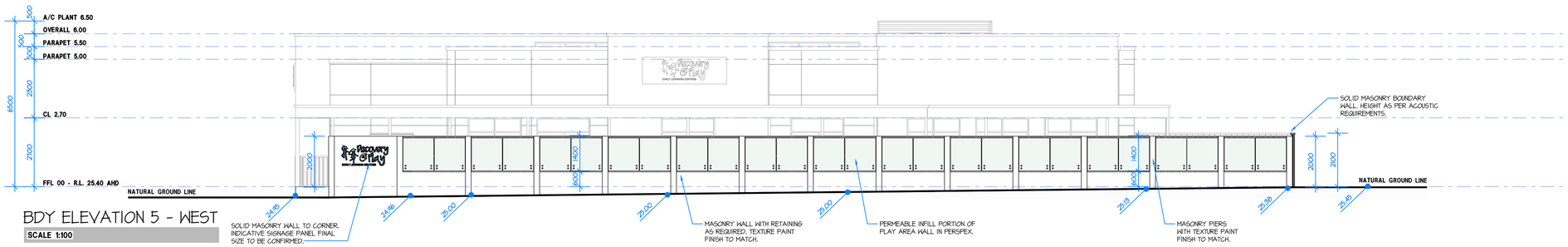
PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date -	30.05.24
Design -	JJR
Drawn -	JJR
Checked -	CPH
Scale -	1:100
Job No. -	0873
Dwg -	DA04
Rev -	B

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024

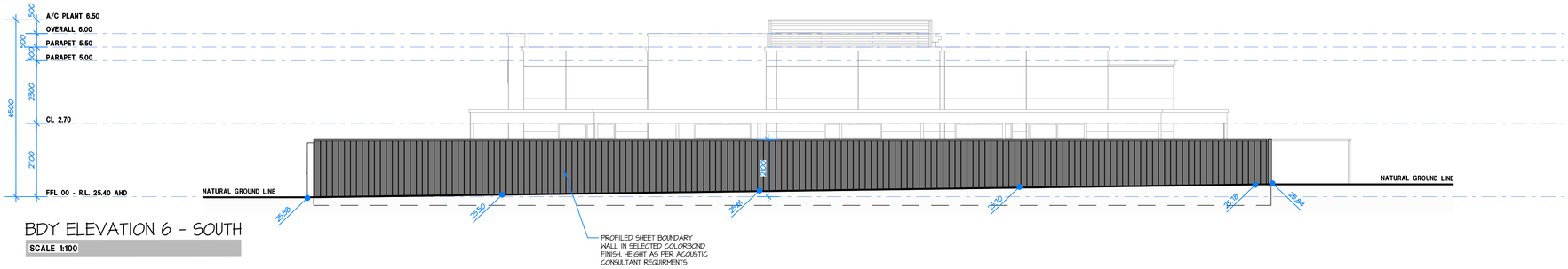
COLOUR SCHEDULE:

- SELECTED GLAZING.
- ALUMINIUM TIMBER LOOK CLADDING.
- DULUX VIVID WHITE PAINT FINISH.
- COLORBOND BASALT.
- DURATEC BLACK POWDERCOAT TO FRAMES.



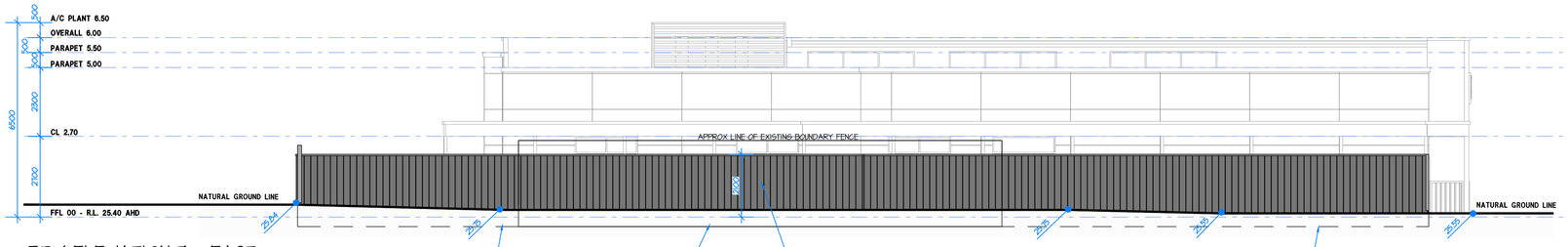
BDY ELEVATION 5 - WEST

SCALE 1:100



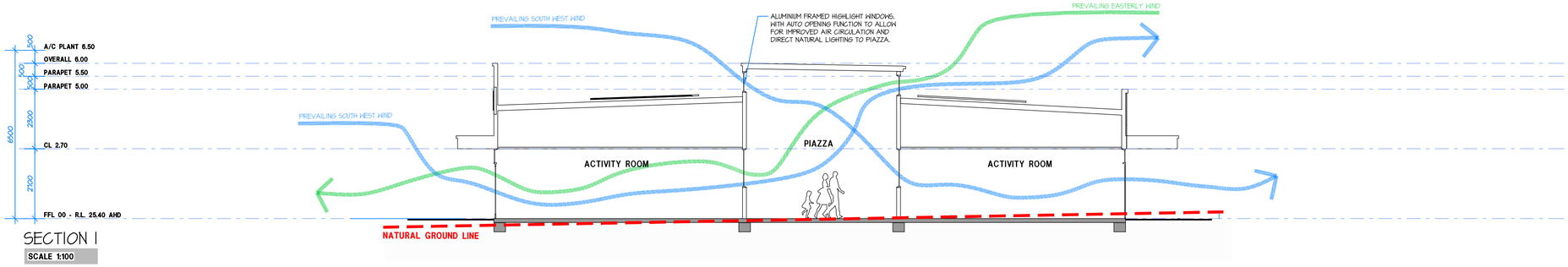
BDY ELEVATION 6 - SOUTH

SCALE 1:100



BDY ELEVATION 7 - EAST

SCALE 1:100



SECTION 1

SCALE 1:100

SUPERSEDED

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

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BUILDING DESIGNERS ASSOCIATION OF WA INC

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-				
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A1 SHEET

PROPOSED BOUNDARY ELEVATIONS & SECTION

SCALE 1:100@ A1 1:200 @ A3

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date -	30.05.24
Design -	JJR
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Checked -	CPH
Scale -	1:100
Job No. -	0873
Dwg -	DA05
Rev -	B

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024

IMAGE 1
"PLAY AREA SHOWN INDICATIVELY ONLY'

IMAGE 2
"PLAY AREA SHOWN INDICATIVELY ONLY'

IMAGE 3
"PLAY AREA SHOWN INDICATIVELY ONLY'

IMAGE 4
"PLAY AREA SHOWN INDICATIVELY ONLY'

SUPERSEDED

IMAGE 5
"PLAY AREA SHOWN INDICATIVELY ONLY'

IMAGE 6
"PLAY AREA SHOWN INDICATIVELY ONLY'

HINDLEY & ASSOCIATES
PTY LTD
BUILDING DESIGNERS

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HINDLEY TRUST
ACN No. 088 989 904

BUILDING DESIGNERS ASSOCIATION OF WA INC

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A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH
-				
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-				
-				

A1 SHEET

PERSPECTIVE VIEWS

NOT TO SCALE

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
Design - JJR
Drawn - JJR
Checked - CPH
Scale - 1:100
Job No. - 0873
Dwg - DA06
Rev - A

IMAGE 7
"PLAY AREA SHOWN INDICATIVELY ONLY'

IMAGE 8
"PLAY AREA SHOWN INDICATIVELY ONLY'

IMAGE 9
"PLAY AREA SHOWN INDICATIVELY ONLY'

IMAGE 10
"PLAY AREA SHOWN INDICATIVELY ONLY'

IMAGE 11
"PLAY AREA SHOWN INDICATIVELY ONLY'

IMAGE 12
"PLAY AREA SHOWN INDICATIVELY ONLY'

SUPERSEDED

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

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AS TRUSTEE FOR
HINDLEY TRUST
ACN No. 088 989 904

BUILDING DESIGNERS ASSOCIATION OF WA INC

NO:	DATE:	REVISION:	DRAWN:	CHECK:
A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH
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-				

A1 SHEET

PERSPECTIVE VIEWS

NOT TO SCALE

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date -	30.05.24
Design -	JJR
Drawn -	JJR
Checked -	CPH
Scale -	1:100
Job No. -	0873
Dwg -	DA07
Rev -	A

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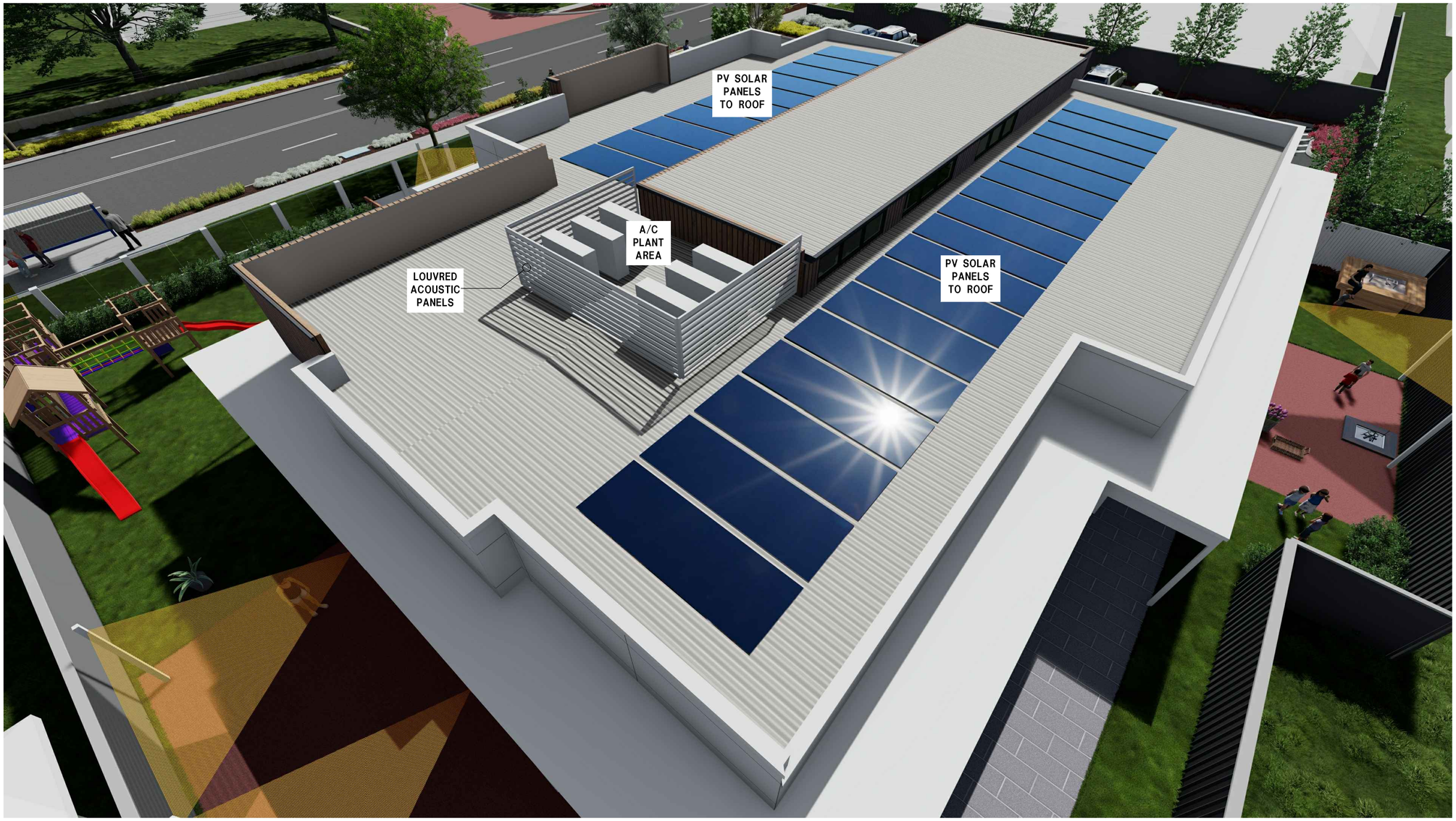

IMAGE 13
"PLAY AREA SHOWN INDICATIVELY ONLY"

SUPERSEDED

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BUILDING DESIGNERS

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ACN No. 088 989 904

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A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH
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-				

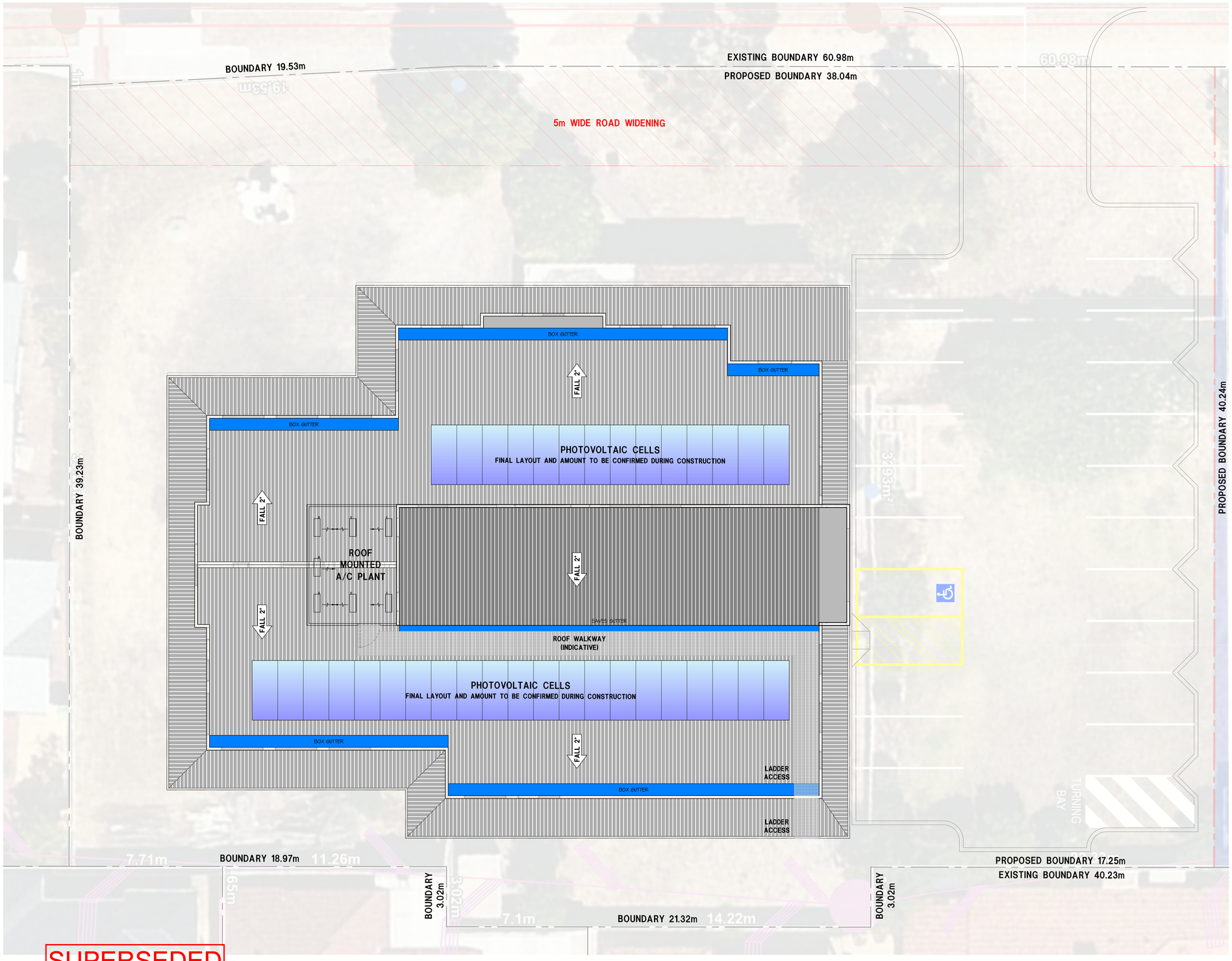
A1 SHEET

PERSPECTIVE VIEWS

NOT TO SCALE

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
Design - JJR
Drawn - JJR
Checked - CPH
Scale - 1:100
Job No. - 0873
Dwg - DA08
Rev - A



ROOFING LEGEND

- SELECTED ROOF SHEETING WITH A "SURFMIST" COLORBOND FINISH OR SIMILAR.
- 600mm WIDE x 200mm DEEP ZINCALUME BOX GUTTER SUPPORTED ON SPANDEK SHEETING WITH PSI GUTTER STRAPS AT 600mm CENTRES.
- SELECTED EAVES GUTTER WITH SELECTED COLORBOND FINISH.

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BUILDING DESIGNERS

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HINDLEY TRUST
ACN No. 088 989 904

BUILDING DESIGNERS ASSOCIATION OF WA INC

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A	08.08.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH
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-				
-				
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A1 SHEET

PROPOSED ROOF PLAN

SCALE 1:100 @ A1 1:200 @ A3

N

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date -	30.05.24
Design -	JJR
Drawn -	JJR
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Scale -	1:200
Job No. -	0873
Dwg -	DA09
Rev -	A

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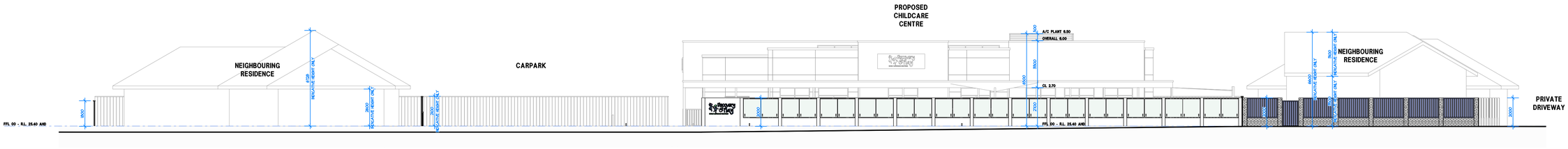

MAIN STREET OVERALL ELEVATION

SCALE 1:150 @ A1 1:300 @ A3

SUPERSEDED

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
NEDLANDS WA 6009

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AS TRUSTEE FOR
HINDLEY TRUST
ACN No. 088 989 904

BUILDING DESIGNERS ASSOCIATION OF WA INC

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A	08.08.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH
-				
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-				
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-				

A1 SHEET

@ A1 1:200 @ A3

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
Design - JJR
Drawn - JJR
Checked - CPH
Scale - 1:100
Job No. - 0873
Dwg - DA10
Rev - A

NOT TO SCALE

MAIN STREET CHILDCARE CENTRE BALCATTA

PLAY SPACE DESIGN

CONTENTS

LS 101	LOCATION PLAN
LS 102	CONCEPT PLAN - 0 - 3 YEARS
LS 103	CONCEPT PLAN - 2 - 5 YEARS
LS 104	SHADE PLAN
LS 105	DEEP SOIL CALCULATION AND RETAINING WALLS
LS 106	PLANTING PLAN - PLAYSPACE
LS 107	PLANTING PLAN - CARPARK AND VERGE

PROPOSED DEVELOPMENT
(EXCLUDING ROAD WIDENING)

GROUND FLOOR

685 sqm

AREA 1 (0 - 1 years)
16 places

AREA 2 (1 - 3 years)
35 places

AREA 3 (2 - 5 years)
35 places

GENERAL NOTES

HYDRAULIC
- 20mm water points to water play (fountains/pumps/misters) locations
- 25mm retic cut-in close to the water meter

ELECTRICAL
- Power to retic controller location

CIVIL
- Ground level on site to be set 150mm lower than FFL of slab prior to us commencing on site
- Stormwater pit/grate locations and heights to be coordinated with this concept plan

HARD DIGGING
- No allowance has been made for hard digging in the costing provided

nature PLAY SOLUTIONS
8 Burchell Way
Kewdale WA 6105
(08) 9361 1355
play@natureplaysolutions.com.au

MAIN STREET CHILDCARE CENTRE BALCATTA

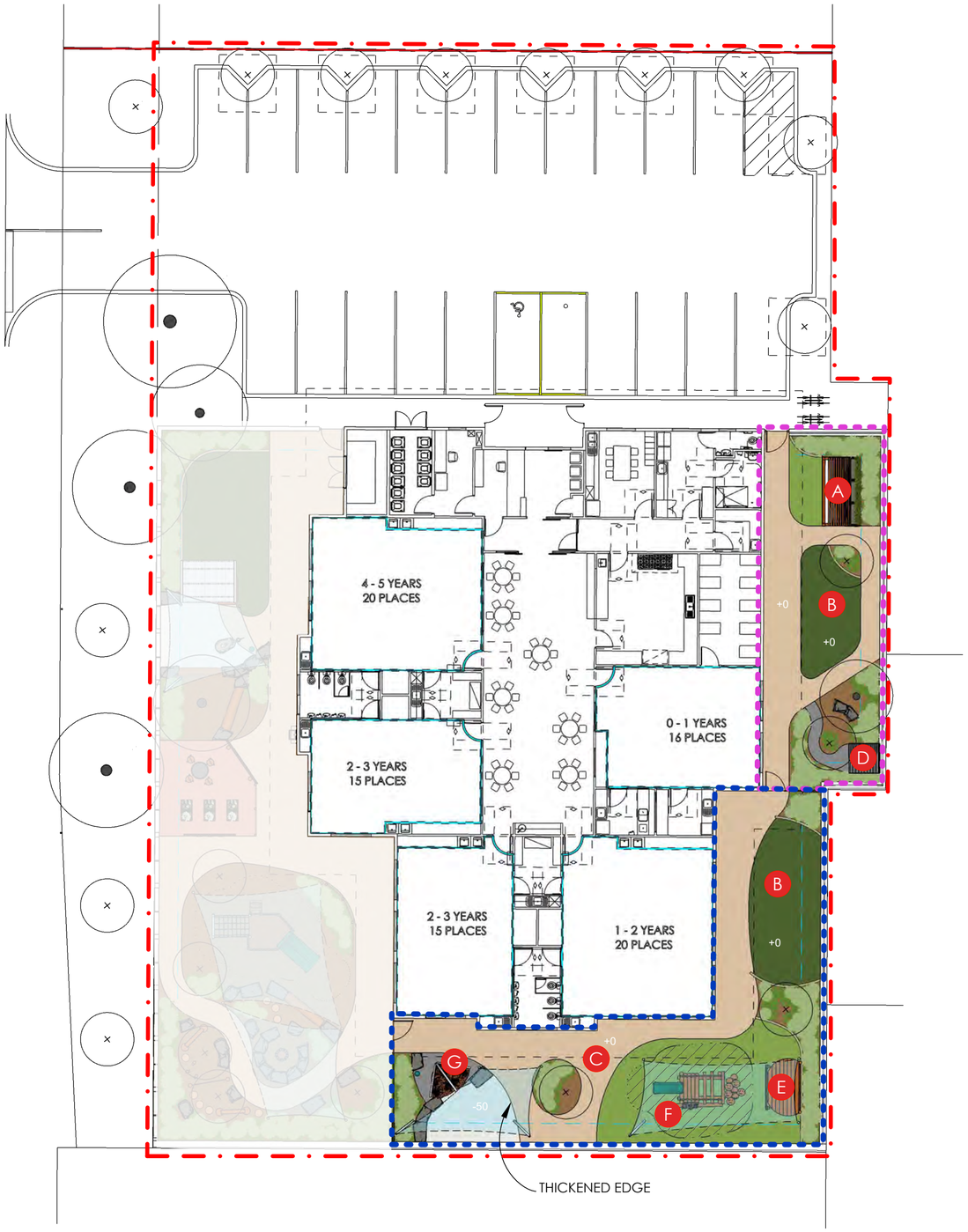
308 Main Street Balcatta WA Australia

LS 101 - LOCATION PLAN

N

Job No: 6342
Rev: B
Date: Aug 2024
Design: KP

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024



LEGEND

- A ARCH SHELTER W SANDPIT (L051504)
- B OPEN FLEXIBLE SPACE
- C BIKE PATH
- D MINI CUBBY - MESH (L019113)
- E STAGE WITH CURTAIN AND CLIPS (L032403)
- F MINI MORETON CLIMBER (L002801)
- G SHADLE LIGHT AND SHADE WITH MISTERS (L016922)

- HYBRID LAWN
- ARTIFICIAL TURF
- ARTIFICIAL TURF WITH RUBBER UNDERNEATH
- WHITE SAND (MIN 300mm DEEP)
- MULCH
- PISTACHIO CONCRETE (STIPPLE TROWEL)
- CONCRETE (ROCK SALT FINISH)
- SHADE SAIL (COLOR TBC WITH CLIENT)

- ROCK BOULDERS
- SHADE SAIL POST
- CURVED SHADE SAIL POST
- CONCRETE KERB (CREAM)
- EXISTING TREE
- PROPOSED TREE
- PLANTS
- FALL ZONE
- ROOF OVER / SHADE SAIL
- POOL FENCE FT5
- TIMBER TO BOUNDARY
- SINGLE GATE GT2
- ISOLATION VALVE
- 1m BOUNDARY EXCLUSION ZONE
- SCOPE OF WORKS (0 - 1 YEAR)
- SCOPE OF WORKS (1 - 3 YEARS)
- PROPOSED DEVELOPMENT (EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

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play@natureplaysolutions.com.au

MAIN STREET CHILDCARE CENTRE BALCATTA

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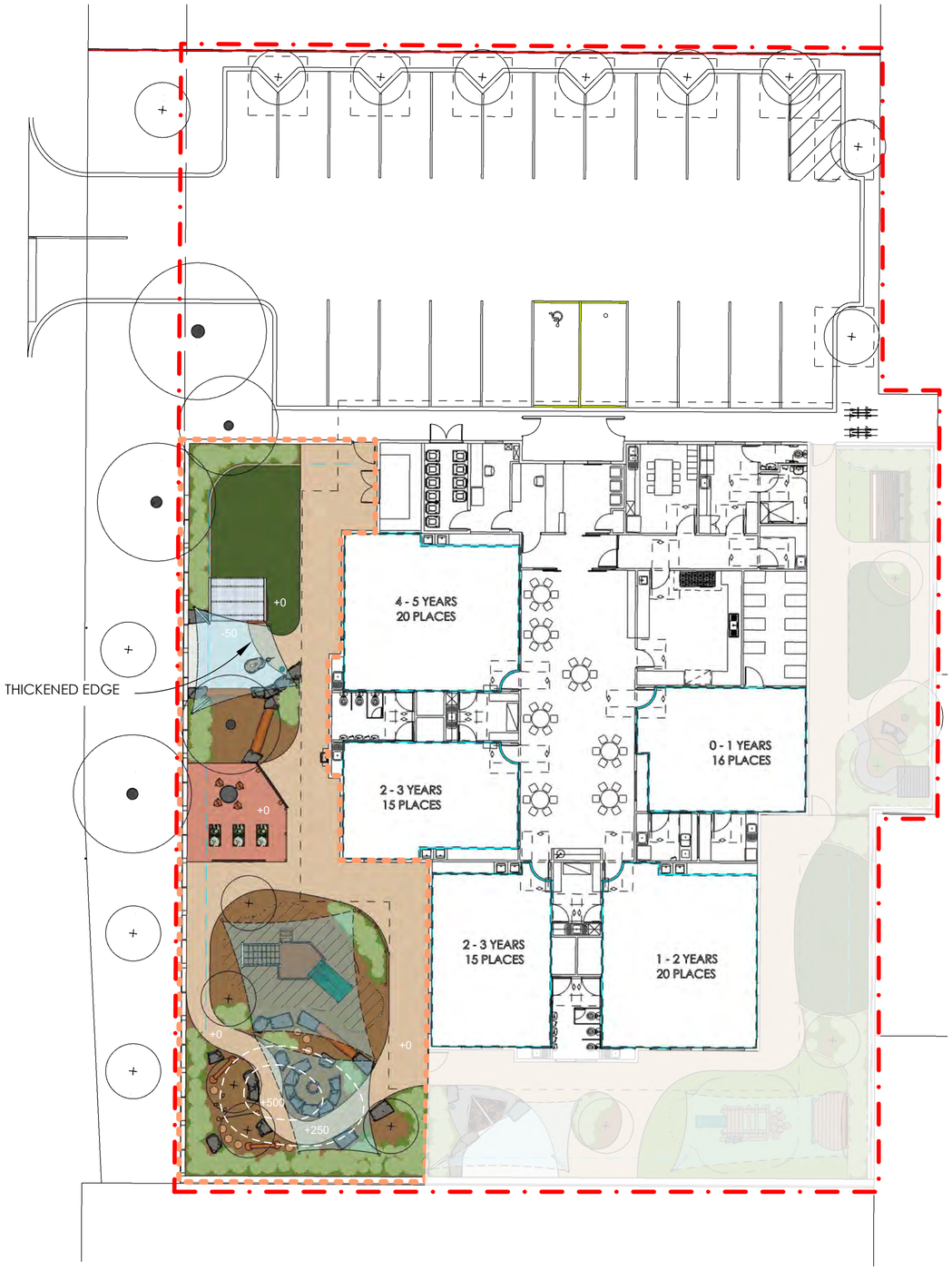
LS 102 - CONCEPT PLAN - 0 - 3 YEARS

N

Job No: 6342
Rev: B
Date: Aug 2024
Design: KP

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024



LEGEND

- A OPEN FLEXIBLE SPACE
- B TOOL SHED W/ SHOP FRONT TIMBER SLATS (L010317)
- C WATER PUMP (L003002)
- D WATER CREEK (L003008)
- E GAMES STUMP WITH CONCRETE TOP (L016402) WITH 4 X MOVEABLE ART STOOL (L020901)
- F VEGGIE GARDEN ENTRY FEATURE (L031600)
- G TIMBER PLANTER - VEGGIES (L010905)
- H ACTIVITY PANEL PEEK-A-BOO WALL - STRAIGHT (L007006)
- I WALFORD FORT (L053900)
- J CAMP SITE W/ FIRE PIT (L027800)
- K BIKE PATH
- L BALANCE SLEEPER 1.8m (L005211)
- M DUAL TIGHT ROPE (L006300)
- N STILT HONED CONCRETE STEP (L004307)

- HYBRID LAWN
- WHITE SAND (MIN 300mm DEEP)
- MULCH
- IAS MULCH
- PISTACHIO CONCRETE (STIPPLE TROWEL)
- SHADE SAIL (COLOR TBC WITH CLIENT)
- PAVING

- ROCK BOULDERS
- CONCRETE STEPPER LIGHT BROWN (L010505)
- SHADE SAIL POST
- CURVED SHADE SAIL POST
- LOG
- CONCRETE KERB (CREAM)
- EXISTING TREE
- PROPOSED TREE
- PLANTS
- FALL ZONE
- ROOF OVER / SHADE SAIL
- POOL FENCE FT5
- GARDEN RAIL FT16
- TIMBER TO BOUNDARY
- SINGLE GATE GT2
- ISOLATION VALVE
- 1m BOUNDARY EXCLUSION ZONE
- SCOPE OF WORKS (2 - 5 YEARS)
- PROPOSED DEVELOPMENT (EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

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MAIN STREET CHILDCARE CENTRE BALCATTA

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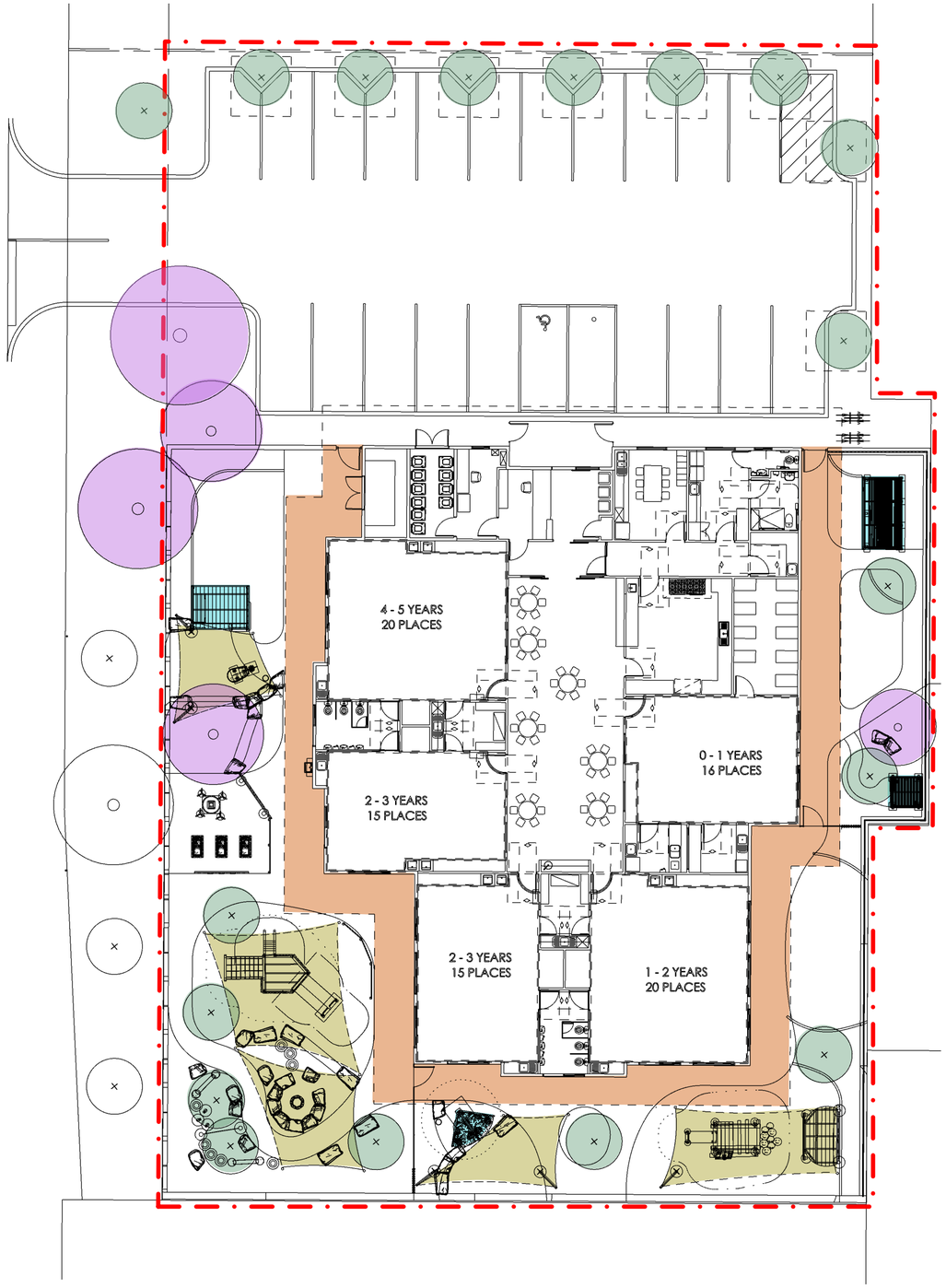
LS 103 - CONCEPT PLAN - 2 - 5 YEARS

N

Job No: 6342
Rev: B
Date: Aug 2024
Design: KP

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024



BUILDING ROOF
EQUIPMENT ROOF
PROPOSED SHADE SAIL
PROPOSED TREES
EXISTING TREES

PROPOSED DEVELOPMENT
(EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

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MAIN STREET CHILDCARE CENTRE BALCATTA

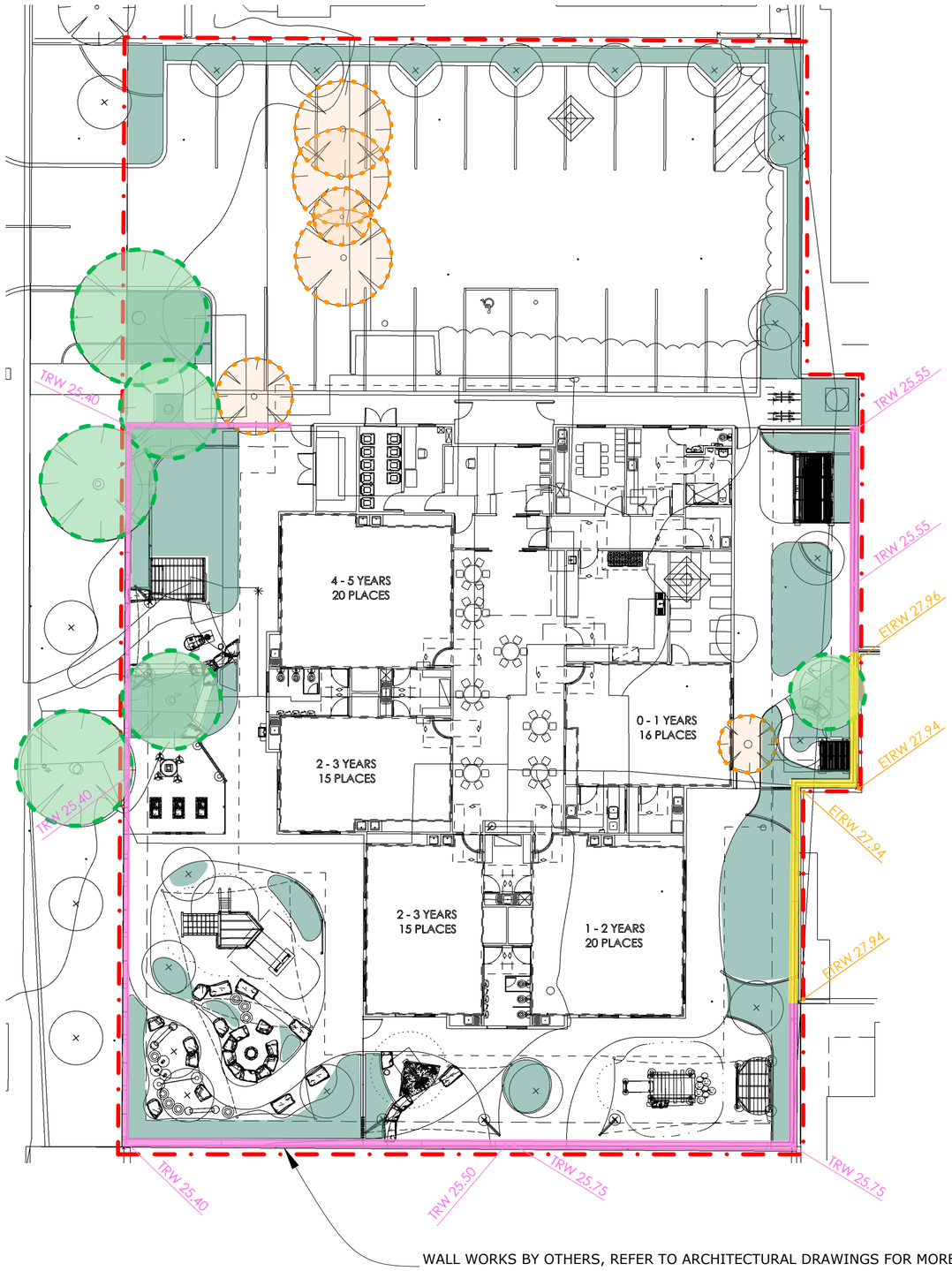
308 Main Street Balcatta WA Australia

LS 104 - SHADE PLAN

N

Job No: 6342
Rev: B
Date: Aug 2024
Design: KP

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024



PROPOSED DEVELOPMENT (EXCLUDING ROAD WIDENING)

EXISTING RETAINING WALL

PROPOSED RETAINING WALL

EXISTING TREES TO BE REMOVED

EXISTING TREES TO BE RETAINED

DEEP SOIL AREA

SITE AREA	m2	SITE %
TOTAL SITE (EXCLUDING ROAD WIDENING)	2093	
DEEP SOIL AREA	315	15%

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

N

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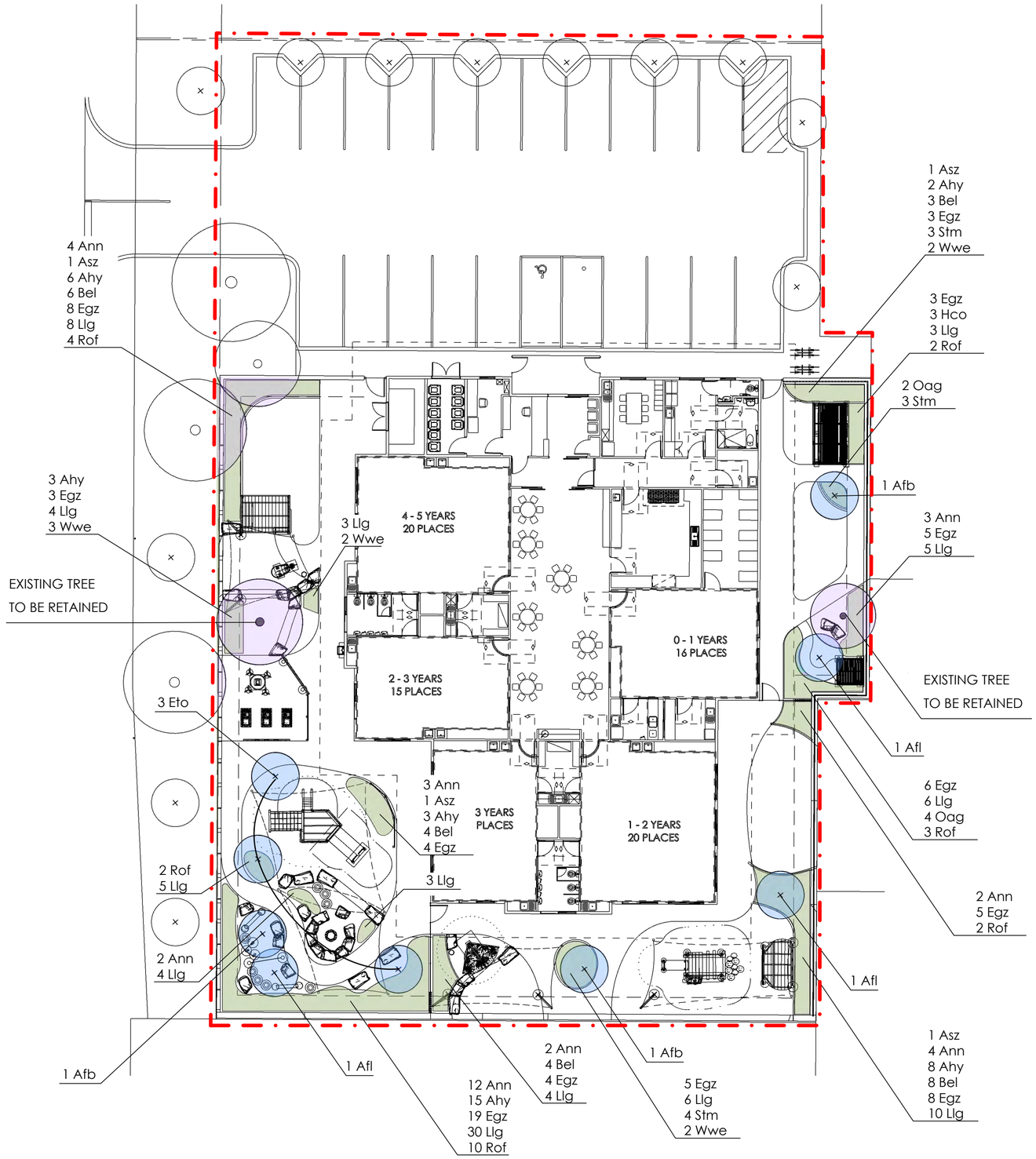
MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 105 - DEEP SOIL CALCULATION AND RETAINING WALLS

Job No: 6342
Rev: B
Date: Aug 2024
Design: KP

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024



PLAYSPACE PLANTING

TYPE	CODE	SPECIES	SIZE	POT SIZE	HABIT	QTY
Plants	Ann	Adenanthos cunninghamii	1m	140mm	Shrub	32
	Asz	Adenanthos sericeus 'Pencil Perfect'	3m	140mm	Shrub Large	4
	Ahy	Anigozanthos hybrid	0.5m	140mm	Strappy	37
	Bel	Beaufortia elegans	1m	140mm	Shrub	25
	Egz	Eremophila glabra 'Blue horizon'	0.3m	140mm	Ground Cover	73
	Afb	Hardenbergia comptoniana	3m	140mm	Creeper	3
	Llg	Lomandra longifolia 'Tanika'	0.7m	140mm	Strappy	91
	Oag	Olearia axillaris 'Little Smokie'	1m	140mm	Shrub	6
	Rof	Rosmarinus officinalis	1.5m	140mm	Shrub	23
	Stm	Stachys 'Moonlight'	0.25m	140mm	Shrub	10
	Wwe	Westringia fruticosa 'WES06' PBR	0.3m	140mm	Shrub	9
Trees	Afl	Agonis flexuosa	8m	100L	Tree Evergreen	3
	Afb	Agonis flexuosa 'Burgundy'	6m	100L	Tree Evergreen	3
	Eto	Eucalyptus torquata	8m	100L	Tree Evergreen	3
					TOTAL PLANTS	**313**
					TOTAL TREES	**9**

*All planting irrigated from mains reticulated water

* PLANTING DENSITY IS APPROX. 3 PLANTS PER SQM IN GENERAL, DEPENDENT ON PLANT SPECIES

PROPOSED DEVELOPMENT
(EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

8 Burchell Way
Kewdale WA 6105
(08) 9361 1355
play@natureplaysolutions.com.au

MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 106 - PLANTING PLAN - PLAYSPACE

N

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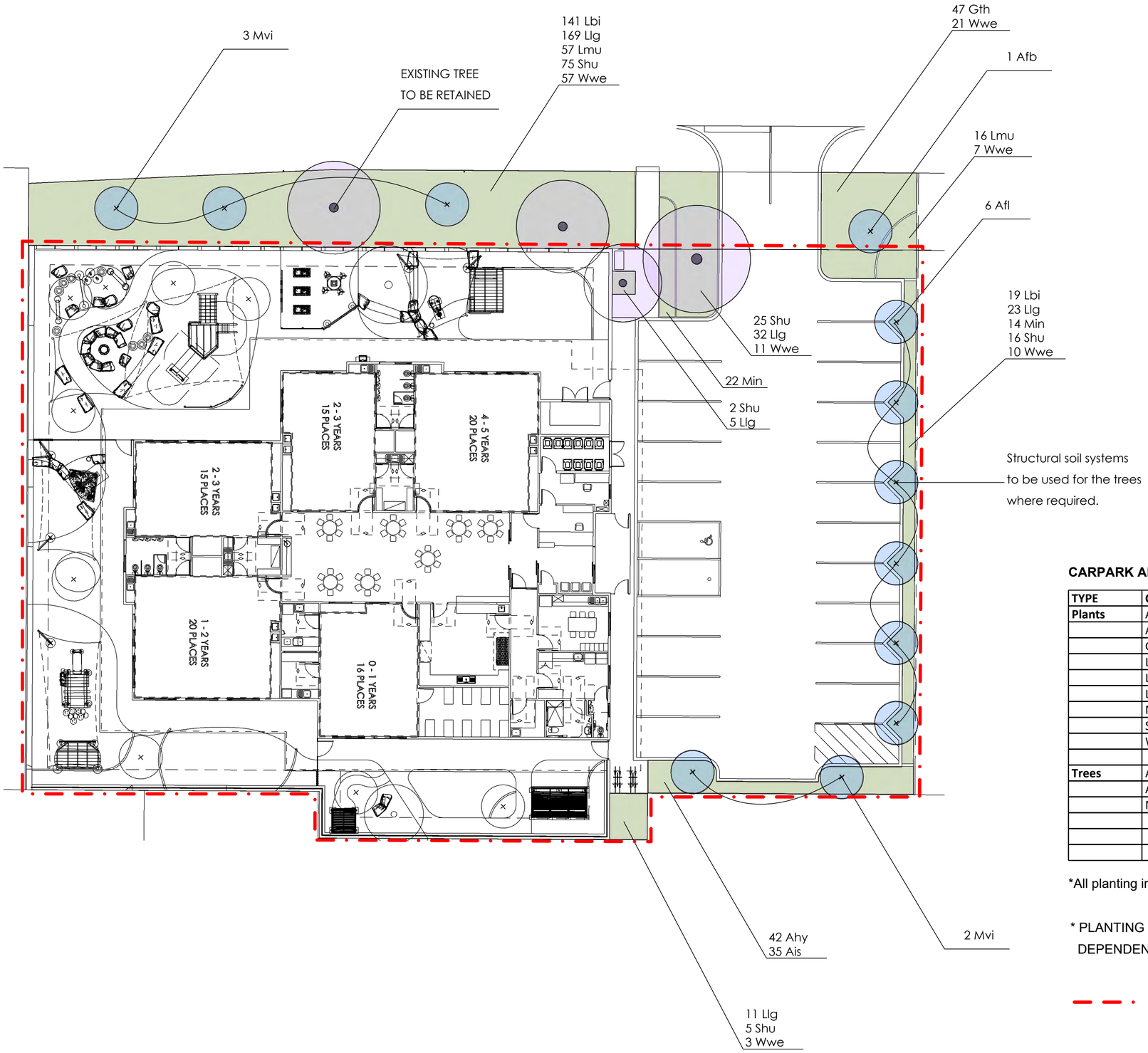

CARPARK AND VERGE PLANTING

TYPE	CODE	SPECIES	SIZE	POT SIZE	HABIT	QTY
Plants	Ais	Adenanthos meisneri 'Green Carpet'	0.3m	140mm	Shrub	35
	Ahy	Anigozanthos hybrid	0.5m	140mm	Strappy	42
	Gth	Grevillea thelemanniana 'Mini Marvel'	0.3m	140mm	Ground Cover	47
	Lbi	Lechenaultia biloba 'Dark Blue'	0.3m	140mm	Shrub	160
	Lmu	Liriope muscari	0.2m	140mm	Strappy	73
	Llg	Lomandra longifolia 'Tanika'	0.7m	140mm	Strappy	240
	Min	Melaleuca incana 'nana'	1m	140mm	Shrub	36
	Shu	Scaevola humilis 'Purple Fusion'	0.2m	140mm	Ground Cover	123
	Wwe	Westringia fruticosa 'WES06' PBR	0.3m	140mm	Shrub	109
Trees	Afl	Agonis flexuosa	8m	100L	Tree Evergreen	6
	Afb	Agonis flexuosa 'Burgundy'	6m	100L	Tree Evergreen	1
	Mvi	Melaleuca viridiflora	8m	100L	Tree Evergreen	5
					TOTAL PLANTS	**865**
					TOTAL TREES	**12**

*All planting irrigated from mains reticulated water

* PLANTING DENSITY IS APPROX. 3 PLANTS PER SQM IN GENERAL, DEPENDENT ON PLANT SPECIES

PROPOSED DEVELOPMENT
(EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

8 Burchell Way
Kewdale WA 6105
(08) 9361 1355
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MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 107 - PLANTING PLAN - CARPARK AND VERGE

N

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Application for Development Approval

Child Care Centre

No.308 Main Street
Balcatta

LATERAL
PLANNING

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024

Document Control

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Location	Lot 6 (No.308) Main Street, Balcatta
Client	Happy Felix Balcatta Pty Ltd
Document Title	Application for Development Approval - Child Care Centre
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1.0 Introduction

Lateral Planning acts for Happy Felix Balcatta Pty Ltd, the registered proprietor of the land situated at Lot 6 (No.308) Main Street, Balcatta ('site').

This Town Planning Statement has been prepared in support of an Application for Development Approval ('Application') for the construction of a Child Care Centre on the site.

The Town Planning Statement provides an assessment of the proposed development against the applicable town planning framework and demonstrates the proposal is consistent with the amenity and orderly and proper planning of the locality. The Application is accompanied by the following technical documents.

Document	Consultant
Feature Survey	Land Surveys
Architectural Drawings	Hindley & Associates
Landscape Plan	Nature Play Solutions
Town Planning Statement	Lateral Planning
Operational Management Plan	Lateral Planning
Acoustic Assessment	Herring Storer Acoustics
Traffic Impact Statement	Archer Consultants Pty Ltd

Table 1: Consultant Team

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2.0 Subject Site

2.1 Overview

Local Authority	City of Stirling	
Locality	Balcatta	
Address	No.308 Main Street, Balcatta	
Cadastral	Lot 6 on Deposited Plan 35267	
Certificate of Title	Volume 2223 Folio 984	
Registered Proprietor	Happy Felix Balcatta Pty Ltd	
Land Area	Total Lot Area	3,293m^2
	Child Care Centre Site	2,093m^2
Frontages	Main Street	80.5 metres
Existing Land Use	Residential (2 Dwellings)	

Table 2: Site Overview

2.2 Context

The site is situated 8 kilometres north of Perth in the suburb of Balcatta, in the City of Stirling ('City'). Balcatta was predominantly occupied by market gardens until the 1960's and has since transitioned into a predominantly residential neighbourhood with a population of approximately 11,000 people.

The site is located on the east side of Main Street, 110 metres north of the intersection with Karrinyup Road / Morley Drive. The surrounding area is characterised by medium density housing of one to two storeys, including traditional homes and contemporary infill housing. Conway Reserve and Harrison Street Local Centre are approximately 300 metres to the north while Balcatta Primary School is 600 metres to the north. On the opposite (west) side of Main Street is the head office of Juniper, a non-profit aged care provided, and a former residential care facility.

Main Street is a district distributor road comprising two traffic lanes in each direction with no central median. A footpath is provided on each side of the street. There are two power poles with street lighting in the verge abutting the site. There are no verge trees.

The site is serviced by public transport (bus services) with Bus No.414 running in a north-south direction along Main Street, between Stirling and Glendalough Railway Stations, with bus stops adjacent to the site. The High Frequency Circle Route No.998 / 999 runs along Karrinyup Road / Morley Drive, in both a clockwise and anti-clockwise direction, with bus stops within 150 metres of the site.

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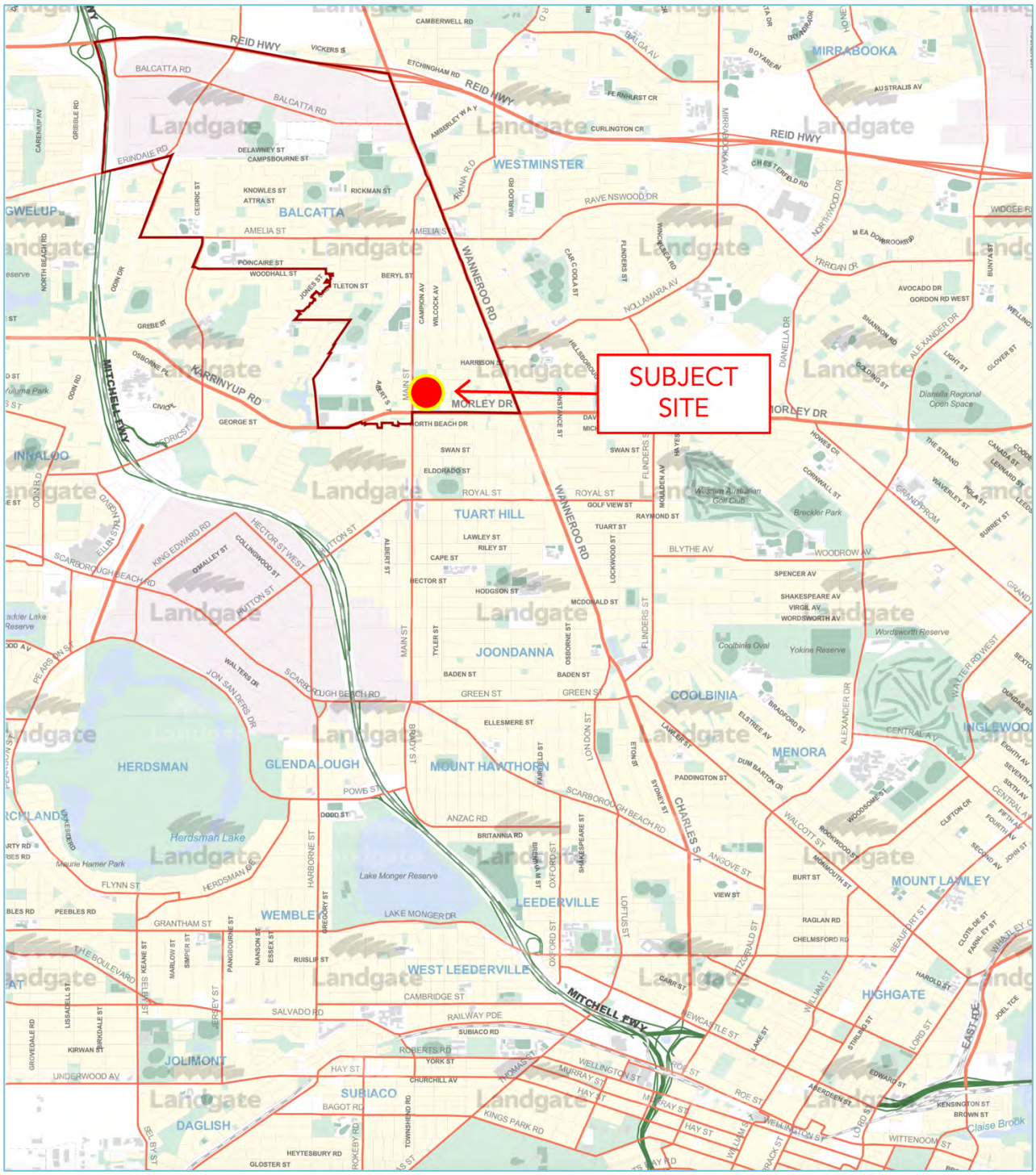

Figure 1: Regional Context

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Figure 2: Local Context

2.3 Characteristics

The site has a land area of 3,293m^2, with a frontage of 80 metres to Main Street.

The site is occupied by two dwellings. The southern dwelling is evident on Landgate mapping from the early 1950's while the northern dwelling was constructed in the late 1990's.

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The site is relatively flat with a level of approximately 25.3 metres AHD. The Perth Groundwater Map indicates a (maximum) groundwater level of 9.7 metres AHD in the vicinity of the site, being a depth of approximately 15.6 metres below ground level. The surface geology is described as 'Tamala Limestone' with a low risk of acid sulfate soils. Vegetation on the site comprises various small to medium sized trees, scattered shrubs and lawn areas.

Figure 3: Site and Surrounds

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3.0 Description of Proposed Development

Item	Proposed			
Description of Development	Child Care Centre			
External Play Area	Total External Play Area		680m²	
Activity Rooms	Room	Age (Years)	Area	Places
	1	4 to 5	67m²	20
	2	3 to 4	49m²	15
	3	2 to 3	53m²	15
	4	1 to 2	70m²	20
	5	0 to 1	52m²	16
	Piazza	0 to 1 2 to 3	65m²	4 4
	Total		**356m²**	**94**
Staff	Educators		18	
	Centre Manager		1	
	Total		**19**	
Operating Times	Trading Days		Monday to Friday	
	Staff Arrival / Departure		6.30am to 7.00pm	
	Customer Arrival / Departure		7.00am to 6.30pm	
	External Play Areas		7.00am to 6.00pm	
Parking	Car Bays		21	
	Bike Bays		2	
Trees	Trees Removed - Verge		0	
	Trees Retained - Verge		0	
	Trees Removed - Site		6	
	Trees Retained - Site		6	
	Trees Proposed - Site		21	

Table 3: Summary of Proposed Development

The proposed Child Care Centre will occupy the central and southern portions of the site, which comprises a total area of 2,093m².

The existing southern dwelling will be demolished to make way for the Child Care Centre. The existing northern dwelling will be retained and does not form part of this Application. No works are proposed within the portion of the site reserved for road widening, with the exception of landscaping and pedestrian / vehicle access.

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4.0 Town Planning Considerations

4.1 Metropolitan Region Scheme

The site is zoned Urban under the Metropolitan Region Scheme ('MRS').

Main Street is reserved as an Other Regional Road and the site is affected by a road widening requirement of approximately 5 metres in width.

No development is proposed within the road widening area with the exception of the driveway, footpath and landscaping. The Department of Planning, Lands and Heritage ('DPLH') has advised that there is no immediate requirement or funding allocated to widen Main Street and the road widening area should therefore be set aside as a separate lot for future acquisition by the State Government at a later date.

4.2 State Planning Policies

4.2.1 State Planning Policy 5.4 – Road and Rail Noise

State Planning Policy 5.4 – Road and Rail Noise ('SPP5.4') seeks to minimise the adverse impacts of road and rail noise on noise-sensitive land uses within the 'trigger distance' of major transport corridors. According to Main Roads WA Traffic Data, Main Street (north of Karrinyup Road / Morley Drive) carried an average of just over 23,500 vehicles per weekday in 2018/2019. This means the site is within the 'trigger distance' of 200 metres applicable to 'other significant traffic routes', defined in SPP5.4 as:

> *These are generally any State administered road and/or local government road identified as being a future State administered road (red road) and other roads that meets the criteria of either >= 100 Class 7 to 12 Austroads vehicles daily or >=23,000 daily traffic count (averaged equivalent to 25,000 vehicles passenger car units under region schemes).*

The Application is accompanied by an Acoustic Assessment, which finds that traffic noise received at the premises will meet the requirements of SPP5.4, subject to implementation of the noise mitigation measures recommended in the Acoustic Assessment.

4.2.2 State Planning Policy 7.0 – Design of the Built Environment

State Planning Policy 7.0 – Design of the Built Environment ('SPP7.0') seeks to achieve 'good design' through the application of ten (10) Design Principles. Consideration has been given to the Design Principles set out in SPP7, as summarised in the table below.

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Design Principle	Response
Context and Character	Consideration has been given to the site context and character of the locality, with respect to the scale, design and materiality of the development.
Landscape Quality	The Application is accompanied by a Landscape Plan that demonstrates a high-quality landscape design to all external areas.
Built Form and Scale	The building is single storey and incorporates a verandah and visually permeable fencing to the street frontage, with the car park sleeved to the side of the development.
Functionality and Build Quality	The building is designed to function as a Child Care Centre in accordance with all applicable Regulations.
Sustainability	The development will incorporate: • roof mounted photovoltaic cells for solar energy; • water and energy efficient appliances. The building incorporates passive design features: • Activity Rooms are situated at the corners of the building to allow for natural cross-ventilation through openings; • Activity Rooms have a direct aspect toward the external play areas, to maximise daylight; • Operable highlight windows to the central Piazza for natural daylight and cross-ventilation; • The depth of the verandah (east and west facing) provides shade in summer; • Retention / planting of trees for shade to External Play Areas and car park.
Amenity	The development is designed to minimise impacts on the amenity of the area. The development will incorporate Construction and Operational Measures to mitigate noise. Refer Acoustic Assessment and Operational Management Plan.
Legibility	The Child Care Centre has a legible front entry with subtle signage and a separate pedestrian path leading to the entry lobby.
Safety	Activity Rooms and External Play Areas are orientated to face the street and provide a high level of casual visual surveillance of the public realm.
Community	The use is compatible with its setting and is an appropriate non-residential activity in the Residential zone that will service residents of the locality. The Child Care Centre will benefit the community by delivering an important service to young families in the local area. A study by Victoria University *(Deserts and Oases: How Accessible is Childcare in Australia? March 2022)* found that between 2.59 and 4.53 children in Balcatta compete for each child care place, compared to a nation-wide median of 2.6 children per place. Out of 16 neighbourhoods in Balcatta, all were classified by the study as "childcare deserts".
Aesthetics	The design and scale of the building is consistent with the character of the area and will enhance the streetscape.

Table 4: Design Principles Assessment

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4.3 City of Stirling Local Planning Scheme No.3

4.3.1 Zoning

The site is zoned 'Residential' under Local Planning Scheme No.3 ('LPS3'). A residential density code of R40 applies to the site.

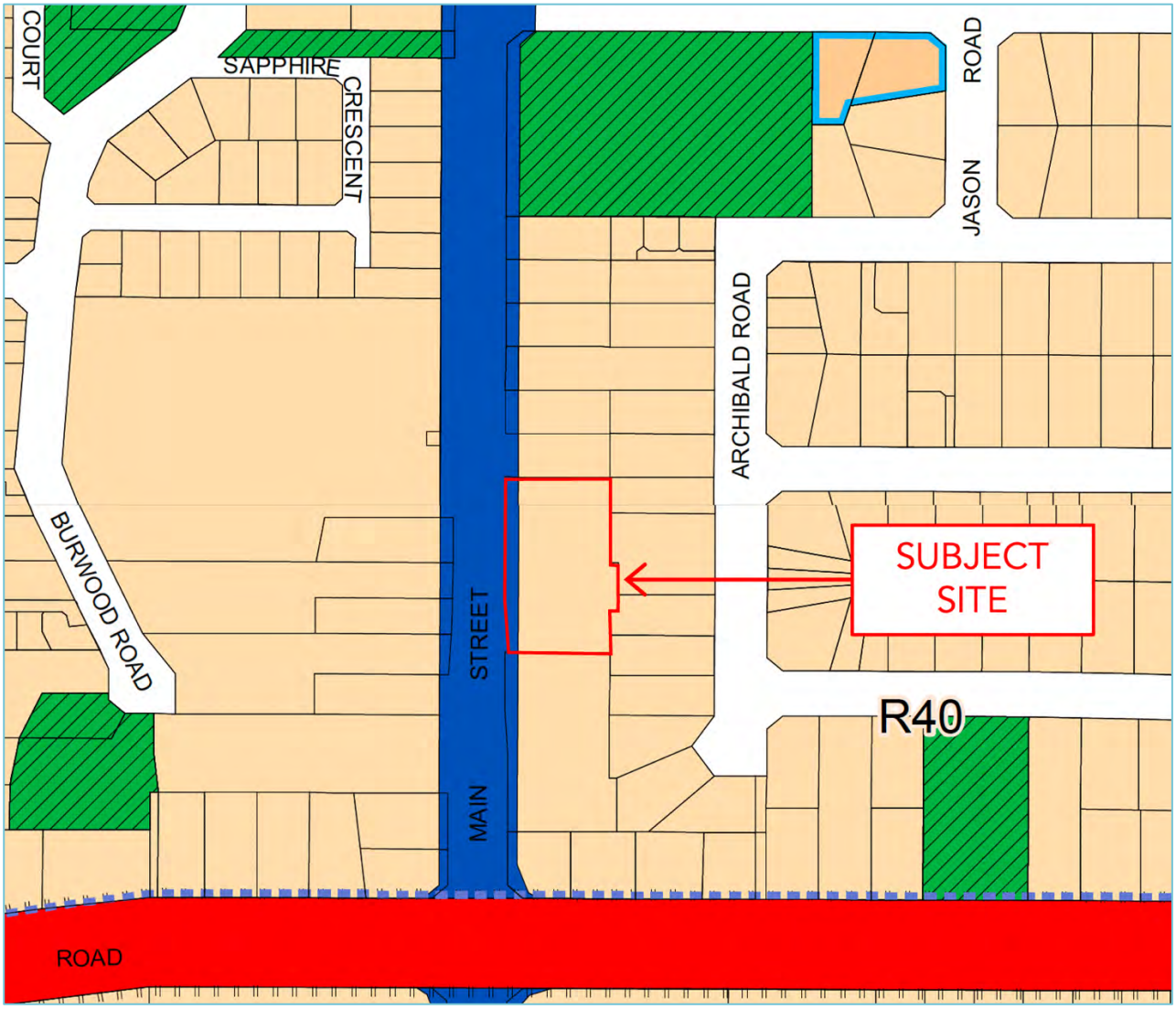

Figure 4: LPS3 Zoning Map

4.3.2 Land Use

The proposed use falls within the definition of a 'Child Care Premises' under LPS3, which is designated as a 'A' use in the 'Residential' Zone. This means the proposed use is capable of being approved at the discretion of the decision-maker, after advertising and having regard to all relevant planning considerations.

It is considered the Child Care Centre is consistent with Objective (b) of the Residential zone, being a non-residential land use that is compatible with and complimentary to residential development. The Child Care Centre will service the needs of the local community and is accessible to Balcatta Primary School and two Local / Neighbourhood Centres.

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4.3.3 Special Control Areas

The site is not within any Special Control Areas under LPS3.

4.3.4 Development Requirements

Clause 5.3.1 of LPS3 states that all non-residential development in the Residential zone shall satisfy the built form provisions of the Residential Design Codes (RD Codes') as applicable to Multiple Dwellings (R40). The proposed Child Care Premises satisfies the majority of relevant Deemed-to-Comply provisions in Part C Volume 1 of the RD Codes, including:

- Soft Landscaping;
- Tree Planting;
- Open Space;
- Building Height;
- Setbacks;
- Site Works;
- Overshadowing; and
- Visual Privacy.

Boundary Wall – Primary Street Setback

A minor variation is proposed to the Deemed-to-Comply provision of the RD Codes relating to the height of the proposed wall within the primary street setback to Main Street.

Deemed-to-Comply C3.6.7 and C3.6.8 state that a wall (including solid piers) within the primary street setback area shall not exceed a maximum height of 1.8 metres above Natural Ground Level ('NGL'), measured on the primary street side of the wall, with visually permeable fencing required above a height of 1.2 metres.

The proposed wall to the front of the External Play Area is located within the primary street setback adjacent to the Other Regional Road Reserve. The wall incorporates visually permeable infill panels above 1.2 metres in height, however, the maximum height of the wall ranges from 2 metres to 2.4 metres above NGL. A solid portion of wall to a height of 2.4 metres is proposed adjacent to the pedestrian entry for the purpose of providing signage for the Child Care Centre.

The design of the wall is considered to satisfy the relevant Design Principles of the RD Codes. The building design addresses the street frontage and the wall will allow for passive surveillance of the public realm, whilst creating a safe External Play Area for the Child Care Premises.

The Application does not propose any other boundary walls. With respect to proposed fences to the side / rear boundaires of the site, Clause 8.2 of LPS3 states a boundary fence that complies with LPS3 is exempt from the requirement to obtain Development Approval. In this regard, a boundary fence does not fall within the definition of a boundary wall under the RD Codes and LPS3 does not include any other provisions relating to boundary fences.

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4.3.5 Local Planning Policies

Clause 5.1.1 of LPS3 requires development to have 'due regard' to all relevant Local Planning Policies adopted under LPS3. Local Planning Policies relevant to the consideration of this Application include:

- Local Planning Policy 6.1 – Advertising Signs;
- Local Planning Policy 6.3 – Bin Storage Areas;
- Local Planning Policy 6.4 – Child Care Premises;
- Local Planning Policy 6.6 – Landscaping;
- Local Planning Policy 6.7 – Parking and Access;
- Local Planning Policy 6.11 – Trees and Development; and
- Local Planning Policy 6.12 – Public Art.

Local Planning Policy 6.1 – Advertising Signs

Local Planning Policy 6.1 ('LPP6.1') outlines development requirements for advertising signs, to ensure signage is in keeping with the scale and form of buildings and does not detract from the streetscape. Signage that meets the Acceptable Development standards of LPP6.1 does not require Development Approval.

In this instance, the Application proposes three signs:

- 1 x Fence Sign, affixed to the front boundary wall, with a maximum height of 1.8 metres and an area of 1.5m^2;
- 2 x Wall Signs, affixed to the western and northern facades of the building, with a maximum area of 1.5m^2 per sign.

The proposed Fence Sign satisfies the Acceptable Development standards of LPP6.1 and is therefore exempt from Development Approval.

With respect to the Wall Signs, the Acceptable Development provisions of LPP6.1 permit a maximum of one (1) Wall Sign with an area of 1.2m^2 for non-residential uses in the Residential zone. The proposed Wall Signs therefore require Development Approval. It is considered the Wall Signs are consistent with the scale and design of the development and will not detract from the streetscape of Main Street.

Local Planning Policy 6.3 - Bin Storage Area

A bin store of 10m^2 is proposed. The bin store is capable of accommodating 10 x 240 litre bins, which is sufficient to meet the waste generation needs of the Child Care Centre.

The bin store is located adjacent to the car park and integrated into the design of the building to minimise its visual impact. The Bin Store will be constructed of materials to match the building and is enclosed by a solid masonry wall.

Waste management is addressed in the Operational Management Plan for the premises.

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Local Planning Policy 6.4 – Child Care Premises

Objectives

Objective	Response
Prioritise the location of Child Care Premises close to activity centres and along urban corridors.	The site is located on Main Street in close proximity to two small activity centres: • Grindleford Road Neighbourhood Centre; and • Harrison Road Local Centre.
Ensure new buildings respect the existing or future built form, scale and character of the area.	The Child Care Centre is a single storey building that satisfies the relevant built form provisions of the RD Codes with respect to open space, height, setbacks, overshadowing and visual privacy.
Provide landscaping to mitigate development impacts on the amenity of the surrounding area.	The Child Care Centre will be set within landscaped External Play Areas and incorporates tree retention and tree planting. Refer Landscape Plan.
Ensure developments in residential areas are located along roads that can carry anticipated traffic volumes and minimises the impact on the function and safety of the local road network.	The Child Care Centre fronts Main Street and will not generate any traffic on local roads in the neighbourhood.
Ensure Child Care Premises operate in a manner that mitigates the impacts of amenity on people living in nearby dwellings with regard to intensity of use, hours of operation, noise, traffic impacts, light spill, waste management and the provision of facilities.	The Hours of Operation are consistent with those required by LPP6.4, being Monday to Friday 7am to 6.30pm. The Application is accompanied by: • Traffic Impact Statement; • Acoustic Assessment; and • Operational Management Plan. The premises will be constructed and thereafter operate in accordance with the recommendations of the Acoustic Assessment and Operational Management Plan.
Require buildings to be designed in a way which minimises the impacts of noise, overlooking, overshadowing, traffic, car parking and access.	The premises is a single storey building that will not result in any overlooking or overshadowing. Access is proposed from Main Street and sufficient car parking is provided to meet demand from customers, staff and other visitors. Acoustic fencing is proposed to all boundaries as recommended by the Acoustic Assessment.
Provide a safe and connected environment for pedestrians both on and around the site.	A separate pedestrian path is provided to the entry of the premises from the exiting footpath on Main Street. The entry incorporates a bench seat and a fenced portico to provide a safe point of entry to the premises. Windows to the staff room and administration room face the pedestrian entry path and visually permeable fencing is provided to the street frontage to enhance surveillance of the public pedestrian footpath.

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General Provisions

General Provision	Response	
Amenity	This Town Planning Statement and the Operational Management Plan demonstrate that the proposed Child Care Premises will not have an adverse impact on the amenity of the locality.	
Operation	Trading Days	Monday to Friday
	Staff Arrival / Departure	6.30am to 7.00pm
	Customer Arrival / Departure	7.00am to 6.30pm
	External Play Areas	7.00am to 6.00pm
Fencing	The front boundary fence is visually permeable above 1.2 metres to maximise surveillance of the public realm.	
Landscaping	The Application is accompanied by a Landscape Plan and incorporates soft landscaping, tree retention and tree planting. Shade trees are provided to the car park. The building is setback 6 metres from the edge of the road reserve to allow for retention and planting of trees in the front setback area.	
Parking and Access	The car park is sleeved to the side of the premises with direct access to the entry. Landscaping will provide shade and soften the visual impact of the car park. The Operational Management Plan shows the allocation of car bays, with all customer bays positioned closest to the building entry for ease of access. Customer car bays have a minimum width of 2.6 metres consistent with AS2890.1 for short-term car parking (less than 15 minutes). The crossover has a width of 6 metres to facilitate two-way access. No verge parking is proposed or required.	
Waste Facilities	The development includes a bin store of sufficient capacity to meet the waste generation needs of the premises. Refer Operational Management Plan.	

Specific Provisions

Requirement	Response
Location	
Suitable Locations	The Child Care Centre fronts the Main Street Corridor.
Unsuitable Locations	The Child Care Centre is not located in an unsuitable location such as a cul-de-sac and does. Not obtain access from a local road, right-of-way or laneway.
Residential Zone	
Site Area	The site area exceeds 1,000m^2.
Compliance with RD Codes	The development satisfies the Deemed-to-Comply provisions of the RD Codes (R40) with respect to building height, open space, side / rear boundary setbacks, visual privacy and overshadowing.

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Boundary Fencing	Colorbond fencing in-lieu of masonry fencing is proposed to the side and rear boundaries of the site. The proposed fencing is consistent with the recommendations contained in the Acoustic Assessment.
Street Setback	The proposed setback to Main Street (measured to the edge of the road widening area) exceeds the minimum setback of 3 metres under the RD Codes.
Interface to Street	The proposed Child Care Premises includes a clearly define entry point with separate path / entry threshold that is visible and accessible from Main Street.
Landscaping	Soft landscaping is proposed to a minimum depth of 1.5 metres to the majority of the site's side and rear boundaries. The external play area to the rear and south of the premises is intended to be used by the younger children (<3 years), with the external play area at the front of the premises to be used by the 3 to 5 age group. This arrangement will assist with reducing noise impacts on residential properties, as the younger children are generally quieter with typically less time spent outdoors.

Local Planning Policy 6.6 – Landscaping

Local Planning Policy 6.11 – Trees and Development

Requirement	Response
Landscape Plan	The Application is accompanied by a Landscape Plan.
Area of Landscaping	10% of the site is required to be landscaped. The Child Care Premises will occupy a site of 2,093m^2, meaning 209m^2 of landscaping is required. Approximately 410m^2 (20%) of landscaping is proposed, which excludes pedestrian paths, paved play areas and artificial turf.
Buffers to Setback Areas	A 'soft' landscaped buffer of 1.5 metres in width is required where buildings are setback from adjacent properties. Soft landscaping is proposed to a minimum depth of 1.5 metres to the majority of the site's side and rear boundaries.
Trees	
• Verge Trees	There are no verge trees adjacent to the site. Two (2) existing trees in the road widening area are proposed to be retained and four (4) new trees are proposed to be planted in the road widening area.
• Site Trees	1 existing tree is required to be retained for every 500m^2 of site area (2,093m^2); or 1 advanced tree is required to be planted for every 500m^2 of site area where no significant trees are retained. The Application proposes the following: • Retained Trees: 6 • Proposed Trees: 21 - Road Widening Area: 4 - Car Park: 8 - External Play Areas: 9 • Total Retained + Proposed 27
• Shade Trees – Car Park	LPP6.6 requires one (1) shade tree for every 6 car bays, meaning four (4) shade trees are required. A total of eight (8) trees are proposed in the car park.

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Local Planning Policy 6.7 – Parking and Access

Policy Objectives

The Objectives of LPP6.7 are:

a) *To ensure development provides an appropriate level of car parking, reflecting supply and demand so that a major parking problem is unlikely to occur;*
b) *To ensure safe, convenient, and efficient access for pedestrians, cyclists, and motorists;*
c) *To prioritise access by public transport, walking and cycling;*
d) *To facilitate the provision of adequate bicycle parking and end of trip facilities;*
e) *To provide a balanced parking supply that does not exceed the capacity of the road network, with sufficient publicly accessible parking;*
f) *To ensure that an oversupply of parking does not occur that discourages alternative forms of transport; and*
g) *To ensure the amount of parking is not detrimental to the urban design and character of the locality.*

Due consideration has been given to the Policy Objectives with respect to the provision of parking for the proposed Child Care Premises.

Car Parking Requirement

The minimum car parking requirement applicable to a Child Care Premises is set out in Table 2 of LPP6.7, as summarised below.

Standard	Requirement		Response	
Car Parking	Staff Car Parking:		Total Car Bays Provided	21
	• 1 bay / staff member (19)	19	As per the Operational Management Plan, car parking bays will be allocated as follows:	
	Customer Car Parking:			
	• 1 bay / 7 places (94)	13	• Staff Only Bays:	11
	Total Required:	32	• Additional Staff Bays (non-peak times):	8
			• Additional Visitor Bays (non-peak times):	1
			• Customer Only Bays (peak times):	9
			• ACROD Bay (all times):	1

Table 5: Car Parking Summary

Variations to Car Parking Requirement

A total of 32 car bays are required, whereas the Application proposes 21 car bays, resulting in a shortfall of 11 car bays. Notwithstanding, Clause 6.1.2 of LPP8 contemplates the ability for the car parking requirement to be varied. Clause 6.1.2 reads:

The car parking requirements applicable under Table 1 may be varied, having regard to:

a) *The nature of the proposed development;*
b) *The number of employees likely to be employed on site;*
c) *The anticipated demand for parking; and*
d) *The orderly and proper planning of the locality.*

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Variations will only be supported where it will not adversely affect access arrangements, the safety of pedestrians or persons in vehicles, open bay, street trees or service infrastructure and the number of car parking bays to be provided will be adequate for the demands of the development, having regard to the likely use of the car parking bays, the availability of off-site parking facilities and the likely use of alternative means of transport.

The amount of parking provided is sufficient to meet parking demand from customers, staff and other visitors throughout the day, due to the different peak operating times of each user group. This allows car bays to be allocated to specific user groups at different times to meet demand.

Customer Parking

A total of nine (9) car bays will be set aside exclusively for customer use during the morning drop-off peak and afternoon pick-up peak.

According to the Guide to Traffic Generating Developments published by the New South Wales Road and Traffic Authority, the average length of stay for a drop-off / pick-up at Child Care Centres is 6.8 minutes.

Consistent with the approach taken for other approved Child Care Centres in the metropolitan area, and assuming a more conservative 10-minute average length of stay, each car bay can accommodate 6 separate drop-offs per hour, or 12 drop-offs over a typical two-hour peak period. With 9 dedicated customer car bays during peak times, a total of 108 individual car drop-offs / pick-ups can be accommodated over a two-hour peak period, which is more than the maximum capacity of the Child Care Premises.

Furthermore, based on traffic modelling for numerous other approved Child Care Centres in the metropolitan area, it is anticipated the AM peak hour of the Child Care Premises will be 7.30am to 8.30am, with the PM peak hour being 4.30pm to 5.30pm, when up to 45% of customers (42) will arrive / depart. With each customer car bay accommodating 6 separate drop-offs per hour, the provision of 9 dedicated customer bays is sufficient to meet anticipated demand during the AM and PM peak hours.

It is important to note that the above assessment of customer parking demand assumes 100% occupancy with all children being driven to the premises in separate vehicles. In practice, the premises will rarely (if ever) operate at full capacity due to day-to-day enrolments, absentees, and market conditions. In addition, not all customers arrive by car and many children will have siblings at the premises, further reducing the number of individual car trips.

The provision of 9 dedicated customer bays during the morning and afternoon peak is therefore adequate to meet parking demand from the proposed development.

Staff Parking

The number of staff at the premises on any given day will vary depending on enrolments in each age group, with staff work times staggered to meet the needs of the centre throughout the day.

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Three (3) staff will typically be rostered to open the premises and commence work by 7am. No staff would arrive prior to 6.30am. For a full occupancy scenario, up to 10 staff would typically be rostered to commence work prior to 8.30am, increasing to a maximum of 19 staff during the day. Staff levels will gradually decrease as shifts finish and children are collected. No more than 10 staff would typically be working at the commencement of the afternoon peak (4.30pm), with 3 staff typically rostered to close the premises at 6.30pm. All staff would depart by 7pm latest.

A total of 11 car bays will be set aside exclusively for staff use throughout the entire day, with an additional 8 car bays available for additional staff parking between 9am and 4pm when customer parking demand is low. A total of 19 car bays will therefore be available for staff parking when the highest number of staff (19) will be present on the site.

The provision of staff parking assumes 100% occupancy of the premises, which is unlikely to occur. Furthermore, not all staff will drive in separate cars, and some staff will arrive by means other than driving (walking, cycling or public transport).

Other Visitors & Service Vehicles

Other visitors to the premises include service vehicles, suppliers and potential clients who may wish to meet with staff and / or inspect the centre. Such visitations are infrequent and will be scheduled to occur during the day (between 9am and 4pm) when use of the car park is at its lowest. One (1) car bay will be set aside for visitor parking outside of peak times.

ACROD Parking

One (1) car bay will be available for ACROD permit parking, which may include customers, staff and other visitors.

Design of Car Park

The design of the car park complies with AS2890.1 and all of the requirements set out in LPP6.7.

Operational Management Plan

The Operational Management Plan accompanying the Application demonstrates how the car parking bays on the site will be allocated to meet the different peak parking demand times of each user group, as outlined above and depicted in the figure below.

This approach is consistent with the principle and intent of Clause 5.5 (Shared Parking) of LPP6.7, which makes provision for the shared use of car parking facilities. Clause 5.5 states:

> *The City may consider shared parking arrangements for developments where Table 2 applies. In assessing whether shared parking is appropriate whether the parking facilities are conveniently and safely located, and accessible for both developments and provide sufficient parking during times of shared parking. The City may consider the following shared parking arrangements:*
>
> *a) Up to 90% of the parking requirement specified, where there is minimal overlap (less than 30 minutes) in the operating times of uses; or*
>
> *b) Up to 50% of the parking requirement specified, where there is partial overlap (not more than 50 percent) in operating times of the uses.*

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While Clause 5.5 is intended to apply to the shared use of parking facilities for different developments, the **shared parking principle** contemplated by Clause 5.5 is relevant to the proposed development and can be applied in a similar way through implementation of the Operational Management Plan.

With the deployment of these operational measures, sufficient car parking will be available to meet demand from different users of the child care centre throughout the day. The site's proximity to public transport, together with the provision of bike parking and end-of-trip facilities, will further reduce private car usage and encourage alternative modes of transport.

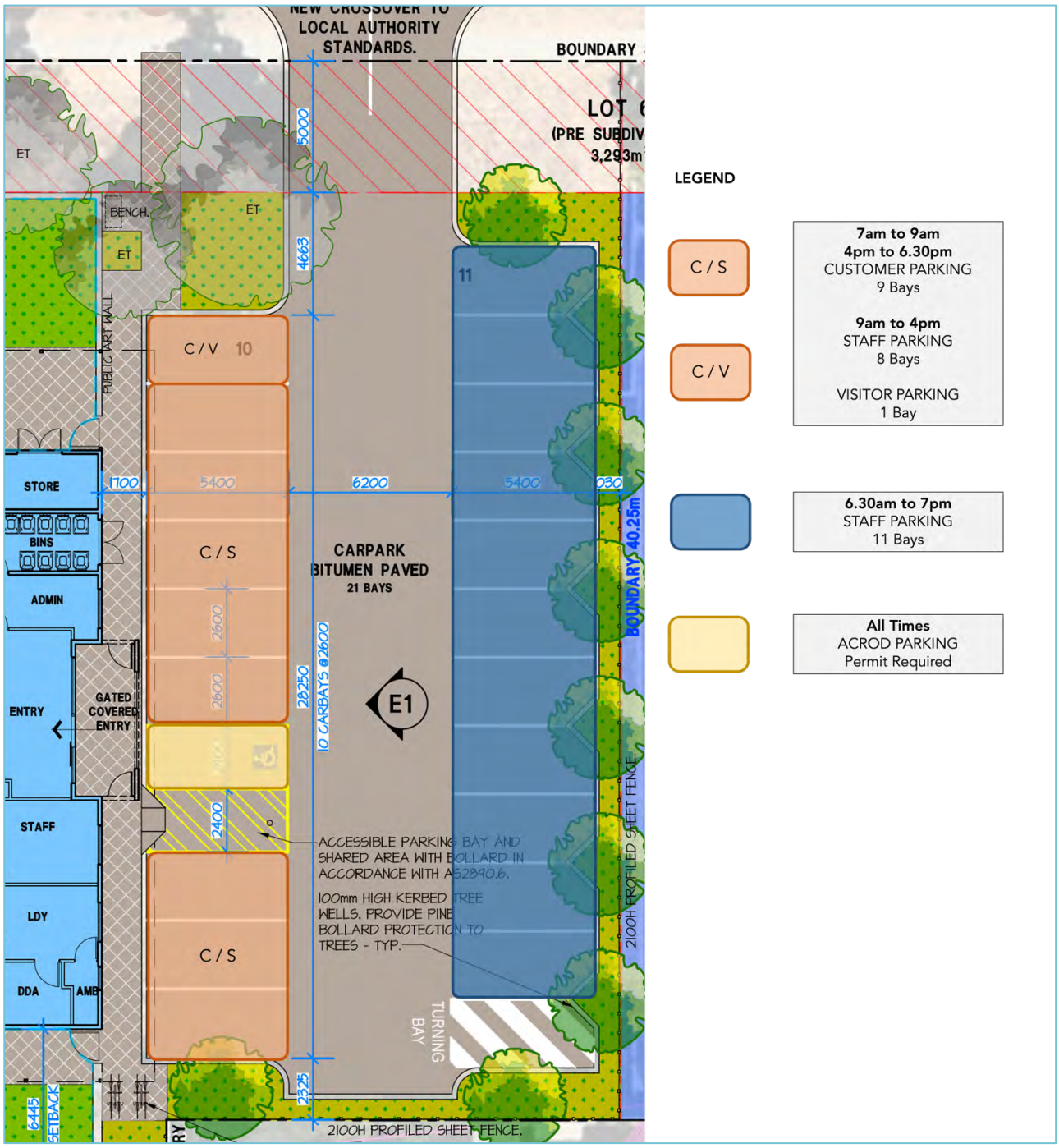

Figure 5: Car Park Allocation Plan

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Part 9A of Deemed Provisions

Clause 5.6 of LPP6.7 is titled 'Further Reduction of Car Parking Bays' and makes reference to Part 9A of the Deemed Provisions. Deemed Provision 77D (2) allows the City to exercise discretion and vary a minimum parking requirement provided the City is satisfied with the following:

> *(a) that reasonable efforts have been made to comply with the minimum on-site parking requirement without adversely affecting access arrangements, the safety of pedestrians or persons in vehicles, open space, street trees or service infrastructure; and*
>
> *(b) that… the lower number of car parking spaces would be adequate for the demands of the development, having regard to the likely use of the car parking spaces, the availability of off-site parking facilities and the likely use of alternative means of transport.*

With respect to Sub-Clause (a) of Deemed Provision 77D (2):

- All reasonable efforts have been made to comply with the on-site parking requirement without adversely affecting access, safety, open space, trees and infrastructure;
- The design of the car park complies with AS2890.1;
- No trees or infrastructure are affected by the proposed development;
- The site is affected by an Other Regional Road reserve that will be set aside as a separate lot for future acquisition, which further reduces the ability to provide additional car parking bays;
- A separate pedestrian path will provide a safe means of access to the premises; and
- The design allows all vehicles using the car parking bays to enter and exit in forward gear.

With respect to Sub-Clause (b) of Deemed Provision 77D (2):

- The proposed number of car bays is adequate to meet demand from customers, staff and other visitors throughout the day, as set out in the Operational Management Plan;
- The anticipated peak parking demand of the premises will occur between 7.30am and 8.30am, and 4.30pm and 5.30pm, when up to 45% of attendees (42) will likely arrive / depart, equating to a peak parking demand of 7 customer car bays based on a conservative 10-minute dwell time for each drop-off / pick-up. Outside of peak times, all staff (19) will have access to a car bay, with one (1) bay set aside for other visitors during the day;
- The provision of bike bays and end-of-trip facilities (shower / lockers) and the availability of bus services will further reduce demand for car parking within the site;
- The provision of 21 car bays for a 94-place child care centre equates to 1 car bay for every 4.5 places. In comparison, a rate of 1 car bay for every 5 places is recommended by the Department of Planning, Lands and Heritage in its Draft Position Statement for Child Care Premises (November 2022); and
- The provision of 1 car bay for every 4.5 places equates to the average rate of parking provided at many other recently approved child care centres in the metropolitan area, consistent with the intent of the Draft Position Statement.

For all of these reasons, it is considered sufficient car parking is provided on-site to meet demand and the proposed parking shortfall will not have an adverse impact on the amenity of the locality.

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Bicycle Parking and End-of-Trip Facilities

LPP6.7 specifies a bike parking rate of 1 bike bay for every 400m2 of Gross Floor Area, meaning the proposed Child Care Premises is required to provide two bike bays. Two bike bays are provided toward the rear of the car park for staff / visitor use. Whilst there is no requirement to provide end-of-trip facilities, a shower / change facility and lockers are provided for staff use.

Local Planning Policy 6.12 – Public Art

LPP6.12 requires non-residential development with an estimated cost exceeding $2 million to provide public art to the value of 1% of the construction cost. The estimated construction cost of the development is $3 million meaning public art to the value of $30,000 is required. Details of the public art strategy can be provided in accordance with a condition of Development Approval.

4.3.6 Deemed Provisions

Deemed Provision 67 sets out the various matters that a decision-maker is required to consider in determining this Application. The table below explains how the Application addresses each of the relevant matters listed in Deemed Provision 67.

Deemed Provision 67		Response
(a)	Local Planning Scheme	The Application is capable of approval under LPS3.
(b)	Orderly and proper planning	The use is consistent with the orderly and proper planning of the locality.
(c)	State Planning Policies	State Planning Policy 5.4 – Road and Rail Noise. State Planning Policy 7.0 – Design of the Built Environment.
(d)	Environmental Protection Policies	Not applicable.
(e)	Any policy of the WAPC	WAPC Draft Position Statement - Child Care Premises.
(f)	Any policy of the State	Not applicable.
(g)	Local Planning Policies	Local Planning Policy 6.1 – Advertising Signs; Local Planning Policy 6.3 – Bin Storage Areas; Local Planning Policy 6.4 – Child Care Premises; Local Planning Policy 6.6 – Landscaping; Local Planning Policy 6.7 – Parking and Access; Local Planning Policy 6.11 – Trees and Development; Local Planning Policy 6.12 – Public Art.
(h)	Structure Plans, Centre Plans and Local Development Plans	Not applicable
(i)	Review of Local Planning Scheme	Draft Local Planning Scheme No.4 is awaiting consent to advertise. No change to zoning / use class is proposed by draft LPS4.
(j)	Reserved land	Not applicable
(k)	Built heritage conservation of any place of cultural significance	The development does not have an adverse impact on the built heritage conservation of any place of cultural significance.
(l)	Cultural heritage significance	The site is not within an area of cultural heritage significance. The development will not have any effect on a known site or place of Aboriginal heritage significance.

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(m)	Compatibility with setting	The development is compatible with its setting, being a low impact non-residential use within the residential zone.
(n)	Amenity of the locality:	
	(i) Environmental impacts	The proposal will not have any adverse impact on the environment.
	(ii) Character of locality	The design of the development is compatible with the character of the area.
	(iii) Social impacts	The development will not have any adverse social impacts.
(o)	Effect on natural environment	The development will not have an adverse effect on the natural environment.
(p)	Landscaping and tree retention	Landscaping, including tree retention and tree planting, is proposed.
(q)	Environmental risks	None
(r)	Risk to human health or safety	None
(s)	Access and parking	Parking for 21 cars is provided with access from Main Street. The Operational Management Plan demonstrates how the car bays will be allocated during the day to meet peak demand from different user groups.
(t)	Traffic impacts	The traffic generated by the development will not have an adverse effect on traffic flow and safety. Refer to Traffic Impact Statement.
(u)	(i) Public Transport	Bus 414 runs along Main Street, between Stirling and Glendalough Train Stations, with bus stops adjacent to the site. The High Frequency Circle Route No.998 / 999 runs along Karrinyup Road / Morley Drive.
	(ii) Public Utilities	All utilities required to service the development are available, including water, sewer, and power.
	(iii) Waste Management	A bin store is proposed of sufficient capacity to service the development. Refer Operational Management Plan.
	(iv) Pedestrian & Cyclist Access	2 bike bays are proposed and end-of-trip facilities will be provided for staff. A pedestrian path connects the building entry to the car park and footpath.
	(v) Elderly & Disability Access	One 'ACROD' bay is provided.
(v)	Loss of community benefit or service	The Application will not result in any loss of a community service. The Child Care Premises will benefit the local community by providing improved access to child care services in the area. A study by Victoria University (Deserts and Oases: How Accessible is Childcare in Australia? March 2022) found that between 2.59 and 4.53 children in Balcatta compete for each child care place, compared to a nation-wide median of 2.6 children per place. Out of 16 neighbourhoods in Balcatta, all were classified by the study as "childcare deserts".
(w)	History of the site	No relevant site history.
(x)	Impact on the community	It is not considered the development will have an adverse community impact. The Child Care Premises will benefit the local community by providing improved access to child care services in the area.
(y)	Submissions on the proposal	To be determined
(za)	Comments from agencies	To be determined
(zb)	Other planning considerations	None

Table 6: Deemed Provisions

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5.0 Conclusion

This Town Planning Statement has been prepared in support of an Application for Development Approval for the construction of a Child Care Centre on the land situated at Lot 6 (No.308) Main Street, Balcatta ('site').

The site is ideally placed to accommodate a Child Care Centre. The site is zoned Residential, has frontage to an Other Regional Road, is of sufficient size to accommodate the proposed facility, and within walking distance of two Local Centres.

The Child Care Centre is a compatible non-residential use that will provide residents of Balcatta and surrounds with improved and convenient access to child care services.

The Traffic Impact Statement finds that the road network surrounding the site can successfully accommodate additional traffic associated with the development and sufficient car parking is provided on-site to meet parking demand throughout the day.

The Acoustic Assessment finds that the Child Care Centre is capable of satisfying applicable noise regulations and will not be affected by excessive levels of traffic noise.

The Operational Management Plan explains how the premises will be operated to mitigate any adverse impacts on the locality with respect to car parking, noise and waste.

Accordingly, the proposed development satisfies the relevant considerations of Deemed Provision 67, is consistent with the principles of orderly and proper planning, and will not have any detrimental impact on the amenity of the locality.

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Operational Management Plan

Child Care Centre

No.308 Main Street
Balcatta

LATERAL
PLANNING

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Document Control

Reference	0326
Location	Lot 6 (No.308) Main Street, Balcatta
Client	Happy Felix Balcatta Pty Ltd
Document Title	Operational Management Plan
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1.0 Introduction

This Operational Management Plan ('OMP') has been prepared in support of an Application for Development Approval for a Child Care Centre at Lot 6 (No.308) Main Street, Balcatta ('site'). The purpose of the OMP is to document how the Child Care Centre will operate to minimise impacts on the locality.

2.0 Site Description

Local Authority	City of Stirling
Locality	Balcatta
Address	No.308 Main Street
Cadastral	Lot 6 on Deposited Plan 35267
Certificate of Title	Volume 2223 Folio 984
Registered Proprietor	Happy Felix Balcatta Pty Ltd
Proposed Site Area	2,093m^2

Figure 1: Site Location

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3.0 Proposed Development

Operating Times

Business Days	Monday to Friday
Staff Arrival / Departure	6.30am to 7.00pm
Customer Arrival / Departure	7.00am to 6.30pm
External Play Areas ('EPA')	7.00am to 6.00pm

Capacity

Activity Room	Age Group	Places	Educators	Indoor Area	External Area
1	4 to 5	20	2	67m²	350m²
2	3 to 4	15	2	49m²	
3	2 to 3	15	3	53m²	215m²
4	1 to 2	20	5	70m²	
5	0 to 1	16	4	52m²	115m²
Piazza	0 to 1	4	1	65m²	
	2 to 3	4	1		
Total		**94**	**18**	**356m²**	680m²
Required Indoor Area: 3.25m² per child. Required Outdoor Area: 7m² per child.					

Staff

Educators	18
Centre Manager	1
Total	**19**

The minimum number of educators required to supervise children is:

- 0 to 2 age group: 1 supervisor per 4 children
- 2 to 3 age group: 1 supervisor per 5 children
- 3 to 5 age group: 1 supervisor per 10 children

The number of staff at the premises on any given day will vary depending on enrolments in each age group, with staff work times staggered to meet the needs of the centre throughout the day. Three (3) staff will typically be rostered to open the premises and commence work by 7am. No staff would arrive prior to 6.30am. For a full occupancy scenario, up to 10 staff would typically be rostered to commence work prior to 8.30am, increasing to a maximum of 19 staff during the day. Staff levels will gradually decrease as shifts finish and children are collected. No more than 10 staff would typically be working at the commencement of the afternoon peak (4.30pm), with 3 staff typically rostered to close the premises at 6.30pm. All staff would depart by 7pm latest.

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4.0 Traffic and Parking

Overview

Car Parking

A total of 21 car bays will be provided for staff, parents / guardians and other visitors.

The proposed allocation of car bays is depicted in Figure 2 below.

Customer Parking

A total of nine (9) car bays will be set aside exclusively for customer use during the morning drop-off peak (7am to 9am) and afternoon pick-up peak (4pm to 6.30pm).

The customer car bays are positioned on the south side of the car park near the entry to the premises to enhance access. This also reduces customer vehicle movements in the northern part of the car park near the abutting residential property.

Staff Parking

A total of eleven (11) car bays will be set aside exclusively for staff use throughout the entire day, with an additional eight (8) car bays available for staff parking between 9am to 4pm, when customer parking demand is extremely low.

A total of 19 car bays will therefore be available for staff parking.

Other Visitors & Service Vehicles

Other visitors include service vehicles, suppliers and potential customers who may wish to meet with staff and / or inspect the centre. Such visitations are infrequent and will be scheduled to occur outside of peak times (between 9am and 4pm) when use of the car park is at its lowest.

One (1) car bay will be set aside for other visitors and service vehicles outside of peak times.

ACROD Parking

One (1) car bay will be available for ACROD permit parking, which may include customers, staff and other visitors.

Vehicle Access

Access is proposed from Main Street. No security gate is proposed to the car park, allowing vehicles to enter the site without having to wait on the road carriageway or verge.

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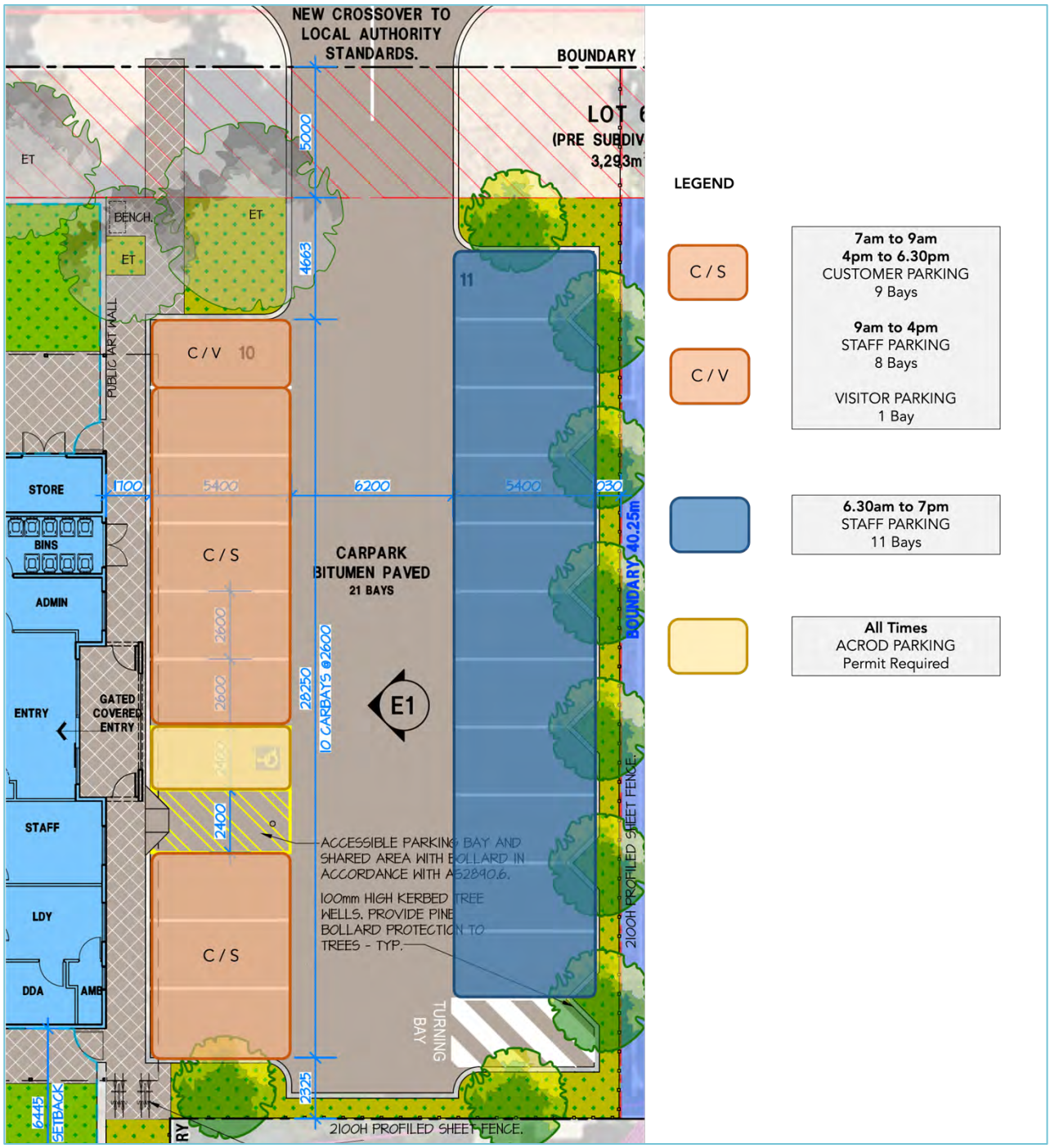

Figure 2: Car Park Allocation Plan

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Bicycle Parking

A total of two (2) bike racks will be provided toward the rear of the car park, adjacent to the Child Care Centre. Staff will have access to a shower / change facility and secure lockers.

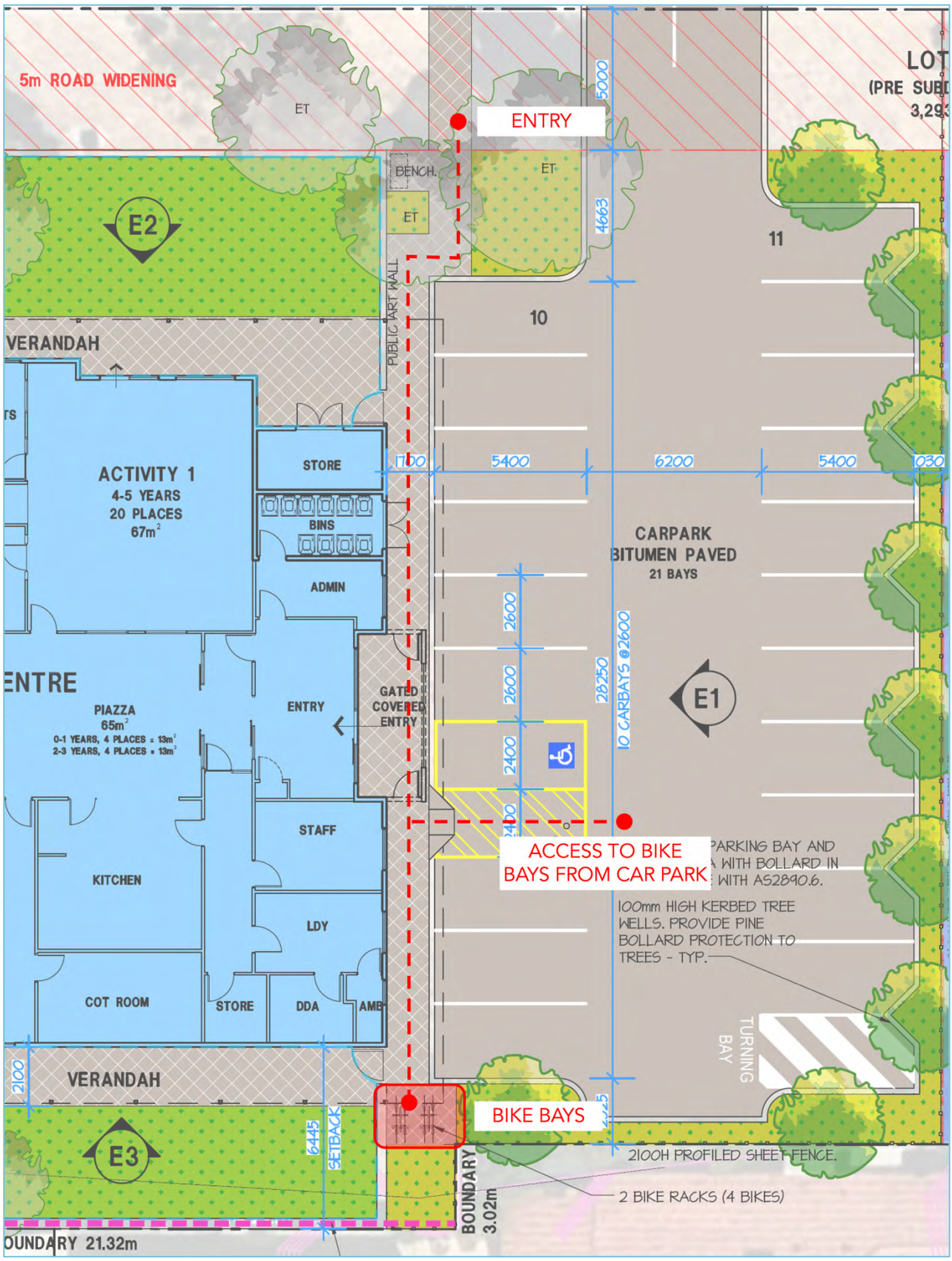

Figure 3: Bike Parking

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Public Transport

The site is serviced by public transport (bus services).

Bus No.	Description	Bus Stops
414	Stirling Train Station – Glendalough Train Station	Main Street Stop No.12625 (<50 metres) Stop No.12643 (<50 metres)
998 & 999	High Frequency Route: Circle Route	Karrinyup Road / Morley Drive Stop No.11578 (<150 metres) Stop No.11419 (<150 metres)

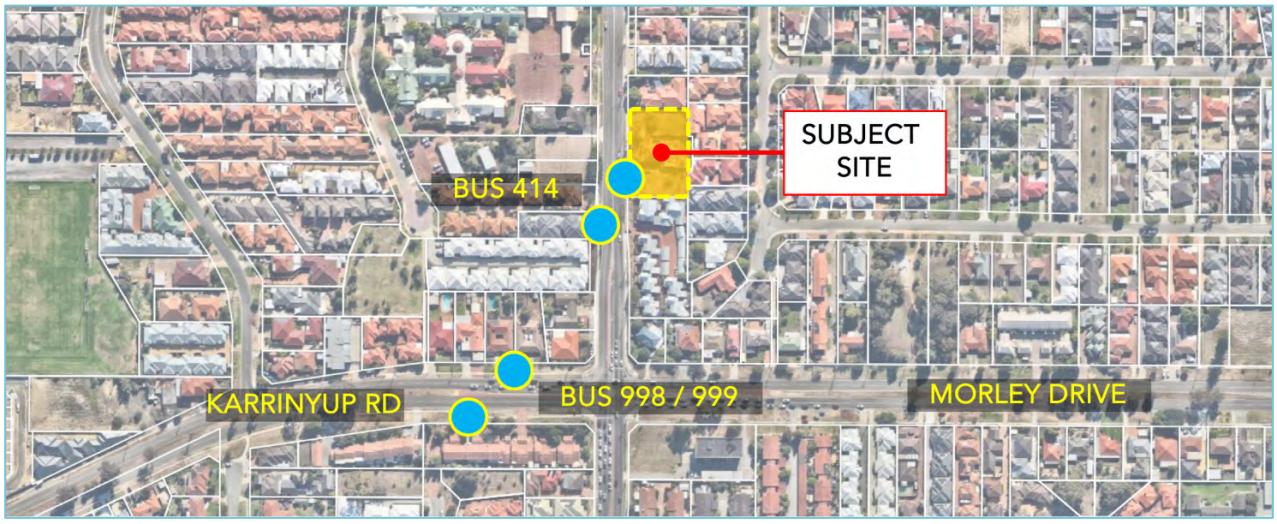

Figure 4: Bus Services

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Traffic and Parking Management

Operational Measures

The following operational measures will be implemented to mitigate any potential adverse impacts associated with traffic and parking.

These measures will be implemented on an on-going basis by Child Care Centre management, pursuant to a condition of Development Approval that gives effect to this OMP.

Operational Measures – Traffic and Parking
Car Park
1. Line-marking and signage will be installed to depict the authorised use of each car bay throughout the day.
2. Staff, customers and other visitors will be advised of the requirement to park in designated car bays only.
3. Customers will be requested not to park or stand their vehicle in any roads surrounding the site and to observe on-street parking restrictions.
4. Staff will be responsible for monitoring use of the car park and customers will be reminded of the car park operation procedures on an as-required / as-needed basis.
5. Management of the Child Care Centre will endeavour to schedule non-urgent visitations and deliveries during non-peak times only (9am to 4pm).
6. All suppliers / contractors will be advised that access to the site during the morning drop-off (before 9.00am) and afternoon pick-up (after 4.00pm) will not be permitted (except for emergency maintenance).
7. Management will encourage deliveries to occur between 11.00am and 2.00pm, when vehicle movements at the Child Care Centre will typically be at their lowest.
8. Any car park security gate that might be provided in the future will remain open throughout the day.
Public Transport and Cycling
9. Staff will be advised of available bus services and encouraged to use public transport to access the premises.
10. Staff will also be advised of the provision of bike parking and end-of-trip facilities, which include a shower / change room and secure lockers.

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5.0 Noise

Overview

Environmental Protection (Noise) Regulations

The Child Care Centre is required to satisfy the Environmental Protection (Noise) Regulations and will incorporate measures to mitigate the impacts of noise on nearby residential properties.

State Planning Policy 5.4 – Road and Rail Noise

State Planning Policy 5.4 – Road and Rail Noise ('SPP5.4') seeks to minimise the adverse impacts of road and rail noise on noise-sensitive land use. Herring Storer Acoustics has prepared an Acoustic Assessment that finds the premises is capable of satisfying SPP5.4.

Noise Management

The Acoustic Assessment recommends various noise mitigation measures relating to the construction and operation of the premises. The construction measures will be implemented prior to occupation of the premises, pursuant to a suitable condition of Development Approval. The operational measures will be implemented on an on-going basis by Child Care Centre management, pursuant to a condition of Development Approval that gives effect to this OMP.

Operational Measures

The following operational noise mitigation measures will be implemented.

Operational Measures - Noise Mitigation
Hours of Operation
1. The Child Care Centre is to be operational for customer use from 7am to 6.30pm Monday to Friday, excluding public holidays.
2. Staff will be instructed not to arrive prior to 6.30am and to be off-site by 7pm.
3. Typically, not more than three (3) staff will be rostered to arrive in time to commence work at 7am.
4. Typically, not more than three (3) staff will be rostered to close the premises at 6.30pm.
External Play Areas
5. Children are not permitted outdoors for play purposes prior to 7am.
6. Fixed play equipment should be non-metallic. If metal fixed play equipment is used then hollow metal sections shall be filled with expanding foam or sand.
7. Concrete or brick paved areas, if any, should be minimised and where practicable covered with synthetic grass to minimise noise of play equipment on hard surfaces.
Music
8. Keep external windows and doors closed when playing music indoors.
9. Do not play music outdoors (except light children's music if authorised by the Local Authority).
10. Avoid playing games requiring hand clapping on the eastern activity deck.
Car Park
11. Staff will be instructed to park in the designated staff parking bays only.
12. Signage will be placed in the car park advising staff / visitors not to slam doors or play music in the car park.

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6.0 Waste

Waste Generation Rates

The Commercial and Industrial Waste Management Guidelines published by the Western Australian Local Government Association ('WALGA') include estimated waste generation rates for various land uses. The WALGA rates were derived from the Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities published by the New South Wales Environmental Protection Authority. Neither document includes a waste generation rate for Child Care Centres.

Waste generation rates published by the City of Melbourne and City of Casey in Victoria suggest a Child Care Centre generates 350 litres of General (including FOGO) waste and 350 litres of Recyclable waste per 100m^2 of floor area per week. A review of other Waste Management Plans indicates this rate is based on 7 days a week, equating to 50 litres per trading day per 100m^2.

A waste generation rate of 50 litres per trading day per 100m^2 has been applied, with floor area based on the total area of the Activity Rooms.

A separate FOGO waste collection service is not proposed. All FOGO waste will be included in the General waste collection service.

Estimated Waste Generation

General and Recyclable Waste

It is estimated the proposed Child Care Centre will generate the following amount of waste.

Item	General Waste	Recyclable Waste
Waste Generation Rate	50 litres / 100m^2 / day	50 litres / 100m^2 / day
Activity Room / Piazza Floor Area	291m^2	291m^2
Trading Days	5	5
Daily Waste	145 litres	145 litres
Weekly Waste	725 litres	725 litres

Other Waste Requirements

- Liquid or Hazardous Waste: Not Applicable
- Medical Waste: Not Applicable
- Food Processing: Not Applicable

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Bin Selection

Bin Size and Collection Frequency

- General Waste: 240 litre bins collected weekly;
- Recyclable Waste: 240 litre bins collected fortnightly.

It is understood the City of Stirling offers a commercial waste collection service using 660 litre bins, which can be collected with the City's 'Urbin 11' bin truck. Should the City be engaged to collect waste, the 240 litre bins can be replaced by the required number of 660 litre bins.

Type and Number of Bins

Item	General Waste	Recyclable Waste
Collection Frequency	Weekly	Fortnightly
Waste per Week	725 litres	725 litres
Waste per Fortnight	n/a	1,450 litres
Number of Bins	4 x 240 litre bins	6 x 240 litre bins
Capacity of Bins	960 litres	1,440 litres
Total Bins Required	10 x 240 litre bins	

Bin Store

The Bin Store is of sufficient size to accommodate the required bins, as illustrated below.

The Bin Store is located adjacent to the car park and integrated into the design of the building to minimise its visual impact.

The Bin Store can be accessed from the car park via double doors of sufficient size to allow bins to be wheeled in and out. A door is also provided from within the Child Care Centre administration area to allow staff to carry rubbish to the Bin Store without exiting the building.

The Bin Store will be constructed of materials to match the building and is enclosed by a solid masonry wall. The Bin Store will be fitted with a tap and floor waste and all finished surfaces will be impervious.

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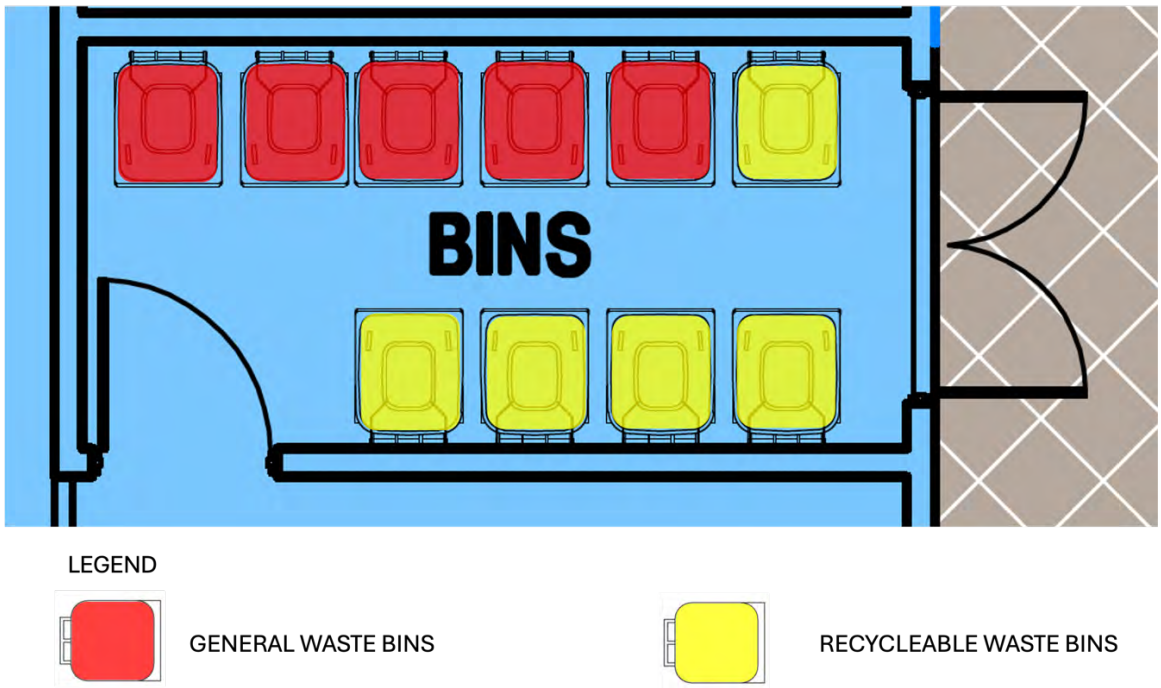

Figure 5: Bin Store

Waste Collection

Collector

Private Contractor or Local Authority.

Collection Point

It is intended that waste be collected from the car park. Waste collection will be scheduled to occur after business hours, to avoid conflicts with the peak drop-off and pick-up times of the Child Care Centre, and to ensure that sufficient area is available for the bin truck to turnaround and exit the car park in forward gear.

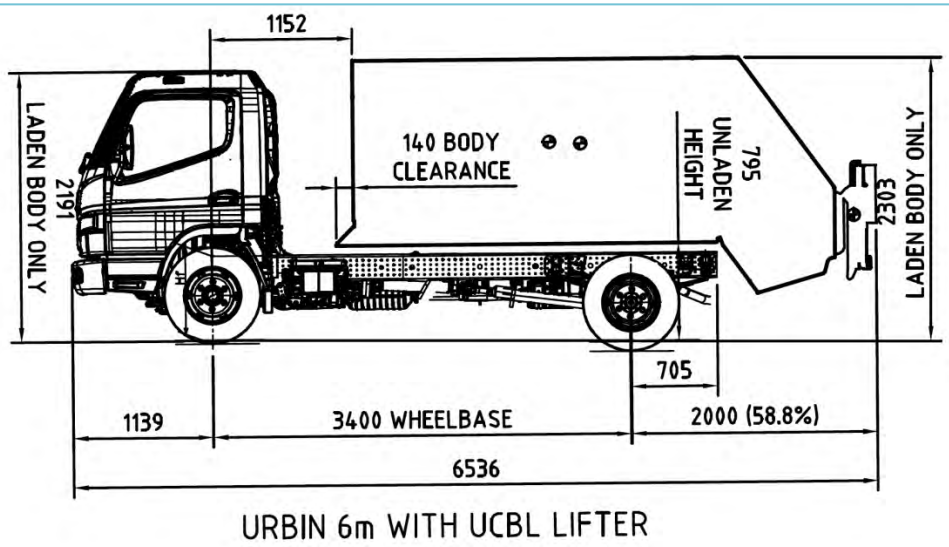

Figure 6: Specification of Local Authority Rear Loader Bin Truck (Urbin II)

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7.0 Review of Operational Management Plan

Management of the Child Care Centre will review the OMP on an annual basis to ensure it remains effective and consistent with regulatory requirements.

Complaints relating to the operation of the Child Care Centre should be directed to the Centre Manager, who will endeavour to respond in a timely manner.

The contact details of the Child Care Centre shall be included in this OMP prior to the Child Care Centre commencing operations, as per the details below (to be completed).

Contact Details	
Trading Name of Centre	
Name of Centre Manager	
Telephone Number – Business Horus	
Telephone Number – After Hours	
Email Address	

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Noise and Acoustics

The subject site abuts Main Street which is identified as a 'Other Significant Freight/Traffic Route' in accordance with State Planning Policy 5.4 – Road and Rail Noise (SPP 5.4). As such, the requirements of SPP 5.4 apply to the proposed development as it is classified as a 'Noise Sensitive Land Use'.

The Applicant submitted an Environmental Acoustic Assessment prepared by Herring Storer Acoustics in support of the proposed development. The Applicant's Environmental Assessment provides recommendations regarding the construction, operation and mechanical services of the proposed development as detailed in the submitted Environmental Acoustic Assessment.

The City has reviewed the submitted Environmental Acoustic Assessment and supports the referenced recommendations with a condition imposed as part of the City's recommendation to comply with the submitted Environmental Assessment prepared by Herring Storer Acoustics and *Environmental (Noise) Regulations 1997*. With the implementation of the acoustic measures into the constructed building, the City is satisfied that the development will satisfy SPP5.4

Areas of Discretion Sought

The following table outlines areas of discretion sought against the prevailing planning framework to be read in conjunction with the Responsible Authority Report.

Local Planning Policy 6.1 Advertising Signs (LPP 6.1)

The below list identifies where discretion is sought to the development standards of LPP 6.1.

- Proposed fence sign is not visually permeable.
- Two wall signs proposed on-site in lieu of one.
- Proposed wall signs proposed at 1.5m² in lieu of 1.2m².

The development addresses the Objectives of LPP 6.1 and is supported. An assessment against the Objectives of LPP 6.1 is provided below.

Local Planning Policy 6.1 – Advertising Signs	
Objective	**Officer Comment**
To ensure advertising signs do not pose a safety threat and do not prevent passive surveillance;	The proposed signage does not pose a safety threat for users of the development due to the signage location. The proposed sign is located on a solid portion of wall which is required for noise mitigation purposes along Main Street as a District Distributor A road. The portion of solid fencing provides screening to provide for increased safety, privacy and noise amelioration to the Child Care Premises play areas. The portion of solid front fence is minor and the development provides for passive surveillance opportunities.

Local Planning Policy 6.1 – Advertising Signs	
Objective	**Officer Comment**
To ensure businesses can display advertising signs without, in certain circumstances, the need to obtain development approval;	Not applicable, the proposed signage requires development approval.
To ensure that the display of advertising signs does not adversely impact on the amenity of surrounding land and streetscapes;	The proposed signage consists of simple wording on a contrasting background. The signage is legible and easy to read and relates directly to the Child Care Premises. The proposed signage is integrated into the built form of the development.
To ensure advertising signs are appropriately scaled for their setting;	The proposed signage is integrated into the development and is appropriately scaled for a commercial land use which abuts residential properties.
To avoid the proliferation of advertising signs on individual sites and buildings to minimise visual clutter;	All signage is respectful to the scale of the development to which it relates and is fixed directly to the building.
To encourage the incorporation of advertising signs into the design consideration of buildings and avoid obscuring or detracting from prominent architectural features;	The proposed wall signs are incorporated into the design of the building. The colours and materials are consistent with the Child Care Premises' façade.
To ensure advertising signs only relate to services and products available on the site; and	The signage contains only the name and logo of the business.
To ensure the content of advertising signs meets community expectations and is not discriminatory or offensive.	The signage is not discriminatory or offensive. The signage contains only the name and logo of the business.

The development addresses the objectives of LPP6.1 and is supported.

Local Planning Policy 6.6 Landscaping

Discretion is sought regarding the following development standards of LPP 6.6.

- Landscaping buffers to adjacent properties of nil to 1.5m in lieu of 1.5m minimum width.

The development addresses the Objectives of LPP 6.6 and is supported. An assessment against the Objectives of LPP 6.6 is provided below.

Local Planning Policy 6.6 – Landscaping	
Objective	**Officer Comment**
To promote improved landscaping provision and design;	The overall provision of landscaping is in excess of the required 10% (209m²) with a total of 18% (395m²) provided. A mix of new trees, new grass, shrubs, and mulched garden bed areas with landscaping are provided. Overall, the development proposes a high level and variety of landscaped areas, providing for External Play Areas and an attractive setting for the building.
To improve the visual appeal of development, screen service areas and provide a buffer to boundaries;	The proposed landscaping is predominantly located along the street and internal northern and southern lot boundaries of the development, providing a buffer from the Child Care Premises to surrounding properties and improving the visual appeal of the development to Main Street. Additionally, the proposal includes a number of new trees within the proposed road widening area which will provide additional tree planting until such time as the road widening is required. The retention of the six existing mature trees and planting of 24 new trees and 395m² (18%) of landscaped areas break up the overall impact of paved and hardstand areas and screens service areas from the street.
To provide shade and 'green relief' in built up areas; and	The addition of 24 new trees and retention of six existing trees will provide shade and green relief to both the subject site and the locality.
To ensure advertising signs are appropriately scaled for their setting;	The proposed signage is integrated into the development and is appropriately scaled for a commercial land use which abuts residential properties.
To promote more environmentally sustainable landscaping.	The proposed landscaping species are suitable to the site context with conditions recommended for landscaping to be reticulated and mulched.

The development addresses the objectives of LPP 6.6.

State Planning Policy 7.0 – Design of the Built Environment (SPP7.0)

SPP 7.0 applies to all development in Western Australia. The purpose of SPP 7.0 is to inform and guide landowners, proponents, designers, reviewers and decision-makers to achieve good design outcomes in the built environment.

The City's summary of the proposed development against SPP7.0 is as follow:

SPP7.0 Design of the Built Environment	
Design Principle	**Officer Comment**
1.Context and Character *Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.*	The proposed development abuts established single and double storey residential properties. The scale of the development at one storey is consistent with the established properties in the vicinity. The colour and material palette of the Child Care Premises is sympathetic to the existing built form and materiality within the locality
2.Landscape Quality *Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.*	The development includes a total of 18% (395m²) of on-site landscaping, which exceeds the required minimum of 10% (209m²). The development includes the retention of six existing trees on-site and the planting of an additional 24 trees which will provide shade and green relief to both the subject site and the locality. The proposed Landscaping Plan proposes a mix of artificial turf and natural lawn, soft fall areas and mulched and landscaped areas, which softens the appearance of the development and reduces overall impacts of bulk and the visual impacts of paved and hardstand areas. Significant landscaping areas are provided to Main Street and the lot boundaries to provides for an improved streetscape and a buffer to the benefit of the adjacent properties.
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 scale of the development is consistent with existing development on the neighboring properties which are single storey. The proposal incorporates high quality materials and is articulated to minimise the impact of bulk to the street

SPP7.0 Design of the Built Environment	
Design Principle	**Officer Comment**
existing built form and the intended future character of the local area.	and adjoining residential properties. The development is appropriate and consistent with the existing and future built form. The proposed built form does not result in excessive building bulk as a single storey building with sufficient setbacks to the adjoining properties. The design of the building and significant landscaping provided ensures the development is consistent with the existing streetscape and the future intended character of the locality, as envisaged under the City's framework.
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.*	Pedestrian access to the site is provided via an existing pedestrian footpath running along Main Street. The main pedestrian entrance to the building is located on Main Street, with a footpath and entranceway providing a legible entrance to the streetscape with a bus stop located directly abutting the site The proposal has been designed to meet the specific needs of a Child Care Premises. The proposed materials are durable and are easily maintained.
5. Sustainability *Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.*	The proposed development includes the installation of solar panels to assist in reducing energy consumption. The proposed development also includes species which are appropriate for the site context. The proposal provides for a suitable commercial land use in proximity to residential properties which provides for an essential service to the community and potential employment opportunities.
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 proposal is for a commercial land use abutting residential properties directly to the north, east and south. The proposed development has been designed to minimise any impacts to the adjoining residential properties through setbacks and landscaping.

SPP7.0 Design of the Built Environment	
Design Principle	**Officer Comment**
	The proposed Child Care Premises is located on a District Distributor A category road and is located along a Class 2 Corridor. As such, the Child Care Premises is located in a preferred location as per LPP 6.4. The submitted Environmental Acoustic Assessment confirms the proposal will address the requirements of the *Environmental Protection (Noise) Regulations 1997.*
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.*	The entrances to the building are identifiable from the street and the car park. Internal navigation through the site is logical. The design of the entrances has been refined to improve legibility in response to the Design Review Panel's comments.
8. Safety *Good design optimises safety and security, minimising the risk of personal harm and supporting safe behavior and use.*	The development incorporates passive surveillance techniques to the street and internally within the site. Vehicle circulation areas have been designed to allow vehicles to enter the street in forward gear with unobstructed sightlines provided to minimise potential conflict to pedestrians, cyclists and vehicles.
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 proposal provides for a suitable commercial land use within a Residential zone which supports the needs of the local and wider community.
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.*	The proposed development includes several large openings on each elevation and uses alternating materials and colours to provide visual interest. These elements articulate the building, which reduces the overall bulk. Additionally, the portico provides a clear and strong entry feature within the site. The built form design is modern and sympathetic to the existing and future streetscape

Planning and Development (Local Planning Schemes) Regulations 2015

The proposed development is required to be considered against the relevant matters listed under Clause 67 (2) of the Deemed Provisions of the Planning and Development (Local Planning Schemes) Regulations 2015.

Commentary on the relevant considerations is provided below:

SPP7.0 Design of the Built Environment	
Design Principle	**Officer Comment**
(a) the aims and provisions of this Scheme and Scheme and any other local planning scheme operating within the Scheme area;	The proposed Child Care Premises is consistent with the Residential zoning of the site as per LPS3. The built form of the proposed development is consistent with the primary controls as set out by the City's framework.
(b) the requirements of orderly and proper planning including 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 development is consistent with LPS3 and other planning documents, and therefore is consistent with the requirements of orderly and proper planning. There are no seriously entertained proposed planning instruments that affect this development. Although the City has prepared draft LPS 4, the final form of draft LPS4 is not imminent nor certain at this time, noting the draft scheme is currently being advertised. Accordingly, no weight should be given to draft LPS 4 when determining this application. The proposed built form is consistent with the existing and proposed street character of the locality, and is setback adequately so as to ameliorate impacts to the adjacent properties and streetscape.
(c) any approved State planning policy;	The City's assessment of the development application has considered the relevant State Planning Policies. The proposal satisfies the objectives and requirements of those policies.
(g) any local planning policy for the Scheme area;	The City's assessment of the development application has considered the relevant local planning policies. The proposal satisfies the objectives and provisions of those policies.

SPP7.0 Design of the Built Environment	
Design Principle	**Officer Comment**
(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 compatible with the setting as the bulk, scale and appearance of the development is consistent with the one and two storey residential development in the locality. The impact of bulk is minimal and mitigated through use of design and large setbacks from the street and adjacent properties.
(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 proposed development provides significant landscaping on-site with landscaping in excess of the required 10% (18%). A mix of new trees, new grass and mulched garden bed areas are provided in addition to the retention of six trees. The proposed development is consistent with the existing and envisioned character of the locality. The built form is in keeping with the surrounding residential development in response to the articulated design, variety of colours and materials. The proposed development provides a suitable commercial land use on a Residential zoned property. The proposed development does not result in any adverse social impacts.
(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 proposed development satisfied the provisions of Local Planning Policy 6.6 – Landscaping and Local Planning Policy 6.11 – Trees and Development.
(s) the adequacy of – *(i) the proposed means of access to and egress from the site; and*	The proposed development provides safe and direct access and egress for pedestrians, cyclists and vehicles. The development provides sufficient car parking and service vehicle access.

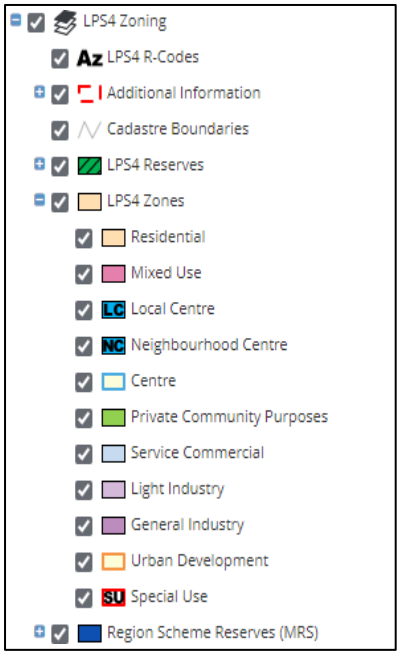
SPP7.0 Design of the Built Environment	
Design Principle	**Officer Comment**
(ii) arrangements for the loading, unloading, manoeuvring and parking of vehicles;	
(t) the amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety;	The applicant provided a Transport Impact Statement (TIS) and Planning Report in support of the proposal which concludes the traffic generated by the proposed development can be safely accommodated within the road network. The City has reviewed the TIS and Planning Report with the proposal supported.
(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* *(v) access by older people and people with disability;*	The subject site abuts a bus stop and is located within a high frequency public transport route on Main Street. There are two bicycle racks provided onsite, encouraging active forms of transport. Utility services are available to the site. As part of the City's recommendation, the City recommended a condition which requests the further detailed waste management plan is provided.. The development provides 'at grade' car parking and universal access design features throughout the site.
(y) any submissions received on the application;	The application has been formally advertised in accordance requirements of Clause 64(3) and (6)(a) of the *Planning and Development (Local Planning Schemes) Regulations 2015* with comments received. These submissions have been considered as part of the City's assessment.
(za) the comments or submissions received from any authority consulted under clause 66;	Consultation to relevant authorities including; • Department of Planning, Lands and Heritage; • Water Corporation; and • Public Transport Authority (PTA). has been undertaken with the relevant comments forming part of the City's recommendation and condition setting.

Draft Local Planning Scheme No. 4 (LPS4)

On 15 August 2023, Council resolved (Council Resolution Number 0823/034) to prepare Local Planning Scheme No.4 (LPS4). City officers prepared draft LPS4 with a report prepared for consideration by Council at its Ordinary Meeting on 5 December 2023. The purpose of this report was to obtain resolution of Council to support the commencement of advertising of draft LPS4 and to obtain advice from the Western Australian Planning Commission (WAPC) on any modifications to LPS4 prior to the commencement of advertising. At its Ordinary Meeting held on 5 December 2023, Council resolved to proceed to advertise draft LPS4 and the draft Scheme Map, subject to consent from the WAPC. The City received consent from the WAPC to advertise draft LPS 4, subject to modifications, commenced advertising on 18 October 2024 and is scheduled to conclude on 24 January 205.

In relation to draft LPS4, a decision-maker can give due regard to a seriously entertained planning proposal when determining an application, in accordance with Schedule 2 Clause 67(2)(b) of the Planning and Development (Local Planning Schemes) Regulations 2015. The final form of draft LPS4 is not imminent nor certain at this time, noting the draft scheme has not been advertised, and accordingly no weight should be given to the proposed development controls when determining this application. Accordingly, the City has not assessed the development against draft LPS4. Notwithstanding the proposed planning provisions for the subject site include:

- Zoning: Residential Zone with a Density Coding of R40.
- Child Care Premises is proposed to be a 'A' Land Use under Draft LPS4.
- The objectives for the Residential are proposed to be:
  - To provide for a range of housing and a choice of residential densities to meet the needs of the community.
  - To facilitate and encourage high quality design, built form and streetscapes throughout residential areas.
  - To provide for a range of non-residential uses, which are compatible with and complementary to residential development.



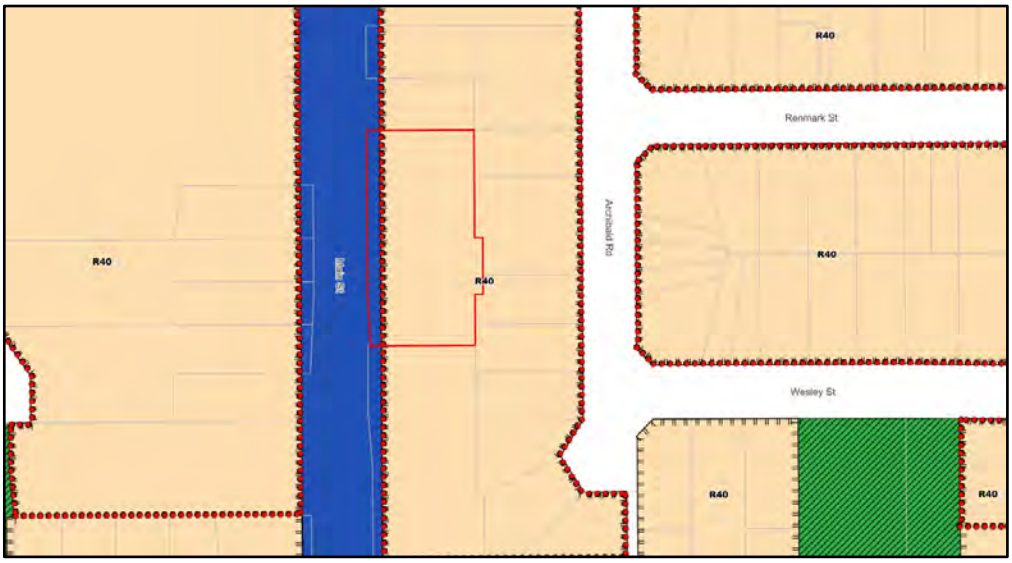


Figure 1 - Annotated draft LPS4 Zoning showing development site

EMERGEN

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APPENDIX 1 – THERMAL CONSTRUCTION - GENERAL 21

1 OVERVIEW

EMERGEN has developed a sustainable design report on the proposed childcare development building at Lot 6, No. 308 Main Street, Balcatta WA in consultation with Lateral Planning.

The purpose of this report is to support the development application by identifying the principles incorporated in the design that meet sustainable objectives and targets for the site.

1.1 STATE PLANNING POLICY SUMMARY

EMERGEN (a division of CADDS GROUP), in collaboration with the design team (Lateral Planning) has developed a sustainable design strategy aligning with *State Planning Policy 7.0*, which focuses on the Design of the Built Environment - specifically, Principle 5: Sustainability.

This report serves the vital purpose of bolstering the development application by articulating the sustainability principles and commitments for the project site. We acknowledge the significance of State Planning Policy 7.0 in promoting sustainability within the built environment. Good design, as outlined in the policy, is not only about aesthetics but also optimises the sustainability of our built surroundings, yielding positive outcomes on environmental, social, and economic fronts.

Our approach to sustainable landscape and urban design adheres closely to the established water-sensitive urban design principles, ensuring minimal adverse impacts on existing natural features and ecological processes while promoting green infrastructure at all scales of the project. Furthermore, our strategy for sustainable built environments embraces passive environmental design measures tailored to local climate and site conditions. This includes careful consideration of optimal orientation, shading, building envelope, and natural ventilation, ultimately reducing reliance on energy-intensive heating and cooling technologies. This, in turn, results in reduced energy consumption, decreased resource usage, and lowered operating costs throughout the project's lifecycle.

1.2 DESIGN AND CONSTRUCT TO AUSTRALIAN BEST PRACTICE

The design team will utilise a structured approach to a sustainable outcome for the design and construction of the development including the following Sustainable Targets.

Table 1:Sustainability Targets

DESCRIPTION	GOAL	SUSTAINABILITY COMMITMENTS
Clear Air	Improve Indoor Environment Quality and Health And Wellbeing Of Occupants.	Outdoor air provided to primary areas at a rate at least **50%** greater than minimum in AS 1668.2:2012. *(TBC based on mechanical consultant).*
Light Quality		Above **40%** of the regularly occupied areas have high level of daylight (above 160 Lux).
Exposure to Toxins		The building's paints adhesives, sealants, and carpets are low in TVOC or non-toxic. The building's engineered wood products are low in TVOC or non-toxic. Occupants are not exposed to banned or highly toxic materials in the building.
Urban ecology	Heat Resilience	Light Roof Colour (SRI below 0.50)
Energy use	Reduce Emissions and Water Use.	A minimum of **30%** offset in operational energy usage
		High performance building fabric.
		Provision for **Future** solar PV array to supply renewable energy to Commercial building.
Water use		High WELS Ratings (these equal to above **30%** reduction in potable water).
Lighting use		**20%** reduction in lighting power when compared to NCC DTS.
Recycle building Materials	Recycled Asphalt	Project integrates recyclable materials, including recycled asphalt paving
	Sustainable Timber	The playground is constructed from sustainable timber materials
Movement and place	Low Carbon Options.	Provision for 4 x EV Charging Bays
		Provision for secured and unsecured bike parking
Design for Inclusion	Social Health.	Disability Access and inclusive design

2 PROJECT INFORMATION

The proposed project is located at Lot 6, No. 308 Main Street, Balcatta WA.

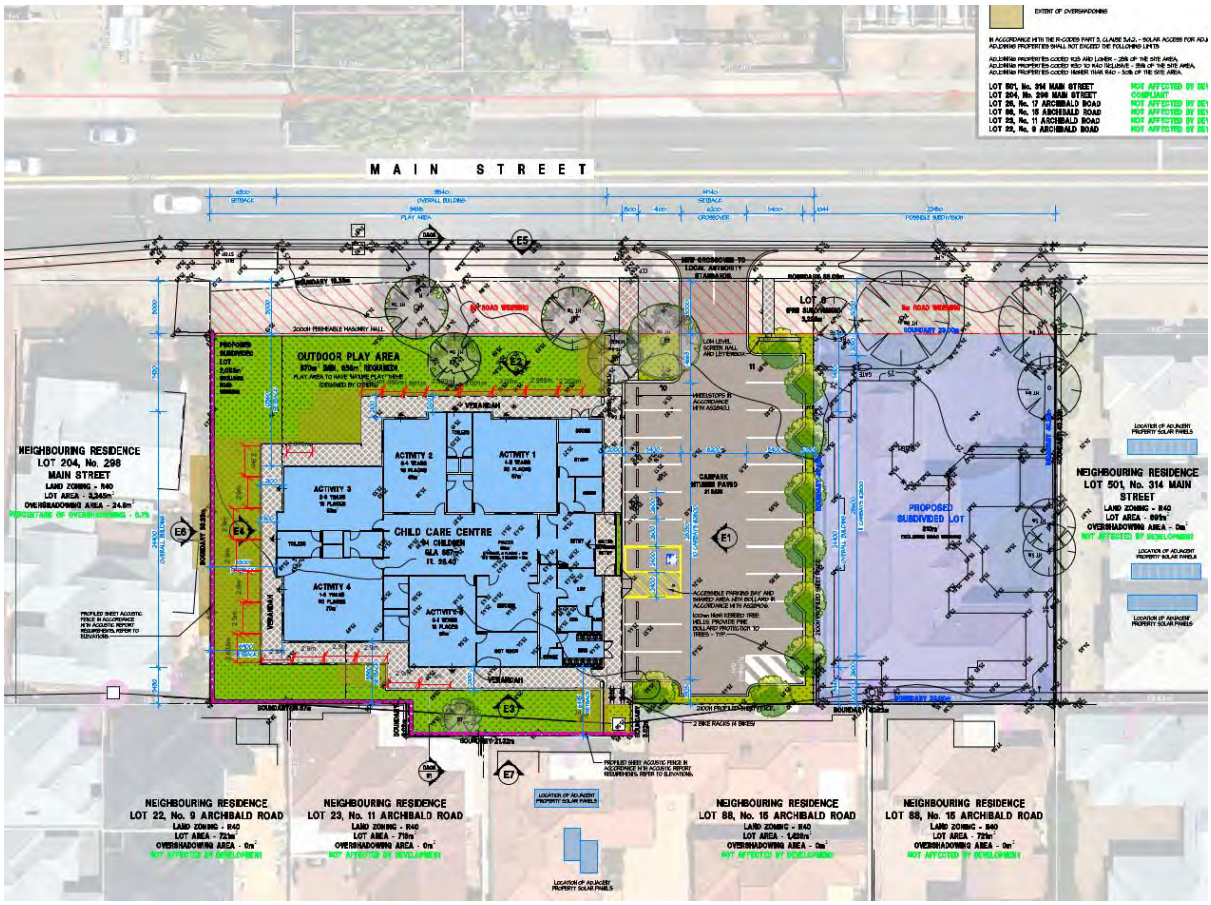
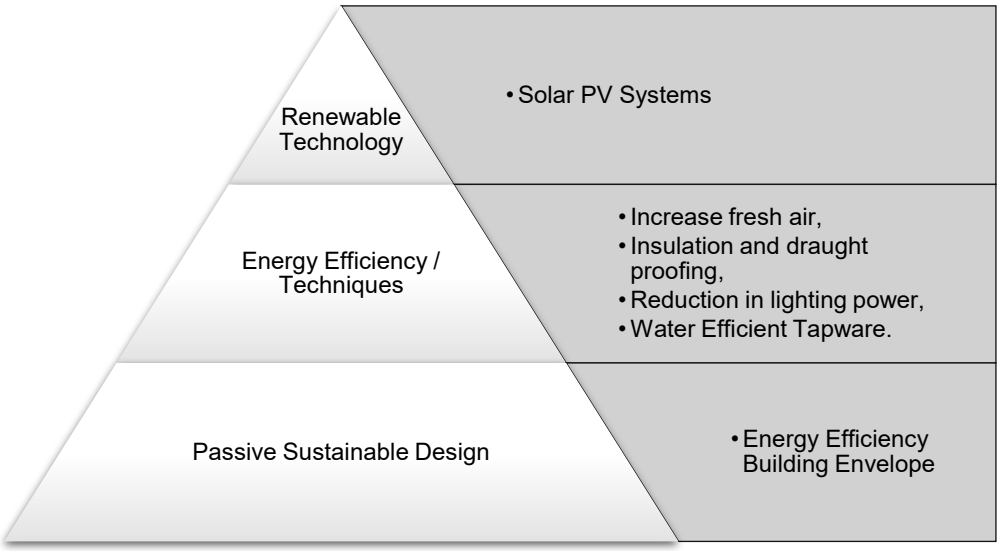


Figure 1: Existing Site Image/proposed development

3 ENERGY REDUCTION STRATEGY

Figure 2: Energy Reduction Strategy



4 LIGHTING COMFORT

Lighting within the building must meet the following criteria:

- All lighting must be flicker-free.
- Light sources must have a minimum Colour Rendering Index (CRI) average R1 to R8 of 85 or higher and have a CRI R9 of 50 or higher.
- Light sources must meet best practice illuminance levels for each task within each space type with a maintained illuminance that meets the levels recommended in AS/NZS 1680.1:2006 series applicable to the project type and including maintenance.
- The maintained Illuminance values must achieve a uniformity of no less than that specified in Table 3.2 of AS/NZS 1680.1:2006, with a maintenance factor method as defined in AS/NZS 1680.4.; and
- All light sources must have a minimum of 3 MacAdam Ellipses.
- The walls within the field of view of occupants in regularly occupied spaces must have an average surface reflectance value of 0.70 and an average surface illuminance of at least 50% of the horizontal illuminance levels required for task.
- Vertical illuminance in workspaces: ensure that 50% of the horizontal task illuminance reaches the average eye height for 90% of primary spaces using vertical illuminance calculation grid.
- The illuminance values must be calculated in accordance with AS/NZS 1680 series for the relevant task.

4.1 EFFICIENT LIGHTING AND CONTROL

The installed aggregate illumination power has been designed to be **20%** below the maximum illumination power based on maximum allowable lighting power densities defined in Table J6.2a of the NCC 2019. Motion Detectors and daylight sensors are provided to reduce demand.

Table 2: Lighting Characteristics

PARAMETER	PROPOSED BUILDING	REFERENCE BUILDING
LIGHTING TYPE	LED light fittings	LED light fittings
DESIGN ILLUMINANCE (LUX)	Various lux	Various lux
NOMINAL LIGHTING POWER DENSITY (W/M^2)	**20%** less compared to NCC max requirements.	As per NCC max requirements.
OCCUPANT SENSOR CONTROLS	Motion sensors	N/A
DAYLIGHT CONTROLS	Yes	N/A
OTHER LIGHTING CONTROLS	Timer switches	N/A
ADJUSTMENT FACTOR APPLIED	0.9 – Motion sensor 1 0.7 – Motion sensor 2 0.55 – Motion sensor 3	Room Aspect Ratio

4.2 DAYLIGHTING

The purpose of this credit is to ensure the building is providing daylight access above typical federal, state, or local regulations by showing how the building's design and glazing specification maximises natural lighting to regularly occupied spaces.

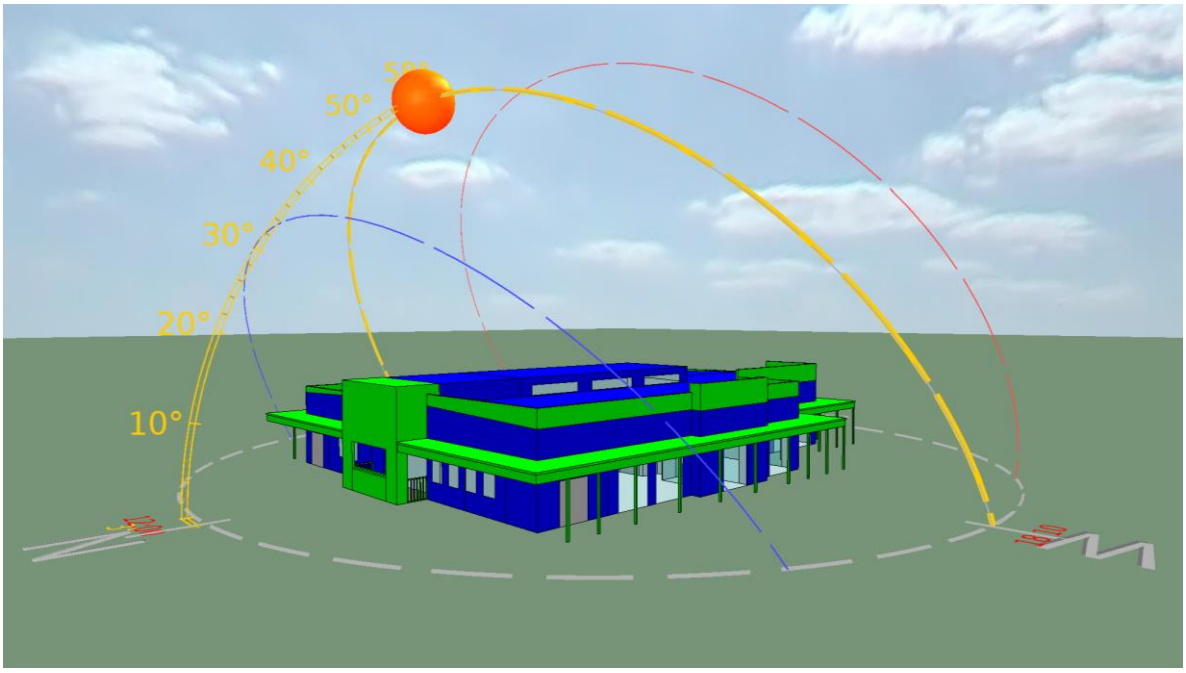


Figure 3: Daylighting Model

CALCULATION CONDITIONS	
TEST FACTOR	Daylight Factor
SKY FACTOR	CIE Overcast Sky
DATE	September 21st 12:00pm

BUILDING	PROPOSE USAGE	NOMINATED AREA (m^2)	COMPLIANT AREA (m^2)	COMPLIANT AREA (%)
CHILDCARE	Primary	461.48	404.85	**87.7%**

Figure 4: Daylighting for Primary Areas

4.3 ARTIFICIAL LIGHTING AND CONTROLS

All lighting will be equipped with light-emitting diodes (LEDs), covering all primary areas. Common area lighting will include controls like occupancy sensors (PIRs) and time switches to minimize energy usage when lighting is not needed.

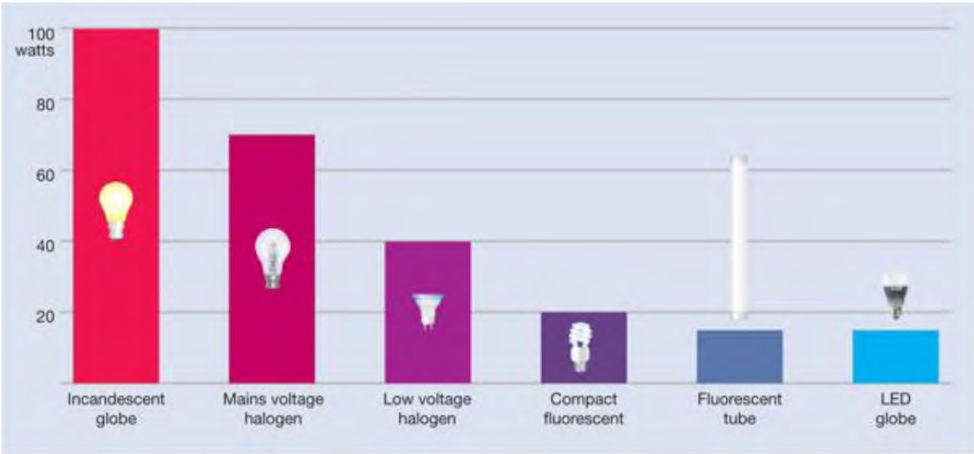


Figure 5: Comparison of LED lighting with other conventional lighting

4.4 SOLAR ANALYSIS

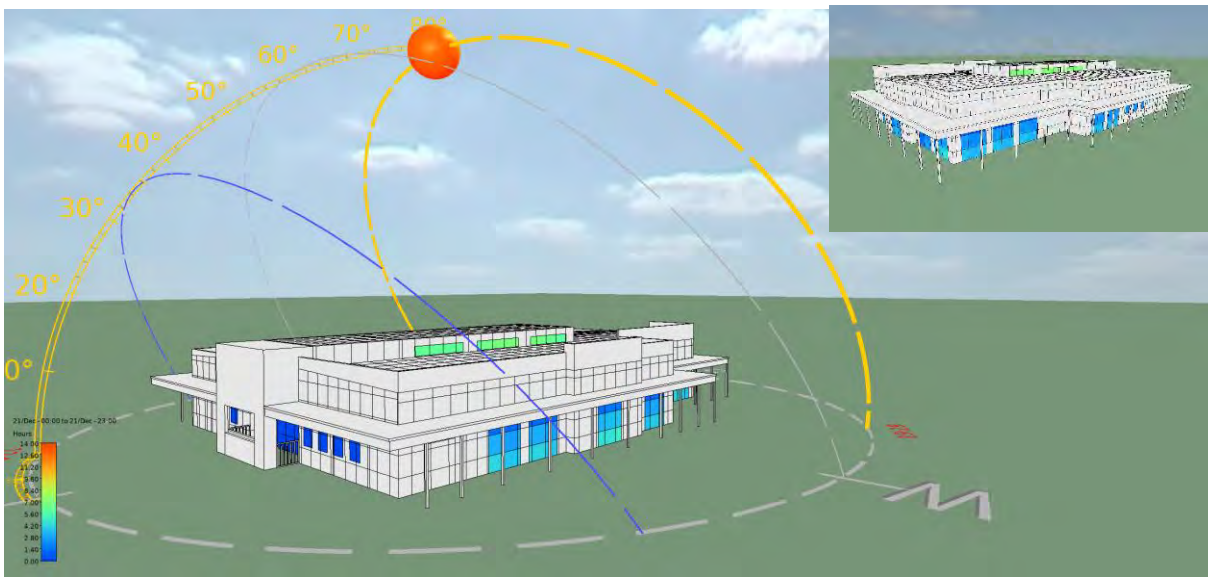


Figure 6: Solar Analysis during Summer

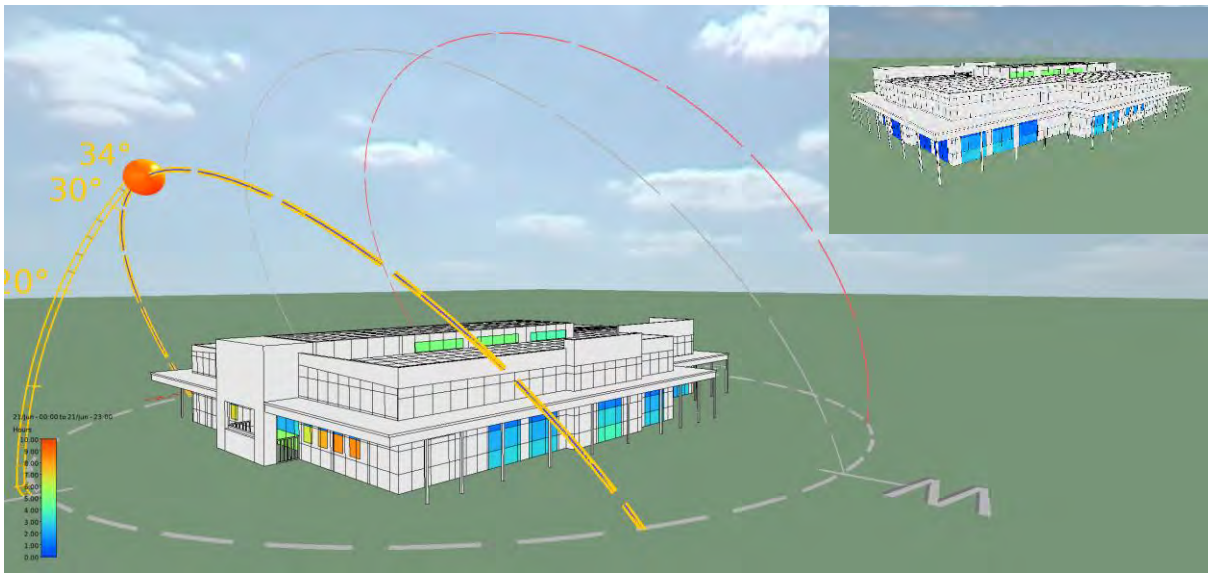


Figure 7: Solar Analysis during Winter

The shading elements have been strategically designed to minimise extended solar exposure during summer months yet maximise solar gains in winter months. During the Summer months each window, receives approximately 1 to 5 hours of daylight over the course of the day, striking a balance between harnessing natural light and mitigating excessive sunlight exposure.

5 URBAN ECOLOGY

Urban ecology is crucial for conserving biodiversity and enhancing urban life. Well-planned buildings and landscapes protect biodiversity and support sustainable practices, including low water and fertilizer use and the selection of native plants. Existing mature trees in the perimeter buffers will be maintained as much as possible.

5.1 MINIMISING HEAT ISLAND EFFECT

The heat island effect occurs when urban areas are warmer than their rural surroundings due to the built environment. The design has mitigated this effect by using light-coloured roof materials and shaded landscaped areas, which significantly mitigates this effect and enhances energy savings.

Figure 8: Potential design provisions for heat island effect

6 ENERGY USE

Energy savings in a building can be realized by minimizing the need for heating and cooling through a well-designed and insulated façade. The design team will focus on enhancing energy efficiency by exceeding the minimum requirements of BCA Section J. This will involve optimizing the building envelope, air conditioning and ventilation systems, and lighting to ensure lower energy consumption.

The design team has also included provisions for future solar PV installation on the roof of all buildings, accommodating both structural and electrical requirements. The plan is to install the solar systems within two years of the building's operational start.

6.1 BUILDING FABRIC

Table 3: Proposed Building Specification

CONSTRUCTION		DESCRIPTION	REQUIREMENT
ENVELOPE WALLS	External Steel Framed Wall	Face brick tile and 9mm CFC Cladding on 35mm top hat fixed to 92mm steel stud internally lined with 13mm plasterboard. Restoration Red Brick **(SA≈0.70)**	**R0.2 thermal break** between external cladding and steel frame with **90mm R2.5HD insulation batts** inside steel frame. ***Total R-Value=1.63***
	External Steel Framed Wall	9mm CFC Cladding on 35mm top hat fixed to 92mm steel stud internally lined with 13mm plasterboard. Cladding in Dulux White **(SA≈0.20)**	**R0.2 thermal break** between external cladding and steel frame with **90mm R2.5HD insulation batts** inside steel frame. ***Total R-Value=1.60***
	Internal Steel Framed Wall	Steel framed wall with plasterboard lining.	**90mm R2.5HD insulation batts** inside steel frame.
INTERNAL WALLS	Steel Framed Wall	Steel framed wall with plasterboard lining.	**No Insulation Required.**
FLOORS	Slab on Ground	Concrete slab with ground contact. Floor coverings as per plans.	**No Insulation Required.**
ROOFS	Roof Type 1	Metal deck roof sheet. Cladding in **Surfmist (SA: 0.33)**	**60mm Anticon (R1.3)** with **R4.0 Insulation Batts** to dropped plasterboard ceilings.

WINDOW SPECIFICATION		U-VALUE	SHGC
OPTION 1:	Single Clear glazing in aluminium frame. (i.e., 6.00mm **Viridian VFloat Clear**, or equal)	**6.28**	**0.76**

OPTION 2:	DG Clear in aluminium frame. (i.e., 6/12/6 **Viridian DG VFloat Clear**, or equal)	**3.72**	**0.66**

Note: Glazing values provided are for Whole System (Frame + Glass)

6.2 RESULTS

The figures shown below demonstrate the difference in performance between the Proposed Building and the Reference Building, allowing for a quantifiable comparison on the performance of each building.

Table 4: Estimated Energy Used - Option 1: Single Clear

MODEL	HEATING	COOLING	FANS	LIGHTS	EQUIP	PV	TOTAL
REFERENCE (kWh/m^2)	1.4	21.3	11.4	11.4	11.1	-	**56.6**
PROPOSED (kWh/m^2)	1.6	20.9	11.4	11.4	11.1	-21.2	**35.3**
ENERGY REDUCTION							**37.73%**

It's important to note that a **10kW** solar photovoltaic (PV) system has been integrated into the proposed building's design to assist in offsetting the overall energy consumption.

Table 5: Estimated Energy Used - Option 2: DG Clear

MODEL	HEATING	COOLING	FANS	LIGHTS	EQUIP	PV	TOTAL
REFERENCE (kWh/m^2)	1.4	21.3	11.4	11.4	11.1	-	**56.6**
PROPOSED (kWh/m^2)	1.4	20.0	11.0	11.4	11.1	-21.2	**33.7**
ENERGY REDUCTION							**40.48%**

It's important to note that a **10kW** solar photovoltaic (PV) system has been integrated into the proposed building's design to assist in offsetting the overall energy consumption.

Table 6: Annual Greenhouse Gas Emissions

MODEL		ANNUAL GREENHOUSE GAS EMISSIONS
REFERENCE	$kgCO_2$-e	**27,502.35**
PROPOSED w/ Single Clear	$kgCO_2$-e	**17,126.86**
PROPOSED w/ DG Clear	$kgCO_2$-e	**16,369.88**

Table 7: Predicted Mean Vote (PMV) Summary

PREDICTED MEAN VOTE - % HOURS IN RANGE FOR	<= -1.00	>-1.00 TO <=1.00	>1.00
Building Class 9b w/ Single Clear	0.00	99.16	0.91
Building Class 9b w/ DG Clear	0.00	99.40	0.66

7 WATER EFFICIENCY

7.1 SUSTAINABLE WATER INITIATIVES

Non-potable water use is minimal throughout the proposed design due to the application of water efficient toilets, taps and showers and relatively small areas of irrigated plantings. The design team has identified water capture, grey and black water capture and treatment during the target setting workshop but did not preference these options due to:

- Low non-potable water use requirements of the development
- Logistical constraints, energy use and operational costs associated with grey and black water treatment in office complexes influenced heavily by health regulations (significant periodic inspection and testing required in the applications)
- Space requirements of rainwater harvesting and/or grey and black water treatment tanks
- Relative cost vs benefit of these strategies versus competing strategies which delivered much larger environmental benefits at a lower cost.

All new water fixtures are to ensure that high WELS rating fixtures and fitting are to be specified in line with minimum benchmarks below.

Table 8: WELS Ratings

FIXTURE / EQUIPMENT TYPE	WELS RATING
TAPS	5 Star
URINALS	5 Star
TOILETS	4 Star
SHOWERS	3 Star – (7L/min)

7.1.1 LANDSCAPE AND IRRIGATION PLAN

The development's location in Western Australia is considered a drying climate and as such, water conservation is critically important. The following sections set out design strategies utilised for this development to reduce its overall water consumption.

7.1.1.1 Drip Irrigation System:

- Efficient drip irrigation system with bubblers ensuring optimal water delivery to trees and uniform hydration throughout the landscape.

7.1.1.2 Plant Selection:

- Drought-tolerant and water-wise plants will be selected wherever possible to ensure sustainable water use.

7.1.1.3 Vegetation and Landscaping:

- Native vegetation that is water-wise will be prioritized.

7.1.1.4 Car Park Design:

- The car park will incorporate shade trees and use permeable paving. The design will include traditional kerbs.

8 MOVEMENT AND PLACE

8.1 BICYLCE PARKING FACILITIES & SUSTAINABLE TRANSPORT FACILITIES

It is the intention of this category to reduce occupant's dependency on carbon intensive vehicles. The development will install infrastructure to allow for future installation of minimum 4 metered EV charging stations on the northern cross over and a high number of secured and unsecured bike racks.

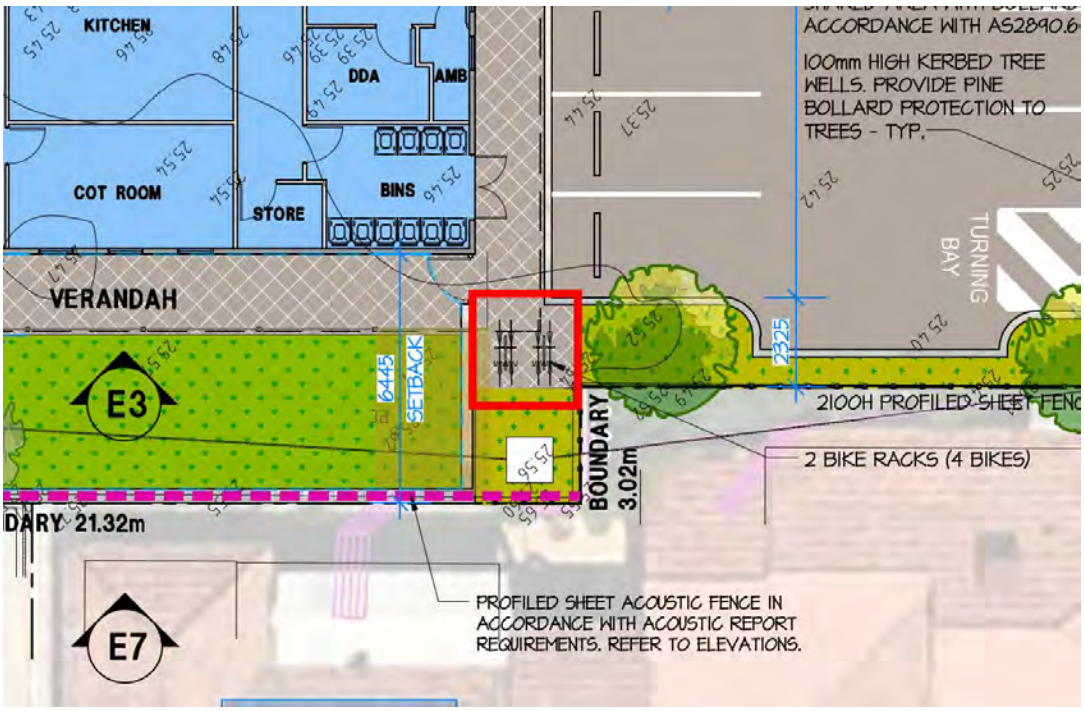


Figure 9: Proposed Bike Racks

9 WASTE EFFICIENCY

A waste planning expert will produce a Waste Management Plan (OWMP) that addresses best practice in waste management, including:

- Identifying the objectives of the plan, by setting diversion from landfill targets and / or target for reducing total materials generation (general waste materials + recyclable / reusable materials);
- Clearly identify waste streams including general waste, paper and cardboard, glass and plastic;

- Clearly identify applicable bins for various waste streams, that allow for separation of recyclable streams – or use of comingled systems where appropriate.
- Clearly identify at least one other waste stream that can be recycled, and for which recycling facilities are provided.
- Clearly identify storage areas for all waste streams identified in the OWMP.
    - Area to be sized sufficiently for all streams nominated above, based on waste generated by the project and the collection frequency for each stream; and
    - Calculations shall be based on third-party best practice guidelines.
- Outline best practice access requirements for the collection of all waste streams identified in the OWMP.
- Outline individual roles responsible for delivering and reviewing the OWMP

9.1 RECYCLING BUILDING MATERIALS

Buildings use significant natural resources throughout their lifecycle. This section will outline the impacts of material procurement and construction, and how these have been minimized compared to typical developments. The goal is to reduce the total embodied energy and carbon of the building.

Design Focus	Intended Design Initiative
Sustainable timber	• Timber used in the building and construction will primarily come from sustainable sources or be reused. • Local wood carvers will repurpose site-cleared logs into seats, bike racks, and climbing features for the children's playground.
Recycled Asphalt	• Using recycled asphalt pavement
Structural and reinforcing steel	• The aim is for the majority of the steel used in the building to come from an energy-efficient processing plant and a Responsible Steel Maker

10 EXPOSURE TO TOXINS

10.1 PAINTS, ADHESIVES, AND SEALANTS

To meet the requirements, at least 95% of internally applied paints, adhesives, sealants (by volume), and carpets (by area) must meet TVOC (Total Volatile Organic Compounds) limits. Compliance with these limits can be achieved through one of the following methods:

1. Product Certification Scheme: The contractor can use products that are certified under a recognized and current Product Certification Scheme at the time of purchase. These schemes assess and verify the TVOC content of the materials, ensuring they meet the specified limits.
2. Laboratory Product Testing: If there are no certified products available, the contractor can conduct laboratory testing on the paints, adhesives, and sealants, to determine their TVOC content. The testing should be carried out using the whole paint, including water and tinters, to obtain accurate results.
3. Absence of Non-compliant Materials: Alternatively, if none of the materials mentioned (paints, adhesives, sealants, and carpets) are present at the time of practical completion (PC), and thus no TVOC emissions are expected, compliance can be achieved.

All paints used for internal application on the job are to have a low TVOC content as outlined below. TVOC content must be based on whole paint (water and tinters included):

Table 9: Paint VOC limits

PRODUCT TYPE / SUBCATEGORY	MAX TVOC CONTENT (G/L OF READY TO USE PRODUCT)
Walls and ceilings – Any gloss level	16
Trim, varnishes and wood stains	75
Primers, sealers and prep coats	65

Maximum TVOC Content Limits for Paints, Varnishes and Protective Coatings
*EU Directive
The TVOC content of the 'ready-to-use' paint shall be theoretically calculated as the sum total of the VOCs of each of the raw material component comprising the paint.

Where the TVOC content of individual components is not known, it must be determined experimentally by one of the following testing methods as appropriate:

- ISO Method 17895 (2005), for a material with a presumed VOC content <1%;
- ISO Method 11890-2 (2006), for a material with a presumed VOC <15%;
- ISO Method 11890-1 (2007), for a material with a presumed VOC content >15%;
- ASTM D3960, which is comprised of four individual testing procedures that measures TVOC (D2369) as well as density (D1475) and water content (D4017). Exempt compounds (D4457) must not be subtracted in the calculation of VOC content.

The contractor must obtain written approval from the design team before using any sealant, adhesive, paint, flooring or fit out items. This approval will be contingent on the provision of proof that the product has a VOC content below that noted above.

At the end of construction, the contractor is required to undertake a final audit to ensure that the correct products have been used.

All sealants used in an internal application on the job are to have a low TVOC content as outlined below.

Table 10: Adhesives/Sealants VOC limits

PRODUCT	MAXIMUM TVOC CONTENT (G/LITRE)
General purpose adhesives and sealants	50
Acoustic sealants, architectural sealant, waterproofing membranes and sealant, fire retardant sealants and adhesives	250
Structural glazing adhesive, wood flooring and laminate adhesives and sealants	100
Primers, sealers and prep coats	65
One and two pack performance coatings for floors	140

Maximum TVOC limits for Adhesives & Sealants
*Sealants used to enhance the fire- and water-proofing properties are included.

The testing method applicable to adhesive and sealants is only ASTM D3960 as detailed above for paints. For more information on ASTM D3960 refer to South Coast Air Quality Management District Rule 1168.

The contractor must obtain written approval from the design team before using any sealant, adhesive, paint, flooring or fitout items. This approval will be contingent on the provision of proof that the product has a VOC content below that noted above.

At the end of construction, the contractor is required to undertake a final audit to ensure that the correct products have been used.

All carpets and/or other flooring used on the project are to have low TVOC emission rates as outlined below.

Table 11: Carpet VOC limits

ALL CARPET/FLOORING PRODUCTS MUST COMPLY WITH TVOC EMISSION LEVELS	
Total VOC limit	0.5 mg/m^2 per hour
4-pc (4-Phenolcycohexene) limit	0.05 mg/m^2 per hour

Compliance Testing: Refer to Carpet and Rug Institute Green Label (US) OR American Society for Testing and Materials (ASTM) D5116 Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Material/Products OR

For carpets and laminate floor coverings, an option for demonstrating compliance with TVOC levels is as follows: ISO 10580 (also known as ISO/TC 219) – Document N238 – Resilient,

Textile and Laminate Floor Coverings Evaluation of Volatile Organic Compounds Emissions, with a limit of 500µg/m^2/hr at 24 hours. OR

For floor coverings (other than carpet), an option for demonstrating compliance with TVOC levels is as follows:

ISO16000 parts 9, 10 and 11 (also known as the EN 13419), with a TVOC limit at three days of 5mg/m^2/h and 0.5mg/m^2/h at 28 days.

Carpet or other flooring installed as part of the base building works prior to fit out works, can be deemed re-used for the purpose of this credit.

The contractor must obtain written approval from the design team before using any sealant, adhesive, paint, flooring or fit out items. This approval will be contingent on the provision of proof that the product has a VOC content below that noted above.

At the end of construction, the contractor is required to undertake a final audit to ensure that the correct products have been used.

There are two options for demonstrating compliance for carpets, as follows:

Option A - Product Certification:

Carpets certified under a relevant Product Certification Scheme standard recognised by the GBCA under the GBCA assessment Framework for Product Certification Schemes are deemed to satisfy the requirements of this criterion. Relevant GBCA recognized standards are listed on the GBCA web site. The certificate must be current at the time of project registration or submission and list the relevant product name and model.

A UL GREENGUARD Children & Schools® certification current at the time of project registration or submission is another acceptable evidence for demonstrating compliant TVOC levels for carpets.

Option B - Experimental Testing

All carpets comply with the Total VOC (TVOC) limits within Table below. The emission levels detailed in this table must be established by a NATA or another ISO/IEC17025 accreditation laboratory.

Table 12: Flooring VOC limits

ALL CARPET/FLOORING PRODUCTS MUST COMPLY WITH TVOC EMISSION LEVELS – TO ASTM D5116 TEST PROTOCOL	
Carpets using ASTM D5116 Test Protocol:	
Total VOC limit	0.5 mg/m^2 per hour
4-pc (4-Phenolcycohexene) limit	0.05 mg/m^2 per hour
Carpet using ISO 16000 test protocol (also known as EN 13419)	
TVOC at three days-	0.5 mg/sqm per hour
Flooring using ISO 10580 (also known as ISO/TC 219) – Document	
TVOC at 24 hours - 0	0.5mg/sqm per hour

10.2 FORMALDEHYDE MINIMISATION

All engineered wood products used internally, including exposed and concealed applications, must have low formaldehyde emissions as defined in the table below, or contain no formaldehyde. Engineered wood products are defined as particleboard, plywood, veneer, MDF, Laminated Veneer Lumber (LVL), High-Pressure Laminate (HPL), Compact Laminate and decorative overlaid wood panels and include both finished and unfinished products.

These requirements are not applicable to exterior applications, formwork, internal car park applications, reused engineered wood products or raw timber.

The contractor must obtain approval from the design team before substituting any product.

The limits listed here are defined according to the test method. The levels listed are equivalent results for different test procedures.

Table 13: Formaldehyde emission limits

TEST PROTOCOL	EMISSION LIMIT/ UNIT OF MEASUREMENTS
AS/NZS 2269:2004, testing procedure AS/NZS 2098.11:2005 method 10 for Plywood	< 1.0 mg/L
AS/NZS 1859.1:2004 - Particle Board, with use of testing procedure AS/NZS 4266.16:2004 method 16	< 1.5 mg/L

AS/NZS 1859.2:2004 - MDF, with use of testing procedure AS/NZS 4266.16:2004 method 16	< 1.0 mg/L
JIS A 5908:2003- Particle Board and Plywood, with use of testing procedure JIS A 1460	< 1.0 mg/L
JIS A 5905:2003 - MDF, with use of testing procedure JIS A 1460	< 1.0 mg/L
JIS A1901 (not applicable to Plywood)	< 1.0 mg/L
ASTM D5116	<0.1 (+/- 0.0005) mg/m^2hr (may also be represented as $mg/m^2/hr$)
ISO 16000 part 9, 10 and 11 (also known as EN 13419)	<0.1 (+/- 0.0005) mg/m^2hr (may also be represented as $mg/m^2/hr$)
ASTM D6007	$0.12mg/m^3$*
ASTM E1333	$0.12mg/m^3$**
EN 717-1 (also known as DIN EN 717-1)	$0.12\ mg/m^3$
EN 717-2 (also known as DIN EN 717-2)	$3.5\ mg/m^2hr$ (may also be represented as $mg/m^2/hr$).
*The test report must confirm that the conditions of Table 1 comply for the particular wood product type, the final results must be presented in EN 717-1 equivalent (as presented in the table) using the correlation ratio of 0.98.	

11 CONCLUSION

In conclusion, the report outlines sustainability commitments that align with core principles, focusing on energy, water, and waste management. It highlights efforts to promote environmental responsibility and resource efficiency, underscoring a commitment to a greener, more sustainable future.

Table 14: Sustainability Commitments

DESCRIPTION	GOAL	SUSTAINABILITY COMMITMENTS
Clear Air	Improve Indoor Environment Quality And Health And Wellbeing Of Occupants.	Outdoor air provided to primary areas at a rate at least **50%** greater than minimum in AS 1668.2:2012. *(TBC based on mechanical consultant).*
Light Quality		Above **40%** of the regularly occupied areas have high level of daylight (above 160 Lux).
Exposure to Toxins		The building's paints adhesives, sealants, and carpets are low in TVOC or non-toxic. The building's engineered wood products are low in TVOC or non-toxic. Occupants are not exposed to banned or highly toxic materials in the building.
Urban ecology	Heat Resilience	Light Roof Colour (SRI below 0.50)
Energy use	Reduce Emissions And Water Use.	A minimum of **30%** offset in operational energy usage
		High performance building fabric.
		Provision for **Future** solar PV array to supply renewable energy to Commercial building.
Water use		High WELS Ratings (these equal to above **30%** reduction in potable water).
Lighting use		**20%** reduction in lighting power when compared to NCC DTS.
Recycle building Materials	Recycled Asphalt	Project integrates recyclable materials, including recycled asphalt paving
	Sustainable Timber	The playground is constructed from sustainable timber materials
Movement and place	Low Carbon Options.	Provision for 4 x EV Charging Bays
		Provision for secured and unsecured bike parking
Design for Inclusion	Social Health.	Disability Access and inclusive design

APPENDIX 1 – THERMAL CONSTRUCTION - GENERAL

Excerpt from the BCA, Volume One - Part J1.2

Thermal Construction - General

1. Where required, insulation must comply AS/NZS 4859.1 and be installed so that it –
    a. Abuts or overlaps adjoining insulation other than at supporting members such as studs, noggings, joists, furring channels and the like where the insulation must be against the member; and
    b. Forms a continuous barrier with ceilings, walls, bulkheads, floors or the like that inherently contribute to the thermal barrier; and
    c. Does not affect the safe or effective operation of a domestic service or fitting.
2. Where required, reflective insulation must be installed with –
    a. The necessary airspace, to achieve the required R-Value between a reflective side of the reflective insulation and a building lining or cladding; and
    b. The reflective insulation closely fitted against any penetration, door or window opening; and
    c. The reflective insulation adequately supported by framing members; and
    d. Each adjoining sheet of roll membrane being –
        i. Overlapped not less than 50 mm; or
        ii. Taped together.
3. Where required, bulk insulation must be installed so that –
    a. It maintains its position and thickness, other than where it crosses roof battens, water pipes, electrical cabling or the like; and
    b. In a ceiling, where there is no bulk insulation or reflective insulation in the wall beneath, it overlaps the wall by not less than 50mm.
4. Roof, ceiling, wall and floor materials, and associated surfaces are deemed to have the thermal properties listed in Specification J1.2
5. The required Total R-Value and Total System U-Value, including allowance for thermal bridging, must be –
    a. Calculated in accordance with AS/NZS 4859.2 for a roof or floor; or
    b. Determined in accordance with Specification J1.5a for wall-glazing construction; or
    c. Determined in accordance with Specification J1.6 or Section 3.5 of CIBSE Guide A for soil or sub-floor spaces.

Attachment 7b. Traffic Impact Statment
recieved 23 August 2024

Archer Consultants Pty Ltd

PH: 08 6275 6820 ABN: 79 661 164 683

308 Main Street, Balcatta WA 6021

TRANSPORT IMPACT STATEMENT

Proposed Child Care Centre Development

Client - Project Construction

Revision - 1B

Prepared For - City of Stirling - July 2024

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024

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INTRODUCTION

Archer Consultants Pty Ltd was engaged by Project Construction to prepare a Transport Impact Statement (TIS) for approval of a proposed Child Care Centre development at 308 Main Street, Balcatta WA 6021.

This report will assess the implications of the proposed development on existing traffic, parking, and transport conditions surrounding the site. 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).* The following items have been included in the subsequent sections of this report:

- A Traffic Impact Statement for the proposed development.
- Conclusions of the above findings.

During the course of preparing this assessment, the subject site and its environment have been inspected, and all relevant traffic and parking data collected and analysed.

BACKGROUND AND EXISTING CONDITIONS

Location and Land Use

The subject site is located on the eastern side of Main Street in the suburb of Balcatta which is approximately 6km north of Perth. The use of the land immediately surrounding the subject site is a mix of commercial and residential in nature.

Figure 1 provides an overview of the area and its surrounding land uses whilst **Figure 2** provides an aerial view of the immediate area surround the subject site.

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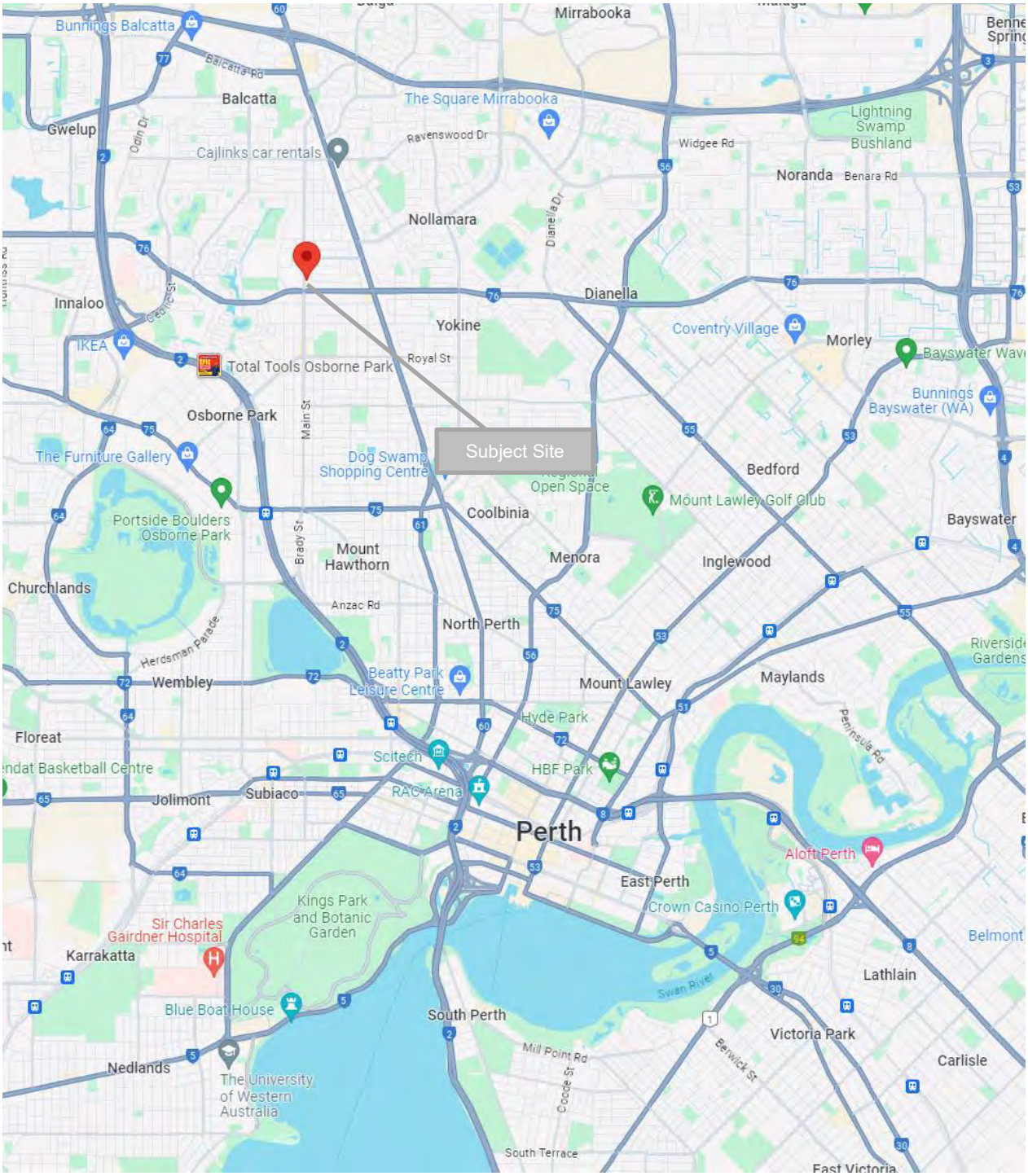

Figure 1 **Subject Site Location** *source: Google Maps*

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Figure 2 Subject Site Aerial View *source: Google Maps*

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PUBLIC TRANSPORT

The subject site is in an area that has very good access to public transport services that is within walking distance of the site. The closest public transport stop to the site is the Main Street before Karrinyup Road bus stop which is approximately 33m away and is a 1 minute walk. This services the 414 Bus Route. The following figure displays the fastest walking route from the site towards the bus stop.

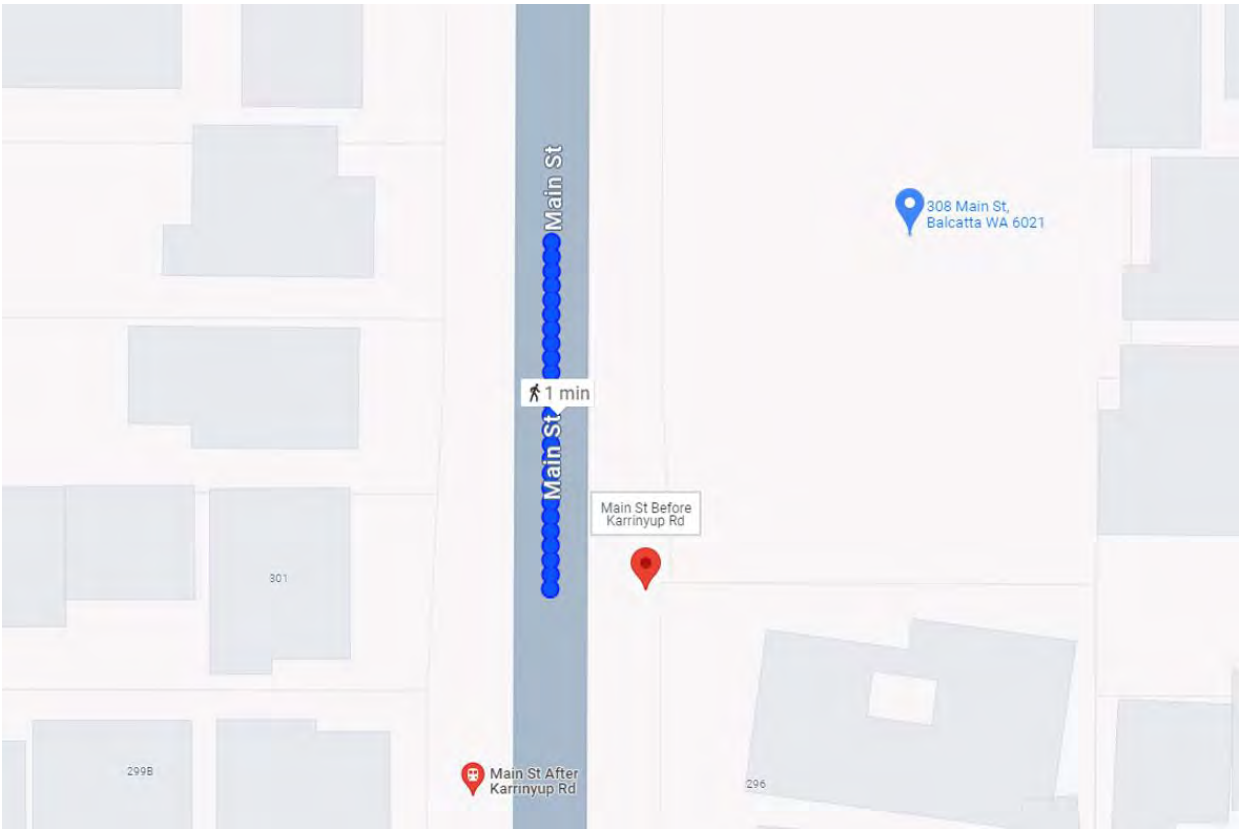

Figure 3 Proposed Development to Public Transport Bus Stop Walking Route *source: Google Maps*

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Main Street

Main Street is a main road that travels in the north-south direction. Main Street facilitates two lane, two-way traffic throughout via marked lanes with a double centre line marked median and provides no kerbside parking on both sides of the road and has a posted speed limit of 60 km/hr.

Figure 4 Main Street near the Frontage Facing South *source: Google Maps*

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PROPOSED DEVELOPMENT

The proposed development for site 308 Main Street, Balcatta WA 6021 is for a Child Care Centre.

Through observation of site plans and information from the client, the following information is provided:

Proposed Operating Hours

7:00am – 6:30pm Monday to Friday.

Expected Peak Periods

7:30am – 8:30am and 4:30pm – 5:30pm Monday to Friday.

Children

The following number of children are expected daily:

Babies: 20

Toddlers: 39

Preschoolers: 35

Staff

There will be a maximum of 19 staff on site at any one time.

Car Parking Spaces

There are 21 car spaces proposed on site including 1 accessible space.

Leasable Floor Area

The subject site has approximately 658m^2 of leasable floor area.

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In accordance with the *WAPC TIA Guidelines Volume 4 Individual Developments* report, it is typical for Child Care Centres (class as Schools) land uses that have 10-100 children attending to have a vehicle peak hour range of 10 – 100 vehicle trips. As the number of peak hour vehicle trips is anticipated to be below 100 trips, a traffic impact statement is warranted.

Provision for Service Vehicles

As shown in the site plan in ***Appendix A*** it is acknowledged that the service vehicles and parents will enter the site from Main Street through the western accessway. The site is expected to accommodate light vehicles. The largest vehicle expected to access the site will be a 6.4m SRV waste collection vehicle.
NOTE: All waste collection will be done after hours when the car park is empty, allowing the vehicle to turn on site and exit the site in a forward direction. Swept path diagrams for this vehicle are shown in ***Appendix B***.

Daily Traffic Volumes and Vehicle Types

The traffic generation rates for a Child Care Centre are obtained from *RMS Guide to Traffic Generating Developments* and are shown below:

Table 3.6
Traffic generation rates

Centre Type	Peak Vehicle Trips / Child		
	7.00-9.00am	2.30-4.00pm	4.00-6.00pm
Pre-school	1.4	0.8	-
Long-day care	0.8	0.3	0.7
Before/after care	0.5	0.2	0.7

Figure 5 Typical Land Use Vehicle Trip Rates *source: RMS Guide to Traffic Generating Developments*

As the proposed development is classed as 'Long-day care, the anticipated AM peak hour vehicle trip rate is 75 vehicle trips. The anticipated PM peak hour vehicle trip rate is 66 trips. Evident by these rates, the proposed development is expected to generate a low to medium level of vehicle trips which will have a minor impact on the existing traffic conditions.

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Traffic Management on the Frontage Streets

Road Width/Number of Lanes

The site has 1 main frontage. The frontage on Main Street contains 4 marked lanes (2 northbound and 2 southbound). The widths of each lane is approximately 3.2m wide. The frontage can accommodate light vehicles travelling into and out of the site.

Footpaths/Cycleways

Pedestrians have suitable access to the site via pedestrian footpaths available along the Main Street site boundary.
Site access however for cyclists is not ideal as there are no dedicated cycling lanes present along the front of the site.

Any Parking Provision or Restrictions

It is acknowledged that there are no dedicating on-street parking spaces available along Main Street however, it is recognized that the site has an abundance of on-site parking spaces that are available for staff and parents for child drop off and pick up.

Posted Traffic Speed

The frontage of the site has a posted speed limit of 60km/hr.

Intersections and Type of Control

When observing 100m north and south of the site, there are no intersections present along Main Street.

Access Driveways to Properties

Along Main Street, 100m north from the access to the site, there are 4 accessways on the eastern side and 1 accessway on the western side into neighbouring lots. 100m south from the access to the site, there is 1 accessway on the eastern side and 4 accessways on the western side into neighbouring lots.
The vehicle movements generated from the proposed development will have minimum impact on the existing traffic condition of these roads as the surrounding developments are expected to have low traffic movements throughout the day.

Public Transport Access

Assessing the site locality, the nearest public transport service available is a 1 minute walk from the site.

Bicycle Access

It is noted that there are 2 bicycle parking spaces that are available on-site.

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CROSS UTILISATION TRIPS

Considering the land use of the proposed development and the locality, it is expected that trips to and from the development will be direct.

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CONCLUSIONS

Based on the assessment presented in this report, it is considered that:

- The proposed development for the site at 308 Main Street, Balcatta WA 6021 is for a Child Care Centre.

- The site has very good access to public transport services. Assessing the site locality, the closest public transport stop to the site is the Main Street before Karrinyup Road bus stop which is approximately 33m away and is a 1-minute walk.

- Considering the proposed site location and land use, it is likely that all trips to and from the site will be direct.

- The proposed development will generate additional, but low levels of trips throughout the day. It is expected that these trips can be accommodated along Main Street without affecting traffic performance or increasing any delays or queues.

In conclusion, this study indicates that the development is not envisaged to have adverse impacts on the surrounding traffic or parking conditions. As such, the development should be endorsed in a traffic and parking context.

Report prepared by:

Vadi Vencatachellum
Senior Traffic Engineer
BE Civil Engineering

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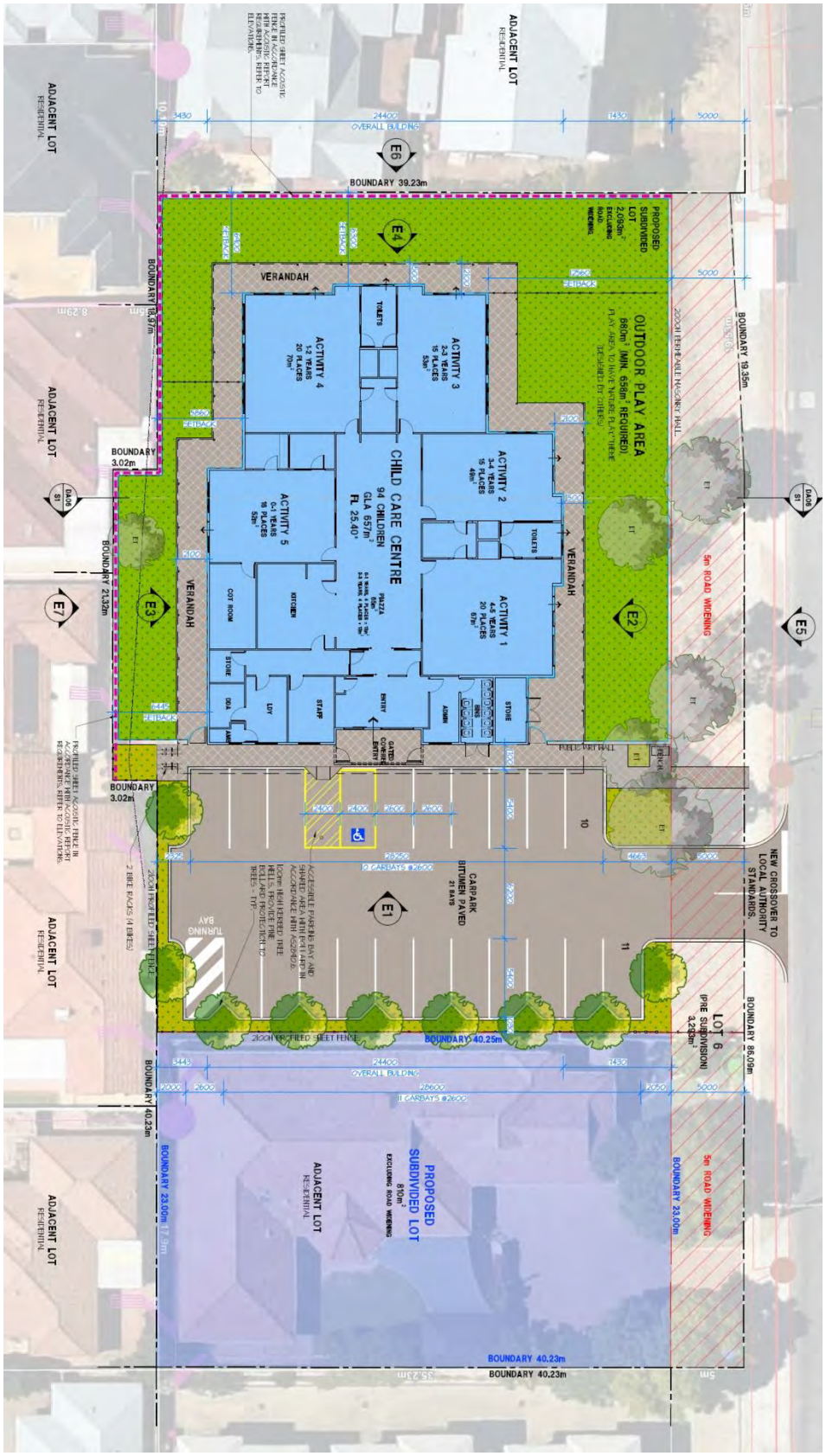
APPENDIX A: PROPOSED SITE PLAN



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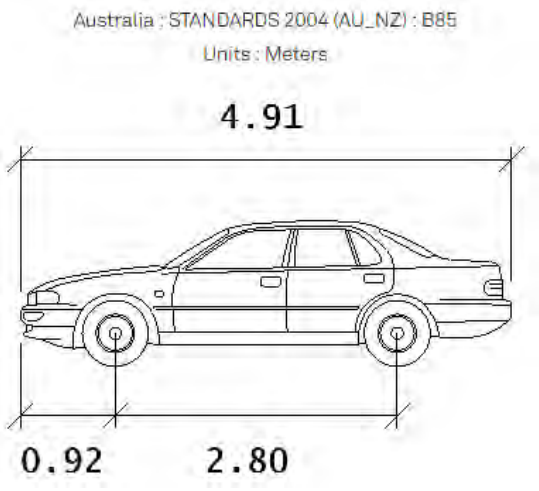
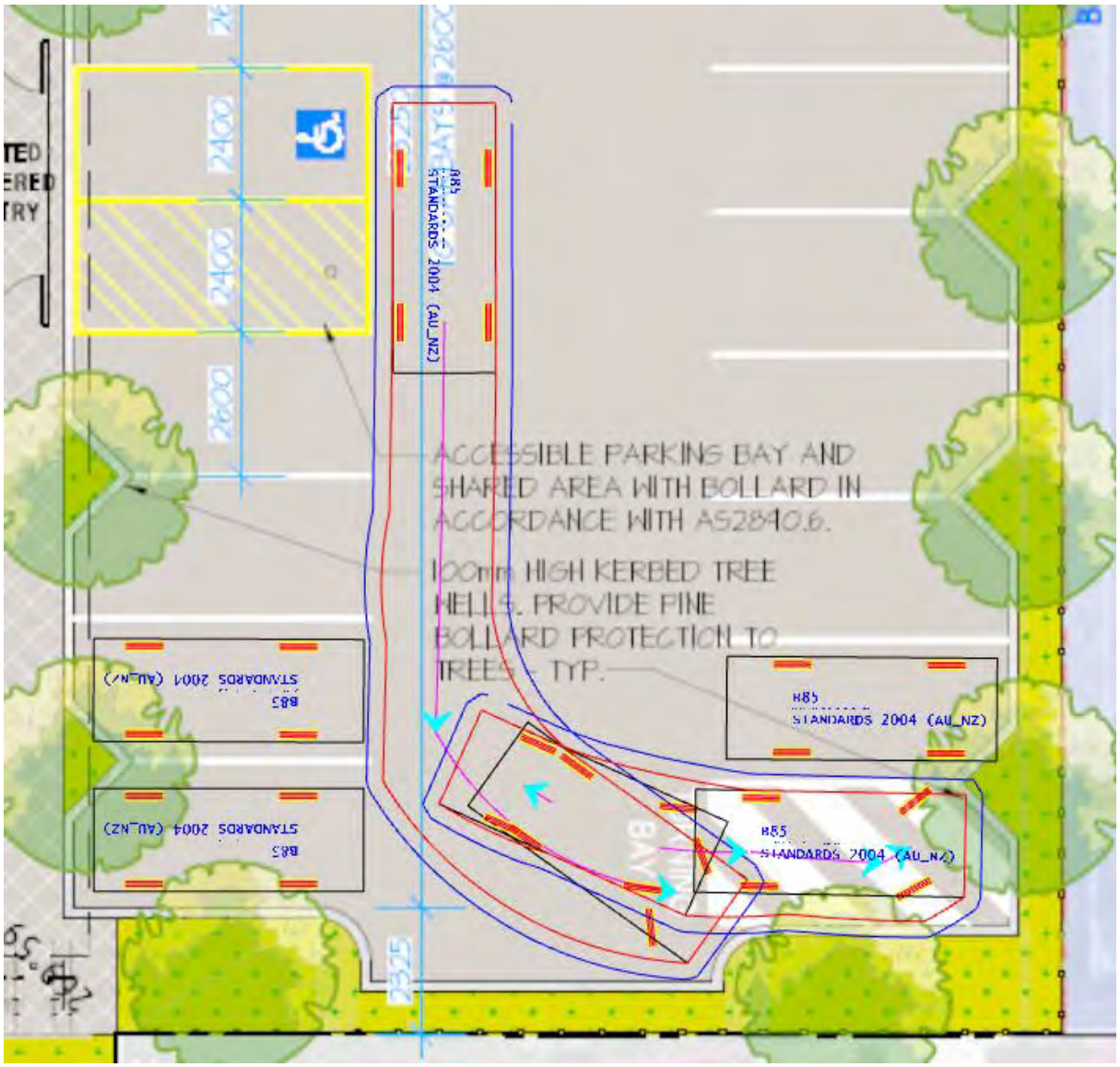
APPENDIX B: SWEPT PATH DIAGRAMS





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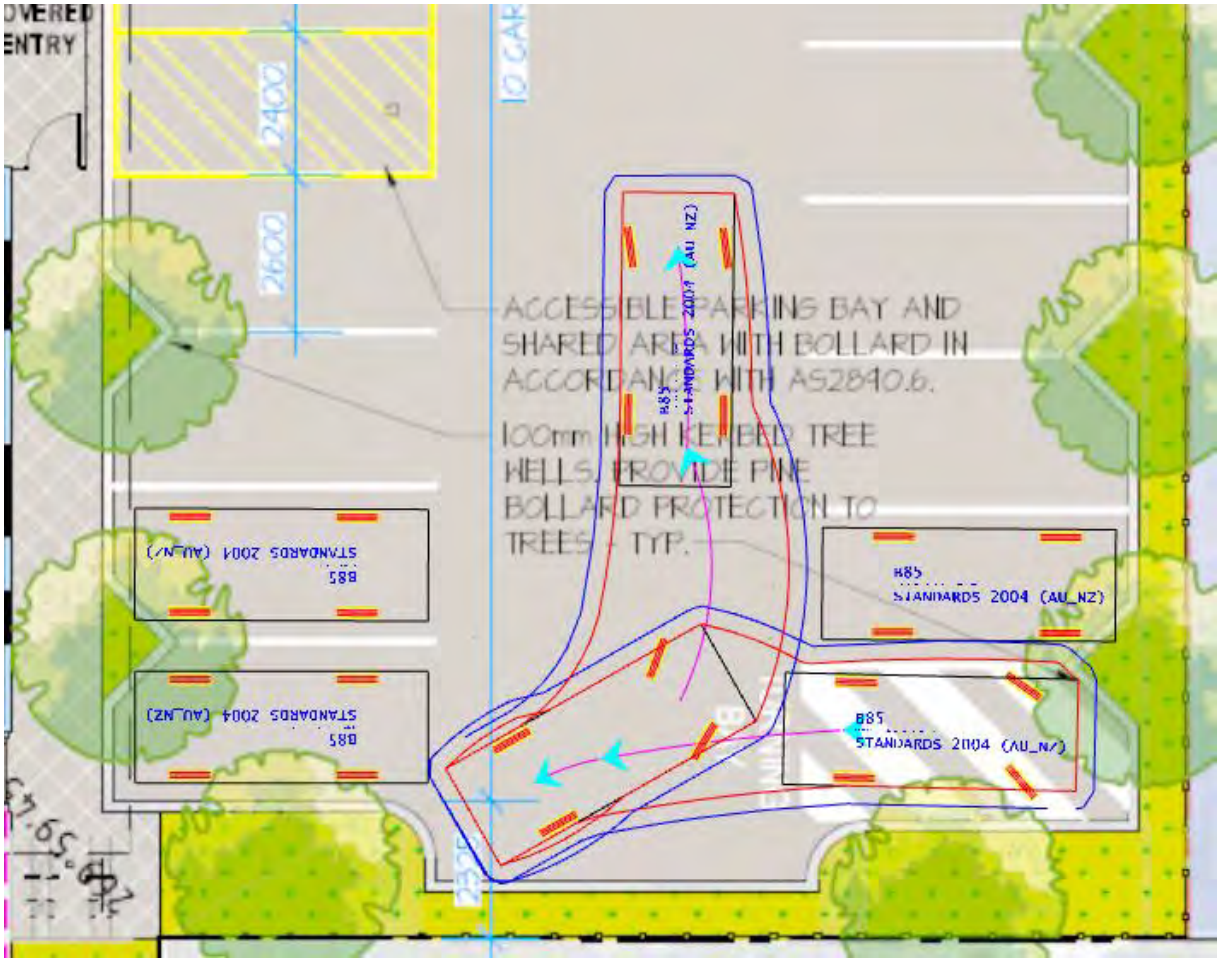

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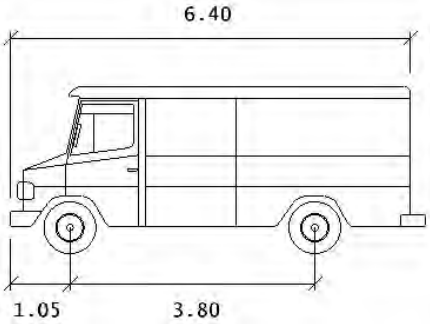

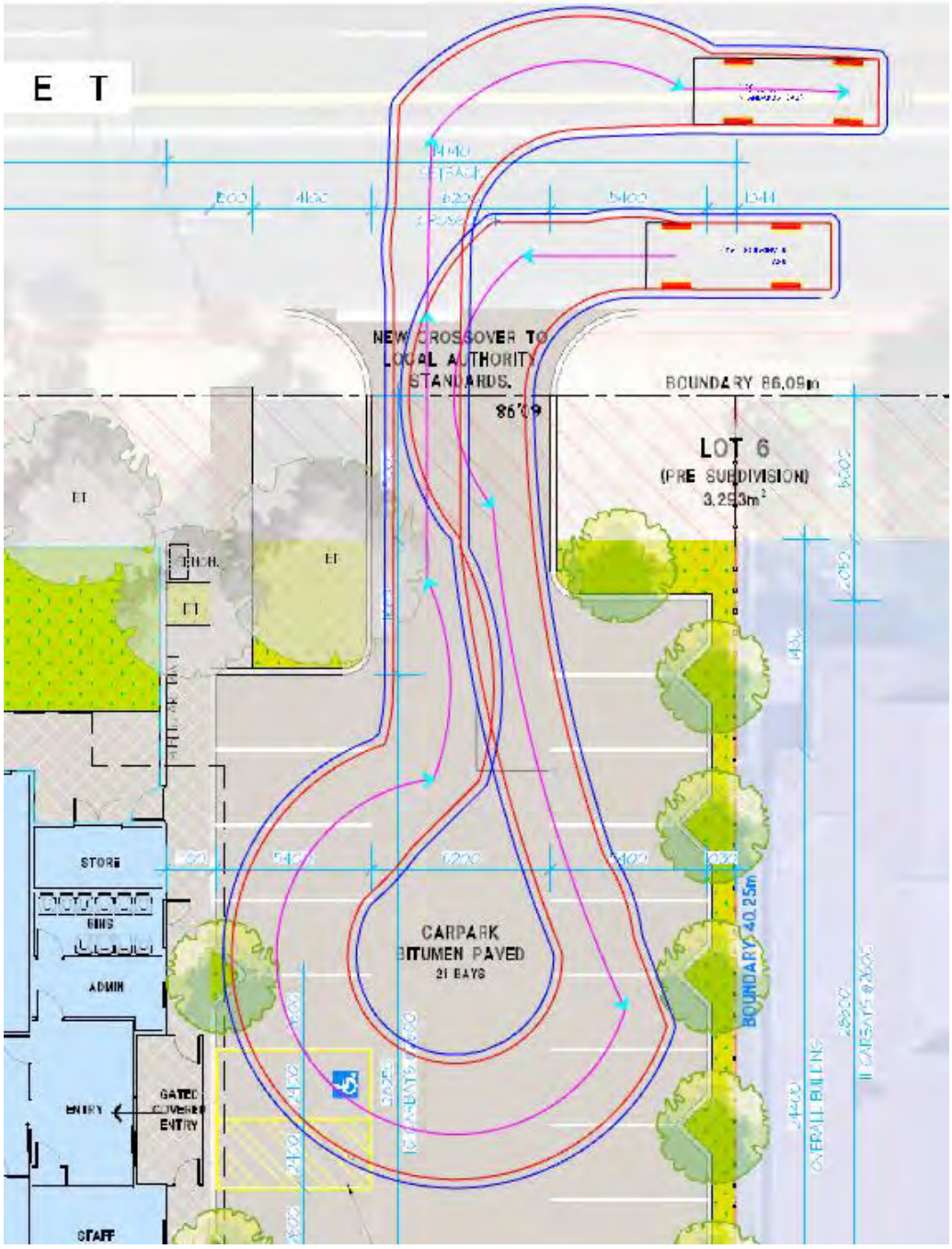

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Attachment 7c. Acoustic Report recieved 23 August 204

HERRING STORER ACOUSTICS

PROPOSED CHILDCARE CENTRE
LOT 6, 308 MAIN STREET
BALCATTA

ENVIRONMENTAL ACOUSTIC ASSESSMENT

JULY 2024

OUR REFERENCE: 32985-2-24220

Rochdale Holdings Pty Ltd A.B.N. 85 009 049 067 trading as:
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ENVIRONMENTAL ACOUSTIC ASSESSMENT

PROPOSED CHILD CARE CENTRE
BALCATTA

Job No: 24220

Document Reference: 32985-2-24220

FOR

PROJECT CONSTRUCTION

DOCUMENT INFORMATION			
Author:	Geoff Harris	**Checked By:**	Paul Daly
Date of Issue:	4 July 2024		

REVISION HISTORY

Revision	Description	Date	Author	Checked
1	Original Issue	04/07/24	GH	PLD
2	Updates re:client's commentary.	24/07/24	GH	PLD

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4.	PROPOSAL	4
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APPENDICIES

A PLANS

1. INTRODUCTION

Herring Storer Acoustics were commissioned by Project Construction to undertake an acoustic assessment of noise emissions associated with the proposed child care centre to be located at Lot 6, 308 Main Street, Balcatta.

The report considers noise received at the neighbouring premises from the proposed development for compliance with the requirements of the *Environmental Protection (Noise) Regulations 1997.* This report considers noise emissions from:

- Children playing within the outside play areas of the centre.
- Mechanical Plant

We note that from information received from DWER, the bitumised area would be considered as a road, thus noise relating to motor vehicles is exempt from the *Environmental Protection (Noise) Regulations 1997*. We note that these noise sources are rarely critical in the determination of compliance. However, as requested by council and for completeness, they have been included in the assessment, for information purposes only.

For information, a plan of the proposed development is attached in Appendix A.

2. SUMMARY

Noise received at the neighbouring residences from the outdoor play areas would comply with the requirements of the *Environmental Protections (Noise) Regulations 1997* for hours of operation.

Noise from the mechanical services has also been assessed to comply with the relevant criteria given the implementation of a barrier. However, as the design of the mechanical services has not been undertaken at this stage of the project, it is recommended that the mechanical services design be reviewed for compliance with the Regulatory requirements.

It is noted that noise associated with cars movements and cars starting are exempt from complying with the Regulations. However, noise emissions from car doors is not strictly exempt from the Regulations. Noise received at the existing neighbouring residences from these noise sources would comply with the Regulatory requirements, at all times given the conditions listed below.

Thus, noise emissions from the proposed development, would be deemed to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* for the proposed hours of operation, with the inclusion of the following:

1. A solid continuous 2000mm barrier to the south. 1800mm elsewhere. For child care centres, a colorbond fence is sufficient. Note, these are the acoustic requirements for barriers, and maybe superseded by taller barriers or barriers with a higher surface density if required by other design aspects.

2. Mechanical plant would need to be barriered by a barrier at least 500mm above the top of the plant.

3. No car bays would need to be restricted.

3. CRITERIA

The allowable noise level at the surrounding locales is prescribed by the *Environmental Protection (Noise) Regulations 1997*. Regulations 7 & 8 stipulate maximum allowable external noise levels. For highly sensitive area of a noise sensitive premises this is determined by the calculation of an influencing factor, which is then added to the base levels shown below in Table 3.1. The influencing factor is calculated for the usage of land within two circles, having radii of 100m and 450m from the premises of concern. For other areas within a noise sensitive premises, the assigned noise levels are fixed throughout the day, as listed in Table 3.1.

TABLE 3.1 - BASELINE ASSIGNED OUTDOOR NOISE LEVEL

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise sensitive premises: highly sensitive area	0700 - 1900 hours Monday to Saturday (Day)	45 + IF	55 + IF	65 + IF
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day)	40 + IF	50 + IF	65 + IF
	1900 - 2200 hours all days (Evening)	40 + IF	50 + IF	55 + IF
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	35 + IF	45 + IF	55 + IF
Commercial Premises	All Hours	60	75	80
Noise sensitive premises: any area other than highly sensitive area	All hours	60	75	80

Note: L_{A10} is the noise level exceeded for 10% of the time.
L_{A1} is the noise level exceeded for 1% of the time.
L_{Amax} is the maximum noise level.
IF is the influencing factor.

Under the Regulations, a highly sensitive area means that area (if any) of noise sensitive premises comprising –

(a) A building, or a part of a building, on the premises that is used for a noise sensitive purpose; and

(b) Any other part of the premises within 15 m of that building or that part of the building.

It is a requirement that received noise be free of annoying characteristics (tonality, modulation and impulsiveness), defined below as per Regulation 9.

"impulsiveness" means a variation in the emission of a noise where the difference between L_{Apeak} and $L_{Amax(Slow)}$ is more than 15 dB when determined for a single representative event;

"modulation" means a variation in the emission of noise that –

(a) is more than 3 dB L_{AFast} or is more than 3 dB L_{AFast} in any one-third octave band;

(b) is present for more at least 10% of the representative assessment period; and

(c) is regular, cyclic and audible;

"tonality" means the presence in the noise emission of tonal characteristics where the difference between –

(a) the A-weighted sound pressure level in any one-third octave band; and

(b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands,

is greater than 3 dB when the sound pressure levels are determined as $L_{Aeq,T}$ levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as L_{ASlow} levels.

Where the noise emission is not music, if the above characteristics exist and cannot be practicably removed, then any measured level is adjusted according to Table 3.2 below.

TABLE 3.2 - ADJUSTMENTS TO MEASURED LEVELS

Where **tonality** is present	Where **modulation** is present	Where **impulsiveness** is present
+5 dB(A)	+5 dB(A)	+10 dB(A)

Note: These adjustments are cumulative to a maximum of 15 dB.

The neighbouring locations have been identified as

- R1 – 314 Main Street (North), Residential
- R2 – 15 Archibald Road, Residential
- R3 – 11 Archibald Road (East), Residential
- R4 – 9 Archibald Road (East), Residential
- R5 – 296 Main Street (South), Residential
- R6 – Residents to the West of Main Street

All locations would have an influencing factor of +6 dB due to proximity to Main Street (23,520 vpd; 2018)

TABLE 3.3 - ASSIGNED OUTDOOR NOISE LEVEL

Premises Receiving Noise	**Time of Day**	**Assigned Level (dB)**		
		L_{A10}	**L_{A1}**	**L_{Amax}**
R1-R6	0700 - 1900 hours Monday to Saturday (Day)	51	61	71
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day)	46	56	71
	1900 - 2200 hours all days (Evening)	46	56	61
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	41	51	61

Note: L_{A10} is the noise level exceeded for 10% of the time.
L_{A1} is the noise level exceeded for 1% of the time.
L_{Amax} is the maximum noise level.

4. PROPOSAL

From information supplied, we understand that the child care centre normal hours of operations would be as follows

Staff –	0630 to 1900
Customers	0700 to 1830
Outdoor Play Area	0700 to 1800

Similarly, mechanical plant would possibly operate all hours of the day.

5. MODELLING

To assess the noise received at the neighbouring premises from the proposed development, noise modelling was undertaken using the noise modelling program SoundPlan.

Calculations were carried out using the DWER's weather conditions, which relate to worst case noise propagation, as stated in the Department of Environment Regulation *"Draft Guidance on Environmental Noise for Prescribed Premises"*. These conditions include winds blowing from sources to the receiver(s).

Calculations were based on the sound power levels used in the calculations are listed in Table 5.1, as well as plans and contours provide by the client.

TABLE 5.1 – SOUND POWER LEVELS

Item	Sound Power Level, dB(A)
Children Playing	<24 months 78 (per 10 children) Between 24 and 36 months 85 (per 10 children) >36 months 87 (per 10 children)
Car Moving in Car Park	79
Car Starting	85
Door Closing	87
Kitchen/Bathroom Exhaust (3x)	74 each
Air conditioning condensing Unit (3x)	71 each

Notes:

1 Acoustic modelling of outdoor play noise was made, based on 94 children within the outdoor play area (ie worst case scenario) broken down as follows:

0-1 years – 20 places
1-2 years – 20 places
2-3 years – 19 places
3-4 years – 15 places
4+ years – 20 places

2 The noise level for the mechanical plant has been based on the sound power levels used for previous assessment of child care centres. From other studies, we understand that the noise associated with the condensing units would be conservative.

3 For this child care centre, the mechanical plant units have been considered roof mounted with a barrier at least 500mm above top of units.

4 A solid continuous 2000mm barrier to the south. 1800mm elsewhere. For child care centres, a colorbond fence is sufficient. Note, these are the acoustic requirements for barriers, and maybe superseded by taller barriers or barriers with a higher surface density if required by other design aspects.

5 To determine the restriction to the parking, a point noise source was located in each car bay.

6 Modelling shows that noise received at the neighbouring residences from car doors closing would comply with the assigned noise level for both day and night period.

7 With only staff arriving before 7am, there would be no car starts before 7am.

8 Calculations were undertaken for the receivers at 1.5 metres above the ground level.

9 Noise modelling was undertaken to a number of different receiver locations for each of the neighbouring residences. However, to simplify the assessment, only the noise level in the worst case location (ie highest noise level), have been listed.

6. ASSESSMENT

The tables below show the assessment of noise emissions of concern from the operation. Standard building construction will be sufficient to ensure that noise from inside the building will meet the regulations.

The resultant noise levels at the neighbouring residence from children playing outdoors and mechanical plant are tabulated in Table 6.1.

From previous measurements, noise emissions from children playing does not contain any annoying characteristics, however mechanical plant emissions would be considered tonal and attract a +5 dB(A) Penalty. Noise emissions from outdoor play needs to comply with the assigned L_{A10} noise levels.

TABLE 6.1 - ACOUSTIC MODELLING RESULTS FOR L_{A10} CRITERIA OUTDOOR PLAY AREAS AND MECHANICAL PLANT

Neighbouring Premises	Calculated Noise Level (dB(A))	
	Children Playing	Mechanical Plant
R1 Residential	36	30 (35)
R2 Residential	48	36 (41)
R3 Residential	48	36 (41)
R4 Residential	48	33 (38)
R5 Residential	50	34 (39)
R6 Residential	50	33 (38)

( ) Includes +5 dB(A) penalty for tonality

With regards to noise associated with cars within the parking area, resultant noise levels are tabulated in Tables 6.2 and 6.3. It is noted that noise emissions from a moving car being an L_{A1} noise level, with noise emissions from cars starting and doors closing being an L_{Amax} noise level.

Based on the definitions of tonality, noise emissions from car movements and car starts, being an L_{A1} and L_{AMax} respectively, being present for less than 10% of the time, would not be considered tonal. Thus, no penalties would be applicable, and the assessment would be as listed in Table 6.2 (Car Moving) and Table 6.3 (Car Starting). However, noise emissions from car doors closing could be impulsive, hence the +10dB penalty has been included in the assessment.

TABLE 6.2 - ACOUSTIC MODELLING RESULTS L_{A1} CRITERIA
CAR MOVING

Neighbouring Premises	Calculated Noise Level (dB(A))
R1 Residential	45
R2 Residential	49
R3 Residential	37
R4 Residential	32
R5 Residential	31
R6 Residential	46

TABLE 6.3 - ACOUSTIC MODELLING RESULTS L_{Amax} CRITERIA
CAR STARTING / DOOR CLOSING

Neighbouring Premises	Calculated Noise Level (dB(A))			
	Car Start		Car Door	
	Day Period	Night Period	Day Period	Night Period
R1 Residential	52	N/A	51 [61]	51 [61]
R2 Residential	48	N/A	48 [58]	48 [58]
R3 Residential	40	N/A	41 [51]	41 [51]
R4 Residential	33	N/A	31 [41]	31 [41]
R5 Residential	33	N/A	32 [42]	32 [42]
R6 Residential	46	N/A	42 [52]	42 [52]

[ ] Includes +10 dB(A) penalty for impulsiveness.

Tables 6.4 to 6.9 summarise the applicable Assigned Noise Levels, and assessable noise level emissions for each identified noise.

TABLE 6.4 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS
OUTDOOR PLAY (DAY PERIOD)

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Residential	36	51	Complies
R2 Residential	48	51	Complies
R3 Residential	48	51	Complies
R4 Residential	48	51	Complies
R5 Residential	50	51	Complies
R6 Residential	50	51	Complies

TABLE 6.5 – ASSESSMENT OF L_{A10} NIGHT PERIOD NOISE LEVEL EMISSIONS
MECHANICAL PLANT

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Residential	35	41	Complies
R2 Residential	41	41	Complies
R3 Residential	41	41	Complies
R4 Residential	38	41	Complies
R5 Residential	39	41	Complies
R6 Residential	38	41	Complies

TABLE 6.6 – ASSESSMENT OF L_{A1} NIGHT PERIOD NOISE LEVEL EMISSIONS CAR MOVEMENTS

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Residential	45	51	Complies
R2 Residential	49	51	Complies
R3 Residential	37	51	Complies
R4 Residential	32	51	Complies
R5 Residential	31	51	Complies
R6 Residential	46	51	Complies

TABLE 6.7 – ASSESSMENT OF L_{Amax} DAY PERIOD NOISE LEVEL EMISSIONS CAR STARTING

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Residential	52	71	Complies
R2 Residential	48	71	Complies
R3 Residential	40	71	Complies
R4 Residential	33	71	Complies
R5 Residential	33	71	Complies
R6 Residential	46	71	Complies

TABLE 6.8 – ASSESSMENT OF L_{Amax} DAY PERIOD NOISE LEVEL EMISSIONS CAR DOOR

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Residential	61	71	Complies
R2 Residential	58	71	Complies
R3 Residential	51	71	Complies
R4 Residential	41	71	Complies
R5 Residential	42	71	Complies
R6 Residential	52	71	Complies

TABLE 6.9 – ASSESSMENT OF L_{Amax} NIGHT PERIOD NOISE LEVEL EMISSIONS CAR DOOR

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Residential	61	61	Complies
R2 Residential	58	61	Complies
R3 Residential	51	61	Complies
R4 Residential	41	61	Complies
R5 Residential	42	61	Complies
R6 Residential	52	61	Complies

7. CONCLUSION

Noise received at the neighbouring residences from the outdoor play area would comply during the day period, thus, outdoor play would be limited to the day period (ie – after 7am).

Noise received at the neighbouring residences from the mechanical plant would comply at all hours, when barriered.

Noise received at the neighbouring residences from noise associated with vehicles would also comply at all hours.

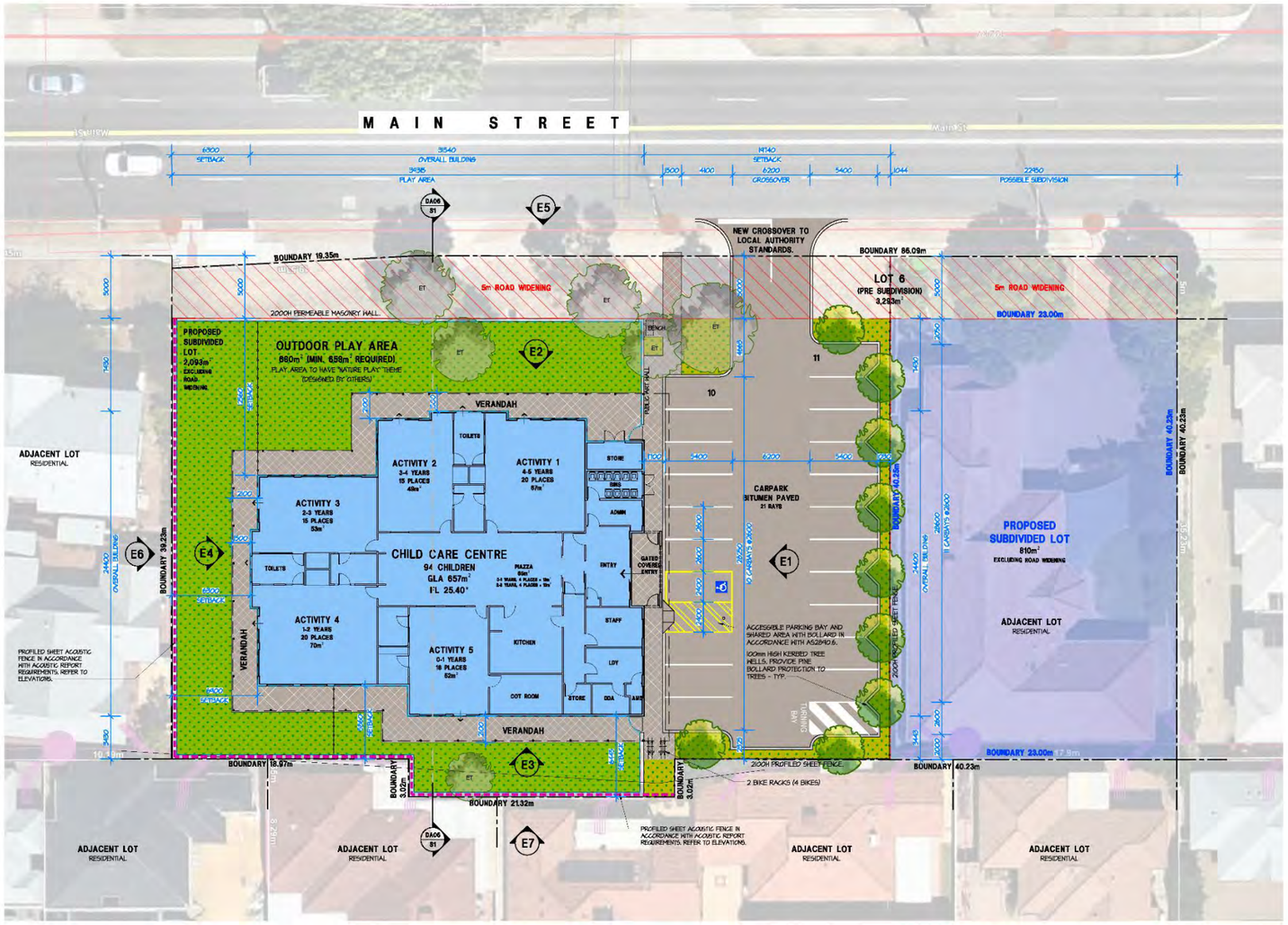
Thus, noise emissions from the proposed development, would be deemed to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* for the proposed hours of operation, with the inclusion of the following:

1. A solid continuous 2000mm barrier to the south. 1800mm elsewhere. For child care centres, a colorbond fence is sufficient. Note, these are the acoustic requirements for barriers, and maybe superseded by taller barriers or barriers with a higher surface density if required by other design aspects.
2. Mechanical plant would need to be barriered by a barrier at least 500mm above the top of the plant.
3. No restriction to car parking during the night time period.

Finally, it is recommended to adopt best practices in managing a child care centre to reduce noise, including but not limited to no amplified music to be played outside, and favouring soft finishes in the outdoor play area.

APPENDIX A

PLANS



CARPARKING

USE	VALUE	CALC	REQUIRED
CHILD CARE	94 CHILDREN	1/5 PLACES	19
TOTAL PROVIDED			21

LEGEND:

- HARDSTAND PAVEMENT.
- PAVED FOOTPATHS.
- SELECTED LANDSCAPING. PLAY AREA TO BE DESIGNED BY OTHERS.
- NEW SELECTED SHADE TREE IN ACCORDANCE WITH LOCAL AUTHORITY GUIDLINES.
- ET. EXISTING TREE RETAINED. REFER TO DEMO PLAN FOR EXTENT OF REMOVED TREES.
- EXTENT OF 2100mm HIGH PROFILED SHEET ACOUSTIC WALL. TO BE IN ACCORDANCE WITH ACOUSTIC REPORT REQUIREMENTS. REFER TO ELEVATIONS FOR MORE INFORMATION.

NOTES:

- FLOOR LEVEL AND STORM WATER IS INDICATIVE ONLY. FINAL DESIGN TO BE PREPARED BY A CIVIL ENGINEER AS PART OF BUILDING PERMIT APPLICATION.

HINDLEY & ASSOCIATES
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BUILDING DESIGNERS

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A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH
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-				

A1 SHEET

PROPOSED SITE PLAN

SCALE 1:200

N

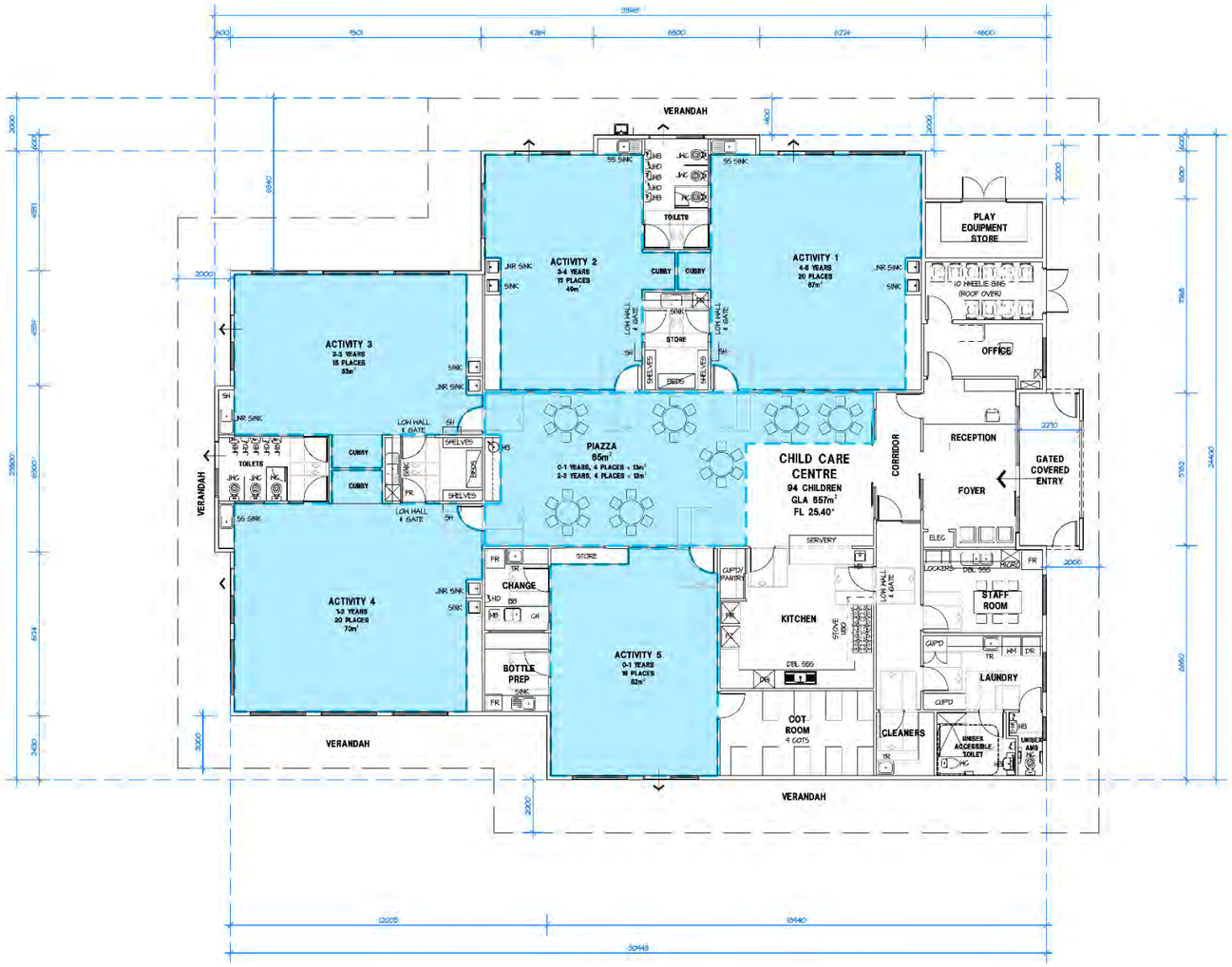
PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date -	30.05.24
Design -	JJR
Drawn -	JJR
Checked -	CPH
Scale -	1:200
Job No. -	0873
Dwg -	DA01
Rev -	A

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024

LEGEND

FHR	FIRE HOSE REEL	SH	SHELF - INTERNAL - 300 L x 300 H EXTERAL - 400 L x 300 H
TR	WASH TROUGH	FR	FRIDGE
HB	HAND BASIN	FZ	FREEZER
JHB	JUNIOR HAND BASIN	MW	MICROWAVE
WC	TOILET PAN	WM	CLOTHES WASHING MACHINE (TOP LOADER)
JWC	JUNIOR TOILET PAN	DRY	CLOTHES DRYER (CONDENSING)
HD	HAND DRYER	DBL SSS	DOUBLE BOWL STAINLESS STEEL SINK
JHD	JUNIOR HAND DRYER	DW	DISHWASHER (COMMERCIAL)
BB	BABIES BATH	STOVE	STOVE TOP (900mm 6 ZONE)
CH	CHANGE TABLE	UBO	UNDER BENCH OVEN (900mm)



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BUILDING DESIGNERS ASSOCIATION OF WA

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A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH
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-				
-				
-				
-				

A1 SHEET

PROPOSED FLOOR PLAN

SCALE 1:100

N

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date -	30.05.24
Design -	JJR
Drawn -	JJR
Checked -	CPH
Scale -	1:200
Job No. -	0873
Dwg -	DA03
Rev -	A

PROPOSED CHILD CARE CENTRE PROJECT CONSTRUCTION

LOT 6, 308 MAIN STREET BALCATTA

STATE PLANNING POLICY 5.4 NOISE MANAGEMENT PLAN

JULY 2024

OUR REFERENCE: 32986-2-24220

Rochdale Holdings Pty Ltd A.B.N. 85 009 049 067 trading as:
HERRING STORER ACOUSTICS
P.O. Box 219, Como, W.A. 6952
(08) 9367 6200
hsa@hsacoustics.com.au

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024

DOCUMENT CONTROL PAGE

SPP 5.4 – NOISE MANAGEMENT PLAN

CHILD CARE CENTRE – BALCATTA

Job No: 24220

Document Reference: 32986-2-24220

FOR

PROJECT CONSTRUCTION

DOCUMENT INFORMATION			
Author:	Geoffrey Harris	**Checked By:**	Paul Daly
Date of Issue:	4 July 2024		

REVISION HISTORY

Revision	Description	Date	Author	Checked
1	Original Issue	04/07/24	GH	PLD
2	Updated Plans	24/07/24	GH	PLD

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CONTENTS

1.	INTRODUCTION	1
2.	SUMMARY	1
3.	CRITERIA	1
4.	MEASUREMENTS AND OBSERVATIONS	2
5.	MODELLING	2
6.	TRAFFIC NOISE ASSESSMENT	3
7.	CONCLUSION	3

APPENDICIES

A	Child Care Plans
B	Acoustic Requirements
C	MRWA Traffic Flow Data

1. INTRODUCTION

Herring Storer Acoustics was commissioned to undertake an acoustic assessment for the proposed child care centre, located at Lot 6, 308 Main Street, Balcatta with regards to vehicles travelling along Main Street. The acoustic assessment is to comply with the requirement of State Planning Policy 5.4 *"Road and Rail Transport Noise"* (SPP5.4). As part of this assessment, the following was carried out:

- Determine by modelling, the noise that would be received at child care centre from vehicles travelling on Main Street.
- Assess the predicted noise levels for compliance with the appropriate criteria.
- If exceedances are predicted, comment on possible noise amelioration options for compliance with the appropriate criteria.

For information, plans for the child care centre are attached in Appendix A.

2. SUMMARY

It is noted that the child care centre is only occupied during the day period, thus under State Planning Policy 5.4 *"Road and Rail Transport Noise"* only the criteria for the day period is applicable.

The results of the acoustic assessment indicate that noise received at the development from future traffic, exceed external noise level criteria. Therefore, noise amelioration listed in Appendix B, are required.

Although under the Policy, there are no requirements with regards to the outdoor play areas, noise received within these areas does need to be considered to provide at practicable level external noise level. There are outdoor play areas on the opposite side of the development to the road have a noise level of 46 dB $L_{AEq(Day)}$, and as a result, this criteria is met.

3. CRITERIA

Road traffic noise received at a sensitive premise needs to comply with the requirements of State Planning Policy 5.4 "*Road and Rail Transport Noise*". Under this policy, for non-residential noise sensitive premises, internal noise levels should meet the design sound levels as listed in Table 1 of AS/NZ 2107:2000 "Acoustics – Recommended design sound levels and reverberation times for building interiors". Under AS 2017, the internal criteria would:

Sleep Rooms	-	$L_{Aeq(Day)}$ of 35 dB(A).
Play/Group Rooms	-	$L_{Aeq(Day)}$ of 40 dB(A).
Staff Room	-	$L_{Aeq(Day)}$ of 45 dB(A).
Office	-	$L_{Aeq(Day)}$ of 40 dB(A).
Reception	-	$L_{Aeq(Day)}$ of 45 dB(A).
Work areas (eg: Laundry)	-	$L_{Aeq(Day)}$ of 50 dB(A).

We also note that additional to the above, under Section 6.1 of the Policy, "a reasonable degree of acoustic amenity for outdoor living areas on each residential lot." Under the Policy, an outdoor living area is as defined in the State Planning Policy 3.1 Residential Design Codes. The definition for an outdoor living area is as per below:

Outdoor living area

The area external to a **single house**, **grouped** or **multiple dwelling** to be used in conjunction with that **dwelling** such that it is capable of active or passive use and is readily accessible from the dwelling.

However, the Policy also states that "For non-residential noise-sensitive developments, for example schools and child care centres the design of outdoor areas should take into consideration the noise targets."

Finally, it is also noted that under the Policy, "It is recognized that in some instances, it may not be reasonable and/or practicable to meet the outdoor noise targets". Thus, for child care centres, compliance with the "Target" noise levels within the outdoor play areas is not a requirement under the Policy, however, noise received at within the outdoor area still need to be considered.

4. MEASUREMENTS AND OBSERVATIONS

The noise measurements were conducted on 30 November 2023 for Main Street for a short term period during peak hour to determine the L_{A10} noise level. Utilising this measurement, reference to the DEFRA publication has been sought and the difference between the $L_{A10,18hr}$ and the $L_{Aeq,8hr}$ and the $L_{Aeq,16hr}$ has been calculated. The results of the measurement and the determination of the $L_{Aeq(Day)}$ and $L_{Aeq(Night)}$ are shown in Table 3.1.

Noise measurements were conducted with a Larson Davis 831 Sound Level Meter. The Sound Level Meter was calibrated prior to and after use with a Bruel and Kjaer 4230 Calibrator. All equipment used is currently NATA laboratory calibrated. Calibration certificates are available on request.

TABLE 4.1 – MEASURED NOISE LEVELS

Description	L_{A10} dB	L_{Aeq} dB
Main Street	71.3	67.7

5. MODELLING

To determine the noise levels from traffic on Main Street, acoustic modelling was carried out using Sound Plan, using the Calculation of Road Traffic Noise (CoRTN)[1] algorithms.

The input data for the model included:

- Topographical and cadastral data supplied by client (Shown in Appendix A).
- Traffic data as per Table 5.1 (Based on available information on MRWA Traffic Map, Attached in Appendix C).
- Adjustments as listed in Table 5.2.

1 *Calculation of Road Traffic Noise* UK Department of Transport 1987

TABLE 5.1 - NOISE MODELLING INPUT DATA

Parameter	Main Street (Current 2018)	Main Street (Future 2044)
Traffic Volumes	23,500	39,370 vpd
Percentage Traffic 0600 – 2400 hours (assumed)	94%	94%
Heavy Vehicles (%)	5.7%	5.7%
Speed (km/hr)	60 km/hr	60 km/hr
Road Surface	Chip Seal	Dense Graded Asphalt

TABLE 5.2 – ADJUSTMENTS FOR NOISE MODELLING

Description	Value
Façade Reflection Adjustment	+2.5 dB
Conversion from $L_{A10\ (18\ hour)}$ to $L_{Aeq\ (16\ hour)}$ (Day)	-3.6 dB

Conversion from $L_{A10(18\ hour)}$ to $L_{Aeq(16\ hour)}$ was conducted with the method detailed in the DEFRA publication – "*Method for Converting the UK Road Traffic Noise $L_{A10,18h}$ to the EU Noise Indices for Road Noise Mapping, ref: st/05/91/AGG04442"*

The future road traffic volumes were based on information provided by the MRWA traffic maps and by the MRWA ROM Department.

6. TRAFFIC NOISE ASSESSMENT

Using the data contained in Tables 3.1, 4.1 and 4.2 and the adjustments noted above, modelling was carried out under existing conditions for calibration. The Sound Plan model for the site has been set up for the 2044 scenario as defined in Table 4.1.

The noise requirements based on the above have been listed in Appendix B.

It is noted that these requirements pertain to acoustic requirements only, with regard to *State Planning Policy 5.4,* and may be superseded by other requirements (BAL, Thermal, etc).

7. CONCLUSION

In accordance with the WAPC Planning Policy 5.4, an assessment of the noise that would be received within the development of Lot 6, 308 Main Street, Balcatta, from vehicles travelling on Main Street has been undertaken.

In accordance with the Policy, the following would be the internal acoustic criteria applicable to this project:

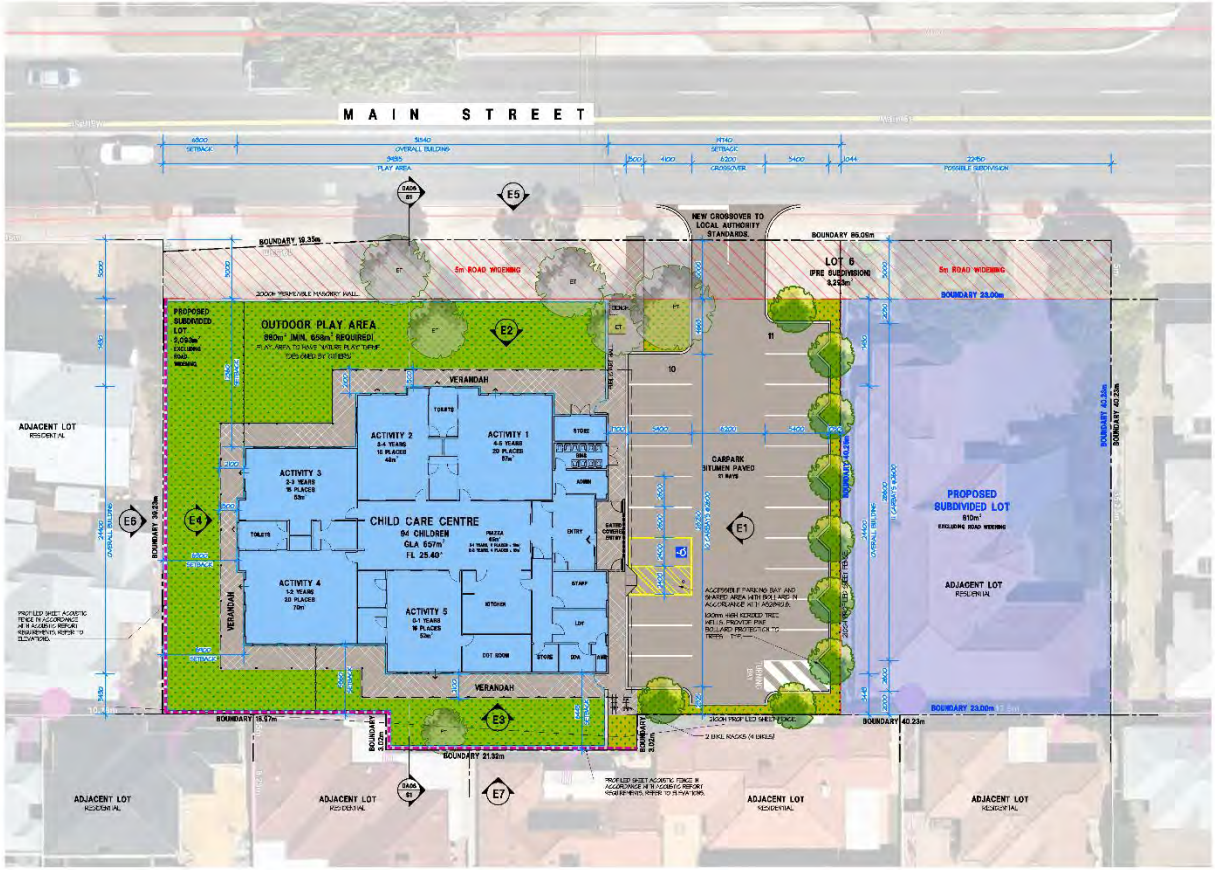
Sleep Rooms	-	$L_{Aeq(Day)}$ of 35 dB(A).
Play/Group Rooms	-	$L_{Aeq(Day)}$ of 40 dB(A).
Staff Room	-	$L_{Aeq(Day)}$ of 45 dB(A).
Office	-	$L_{Aeq(Day)}$ of 40 dB(A).
Reception	-	$L_{Aeq(Day)}$ of 45 dB(A).
Work areas (eg: Laundry)	-	$L_{Aeq(Day)}$ of 50 dB(A).

The results of the acoustic assessment indicate that noise received at the development from future traffic, exceed external noise level criteria. Therefore, noise amelioration listed in Appendix B, are required.

Although under the Policy, there are no requirements with regards to the outdoor play areas, noise received within these areas does need to be considered to provide at practicable level external noise level. There are outdoor play areas on the opposite side of the development to the road, that have a noise level of 46 dB $L_{AEq(Day)}$, and as a result, this criteria is met.

APPENDIX A

PLAN



CARPARKING

USE	VALUE	CALC	REQUIRED
CHILD CARE	94 CHILDREN	10 PLACES	9
TOTAL PROVIDED			21

LEGEND:

- HARDSCAPE/HARDSTAND.
- PAVED FOOTPATH.
- SELECTED LANDSCAPING. PLAY AREA TO BE DESIGNED BY OTHERS.
- NEW SELECTED SHADE TREE IN ACCORDANCE WITH LOCAL AUTHORITY GUIDELINES.
- EXISTING TREE RETAINED. REFER TO SITING PLAN FOR EXTENT OF REMOVED TREES.
- EXTENT OF 2.00m HIGH PROFILED SHEET ACOUSTIC WALL. TO BE IN ACCORDANCE WITH ACOUSTIC REPORT REQUIREMENTS. REFER TO ELEVATIONS FOR MORE INFORMATION.

NOTES:

1. FLOOR LEVEL AND STORM WATER IS INDICATIVE ONLY. FINAL DESIGN TO BE PREPARED BY A CIVIL ENGINEER AS PART OF BUILDING PERMIT APPLICATION.

HINDLEY & ASSOCIATES PTY LTD
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NO.	DATE	REVISION	DRAWN	CHECK
A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH

A1 SHEET

PROPOSED SITE PLAN
SCALE 1:200

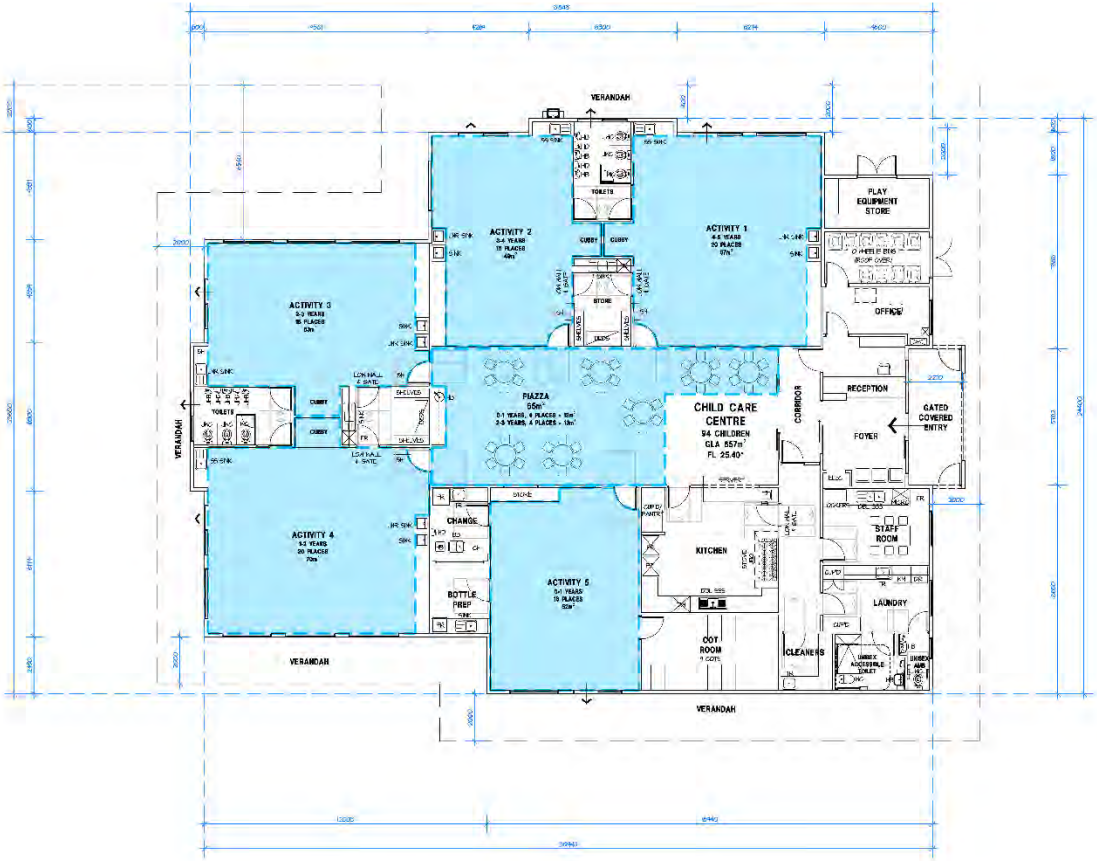
PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date	30.05.24
Design	JJR
Draw	JJR
Checked	CPH
Scale	1:200
Job No.	0873
Dwg	DA01
Rev	A

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024

LEGEND

FHR	FIRE HOSE REEL	SF	SHELF - MERBAU - 300 L x 300 H ENSIAL - 450 L x 300 H
TR	WASH TROUGH	FR	FRIDGE
WB	HAND BASIN	FZ	FREEZER
JHB	JUNIOR HAND BASIN	MW	MICROWAVE
HC	TOILET PAN	AH	CLOTHES WASHING MACHINE (TOP LOADER)
JHC	JUNIOR TOILET PAN	DRY	CLOTHES DRYER (CONDENSING)
HD	HAND DRYER	DB 355	DOUBLE BOWL STAINLESS STEEL SINK
JHD	JUNIOR HAND DRYER	DR	DISHWASHER (COMMERCIAL)
BT	BABIES BATH	STOVE	STOVE TOP (FOUR ELEMENTS)
CP	CHANGE TABLE	OO	UNDER BENCH OVEN (600mm)



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A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH

A1 SHEET

PROPOSED FLOOR PLAN
SCALE 1:100

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
Design - JJR
Drawn - JJR
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Scale - 1:200
Job No - 0873
Dwg - DA03
Rev - A

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024

APPENDIX B

GLAZING REQUIREMENTS

Calculated Noise Levels and Required R_w and C_{tr} Ratings			Example Construction
Location	**Level**	**$R_w + C_{tr}$***	
ACTIVITY 1 FACING	65	26	6mm Monolithic
ACTIVITY 2 FACING	65	26	6mm Monolithic
ACTIVITY 2 SIDE ON	61	23	4mm Monolithic
ACTIVITY 3 FACING	62	26	6mm Monolithic
ACTIVITY 3 SIDEONE	58	23	4mm Monolithic
ACTIVITY 4 REAR	43	23	4mm Monolithic
ACTIVITY 4 SIDE ONE	52	23	4mm Monolithic
ACTIVITY 5 REAR	42	23	4mm Monolithic
ENTRY SIDE ON	57	23	4mm Monolithic
STAFF ROOM	48	23	4mm Monolithic
Walls	65	50	-
Roof/Ceiling	65	40	-

Notes: The required R_W rating can be reduced by reducing the area of glazing.
All non-listed locations would meet requirements given standard construction (4mm Monolithic windows, 6mm monolithic doors)
Requirements pertain to only acoustic advice in regard to *State Planning Policy 5.4* and may be superceded by other requirements (BAL, Thermal, etc).

APPENDIX C

MRWA TRAFFIC FLOW DATA

mainroads WESTERN AUSTRALIA

SITE 5144

Hourly Volume

Main St (1250067)

North of Morley Dr (SLK 3.18)

2018/19
Monday to Friday

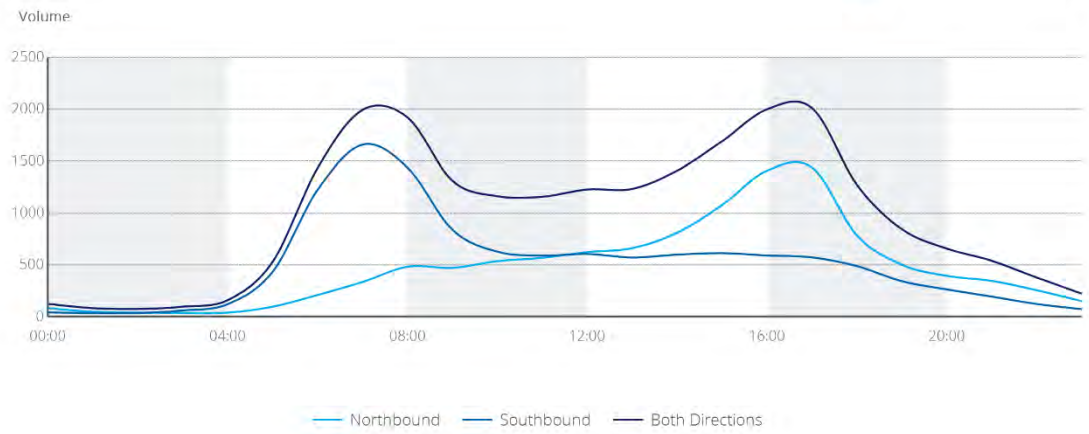
All Vehicles

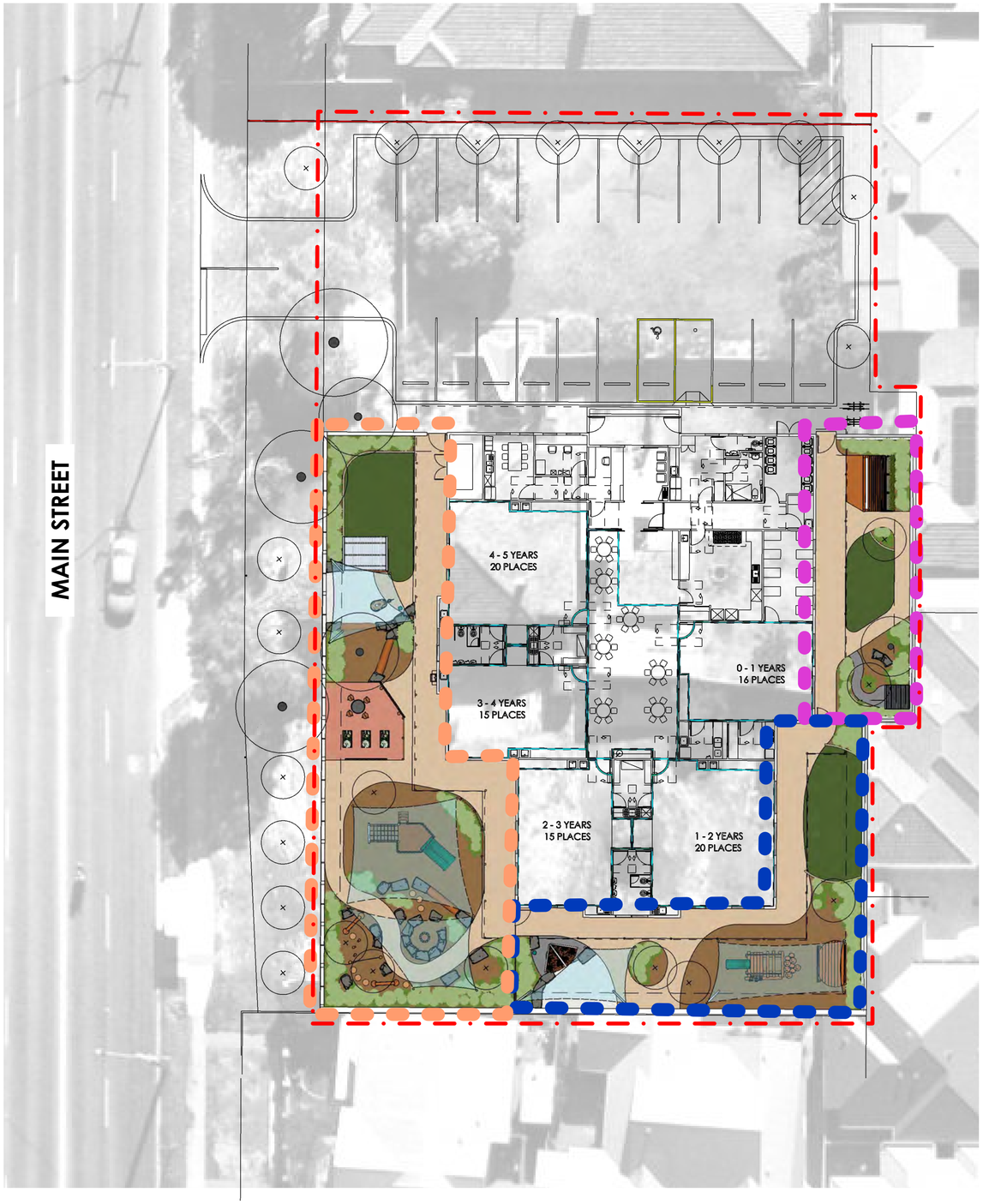
	NB	SB	Both
00:00	82	41	123
01:00	47	35	82
02:00	39	35	74
03:00	36	60	96
04:00	39	121	160
05:00	96	435	531
06:00	210	1225	1435
07:00	335	1659	1994
08:00	483	1437	1920
09:00	472	838	1310
10:00	536	627	1163
11:00	568	590	1158
12:00	623	605	1228
13:00	662	571	1233
14:00	811	599	1410
15:00	1079	613	1692
16:00	1410	590	2000
17:00	1438	572	2010
18:00	782	488	1270
19:00	501	342	843
20:00	394	263	657
21:00	345	194	539
22:00	255	122	377
23:00	150	72	222
TOTAL	11393	12134	23527

Peak Statistics

		NB	SB	Both
AM	TIME	11:45	07:15	07:15
	VOL	610	1660	2034
PM	TIME	16:45	14:30	16:45
	VOL	1481	623	2076

Information Not Available





NOT TO SCALE

MAIN STREET CHILDCARE CENTRE BALCATTA

PLAY SPACE DESIGN

CONTENTS

LS 101 LOCATION PLAN
LS 102 CONCEPT PLAN - 0 - 3 YEARS
LS 103 CONCEPT PLAN - 2 - 5 YEARS
LS 104 SHADE PLAN
LS 105 DEEP SOIL CALCULATION, FALL ZONE AND RETAINING WALLS
LS 106 PLANTING PLAN - PLAYSPACE
LS 107 PLANTING PLAN - CARPARK AND VERGE

PROPOSED DEVELOPMENT
(EXCLUDING ROAD WIDENING)

GROUND FLOOR

685 sqm

AREA 1 (0 - 1 years)
16 places

AREA 2 (1 - 3 years)
35 places

AREA 3 (2 - 5 years)
35 places

GENERAL NOTES

HYDRAULIC
- 20mm water points to water play (fountains/pumps/misters) locations
- 25mm retic cut-in close to the water meter

ELECTRICAL
- Power to retic controller location

CIVIL
- Ground level on site to be set 150mm lower than FFL of slab prior to us commencing on site
- Stormwater pit/grate locations and heights to be coordinated with this concept plan

HARD DIGGING
- No allowance has been made for hard digging in the costing provided

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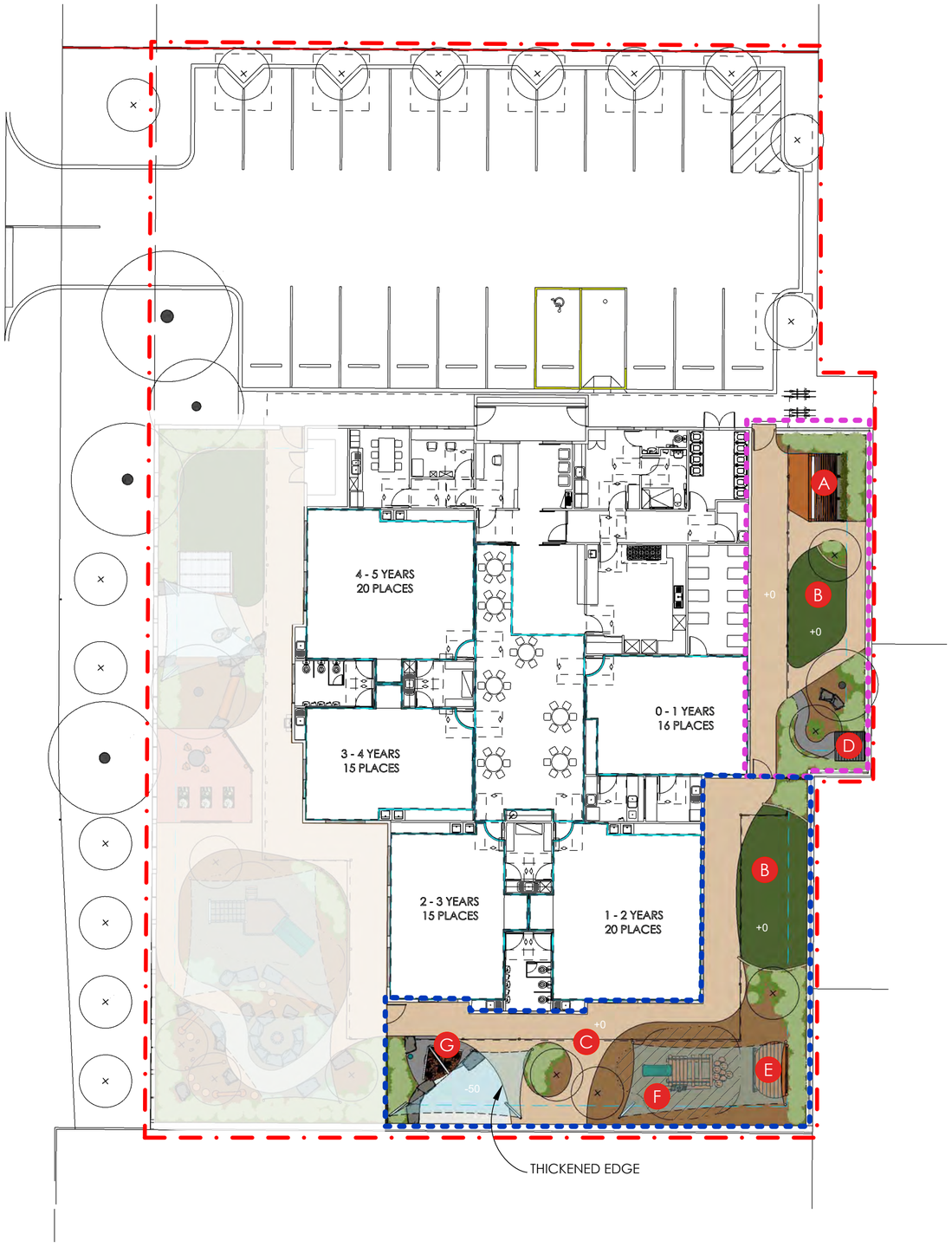
MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 101 - LOCATION PLAN

N

Job No: 6342
Rev: C
Date: Oct 2024
Design: KP



LEGEND

- A ARCH SHELTER W SANDPIT (L051504)
- B OPEN FLEXIBLE SPACE
- C BIKE PATH
- D MINI CUBBY - MESH (L019113)
- E STAGE WITH CURTAIN AND CLIPS (L032403)
- F MINI MORETON CLIMBER (L002801)
- G SHADLE LIGHT AND SHADE WITH MISTERS (L016922)

- HYBRID LAWN
- TIMBER DECKING
- WHITE SAND (MIN 300mm DEEP)
- MULCH
- IAS MULCH
- PISTACHIO CONCRETE (STIPPLE TROWEL)
- CONCRETE (ROCK SALT FINISH)
- SHADE SAIL (COLOR TBC WITH CLIENT)

- ROCK BOULDERS
- SHADE SAIL POST
- CURVED SHADE SAIL POST
- CONCRETE KERB (CREAM)
- EXISTING TREE
- PROPOSED TREE
- PLANTS
- FALL ZONE
- ROOF OVER / SHADE SAIL
- POOL FENCE FT5
- TIMBER TO BOUNDARY
- SINGLE GATE GT2
- ISOLATION VALVE
- 1m BOUNDARY EXCLUSION ZONE
- SCOPE OF WORKS (0 - 1 YEAR)
- SCOPE OF WORKS (1 - 3 YEARS)
- PROPOSED DEVELOPMENT (EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

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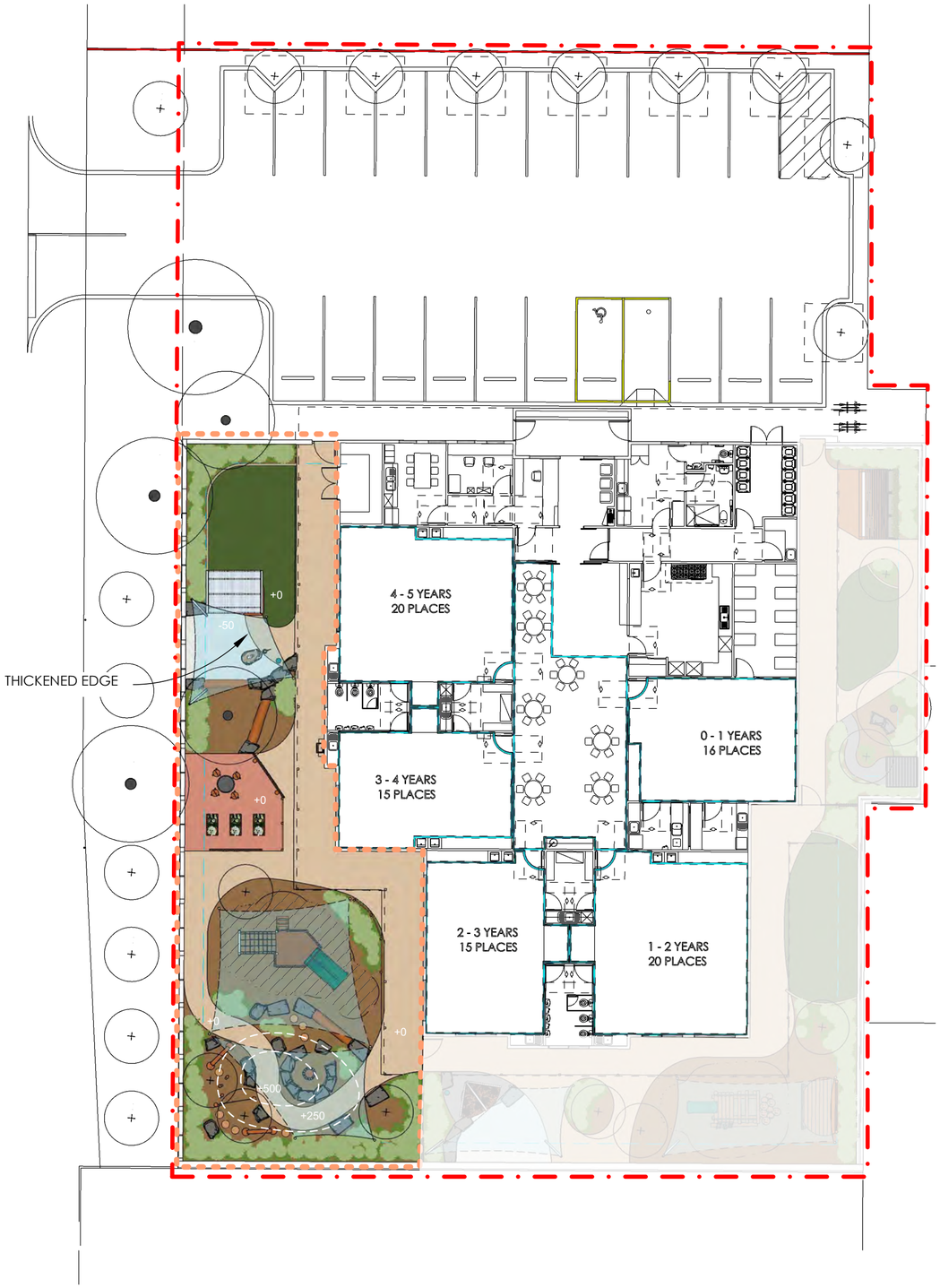
MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 102 - CONCEPT PLAN - 0 - 3 YEARS

N

Job No: 6342
Rev: C
Date: Oct 2024
Design: KP



LEGEND

- A OPEN FLEXIBLE SPACE
- B TOOL SHED W/ SHOP FRONT TIMBER SLATS (L010317)
- C WATER PUMP (L003002)
- D WATER CREEK (L003008)
- E GAMES STUMP WITH CONCRETE TOP (L016402) WITH 4 X MOVEABLE ART STOOL (L020901)
- F VEGGIE GARDEN ENTRY FEATURE (L031600)
- G TIMBER PLANTER - VEGGIES (L010905)
- H ACTIVITY PANEL PEEK-A-BOO WALL - STRAIGHT (L007006)
- I WALFORD FORT (L053900)
- J CAMP SITE W/ FIRE PIT (L027800)
- K BIKE PATH
- L BALANCE SLEEPER 1.8m (L005211)
- M DUAL TIGHT ROPE (L006300)
- N STILT HONED CONCRETE STEP (L004307)

- HYBRID LAWN
- WHITE SAND (MIN 300mm DEEP)
- MULCH
- IAS MULCH
- PISTACHIO CONCRETE (STIPPLE TROWEL)
- SHADE SAIL (COLOR TBC WITH CLIENT)
- PAVING

- ROCK BOULDERS
- CONCRETE STEPPER LIGHT BROWN (L010505)
- SHADE SAIL POST
- CURVED SHADE SAIL POST
- LOG
- CONCRETE KERB (CREAM)
- EXISTING TREE
- PROPOSED TREE
- PLANTS
- FALL ZONE
- ROOF OVER / SHADE SAIL
- POOL FENCE FT5
- GARDEN RAIL FT16
- TIMBER TO BOUNDARY
- SINGLE GATE GT2
- ISOLATION VALVE
- 1m BOUNDARY EXCLUSION ZONE
- SCOPE OF WORKS (2 - 5 YEARS)
- PROPOSED DEVELOPMENT (EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

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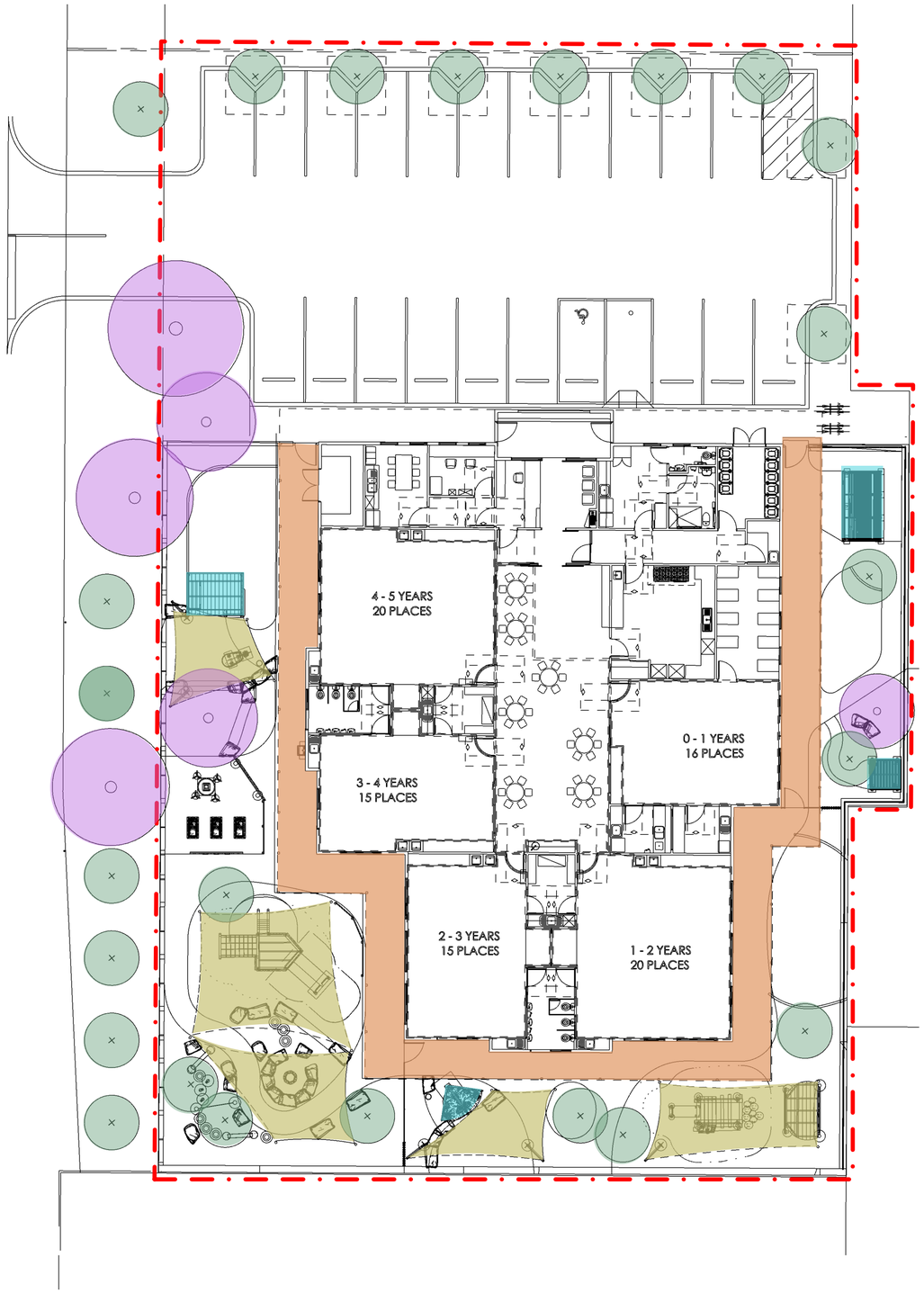
MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 103 - CONCEPT PLAN - 2 - 5 YEARS

N

Job No: 6342
Rev: C
Date: Oct 2024
Design: KP



BUILDING ROOF
EQUIPMENT ROOF
PROPOSED SHADE SAIL
PROPOSED TREES
EXISTING TREES

PROPOSED DEVELOPMENT
(EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

8 Burchell Way
Kewdale WA 6105
(08) 9361 1355
play@natureplaysolutions.com.au

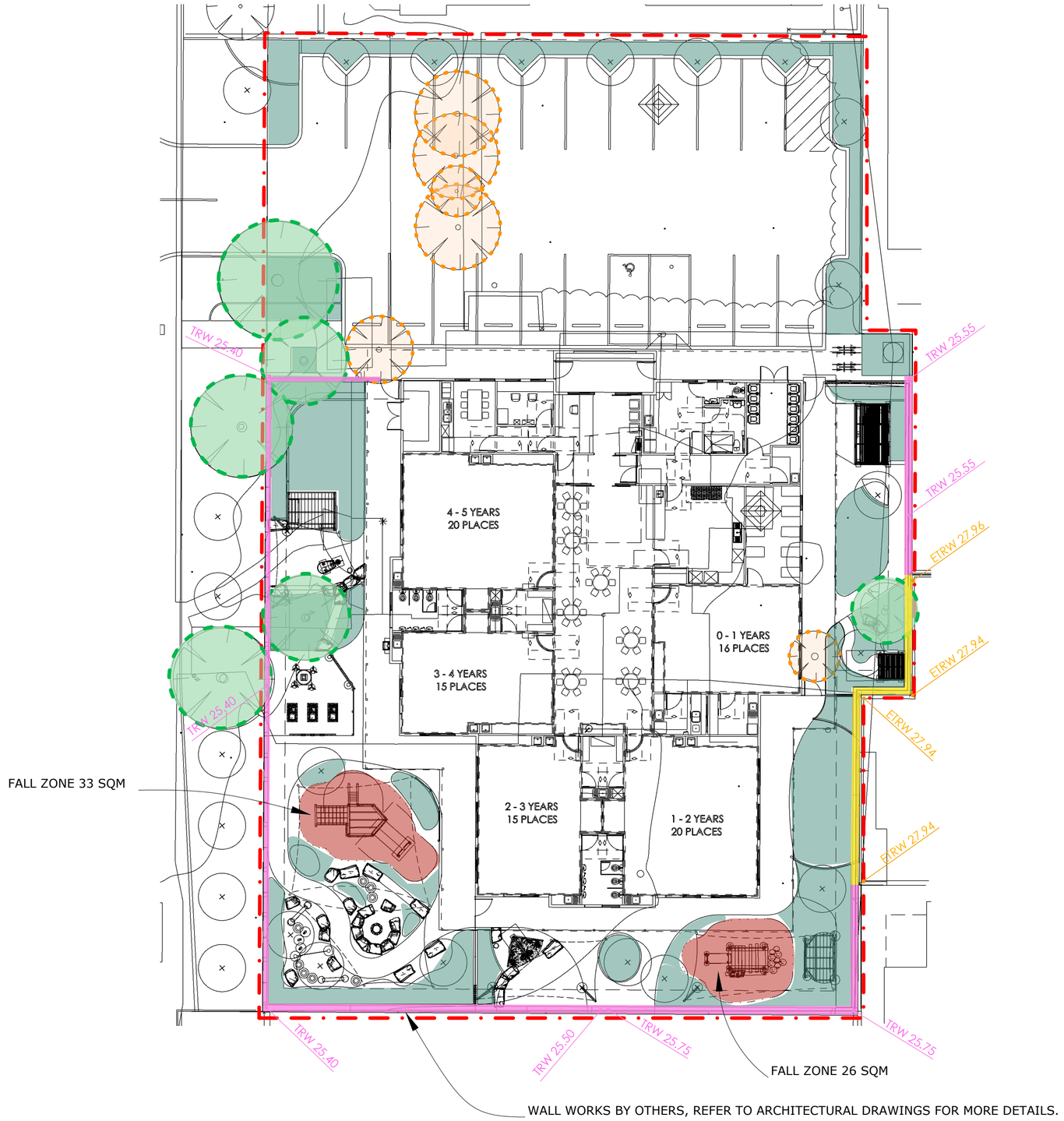
MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 104 - SHADE PLAN

N

Job No: 6342
Rev: C
Date: Oct 2024
Design: KP



PROPOSED DEVELOPMENT (EXCLUDING ROAD WIDENING)

EXISTING RETAINING WALL

PROPOSED RETAINING WALL

EXISTING TREES TO BE REMOVED

EXISTING TREES TO BE RETAINED

DEEP SOIL AREA

FALL ZONE (59 SQM)

SITE AREA	m2	SITE %
TOTAL SITE (EXCLUDING ROAD WIDENING)	2093	
DEEP SOIL AREA	395	18.8%

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

8 Burchell Way
Kewdale WA 6105
(08) 9361 1355
play@natureplaysolutions.com.au

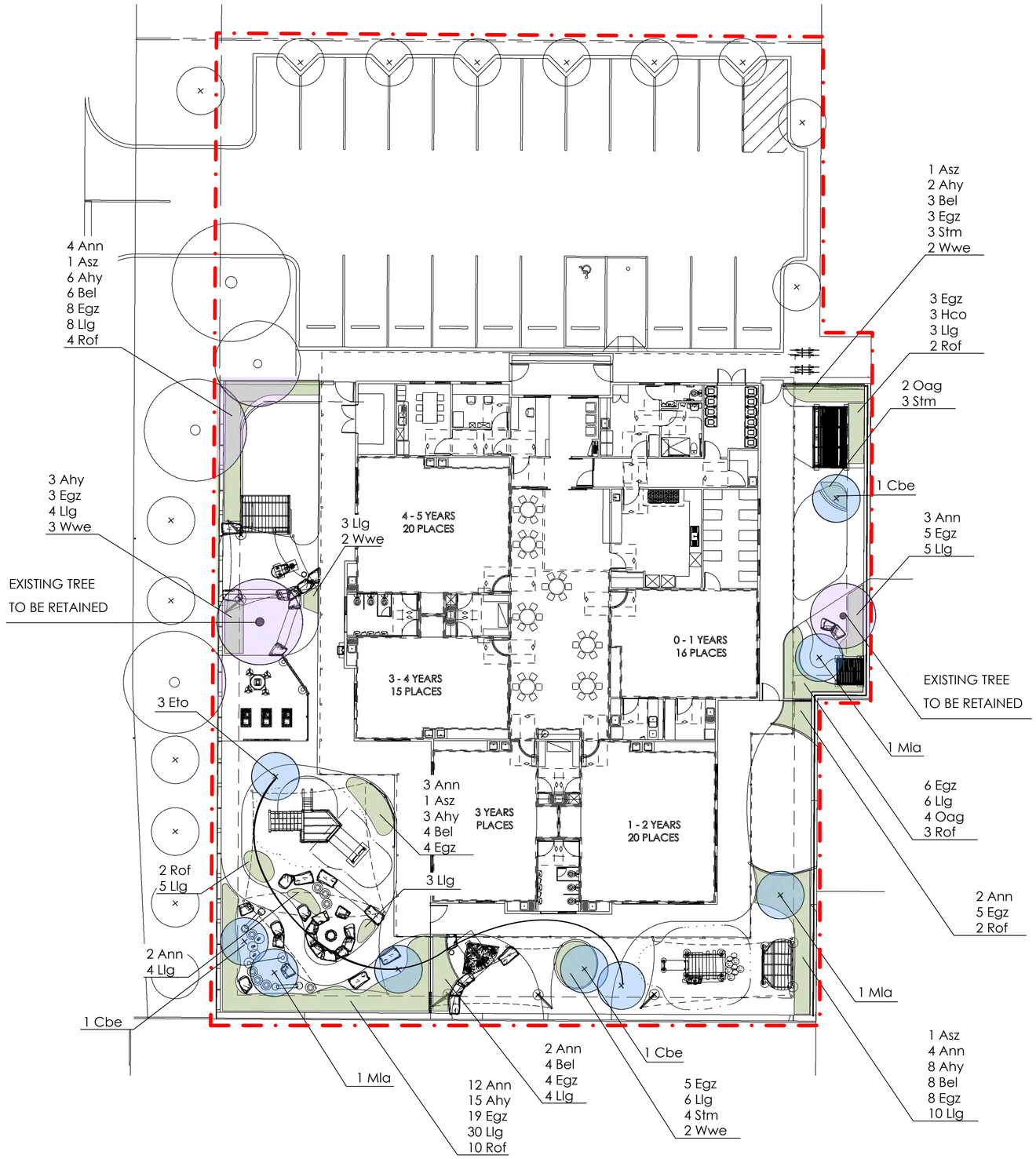
MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 105 - DEEP SOIL CALCULATION, FALL ZONE AND RETAINING WALLS

N

Job No: 6342
Rev: C
Date: Oct 2024
Design: KP



PLAYSPACE PLANTING

TYPE	CODE	SPECIES	SIZE	POT SIZE	HABIT	QTY
Plants	Ann	Adenanthos cunninghamii	1m	140mm	Shrub	32
	Asz	Adenanthos sericeus 'Pencil Perfect'	3m	140mm	Shrub Large	4
	Ahy	Anigozanthos hybrid	0.5m	140mm	Strappy	37
	Bel	Beaufortia elegans	1m	140mm	Shrub	25
	Egz	Eremophila glabra 'Blue horizon'	0.3m	140mm	Ground Cover	73
	Afb	Hardenbergia comptoniana	3m	140mm	Creeper	3
	Llg	Lomandra longifolia 'Tanika'	0.7m	140mm	Strappy	91
	Oag	Olearia axillaris 'Little Smokie'	1m	140mm	Shrub	6
	Rof	Rosmarinus officinalis	1.5m	140mm	Shrub	23
	Stm	Stachys 'Moonlight'	0.25m	140mm	Shrub	10
	Wwe	Westringia fruticosa 'WES06' PBR	0.3m	140mm	Shrub	9
Trees	Cbe	Corymbia 'Beeliar Orange'	5m	100L	Tree Evergreen	3
	Eto	Eucalyptus torquata	8m	100L	Tree Evergreen	3
	Mla	Melaleuca lanceolata	7m	90L	Tree Evergreen	3
					TOTAL PLANTS	**313**
					TOTAL TREES	**9**

*All planting irrigated from mains reticulated water

* PLANTING DENSITY IS APPROX. 3 PLANTS PER SQM IN GENERAL, DEPENDENT ON PLANT SPECIES

PROPOSED DEVELOPMENT
(EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

8 Burchell Way
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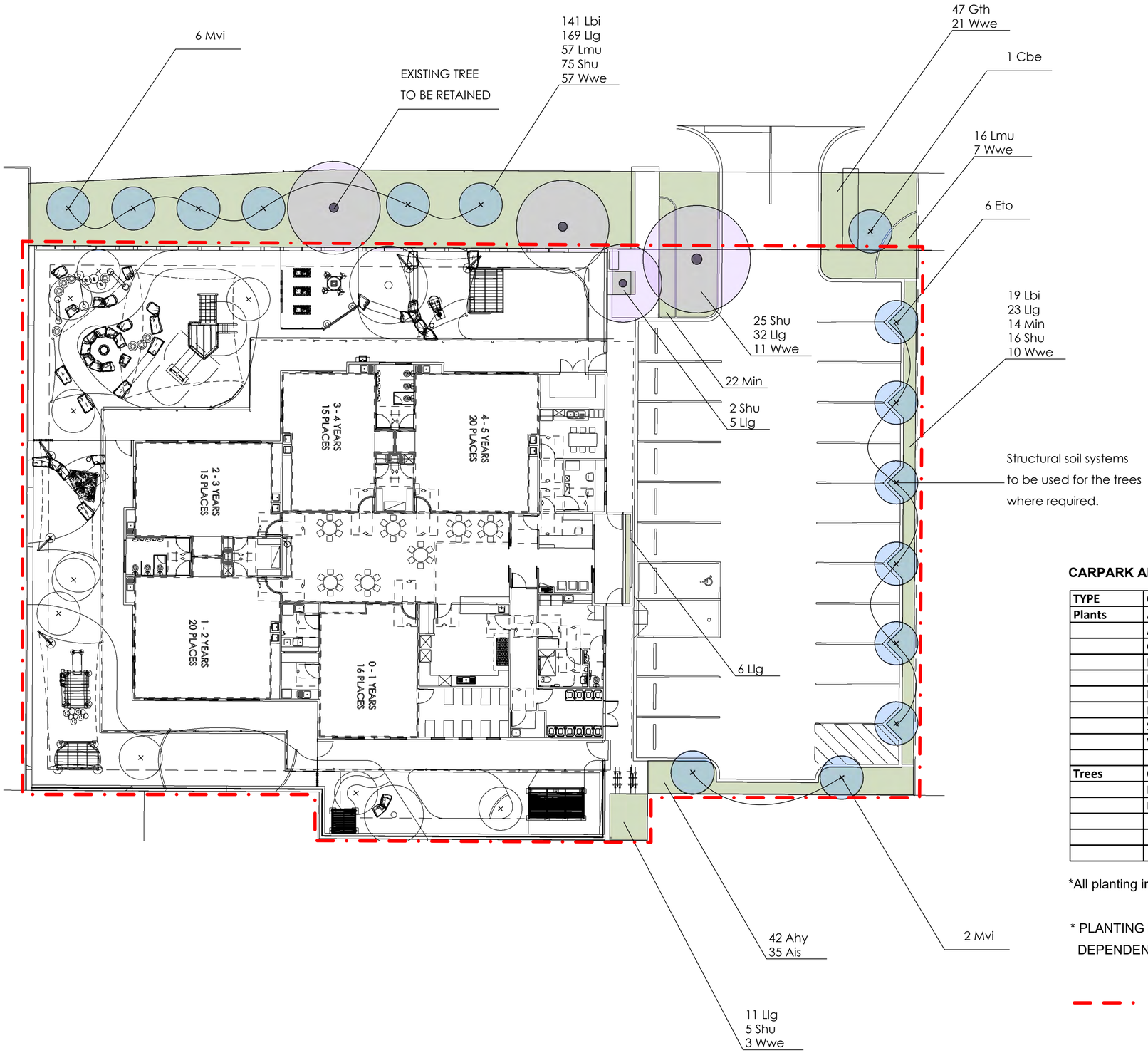
MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 106 - PLANTING PLAN - PLAYSPACE

N

Job No: 6342
Rev: C
Date: Oct 2024
Design: KP



Structural soil systems
to be used for the trees
where required.

CARPARK AND VERGE PLANTING

TYPE	CODE	SPECIES	SIZE	POT SIZE	HABIT	QTY
Plants	Ais	Adenanthos meisneri 'Green Carpet'	0.3m	140mm	Shrub	35
	Ahy	Anigozanthos hybrid	0.5m	140mm	Strappy	42
	Gth	Grevillea thelemanniana 'Mini Marvel'	0	140mm	Shrub	47
	Lbi	Lechenaultia biloba 'Dark Blue'	0.3m	140mm	Shrub	160
	Lmu	Liriope muscari	0.2m	140mm	Strappy	73
	Llg	Lomandra longifolia 'Tanika'	0.7m	140mm	Strappy	246
	Min	Melaleuca incana 'nana'	1m	140mm	Shrub	36
	Shu	Scaevola humilis 'Purple Fusion'	0.2m	140mm	Ground Cover	123
	Wwe	Westringia fruticosa 'WES06' PBR	0.3m	140mm	Shrub	109
Trees	Cbe	Corymbia 'Beeliar Orange'	5m	100L	Tree Evergreen	1
	Eto	Eucalyptus torquata	8m	100L	Tree Evergreen	6
	Mvi	Melaleuca viridiflora	8m	100L	Tree Evergreen	8
					TOTAL PLANTS	**871**
					TOTAL TREES	**15**

*All planting irrigated from mains reticulated water

* PLANTING DENSITY IS APPROX. 3 PLANTS PER SQM IN GENERAL,
DEPENDENT ON PLANT SPECIES

PROPOSED DEVELOPMENT
(EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

8 Burchell Way
Kewdale WA 6105
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MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 107 - PLANTING PLAN - CARPARK AND VERGE

N

Job No: 6342
Rev: C
Date: Oct 2024
Design: KP

Keeping open spaces
safe & green with...

COVER LAWN™

COVER LAWN™

CoverLawn as its name suggests, is a cover which is placed over your grass areas. It is easy to install and it protects your natural grass from damage.

Simply roll it out, peg it down, and watch your grass grow from beneath.

CoverLawn is unique. It is an open synthetic turf, with no backing. Via a knitting technique, the synthetic fibres create a braid of knots, and when stretched, these braids form a honeycomb of holes. These holes allow the natural grass to grow through, and the fibres protect the grass from damage.

A true 'hybrid grass' for open spaces. Creating safe, stable natural grass areas.

CoverLawn can be laid over seeded, instant turf, or an existing lawn.

Problem solved!

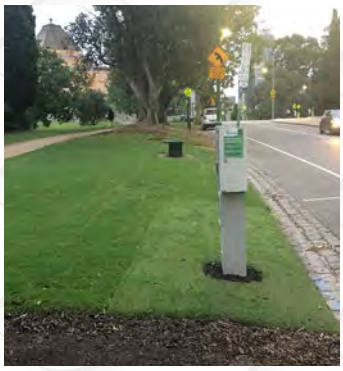
KEY BENEFITS

- Protects your natural grass
- No more bare patches
- Designed for drainage and roots to grow
- Affordable, easy installation
- 'Best of both worlds' natural grass + synthetic grass

DOG PARKS

~ Deters dogs from digging holes in the turf.
~ Protects and reinforces the natural grass.

ASSET MANAGEMENT



~ Eliminates bare patches in high-traffic areas.
~ Maintains a stable, safe surface year-round.

PEDESTRIAN ZONES

~ Less closures from heavy foot-traffic.
~ Safe and secure footing.

Innovation by:

HG TURF GROUP

Available from:

info@hgturfgroup.com.au
www.hgturfgroup.com.au

COVER LAWN™ Installation Guide

CoverLawn is unique. It is an open synthetic turf, with no backing. Via a knitting technique, the synthetic fibres create a braid of knots, and when stretched, these braids form a honeycomb of holes. These holes allow the natural grass to grow through, and the fibres protect the grass from damage.

1. Measure and mark out the area you wish to cover with CoverLawn. Allow for the CoverLawn to be pushed into the soil by 10mm around the edge of the area.
2. If you are installing over an existing grass area then remove weeds and foreign grasses (Photo1). Mow the surface as low as possible, 20 mm is ideal or otherwise put the mower on lowest level.
3. Or: Install new sod in the area as required. For information on installing new sod go to **www.hgturfgroup.com.au**.
4. CoverLawn will align itself with the natural contours of the ground. If the surface is uneven then top dress the area 50/50 sand soil mix.
5. Roll out the CoverLawn over the area.
   Cut to size with a good pair of scissors. (Photo 2).
6. Cut into the edge of the area with a spade or bed knife.
   Push the CoverLawn into the soil to secure it. (Photo 3).
   Start from middle and work towards the ends.
   Make sure you have good stretch/tension on the CoverLawn.
   Work down one side first then stretch it on the other side.
7. Use a hammer and Biodegradable pegs to anchor the edges and secure it in place. Place pegs in the centre of the area at 5m intervals. (Photo 4)
8. If you are joining 2 pieces of CoverLawn this can be done by either cable tying / or stitching the material together or just push both pieces into the soil side by side. (Photo 3).
9. Top dress the final area with sand and water it in to fill in the CoverLawn.
10. As the grass grows through the CoverLawn you can continue with normal lawn maintenance.
    Avoid very low mowing, It is best to keep you grass a little longer to help with the high traffic.

    See right.

HG TURF GROUP

info@hgturfgroup.com.au
www.hgturfgroup.com.au

EMERGEN

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APPENDIX 1 – THERMAL CONSTRUCTION - GENERAL 21

1 OVERVIEW

EMERGEN has developed a sustainable design report on the proposed childcare development building at Lot 6, No. 308 Main Street, Balcatta WA in consultation with Lateral Planning.

The purpose of this report is to support the development application by identifying the principles incorporated in the design that meet sustainable objectives and targets for the site.

1.1 STATE PLANNING POLICY SUMMARY

EMERGEN (a division of CADDS GROUP), in collaboration with the design team (Lateral Planning) has developed a sustainable design strategy aligning with *State Planning Policy 7.0*, which focuses on the Design of the Built Environment - specifically, Principle 5: Sustainability.

This report serves the vital purpose of bolstering the development application by articulating the sustainability principles and commitments for the project site. We acknowledge the significance of State Planning Policy 7.0 in promoting sustainability within the built environment. Good design, as outlined in the policy, is not only about aesthetics but also optimises the sustainability of our built surroundings, yielding positive outcomes on environmental, social, and economic fronts.

Our approach to sustainable landscape and urban design adheres closely to the established water-sensitive urban design principles, ensuring minimal adverse impacts on existing natural features and ecological processes while promoting green infrastructure at all scales of the project. Furthermore, our strategy for sustainable built environments embraces passive environmental design measures tailored to local climate and site conditions. This includes careful consideration of optimal orientation, shading, building envelope, and natural ventilation, ultimately reducing reliance on energy-intensive heating and cooling technologies. This, in turn, results in reduced energy consumption, decreased resource usage, and lowered operating costs throughout the project's lifecycle.

1.2 DESIGN AND CONSTRUCT TO AUSTRALIAN BEST PRACTICE

The design team will utilise a structured approach to a sustainable outcome for the design and construction of the development including the following Sustainable Targets.

Table 1:Sustainability Targets

DESCRIPTION	GOAL	SUSTAINABILITY COMMITMENTS
Clear Air	Improve Indoor Environment Quality and Health And Wellbeing Of Occupants.	Outdoor air provided to primary areas at a rate at least **50%** greater than minimum in AS 1668.2:2012. *(TBC based on mechanical consultant).*
Light Quality		Above **40%** of the regularly occupied areas have high level of daylight (above 160 Lux).
Exposure to Toxins		The building's paints adhesives, sealants, and carpets are low in TVOC or non-toxic. The building's engineered wood products are low in TVOC or non-toxic. Occupants are not exposed to banned or highly toxic materials in the building.
Urban ecology	Heat Resilience	Light Roof Colour (SRI below 0.50)
Energy use	Reduce Emissions and Water Use.	A minimum of **30%** offset in operational energy usage
		High performance building fabric.
		Provision for **Future** solar PV array to supply renewable energy to Commercial building.
Water use		High WELS Ratings (these equal to above **30%** reduction in potable water).
Lighting use		**20%** reduction in lighting power when compared to NCC DTS.
Recycle building Materials	Recycled Asphalt	Project integrates recyclable materials, including recycled asphalt paving
	Sustainable Timber	The playground is constructed from sustainable timber materials
Movement and place	Low Carbon Options.	Provision for 4 x EV Charging Bays
		Provision for secured and unsecured bike parking
Design for Inclusion	Social Health.	Disability Access and inclusive design

2 PROJECT INFORMATION

The proposed project is located at Lot 6, No. 308 Main Street, Balcatta WA.

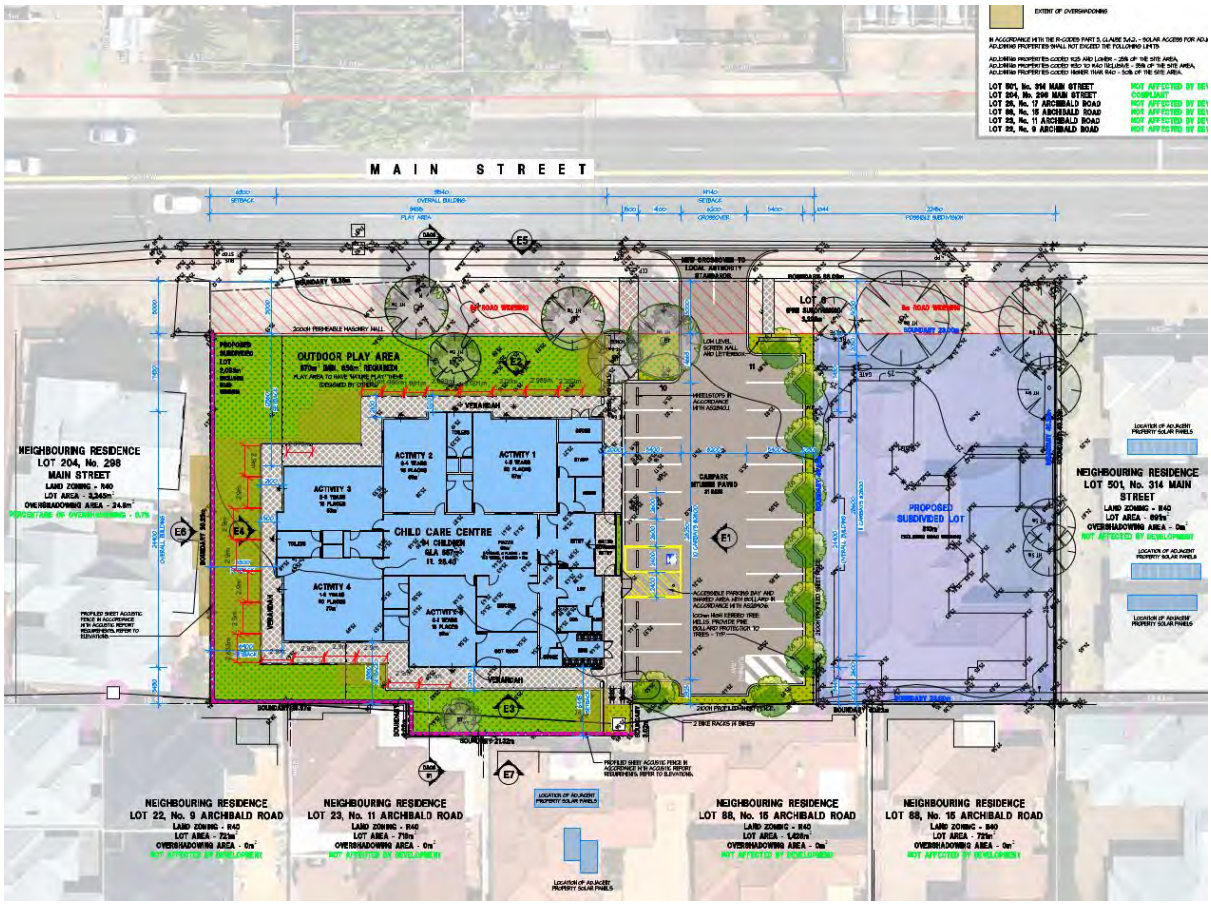
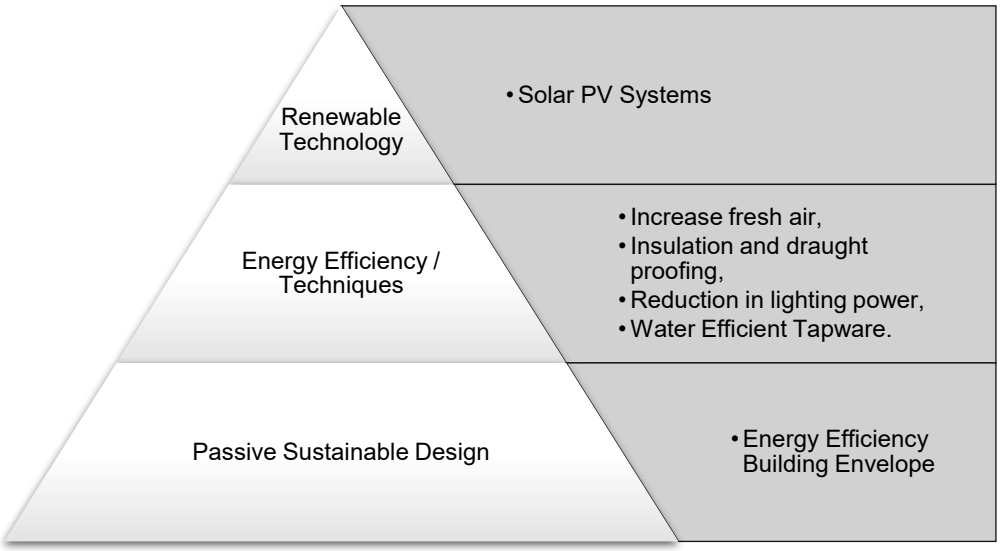


Figure 1: Existing Site Image/proposed development

3 ENERGY REDUCTION STRATEGY

Figure 2: Energy Reduction Strategy



4 LIGHTING COMFORT

Lighting within the building must meet the following criteria:

- All lighting must be flicker-free.
- Light sources must have a minimum Colour Rendering Index (CRI) average R1 to R8 of 85 or higher and have a CRI R9 of 50 or higher.
- Light sources must meet best practice illuminance levels for each task within each space type with a maintained illuminance that meets the levels recommended in AS/NZS 1680.1:2006 series applicable to the project type and including maintenance.
- The maintained Illuminance values must achieve a uniformity of no less than that specified in Table 3.2 of AS/NZS 1680.1:2006, with a maintenance factor method as defined in AS/NZS 1680.4.; and
- All light sources must have a minimum of 3 MacAdam Ellipses.
- The walls within the field of view of occupants in regularly occupied spaces must have an average surface reflectance value of 0.70 and an average surface illuminance of at least 50% of the horizontal illuminance levels required for task.
- Vertical illuminance in workspaces: ensure that 50% of the horizontal task illuminance reaches the average eye height for 90% of primary spaces using vertical illuminance calculation grid.
- The illuminance values must be calculated in accordance with AS/NZS 1680 series for the relevant task.

4.1 EFFICIENT LIGHTING AND CONTROL

The installed aggregate illumination power has been designed to be **20%** below the maximum illumination power based on maximum allowable lighting power densities defined in Table J6.2a of the NCC 2019. Motion Detectors and daylight sensors are provided to reduce demand.

Table 2: Lighting Characteristics

PARAMETER	PROPOSED BUILDING	REFERENCE BUILDING
LIGHTING TYPE	LED light fittings	LED light fittings
DESIGN ILLUMINANCE (LUX)	Various lux	Various lux
NOMINAL LIGHTING POWER DENSITY (W/M^2)	**20%** less compared to NCC max requirements.	As per NCC max requirements.
OCCUPANT SENSOR CONTROLS	Motion sensors	N/A
DAYLIGHT CONTROLS	Yes	N/A
OTHER LIGHTING CONTROLS	Timer switches	N/A
ADJUSTMENT FACTOR APPLIED	0.9 – Motion sensor 1 0.7 – Motion sensor 2 0.55 – Motion sensor 3	Room Aspect Ratio

4.2 DAYLIGHTING

The purpose of this credit is to ensure the building is providing daylight access above typical federal, state, or local regulations by showing how the building's design and glazing specification maximises natural lighting to regularly occupied spaces.

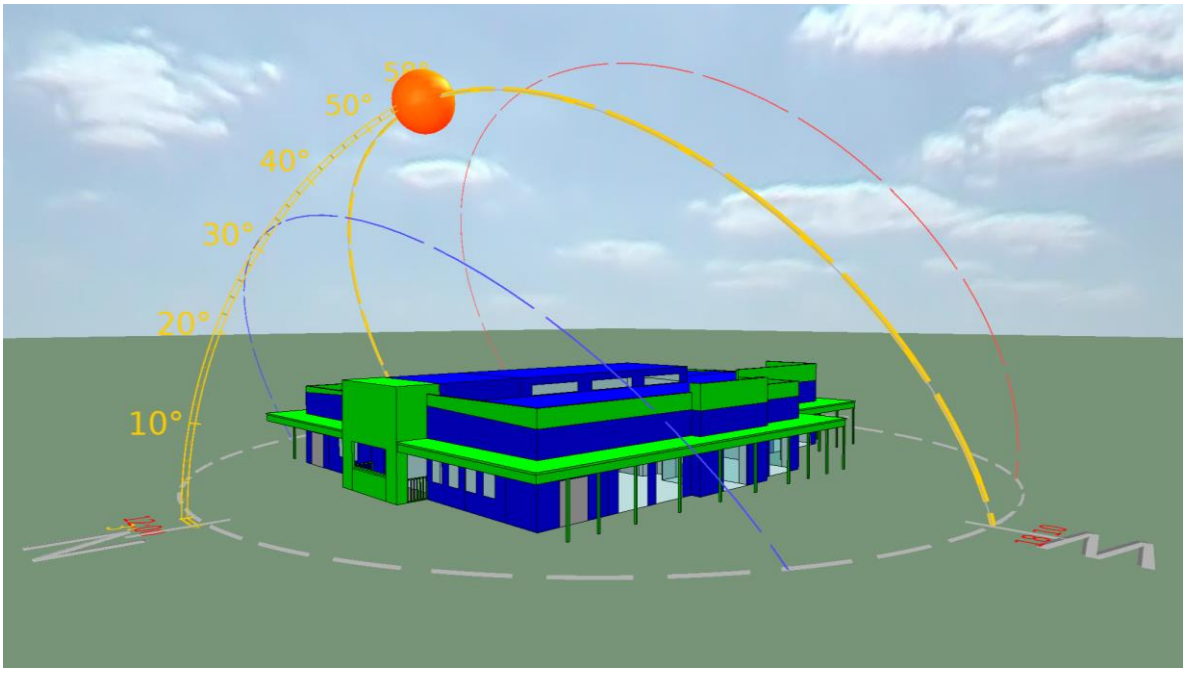


Figure 3: Daylighting Model

CALCULATION CONDITIONS	
TEST FACTOR	Daylight Factor
SKY FACTOR	CIE Overcast Sky
DATE	September 21st 12:00pm

BUILDING	PROPOSE USAGE	NOMINATED AREA (m^2)	COMPLIANT AREA (m^2)	COMPLIANT AREA (%)
CHILDCARE	Primary	461.48	404.85	**87.7%**

Figure 4: Daylighting for Primary Areas

4.3 ARTIFICIAL LIGHTING AND CONTROLS

All lighting will be equipped with light-emitting diodes (LEDs), covering all primary areas. Common area lighting will include controls like occupancy sensors (PIRs) and time switches to minimize energy usage when lighting is not needed.

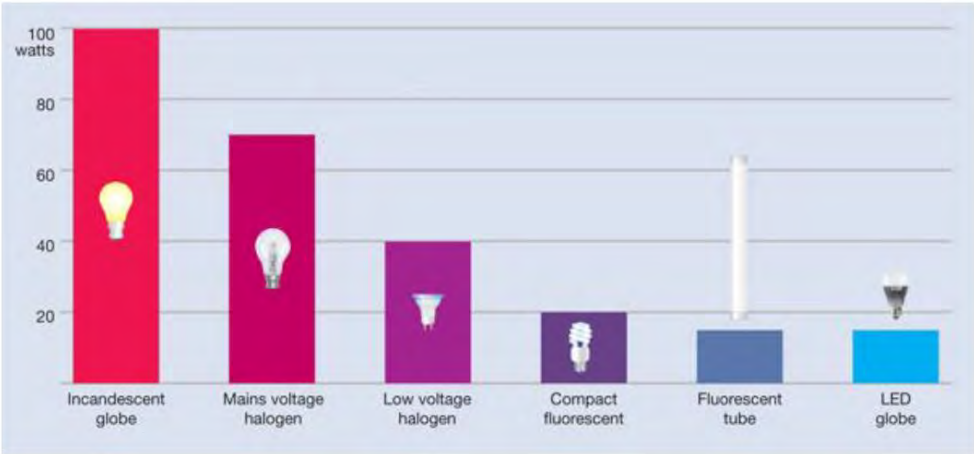


Figure 5: Comparison of LED lighting with other conventional lighting

4.4 SOLAR ANALYSIS

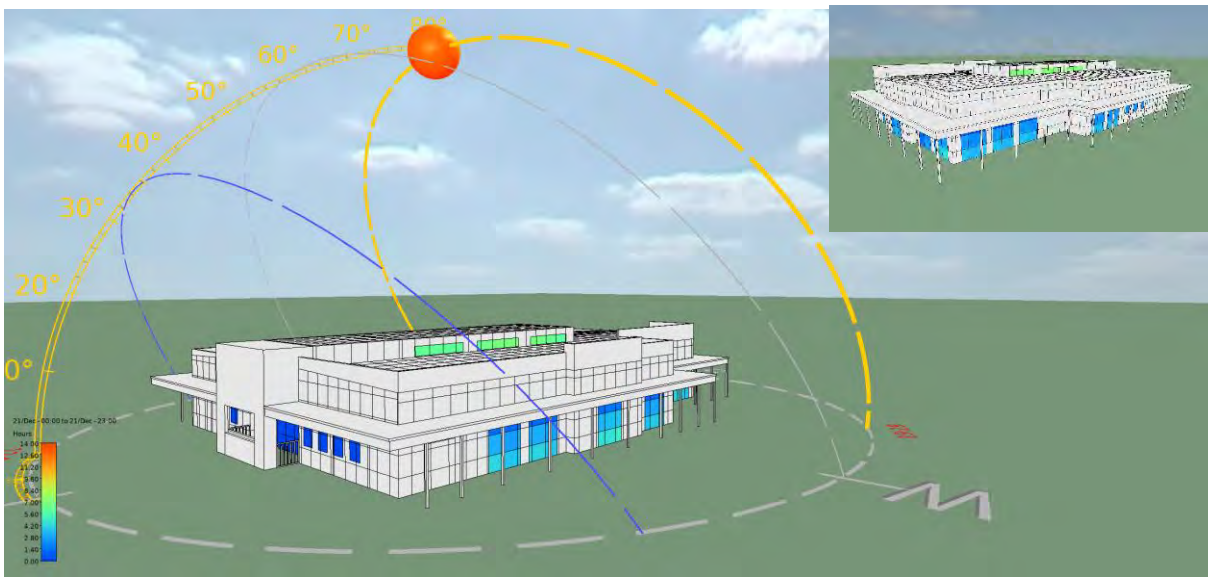


Figure 6: Solar Analysis during Summer

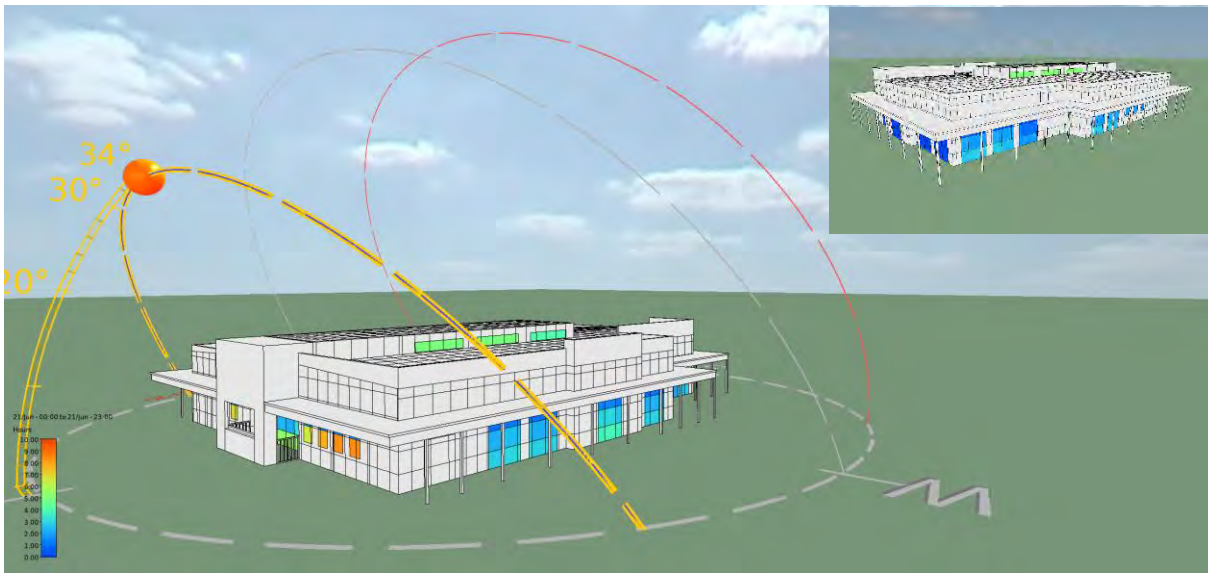


Figure 7: Solar Analysis during Winter

The shading elements have been strategically designed to minimise extended solar exposure during summer months yet maximise solar gains in winter months. During the Summer months each window, receives approximately 1 to 5 hours of daylight over the course of the day, striking a balance between harnessing natural light and mitigating excessive sunlight exposure.

5 URBAN ECOLOGY

Urban ecology is crucial for conserving biodiversity and enhancing urban life. Well-planned buildings and landscapes protect biodiversity and support sustainable practices, including low water and fertilizer use and the selection of native plants. Existing mature trees in the perimeter buffers will be maintained as much as possible.

5.1 MINIMISING HEAT ISLAND EFFECT

The heat island effect occurs when urban areas are warmer than their rural surroundings due to the built environment. The design has mitigated this effect by using light-coloured roof materials and shaded landscaped areas, which significantly mitigates this effect and enhances energy savings.

Figure 8: Potential design provisions for heat island effect

6 ENERGY USE

Energy savings in a building can be realized by minimizing the need for heating and cooling through a well-designed and insulated façade. The design team will focus on enhancing energy efficiency by exceeding the minimum requirements of BCA Section J. This will involve optimizing the building envelope, air conditioning and ventilation systems, and lighting to ensure lower energy consumption.

The design team has also included provisions for future solar PV installation on the roof of all buildings, accommodating both structural and electrical requirements. The plan is to install the solar systems within two years of the building's operational start.

6.1 BUILDING FABRIC

Table 3: Proposed Building Specification

CONSTRUCTION		DESCRIPTION	REQUIREMENT
ENVELOPE WALLS	External Steel Framed Wall	Face brick tile and 9mm CFC Cladding on 35mm top hat fixed to 92mm steel stud internally lined with 13mm plasterboard. Restoration Red Brick **(SA≈0.70)**	**R0.2 thermal break** between external cladding and steel frame with **90mm R2.5HD insulation batts** inside steel frame. ***Total R-Value=1.63***
	External Steel Framed Wall	9mm CFC Cladding on 35mm top hat fixed to 92mm steel stud internally lined with 13mm plasterboard. Cladding in Dulux White **(SA≈0.20)**	**R0.2 thermal break** between external cladding and steel frame with **90mm R2.5HD insulation batts** inside steel frame. ***Total R-Value=1.60***
	Internal Steel Framed Wall	Steel framed wall with plasterboard lining.	**90mm R2.5HD insulation batts** inside steel frame.
INTERNAL WALLS	Steel Framed Wall	Steel framed wall with plasterboard lining.	**No Insulation Required.**
FLOORS	Slab on Ground	Concrete slab with ground contact. Floor coverings as per plans.	**No Insulation Required.**
ROOFS	Roof Type 1	Metal deck roof sheet. Cladding in **Surfmist (SA: 0.33)**	**60mm Anticon (R1.3)** with **R4.0 Insulation Batts** to dropped plasterboard ceilings.

WINDOW SPECIFICATION		U-VALUE	SHGC
OPTION 1:	Single Clear glazing in aluminium frame. (i.e., 6.00mm **Viridian VFloat Clear**, or equal)	**6.28**	**0.76**

OPTION 2:	DG Clear in aluminium frame. (i.e., 6/12/6 **Viridian DG VFloat Clear**, or equal)	**3.72**	**0.66**

Note: Glazing values provided are for Whole System (Frame + Glass)

6.2 RESULTS

The figures shown below demonstrate the difference in performance between the Proposed Building and the Reference Building, allowing for a quantifiable comparison on the performance of each building.

Table 4: Estimated Energy Used - Option 1: Single Clear

MODEL	HEATING	COOLING	FANS	LIGHTS	EQUIP	PV	TOTAL
REFERENCE (kWh/m^2)	1.4	21.3	11.4	11.4	11.1	-	**56.6**
PROPOSED (kWh/m^2)	1.6	20.9	11.4	11.4	11.1	-21.2	**35.3**
ENERGY REDUCTION							**37.73%**

It's important to note that a **10kW** solar photovoltaic (PV) system has been integrated into the proposed building's design to assist in offsetting the overall energy consumption.

Table 5: Estimated Energy Used - Option 2: DG Clear

MODEL	HEATING	COOLING	FANS	LIGHTS	EQUIP	PV	TOTAL
REFERENCE (kWh/m^2)	1.4	21.3	11.4	11.4	11.1	-	**56.6**
PROPOSED (kWh/m^2)	1.4	20.0	11.0	11.4	11.1	-21.2	**33.7**
ENERGY REDUCTION							**40.48%**

It's important to note that a **10kW** solar photovoltaic (PV) system has been integrated into the proposed building's design to assist in offsetting the overall energy consumption.

Table 6: Annual Greenhouse Gas Emissions

MODEL		ANNUAL GREENHOUSE GAS EMISSIONS
REFERENCE	$kgCO_2$-e	**27,502.35**
PROPOSED w/ Single Clear	$kgCO_2$-e	**17,126.86**
PROPOSED w/ DG Clear	$kgCO_2$-e	**16,369.88**

Table 7: Predicted Mean Vote (PMV) Summary

PREDICTED MEAN VOTE - % HOURS IN RANGE FOR	<= -1.00	>-1.00 TO <=1.00	>1.00
Building Class 9b w/ Single Clear	0.00	99.16	0.91
Building Class 9b w/ DG Clear	0.00	99.40	0.66

7 WATER EFFICIENCY

7.1 SUSTAINABLE WATER INITIATIVES

Non-potable water use is minimal throughout the proposed design due to the application of water efficient toilets, taps and showers and relatively small areas of irrigated plantings. The design team has identified water capture, grey and black water capture and treatment during the target setting workshop but did not preference these options due to:

- Low non-potable water use requirements of the development
- Logistical constraints, energy use and operational costs associated with grey and black water treatment in office complexes influenced heavily by health regulations (significant periodic inspection and testing required in the applications)
- Space requirements of rainwater harvesting and/or grey and black water treatment tanks
- Relative cost vs benefit of these strategies versus competing strategies which delivered much larger environmental benefits at a lower cost.

All new water fixtures are to ensure that high WELS rating fixtures and fitting are to be specified in line with minimum benchmarks below.

Table 8: WELS Ratings

FIXTURE / EQUIPMENT TYPE	WELS RATING
TAPS	5 Star
URINALS	5 Star
TOILETS	4 Star
SHOWERS	3 Star – (7L/min)

7.1.1 LANDSCAPE AND IRRIGATION PLAN

The development's location in Western Australia is considered a drying climate and as such, water conservation is critically important. The following sections set out design strategies utilised for this development to reduce its overall water consumption.

7.1.1.1 Drip Irrigation System:

- Efficient drip irrigation system with bubblers ensuring optimal water delivery to trees and uniform hydration throughout the landscape.

7.1.1.2 Plant Selection:

- Drought-tolerant and water-wise plants will be selected wherever possible to ensure sustainable water use.

7.1.1.3 Vegetation and Landscaping:

- Native vegetation that is water-wise will be prioritized.

7.1.1.4 Car Park Design:

- The car park will incorporate shade trees and use permeable paving. The design will include traditional kerbs.

8 MOVEMENT AND PLACE

8.1 BICYLCE PARKING FACILITIES & SUSTAINABLE TRANSPORT FACILITIES

It is the intention of this category to reduce occupant's dependency on carbon intensive vehicles. The development will install infrastructure to allow for future installation of minimum 4 metered EV charging stations on the northern cross over and a high number of secured and unsecured bike racks.

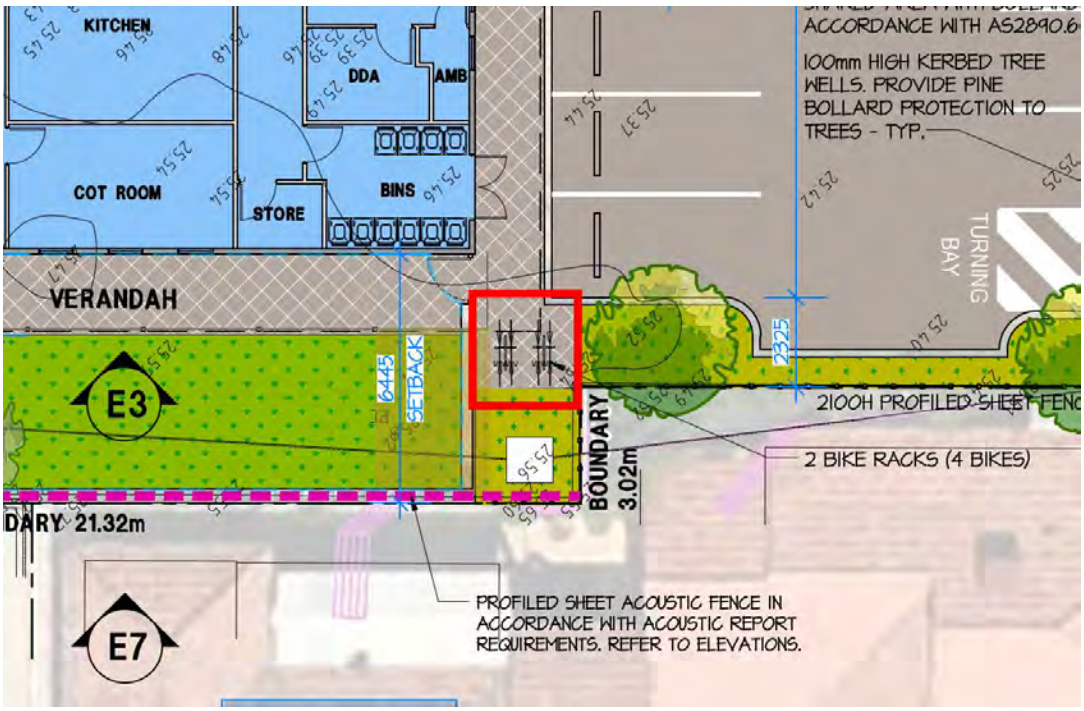


Figure 9: Proposed Bike Racks

9 WASTE EFFICIENCY

A waste planning expert will produce a Waste Management Plan (OWMP) that addresses best practice in waste management, including:

- Identifying the objectives of the plan, by setting diversion from landfill targets and / or target for reducing total materials generation (general waste materials + recyclable / reusable materials);
- Clearly identify waste streams including general waste, paper and cardboard, glass and plastic;

- Clearly identify applicable bins for various waste streams, that allow for separation of recyclable streams – or use of comingled systems where appropriate.
- Clearly identify at least one other waste stream that can be recycled, and for which recycling facilities are provided.
- Clearly identify storage areas for all waste streams identified in the OWMP.
    - Area to be sized sufficiently for all streams nominated above, based on waste generated by the project and the collection frequency for each stream; and
    - Calculations shall be based on third-party best practice guidelines.
- Outline best practice access requirements for the collection of all waste streams identified in the OWMP.
- Outline individual roles responsible for delivering and reviewing the OWMP

9.1 RECYCLING BUILDING MATERIALS

Buildings use significant natural resources throughout their lifecycle. This section will outline the impacts of material procurement and construction, and how these have been minimized compared to typical developments. The goal is to reduce the total embodied energy and carbon of the building.

Design Focus	Intended Design Initiative
Sustainable timber	• Timber used in the building and construction will primarily come from sustainable sources or be reused. • Local wood carvers will repurpose site-cleared logs into seats, bike racks, and climbing features for the children's playground.
Recycled Asphalt	• Using recycled asphalt pavement
Structural and reinforcing steel	• The aim is for the majority of the steel used in the building to come from an energy-efficient processing plant and a Responsible Steel Maker

10 EXPOSURE TO TOXINS

10.1 PAINTS, ADHESIVES, AND SEALANTS

To meet the requirements, at least 95% of internally applied paints, adhesives, sealants (by volume), and carpets (by area) must meet TVOC (Total Volatile Organic Compounds) limits. Compliance with these limits can be achieved through one of the following methods:

1. Product Certification Scheme: The contractor can use products that are certified under a recognized and current Product Certification Scheme at the time of purchase. These schemes assess and verify the TVOC content of the materials, ensuring they meet the specified limits.
2. Laboratory Product Testing: If there are no certified products available, the contractor can conduct laboratory testing on the paints, adhesives, and sealants, to determine their TVOC content. The testing should be carried out using the whole paint, including water and tinters, to obtain accurate results.
3. Absence of Non-compliant Materials: Alternatively, if none of the materials mentioned (paints, adhesives, sealants, and carpets) are present at the time of practical completion (PC), and thus no TVOC emissions are expected, compliance can be achieved.

All paints used for internal application on the job are to have a low TVOC content as outlined below. TVOC content must be based on whole paint (water and tinters included):

Table 9: Paint VOC limits

PRODUCT TYPE / SUBCATEGORY	MAX TVOC CONTENT (G/L OF READY TO USE PRODUCT)
Walls and ceilings – Any gloss level	16
Trim, varnishes and wood stains	75
Primers, sealers and prep coats	65

Maximum TVOC Content Limits for Paints, Varnishes and Protective Coatings
*EU Directive
The TVOC content of the 'ready-to-use' paint shall be theoretically calculated as the sum total of the VOCs of each of the raw material component comprising the paint.

Where the TVOC content of individual components is not known, it must be determined experimentally by one of the following testing methods as appropriate:

- ISO Method 17895 (2005), for a material with a presumed VOC content <1%;
- ISO Method 11890-2 (2006), for a material with a presumed VOC <15%;
- ISO Method 11890-1 (2007), for a material with a presumed VOC content >15%;
- ASTM D3960, which is comprised of four individual testing procedures that measures TVOC (D2369) as well as density (D1475) and water content (D4017). Exempt compounds (D4457) must not be subtracted in the calculation of VOC content.

The contractor must obtain written approval from the design team before using any sealant, adhesive, paint, flooring or fit out items. This approval will be contingent on the provision of proof that the product has a VOC content below that noted above.

At the end of construction, the contractor is required to undertake a final audit to ensure that the correct products have been used.

All sealants used in an internal application on the job are to have a low TVOC content as outlined below.

Table 10: Adhesives/Sealants VOC limits

PRODUCT	MAXIMUM TVOC CONTENT (G/LITRE)
General purpose adhesives and sealants	50
Acoustic sealants, architectural sealant, waterproofing membranes and sealant, fire retardant sealants and adhesives	250
Structural glazing adhesive, wood flooring and laminate adhesives and sealants	100
Primers, sealers and prep coats	65
One and two pack performance coatings for floors	140

Maximum TVOC limits for Adhesives & Sealants
*Sealants used to enhance the fire- and water-proofing properties are included.

The testing method applicable to adhesive and sealants is only ASTM D3960 as detailed above for paints. For more information on ASTM D3960 refer to South Coast Air Quality Management District Rule 1168.

The contractor must obtain written approval from the design team before using any sealant, adhesive, paint, flooring or fitout items. This approval will be contingent on the provision of proof that the product has a VOC content below that noted above.

At the end of construction, the contractor is required to undertake a final audit to ensure that the correct products have been used.

All carpets and/or other flooring used on the project are to have low TVOC emission rates as outlined below.

Table 11: Carpet VOC limits

ALL CARPET/FLOORING PRODUCTS MUST COMPLY WITH TVOC EMISSION LEVELS	
Total VOC limit	0.5 mg/m^2 per hour
4-pc (4-Phenolcycohexene) limit	0.05 mg/m^2 per hour

Compliance Testing: Refer to Carpet and Rug Institute Green Label (US) OR American Society for Testing and Materials (ASTM) D5116 Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Material/Products OR

For carpets and laminate floor coverings, an option for demonstrating compliance with TVOC levels is as follows: ISO 10580 (also known as ISO/TC 219) – Document N238 – Resilient,

Textile and Laminate Floor Coverings Evaluation of Volatile Organic Compounds Emissions, with a limit of 500µg/m^2/hr at 24 hours. OR

For floor coverings (other than carpet), an option for demonstrating compliance with TVOC levels is as follows:

ISO16000 parts 9, 10 and 11 (also known as the EN 13419), with a TVOC limit at three days of 5mg/m^2/h and 0.5mg/m^2/h at 28 days.

Carpet or other flooring installed as part of the base building works prior to fit out works, can be deemed re-used for the purpose of this credit.

The contractor must obtain written approval from the design team before using any sealant, adhesive, paint, flooring or fit out items. This approval will be contingent on the provision of proof that the product has a VOC content below that noted above.

At the end of construction, the contractor is required to undertake a final audit to ensure that the correct products have been used.

There are two options for demonstrating compliance for carpets, as follows:

Option A - Product Certification:

Carpets certified under a relevant Product Certification Scheme standard recognised by the GBCA under the GBCA assessment Framework for Product Certification Schemes are deemed to satisfy the requirements of this criterion. Relevant GBCA recognized standards are listed on the GBCA web site. The certificate must be current at the time of project registration or submission and list the relevant product name and model.

A UL GREENGUARD Children & Schools® certification current at the time of project registration or submission is another acceptable evidence for demonstrating compliant TVOC levels for carpets.

Option B - Experimental Testing

All carpets comply with the Total VOC (TVOC) limits within Table below. The emission levels detailed in this table must be established by a NATA or another ISO/IEC17025 accreditation laboratory.

Table 12: Flooring VOC limits

ALL CARPET/FLOORING PRODUCTS MUST COMPLY WITH TVOC EMISSION LEVELS – TO ASTM D5116 TEST PROTOCOL	
Carpets using ASTM D5116 Test Protocol:	
Total VOC limit	0.5 mg/m^2 per hour
4-pc (4-Phenolcycohexene) limit	0.05 mg/m^2 per hour
Carpet using ISO 16000 test protocol (also known as EN 13419)	
TVOC at three days-	0.5 mg/sqm per hour
Flooring using ISO 10580 (also known as ISO/TC 219) – Document	
TVOC at 24 hours - 0	0.5mg/sqm per hour

10.2 FORMALDEHYDE MINIMISATION

All engineered wood products used internally, including exposed and concealed applications, must have low formaldehyde emissions as defined in the table below, or contain no formaldehyde. Engineered wood products are defined as particleboard, plywood, veneer, MDF, Laminated Veneer Lumber (LVL), High-Pressure Laminate (HPL), Compact Laminate and decorative overlaid wood panels and include both finished and unfinished products.

These requirements are not applicable to exterior applications, formwork, internal car park applications, reused engineered wood products or raw timber.

The contractor must obtain approval from the design team before substituting any product.

The limits listed here are defined according to the test method. The levels listed are equivalent results for different test procedures.

Table 13: Formaldehyde emission limits

TEST PROTOCOL	EMISSION LIMIT/ UNIT OF MEASUREMENTS
AS/NZS 2269:2004, testing procedure AS/NZS 2098.11:2005 method 10 for Plywood	< 1.0 mg/L
AS/NZS 1859.1:2004 - Particle Board, with use of testing procedure AS/NZS 4266.16:2004 method 16	< 1.5 mg/L

AS/NZS 1859.2:2004 - MDF, with use of testing procedure AS/NZS 4266.16:2004 method 16	< 1.0 mg/L
JIS A 5908:2003- Particle Board and Plywood, with use of testing procedure JIS A 1460	< 1.0 mg/L
JIS A 5905:2003 - MDF, with use of testing procedure JIS A 1460	< 1.0 mg/L
JIS A1901 (not applicable to Plywood)	< 1.0 mg/L
ASTM D5116	<0.1 (+/- 0.0005) mg/m^2hr (may also be represented as $mg/m^2/hr$)
ISO 16000 part 9, 10 and 11 (also known as EN 13419)	<0.1 (+/- 0.0005) mg/m^2hr (may also be represented as $mg/m^2/hr$)
ASTM D6007	$0.12mg/m^3$*
ASTM E1333	$0.12mg/m^3$**
EN 717-1 (also known as DIN EN 717-1)	$0.12\ mg/m^3$
EN 717-2 (also known as DIN EN 717-2)	$3.5\ mg/m^2hr$ (may also be represented as $mg/m^2/hr$).
*The test report must confirm that the conditions of Table 1 comply for the particular wood product type, the final results must be presented in EN 717-1 equivalent (as presented in the table) using the correlation ratio of 0.98.	

11 CONCLUSION

In conclusion, the report outlines sustainability commitments that align with core principles, focusing on energy, water, and waste management. It highlights efforts to promote environmental responsibility and resource efficiency, underscoring a commitment to a greener, more sustainable future.

Table 14: Sustainability Commitments

DESCRIPTION	GOAL	SUSTAINABILITY COMMITMENTS
Clear Air	Improve Indoor Environment Quality And Health And Wellbeing Of Occupants.	Outdoor air provided to primary areas at a rate at least **50%** greater than minimum in AS 1668.2:2012. *(TBC based on mechanical consultant).*
Light Quality		Above **40%** of the regularly occupied areas have high level of daylight (above 160 Lux).
Exposure to Toxins		The building's paints adhesives, sealants, and carpets are low in TVOC or non-toxic. The building's engineered wood products are low in TVOC or non-toxic. Occupants are not exposed to banned or highly toxic materials in the building.
Urban ecology	Heat Resilience	Light Roof Colour (SRI below 0.50)
Energy use	Reduce Emissions And Water Use.	A minimum of **30%** offset in operational energy usage
		High performance building fabric.
		Provision for **Future** solar PV array to supply renewable energy to Commercial building.
Water use		High WELS Ratings (these equal to above **30%** reduction in potable water).
Lighting use		**20%** reduction in lighting power when compared to NCC DTS.
Recycle building Materials	Recycled Asphalt	Project integrates recyclable materials, including recycled asphalt paving
	Sustainable Timber	The playground is constructed from sustainable timber materials
Movement and place	Low Carbon Options.	Provision for 4 x EV Charging Bays
		Provision for secured and unsecured bike parking
Design for Inclusion	Social Health.	Disability Access and inclusive design

APPENDIX 1 – THERMAL CONSTRUCTION - GENERAL

Excerpt from the BCA, Volume One - Part J1.2

Thermal Construction - General

1. Where required, insulation must comply AS/NZS 4859.1 and be installed so that it –
    a. Abuts or overlaps adjoining insulation other than at supporting members such as studs, noggings, joists, furring channels and the like where the insulation must be against the member; and
    b. Forms a continuous barrier with ceilings, walls, bulkheads, floors or the like that inherently contribute to the thermal barrier; and
    c. Does not affect the safe or effective operation of a domestic service or fitting.
2. Where required, reflective insulation must be installed with –
    a. The necessary airspace, to achieve the required R-Value between a reflective side of the reflective insulation and a building lining or cladding; and
    b. The reflective insulation closely fitted against any penetration, door or window opening; and
    c. The reflective insulation adequately supported by framing members; and
    d. Each adjoining sheet of roll membrane being –
        i. Overlapped not less than 50 mm; or
        ii. Taped together.
3. Where required, bulk insulation must be installed so that –
    a. It maintains its position and thickness, other than where it crosses roof battens, water pipes, electrical cabling or the like; and
    b. In a ceiling, where there is no bulk insulation or reflective insulation in the wall beneath, it overlaps the wall by not less than 50mm.
4. Roof, ceiling, wall and floor materials, and associated surfaces are deemed to have the thermal properties listed in Specification J1.2
5. The required Total R-Value and Total System U-Value, including allowance for thermal bridging, must be –
    a. Calculated in accordance with AS/NZS 4859.2 for a roof or floor; or
    b. Determined in accordance with Specification J1.5a for wall-glazing construction; or
    c. Determined in accordance with Specification J1.6 or Section 3.5 of CIBSE Guide A for soil or sub-floor spaces.

Attachment 7b. Traffic Impact Statment
recieved 23 August 2024

Archer Consultants Pty Ltd

PH: 08 6275 6820 ABN: 79 661 164 683

308 Main Street, Balcatta WA 6021

TRANSPORT IMPACT STATEMENT

Proposed Child Care Centre Development

Client - Project Construction

Revision - 1B

Prepared For - City of Stirling - July 2024

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024

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INTRODUCTION

Archer Consultants Pty Ltd was engaged by Project Construction to prepare a Transport Impact Statement (TIS) for approval of a proposed Child Care Centre development at 308 Main Street, Balcatta WA 6021.

This report will assess the implications of the proposed development on existing traffic, parking, and transport conditions surrounding the site. 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).* The following items have been included in the subsequent sections of this report:

- A Traffic Impact Statement for the proposed development.
- Conclusions of the above findings.

During the course of preparing this assessment, the subject site and its environment have been inspected, and all relevant traffic and parking data collected and analysed.

BACKGROUND AND EXISTING CONDITIONS

Location and Land Use

The subject site is located on the eastern side of Main Street in the suburb of Balcatta which is approximately 6km north of Perth. The use of the land immediately surrounding the subject site is a mix of commercial and residential in nature.

Figure 1 provides an overview of the area and its surrounding land uses whilst **Figure 2** provides an aerial view of the immediate area surround the subject site.

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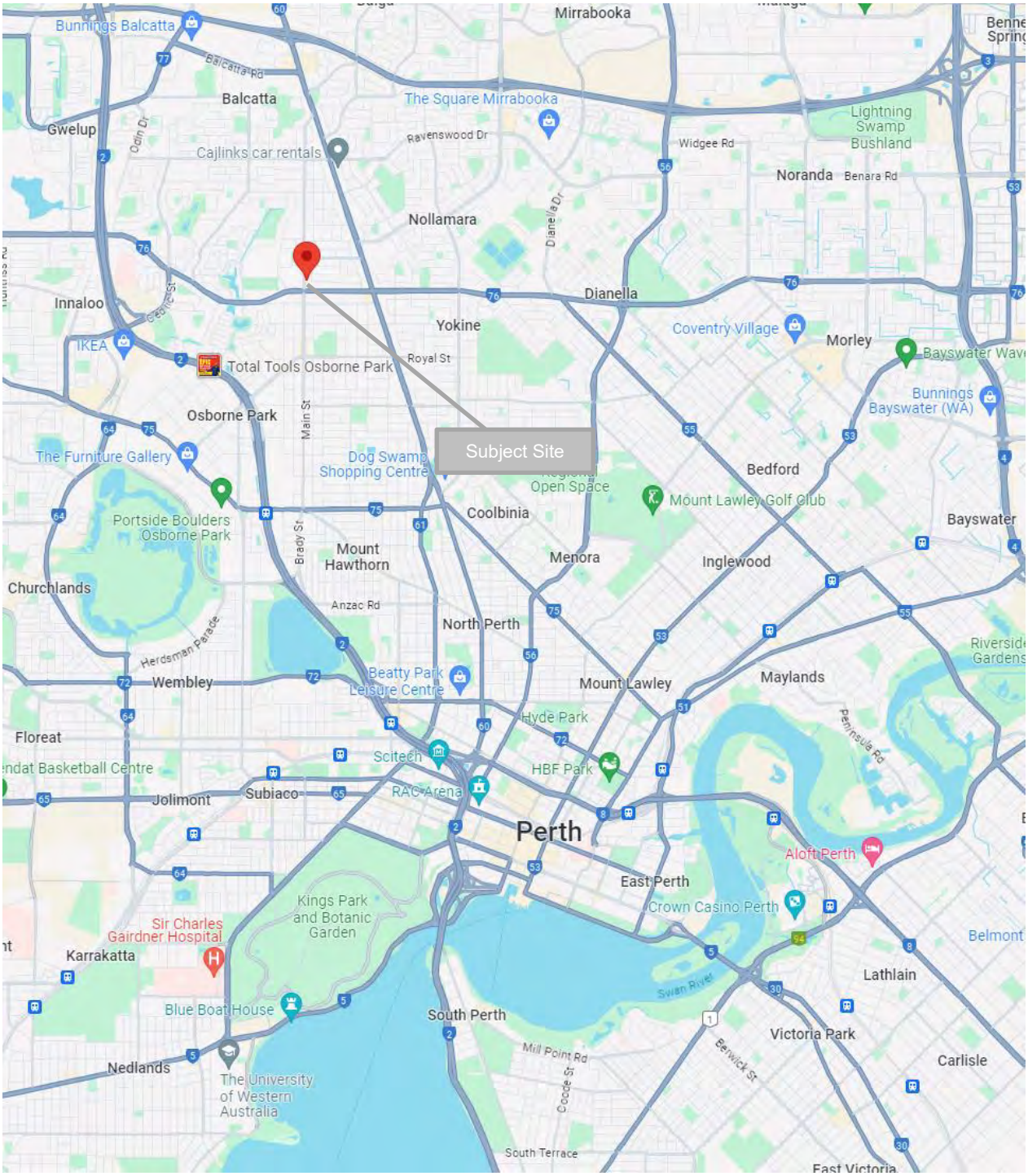

Figure 1 **Subject Site Location** *source: Google Maps*

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Figure 2 Subject Site Aerial View *source: Google Maps*

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PUBLIC TRANSPORT

The subject site is in an area that has very good access to public transport services that is within walking distance of the site. The closest public transport stop to the site is the Main Street before Karrinyup Road bus stop which is approximately 33m away and is a 1 minute walk. This services the 414 Bus Route. The following figure displays the fastest walking route from the site towards the bus stop.

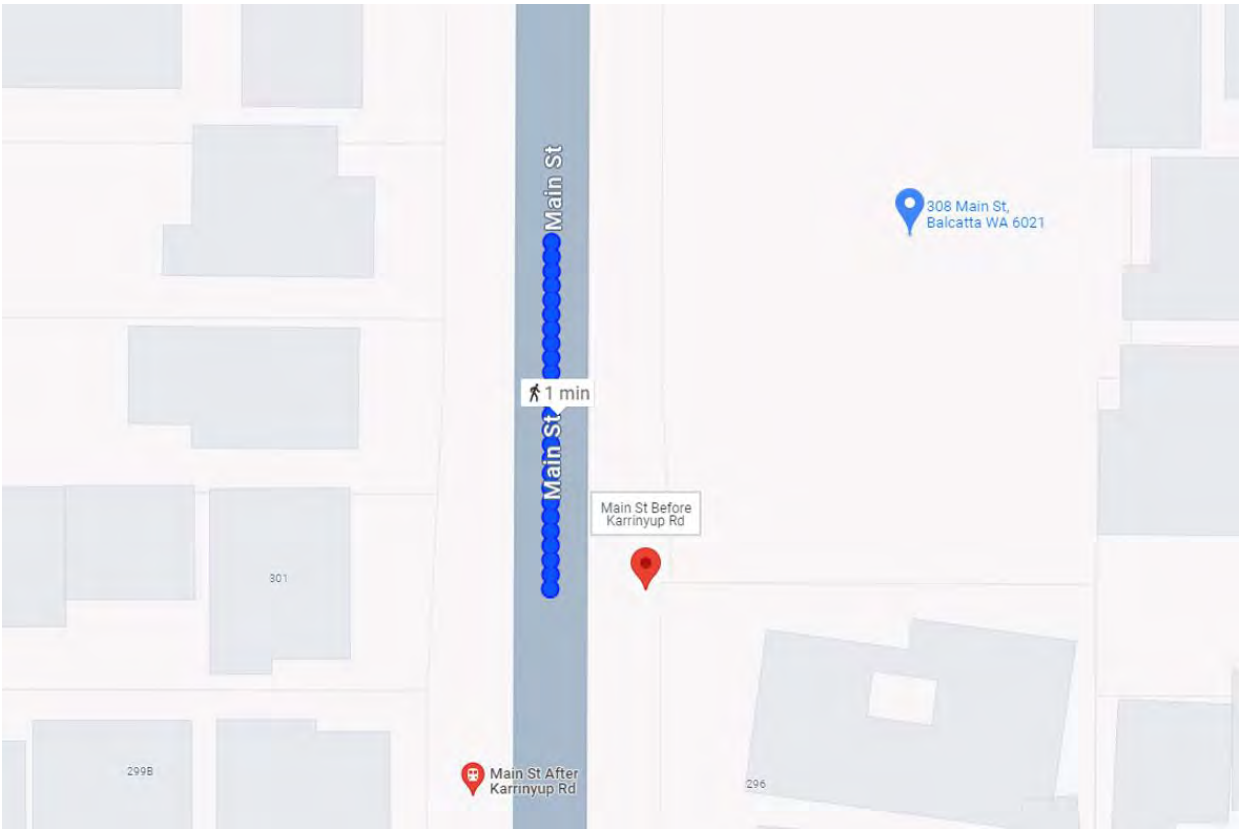

Figure 3 Proposed Development to Public Transport Bus Stop Walking Route *source: Google Maps*

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Main Street

Main Street is a main road that travels in the north-south direction. Main Street facilitates two lane, two-way traffic throughout via marked lanes with a double centre line marked median and provides no kerbside parking on both sides of the road and has a posted speed limit of 60 km/hr.

Figure 4 Main Street near the Frontage Facing South *source: Google Maps*

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PROPOSED DEVELOPMENT

The proposed development for site 308 Main Street, Balcatta WA 6021 is for a Child Care Centre.

Through observation of site plans and information from the client, the following information is provided:

Proposed Operating Hours

7:00am – 6:30pm Monday to Friday.

Expected Peak Periods

7:30am – 8:30am and 4:30pm – 5:30pm Monday to Friday.

Children

The following number of children are expected daily:

Babies: 20

Toddlers: 39

Preschoolers: 35

Staff

There will be a maximum of 19 staff on site at any one time.

Car Parking Spaces

There are 21 car spaces proposed on site including 1 accessible space.

Leasable Floor Area

The subject site has approximately 658m^2 of leasable floor area.

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In accordance with the *WAPC TIA Guidelines Volume 4 Individual Developments* report, it is typical for Child Care Centres (class as Schools) land uses that have 10-100 children attending to have a vehicle peak hour range of 10 – 100 vehicle trips. As the number of peak hour vehicle trips is anticipated to be below 100 trips, a traffic impact statement is warranted.

Provision for Service Vehicles

As shown in the site plan in ***Appendix A*** it is acknowledged that the service vehicles and parents will enter the site from Main Street through the western accessway. The site is expected to accommodate light vehicles. The largest vehicle expected to access the site will be a 6.4m SRV waste collection vehicle.
NOTE: All waste collection will be done after hours when the car park is empty, allowing the vehicle to turn on site and exit the site in a forward direction. Swept path diagrams for this vehicle are shown in ***Appendix B***.

Daily Traffic Volumes and Vehicle Types

The traffic generation rates for a Child Care Centre are obtained from *RMS Guide to Traffic Generating Developments* and are shown below:

Table 3.6
Traffic generation rates

Centre Type	Peak Vehicle Trips / Child		
	7.00-9.00am	2.30-4.00pm	4.00-6.00pm
Pre-school	1.4	0.8	-
Long-day care	0.8	0.3	0.7
Before/after care	0.5	0.2	0.7

Figure 5 Typical Land Use Vehicle Trip Rates *source: RMS Guide to Traffic Generating Developments*

As the proposed development is classed as 'Long-day care, the anticipated AM peak hour vehicle trip rate is 75 vehicle trips. The anticipated PM peak hour vehicle trip rate is 66 trips. Evident by these rates, the proposed development is expected to generate a low to medium level of vehicle trips which will have a minor impact on the existing traffic conditions.

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Traffic Management on the Frontage Streets

Road Width/Number of Lanes

The site has 1 main frontage. The frontage on Main Street contains 4 marked lanes (2 northbound and 2 southbound). The widths of each lane is approximately 3.2m wide. The frontage can accommodate light vehicles travelling into and out of the site.

Footpaths/Cycleways

Pedestrians have suitable access to the site via pedestrian footpaths available along the Main Street site boundary.
Site access however for cyclists is not ideal as there are no dedicated cycling lanes present along the front of the site.

Any Parking Provision or Restrictions

It is acknowledged that there are no dedicating on-street parking spaces available along Main Street however, it is recognized that the site has an abundance of on-site parking spaces that are available for staff and parents for child drop off and pick up.

Posted Traffic Speed

The frontage of the site has a posted speed limit of 60km/hr.

Intersections and Type of Control

When observing 100m north and south of the site, there are no intersections present along Main Street.

Access Driveways to Properties

Along Main Street, 100m north from the access to the site, there are 4 accessways on the eastern side and 1 accessway on the western side into neighbouring lots. 100m south from the access to the site, there is 1 accessway on the eastern side and 4 accessways on the western side into neighbouring lots.
The vehicle movements generated from the proposed development will have minimum impact on the existing traffic condition of these roads as the surrounding developments are expected to have low traffic movements throughout the day.

Public Transport Access

Assessing the site locality, the nearest public transport service available is a 1 minute walk from the site.

Bicycle Access

It is noted that there are 2 bicycle parking spaces that are available on-site.

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CROSS UTILISATION TRIPS

Considering the land use of the proposed development and the locality, it is expected that trips to and from the development will be direct.

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CONCLUSIONS

Based on the assessment presented in this report, it is considered that:

- The proposed development for the site at 308 Main Street, Balcatta WA 6021 is for a Child Care Centre.

- The site has very good access to public transport services. Assessing the site locality, the closest public transport stop to the site is the Main Street before Karrinyup Road bus stop which is approximately 33m away and is a 1-minute walk.

- Considering the proposed site location and land use, it is likely that all trips to and from the site will be direct.

- The proposed development will generate additional, but low levels of trips throughout the day. It is expected that these trips can be accommodated along Main Street without affecting traffic performance or increasing any delays or queues.

In conclusion, this study indicates that the development is not envisaged to have adverse impacts on the surrounding traffic or parking conditions. As such, the development should be endorsed in a traffic and parking context.

Report prepared by:

Vadi Vencatachellum
Senior Traffic Engineer
BE Civil Engineering

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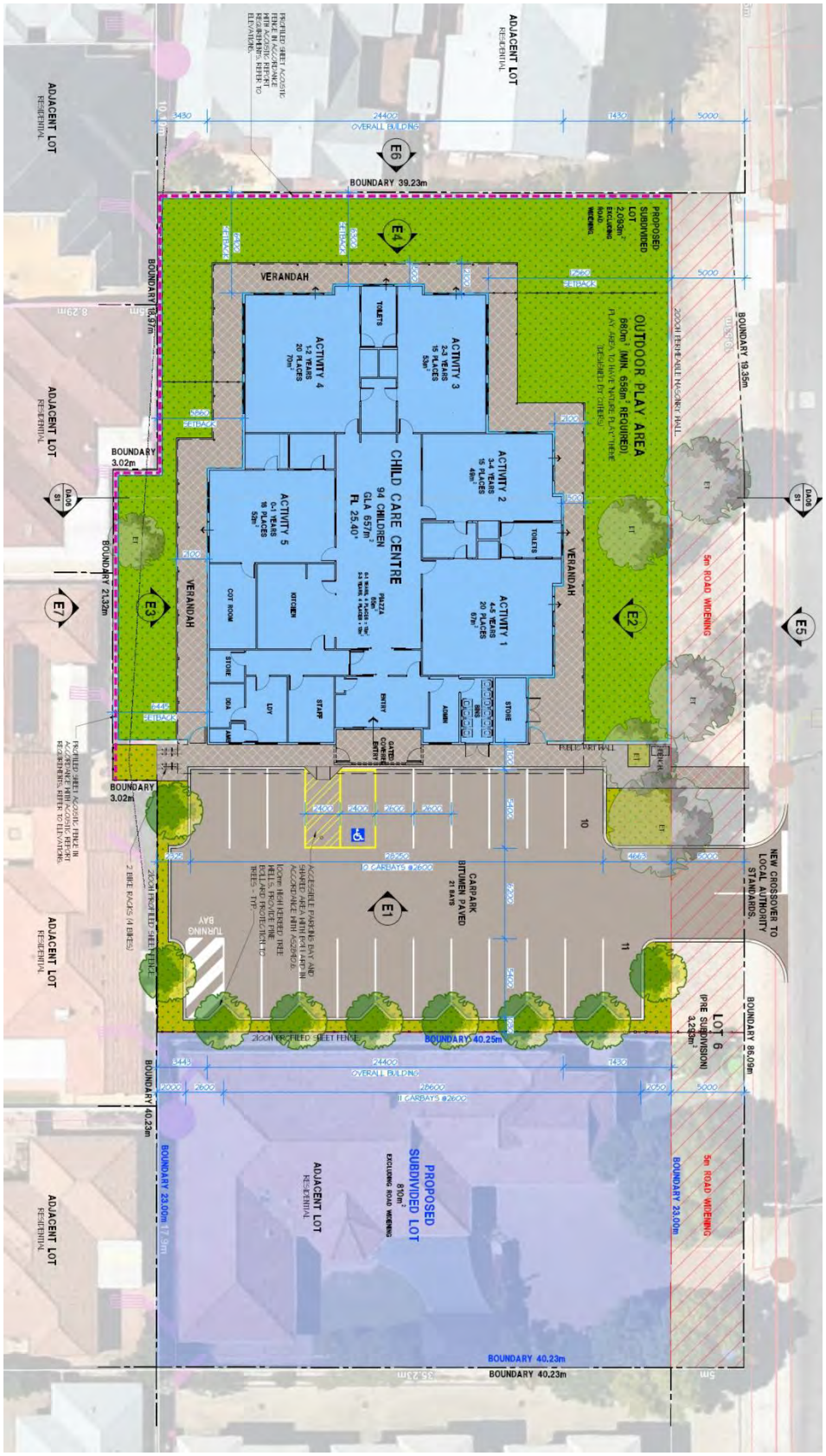
APPENDIX A: PROPOSED SITE PLAN



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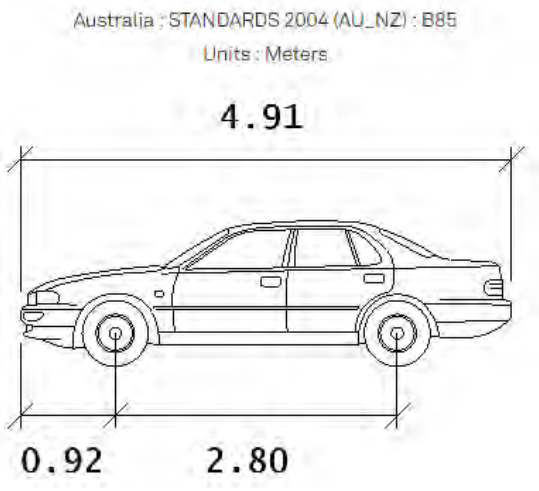
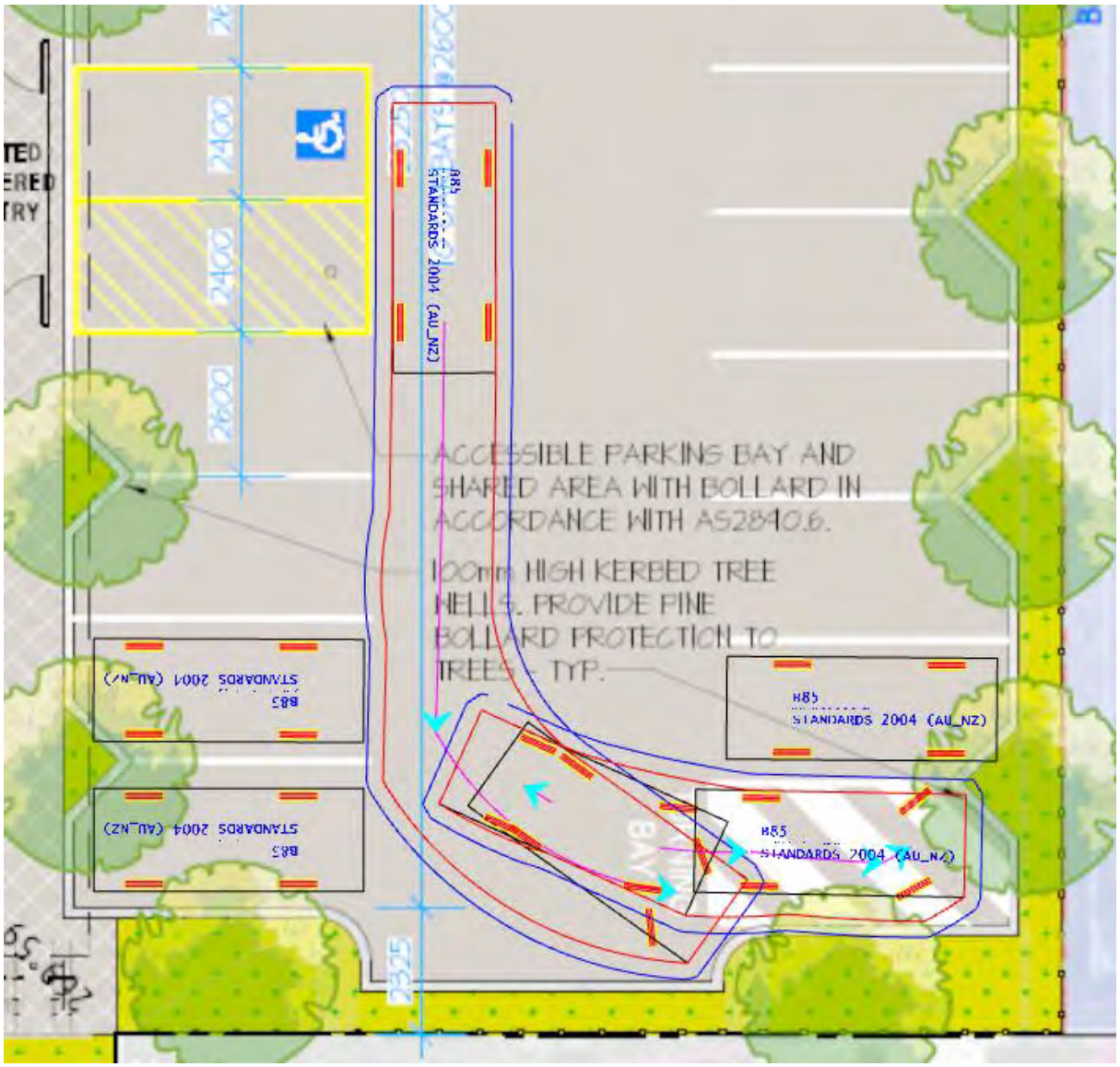
APPENDIX B: SWEPT PATH DIAGRAMS





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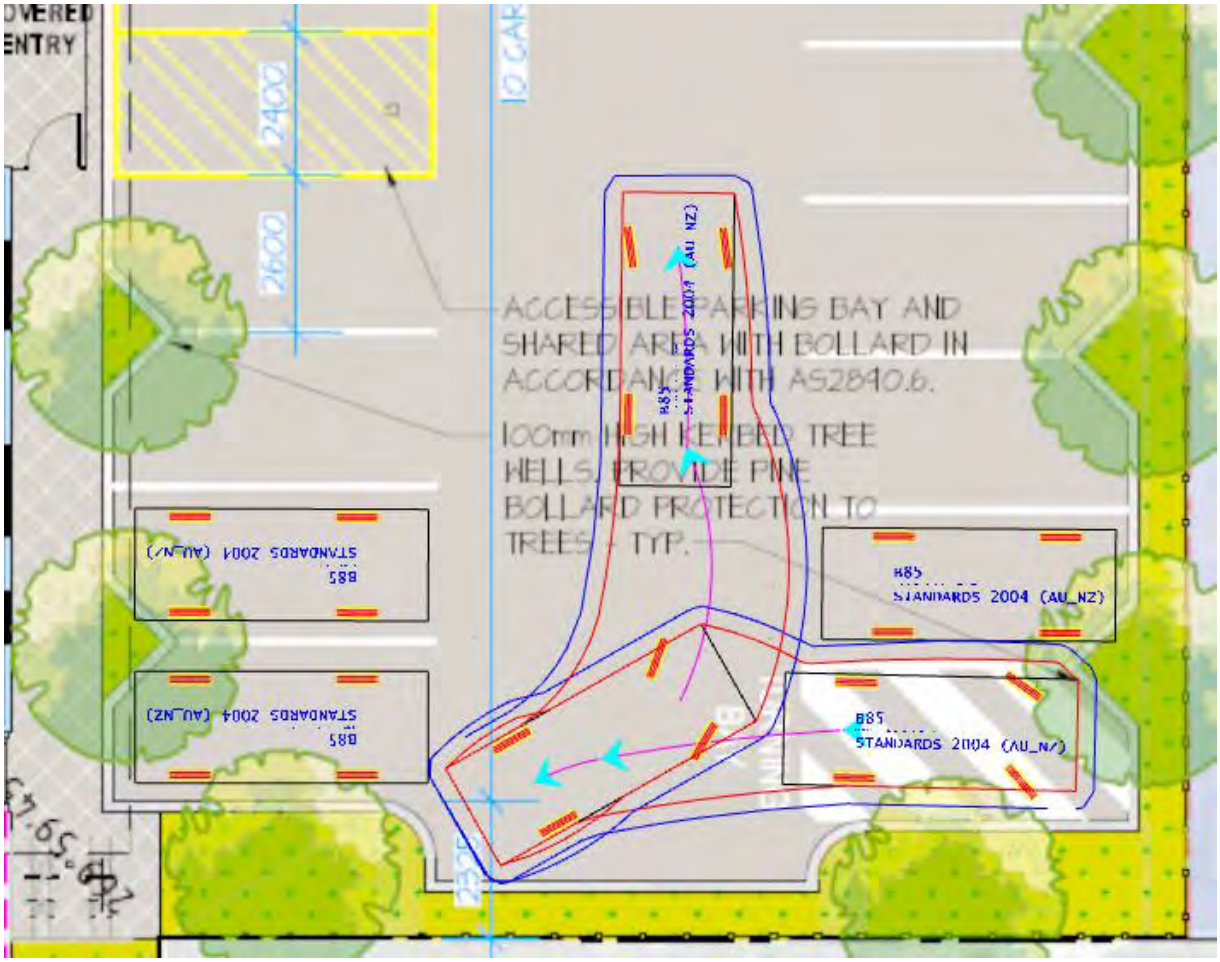

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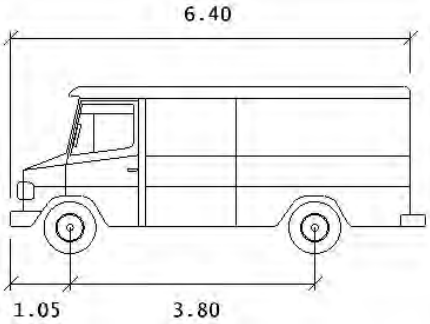
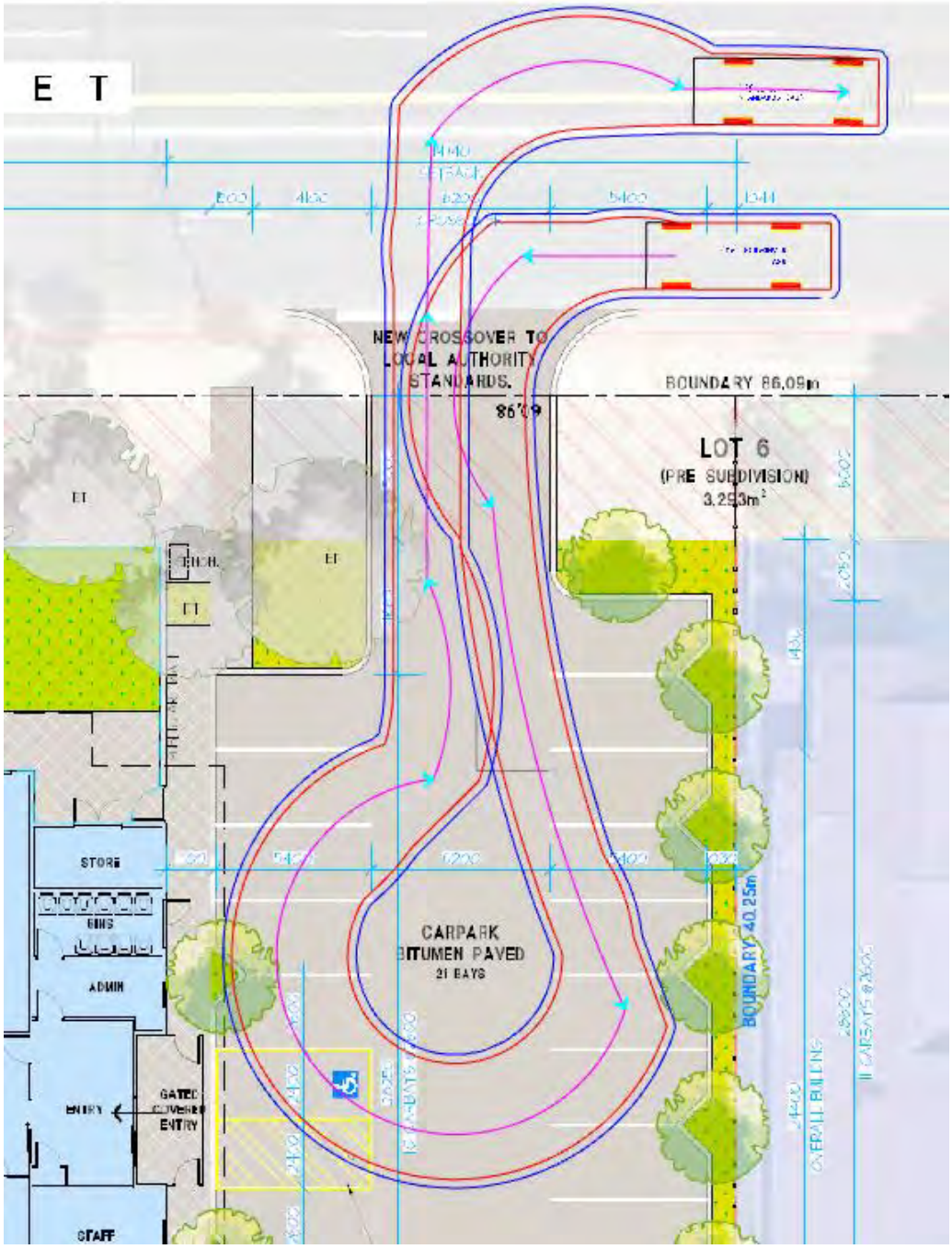
Units : Meters





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Attachment 7c. Acoustic Report recieved 23 August 204

HERRING STORER ACOUSTICS

PROPOSED CHILDCARE CENTRE
LOT 6, 308 MAIN STREET
BALCATTA

ENVIRONMENTAL ACOUSTIC ASSESSMENT

JULY 2024

OUR REFERENCE: 32985-2-24220

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ENVIRONMENTAL ACOUSTIC ASSESSMENT

PROPOSED CHILD CARE CENTRE
BALCATTA

Job No: 24220

Document Reference: 32985-2-24220

FOR

PROJECT CONSTRUCTION

DOCUMENT INFORMATION			
Author:	Geoff Harris	**Checked By:**	Paul Daly
Date of Issue:	4 July 2024		

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1. INTRODUCTION

Herring Storer Acoustics were commissioned by Project Construction to undertake an acoustic assessment of noise emissions associated with the proposed child care centre to be located at Lot 6, 308 Main Street, Balcatta.

The report considers noise received at the neighbouring premises from the proposed development for compliance with the requirements of the *Environmental Protection (Noise) Regulations 1997.* This report considers noise emissions from:

- Children playing within the outside play areas of the centre.
- Mechanical Plant

We note that from information received from DWER, the bitumised area would be considered as a road, thus noise relating to motor vehicles is exempt from the *Environmental Protection (Noise) Regulations 1997*. We note that these noise sources are rarely critical in the determination of compliance. However, as requested by council and for completeness, they have been included in the assessment, for information purposes only.

For information, a plan of the proposed development is attached in Appendix A.

2. SUMMARY

Noise received at the neighbouring residences from the outdoor play areas would comply with the requirements of the *Environmental Protections (Noise) Regulations 1997* for hours of operation.

Noise from the mechanical services has also been assessed to comply with the relevant criteria given the implementation of a barrier. However, as the design of the mechanical services has not been undertaken at this stage of the project, it is recommended that the mechanical services design be reviewed for compliance with the Regulatory requirements.

It is noted that noise associated with cars movements and cars starting are exempt from complying with the Regulations. However, noise emissions from car doors is not strictly exempt from the Regulations. Noise received at the existing neighbouring residences from these noise sources would comply with the Regulatory requirements, at all times given the conditions listed below.

Thus, noise emissions from the proposed development, would be deemed to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* for the proposed hours of operation, with the inclusion of the following:

1. A solid continuous 2000mm barrier to the south. 1800mm elsewhere. For child care centres, a colorbond fence is sufficient. Note, these are the acoustic requirements for barriers, and maybe superseded by taller barriers or barriers with a higher surface density if required by other design aspects.

2. Mechanical plant would need to be barriered by a barrier at least 500mm above the top of the plant.

3. No car bays would need to be restricted.

3. CRITERIA

The allowable noise level at the surrounding locales is prescribed by the *Environmental Protection (Noise) Regulations 1997*. Regulations 7 & 8 stipulate maximum allowable external noise levels. For highly sensitive area of a noise sensitive premises this is determined by the calculation of an influencing factor, which is then added to the base levels shown below in Table 3.1. The influencing factor is calculated for the usage of land within two circles, having radii of 100m and 450m from the premises of concern. For other areas within a noise sensitive premises, the assigned noise levels are fixed throughout the day, as listed in Table 3.1.

TABLE 3.1 - BASELINE ASSIGNED OUTDOOR NOISE LEVEL

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise sensitive premises: highly sensitive area	0700 - 1900 hours Monday to Saturday (Day)	45 + IF	55 + IF	65 + IF
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day)	40 + IF	50 + IF	65 + IF
	1900 - 2200 hours all days (Evening)	40 + IF	50 + IF	55 + IF
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	35 + IF	45 + IF	55 + IF
Commercial Premises	All Hours	60	75	80
Noise sensitive premises: any area other than highly sensitive area	All hours	60	75	80

Note: L_{A10} is the noise level exceeded for 10% of the time.
L_{A1} is the noise level exceeded for 1% of the time.
L_{Amax} is the maximum noise level.
IF is the influencing factor.

Under the Regulations, a highly sensitive area means that area (if any) of noise sensitive premises comprising –

(a) A building, or a part of a building, on the premises that is used for a noise sensitive purpose; and

(b) Any other part of the premises within 15 m of that building or that part of the building.

It is a requirement that received noise be free of annoying characteristics (tonality, modulation and impulsiveness), defined below as per Regulation 9.

"impulsiveness" means a variation in the emission of a noise where the difference between L_{Apeak} and $L_{Amax(Slow)}$ is more than 15 dB when determined for a single representative event;

"modulation" means a variation in the emission of noise that –

(a) is more than 3 dB L_{AFast} or is more than 3 dB L_{AFast} in any one-third octave band;

(b) is present for more at least 10% of the representative assessment period; and

(c) is regular, cyclic and audible;

"tonality" means the presence in the noise emission of tonal characteristics where the difference between –

(a) the A-weighted sound pressure level in any one-third octave band; and

(b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands,

is greater than 3 dB when the sound pressure levels are determined as $L_{Aeq,T}$ levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as L_{ASlow} levels.

Where the noise emission is not music, if the above characteristics exist and cannot be practicably removed, then any measured level is adjusted according to Table 3.2 below.

TABLE 3.2 - ADJUSTMENTS TO MEASURED LEVELS

Where **tonality** is present	Where **modulation** is present	Where **impulsiveness** is present
+5 dB(A)	+5 dB(A)	+10 dB(A)

Note: These adjustments are cumulative to a maximum of 15 dB.

The neighbouring locations have been identified as

- R1 – 314 Main Street (North), Residential
- R2 – 15 Archibald Road, Residential
- R3 – 11 Archibald Road (East), Residential
- R4 – 9 Archibald Road (East), Residential
- R5 – 296 Main Street (South), Residential
- R6 – Residents to the West of Main Street

All locations would have an influencing factor of +6 dB due to proximity to Main Street (23,520 vpd; 2018)

TABLE 3.3 - ASSIGNED OUTDOOR NOISE LEVEL

Premises Receiving Noise	**Time of Day**	**Assigned Level (dB)**		
		L_{A10}	**L_{A1}**	**L_{Amax}**
R1-R6	0700 - 1900 hours Monday to Saturday (Day)	51	61	71
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day)	46	56	71
	1900 - 2200 hours all days (Evening)	46	56	61
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	41	51	61

Note: L_{A10} is the noise level exceeded for 10% of the time.
L_{A1} is the noise level exceeded for 1% of the time.
L_{Amax} is the maximum noise level.

4. PROPOSAL

From information supplied, we understand that the child care centre normal hours of operations would be as follows

Staff –	0630 to 1900
Customers	0700 to 1830
Outdoor Play Area	0700 to 1800

Similarly, mechanical plant would possibly operate all hours of the day.

5. MODELLING

To assess the noise received at the neighbouring premises from the proposed development, noise modelling was undertaken using the noise modelling program SoundPlan.

Calculations were carried out using the DWER's weather conditions, which relate to worst case noise propagation, as stated in the Department of Environment Regulation *"Draft Guidance on Environmental Noise for Prescribed Premises"*. These conditions include winds blowing from sources to the receiver(s).

Calculations were based on the sound power levels used in the calculations are listed in Table 5.1, as well as plans and contours provide by the client.

TABLE 5.1 – SOUND POWER LEVELS

Item	Sound Power Level, dB(A)
Children Playing	<24 months 78 (per 10 children) Between 24 and 36 months 85 (per 10 children) >36 months 87 (per 10 children)
Car Moving in Car Park	79
Car Starting	85
Door Closing	87
Kitchen/Bathroom Exhaust (3x)	74 each
Air conditioning condensing Unit (3x)	71 each

Notes:

1 Acoustic modelling of outdoor play noise was made, based on 94 children within the outdoor play area (ie worst case scenario) broken down as follows:

0-1 years – 20 places
1-2 years – 20 places
2-3 years – 19 places
3-4 years – 15 places
4+ years – 20 places

2 The noise level for the mechanical plant has been based on the sound power levels used for previous assessment of child care centres. From other studies, we understand that the noise associated with the condensing units would be conservative.

3 For this child care centre, the mechanical plant units have been considered roof mounted with a barrier at least 500mm above top of units.

4 A solid continuous 2000mm barrier to the south. 1800mm elsewhere. For child care centres, a colorbond fence is sufficient. Note, these are the acoustic requirements for barriers, and maybe superseded by taller barriers or barriers with a higher surface density if required by other design aspects.

5 To determine the restriction to the parking, a point noise source was located in each car bay.

6 Modelling shows that noise received at the neighbouring residences from car doors closing would comply with the assigned noise level for both day and night period.

7 With only staff arriving before 7am, there would be no car starts before 7am.

8 Calculations were undertaken for the receivers at 1.5 metres above the ground level.

9 Noise modelling was undertaken to a number of different receiver locations for each of the neighbouring residences. However, to simplify the assessment, only the noise level in the worst case location (ie highest noise level), have been listed.

6. ASSESSMENT

The tables below show the assessment of noise emissions of concern from the operation. Standard building construction will be sufficient to ensure that noise from inside the building will meet the regulations.

The resultant noise levels at the neighbouring residence from children playing outdoors and mechanical plant are tabulated in Table 6.1.

From previous measurements, noise emissions from children playing does not contain any annoying characteristics, however mechanical plant emissions would be considered tonal and attract a +5 dB(A) Penalty. Noise emissions from outdoor play needs to comply with the assigned L_{A10} noise levels.

TABLE 6.1 - ACOUSTIC MODELLING RESULTS FOR L_{A10} CRITERIA OUTDOOR PLAY AREAS AND MECHANICAL PLANT

Neighbouring Premises	Calculated Noise Level (dB(A))	
	Children Playing	Mechanical Plant
R1 Residential	36	30 (35)
R2 Residential	48	36 (41)
R3 Residential	48	36 (41)
R4 Residential	48	33 (38)
R5 Residential	50	34 (39)
R6 Residential	50	33 (38)

( ) Includes +5 dB(A) penalty for tonality

With regards to noise associated with cars within the parking area, resultant noise levels are tabulated in Tables 6.2 and 6.3. It is noted that noise emissions from a moving car being an L_{A1} noise level, with noise emissions from cars starting and doors closing being an L_{Amax} noise level.

Based on the definitions of tonality, noise emissions from car movements and car starts, being an L_{A1} and L_{AMax} respectively, being present for less than 10% of the time, would not be considered tonal. Thus, no penalties would be applicable, and the assessment would be as listed in Table 6.2 (Car Moving) and Table 6.3 (Car Starting). However, noise emissions from car doors closing could be impulsive, hence the +10dB penalty has been included in the assessment.

TABLE 6.2 - ACOUSTIC MODELLING RESULTS L_{A1} CRITERIA
CAR MOVING

Neighbouring Premises	Calculated Noise Level (dB(A))
R1 Residential	45
R2 Residential	49
R3 Residential	37
R4 Residential	32
R5 Residential	31
R6 Residential	46

TABLE 6.3 - ACOUSTIC MODELLING RESULTS L_{Amax} CRITERIA
CAR STARTING / DOOR CLOSING

Neighbouring Premises	Calculated Noise Level (dB(A))			
	Car Start		Car Door	
	Day Period	Night Period	Day Period	Night Period
R1 Residential	52	N/A	51 [61]	51 [61]
R2 Residential	48	N/A	48 [58]	48 [58]
R3 Residential	40	N/A	41 [51]	41 [51]
R4 Residential	33	N/A	31 [41]	31 [41]
R5 Residential	33	N/A	32 [42]	32 [42]
R6 Residential	46	N/A	42 [52]	42 [52]

[ ] Includes +10 dB(A) penalty for impulsiveness.

Tables 6.4 to 6.9 summarise the applicable Assigned Noise Levels, and assessable noise level emissions for each identified noise.

TABLE 6.4 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS
OUTDOOR PLAY (DAY PERIOD)

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Residential	36	51	Complies
R2 Residential	48	51	Complies
R3 Residential	48	51	Complies
R4 Residential	48	51	Complies
R5 Residential	50	51	Complies
R6 Residential	50	51	Complies

TABLE 6.5 – ASSESSMENT OF L_{A10} NIGHT PERIOD NOISE LEVEL EMISSIONS
MECHANICAL PLANT

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Residential	35	41	Complies
R2 Residential	41	41	Complies
R3 Residential	41	41	Complies
R4 Residential	38	41	Complies
R5 Residential	39	41	Complies
R6 Residential	38	41	Complies

TABLE 6.6 – ASSESSMENT OF L_{A1} NIGHT PERIOD NOISE LEVEL EMISSIONS CAR MOVEMENTS

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Residential	45	51	Complies
R2 Residential	49	51	Complies
R3 Residential	37	51	Complies
R4 Residential	32	51	Complies
R5 Residential	31	51	Complies
R6 Residential	46	51	Complies

TABLE 6.7 – ASSESSMENT OF L_{Amax} DAY PERIOD NOISE LEVEL EMISSIONS CAR STARTING

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Residential	52	71	Complies
R2 Residential	48	71	Complies
R3 Residential	40	71	Complies
R4 Residential	33	71	Complies
R5 Residential	33	71	Complies
R6 Residential	46	71	Complies

TABLE 6.8 – ASSESSMENT OF L_{Amax} DAY PERIOD NOISE LEVEL EMISSIONS CAR DOOR

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Residential	61	71	Complies
R2 Residential	58	71	Complies
R3 Residential	51	71	Complies
R4 Residential	41	71	Complies
R5 Residential	42	71	Complies
R6 Residential	52	71	Complies

TABLE 6.9 – ASSESSMENT OF L_{Amax} NIGHT PERIOD NOISE LEVEL EMISSIONS CAR DOOR

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Residential	61	61	Complies
R2 Residential	58	61	Complies
R3 Residential	51	61	Complies
R4 Residential	41	61	Complies
R5 Residential	42	61	Complies
R6 Residential	52	61	Complies

7. CONCLUSION

Noise received at the neighbouring residences from the outdoor play area would comply during the day period, thus, outdoor play would be limited to the day period (ie – after 7am).

Noise received at the neighbouring residences from the mechanical plant would comply at all hours, when barriered.

Noise received at the neighbouring residences from noise associated with vehicles would also comply at all hours.

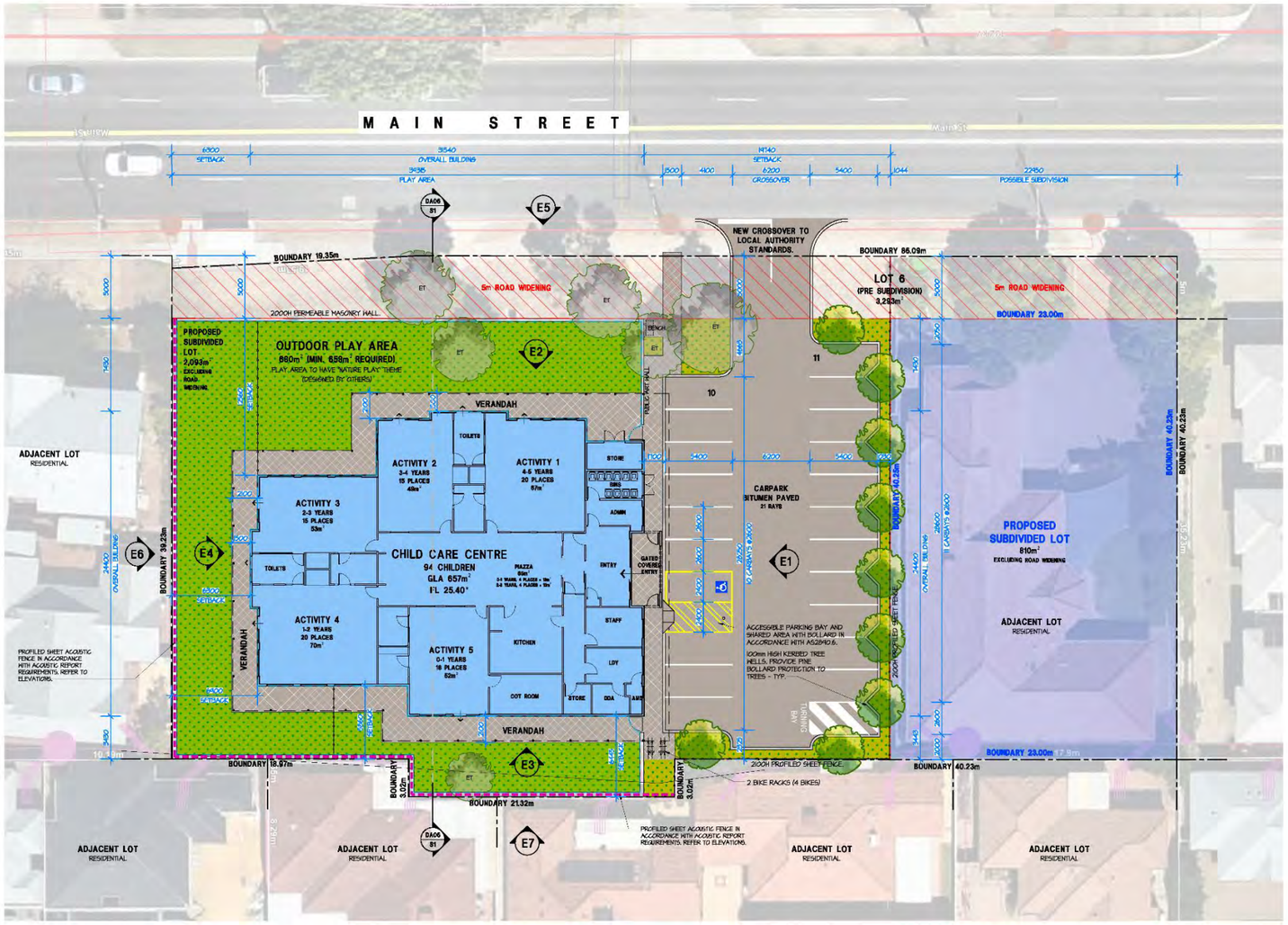
Thus, noise emissions from the proposed development, would be deemed to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* for the proposed hours of operation, with the inclusion of the following:

1. A solid continuous 2000mm barrier to the south. 1800mm elsewhere. For child care centres, a colorbond fence is sufficient. Note, these are the acoustic requirements for barriers, and maybe superseded by taller barriers or barriers with a higher surface density if required by other design aspects.
2. Mechanical plant would need to be barriered by a barrier at least 500mm above the top of the plant.
3. No restriction to car parking during the night time period.

Finally, it is recommended to adopt best practices in managing a child care centre to reduce noise, including but not limited to no amplified music to be played outside, and favouring soft finishes in the outdoor play area.

APPENDIX A

PLANS



CARPARKING

USE	VALUE	CALC	REQUIRED
CHILD CARE	94 CHILDREN	1/5 PLACES	19
TOTAL PROVIDED			21

LEGEND:

- HARDSTAND PAVEMENT.
- PAVED FOOTPATHS.
- SELECTED LANDSCAPING. PLAY AREA TO BE DESIGNED BY OTHERS.
- NEW SELECTED SHADE TREE IN ACCORDANCE WITH LOCAL AUTHORITY GUIDLINES.
- ET. EXISTING TREE RETAINED. REFER TO DEMO PLAN FOR EXTENT OF REMOVED TREES.
- EXTENT OF 2100mm HIGH PROFILED SHEET ACOUSTIC WALL. TO BE IN ACCORDANCE WITH ACOUSTIC REPORT REQUIREMENTS. REFER TO ELEVATIONS FOR MORE INFORMATION.

NOTES:

- FLOOR LEVEL AND STORM WATER IS INDICATIVE ONLY. FINAL DESIGN TO BE PREPARED BY A CIVIL ENGINEER AS PART OF BUILDING PERMIT APPLICATION.

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A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH
-				
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A1 SHEET

PROPOSED SITE PLAN

SCALE 1:200

N

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date -	30.05.24
Design -	JJR
Drawn -	JJR
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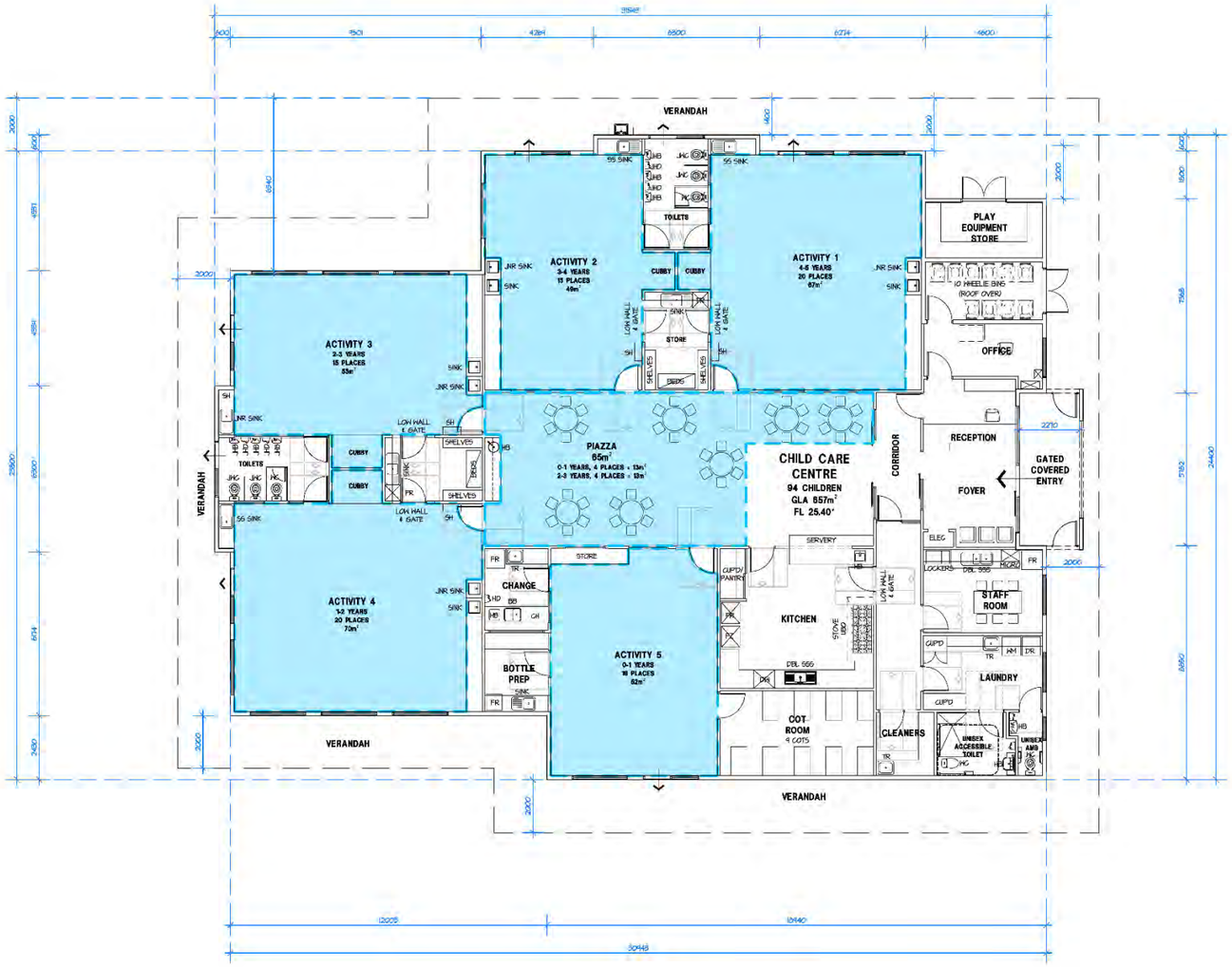
LEGEND

FHR	FIRE HOSE REEL	SH	SHELF - INTERNAL - 300 L x 300 H EXTERAL - 400 L x 300 H
TR	WASH TROUGH	FR	FRIDGE
HB	HAND BASIN	FZ	FREEZER
JHB	JUNIOR HAND BASIN	MW	MICROWAVE
WC	TOILET PAN	WM	CLOTHES WASHING MACHINE (TOP LOADER)
JWC	JUNIOR TOILET PAN	DRY	CLOTHES DRYER (CONDENSING)
HD	HAND DRYER	DBL SSS	DOUBLE BOWL STAINLESS STEEL SINK
JHD	JUNIOR HAND DRYER	DW	DISHWASHER (COMMERCIAL)
BB	BABIES BATH	STOVE	STOVE TOP (900mm 6 ZONE)
CH	CHANGE TABLE	UBO	UNDER BENCH OVEN (900mm)



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A1 SHEET

PROPOSED FLOOR PLAN

SCALE 1:100

N

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date -	30.05.24
Design -	JJR
Drawn -	JJR
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Dwg -	DA03
Rev -	A

PROPOSED CHILD CARE CENTRE PROJECT CONSTRUCTION

LOT 6, 308 MAIN STREET BALCATTA

STATE PLANNING POLICY 5.4 NOISE MANAGEMENT PLAN

JULY 2024

OUR REFERENCE: 32986-2-24220

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SPP 5.4 – NOISE MANAGEMENT PLAN

CHILD CARE CENTRE – BALCATTA

Job No: 24220

Document Reference: 32986-2-24220

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APPENDICIES

A	Child Care Plans
B	Acoustic Requirements
C	MRWA Traffic Flow Data

1. INTRODUCTION

Herring Storer Acoustics was commissioned to undertake an acoustic assessment for the proposed child care centre, located at Lot 6, 308 Main Street, Balcatta with regards to vehicles travelling along Main Street. The acoustic assessment is to comply with the requirement of State Planning Policy 5.4 *"Road and Rail Transport Noise"* (SPP5.4). As part of this assessment, the following was carried out:

- Determine by modelling, the noise that would be received at child care centre from vehicles travelling on Main Street.
- Assess the predicted noise levels for compliance with the appropriate criteria.
- If exceedances are predicted, comment on possible noise amelioration options for compliance with the appropriate criteria.

For information, plans for the child care centre are attached in Appendix A.

2. SUMMARY

It is noted that the child care centre is only occupied during the day period, thus under State Planning Policy 5.4 *"Road and Rail Transport Noise"* only the criteria for the day period is applicable.

The results of the acoustic assessment indicate that noise received at the development from future traffic, exceed external noise level criteria. Therefore, noise amelioration listed in Appendix B, are required.

Although under the Policy, there are no requirements with regards to the outdoor play areas, noise received within these areas does need to be considered to provide at practicable level external noise level. There are outdoor play areas on the opposite side of the development to the road have a noise level of 46 dB $L_{AEq(Day)}$, and as a result, this criteria is met.

3. CRITERIA

Road traffic noise received at a sensitive premise needs to comply with the requirements of State Planning Policy 5.4 "*Road and Rail Transport Noise*". Under this policy, for non-residential noise sensitive premises, internal noise levels should meet the design sound levels as listed in Table 1 of AS/NZ 2107:2000 "Acoustics – Recommended design sound levels and reverberation times for building interiors". Under AS 2017, the internal criteria would:

Sleep Rooms	-	$L_{Aeq(Day)}$ of 35 dB(A).
Play/Group Rooms	-	$L_{Aeq(Day)}$ of 40 dB(A).
Staff Room	-	$L_{Aeq(Day)}$ of 45 dB(A).
Office	-	$L_{Aeq(Day)}$ of 40 dB(A).
Reception	-	$L_{Aeq(Day)}$ of 45 dB(A).
Work areas (eg: Laundry)	-	$L_{Aeq(Day)}$ of 50 dB(A).

We also note that additional to the above, under Section 6.1 of the Policy, "a reasonable degree of acoustic amenity for outdoor living areas on each residential lot." Under the Policy, an outdoor living area is as defined in the State Planning Policy 3.1 Residential Design Codes. The definition for an outdoor living area is as per below:

Outdoor living area

The area external to a **single house**, **grouped** or **multiple dwelling** to be used in conjunction with that **dwelling** such that it is capable of active or passive use and is readily accessible from the dwelling.

However, the Policy also states that "For non-residential noise-sensitive developments, for example schools and child care centres the design of outdoor areas should take into consideration the noise targets."

Finally, it is also noted that under the Policy, "It is recognized that in some instances, it may not be reasonable and/or practicable to meet the outdoor noise targets". Thus, for child care centres, compliance with the "Target" noise levels within the outdoor play areas is not a requirement under the Policy, however, noise received at within the outdoor area still need to be considered.

4. MEASUREMENTS AND OBSERVATIONS

The noise measurements were conducted on 30 November 2023 for Main Street for a short term period during peak hour to determine the L_{A10} noise level. Utilising this measurement, reference to the DEFRA publication has been sought and the difference between the $L_{A10,18hr}$ and the $L_{Aeq,8hr}$ and the $L_{Aeq,16hr}$ has been calculated. The results of the measurement and the determination of the $L_{Aeq(Day)}$ and $L_{Aeq(Night)}$ are shown in Table 3.1.

Noise measurements were conducted with a Larson Davis 831 Sound Level Meter. The Sound Level Meter was calibrated prior to and after use with a Bruel and Kjaer 4230 Calibrator. All equipment used is currently NATA laboratory calibrated. Calibration certificates are available on request.

TABLE 4.1 – MEASURED NOISE LEVELS

Description	L_{A10} dB	L_{Aeq} dB
Main Street	71.3	67.7

5. MODELLING

To determine the noise levels from traffic on Main Street, acoustic modelling was carried out using Sound Plan, using the Calculation of Road Traffic Noise (CoRTN)[1] algorithms.

The input data for the model included:

- Topographical and cadastral data supplied by client (Shown in Appendix A).
- Traffic data as per Table 5.1 (Based on available information on MRWA Traffic Map, Attached in Appendix C).
- Adjustments as listed in Table 5.2.

1 *Calculation of Road Traffic Noise* UK Department of Transport 1987

TABLE 5.1 - NOISE MODELLING INPUT DATA

Parameter	Main Street (Current 2018)	Main Street (Future 2044)
Traffic Volumes	23,500	39,370 vpd
Percentage Traffic 0600 – 2400 hours (assumed)	94%	94%
Heavy Vehicles (%)	5.7%	5.7%
Speed (km/hr)	60 km/hr	60 km/hr
Road Surface	Chip Seal	Dense Graded Asphalt

TABLE 5.2 – ADJUSTMENTS FOR NOISE MODELLING

Description	Value
Façade Reflection Adjustment	+2.5 dB
Conversion from $L_{A10\ (18\ hour)}$ to $L_{Aeq\ (16\ hour)}$ (Day)	-3.6 dB

Conversion from $L_{A10(18\ hour)}$ to $L_{Aeq(16\ hour)}$ was conducted with the method detailed in the DEFRA publication – "*Method for Converting the UK Road Traffic Noise $L_{A10,18h}$ to the EU Noise Indices for Road Noise Mapping, ref: st/05/91/AGG04442"*

The future road traffic volumes were based on information provided by the MRWA traffic maps and by the MRWA ROM Department.

6. TRAFFIC NOISE ASSESSMENT

Using the data contained in Tables 3.1, 4.1 and 4.2 and the adjustments noted above, modelling was carried out under existing conditions for calibration. The Sound Plan model for the site has been set up for the 2044 scenario as defined in Table 4.1.

The noise requirements based on the above have been listed in Appendix B.

It is noted that these requirements pertain to acoustic requirements only, with regard to *State Planning Policy 5.4,* and may be superseded by other requirements (BAL, Thermal, etc).

7. CONCLUSION

In accordance with the WAPC Planning Policy 5.4, an assessment of the noise that would be received within the development of Lot 6, 308 Main Street, Balcatta, from vehicles travelling on Main Street has been undertaken.

In accordance with the Policy, the following would be the internal acoustic criteria applicable to this project:

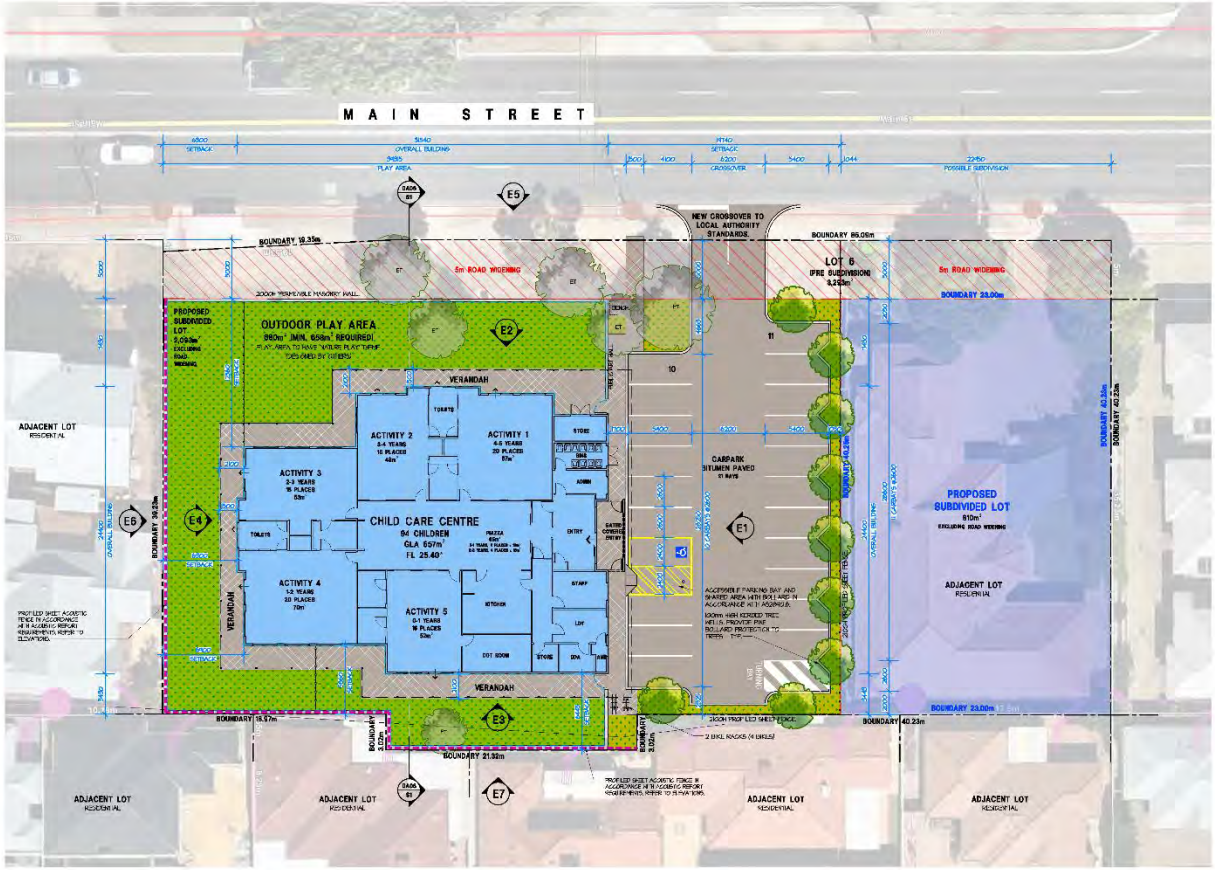
Sleep Rooms	-	$L_{Aeq(Day)}$ of 35 dB(A).
Play/Group Rooms	-	$L_{Aeq(Day)}$ of 40 dB(A).
Staff Room	-	$L_{Aeq(Day)}$ of 45 dB(A).
Office	-	$L_{Aeq(Day)}$ of 40 dB(A).
Reception	-	$L_{Aeq(Day)}$ of 45 dB(A).
Work areas (eg: Laundry)	-	$L_{Aeq(Day)}$ of 50 dB(A).

The results of the acoustic assessment indicate that noise received at the development from future traffic, exceed external noise level criteria. Therefore, noise amelioration listed in Appendix B, are required.

Although under the Policy, there are no requirements with regards to the outdoor play areas, noise received within these areas does need to be considered to provide at practicable level external noise level. There are outdoor play areas on the opposite side of the development to the road, that have a noise level of 46 dB $L_{AEq(Day)}$, and as a result, this criteria is met.

APPENDIX A

PLAN



CARPARKING

USE	VALUE	CALC	REQUIRED
CHILD CARE	94 CHILDREN	10 PLACES	9
TOTAL PROVIDED			21

LEGEND:

- HARDSCAPE/HARDSTAND.
- PAVED FOOTPATH.
- SELECTED LANDSCAPING. PLAY AREA TO BE DESIGNED BY OTHERS.
- NEW SELECTED SHADE TREE IN ACCORDANCE WITH LOCAL AUTHORITY GUIDELINES.
- EXISTING TREE RETAINED. REFER TO SITING PLAN FOR EXTENT OF REMOVED TREES.
- EXTENT OF 2.00m HIGH PROFILED SHEET ACOUSTIC WALL. TO BE IN ACCORDANCE WITH ACOUSTIC REPORT REQUIREMENTS. REFER TO ELEVATIONS FOR MORE INFORMATION.

NOTES:

1. FLOOR LEVEL AND STORM WATER IS INDICATIVE ONLY. FINAL DESIGN TO BE PREPARED BY A CIVIL ENGINEER AS PART OF BUILDING PERMIT APPLICATION.

HINDLEY & ASSOCIATES PTY LTD
BUILDING DESIGNERS

166 STIRLING HIGHWAY
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NO.	DATE	REVISION	DRAWN	CHECK
A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH

A1 SHEET

PROPOSED SITE PLAN
SCALE 1:200

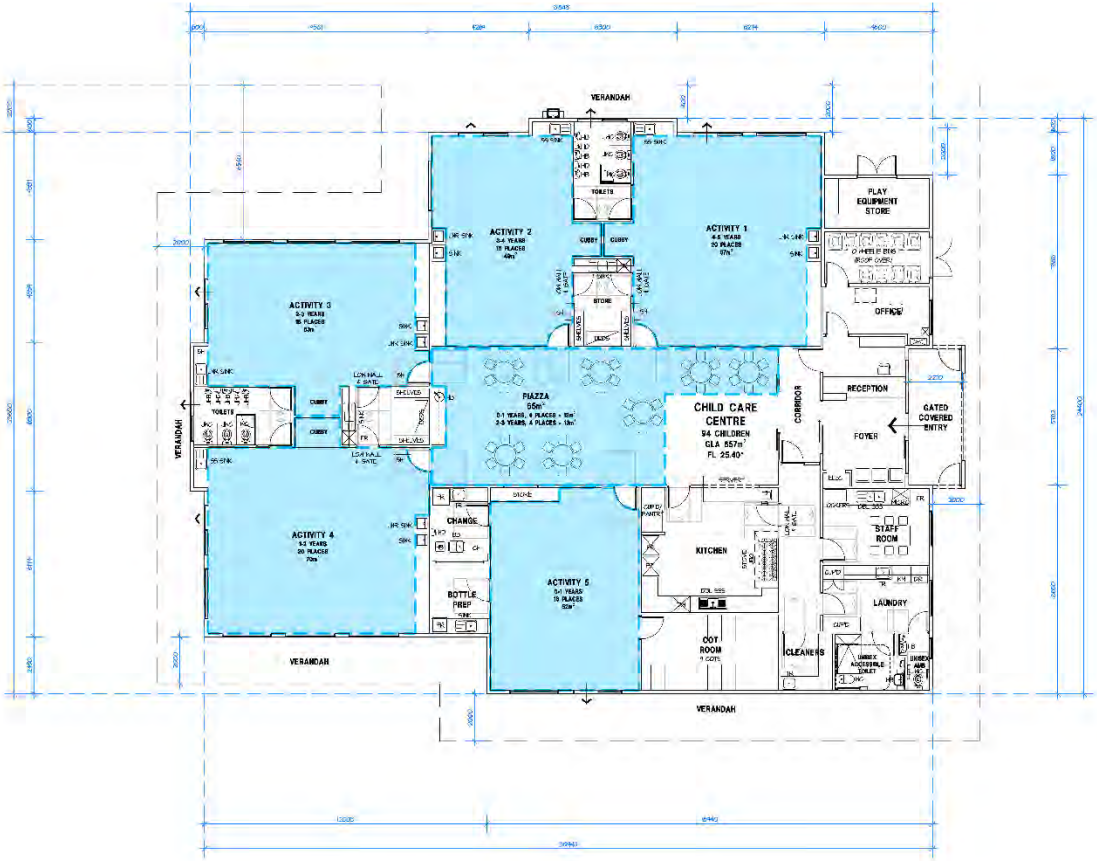
PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date	30.05.24
Design	JJR
Draw	JJR
Checked	CPH
Scale	1:200
Job No.	0873
Dwg	DA01
Rev	A

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024

LEGEND

FHR	FIRE HOSE REEL	SF	SHELF - MERBAU - 300 L x 300 H ENSIAL - 450 L x 300 H
TR	WASH TROUGH	FR	FRIDGE
WB	HAND BASIN	FZ	FREEZER
JHB	JUNIOR HAND BASIN	MW	MICROWAVE
HC	TOILET PAN	AH	CLOTHES WASHING MACHINE (TOP LOADER)
JHC	JUNIOR TOILET PAN	DRY	CLOTHES DRYER (CONDENSING)
HD	HAND DRYER	DB 355	DOUBLE BOWL STAINLESS STEEL SINK
JHD	JUNIOR HAND DRYER	DR	DISHWASHER (COMMERCIAL)
BT	BABIES BATH	STOVE	STOVE TOP (FOUR ELEMENTS)
CP	CHANGE TABLE	OO	UNDER BENCH OVEN (600mm)



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NO.	DATE	REVISION	DRAWN	CHECKED
A	23.07.24	ISSUED FOR DEVELOPMENT APPROVAL	JJR	CPH

A1 SHEET

PROPOSED FLOOR PLAN
SCALE 1:100

PROPOSED CHILDCARE CENTRE
LOT 6, No. 308 MAIN STREET
BALCATTA
for PROJECT CONSTRUCTION Pty Ltd

Date - 30.05.24
Design - JJR
Drawn - JJR
Checked - CPH
Scale - 1:200
Job No - 0873
Dwg - DA03
Rev - A

Document Set ID: 11087019
Version: 1, Version Date: 23/08/2024

APPENDIX B

GLAZING REQUIREMENTS

Calculated Noise Levels and Required R_w and C_{tr} Ratings			Example Construction
Location	**Level**	**$R_w + C_{tr}$***	
ACTIVITY 1 FACING	65	26	6mm Monolithic
ACTIVITY 2 FACING	65	26	6mm Monolithic
ACTIVITY 2 SIDE ON	61	23	4mm Monolithic
ACTIVITY 3 FACING	62	26	6mm Monolithic
ACTIVITY 3 SIDEONE	58	23	4mm Monolithic
ACTIVITY 4 REAR	43	23	4mm Monolithic
ACTIVITY 4 SIDE ONE	52	23	4mm Monolithic
ACTIVITY 5 REAR	42	23	4mm Monolithic
ENTRY SIDE ON	57	23	4mm Monolithic
STAFF ROOM	48	23	4mm Monolithic
Walls	65	50	-
Roof/Ceiling	65	40	-

Notes: The required R_W rating can be reduced by reducing the area of glazing.
All non-listed locations would meet requirements given standard construction (4mm Monolithic windows, 6mm monolithic doors)
Requirements pertain to only acoustic advice in regard to *State Planning Policy 5.4* and may be superceded by other requirements (BAL, Thermal, etc).

APPENDIX C

MRWA TRAFFIC FLOW DATA

mainroads WESTERN AUSTRALIA

SITE 5144

Hourly Volume

Main St (1250067)

North of Morley Dr (SLK 3.18)

2018/19
Monday to Friday

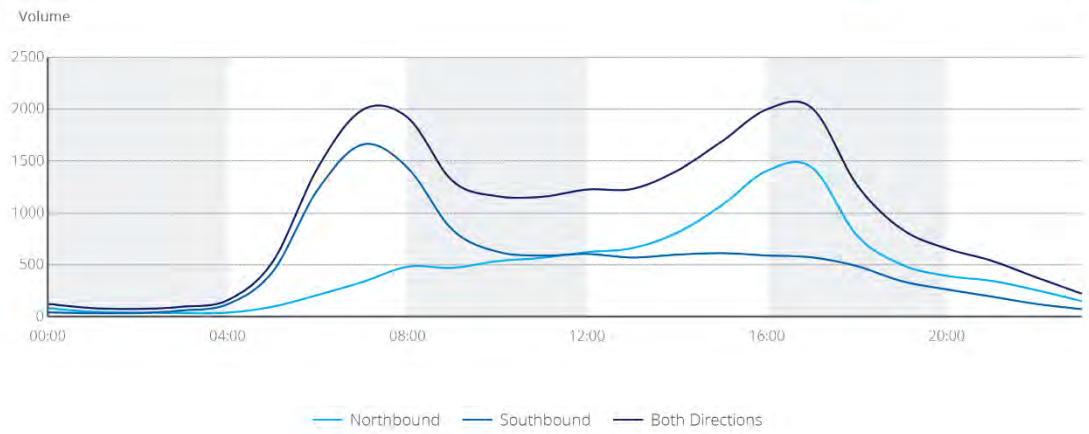
All Vehicles

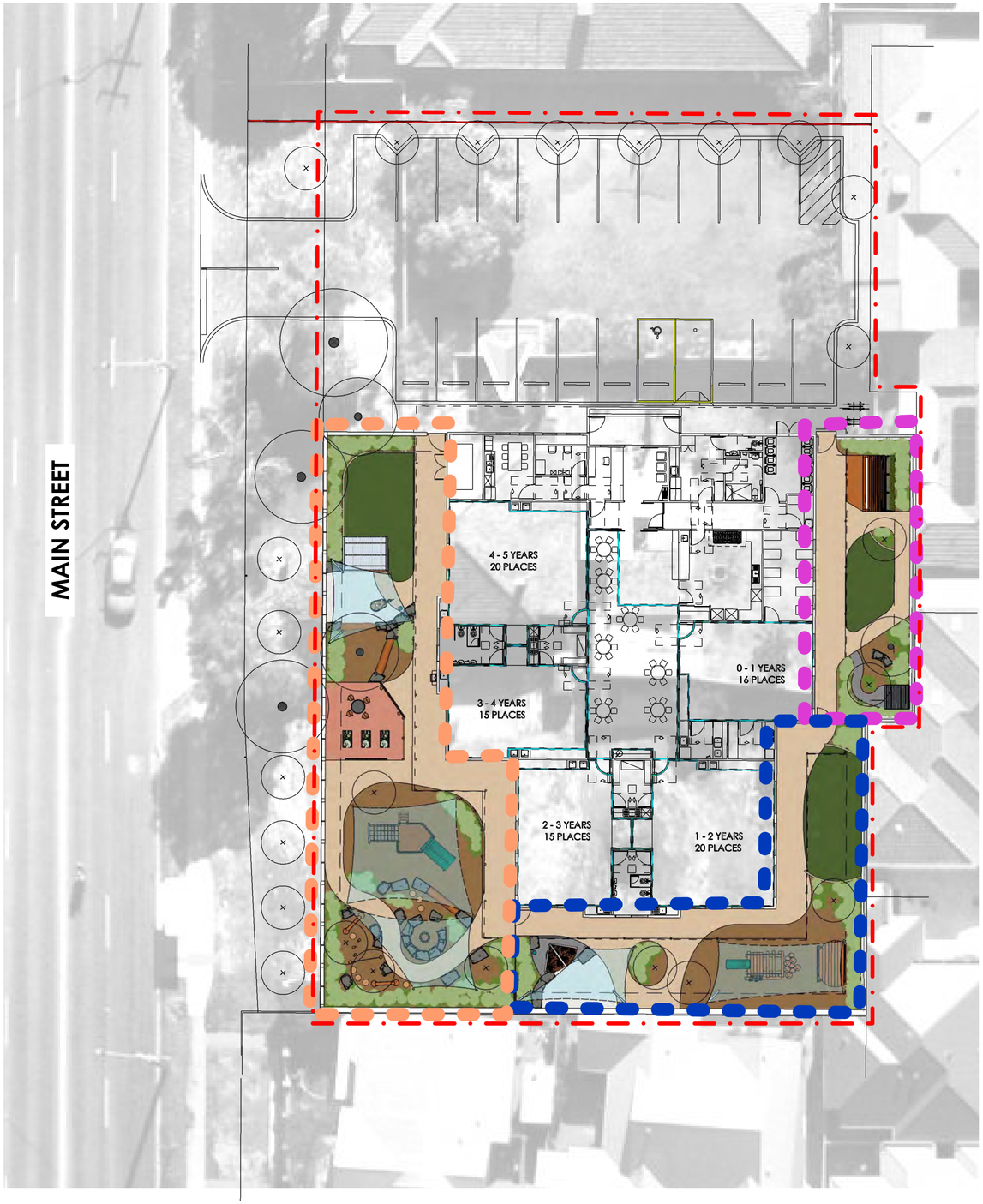
	NB	SB	Both
00:00	82	41	123
01:00	47	35	82
02:00	39	35	74
03:00	36	60	96
04:00	39	121	160
05:00	96	435	531
06:00	210	1225	1435
07:00	335	1659	1994
08:00	483	1437	1920
09:00	472	838	1310
10:00	536	627	1163
11:00	568	590	1158
12:00	623	605	1228
13:00	662	571	1233
14:00	811	599	1410
15:00	1079	613	1692
16:00	1410	590	2000
17:00	1438	572	2010
18:00	782	488	1270
19:00	501	342	843
20:00	394	263	657
21:00	345	194	539
22:00	255	122	377
23:00	150	72	222
TOTAL	11393	12134	23527

Peak Statistics

		NB	SB	Both
AM	TIME	11:45	07:15	07:15
	VOL	610	1660	2034
PM	TIME	16:45	14:30	16:45
	VOL	1481	623	2076

Information Not Available





NOT TO SCALE

MAIN STREET CHILDCARE CENTRE BALCATTA

PLAY SPACE DESIGN

CONTENTS

LS 101 LOCATION PLAN
LS 102 CONCEPT PLAN - 0 - 3 YEARS
LS 103 CONCEPT PLAN - 2 - 5 YEARS
LS 104 SHADE PLAN
LS 105 DEEP SOIL CALCULATION, FALL ZONE AND RETAINING WALLS
LS 106 PLANTING PLAN - PLAYSPACE
LS 107 PLANTING PLAN - CARPARK AND VERGE

PROPOSED DEVELOPMENT
(EXCLUDING ROAD WIDENING)

GROUND FLOOR

685 sqm

AREA 1 (0 - 1 years)
16 places

AREA 2 (1 - 3 years)
35 places

AREA 3 (2 - 5 years)
35 places

GENERAL NOTES

HYDRAULIC
- 20mm water points to water play (fountains/pumps/misters) locations
- 25mm retic cut-in close to the water meter

ELECTRICAL
- Power to retic controller location

CIVIL
- Ground level on site to be set 150mm lower than FFL of slab prior to us commencing on site
- Stormwater pit/grate locations and heights to be coordinated with this concept plan

HARD DIGGING
- No allowance has been made for hard digging in the costing provided

nature PLAY SOLUTIONS
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play@natureplaysolutions.com.au

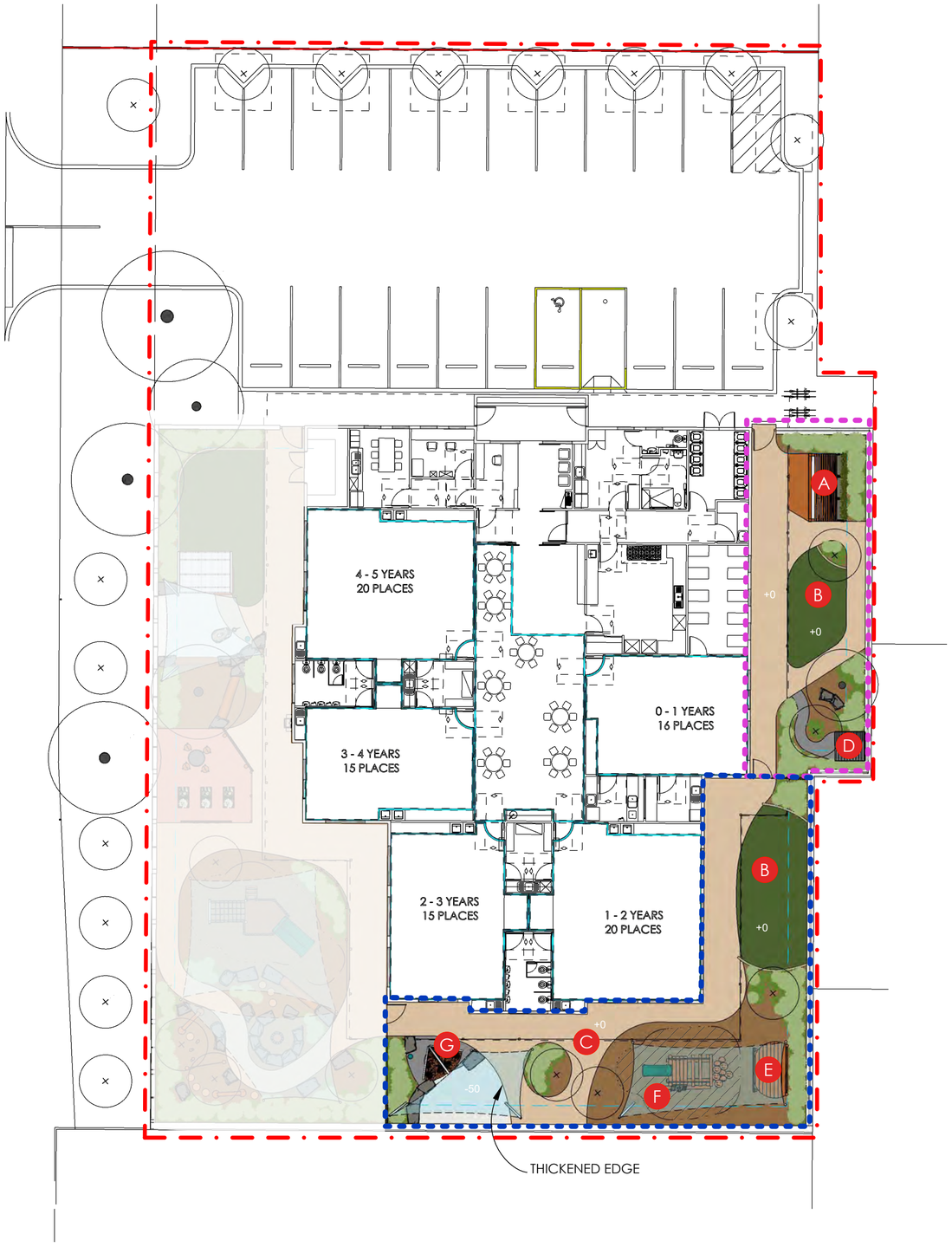
MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 101 - LOCATION PLAN

N

Job No: 6342
Rev: C
Date: Oct 2024
Design: KP



LEGEND

- A ARCH SHELTER W SANDPIT (L051504)
- B OPEN FLEXIBLE SPACE
- C BIKE PATH
- D MINI CUBBY - MESH (L019113)
- E STAGE WITH CURTAIN AND CLIPS (L032403)
- F MINI MORETON CLIMBER (L002801)
- G SHADLE LIGHT AND SHADE WITH MISTERS (L016922)

- HYBRID LAWN
- TIMBER DECKING
- WHITE SAND (MIN 300mm DEEP)
- MULCH
- IAS MULCH
- PISTACHIO CONCRETE (STIPPLE TROWEL)
- CONCRETE (ROCK SALT FINISH)
- SHADE SAIL (COLOR TBC WITH CLIENT)

- ROCK BOULDERS
- SHADE SAIL POST
- CURVED SHADE SAIL POST
- CONCRETE KERB (CREAM)
- EXISTING TREE
- PROPOSED TREE
- PLANTS
- FALL ZONE
- ROOF OVER / SHADE SAIL
- POOL FENCE FT5
- TIMBER TO BOUNDARY
- SINGLE GATE GT2
- ISOLATION VALVE
- 1m BOUNDARY EXCLUSION ZONE
- SCOPE OF WORKS (0 - 1 YEAR)
- SCOPE OF WORKS (1 - 3 YEARS)
- PROPOSED DEVELOPMENT (EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

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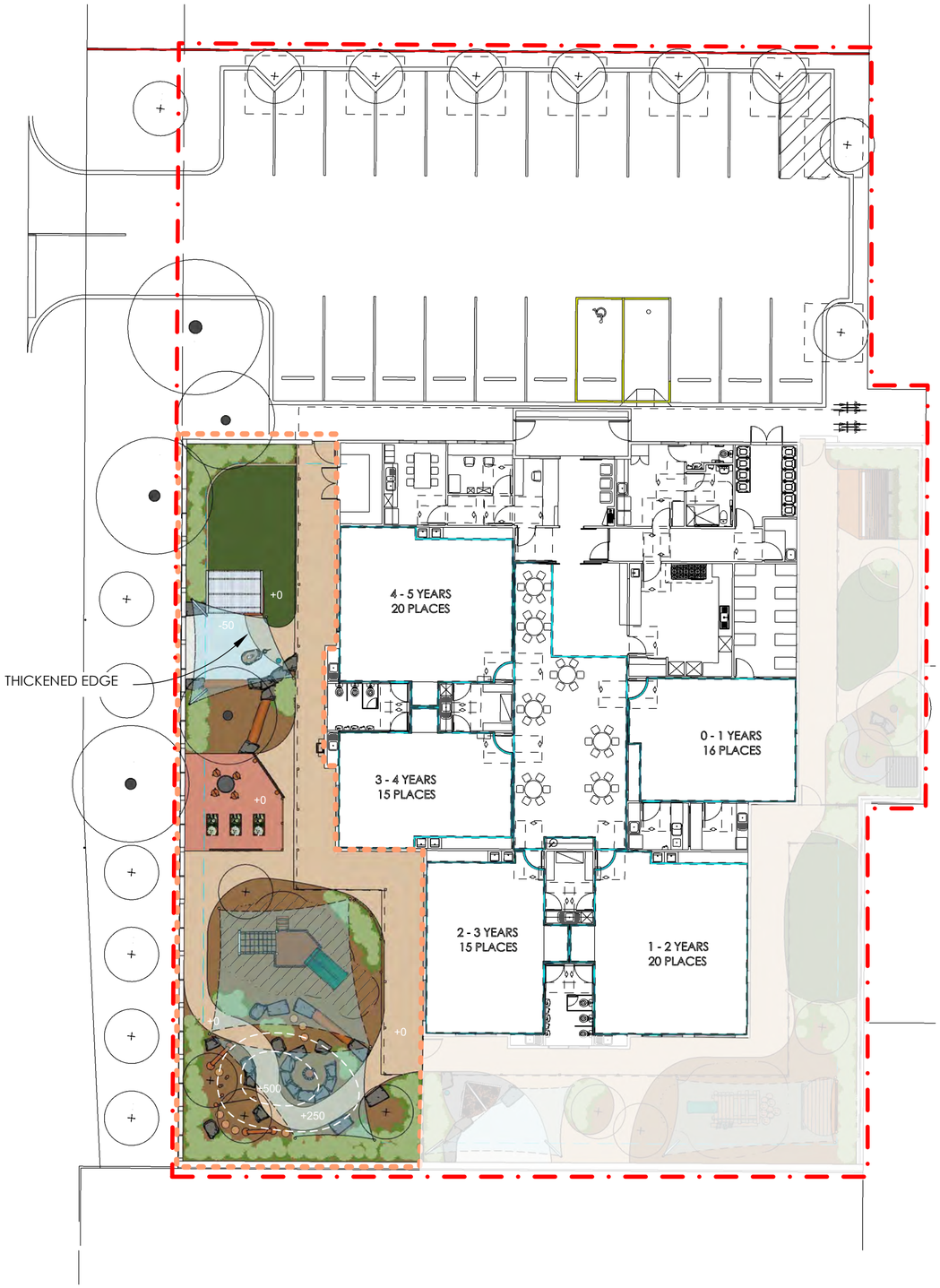
MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 102 - CONCEPT PLAN - 0 - 3 YEARS

N

Job No: 6342
Rev: C
Date: Oct 2024
Design: KP



LEGEND

- A OPEN FLEXIBLE SPACE
- B TOOL SHED W/ SHOP FRONT TIMBER SLATS (L010317)
- C WATER PUMP (L003002)
- D WATER CREEK (L003008)
- E GAMES STUMP WITH CONCRETE TOP (L016402) WITH 4 X MOVEABLE ART STOOL (L020901)
- F VEGGIE GARDEN ENTRY FEATURE (L031600)
- G TIMBER PLANTER - VEGGIES (L010905)
- H ACTIVITY PANEL PEEK-A-BOO WALL - STRAIGHT (L007006)
- I WALFORD FORT (L053900)
- J CAMP SITE W/ FIRE PIT (L027800)
- K BIKE PATH
- L BALANCE SLEEPER 1.8m (L005211)
- M DUAL TIGHT ROPE (L006300)
- N STILT HONED CONCRETE STEP (L004307)

- HYBRID LAWN
- WHITE SAND (MIN 300mm DEEP)
- MULCH
- IAS MULCH
- PISTACHIO CONCRETE (STIPPLE TROWEL)
- SHADE SAIL (COLOR TBC WITH CLIENT)
- PAVING

- ROCK BOULDERS
- CONCRETE STEPPER LIGHT BROWN (L010505)
- SHADE SAIL POST
- CURVED SHADE SAIL POST
- LOG
- CONCRETE KERB (CREAM)
- EXISTING TREE
- PROPOSED TREE
- PLANTS
- FALL ZONE
- ROOF OVER / SHADE SAIL
- POOL FENCE FT5
- GARDEN RAIL FT16
- TIMBER TO BOUNDARY
- SINGLE GATE GT2
- ISOLATION VALVE
- 1m BOUNDARY EXCLUSION ZONE
- SCOPE OF WORKS (2 - 5 YEARS)
- PROPOSED DEVELOPMENT (EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

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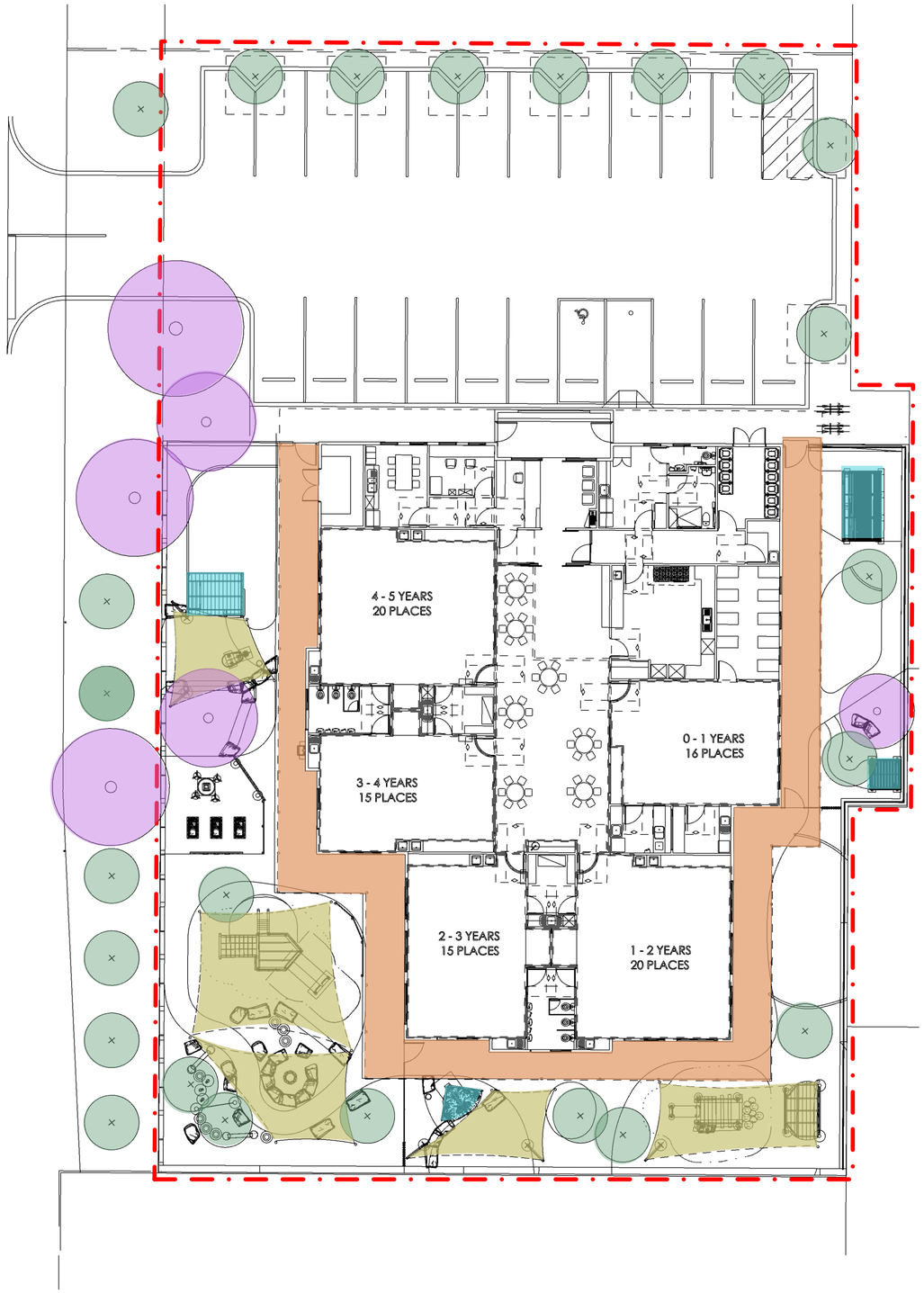
MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 103 - CONCEPT PLAN - 2 - 5 YEARS

N

Job No: 6342
Rev: C
Date: Oct 2024
Design: KP



BUILDING ROOF
EQUIPMENT ROOF
PROPOSED SHADE SAIL
PROPOSED TREES
EXISTING TREES

PROPOSED DEVELOPMENT
(EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

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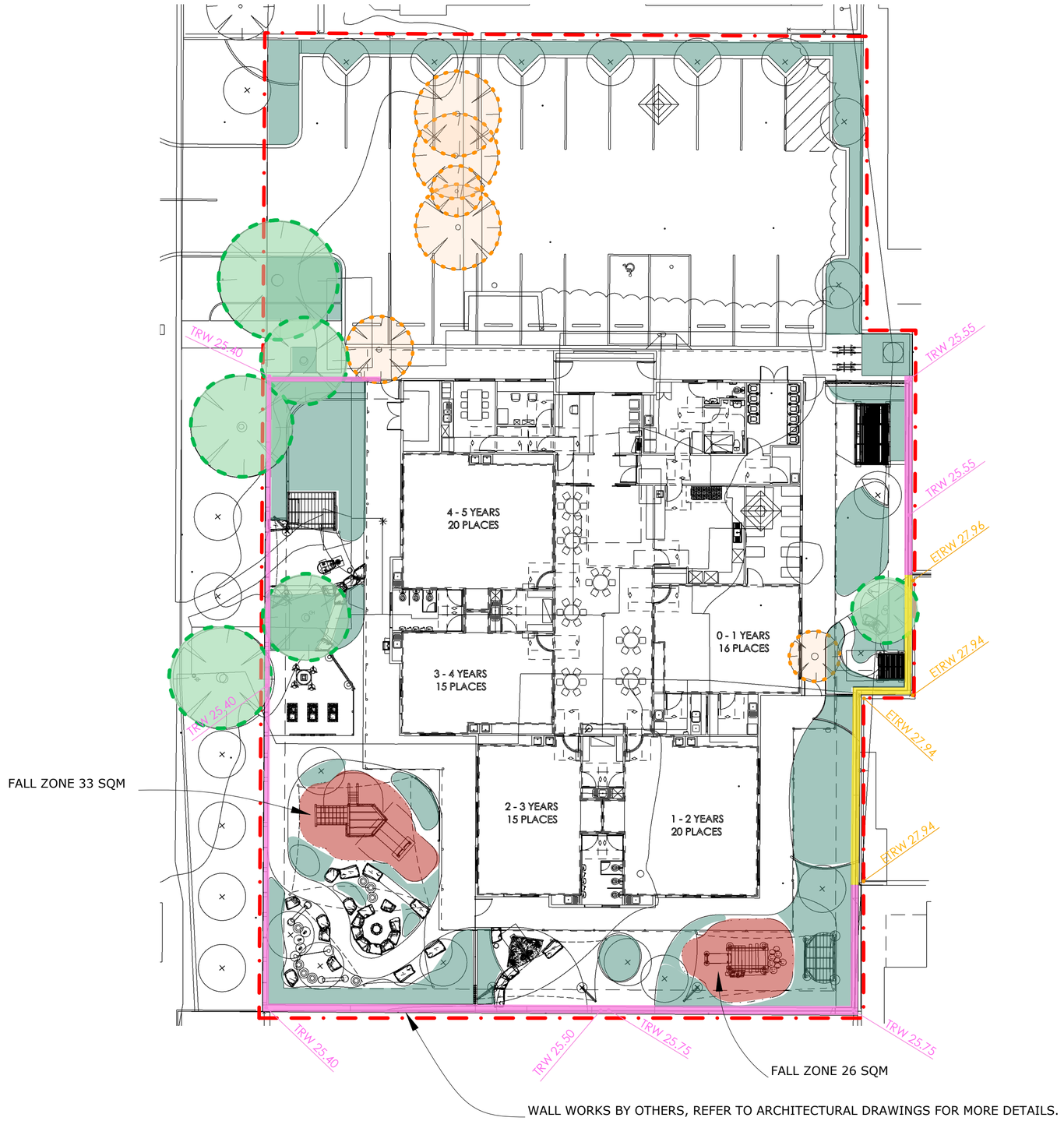
MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 104 - SHADE PLAN

N

Job No: 6342
Rev: C
Date: Oct 2024
Design: KP



PROPOSED DEVELOPMENT (EXCLUDING ROAD WIDENING)

EXISTING RETAINING WALL

PROPOSED RETAINING WALL

EXISTING TREES TO BE REMOVED

EXISTING TREES TO BE RETAINED

DEEP SOIL AREA

FALL ZONE (59 SQM)

SITE AREA	m2	SITE %
TOTAL SITE (EXCLUDING ROAD WIDENING)	2093	
DEEP SOIL AREA	395	18.8%

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

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play@natureplaysolutions.com.au

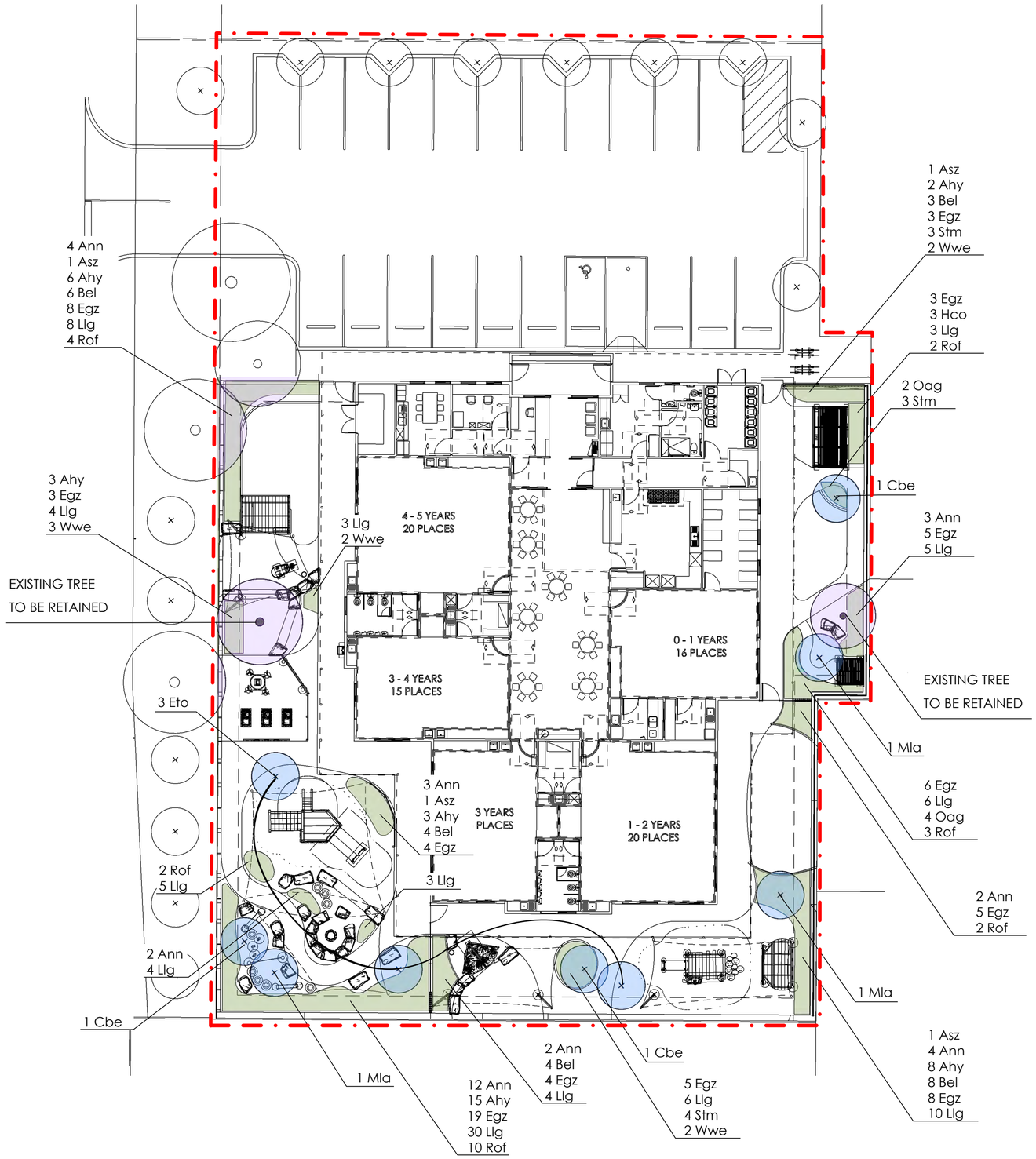
MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 105 - DEEP SOIL CALCULATION, FALL ZONE AND RETAINING WALLS

N

Job No: 6342
Rev: C
Date: Oct 2024
Design: KP



PLAYSPACE PLANTING

TYPE	CODE	SPECIES	SIZE	POT SIZE	HABIT	QTY
Plants	Ann	Adenanthos cunninghamii	1m	140mm	Shrub	32
	Asz	Adenanthos sericeus 'Pencil Perfect'	3m	140mm	Shrub Large	4
	Ahy	Anigozanthos hybrid	0.5m	140mm	Strappy	37
	Bel	Beaufortia elegans	1m	140mm	Shrub	25
	Egz	Eremophila glabra 'Blue horizon'	0.3m	140mm	Ground Cover	73
	Afb	Hardenbergia comptoniana	3m	140mm	Creeper	3
	Llg	Lomandra longifolia 'Tanika'	0.7m	140mm	Strappy	91
	Oag	Olearia axillaris 'Little Smokie'	1m	140mm	Shrub	6
	Rof	Rosmarinus officinalis	1.5m	140mm	Shrub	23
	Stm	Stachys 'Moonlight'	0.25m	140mm	Shrub	10
	Wwe	Westringia fruticosa 'WES06' PBR	0.3m	140mm	Shrub	9
Trees	Cbe	Corymbia 'Beeliar Orange'	5m	100L	Tree Evergreen	3
	Eto	Eucalyptus torquata	8m	100L	Tree Evergreen	3
	Mla	Melaleuca lanceolata	7m	90L	Tree Evergreen	3
					TOTAL PLANTS	**313**
					TOTAL TREES	**9**

*All planting irrigated from mains reticulated water

* PLANTING DENSITY IS APPROX. 3 PLANTS PER SQM IN GENERAL, DEPENDENT ON PLANT SPECIES

PROPOSED DEVELOPMENT
(EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

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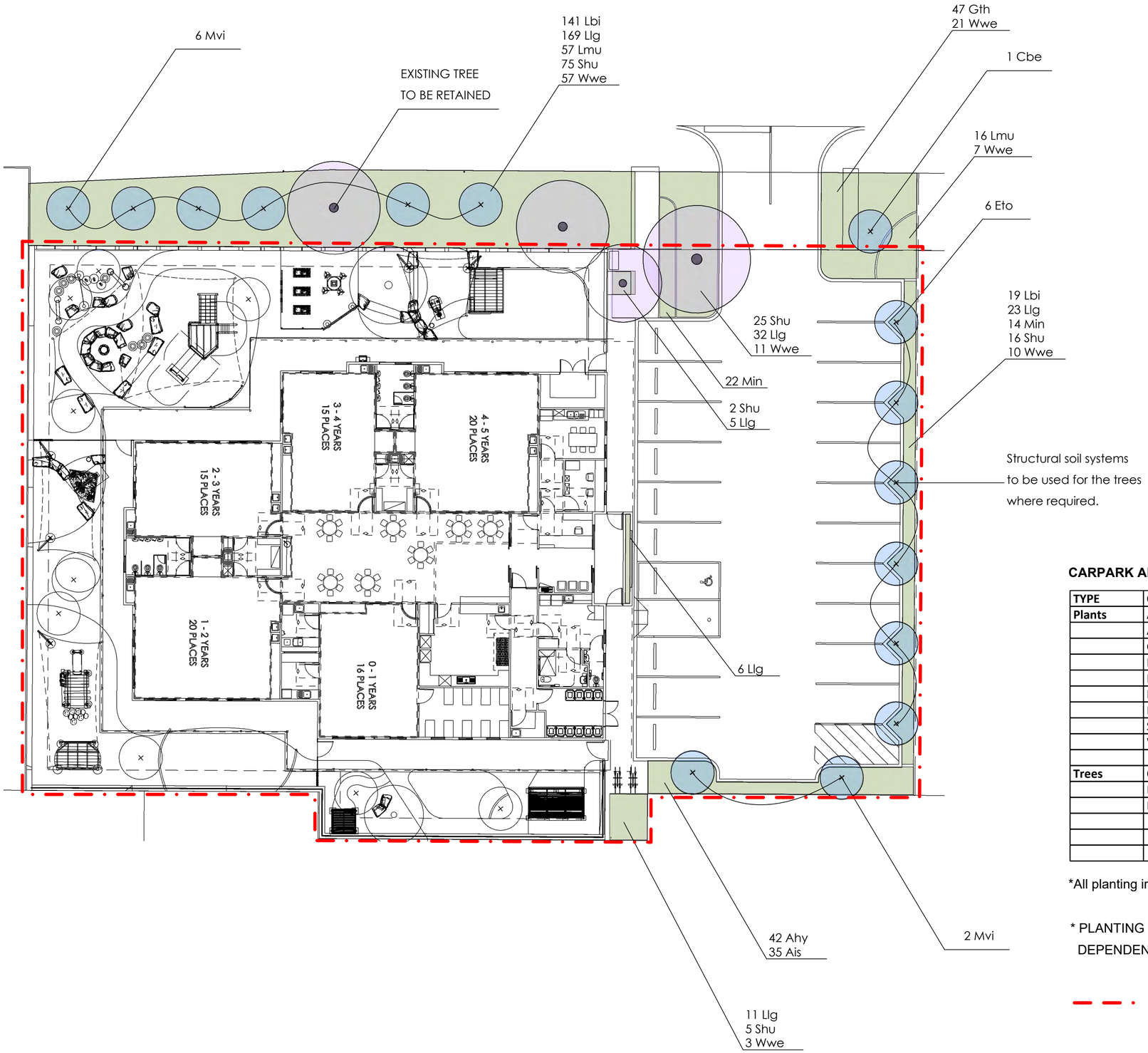
MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 106 - PLANTING PLAN - PLAYSPACE

N

Job No: 6342
Rev: C
Date: Oct 2024
Design: KP



Structural soil systems
to be used for the trees
where required.

CARPARK AND VERGE PLANTING

TYPE	CODE	SPECIES	SIZE	POT SIZE	HABIT	QTY
Plants	Ais	Adenanthos meisneri 'Green Carpet'	0.3m	140mm	Shrub	35
	Ahy	Anigozanthos hybrid	0.5m	140mm	Strappy	42
	Gth	Grevillea thelemanniana 'Mini Marvel'	0	140mm	Shrub	47
	Lbi	Lechenaultia biloba 'Dark Blue'	0.3m	140mm	Shrub	160
	Lmu	Liriope muscari	0.2m	140mm	Strappy	73
	Llg	Lomandra longifolia 'Tanika'	0.7m	140mm	Strappy	246
	Min	Melaleuca incana 'nana'	1m	140mm	Shrub	36
	Shu	Scaevola humilis 'Purple Fusion'	0.2m	140mm	Ground Cover	123
	Wwe	Westringia fruticosa 'WES06' PBR	0.3m	140mm	Shrub	109
Trees	Cbe	Corymbia 'Beeliar Orange'	5m	100L	Tree Evergreen	1
	Eto	Eucalyptus torquata	8m	100L	Tree Evergreen	6
	Mvi	Melaleuca viridiflora	8m	100L	Tree Evergreen	8
					TOTAL PLANTS	**871**
					TOTAL TREES	**15**

*All planting irrigated from mains reticulated water

* PLANTING DENSITY IS APPROX. 3 PLANTS PER SQM IN GENERAL,
DEPENDENT ON PLANT SPECIES

PROPOSED DEVELOPMENT
(EXCLUDING ROAD WIDENING)

Scale Approx 1:200 @ A2

0 1 2 3 4 5 10 20m

8 Burchell Way
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MAIN STREET CHILDCARE CENTRE BALCATTA

308 Main Street Balcatta WA Australia

LS 107 - PLANTING PLAN - CARPARK AND VERGE

N

Job No: 6342
Rev: C
Date: Oct 2024
Design: KP

Keeping open spaces
safe & green with...

COVER LAWN™

COVER LAWN™

CoverLawn as its name suggests, is a cover which is placed over your grass areas. It is easy to install and it protects your natural grass from damage.

Simply roll it out, peg it down, and watch your grass grow from beneath.

CoverLawn is unique. It is an open synthetic turf, with no backing. Via a knitting technique, the synthetic fibres create a braid of knots, and when stretched, these braids form a honeycomb of holes. These holes allow the natural grass to grow through, and the fibres protect the grass from damage.

A true 'hybrid grass' for open spaces. Creating safe, stable natural grass areas.

CoverLawn can be laid over seeded, instant turf, or an existing lawn.

Problem solved!

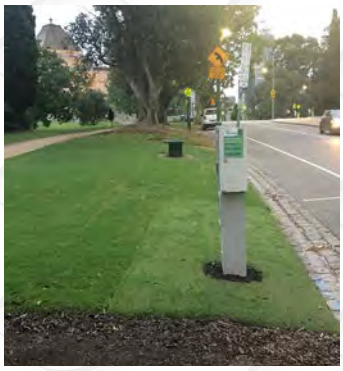
KEY BENEFITS

- Protects your natural grass
- No more bare patches
- Designed for drainage and roots to grow
- Affordable, easy installation
- 'Best of both worlds' natural grass + synthetic grass

DOG PARKS

~ Deters dogs from digging holes in the turf.
~ Protects and reinforces the natural grass.

ASSET MANAGEMENT



~ Eliminates bare patches in high-traffic areas.
~ Maintains a stable, safe surface year-round.

PEDESTRIAN ZONES

~ Less closures from heavy foot-traffic.
~ Safe and secure footing.

Innovation by:

HG TURF GROUP

Available from:

info@hgturfgroup.com.au
www.hgturfgroup.com.au

COVER LAWN™ Installation Guide

CoverLawn is unique. It is an open synthetic turf, with no backing. Via a knitting technique, the synthetic fibres create a braid of knots, and when stretched, these braids form a honeycomb of holes. These holes allow the natural grass to grow through, and the fibres protect the grass from damage.

1. Measure and mark out the area you wish to cover with CoverLawn. Allow for the CoverLawn to be pushed into the soil by 10mm around the edge of the area.
2. If you are installing over an existing grass area then remove weeds and foreign grasses (Photo1). Mow the surface as low as possible, 20 mm is ideal or otherwise put the mower on lowest level.
3. Or: Install new sod in the area as required. For information on installing new sod go to **www.hgturfgroup.com.au**.
4. CoverLawn will align itself with the natural contours of the ground. If the surface is uneven then top dress the area 50/50 sand soil mix.
5. Roll out the CoverLawn over the area.
   Cut to size with a good pair of scissors. (Photo 2).
6. Cut into the edge of the area with a spade or bed knife.
   Push the CoverLawn into the soil to secure it. (Photo 3).
   Start from middle and work towards the ends.
   Make sure you have good stretch/tension on the CoverLawn.
   Work down one side first then stretch it on the other side.
7. Use a hammer and Biodegradable pegs to anchor the edges and secure it in place. Place pegs in the centre of the area at 5m intervals. (Photo 4)
8. If you are joining 2 pieces of CoverLawn this can be done by either cable tying / or stitching the material together or just push both pieces into the soil side by side. (Photo 3).
9. Top dress the final area with sand and water it in to fill in the CoverLawn.
10. As the grass grows through the CoverLawn you can continue with normal lawn maintenance.
    Avoid very low mowing, It is best to keep you grass a little longer to help with the high traffic.

    See right.

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Design Review Report – Item 1

Local government:	City of Stirling	
Item no.:	Item 1 - DA24/1064 – 308 Main Street, Balcatta – Development Assessment Panel – Form 1 – Child Care Premise	
Chairperson:	Philip Gresley	
Panel members:	Lisa Shine Jackson Liew Tony Blackwell (comments only)	
Local government officers:	Peter Prendergast Dean Williams Shaun Wheatland Karina Bowater Simone Palmer	Service Lead Planning Coordinator Planning Senior Planning Officer Senior Planning Officer DRP Support Officer
Observers	Kymba Fennessy	Project Officer – Trees
Date:	24 October 2024	Time: 2pm
Venue:	City of Stirling – Challenger Room	

Proponent/s		
	Alan Stewart Chris Hindley Chris Lawrence Leon Abrusci	Lateral Planning *(Applicant)* Hindley & Associates Nature Play Solutions Project Construction
	Owners	Happy Felix Balcatta Pty Ltd
Observer/s		

Briefings		
Development assessment overview	Shaun Wheatland	Senior Planning Officer
Technical issues	Shaun Wheatland	Senior Planning Officer
Design Review		
Proposed development	Item 1 - DA24/1064 – 308 Main Street, Balcatta – Development Assessment Panel – Form 1 – Child Care Premise	
Property address	308 Main Street, Balcatta	
Background		
Proposal		
Applicant or applicant's representative address to the design review panel	Alan Stewart Chris Hindley Chris Lawrence	Lateral Planning Hindley & Associates Nature Play Solutions
Key issues / recommendations	The proposal for a single-storey childcare centre remains supported in principle; however, significant design improvements are needed to gain full	

	Panel endorsement. Key recommendations from DRP2 focused on enhancing the building's connection to its local context, as the design still reflects a retail character. Recommended improvements include (but not be limited to) a more suitable choice of brick and further integration of the front fence to strengthen ties to the surrounding streetscape. The Panel reiterated the need for improved site planning, specifically relocating the car park to the south to increase access to northern light for activity spaces. Given the Applicant's reluctance to adjust the car park location, the Panel recommended further design revisions and solar studies to optimize passive solar performance, particularly for east- and west-facing glazing. Additional suggestions included refining the entry portal for improved circulation, replacing shade sails with shading options better aligned to the architectural style, and providing clearer sustainability commitments. Refer to attached Design Quality Evaluation Report.
Chairperson signature	

Design quality evaluation **Item 1 – DA24/1064 – 308 Main Street, Balcatta – Development Assessment Panel – Form 1 – Child Care Premise** **DRP Meeting – Thursday 24 October 2024**		
	S	*Design Principle satisfied*
	P	*Design Principle pending further attention*
	N	*Design Principle not satisfied*
Principle 1 **Context and character**		*Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.*
	N	1a. The proposal has not significantly developed in its response to Context and Character since DRP1. The Panel noted that there is still limited information provided about how the proposal enhances the distinctive characteristics of the local area or contributes to a sense of place. The Panel again suggests that a more comprehensive analysis be undertaken to inform a revised design approach. This might include the local streetscape and examples of materials or design features that are intrinsic to this location. 1b. The Panel noted a missed opportunity regarding the type of brick proposed and its connection to the surrounding context. The images depict salmon and red brick. The Applicant is encouraged to consider the entire streetscape to avoid introducing a brick type that feels out of place. 1c. The updated proposal is still reminiscent of a suburban retail outlet and would benefit from consideration of its use in its design. This can be challenging with Childcare as it is a commercial venture within a residential location. The Panel suggests the materiality and form of the building be reconsidered and the introduction of some more playful elements might assist. 1d. The Panel continued its support of a single storey development in this location. 1e. The Panel acknowledges improvement in the design of the front fence with the addition of brickwork but believes it requires further refinement to create a stronger streetscape interface. It is recommended that more articulation be explored through arrangement and detailing of materials.
Principle 2 **Landscape quality**		*Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.*
	P	2a. The retention of many of the existing trees is strongly supported. 2b. The Panel commented there is a reasonably generous setback of car bays to allow for planting of trees. 2c. It was noted by the Panel the fall zones are now indicated on the plans and appear to be adequately accommodated. 2d. Clarification was provided around the Corymbia “Beeliar Orange” tree being technically on the shot hole borer list. After a brief discussion it was confirmed this tree is a hybrid and is a satisfactory choice. 2e. A paving audit was undertaken and provided to the Panel which was supported. 2f. Some information was provided by the Applicant around the hybrid turf. The Panel stated there is an opportunity for the Applicant to further demonstrate and show proof the hybrid turf is a suitable product with relation to heat retention and toxicity. 2g. The Panel stated the addition of additional verge trees is positive however the tree species chosen is Paperbark which can be sparse. There is opportunity to plant large trees here which are deciduous with a *broader habit* which could provide shading to the large expanses of west facing glazing which will otherwise attract significant heat gain during summer afternoons.

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.*
	N	3a. The scale of the building is acceptable. 3b. Locating the car park to the side of the building, rather than in front, is a positive aspect. However, at DRP 1 the Panel raised a question regarding the choice of a northern location rather than a southern one - to enable better northern aspect to play spaces both internally and externally. The Applicant has since indicated that they are unwilling to relocate the car park to the south of the site. 3c. At DRP1, the Panel suggested that if relocating the car park was not feasible, the Applicant should reconsider the design to improve access to northern light, enhancing both amenity and passive solar performance. This recommendation was reiterated at DRP2, with an additional request for evidence of how passive solar design is being managed, especially for east- and west-facing glazing. The Panel recommends preparing detailed sections to show solar ingress at different times of the year to inform further design revisions. 3d. Despite the above, the Panel recommended exploring any potential cost offsets with the City to facilitate relocating the car park to the south.
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.*
	P	4a. In DRP1, comment was made there is room for improvement around the arrival experience. It was suggested the entry could be relocated closer to the front corner of the building which could create more generosity of space, better legibility, a more welcoming entry, whilst improving proximity to the community seating area. This comment was reiterated. 4b. The Panel noted that the entry portal feels constrained. While the tall planter bed adds a welcoming touch, it occupies valuable space and will reduce access to northern light. The Panel suggested that circulation in this area may not be fully functional and should be tested. One idea proposed was to remove the planter bed and replace it with mesh or wire, incorporating a deciduous creeper to create a visually engaging feature for the children, whilst allowing northern light in winter months. It was also recommended that the gate specified and detailed should be related to the front fencing design. 4c. The widening of the entry path is supported. 4d. The relocation of the staff and administration areas to the northwest side of the entry (with additional windows) was seen as an improvement, but does not optimize the northern orientation for most users. 4e. The Panel stated the extension of the art element is a positive outcome and supported. 4f. The Applicant stated in their presentation that the design is adaptable to other uses. The Panel commented the adaptability is still not evident and further clarification is requested to understand this better. 4g. Concerns were raised around the cost of the UV stabilized *Perspex* proposed for the fencing. The Panel queried what alternative solution will be considered if the cost is too high.
Principle 5 **Sustainability**		*Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.*
	P	5a. The Panel thanked the Applicant for engaging a sustainability consultant. 5b. The Panel noted the successful opportunities in providing the centrally ventilated space for passive cooling. 5c. Comment was made by the Panel it is great to see a commitment to the installation of photovoltaic cells to the development however concern was raised around the 2 year delay before implementation.

		5d. It was noted there may be an error in the roof SRI level in the report and this should be checked and clarified. 5e. The Panel supported the introduction of openable windows between the activity spaces and the "piazza" space to optimize the **stack effect.** The Panel recommended that careful consideration be given to the differences between the stack effect and cross ventilation to get the most effective passive design outcome. 5f. It was stated by the Panel it would be beneficial to have a better understanding of the glazing facing east and west and how heat gain will be managed into the activity space and how an increase in energy requirements is being mitigated. The Panel recommends detailed sections showing solar ingress at various times of the year are prepared and used to revise the designs. 5g. It was suggested by the Panel it would be beneficial to increase (controlled) natural light from the entrance to the reception area. There may be opportunities to lift the roof and have higher ceilings to gain further penetration from the northern light.
Principle 6 **Amenity**		*Good design optimises internal and external amenity for occupants, visitors and neighbours providing environments that are comfortable, productive and healthy.*
	P	6a. The seating provided at the entry for clientele to stop and chat is welcoming and supported. 6b. It was noted by the Panel openable windows have been added to the cot room which is supported and the desired outcome. 6c. The space provided in the entry portal space is still seen as very tight and the Panel recommends more generosity of space be considered.
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.*
	P	7a. The Panel commented the landscaped screening to the carpark is successful and supported. 7b. In DRP1, comment was made there is room for improvement around the arrival experience. It was suggested the entry could be relocated closer to the front corner of the building which could create more generosity of space, better legibility, a more welcoming entry, whilst improving proximity to the community seating area. This comment was reiterated. 7c. The Panel questioned whether the entry is technically compliant and suggested checking the measurements. 7d. The Panel supports the additional screening provided to the carpark from the street.
Principle 8 **Safety**		*Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.*
	S	8a. This design principle is now supported by the Panel.
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.*
	S	9a. The Panel support a childcare centre in this location and are satisfied with the community benefit it will bring to the area. 9b. Comment was made the public art on the front wall near the seat is a positive outcome and supported.
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.*

	N	10a. Integrating the "actual signage" into the design approach is encouraged and the Panel appreciated this consideration. 10b. The screening of the air-conditioning units on the roof is a positive outcome. 10c. The current proposal in form is still reminiscent of a more suburban retail outlet and would benefit from consideration of its use in its design. 10d. The Panel maintains that there is an opportunity to revise the material selection to better reflect the local context. While the addition of brickwork is welcomed, it is recommended that the choice of brick and the overall design response be more thoughtfully considered to create a stronger connection with the surrounding area. 10e. Whilst the simplicity of form is acknowledged the building form should be enhanced to better represent the use and to better respond to the quality of the streetscape as mentioned in DRP 1. 10f. The Panel acknowledges improvement in the design of the front fence with the addition of brickwork but believes it requires further refinement to create a stronger streetscape interface. It is recommended that more articulation be explored through arrangement and detailing of materials. 10g. The use of lightweight materials requires good architectural detailing to optimize the aesthetic outcomes. It would be beneficial to have a better understanding and detailing around the robustness of the materials utilised in the design to ensure a good outcome. 10h. The Panel acknowledged that including shade sails in the plans is a positive step; however, they believe that shade sails may not be the most suitable option for this proposal. The Panel recommends considering alternative shading solutions that align more closely with the architectural form and design language, enhancing both functionality and visual cohesion. 10i. The location and detailing of downpipes and other detailed service elements should be considered with relation to aesthetic appeal.

Design Review progress
Item 1 – DA24/1064 – 308 Main Street, Balcatta – Development Assessment Panel – Form 1 – Child Care Premise
DRP Meeting – Thursday 24 October 2024 and 29 August 2024

S	*Design Principle satisfied*
P	*Design Principle pending further attention*
N	*Design Principle not satisfied*

	DR1 29/8/24	***DR 2 24/10/24***	
Principle 1 - **Context and character**	N	N	
Principle 2 - **Landscape quality**	P	P	
Principle 3 - **Built form and scale**	N	N	
Principle 4 - **Functionality and build quality**	P	P	
Principle 5 - **Sustainability**	N	P	
Principle 6 - **Amenity**	P	P	
Principle 7 - **Legibility**	P	P	
Principle 8 - **Safety**	P	S	
Principle 9 - **Community**	S	S	
Principle 10 - **Aesthetics**	N	N	

DR1 – DRP Recommendations DRP Meeting – 29/8/2024	DR2 – Applicant Response DRP Meeting – 29/8/2024	DR2 - DRP Recommendations DRP Meeting – 24/10/2024	DR2 – Applicant Response DRP Meeting – 24/10/2024
1a. Whilst the location of the proposal (and some technical contextual issues) was presented, the Panel noted that there was limited information provided about how the proposal enhances the distinctive characteristics of the local area or contributed to a sense of place. The Panel suggests that a more comprehensive analysis be undertaken to inform a revised design approach. This might include the local streetscape and examples of materials or design features that are intrinsic to this location. 1b. The current proposal in form is reminiscent of a more suburban retail outlet and would benefit from consideration of its use in its design. This can be challenging with Childcare as it is a commercial venture within a residential location. The Panel suggests the materiality and form of the building be reconsidered and the introduction of some more playful elements might assist. 1e. The Panel expressed concerns about the front fence and suggested that this could be improved to provide a better streetscape interface. Front fences play an important part in defining the context and character of the area. Some additional diversity in the fencing module should be considered.	1. Timber cladding to façade replaced with brickwork to provide a more appropriate response to the character of the locality. Two sections of face brickwork added to the front boundary fence to reflect the materiality of the area and 'break up' the monotony of the original fence treatment. Extent of public art increased to the side (north) elevation and southern-most section of front boundary wall, to emphasise the land use and create a more distinctive entry. Pedestrian entry path widened by 300mm to 1.8 metres.	1a. The proposal has not significantly developed in its response to Context and Character since DRP1. The Panel noted that there is still limited information provided about how the proposal enhances the distinctive characteristics of the local area or contributes to a sense of place. The Panel again suggests that a more comprehensive analysis be undertaken to inform a revised design approach. This might include the local streetscape and examples of materials or design features that are intrinsic to this location. 1b. The Panel noted a missed opportunity regarding the type of brick proposed and its connection to the surrounding context. The images depict salmon and red brick. The Applicant is encouraged to consider the entire streetscape to avoid introducing a brick type that feels out of place. 1c. The updated proposal is still reminiscent of a suburban retail outlet and would benefit from consideration of its use in its design. This can be challenging with Childcare as it is a commercial venture within a residential location. The Panel suggests the materiality and form of the building be reconsidered and the introduction of some more playful elements might assist. 1e. The Panel acknowledges improvement in the design of the	

1f. A view showing the front entry path might help the design team see the opportunity for expanding the width of the pathway and the legibility of the entry.		front fence with the addition of brickwork but believes it requires further refinement to create a stronger streetscape interface. It is recommended that more articulation be explored through arrangement and detailing of materials.	
2c. It was noted by the Panel there are no fall zones indicated on the plans. A request was made to have these calculations included on the drawings. 2d. Comment was made by the Panel the verge tree planting is sparse considering the small size of this species of tree. The Applicant was encouraged to increase the number of trees planted in the verge area if they are limited on the height of the mature trees due to powerlines above. 2f. It was suggested that a paving audit be conducted as there appears to be an excess of hard surface area. It was suggested there may be an opportunity to reduce the paving. 2g. Further information was requested on the existing trees, specifically the frangipani trees. There is a lack of clarity around removing these trees and it was suggested they could be transplanted. 2h. The Panel requested further clarification around the hybrid turf. There is opportunity for the Applicant to demonstrate the hybrid turf is a suitable product. 2j. It was suggested by the Panel there is an opportunity for smaller trees in the open space to better screen the carpark.	2. Fall zones shown on Landscape Plan (59m2) 3 verge trees added (total 24 new trees to be planted). Species adjusted. External Play Area – Extent of Paving • Under verandah 160m^2 24% • Not under verandah 110m^2 16% TOTAL 270m^2 40% Frangipani trees can be transplanted elsewhere (off-site) Details of hybrid turf provided Remaining areas of artificial turf replaced with timber decking. Shade sails slightly increased in size. Low wall to front of carpark.	2f. Some information was provided by the Applicant around the hybrid turf. The Panel stated there is an opportunity for the Applicant to further demonstrate and show proof the hybrid turf is a suitable product with relation to heat retention and toxicity. 2g. The Panel stated the addition of additional verge trees is positive however the tree species chosen is Paperbark which can be sparse. There is opportunity to plant large trees here which are deciduous with a broader habit which could provide shading to the large expanses of west facing glazing which will otherwise attract significant heat gain during summer afternoons.	

3b The placement of the car park to the north of the site significantly reduces the opportunities for access to northern light for the building for passive solar design. The current proposal also introduces service areas and other functions to the north façade that do not require the benefit of northern light. Consideration should be made to relocate the carpark to the south of the building plus re-planning the building to face activity spaces north wherever possible, with connection to north facing outdoor areas. 3c. It is acknowledged that there are technical issues that create more difficulty in relocating the carpark to the south. It was suggested that due to the proposed road widening there may be opportunity for repositioning of the bus stop and drainage to more readily enable a crossover in that location. 3d. Should the relocation of the carpark not be possible, the Applicant should reconsider the design to demonstrate better access to northern light for better amenity and passive solar design.	3. The DRPs comments with respect to access to northern sunlight are noted. The Applicant has made enquiries with the Public Transport Authority and the City with respect to relocation of the bus stop and drainage infrastructure, respectively, to allow for the car park to be relocated to the southern side of the property. For various reasons, the Applicant is not prepared to relocate the car park as suggested. Relocating Activity Rooms 3 and 4 to the northern side of the building is also not possible due to the need for the building entry and administration areas to be located adjacent to the car park. In their current location, Activity Rooms 3 and 4 have access to afternoon and morning winter sunlight, respectively, while the External Play Area direction to the south of these rooms will also gain morning and afternoon sunlight. The External Play Areas to the west and east of the building will continue to receive direct northern sunlight. In addition, the highlight windows allow for daylight access to the central Piazza within the building.	3c. At DRP1, the Panel suggested that if relocating the car park was not feasible, the Applicant should reconsider the design to improve access to northern light, enhancing both amenity and passive solar performance. This recommendation was reiterated at DRP2, with an additional request for evidence of how passive solar design is being managed, especially for east- and west-facing glazing. The Panel recommends preparing detailed sections to show solar ingress at different times of the year to inform further design revisions. 3d. Despite the above, the Panel recommended exploring any potential cost offsets with the City to facilitate relocating the car park to the south.	
4b. The Panel commented that the centralised "piazza" circulation area works well from a ventilation and light access point of view. However, it seems to be its own separate activity space and included in the calculations for child activity spaces. The Panel questioned how this area will function if all activity spaces circulate kids through this space at the same time. Further clarification and an explanation on how this works would be beneficial. This	4. Operable windows provided to the internal walls between the Piazza and Activity Rooms 1, 2 and 5 to enhance cross-ventilation, noting Activity Rooms 3 and 4 are situated on the corners of the building and already achieve cross-ventilation. Service / administration areas along the northern side of the building reconfigured to enhance the arrival experience and improve surveillance of external areas.	4a. In DRP1, comment was made there is room for improvement around the arrival experience. It was suggested the entry could be relocated closer to the front corner of the building which could create more generosity of space, better legibility, a more welcoming entry, whilst improving proximity to the community seating area. This comment was reiterated. 4b. The Panel noted that the entry portal feels constrained. While the	

also applies to the kitchen access to the "piazza" space. Although this might work well, how will this be managed? 4c. The Panel support the operable highlight windows in the central space, however there is some concern about the effectiveness of the ventilation if there are no openings (fixed or operable) between the activity spaces and the "piazza" space to optimize the stack effect. 4d. Comment was made there is room for improvement around the arrival experience. It was suggested the entry could be relocated closer to the front corner of the building which could create more generosity of space (currently limited by the low safety fence), better legibility, a more welcoming entry, whilst improving proximity to the community seating area. 4e. The Panel expressed concern about the bin store being in such close proximity to the entrance. It was recommended the bin store should be repositioned to a more remote location away from the entrance due to possible odour issues and the visual aspect. 4f. The bin doors are not shown on the elevation drawings. The door handles popping out could be problematic if people are walking past. It was suggested there could be a slight recess to accommodate the bin store or recessed door handles to assist with this. 4g. The Applicant stated in their presentation the design is adaptable to other uses. The Panel commented the adaptability is not evident and further clarification is	Bin store relocated to the rear of the building. Staff Room repositioned near the front of the building. Additional windows added to the north facing façade. Pedestrian entry path widened by 300mm to 1.8 metres (2 metres including kerb). <u>Operation of Piazza</u> The central Piazza has been designed specifically for the operator of the premises. The operator has provided the following advice with respect to the Piazza. The Piazza or central hub is a space of the centre shared by children, parents and teachers. It's also a place where children can intermingle to get together into larger groups. The space also serves as mealtimes and cooking programs. It allows fluidity to and from the piazza enabling children to make decisions on where and how they wish to play. This area also features as a display of children's art work. This space is used by children at all times as specified above, either in large groups or smaller groups. (Phyllis Narula, Managing Director, Discovery at Play Early Learning Centres). <u>Adaptability of Design</u> The designer has advised that the "building could be re-purposed for a medical centre or Allied Health utilising the common waiting room and Activity Rooms as Consultant Rooms."	tall planter bed adds a welcoming touch, it occupies valuable space and will reduce access to northern light. The Panel suggested that circulation in this area may not be fully functional and should be tested. One idea proposed was to remove the planter bed and replace it with mesh or wire, incorporating a deciduous creeper to create a visually engaging feature for the children, whilst allowing northern light in winter months. It was also recommended that the gate specified and detailed should be related to the front fencing design. 4f. The Applicant stated in their presentation that the design is adaptable to other uses. The Panel commented the adaptability is still not evident and further clarification is requested to understand this better. 4g. Concerns were raised around the cost of the UV stabilized Perspex proposed for the fencing. The Panel queried what alternative solution will be considered if the cost is too high.	

requested to understand this better. 4i. Concerns were raised about the use of Perspex in the fencing to meet acoustic requirements. Perspex can degrade significantly over time and is generally not very UV stable. Alternative materials should be considered plus alternative approaches to managing this important interface should be considered.	<u>Front Boundary Fence</u> The DRP's comments about the use of 'perspex' to the front boundary fence are noted. The designer has advised that, due to the proximity to Main Street, the risk of damage is too great if glazing were to be installed. Instead, it is proposed to utilise "UV stable Perspex."		
5c. The Applicant was strongly encouraged by the Panel to explore sustainability initiatives and suggested engaging the services of a sustainability consultant. A commitment to sustainability initiatives is essential to enable a successful outcome and further clarity was requested.	5. Operable windows provided to the internal walls between the Piazza and Activity Rooms 3 and 4 are situated on the corners of the building and already achieve cross-ventilation.	5e. The Panel supported the introduction of openable windows between the activity spaces and the "piazza" space to optimize the stack effect. The Panel recommended that careful consideration be given to the differences between the stack effect and cross ventilation to get the most effective passive design outcome. 5f. It was stated by the Panel it would be beneficial to have a better understanding of the glazing facing east and west and how heat gain will be managed into the activity space and how an increase in energy requirements is being mitigated. The Panel recommends detailed sections showing solar ingress at various times of the year are prepared and used to revise the designs. 5g. It was suggested by the Panel it would be beneficial to increase (controlled) natural light from the entrance to the reception area. There may be opportunities to lift the roof and have higher ceilings to gain further penetration from the northern light.	

6a. The seating provided at the entry for clientele to stop and chat is welcoming, positive and good practice, however generosity in this area could be improved. 6b. It was noted by the Panel there are no windows indicated in the cot room on the drawings. The cot room should include an openable window to purge overnight and enable natural light penetration. 6c. The space defined by the safety fence and gates to the entry way could be more generous.	6, 7, 8 and 9 • Windows added to Cot Room • Planter box added to the gated covered entry • Width of pedestrian entry path increased by 300mm to 1.8 metres • Low-level wall with letter box has been added in front of the northern row of car bays • Wheel stops added to car bays to ensure pedestrian path is not blocked by any parked cars • The Applicant does not consider that a security gate is required, however, the design allows for a sliding gate to be installed at a later date if needed (subject to all necessary approvals).	6c. The space provided in the entry portal space is still seen as very tight and the Panel recommends more generosity of space be considered.	
7a. The Panel stated the legibility of the entry portico could be examined and improved. It was suggested the generosity of this area could be explored. 7b. The Applicant was encouraged to explore screening the carpark with landscape or a visually permeable element which would add to the pedestrian experience and reduce the visual dominance of car spaces.		7b. In DRP1, comment was made there is room for improvement around the arrival experience. It was suggested the entry could be relocated closer to the front corner of the building which could create more generosity of space, better legibility, a more welcoming entry, whilst improving proximity to the community seating area. This comment was reiterated. 7c. The Panel questioned whether the entry is technically compliant and suggested checking the measurements.	
8a. Comment was made the entry portal and pathway seems too narrow. The Applicant was urged to check the width to ensure people can pass if a pram is being pushed at the same time. 8c. The Applicant was encouraged to separate the pedestrian and vehicular paths.			
10a. The current proposal in form is reminiscent of a more suburban	10. Face Brickwork (restoration red) added in lieu of timber cladding	10c. The current proposal in form is still reminiscent of a more	

retail outlet and would benefit from consideration of its use in its design. 10b. As explained under Principle 1 commentary there is opportunity to revise the selection of materials to include those of a more contextual nature. One suggestion was to consider the use of brickwork (even as a feature element) which is contextual to the local area. Investigate the various colours in the area or a certain type of brick which has been used. 10c. Whilst the simplicity of form is acknowledged the building form should be enhanced to better represent the use and to better respond to the quality of the streetscape. 10d. The front fence should be further developed to create more interest and better integrate the landscaping. 10e. The use of lightweight materials requires good architectural detailing to optimize the aesthetic outcomes. It would be beneficial to have a better understanding and detailing around the robustness of the materials utilised in the design to ensure a good outcome. 10f. Any shade sails proposed should be shown on the drawings and renders as they impact considerably the aesthetic outcomes. 10g. The location and detailing of downpipes and other detailed service elements should be considered with relation to aesthetic appeal. 10h. A suggestion was made by the Panel there is opportunity to explore a more playful approach to	Public Art mural extent increased to the front and side walls. Face Brickwork (restoration red) added to front fence with a mixture of solid rendered panels and face brickwork Planter box added to the gated covered entry Shade sails are shown in the Landscape Plan and have been added to the renders.	suburban retail outlet and would benefit from consideration of its use in its design. 10d. The Panel maintains that there is an opportunity to revise the material selection to better reflect the local context. While the addition of brickwork is welcomed, it is recommended that the choice of brick and the overall design response be more thoughtfully considered to create a stronger connection with the surrounding area. 10e. Whilst the simplicity of form is acknowledged the building form should be enhanced to better represent the use and to better respond to the quality of the streetscape as mentioned in DRP 1. 10f. The Panel acknowledges improvement in the design of the front fence with the addition of brickwork but believes it requires further refinement to create a stronger streetscape interface. It is recommended that more articulation be explored through arrangement and detailing of materials. 10g. The use of lightweight materials requires good architectural detailing to optimize the aesthetic outcomes. It would be beneficial to have a better understanding and detailing around the robustness of the materials utilised in the design to ensure a good outcome. 10h. The Panel acknowledged that including shade sails in the plans is a positive step; however, they	

the black safety fence at the entrance.		believe that shade sails may not be the most suitable option for this proposal. The Panel recommends considering alternative shading solutions that align more closely with the architectural form and design language, enhancing both functionality and visual cohesion. 10i. The location and detailing of downpipes and other detailed service elements should be considered with relation to aesthetic appeal.	

Department of **Planning, Lands and Heritage**

GOVERNMENT OF WESTERN AUSTRALIA

Your ref:	DA24/1064
Our ref:	DP/11/02191
Enquiries:	Amneet Malhi (Ph: 6552 4693)

City of Stirling
PO Box 1533
Osborne Park WA 6916

25 November 2024

Attention: Shaun Wheatland,

Dear Shaun,

Re: Lot 6 (308) Main Street, Balcatta (revised comments)

I refer to your correspondence dated 17 October 2024 regarding the above application. In accordance with the Western Australian Planning Commission's (WAPC) Notice of Delegation dated 18 January 2022, the following updated comments are provided with respect to this proposal, which seeks approval for a child care premises.

Land Requirements

Lot 6 abuts Main Street which is reserved as an Other Regional Road (ORR) in the Metropolitan Region Scheme (MRS) and Category 2 as per WAPC Plan Number SP 694/6. Lot 6 is subject to a road widening requirement of approximately 5 meters, according to Land Requirement Plan No. 1.3556.

Access

Access is proposed via a single crossover to Main Street which currently services the site, however, is to be relocated. 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.

Traffic Impact Assessment/ Statement

- A Traffic Impact Statement (TIS) has been prepared by *Archer Consultants* to support the application. The TIS states that the proposed development would generate 75 vehicular trips during morning (AM) peak hour and 66 trips during afternoon (PM) peak hour.
- Parking
  - A total of 21 car spaces are proposed on-site, including 1 accessible space.
  - RTA guidelines suggests that for *Child care centres,* off-street parking must be provided at the rate of one space for every four children in attendance.
  - Similarly, there is a theoretical parking shortfall when compared to the *Car Parking Ratio* under the City of Stirling's policy "6.7 PARKING AND ACCESS" for *Child Care Premises*.

- This shortfall could potentially lead to over-parking, site congestion, verge parking, and queues spilling over onto the street, blocking pedestrian routes etc., thus impacting the operations of Main Street.

- As such, it is recommended that parking provision be revised as per the parking provision and to the satisfaction of the city.

- The TIS outlines that the largest heavy vehicle expected to access the site will be a 6.4m SRV waste collection vehicle. However, consideration should be given to the provision of delivery bays for delivery, service, courier, and emergency (ambulance) vehicles, which is consistent with section "5.4 Provision for service vehicles" of the TIA guidelines Vol4.

WAPC State Planning Policy 5.4 Road and Rail Noise

Due regard should be given to WAPC State Planning Policy 5.4 *Road and Rail Noise* (SPP 5.4) which seeks to minimise the adverse impact of transport noise on proposed developments. Main Roads WA traffic counts (2019) suggest that the subject section of Main Street accommodates approximately 23,600 vehicle movements per day.

It is recommended that the local government ensure that due considerations have been given to SPP 5.4 requirements and that all necessary measures, as detailed in the SPP 5.4 Implementation Guidelines have been applied.

WAPC Draft Position Statement: Child Care Premises (2022)

Section 5.5 of the above draft policy, *Undesirable characteristics for a child care premises site* states that it is not desirable for a child care centre to obtain access from a major road or located within proximity to a major intersection where there may be safety concerns for pedestrians and vehicles.

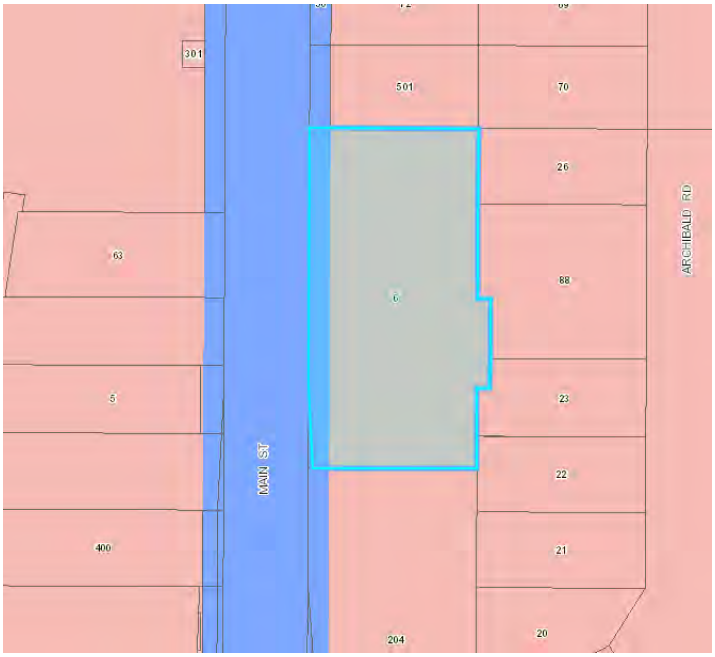
Recommendation

The Department has no objection to the proposal on ORR planning grounds; however, it is recommended that the above items be addressed prior to determination.

Thank you for your correspondence. Should you have any further queries regarding this matter, please contact me on 6552 4693 or via email (Amneet.Malhi@dplh.wa.gov.au)

Yours sincerely

Simon Luscombe
Principal Planning Officer
Strategy and Engagement



Metropolitan Region Scheme Map

Development Services
629 Newcastle Street Leederville WA 6007
PO Box 100 Leederville WA 6902
T (08) 9420 2099
F (08) 9420 3193

Attachment 9b. Referral Response - Water Corporation recieved 23 October 2024.

Your Ref: DA24/1064
Our Ref: 182785782 - DAP415860
Enquiries: Jason Rice
Direct Tel: 9420 3811
Email: building.services@watercorporation.com.au

23 October 2024

Senior Planning Officer
City Of Stirling
PO BOX 1533
OSBORNE PARK WA 6916

Attention of: Shaun Wheatland

Re: Lot 6, 308 Main St, Osborne Park

Thank you for your email dated 17th October 2024. We offer the following comments regarding this proposal.

Water
Reticulated water is available to the subject lots. A 20mm water service exists on the property.

Wastewater
Reticulated sewerage is available to the subject lot. A **150mm** PVC sewer main running parallel along the **inside** of the rear boundary. The minimum distance a building can be to the center of this sewer main is **0.6m** with piling. The minimum distance from the center of the sewer main without piling is 1.5m (Single Story) **2.5m** (Double Story). Any portion of the proposed building which is within the zone of influence to sewer main may require suitable footings in accordance with our technical guidelines. Please refer to our website: www.watercorporation.com.au/Developing-and-building/Working-near-assets.

Protect Sewer
It should be noted that access chamber is located inside the subject land boundary. Due consideration will be required when developing in this area.

- An unconfined access way of at least 1.0 m wide must be maintained around the edge of sewer and drain maintenance structures at all times.
- Headroom (clearance between finished ground level and the underside of an overhanging structure such as a roof) of at least 2.4 m must be maintained at all times.

The developer is required to fund the full cost of protecting or modifying any of the existing infrastructure which may be affected by the proposed development. In accordance with Section 90 of the Water Services Act 2012 whenever development is proposed near Water Corporation assets the applicant/developer/owner needs approval prior to construction.

Approval for works
Any works carried out in proximity to our Assets must receive prior approval by applying for an Asset Protection Risk Assessment (APRA). To assess whether the proposed development will require an APRA, details of the Prescribed Proximities are available on our website: www.watercorporation.com.au/Developing-and-building/Working-near-assets/Approval-for-works.

Building Approval Application
The applicant is required to submit a Commercial/Multi Residential Application by using our online portal BuilderNet: login-buildernet.watercorporation.com.au.

Attachments required for approval will include:

- Final construction site & architectural floor plans
- Engineer certified piling detail plans
- Hydraulic Plans – Water & Wastewater
- Trade Waste Application Form - Application forms (watercorporation.com.au)
- Trade Waste Supplement Form (Meal Preparation)

The information provided above is subject to review and may change. If the proposal has not proceeded within the next 6 months, please contact us to confirm that this information is still valid. Please provide the above comments to the landowner, developer and/or their representative. Should you have any queries or require further clarification on any of the above issues, please do not hesitate to contact our Enquiries Officer.

Kind regards,

Jason Rice

Jason Rice
Advisor – Building Services
Development Services

Attachment 10 - Applicants Response to Public Consultation recieved 2 October 2024

LATERAL PLANNING

2 December 2024

Shaun Wheatland
Senior Planning Officer
City of Stirling
Shaun.Wheatland@stirling.wa.gov.au

APPLICATION FOR DEVELOPMENT APPROVAL
CHILD CARE CENTRE
LOT 6 (No.308) MAIN STREET, BALCATTA

We refer to the Application for Development Approval ('Application') for the construction of a Child Care Centre at Lot 6 (No.308) Main Street, Balcatta ('site').

Please find below the Applicant's comments in response to the summary of issues raised during public advertising of the Application.

Traffic

We are not aware of any "*bend*" in the alignment of Main Street in proximity to the site.

The point of access to the proposed car park is 180 metres north of the intersection with Morley Drive / Karrinyup Road.

The Traffic Impact Statement ('TIS') for the Application concludes that the vehicle trips generated by the proposed development *"can be accommodated along Main Street without affecting traffic performance or increasing any delays or queues."*

We understand the Department of Planning, Lands and Heritage ('DPLH'), being the responsible authority for Main Street, has not objected to the proposal on traffic grounds.

The Application makes provision for the future widening of Main Street as per the Other Regional Road reserve under the Metropolitan Region Scheme ('MRS'), with the road widening area to be set aside as a separate lot for future acquisition by the State Government when required. The Application does not preclude any future upgrade of Main Street within the alignment of the MRS reserve, should this be required.

The reference to the proposal generating 188 extra vehicles a day is incorrect. This assumes each child is driven to / from the premises individually and does not take into account occupancy rates / absentees, siblings (i.e. two children in one car) and people accessing the site by means other than private car.

The TIS for the Application calculates the daily trip movements based on the widely recognised *Guide to Traffic Generating Developments*, which forecasts the following daily trip generation rates for long day care centres:

- 7am to 9am: 0.8 trips per place (75 trips);
- 2.30pm to 4pm: 0.3 trips per place 28 trips); and
- 4pm to 6pm: 0.7 trips per place (66 trips).

The TIS states:

> *As the proposed development is classed as Long-day care, the anticipated AM peak hour vehicle trip rate is 75 vehicle trips. The anticipated PM peak hour vehicle trip rate is 66 trips. Evident by these rates, the proposed development is expected to generate a low to medium level of vehicle trips which will have a minor impact on the existing traffic conditions.*

We note one of the submissions refers to *"Scarborough Beach Road."* We presume this is an error as the intersection of Main Street and Scarborough Beach Road is some 3 kilometres away.

Car Parking

The parking standard for a child care premises is set out in Local Planning Policy 6.7 – Parking and Access ('LPP6.7'). The Application acknowledges the parking requirement of 32 bays under LPP6.7 and provides detailed justification for the provision of 21 car bays.

In this regard, the Operational Management Plan shows the allocation of car bays throughout the day based on the varying peak parking demand times for customers and staff.

The provision of 21 car bays for a 94 place centre equates to 1 bay for every 4.5 places, which is a more generous rate of parking than the rate of 1 bay per 5 places recommended by the DPLH.

The proposed approach to car parking under the Operational Management Plan has been deployed in 13 other child care centre proposals lodged by Lateral Planning that have received DAP approval, with an average rate of parking in the order of 1 bay for every 4.5 places.

Noise Impacts

The Application is accompanied by an Acoustic Assessment that recommends construction and operational measures to mitigate the effects of noise on the amenity of the area, including acoustic-rated boundary fencing.

Demand for Child Care / Alternative Uses for the Site

The demand for child care services and alternative uses for the site are not relevant planning considerations. The Application is required to be considered on its merits, noting a child care premises is a discretionary ('A') use in the Residential zone.

Should you require any further information or clarification in relation to this matter, please contact Alan Stewart on 0413 842 645.

Yours faithfully,

Alan Stewart

Alan Stewart
Lateral Planning

Part C – Item 3.2 – LOT NO. 15 (HOUSE NUMBER 118), FLORA TERRACE, NORTH BEACH – MIXED USE DEVELOPMENT

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Metro Inner DAP
Local Government Area:	City of Stirling
Applicant:	Planning Solutions
Owner:	Neil Bowie
Value of Development:	$10 Million ☐ Mandatory (Regulation 5) ☒ Opt In (Regulation 6)
Responsible Authority:	City of Stirling
Authorising Officer:	Amanda Sheers, Director Planning and Development
LG Reference:	DA24/0971
DAP File No:	DAP/24/02744
Application Received Date:	9 August 2024
Report Due Date:	9 December 2024
Application Statutory Process Timeframe:	90 Days, with an additional 24 days agreed between the Applicant and City of Stirling
Attachment(s):	1. Development Application Plans (received 6 November 2024) 2. Aerial Location Plan 3. Metropolitan Region Scheme Zoning Map 4. City of Stirling Local Planning Scheme No.3 Zoning Map 5. Applicant's Original Planning Report received on 15 July 2024 6. City of Stirling Planning Assessment 7. Applicant's Final Submission: a. Applicant's Response to Request for Information received 6 November 2024 b. Sustainability Strategy prepared by Full Circle Design Services received 15 July 2024 c. Transport Impact Statement prepared by PTG Consulting received 15 July 2024 d. Technical Memorandum in response to City Request for Further Information prepared by PTG

	Consulting received 6 November 2024 e. Acoustic Report prepared by Herring Storer Acoustics received 15 July 2024 f. Noise Management Plan prepared by Herring Storer Acoustics received 15 July 2024 g. Applicant's Residential Design Code Assessment Volume 2 – Apartments received 15 July 2024 h. Design Report by Space Collective Architects received 15 July 2024 i. 3D Render Perspectives by Space Collective Architects received 6 November 2024 j. Overshadowing Illustrations by Space Collective Architects received 6 November 2024 k. Applicant's Landscaping Plans prepared by See Design Studio received 6 November 2024 l. Waste Management Plan prepared by Tails Consultants received 6 November 2024 8. City of Stirling Design Review Panel (DRP) Report dated 20 June 2024 9. External Agency Referral Responses a. Water Corporation received 30 August 2024 b. Western Power received 7 November 2024 10. Applicant's Response to Public Consultation received on 6 November 2024	
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 Inner Development Assessment Panel resolves to:

> **Approve** DAP Application reference DAP/24/02744 and accompanying plans as listed in Condition 3 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 Stirling Local Planning

Scheme No. 3, for the proposed Mixed Use Development on Lot 15, House Number 118, Flora Terrace, North Beach 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. The development is to comply in all respects with the attached approved plans, as dated, marked and stamped, together with any requirements and annotations detailed thereon by the Development Assessment Panel. The plans approved as part of this application form part of the planning approval issued (including any modifications required by conditions of approval).

PLAN TITLE	DATE	REVISION	DRAWING No.	DRAWN BY
Survey Plan	27/06/24	A	SD1-00	Space Collective Architects
Demolition Plan	06/11/24	B	SD1-01	Space Collective Architects
Site Plan	26/11/24	E	SD1-02	Space Collective Architects
Basement Plan	06/11/24	D	SD2-00	Space Collective Architects
Ground Floor Plan	06/11/24	E	SD2-01	Space Collective Architects
Level 01 Plan	06/11/24	E	SD2-02	Space Collective Architects
Level 02 Plan	06/11/24	E	SD2-03	Space Collective Architects
Level 03 Plan	06/11/24	E	SD2-04	Space Collective Architects
Level 04 Plan	06/11/24	E	SD2-05	Space Collective Architects
Roof Plan	06/11/24	D	SD2-06	Space Collective Architects
Elevations	06/11/24	D	SD3-01	Space Collective Architects
Elevations	06/11/24	D	SD3-02	Space Collective Architects
Section	06/11/24	E	SD4-01	Space Collective Architects

4. Notwithstanding the requirements of Condition 3, amended plans shall be provided as part of the Building Permit submission to the satisfaction of the City of Stirling addressing the following:
    a. Widen the crossover to 5.5m in width with the building to be modified to allow for a 1.5m x 1.5m sightline truncation area at the northern junction of the access way and the Flora Terrace road reserve.
    b. Remove the 1.5m wide painted strip along the northern portion of the driveway.
    c. Amend the eastern major opening to Living Area / Dining Room of Apartment 103 and Apartment 203 to be permanently screened to 1.6m in height in accordance with the requirements of the Residential Design Codes Volume 2 (Element 3.5 Visual Privacy).
    d. Provide permanent visually impermeable screening at 1.6m in height to the Ground Floor Terrace and Private Open Space Area of Apartment G02 facing the western and southern lot boundaries in accordance with the requirements of the Residential Design Codes Volume 2 (Element 3.5 Visual Privacy).
    e. Locate the planters on Level 01 along Flora Terrace to be wholly within the lot boundaries.
    f. Remove the proposed awnings to Flora Terrace where they conflict with the existing and proposed street trees and waste collection.

<u>Building Design</u>

5. The colours, materials and finishes of the development shall be in accordance with the details and annotations as indicated on the approved plans which forms part of this approval, to the satisfaction of the City of Stirling.

6. Prior to occupation of the development, the external finish of the boundary walls shall be to the same standard as the rest of the development, to the satisfaction of the City of Stirling.

<u>Construction Management</u>

7. Prior to the submission of a Building Permit application, a Construction Management Plan (CMP) shall be submitted to the City of Stirling for approval. The CMP shall include specific details on the management of aspects including but not limited to, dust, noise, vibration, waste management, parking, traffic, street tree protection zones, storage of materials, site safety / security and any other relevant matters to the satisfaction of the City of Stirling. The CMP is to be complied with for the duration of the construction of the development, to the satisfaction of the City of Stirling.

<u>Landscaping</u>

8. Prior to the submission of a Building Permit application, an amended Landscaping Plan shall be submitted to and approved by the City of Stirling with the following modifications
    a. Planting of a Medium Tree Species to replace a Small Tree on the south of the Ground Floor G03 Terrace.
    b. The removal of the Melaleuca Leucadendra tree species and replacement with an alternative tree species as per the City's recommended tree species list.

c. Details demonstrating the surface treatment within the deep soil areas of the Large and Medium Trees.

9. Prior to occupation of the development, all Advanced Trees required by the approved detailed Landscaping Plan must be planted on site in the area indicated on the approved plan and be thereafter maintained for the duration of the development. The Advanced Trees must be provided with the approved deep soil area at ground level free of intrusions, to the satisfaction of the City of Stirling.

10. Prior to the occupation of the development, all landscaped areas are to be planted, reticulated and mulched in accordance with the amended landscaping plan to be approved and maintained thereafter for the duration of the development, to the satisfaction of the City of Stirling.

11. All street trees located on the verge shall be retained and protected in accordance with Australian Standard AS 4970-2009 Protection of Trees on Development Sites, to the satisfaction of the City of Stirling.

Lighting and Security

12. Adequate lighting being provided to all public spaces including under awnings, parking areas, service areas, footpaths and entry and exit points, to the satisfaction of the City of Stirling.

13. Any outside lighting to comply with Australian Standard AS 4282-2019 - Control of the Obtrusive Effects of Outdoor Lighting (as amended) for the control of obstructive effects of outdoor lighting and must not spill into any adjacent premises. Details of any outside lighting to be submitted at the Building Permit application stage demonstrating compliance with Australian Standard AS 4282-2019 (as amended).

Noise

14. All recommendations provided in the Noise Management Plan prepared by Herring Storer Acoustics received 15 July 2024, are to be implemented, to the satisfaction of the City of Stirling.

15. Prior to the submission of the Building Permit application, the landowner is to provide written confirmation that all recommendations in the Noise Management Plan have been incorporated into the building design, with the certified Building Permit application, to the satisfaction of the City of Stirling.

16. Within three (3) months of the commencement of the development, a Noise Report prepared by an accredited noise consultant shall be submitted to and approved in writing by the City of Stirling. The noise report confirming noise from the development complies with the Environmental Protection (Noise) Regulations 1997, to the satisfaction of the City of Stirling.

Parking and Vehicle Access

17. The minimum number and allocation of car parking, bicycle, scooter and motorcycle on-site is to be provided as follows:
    a. 20 residential car parking bays;

b. Four residential visitor car parking bays; and
c. Seven commercial car parking bays.
d. 10 residential bicycle parking spaces;
e. Two residential visitor bicycle parking spaces; and
f. Three residential motorcycle / scooter parking spaces

18. All parking bays, manoeuvring and circulation areas are to comply with Australian Standards AS/NZS2890.1:2004 Amendment 1 and AS2890.2:2018. The number of ACROD car parking bays and their design and layout are to comply with Australian Standards AS/NZS2890.6:2009 (Off-street Parking for People with Disabilities) and the Building Code of Australia (Volume 1 section D3.5), to the satisfaction of the City of Stirling.

19. Prior to the occupation of the development, all driveways, parking and manoeuvring areas shall be hard surface, drained and maintained to the satisfaction of the City of Stirling.

20. Visitor car, motorcycle, scooter and bicycle parking bays shall be permanently marked, maintained and be accessible at all times for use exclusively by visitors to the property.

21. Prior to the occupation of the development, directional signage shall be provided at the entry to the site. The signage shall direct visitors to the visitor car parking, motorcycle, scooter and bicycle spaces. The signage shall thereafter be retained for the life of the development.

22. The crossover shall be designed, constructed, and installed prior to occupation of the development to the satisfaction of the City of Stirling.

23. Prior to the occupation of the development, any redundant crossover shall be removed and the kerbing and road verge reinstated to the satisfaction of the City of Stirling.

24. Unless otherwise approved, no walls, fences, letterboxes or other structures above 0.75 metres in height to be constructed within the 1.5 metre width x 1.5 metre depth area of where:
    a. Walls, letterboxes or fences adjoin vehicular access points to the site, or
    b. A driveway meets a public or private street, or
    c. Two streets intersect, or
    d. A driveway meets a right of way, or

    unless the further approval of the City of Stirling is obtained.

25. Prior to the occupation of the development, a minimum of 15 bicycle parking bays shall be provided on site. The design and construction of the bicycle bays shall be in accordance with Australian Standard AS 2890.3:2015 Parking Facilities Part 3: Bicycle Parking.

26. Where a storeroom is solely accessible through an adjacent car parking bay, the storeroom and the car parking bay are to be assigned to the same dwelling.

27. Where two car parking bays are provided in a tandem arrangement, both car bays are to be assigned to the same dwelling or commercial tenancy.

28. Prior to occupation of the development, the light pole impacted by the proposed crossover and existing light pole south of the site at the eastern carpark entry are to be relocated at the owner's expense to maintain consistent light spacings and lighting levels along Flora Terrace. Lighting to comply with Australian Lighting Standards, to the City's satisfaction and Western Power approvals.

29. Prior to the lodgement of a Building Permit application, the developments fire service needs to be designed to ensure that a Department of Fire and Emergency Services "Fire Appliance Hardstand" and associated line marking is not required to be installed within the road reserve abutting the development. Details, location and elevations are to be submitted and approved by the City of Stirling.

Development Contributions

30. Prior to occupation of the development, a public art proposal for the subject development to the value of 1.0% of the construction value must be submitted to, and approved by, the City of Stirling.

31. Prior to occupation of the development, the approved public art proposal shall be completed and installed by the developer and maintained thereafter by the owners of the development, to the satisfaction of the City of Stirling.

Sustainability

32. Prior to the submission of a Building Permit application, a revised Sustainable Design Statement is to be submitted to the City of Stirling confirming all dwellings exceed the minimum NATHERS requirement for apartments by one star and the development incorporates sustainable initiatives as per the submitted Sustainable Design Strategy prepared by Full Circle Design Services dated June 2024.

Universal Design

33. Prior to the submission of a Building Permit application, certification completed by a Liveable Housing Australia assessor confirming that the detailed design of the 'Silver Level' dwellings are compliant with the 'Silver Level' of the 'Liveable Housing Design Guidelines' produced by Liveable Housing Australia, must be submitted to, and approved in writing by, the City of Stirling. A minimum of 20% of dwellings are to be designed to achieve a 'Silver Level' rating. All required design features shall be installed and operational prior to occupation.

Utilities, Facilities and External Fixtures

34. Prior to the occupation of the development, each Multiple Dwelling shall be provided with a mechanical dryer, where a concealed drying area is not provided exclusively for the dwelling.

35. In accordance with the Residential Design Codes Volume 2 (Element 4.18 Utilities), all external fixtures, building services, roof equipment and utilities of the development are to be integrated into the building, landscape and/or fencing such that they are accessible for servicing requirements but do not create an adverse visual impact, to the satisfaction of the City of Stirling.

36. Residential storerooms shall be allocated to the dwellings in a manner consistent with Table 4.6 Storage requirements of the Residential Design Codes Volume 2 (Element 4.6 Storerooms), to the satisfaction of the City of Stirling.

Visual Privacy

37. Prior to occupation of the development, all privacy screening shall be visually impermeable and is to comply in all respects with the requirements of Residential Design Codes Volume 2 (Element 3.5 Visual Privacy), to the satisfaction of the City of Stirling.

Waste Management

38. The development is to comply with the Waste Management Plan prepared by Talis Consultants received 6 November 2024, unless otherwise approved by the City of Stirling.

39. The development is to be connected to the sewer.

40. Stormwater from all roofed and paved areas shall be collected and contained on site. Stormwater must not affect or be allowed to flow onto or into any other property or road reserve. There shall be no connection to the City's drainage infrastructure without the written consent of the City of Stirling.

Advice Notes

General

1. Where an approval has so lapsed, no development shall be carried out without the further approval of the Development Assessment Panel or City of Stirling having first been sought and obtained.

2. If an applicant is aggrieved by this determination there is a right of appeal under Part 14 of the *Planning and Development Act 2005*. An appeal must be lodged within 28 days of the determination with the State Administrative Tribunal.

3. This is a Development Approval under the City of Stirling Local Planning Scheme and related policies. It is not a Building Permit or an approval to commence or carry out development under any other law. It is the responsibility of the applicant to obtain any other necessary approvals, consents and licenses required under any other law, and to commence and carry out development in accordance with all relevant laws.

4. This approval is not an authority to ignore any constraint to development on the land, which may exist through statute, regulation, contract or on title, such as an easement or restrictive covenant. It is the responsibility of the applicant and not the Development Assessment Panel or City of Stirling to investigate any such constraints before commencing development. This approval will not necessarily have regard to any such constraint to development, regardless of whether or not it has been drawn to the Development Assessment Panel or City of Stirling's attention.

5. Noisy Construction Work outside the period 7.00am to 7.00pm Monday to Saturday and at any time on Sundays and Public Holidays is not permitted unless a Noise Management Plan for the construction site has been approved in writing by the City of Stirling.

6. The applicant is responsible for ensuring that all lot boundaries as shown on the approved plans are correct.

7. Development is to comply in all respects with the attached approved plans which have been stamped accordingly.

8. In relation to the light pole's relocation, the relocation of the light poles is to is to comply with Australian Lighting Standards, to the satisfaction of the City of Stirling and Western Power.

9. Where, in the opinion of the City of Stirling, achieving compliance with the conditions of approval require significant modifications to the approved plans, a Form 2 application will be required for consideration in accordance with Clause 17 or 17A of the *Planning and Development (Development Assessment Panels) Regulations 2011*.

10. All construction works to comply with the requirements of the *Environmental Protection Act 1986* and the *Environmental Protection (Noise) Regulations 1997*. Noisy construction work outside the period 7:00am to 7:00pm Monday to Saturday and at any time on Sundays and Public Holidays is not permitted unless an approved Noise Management Plan for the construction site has been issued.

<u>Landscaping</u>

11. The detailed Landscaping Plan is to include the retention of the existing street tree planted in the verge.

12. The proposed crossover configuration is subject to the approval of the City of Stirling's Verge Control and Swimming Pool Business Unit. A "Crossover Installation Application" is required to be submitted and approved prior to the commencement of the crossover installation.

<u>Lighting and Security</u>

13. Any outside lighting should meet Australia Standards AS 4282-2019 for the control of obstructive effects of outdoor lighting and must not spill into any neighbouring residential premises. Prior to the issue of the Building Permit a report is to be prepared by a suitably qualified consultant and submitted to the City of Stirling. It should demonstrate that all lighting associated with the development shall comply with AS 4282-2019.

<u>Noise</u>

14. All noise generated by plant and equipment including air conditioners shall comply with the *Environmental (Noise) Regulations 1997*.

<u>Development Contributions</u>

15. In relation to the Public Art condition, please refer to the City of Stirling Developer's Guide to Public Art, the City of Stirling Public Art Masterplan and City of Stirling Local Planning Policy 6.12 - Public Art on Private Land.

    Based upon the estimated cost of development identified on the development application forms, the 1.0% public art contribution will equate to $100,000.

16. The applicant is advised that any future strata title or community title subdivision of the property must be consistent with this approval and the lot sizes demonstrated in the application.

Waste Management

17. The bin enclosure is required to comply with the requirements of the City of Stirling's Waste Management Local Law 2010.

Details: outline of development application

Region Scheme	Metropolitan Region Scheme (MRS)
Region Scheme - Zone/Reserve	Urban
Local Planning Scheme	City of Stirling Local Planning Scheme No.3 (LPS3)
Local Planning Scheme - Zone/Reserve	Local Centre
Structure Plan/Precinct Plan	N/A
Structure Plan/Precinct Plan - Land Use Designation	N/A
Local Planning Strategy Designation	Local Centre (LC 21) – Flora Terrace
Use Class and permissibility:	Office – 'P' use 'P' means that the use is permitted by the Scheme providing the use complies with the relevant development standards and the requirements of the Scheme. Multiple Dwelling – 'D^2' use D^2 – Means the use is not permitted unless Council, or in this instance the DAP, has exercised its discretion by granting planning approval. Note 2 states that Multiple Dwellings are not permitted on the ground floor fronting a street.
Lot Size:	1,686m^2
Existing Land Use:	Commercial - Office and Consulting Rooms
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 key components of the proposed development are summarised as follows:

- A five storey Mixed Use Development comprising:
  - 20 Apartments, ranging from one to four bedrooms; and;
  - One commercial tenancy, with 245.7m^2 of floorspace at ground level, fronting Flora Terrace.
- Communal Open Space and amenities provided at ground level.
- Landscaping including the provision of Two Large trees and 14 Small trees as well as providing deep soil planting across 178m^2 (10.5%) of the site area.
- Vehicle access and car parking from Flora Terrace with a total of 38 residential bays, four visitor bays and seven commercial bays.

Proposed Land Use	Multiple Dwelling, Office
Proposed Commercial Net Lettable Area	245.7m^2
Proposed No. Storeys	Five Storeys
Proposed No. Dwellings	20 Multiple Dwellings

Background

The subject site is 1,686m^2 in area and has a 30.48 metre frontage to Flora Terrace which is identified as 'Local Distributor' as per the City's Functional Road Hierarchy. There is an existing single storey building with associated car parking and landscaping on-site with Office and Consulting Room uses. The subject site is located within the area designated as the Flora Terrace Local Centre (LC21) as per the City's Local Planning Strategy which comprises a variety of residential and commercial land uses.

Existing development on the eastern side of Flora Terrace, between Malcolm Street and Lawley Street is primarily commercial development with some mixed use and residential development of heights ranging from single to four storeys.

On the western side of Flora Terrace, between Malcolm Street and Lawley Street, development is primarily residential with residential densities of R40 and R50. There are limited numbers of commercial properties and one mixed use development. Building heights range from one to three storeys.

The area to the north and south is typically residential in character, with a range of one and two storey single and grouped dwellings, with exception of the immediately abutting northern property which is a 3 storey mixed use development.

Legislation and Policy:

The following legislation is applicable to the proposed development.

Legislation

- *Planning and Development Act 2005*
- *Planning and Development (Development Assessment Panels) Regulations 2011*
- *Planning and Development (Local Planning Schemes) Regulations 2015*
- *Metropolitan Region Scheme* (MRS)
- *City of Stirling Local Planning Scheme No. 3* (LPS3)

State Planning Policies

- State Planning Policy 7.0 – Design of the Built Environment (SPP7.0)

Planning Codes

- Residential Design Codes Volume 1 – Part B
- Residential Design Codes Volume 1 – Part C
- Residential Design Codes Volume 2 – Apartments

Local Planning Strategy

The subject site is located within the Flora Terrace Local Centre There are no statutory controls associated with the site being located within this Local Centre.

Local Planning Policies

The following Local Planning Policies are applicable to the proposed development.

- Local Planning Policy 4.2 – Mixed Use Design Guidelines (LPP4.2)
- Local Planning Policy 6.3 – Bins Storage Areas (LPP6.3)
- Local Planning Policy 6.6 – Landscaping (LPP6.6)
- Local Planning Policy 6.7 – Parking and Access (LPP6.7)
- Local Planning Policy 6.11 – Trees and Development (LPP6.11)
- Local Planning Policy 6.12 – Public Art on Private Land (LPP6.12)
- Local Planning Policy 6.18 – Public Consultation (LPP6.18)

Consultation:

Public Consultation

The proposed development was advertised for a period of 28 days in accordance with the 'Complex Application' requirements of Clause 64(3) and (6)(a) of *the Planning and Development (Local Planning Schemes) Regulations 2015*.

The consultation period commenced on 27 August 2024 and concluded on 25 September 2024. In response, a total of 29 submissions were received, comprising 25 objections and four letters of support. Details related to the number, type and origin of these submissions The submissions received during the consultation period and their relative locations are tabled below.

Submissions Received	Within 200m Radius	Greater than 200m Radius	Number of Submissions
SUPPORT	0 (0%)	4 (100%)	4 (13.8%)

OBJECT	17 (68%)	8 (32%)	25 (86.2%)
OTHER (Comment)	0 (0%)	0%	0 (0%)

All matters raised in submissions received during the advertising period have been summarised in the table below. Also provided is the number of submissions in which the matter was raised, and the City's response to the matter.

Public Consultation Submissions		
Number of Submission to Raise Matters	**Summary of Matters Raised**	**Officer Response**
17	Concerns relating to traffic, safety and congestion.	The Traffic Impact Statement (TIS) provided in support of the proposed development (refer to attachment 7c) includes reference to traffic volumes, safety and congestion and concludes that traffic associated with the proposed development use can be accommodated within the existing road network without any resulting adverse road safety impacts. The TIS has been reviewed by the City and is generally supported subject to the imposition of the recommended conditions of approval proposed by the City.
13	The proposed building height is out of place and inconsistent with the character of the area.	The assessment of the proposed building height is addressed in this report.
7	Concerns relating to overlooking and privacy implications from the proposed development.	Revised plans have addressed visual privacy concerns along the northern, western and southern boundaries such that the development as proposed satisfies the City's requirements. It is noted that the proposed development has been designed to minimise overlooking of adjacent properties, using setbacks, screening devices and by setting in the viewing position of major openings from the perimeter of the building to restrict the cone of vision looking downwards into sensitive areas of adjoining properties. Specific condition setting has also been recommended to ensure the development does not result in any adverse overlooking to

Public Consultation Submissions		
Number of Submission to Raise Matters	**Summary of Matters Raised**	**Officer Response**
		adjoining northern, western and southern properties. Visual privacy is addressed further in this report.
7	Concerns relating to the proposed number of car parking bays provided by the development.	The provision of car parking is appropriate and is supported. Car parking and access is discussed further in this report.
6	Concerns relating to overshadowing to the adjoining properties from the proposed development.	Overshadowing is discussed further in this report. The City's assessment concludes the resultant of overshadowing does not have an adverse effect to adjoining properties or the public realm.
5	Concerns relating to general safety of the surrounding road network.	The submitted TIS has been reviewed by the City and does not identify any safety issues in relation to the proposed development on the road network. Condition setting is recommended to provide for two-way access into the site to mitigate potential issues on Flora Terrace.
4	Concern regarding noise generated from the proposed development.	The submitted Acoustic Report does not identify any issues with noise generated from the development to adjoining properties. The Acoustic Report has been reviewed and is supported by the City with appropriate conditions of approval.
4	Concern regarding light generated from the proposed development.	The City's assessment does not identify any concerns regarding lighting from the proposed development the surrounding area. Any excessive light spillage to adjoining properties, generated both during the construction phase and after occupation of the development can be addressed by appropriate conditions of approval. Condition setting is recommended to mitigate any potential excessive light spillage to adjoining properties, generated both during the construction phase and after occupation of the development.

Public Consultation Submissions		
Number of Submission to Raise Matters	**Summary of Matters Raised**	**Officer Response**
4	Approval of this development may set a precedent.	The development as proposed is aligned with the prevailing planning policy framework.
4	Concerns relating to inadequate space for waste collection along Flora Terrace.	A revised Waste Management Plan was provided in relation to concerns regarding sufficient space for waste collection on Flora Terrace. The revised Waste Management Plan provides for twice-weekly collection to minimise the collection area required.
3	The proposed parking is inadequate and will exacerbate existing on-street parking issues in the area.	The provision of car parking is appropriate and is supported. Car parking and access is discussed further in this report.
3	Concern regarding the built form.	The proposed development has been assessed against the prevailing planning policy framework. Built form is discussed later in this report.
3	The proposal represents an overdevelopment of the site resulting in more people and more cars.	The proposed development has been assessed against the relevant built form controls of the prevailing planning policy framework. Built form, parking and traffic is discussed later in this report.
1	Concerns relating to the site fill located along the southern boundary and its impact on the amenity of the abutting properties.	The revised submission included a reduction in site fill along the western and southern lot boundaries. This matter is discussed further in this report.
1	Concerns relating to the northern boundary wall to the adjoining properties and inconsistency with the character of the area.	The revised submission included modifications to the northern boundary wall. This matter is discussed further in this report.

The City forwarded all submissions received during the public consultation to the Applicant for a response. The Applicant's response to submissions is contained in Attachment 10.

In addition to the public consultation, the City received one petition with 55 verified signatories. The petition received did not meet the petition criteria as outlined in the City of Stirling Meeting Procedures Local Law 2009. On review of the petition, the following matters were raised as concerns:

- Building height

- Traffic management; and
- Parking overflow.

The matters are consistent with comments provided as part of the formal public consultation undertaken by the City with responses regarding these matters provided in the table above.

Consultation with Government/Service Agencies

The application has been referred to the relevant Government/Service Agencies including Water Corporation and Western Power with no objection in principle. Any comments or recommendations of relevance have been incorporated into the recommended conditions of approval. The referral response from the Water Corporation and Western Power is contained in Attachment 9.

Planning Assessment:

The following matters have been identified as the relevant key considerations in the assessment of this application:

1. Proposed Land Use
2. Primary Planning Controls
3. Building Height
4. Side and Rear Setbacks
5. Overshadowing
6. Visual Privacy
7. Plot Ratio
8. Levels
9. Parking and Access
10. City of Stirling Design Review Panel

Attachment 6 – City of Stirling Planning Assessment includes an assessment of the proposal against the relevant planning framework including reference to when discretion is sought.

1. Proposed Land Use

The table below summarises the zoning permissibility of the proposed land uses as set out in Table 1 of LPS3:

LPS3 Clause 4.3 and Land Use Permissibility		
Land Use	**Use Class**	
Multiple Dwelling	D[2]	The use is not permitted unless Council has exercised its discretion by granting planning approval. Note 2 states that Multiple Dwellings are not permitted on the ground floor fronting a street.
Office	P	The use is permitted by the Scheme providing the use complies with the relevant development standards and the requirements of the Scheme.

Multiple Dwellings in the Local Centre zone are listed as a Discretionary use under Table 1 of LPS3. By virtue of the permissibility designation D[2], Multiple Dwellings in this zone are not permitted unless the decision maker exercises its discretion by granting approval subject to Multiple Dwellings not being permitted on a ground floor fronting a road reserve greater than 10m in width. The proposed Multiple Dwellings do not have a direct interface with Flora Terrace on the ground floor, them being sleeved by the proposed Office tenancy. This is therefore consistent with the Scheme provisions.

Office is listed as a 'P' use in accordance with Table 1 - Zoning Table of LPS3, which means the use is permitted by the Scheme providing it complies with the relevant development standards and the requirements of the Scheme.

As Multiple Dwelling is a discretionary use in the Local Centre zone, consideration is required against the Local Centre zone objectives of LPS 3.

Local Centre Zone Objectives (LPS3)	
Objective	**Officer Comment**
To provide for a limited range of small-scale retail, commercial and community facilities to meet the day-to-day needs of the immediate neighbourhood.	There are a variety of commercial land uses along Flora Terrace including Restaurant, Fast Food Outlet, Personal Care Services, Personal Services and Office which service the daily needs of the immediate neighbourhood. The proposed Office tenancy contribute to the variety of commercial land uses to provide for the needs of the immediate neighbourhood and wider area.
To ensure safe and convenient access to facilities, in an environment which is conducive to pedestrian movement.	Subject to the recommended condition setting, the proposed development provides for safe and convenient access for vehicles, bicycles and pedestrians.
To ensure development is sited and designed so as to reinforce a sense of place and attractive streetscapes.	The subject site is located within a Local Centre where there are a mixture of commercial and residential land uses of varying height between one and four storeys. In recognition of this context, the development has been designed to locate the bulk towards the centre of the site. This ensures that building height is appropriately transitioned to the south to mitigate any adverse impacts towards adjoining properties. The articulation, setbacks, colour and materials, creates interest as viewed from the streetscape and adjacent properties, and softens the visual bulk impact of the development ensuring the development reinforces a sense of place and attractive streetscape.

The City's assessment concludes that the proposed land uses are appropriate in the Local Centre zone.

2. Primary Planning Controls

As stated, the subject site is zoned Local Centre by the City's LPS3. Clause 5.3.2 of LPS3 (Special Application of Residential Design Codes) states:

> *Except as otherwise required in the Scheme or a Local Planning Policy, residential development not in the Residential Zone is to comply with the requirements of multiple dwellings under the R80 R-Code.*

As such, the residential component of the proposed development is assessed against the R80 provisions of the Residential Design Codes (R-Codes).

Notwithstanding this, Residential Design Codes Volume 2 permits all of Part 2 (Primary Controls) of the policy, and some sections of Part 3 (Siting the Development) to be modified by the local planning framework. This is particularly relevant in this instance as the R80 requirements applicable to the development proposal are superseded by the requirements of LPP 4.2.

The proposal has been assessed against all applicable requirements of the City's LPS3, the State and Local Planning Policies. Height, setbacks, overshadowing, visual privacy, plot ratio and levels are considered below with an assessment provided against the applicable element objectives and the specific and general objectives of LPP 4.2. All other elements of the proposal which seek discretion against the relevant planning framework have been considered against the relevant element and general objectives (refer Attachment 6).

The following table identifies the key elements of the planning framework applicable to the development:

Element	Provisions	Proposed
Building Height	Permitted building height of three storeys (12m) as per Clause 6.3 of LPS3 and LPP 4.2.	Proposed building height of five storeys (17.3m) – (discretion sought).
Street Setbacks	Permitted nil street setback to Flora Terrace as per LPP 4.2.	• Ground Floor Level and Levels 1-2: Minimum nil setback provided. • Level 3: Minimum 2.8m setback provided. • Level 4: Minimum 7.8m setback provided.
Side and Rear Setbacks	<u>Northern Boundary</u> • Residential Design Codes Volume 1 Part C Table 3.4a (R50).	<u>Northern Boundary</u> • Proposed setback of 1.5m to the ground floor. • Proposed setback of 4.3m from Level 1 – Level 4. • Proposed boundary wall maximum height proposed at 12.4m in lieu of 7m –

Element	Provisions	Proposed
		Discretion sought. • Proposed boundary wall length proposed at 17.4m in lieu of maximum 14m in length at which point the wall is to be set back a minimum of 3m – (discretion sought).
	<u>Rear Boundary</u> • 6m setback.	<u>Rear Boundary</u> • Proposed setback of 4.6m in lieu of 6m (Terrace) – (discretion sought).
	<u>Southern Boundary</u> • Residential Design Codes Volume 1 Part B Tables 2a/2b (R20). Further detailed commentary regarding this matter is provided later in this report.	<u>Southern Boundary</u> • Proposed setback of 4.5m in lieu of 5m to the ground floor – (discretion sought). • Proposed setback of 4.5m in lieu of 5m from Level 1 – (discretion sought).
Landscaping and Trees	• Minimum one Large tree, one Medium tree and Small trees to suit area. • Minimum 10% site area deep soil area (168.6m²)	• Two Large tree and 14 Small trees proposed. • 10.5% (178m²) deep soil proposed on the ground floor. • 119.1m² planting on structure proposed throughout Ground floor – Level 4.
Parking	• Minimum 24 bays and maximum 43 bays for residents. • Minimum four bays for residential visitors. • Minimum 10 bays for the Office tenancy.	• 38 resident bays proposed. • Four visitor bays proposed. • Seven commercial bays proposed in lieu of 10 bays – (discretion sought).

Attachment 6 – City of Stirling Planning Assessment includes an assessment of the proposal against the relevant planning framework including where discretion is sought.

3. Building Height

The following building height provisions apply to the subject site:

- A building height of 12m through Clause 6.3 of LPS 3; and
- A building height of three storeys which may be varied through the adoption of a Local Development Plan (LDP) as per LPP 4.2.

At a height of five storeys or 18.8m and in the absence of an adopted LDP for the site, the proposed development seeks discretion with respect to building height. In that respect, Clause 6.3.3 of LPS 3 requires the following 'procedural' processes to be undertaken:

a) *An application requiring the approval of the Council under Clause 8.1 of the Scheme shall include information which addresses the impact of the proposal having regard to matters such as amenity, overshadowing, wind impacts and building design, siting, bulk, scale and colour.*

b) *Before determination of an application requiring the approval of the Council under Clause 8.1 of the Scheme, the Council shall cause the provisions of Clause 9.4 of the Scheme to be invoked in respect of the application.*

The supporting information provided as part of the development application addresses Clause 6.3.3 (a) of LPS 3 and the application has been advertised as per Clause 9.4 of LPS 3. As such, the consideration of the proposed building height is appropriate subject to the development satisfying the relevant Design Intent of LPP 4.2, Element Objectives of Element 2.2 – Building Height of the R-Codes Volume 2 and Clause 6.3.1 of LPS 3 which is outlined below.

Design Intent:

To ensure that building height and scale is appropriate to its site and context.

Element Objectives

O 2.2.1 *The height of development responds to the desired future scale and character of the street and local area, including existing buildings that are unlikely to change.*

O 2.2.2 *The height of buildings within a development responds to changes in topography.*

O 2.2.3 *Development incorporates articulated roof design and/or roof top communal open space where appropriate.*

O 2.2.4 *The height of development recognises the need for daylight and solar access to adjoining and nearby residential development, communal open space and in some cases, public spaces.*

<u>Clause 6.3.1 Objective:</u>

To ensure that buildings over 12 metres in height do not have a detrimental impact on the amenity of the Special Control Area or adjoining sites.

In determining the suitability of the proposed development, the permitted building height of the area under the planning framework is to be considered, which is demonstrated in Figure 1.

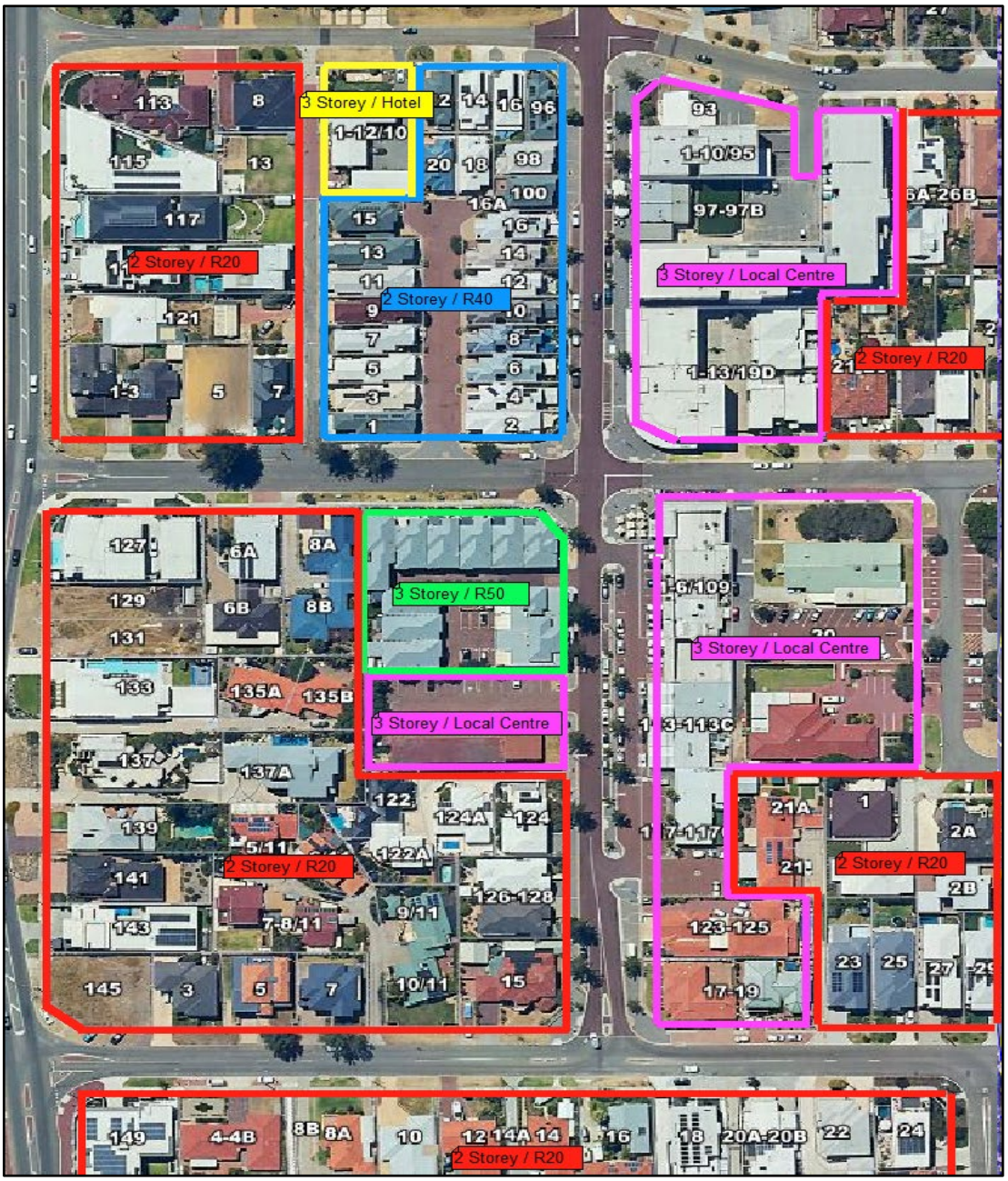


Figure 1 - City's mark-up of the permitted building heights of the adjacent sites and the applicable building height provisons.

The immediate locality consists of mainly commercial development with some mixed use and residential development. Building heights range from single storey up to four storeys as demonstrated in Figures 2 and 3. Building heights of adjoining properties are mainly of two storey design, with a small number of three and four storey mixed use buildings. As demonstrated in Figure 4, to the north is an existing three storey Mixed Use development. This demonstrates that the proposed five storey building height provides a transition in height to the adjoining residential properties.

Figure 3 - Site photo showing existing four storey Mixed-Use Development within the immediate streetscape Lot 31 HN 99 Flora Terrace, North Beach).

Figure 2 -Site photo showing existing four storey development within the immediate streetscape Lot 17 HN 103 Flora Terrace, North Beach).

Figure 4 – Architectural Perspectives showing the proposed development and existing northern development as viewed from Flora Terrace.

The subject site is located within the Flora Terrace Local Centre, which includes buildings up to four storeys in height, whilst directly abutting residential zoned properties with densities of R20 and R50 with heights ranging from single to three storeys. The development has been designed to effectively respond to the desired streetscape character of the Local Centre whilst mitigating the impacts of building heights to lower density residential properties.

To Flora Terrace, the development provides a nil setback for three storeys which is generally consistent with the emerging streetscape particularly between Castle Street and Lawley Street with heights between three and four storeys. The fourth and fifth storey of the proposed development incorporate setbacks between 2.8m to 7.8m to mitigate the impact of the building bulk from the upper levels of the proposed development to the street as demonstrated by Figure 5. Additionally, as the properties directly opposite the subject site along Flora Terrace are zoned Local Centre with permissible building heights of three storeys, the height of the development with a three storey 'podium' and total height of five storeys is not inconsistent with a future streetscape.

The massing of the development provides for a transition in heights to the adjoining residential properties with Level 3 and 4 of the proposal generally located central to the site and increased setbacks provided to the northern, southern and western lot boundaries. This transition is evident along Flora Terrace where building heights step from five storeys to three storeys to the north to respond to the height of the adjoining building at three storeys and the greater intensity of the existing development along Flora Terrace with heights up to four storeys. To the south, the development provides for a more gradual stepping of heights and increased setbacks to respond to the lower density residential properties abutting the site and the existing streetscape with maximum heights of up to two storeys. As detailed in the relevant sections of this report, the City's assessment concludes the proposed height and associated setbacks

of the development are sufficient and mitigate impacts to the adjoining properties with these matters addressed in further detail in the relevant sections of this report.

The site falls from Flora Terrace to the western boundary by approximately two metres which has been incorporated into the design of the development which encompasses five storeys of apartments and a basement car park. The outdoor areas of the rear apartments have also generally been designed to respond to the topography of the site with this matter discussed in further detail in this report.

Figure 5 – Architectural Perspectives showing the proposed development in comparison to the existing streetscape.

The proposed development incorporates an articulated roof design with the fourth and fifth level of the development finished in a dark grey render which contrasts with the white brickwork of the lower apartment levels providing an attractive façade to the street.

In relation to overshadowing, the development satisfies the Acceptable Outcomes of Element 3.2 – Orientation of the R-Codes Volume 2 with a resultant overshadowing of 22% to 24% of the site area of the southern properties being House Number 122, 124 and 124A Flora Terrace. The Applicant has submitted detailed overshadowing diagrams in support of the development demonstrating the extent of overshadowing is comparable to a three storey proposal and does not have an unreasonable impact to the habitable areas, outdoor living areas and solar collectors or the street in the context of the applicable planning controls. Further detailed commentary regarding overshadowing is discussed later in the relevant section of this report.

Whilst LPP 4.2 allows for building height to be varied through an LDP, it is pertinent to consider the purpose of an LDP which is to coordinate and assist in achieving better built form outcomes through the design and coordination of development upon small and highly constrained lots, and supplement development standards of local planning schemes and the R-Codes. In this regard, the City's assessment demonstrates the development generally satisfies the City's relevant planning framework without the preparation and adoption of a LDP through achieving the relevant performance-based criteria. As such, the preparation and adoption of an LDP was not required in this instance.

As outlined above, the height of the development does not have an undue detrimental impact on the amenity of the Coastal Height Limit - Non-Residential Zones Special Control Area or the adjoining sites and therefore satisfies Clause 6.3.1 of LPS 3 and is supported.

4. Side and Rear Setbacks

Where adjoining sites are zoned Residential, LPP 4.2 requires side setbacks to be calculated as per the R-Codes applicable to the adjoining site.

The site to the northern boundary has a density of R50 requiring the northern lot boundary setbacks to be assessed as per the R-Codes - Volume 1 Part C Table 3.4a. The site to the south has a density of R20 requiring the southern setbacks to be assessed as per the R-Codes - Volume 1 Part B Tables 2a and 2b. The proposed development seeks discretion in relation to the following setbacks:

- Northern Boundary – Boundary wall with a maximum height of 12.4m in lieu of 7m.
- Northern Boundary – Boundary wall with a length of 17.4m in lieu of 14m and without a 3m indentation
- Southern Boundary – Ground Floor to Level 1 setback with a setback of 4.5m in lieu of 5m.
- Western boundary – Ground floor setback of 4.5m in lieu of 6m.

Consideration of the development against the Element Objectives of Element 2.4 – Side and Rear Setbacks of R-Codes Volume 2 is provided below:

O 2.4.1 Building boundary setbacks provide for adequate separation between neighbouring properties.

O 2.4.2 Building boundary setbacks are consistent with the existing streetscape pattern or the desired streetscape character.

O 2.4.3 The setback of development from side and rear boundaries enables retention of existing trees and provision of deep soil areas that reinforce the landscape character of the area, support tree canopy and assist with stormwater management.

O 2.4.4 The setback of development from side and rear boundaries provides a transition between sites with different land uses or intensity of development.

In relation to the northern boundary, the development provides for a three-storey podium to the adjoining three storey Mixed Use building with increased setbacks provided to the fourth and fifth levels. The proposed development has been designed to mitigate the impacts of bulk towards the adjoining property with the boundary wall component abutting a wall with no major openings to habitable rooms or private outdoor living areas as demonstrated in Figures 6 and 7. As demonstrated in Figure 6, the proposed boundary wall does not impact the rear balcony of the adjoining property with increased setbacks provided to ensure there is adequate building separation provided. With the exception of the boundary wall, the development satisfies the relevant setback provisions ensuring sufficient separation is provided to the northern property to mitigate any potential adverse impacts.

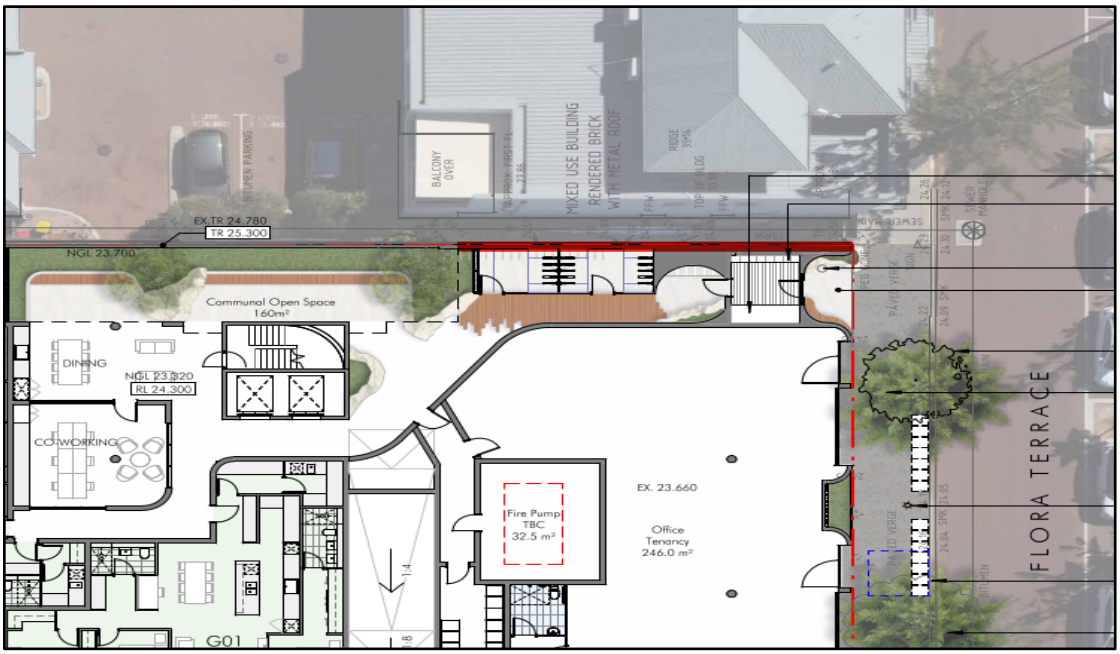


Figure 6 - Overlay showing the location of the proposed boundary wall to the northern property.

Figure 7 – Site photo showing where the proposed boundary wall will abut the adjoining development to the northern property.

To the southern boundary, the development proposes setbacks of 4.5m in lieu of 5m from the Ground Floor and Level 1. As demonstrated in Figure 8, the development primarily abuts a 4m wide common property driveway to the south providing a total separation of 8.5m to the abutting properties ensuring any sensitive areas are unaffected. The proposed development also provides for significant setbacks to the upper floors of the development with minimum setbacks between 5.7m to 12.6m which provides for sufficient separation to mitigate any potential impacts relating to building height.

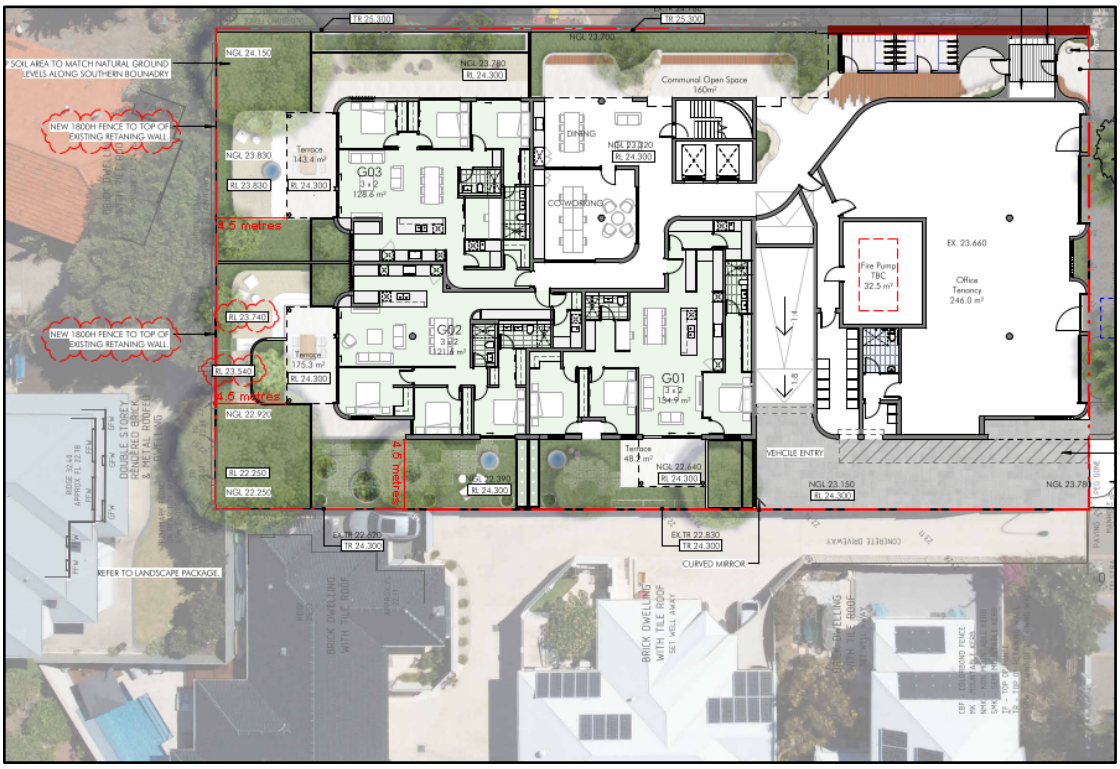


Figure 8 – Overlay showing the setbacks of the development to the southern and western boundaries.

In relation to the western boundary, the development provides a minimum ground floor setback of 4.5m in lieu of 6m to the single storey patio structures with the remainder of the development setback a minimum of 7.5m. The patio structures are single storey and unenclosed on three sides ensuring impacts of building bulk are minimal. In recognition of the lower residential density, the development provides a transition in building heights with setbacks between 7.5m to 10.4m to the upper floors which provides sufficient separation to existing developments located alongside the western boundary.

The setbacks of the proposed development are sympathetic to the existing streetscape and development context with the three storey podium fronting Flora Terrace and the northern boundary with the upper floors setback to provide sufficient separation from the street and adjoining properties. The heights and setbacks respond to the Local Centre zoning of the site and the existing three storey building to the northern adjoining property. Though the proposed development provides for a three-storey boundary wall to the northern boundary, this predominately appears as two storeys from the street due to 2m setback to the third floor (Apartment 104). As demonstrated in Figure 4, due to the design of the proposed development and the existing building, the bulk of the boundary wall is generally concealed from the street.

To the south, the development responds to the lower density residential properties with significant setbacks provided at ground level and to the upper floors which maintains the residential streetscape to the south of the site. The upper floors of the development generally satisfy the recommended building separation provisions and the development is consistent with the existing and desired streetscape character.

The development provides for significant deep soil area with 178m² provided on the ground level and an additional 119m² on structure throughout the development. The development also includes Two Large Trees and 14 Small Trees. The proposed development substantially exceeds the deep soil area and tree planting provisions with the building separation to the side and rear boundaries sufficient.

Though being a commercially zoned site, the proposed development has been appropriately designed to respond to the adjoining residential land uses and residential densities. The development carefully responds to the existing and future development context with sufficient separation provided to mitigate any adverse impacts. This is particularly evident along Flora Terrace with the heights and setbacks maintaining the residential streetscape to the south and the more intense streetscape to the north as demonstrated by Figure 9.

Figure 9 - The streetscape context of the development to the abutting southern and northern properties.

The development satisfies the Element Objectives of Element 2.4 – Side and Rear Setbacks of the R-Codes Volume 2.

5. Overshadowing

Element 3.2 – 'Orientation' of R-Codes Volume 2 includes provisions relating to the orientation of buildings to the street, orientation of buildings to maximise northern solar access to living areas and minimising overshadowing impacts to adjoining properties.

As the proposed development has a maximum height of five storeys and 18.8m in lieu of three storeys and 12m, consideration of the proposed development against the

Element Objectives of Element 3.2 – Orientation of the R-Codes Volume 2, is provided below:

O 3.2.1 Building layouts respond to the streetscape, topography and site attributes while optimising solar and daylight access within the development.

O 3.3.2 Building form and orientation minimises overshadowing of the habitable rooms, open space and solar collectors of neighbouring properties during mid-winter.

The development is designed to address the street with active frontages to the commercial tenancy on the ground floor and balconies to the upper floor apartments. The development has been designed to maximise solar access in accordance with the provisions of the R-Codes Volume 2.

In relation to overshadowing and in support of the proposed development, the Applicant has submitted detailed overshadowing diagrams which demonstrate the proposed development results in overshadowing of 22% to 24% onto the residential properties at 122, 124 and 124A Flora Terrace. These will each have a minimum of 5 hours of sunlight maintained to solar collectors as illustrated in Figures 11 and 12. As such, the impacts of the development relative to overshadowing satisfy the relevant provisions of the R Codes.

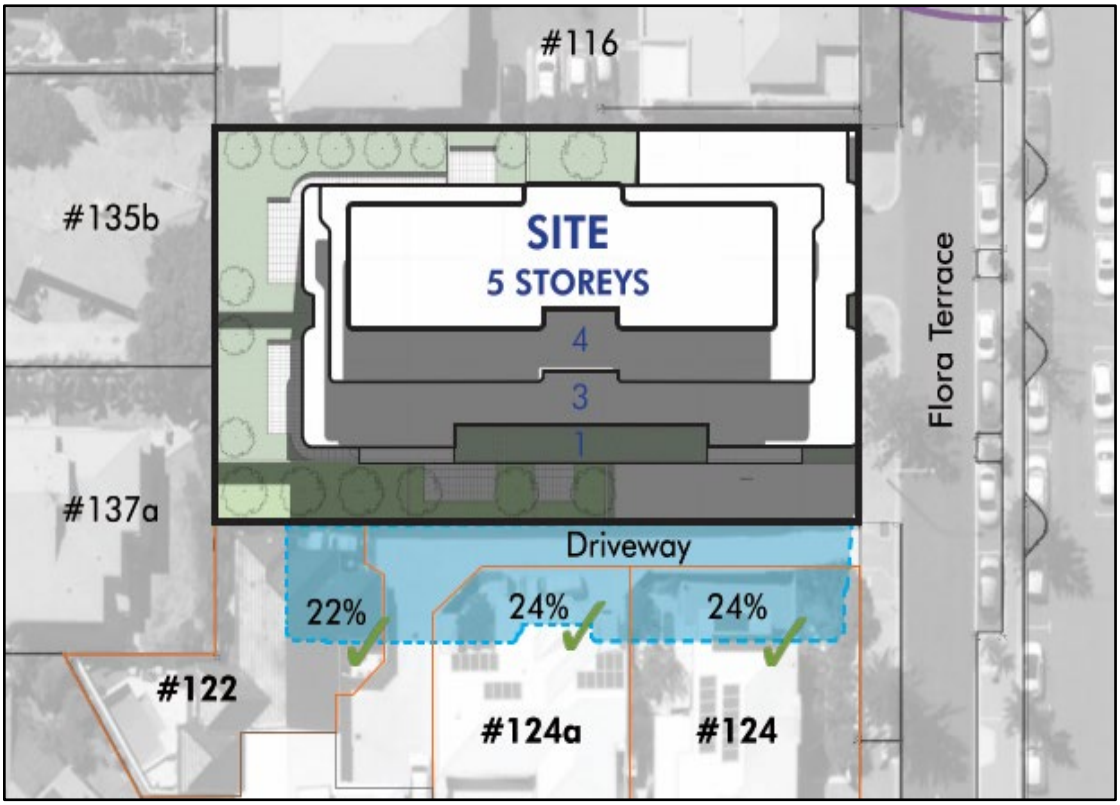


Figure 11 - Applicant's Winter Solstice Overshadowing Diagram

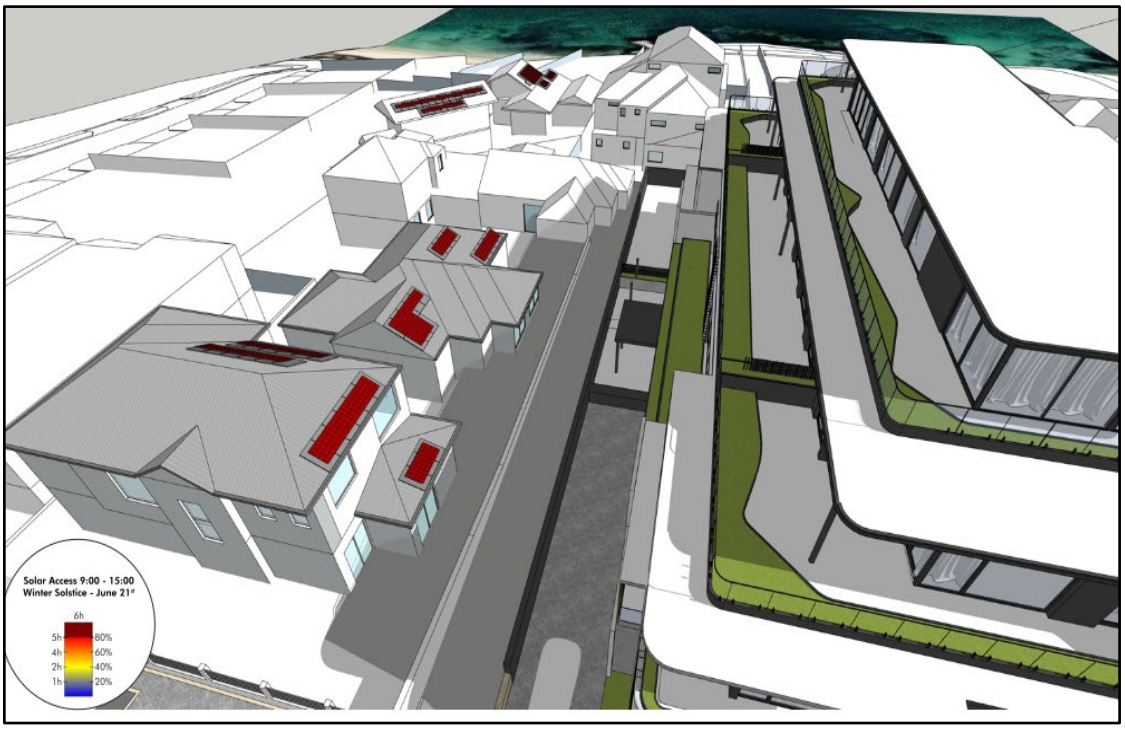


Figure 12 - Applicant's Winter Solstice Solar showing access to southern property solar PV panels. Red annotations demonstrating a minimum of solar access of 5 hours and burgundy demonstrating a minimum of 6 hours.

Figure 10 - Applicant's Winter Solstice Diagram comparing the proposed development (blue hatching) to a deemed-to-comply massing (red hatching over hourly intervals).

To further demonstrate the appropriateness of the height and massing of the development, the Applicant has prepared a series of overshadowing diagrams in their submission which show the shadow cast by the proposed five storey development compared to a three storey (deemed to be height compliant) development. This

analysis is undertaken at hourly intervals between 9.00am and 3.00pm on 21 June (i.e. Winter Solstice), as demonstrated in Figure 11 – also contained in Attachment 7j.

The results of this demonstrate that in terms of overshadowing, the impact the proposed development has at five storeys in height and designed as proposed with setbacks and articulation, results in an improved outcome for properties located to the south. The City notes that whilst the 'Deemed-To-Comply Massing' of the three storey building used for this comparative analysis may not fully reflect the design of an actual three storey building that may be built in accordance with the relevant provisions, the overshadowing diagrams provide for a useful comparative analysis to be undertaken.

The City is satisfied that the proposed development meets the objectives associated with Element 3.2 of the R Codes Volume 2.

6. Visual Privacy

Element 3.5 – Visual Privacy of the R-Codes Volume 2 provides Acceptable Outcomes for the achievement of visual privacy. The following table is extracted from Table 3.5 of the R Codes Volume 2. This suggests recommended privacy setbacks for a development of up to four storeys in height, which if provided are deemed to represent an acceptable outcome in visual privacy terms. It is noted that this is a five storey development for the purposes of assessing visual privacy, noting that from a performance basis, the fifth floor does not result in any adverse visual privacy implications.

Cone of Vision from Unscreened:	Adjoining sites coded R50 or lower
Major opening to bedroom, study, and open access walkways	4.5m
Major openings to habitable rooms other than bedrooms and studies	6m
Unenclosed private outdoor spaces	7.5m

The development proposes alternative visual privacy setbacks as follows:

- Apartments 103, 203 and 302 have a proposed setback of 4.3m in lieu of 6m to the northern boundary.
- Apartments 104 and 204 have a proposed setback of nil in lieu of 6m along the northern boundary.
- Apartment 303 has a proposed setback of nil in lieu of 7.5m along the northern boundary.
- Apartment G02 has a proposed setback of 2.4m in lieu of 7.5m along the western boundary.

An assessment has been undertaken against the Element Objectives of 3.5. These state:

O3.5.1 The orientation and design of buildings, windows and balconies minimises direct overlooking of habitable rooms and private outdoor living areas within the site and of neighbouring properties, while maintaining daylight and solar access, ventilation and the external outlook of habitable rooms.

Apartments 103, 203 and 302 have identical floor plans with major openings facing north from their Living Area / Dining Room setback 4.3 metres in lieu of 6 metres. As per Figures 14 and 15, there are two major openings from the Living Area / Dining Room with a cone of vision which extends to the adjoining northern property at House Number 9/112 Flora Terrace. One of these windows on both levels, as highlighted in red by Figures 14 and 15, result in an adverse visual privacy impact. These windows are recommended to be screened to a height of 1.6m.

Apartments 104 and 204 have major openings to Living Areas with a nil setback in lieu of 6m. These are located to the eastern side of the proposed development. Similarly, Apartment 303 includes an unenclosed outdoor private space with a nil setback in lieu of 7.5m. Figures 16,17 and 18, demonstrate the resultant visual privacy implications.

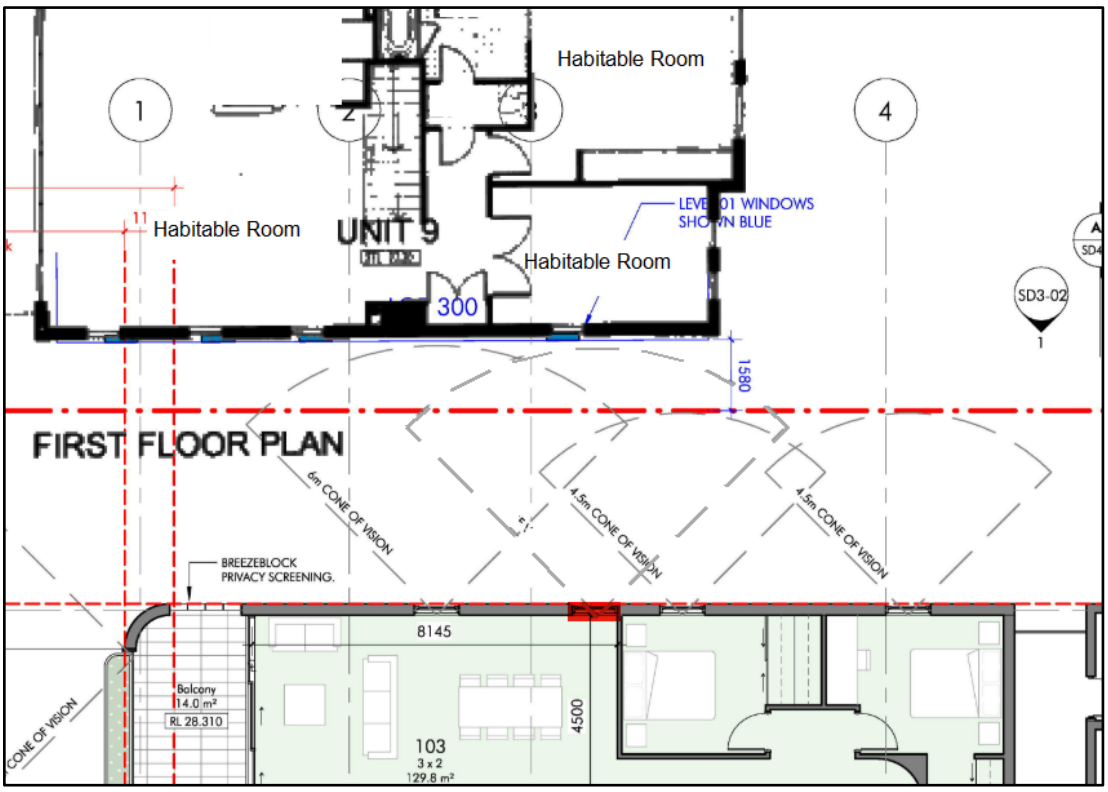


Figure 11 - Proposed overlooking from Apartments 103 and 203 into the ground floor of Lot 15 House Number 9/112 Flora Terrace, North Beach.

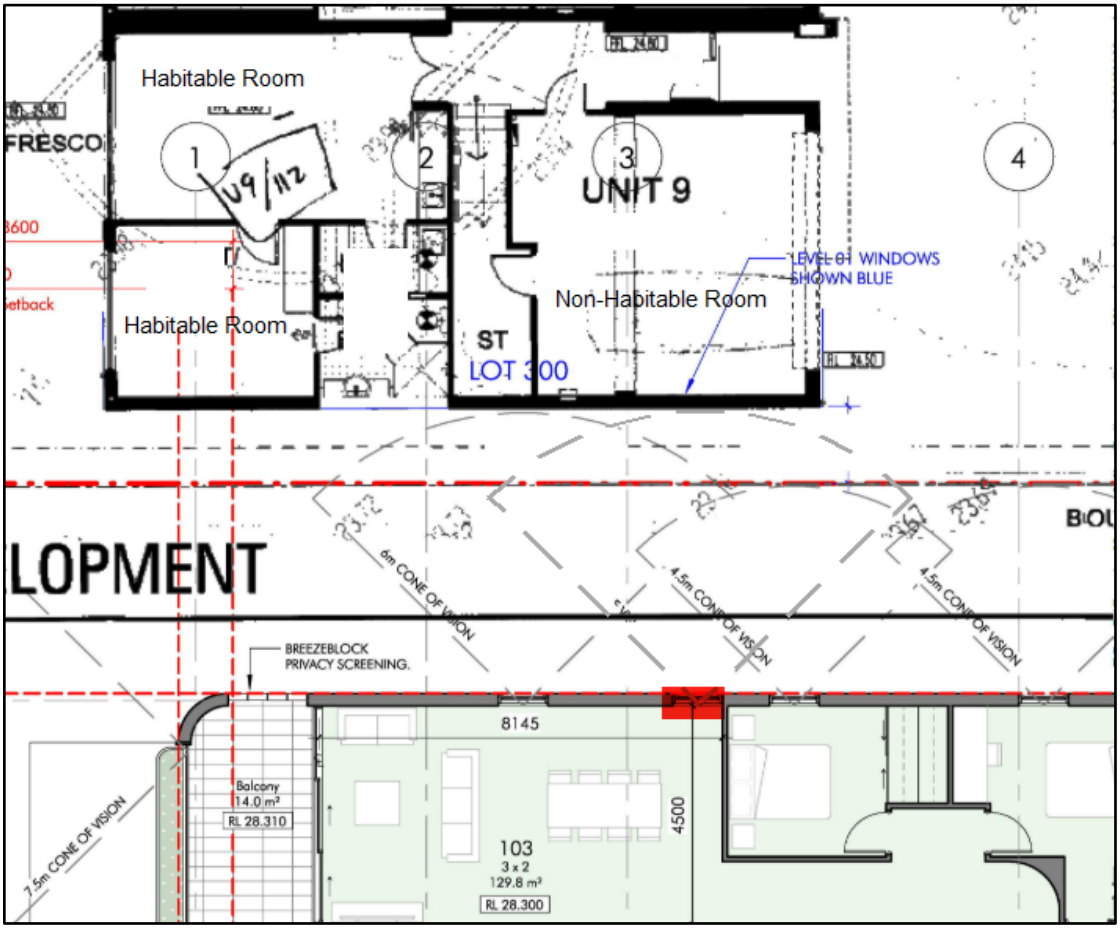


Figure 15 - Proposed overlooking from Apartments 103 and 203 into the upper floor of Lot 15 House Number 9/112 Flora Terrace, North Beach.

Figure 16 - The cone of vision from 104 and 204 will be directly overlooking the car park area of the northern mixed use development.

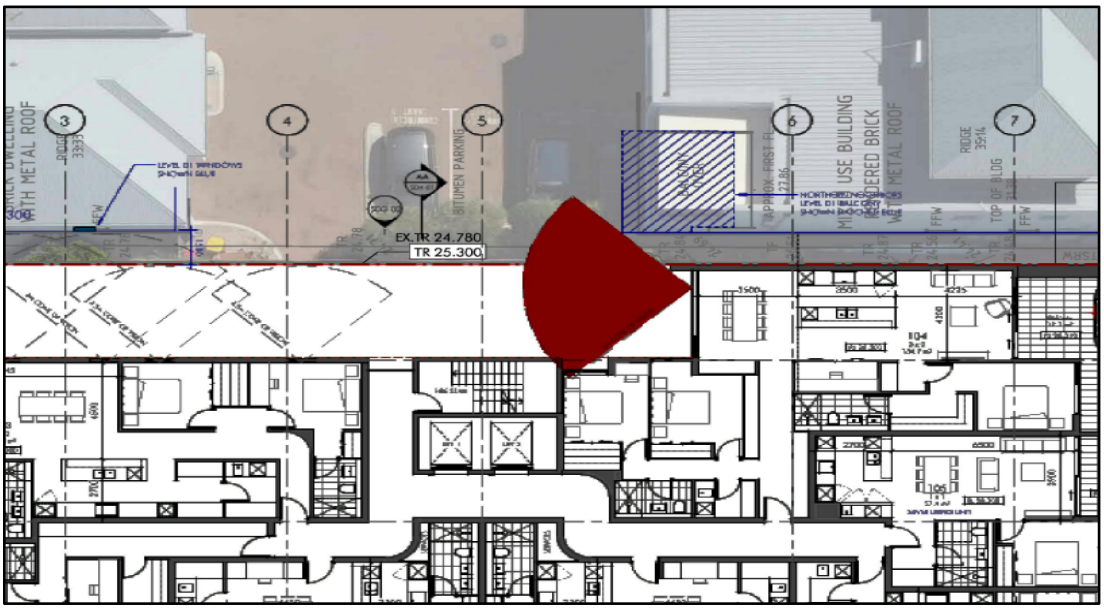


Figure 17 - Overlooking from Apartment 303 will be over the balcony of House Number Lot 15 12/116 Flora Terrace, North Beach.

As per Figures 16 and 17, the cone of vision from the major openings to the living areas do not overlook within the cone of vision, the adjoining property.

Given the height of the balcony to Level 3, overlooking is directed towards the roof space of the adjoining mixed use development, with no direct overlooking of the

Figure 18 - Overlooking from Apartment 303 will be over the balcony of Lot 15 House Number 12/116 Flora Terrace, North Beach.

Given the height of the balcony to Level 3, overlooking is directed towards the roof space of the adjoining mixed use Development, with no direct overlooking of the balcony of the adjoining property located to the north.

Apartment G02 includes a raised terrace which results in direct overlooking towards property located to the south and west. A condition of development approval is recommended to provide screening measures to the terrace. This will ensure the privacy impacts of the abutting properties will be minimised.

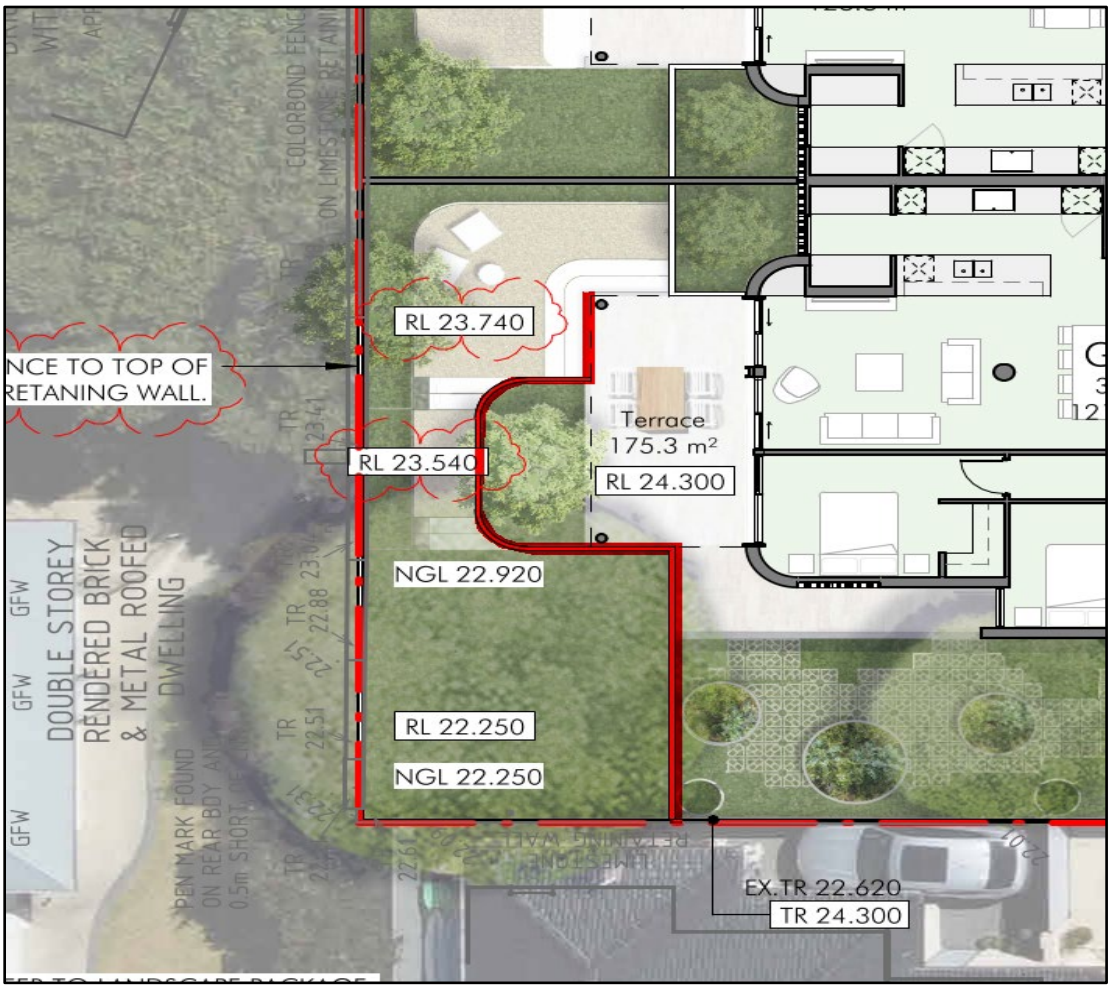


Figure 19 - The City to recommend the below red annotation to be screened in accordance with the Residential Design Codes Volume 2.

It is noted that in respect of visual privacy, the Applicant is aware of the associated conditions of development approval that are proposed as part of the recommendation.

7. Plot Ratio

The development proposes a plot ratio of 1.83 or 2,823.7m² in lieu of 1.0 or 1,686m², which equates to an additional 1,137.7m².

The Element Objectives of part 2.5 of the R Codes Volume 2 states:

> *O 2.5.1 The overall bulk and scale of development is appropriate for the existing or planned character of the area.*

Given the five-storey height of the proposed development the City acknowledges that the plot ratio will be greater than anticipated by a building of reduced height. The key issues of plot ratio, is whether the design of the building, including its height and setbacks, results in a building that fits in with the adjoining urban landscape without resulting in any associated adverse amenity impacts.

The proposed building height, setbacks, articulation, siting and design combine to deliver an appropriate outcome when assessed against the prevailing planning policy framework.

8. Levels

In accordance with LPP4.2, fill of up to 0.5m above natural ground level is permitted. The proposed development seeks discretion in this respect with fill of up to 2.1m proposed along the southern lot boundary.

LPP 4.2 includes the following objective:

> *To ensure that development follows the topography of the land and changes to ground levels will not significantly impact on streetscapes or abutting sites.*

The subject site has a 2.0m crossfall from east to west and the development has been designed to incorporate basement car parking. This means that the natural area to suit to the topography of the site and to maximise the use of the site. The proposed site fill of 2.0m primarily relates to the basement car parking area.

The proposed level of fill is between 0.3m at the street level and gradually increases over a length of 49.2m to a maximum of 2.1m to the rear of the site. As such, the proposed site works do not have an adverse impact on the streetscape. To the south, the proposed site works abut a common property access way and non-habitable spaces and walls without major openings to House Number 122 Flora Terrace as demonstrated by Figure 20.

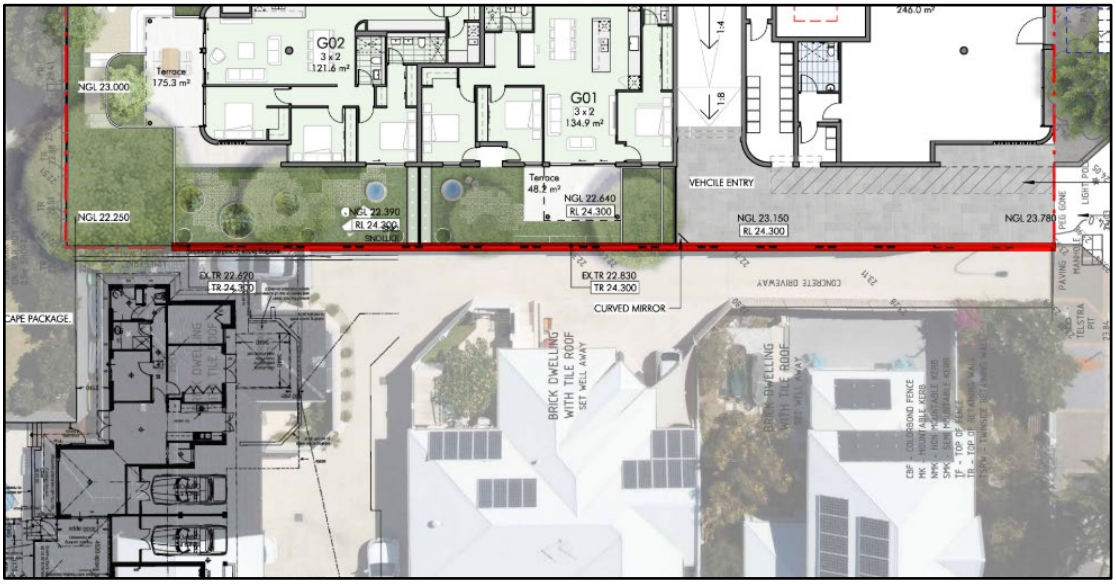


Figure 20 - The site works along the southern boundary up to a maximum of 2.1m, abut a common property access way and non-habitable space to Lot 1 House Number 122 Flora Terrace, North Beach.

The development addresses the objectives of the LPP 4.2.

9. Parking and Access

Parking

The proposed development has been assessed against Element 3.9 – Car and Bicycle Parking of the R-Codes Volume 2 and Local Planning Policy 6.7 – Parking and Access for the parking for the non-residential component. The table below provides a summary of the City's car parking assessment:

Car Parking Assessment			
Use	**Provision**	**Variable**	**Bays Required**
Residential – 1 Bedroom Dwellings	Minimum 0.75 bays per dwelling	2	Minimum 1.5 resident bays Note 1
Residential – 2+ Bedroom Dwellings	Minimum 1 bay per dwelling	18	Minimum 18 resident bays
Residential Visitors	Minimum 1 bay per four dwellings up to 12 dwellings and one 1 bay per eight dwellings for the 13th dwelling and above	20	Minimum 4 visitor bays
LC21 – Flora Terrace	1 bay per 25m² Gross Floor Area (GFA)	245.7m² of GFA	10 (9.8) Note 2
		Residential Total Required (Minimum):	20 resident bays and 4 visitor bays
		Residential Total Provided:	38 residential bays and 4 residential visitor bays provided.
		Non-Residential Required	10 bays
		Non-Residential Provided	7 bays
		Total Car Parking Required	34 bays
		Total Car Parking Provided	49 bays
		Total Surplus / Shortfall:	18 residential bay surplus and 3 commercial bay shortfall

Note:

1: The number of car bays is rounded up to the nearest whole number as per Note 1 of Table 3.9, of R-Codes Volume 2.

2: All parking requirements for non-residential development are to be calculated by rounding to the nearest whole number. In the case of exactly 0.5, the requirement for non-residential development shall be rounded down.

The table above shows that there is a surplus of 18 residential car parking bays and a shortfall of three commercial bays.

Access

In support of the proposed development, the Applicant submitted a TIS prepared by PTG Consulting. The Applicant's TIS predicts the development will generate approximately 125 vehicle trips per day including 12 trips during the morning and 12 during the afternoon. As such, the additional traffic generated by the development can be accommodated by the existing road network. The predicted traffic generation in the Applicant's TIS has been reviewed and the conclusions of the document are accepted by the City.

Vehicle access to the site is proposed via a 4.5m wide crossover which allows for access to the basement car parking area. At the intersection of the crossover and driveway, the driveway widens to 5.74m to allow for a holding bay along the southern boundary to allow for vehicles exiting the basement car parking area to safely pass the vehicle in the waiting bay. An internal traffic management system has been provided at ground floor level and in the basement with a traffic light system provided to ensure vehicle users are aware when vehicles are entering and exiting to mitigate potential conflict. The City generally supports the proposed vehicle access arrangement, with the exception of the 4.5m wide crossover which does not allow for a vehicle to safely enter the site if a vehicle is waiting within the crossover and/or exiting the site. The proposed arrangement may result in queuing within Flora Terrace, the impacts of which would be exacerbated by the location of the bus stop immediately to the south of the subject site and narrow width of Flora Terrace. To allow for two way access, LPP 6.7 provides that a 6m wide access shall be provided, and as such a condition has been proposed to address this in the City's recommendation which is discussed further below.

The proposed shortfall in commercial car parking has been considered against the provisions of LPP 6.7, the objectives of which are:

a) To ensure development provides an appropriate level of car parking, reflecting supply and demand so that a major parking problem is unlikely to occur;
b) To ensure safe, convenient, and efficient access for pedestrians, cyclists, and motorists;
c) To prioritise access by public transport, walking and cycling;
d) To facilitate the provision of adequate bicycle parking and end of trip facilities;
e) To provide a balanced parking supply that does not exceed the capacity of the road network, with sufficient publicly accessible parking;
f) To ensure that an oversupply of parking does not occur that discourages alternative forms of transport; and
g) To ensure the amount of parking is not detrimental to the urban design and character of the locality.

In respect of the commercial parking shortfall, the proposed Office is provided with seven dedicated car parking bays which is considered to be acceptable given the more passive nature of the proposed use, coupled with the availability of on street car parking in the immediate vicinity. In addition, access to public transport is readily available there being a bus stop located within metres of the development.

In general terms, the site is accessible for pedestrians and cyclists. The proposed condition of development approval to require the widening of the crossover serving

access to the site and its car parking area, will ensure a safe satisfactory access to the development for staff and customers/visitors to the commercial tenancy. A condition of development approval is proposed to require the widening of the crossover to 5.5m. This will be aligned with the driveway width. The proposed modifications will require the provision of a 1.5m x 1.5m sight line truncation to the north of the driveway / crossover and minor modifications to the building as demonstrated by Figure 21. The Applicant has been made aware of the proposed condition of development approval.

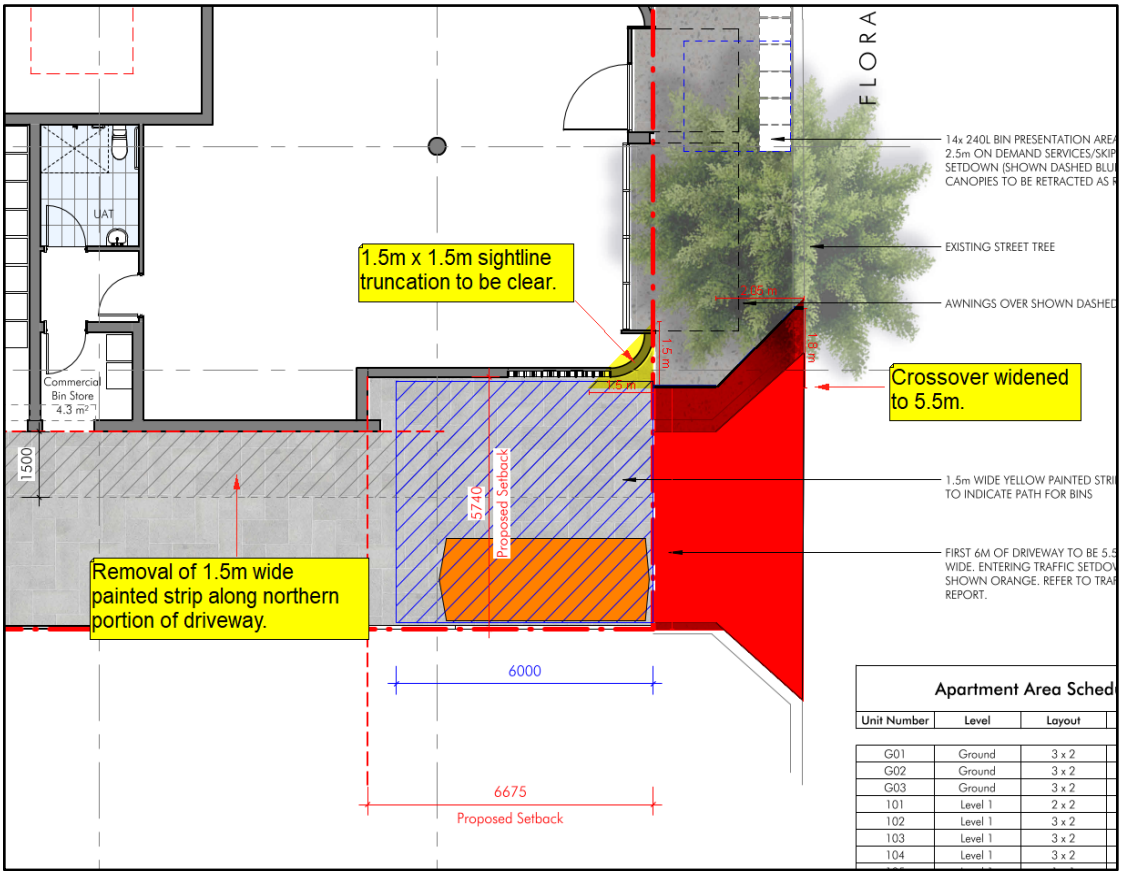


Figure 21 - The City's recommended condition setting for a 5.5m wide crossover and 1.5m by 1.5m sightline truncation.

Subject to the recommended condition setting, the development addresses the Objectives of LPP 6.7.

10. City of Stirling Design Review Panel (DRP)

The role of the City's DRP is to provide design advice and is supplementary to City's planning assessment. The proposed development was reviewed by the City's DRP on three occasions, being 29 February 2024, 9 May 2024 and on 20 June 2024. The DRP Reports are contained in Attachment 8.

At its meeting on 20 June 2024, the DRP provided support for the proposed development concluding a further meeting was not required.

Conclusion:

The proposed development is located within a Local Centre zone whilst abutting low density residential properties. Though the proposed development represents a

departure from the building height and plot ratio provisions of the City's planning framework, the City's assessment concludes the height, bulk and scale of the development is appropriate as it is unlikely to have a negative impact on the area. The proposed development carefully responds to the existing and future development context with sufficient building separation provided to help mitigate any adverse impacts to adjoining properties. At street level, the massing of the development has been designed to maintain the residential streetscape to the south and to respond to the higher density streetscape to the north.

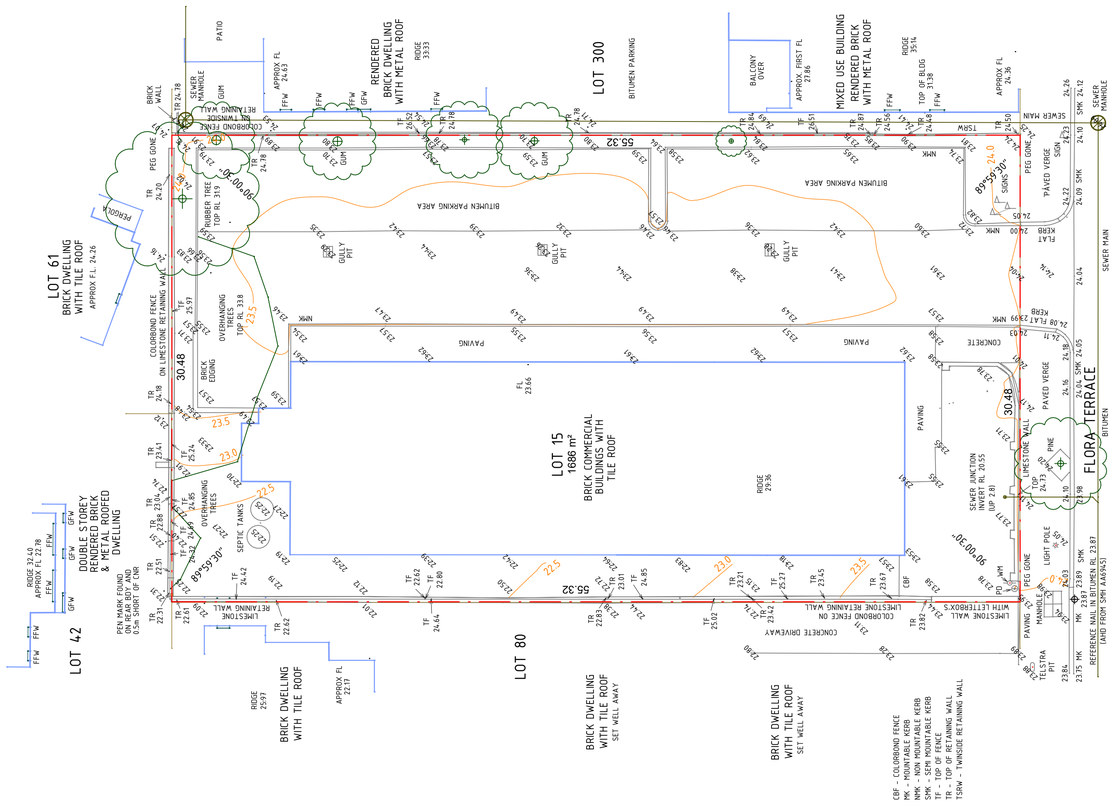
The proposed development provides for high quality landscaping on-site which is co-located with the communal open space for residents on the ground floor. The proposed development includes the provision of significant deep soil area and tree planting along the side and rear setback areas which assists with the transition to the low density residential properties.

The proposed development is of high-quality design and is appropriate within its context. Accordingly, the application is recommended for approval subject to conditions.

Attachment 1 - DevelopmentApplication Plans (received 6 Novemebr 2024)

AMENDED PLAN

City of Stirling
6 November 2024
RECEIVED



Flora Residences
118 Flora Terrace, North Beach

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SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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AMENDED PLAN

City of Stirling
6 November 2024
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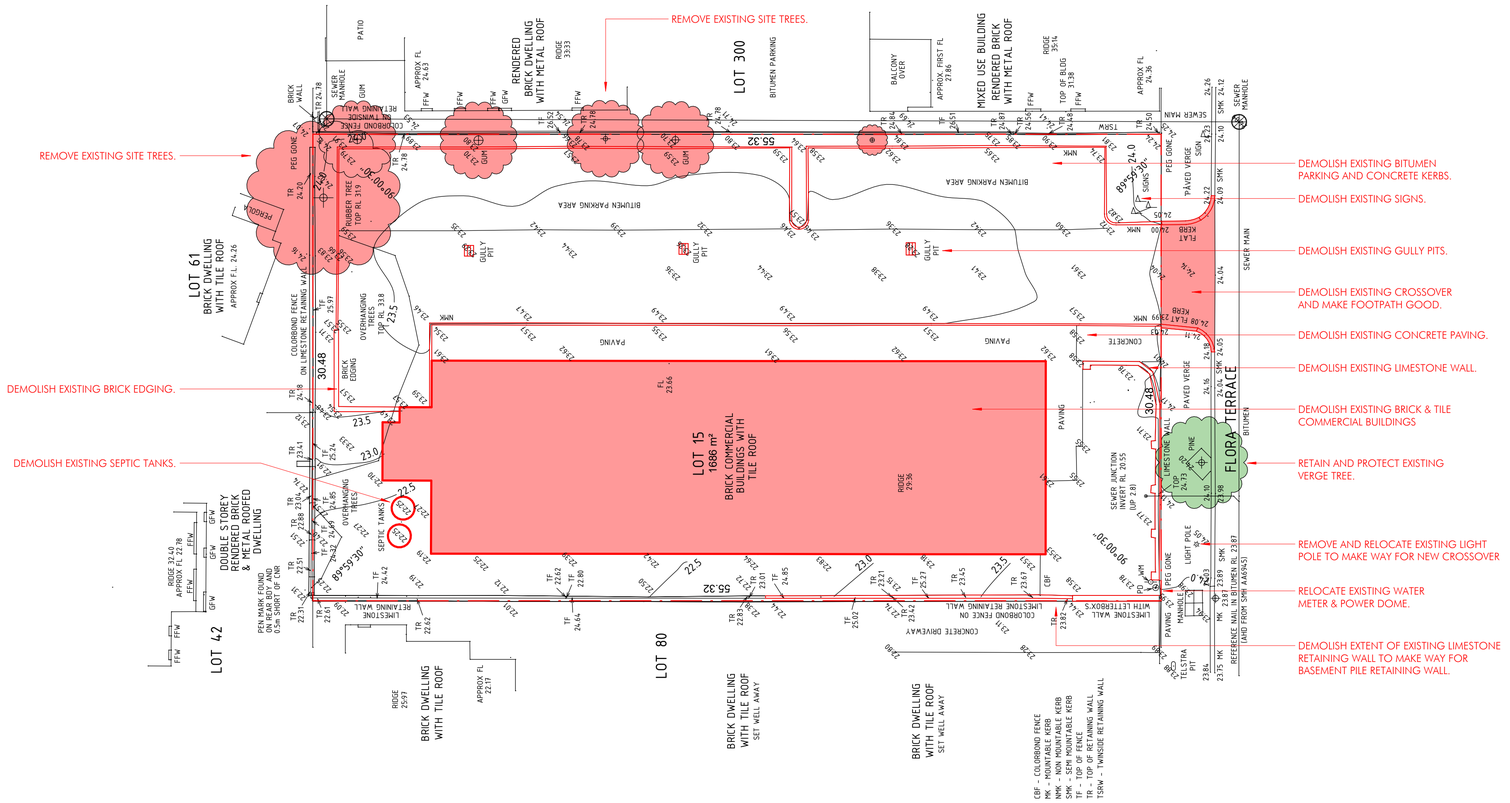

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City of Stirling
26 Nov 2024
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SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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6 November 2024
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BASEMENT

Parking Schedule

Type Comments	Count
ACROD Bay	1
Car Bay - 2400 x 5400	24
Car Bay - Tandem	24
Motorcycle Bay	6

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SCALE	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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AMENDED PLAN

City of Stirling
6 November 2024
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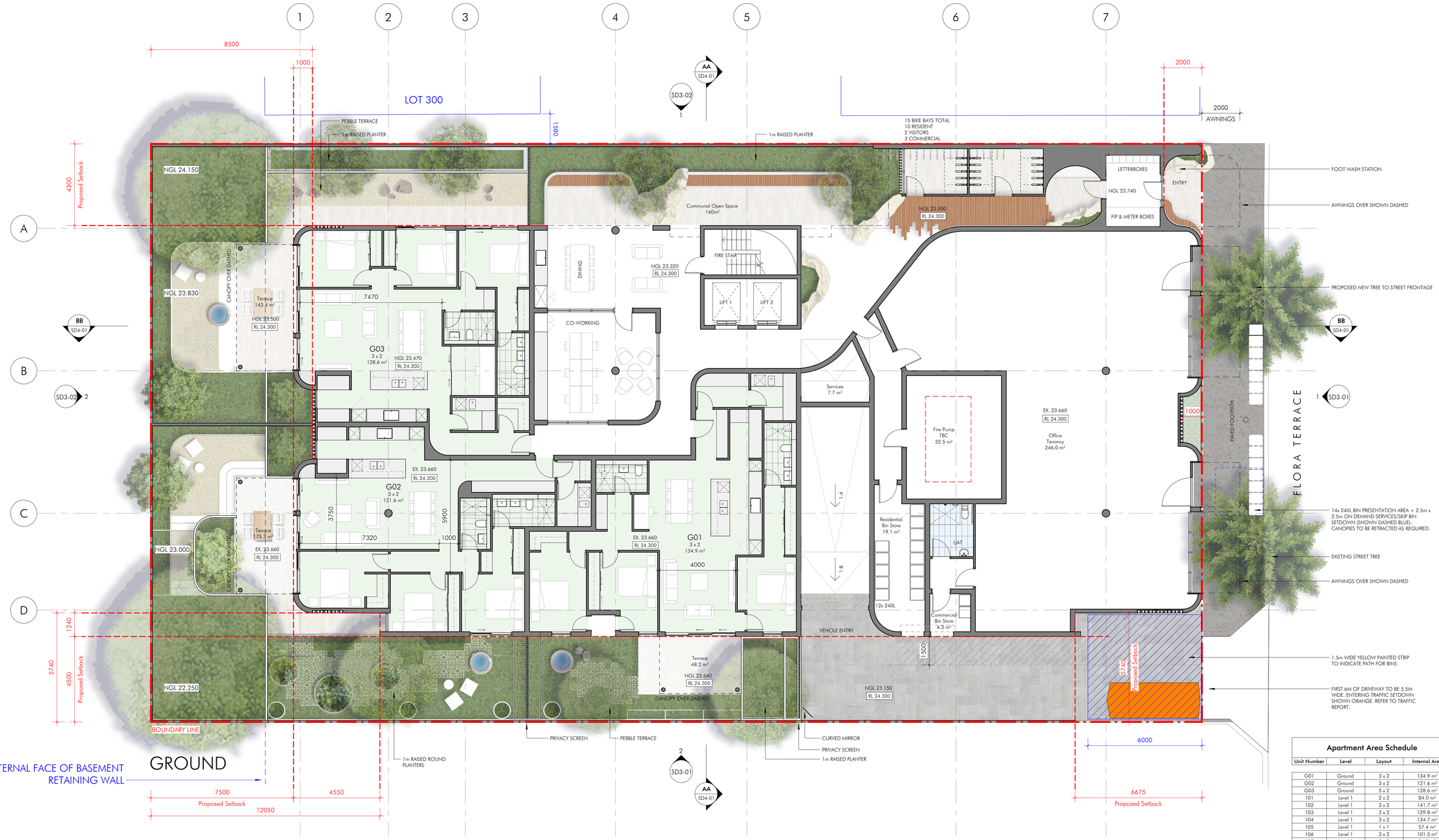

Apartment Area Schedule

Unit Number	Level	Layout	Internal Area
G01	Ground	3 x 2	134.9 m²
G02	Ground	3 x 2	121.6 m²
G03	Ground	3 x 2	128.6 m²
101	Level 1	2 x 2	84.0 m²
102	Level 1	3 x 2	141.7 m²
103	Level 1	3 x 2	129.8 m²
104	Level 1	3 x 2	134.7 m²
105	Level 1	1 x 1	57.4 m²
106	Level 1	3 x 2	101.5 m²
107	Level 1	2 x 2	84.0 m²
201	Level 2	3 x 2	172.4 m²
202	Level 2	3 x 2	132.1 m²
203	Level 2	3 x 2	130.1 m²
204	Level 2	3 x 2	134.6 m²
205	Level 2	1 x 1	57.4 m²
206	Level 2	3 x 2	94.2 m²
301	Level 3	3 x 2	136.0 m²
302	Level 3	3 x 2	167.3 m²
303	Level 3	3 x 2	167.6 m²
401	Level 4	4 x 4.5	268.3 m²
Total Units: 20			2,578.3 m²

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118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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AMENDED PLAN

City of Stirling
6 November 2024
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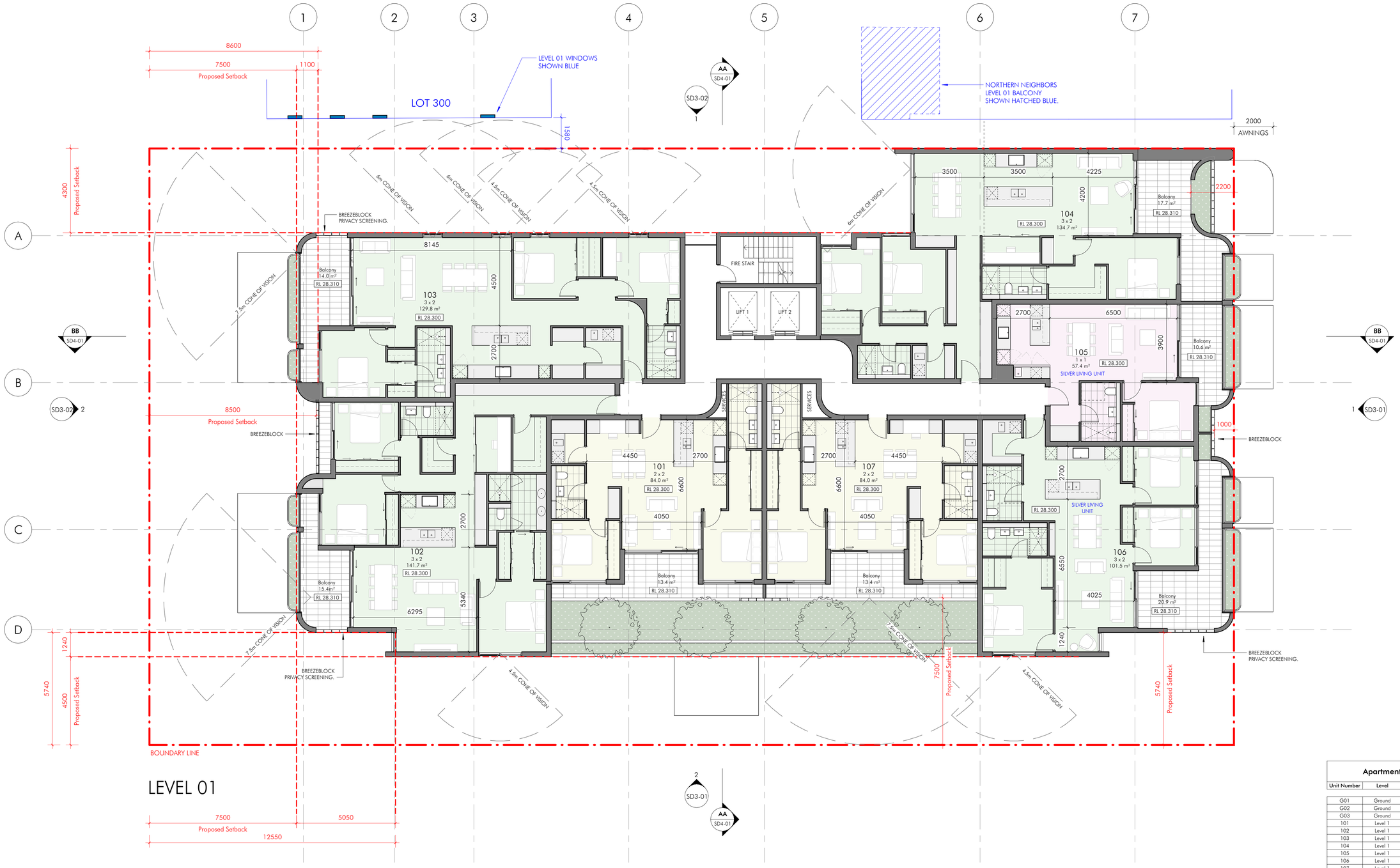

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G03	Ground	3 x 2	128.6 m²
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104	Level 1	3 x 2	134.7 m²
105	Level 1	1 x 1	57.4 m²
106	Level 1	3 x 2	101.5 m²
107	Level 1	2 x 2	84.0 m²
201	Level 2	3 x 2	172.4 m²
202	Level 2	3 x 2	132.1 m²
203	Level 2	3 x 2	130.1 m²
204	Level 2	3 x 2	134.6 m²
205	Level 2	1 x 1	57.4 m²
206	Level 2	3 x 2	94.2 m²
301	Level 3	3 x 2	136.0 m²
302	Level 3	3 x 2	167.3 m²
303	Level 3	3 x 2	167.6 m²
401	Level 4	4 x 4.5	268.3 m²
Total Units: 20			2,578.3 m²

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Flora Residences
118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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AMENDED PLAN

City of Stirling
6 November 2024
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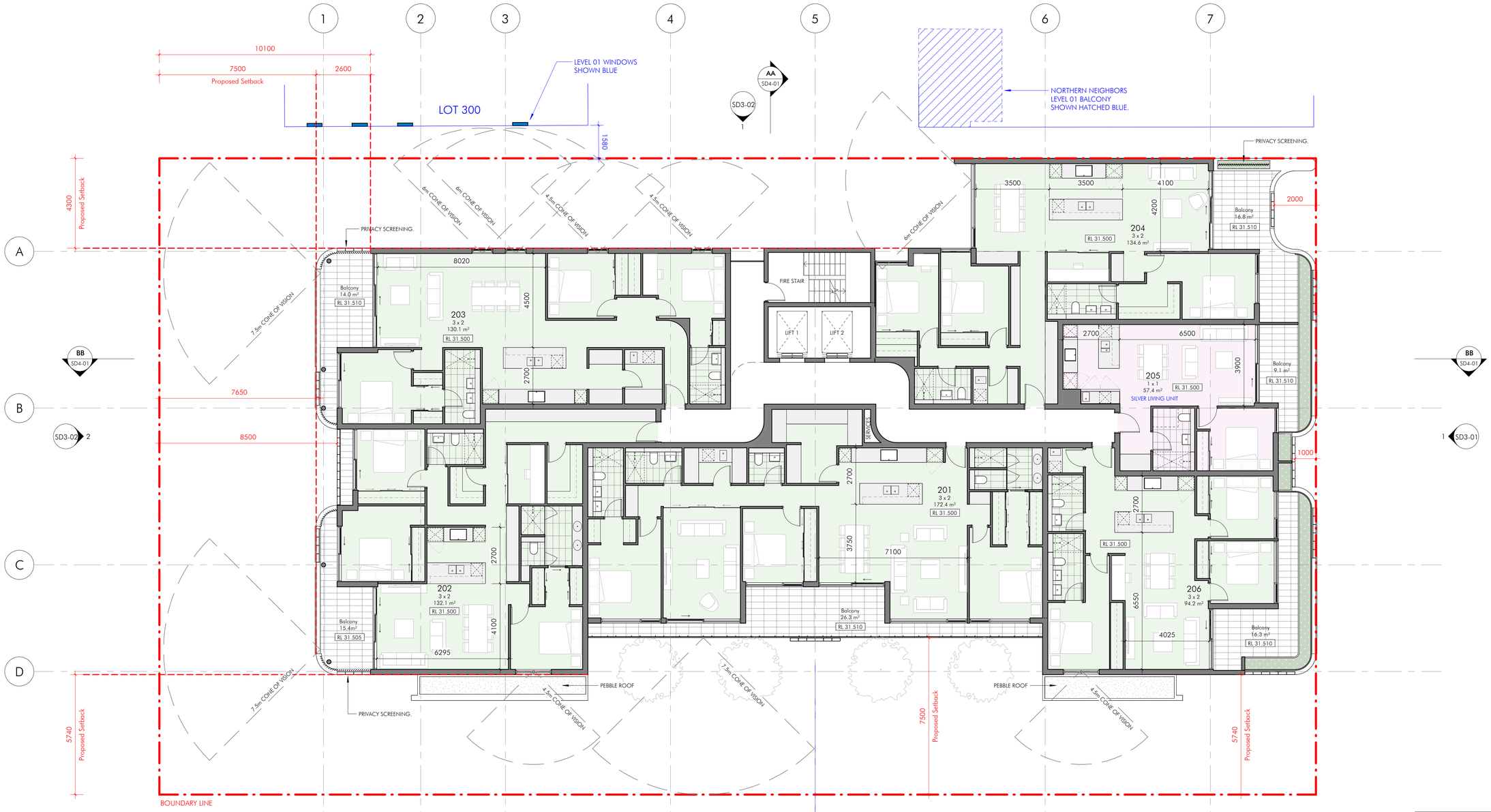

LEVEL 02

Apartment Area Schedule

Unit Number	Level	Layout	Internal Area
G01	Ground	3 x 2	134.9 m²
G02	Ground	3 x 2	121.6 m²
G03	Ground	3 x 2	128.6 m²
101	Level 1	2 x 2	84.0 m²
102	Level 1	3 x 2	141.7 m²
103	Level 1	3 x 2	129.8 m²
104	Level 1	3 x 2	134.7 m²
105	Level 1	1 x 1	57.4 m²
106	Level 1	3 x 2	101.5 m²
107	Level 1	2 x 2	84.0 m²
201	Level 2	3 x 2	172.4 m²
202	Level 2	3 x 2	132.1 m²
203	Level 2	3 x 2	130.1 m²
204	Level 2	3 x 2	134.6 m²
205	Level 2	1 x 1	57.4 m²
206	Level 2	3 x 2	94.2 m²
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space collective architects

Flora Residences
118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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AMENDED PLAN

City of Stirling
6 November 2024
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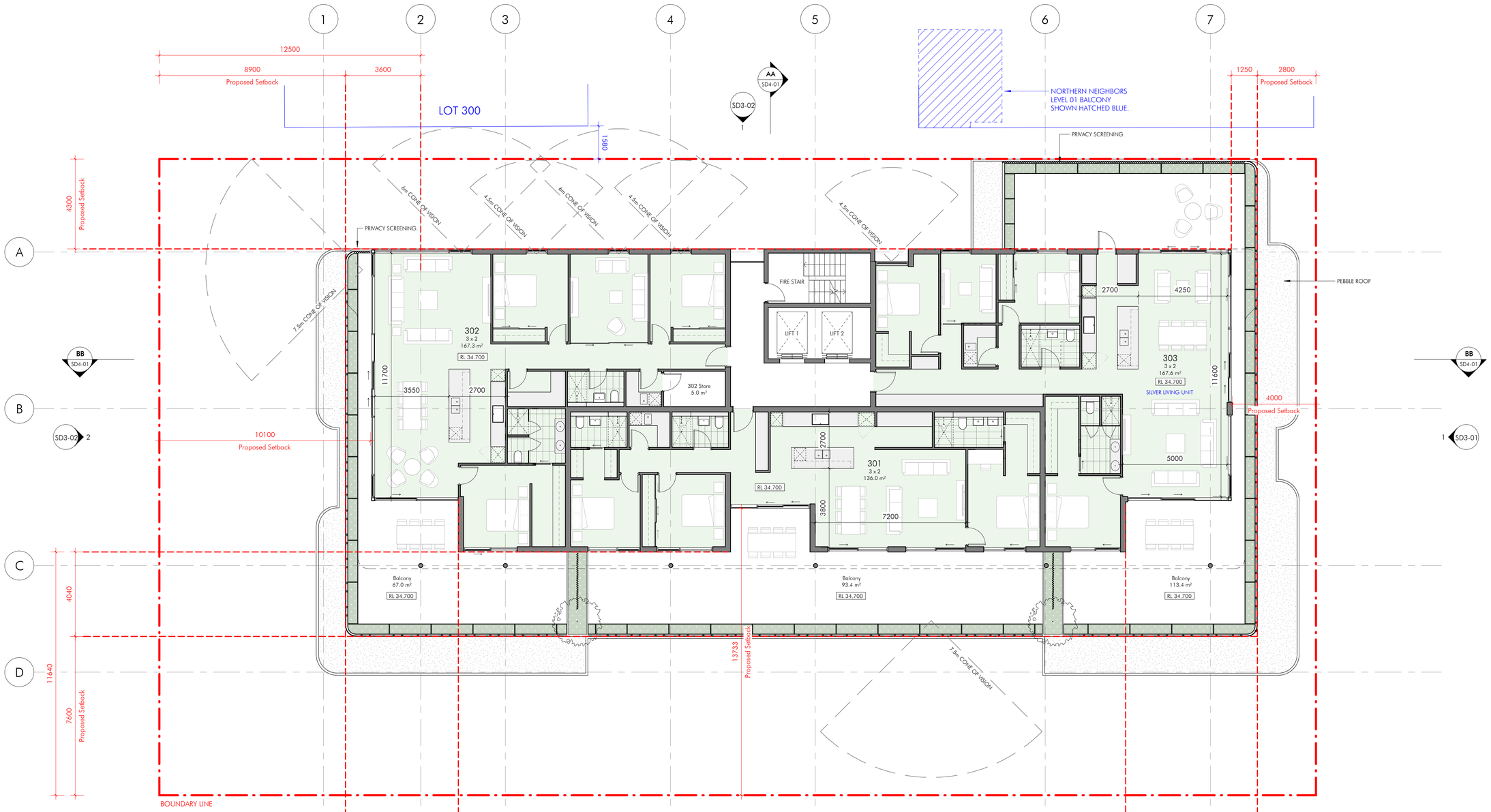

LEVEL 03

Apartment Area Schedule

Unit Number	Level	Layout	Internal Area
G01	Ground	3 x 2	134.9 m²
G02	Ground	3 x 2	121.6 m²
G03	Ground	3 x 2	128.6 m²
101	Level 1	2 x 2	84.0 m²
102	Level 1	3 x 2	141.7 m²
103	Level 1	3 x 2	129.8 m²
104	Level 1	3 x 2	134.7 m²
105	Level 1	1 x 1	57.4 m²
106	Level 1	3 x 2	101.5 m²
107	Level 1	2 x 2	84.0 m²
201	Level 2	3 x 2	172.4 m²
202	Level 2	3 x 2	132.1 m²
203	Level 2	3 x 2	130.1 m²
204	Level 2	3 x 2	134.6 m²
205	Level 2	1 x 1	57.4 m²
206	Level 2	3 x 2	94.2 m²
301	Level 3	3 x 2	136.0 m²
302	Level 3	3 x 2	167.3 m²
303	Level 3	3 x 2	167.6 m²
401	Level 4	4 x 4.5	268.3 m²

Total Units: 20 — 2,578.3 m²

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118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
1 : 100 @A1 1:200 (A3) 0 1 2 3 4 5 m		06.11.24	LEVEL 03 PLAN PROJECT PHASE DA	2401	SD2-04	E

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City of Stirling
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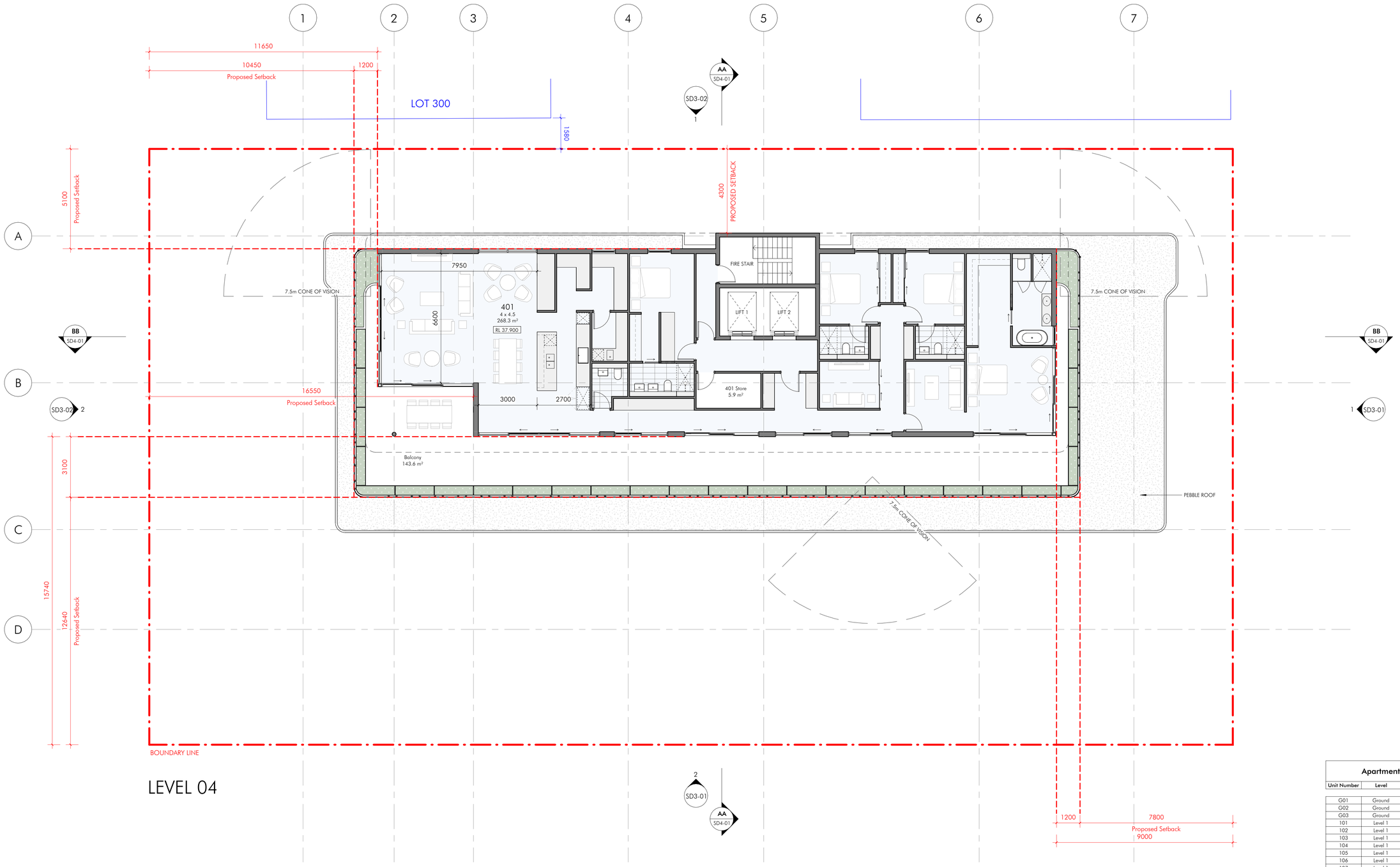

LEVEL 04

Apartment Area Schedule

Unit Number	Level	Layout	Internal Area
G01	Ground	3 x 2	134.9 m²
G02	Ground	3 x 2	121.6 m²
G03	Ground	3 x 2	128.6 m²
101	Level 1	2 x 2	84.0 m²
102	Level 1	3 x 2	141.7 m²
103	Level 1	3 x 2	129.8 m²
104	Level 1	3 x 2	134.7 m²
105	Level 1	1 x 1	57.4 m²
106	Level 1	3 x 2	101.5 m²
107	Level 1	2 x 2	84.0 m²
201	Level 2	3 x 2	172.4 m²
202	Level 2	3 x 2	132.1 m²
203	Level 2	3 x 2	130.1 m²
204	Level 2	3 x 2	134.6 m²
205	Level 2	1 x 1	57.4 m²
206	Level 2	3 x 2	94.2 m²
301	Level 3	3 x 2	136.0 m²
302	Level 3	3 x 2	167.3 m²
303	Level 3	3 x 2	167.6 m²
401	Level 4	4 x 4.5	268.3 m²
Total Units: 20			2,578.3 m²

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SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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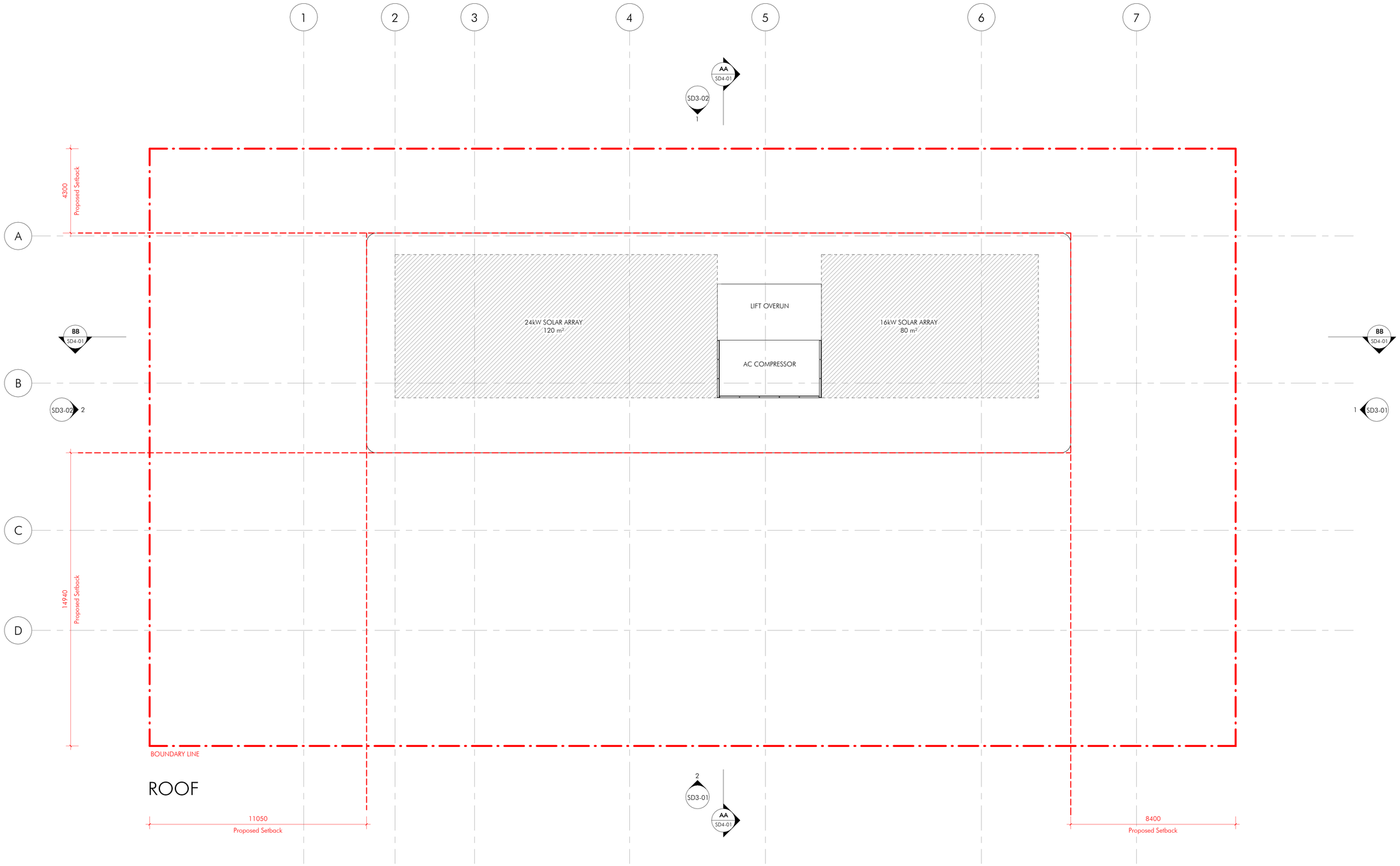

ROOF

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6 November 2024
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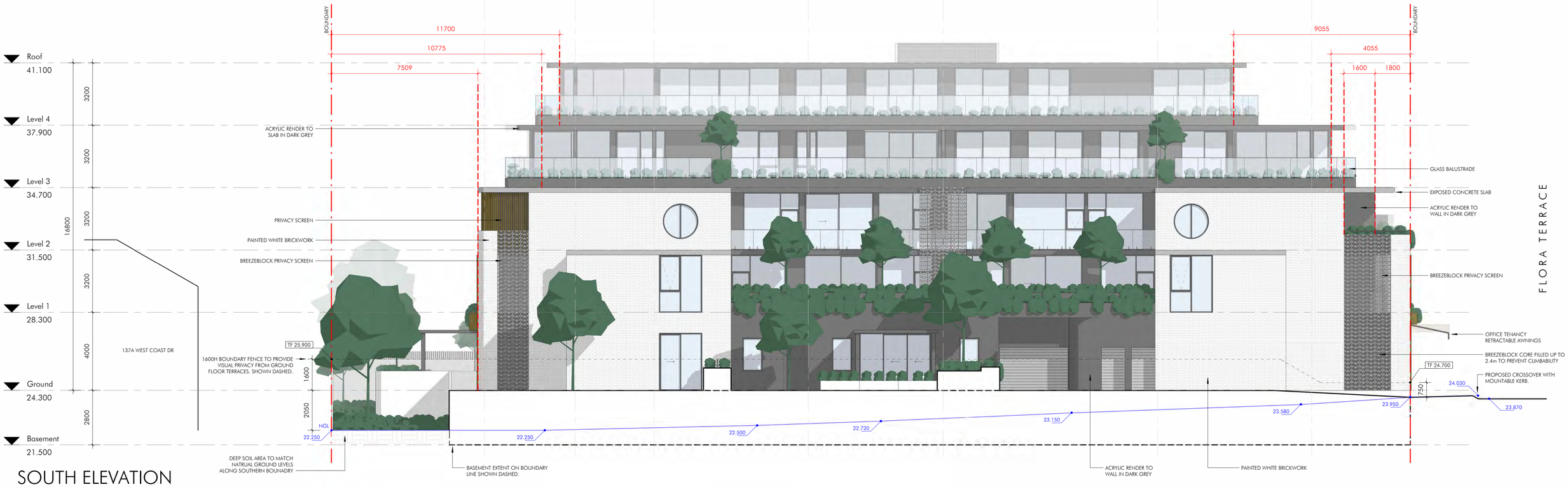
EAST ELEVATION



SOUTH ELEVATION

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SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
1 : 100 @A1 1:200 (A3) 0 1 2 3 4 5 m		06.11.24	ELEVATIONS PROJECT PHASE DA	2401	SD3-01	D

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WEST ELEVATION

NORTH ELEVATION

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SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
1 : 100 @A1 1:200 (A3) 0 1 2 3 4 5 m		06.11.24	ELEVATIONS PROJECT PHASE DA	2401	SD3-02	D

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SECTION AA

SECTION BB

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1 : 100 @A1 1:200 (A3) 0 1 2 3 4 5 m	06.11.24	SECTIONS PROJECT PHASE DA	2401	SD4-01	E

NP

Attachment 2 – Aerial Location Plan

Attachment 3 - Metropolitan Region Scheme Zoning Map

Attachment 4 – City of Stirling Local Planning Scheme No.3 Zoning Map

Development Application Report

Flora Terrace Mixed Use Development

Lot 15 (118) Flora Terrace
North Beach

PLANNING SOLUTIONS
URBAN & REGIONAL PLANNING

Prepared for

118 Flora Terrace Pty Ltd ATF 118 Flora Terrace Unit Trust

July 2024

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Project Details

Job number	8888	
Client	118 Flora Terrace Pty Ltd ATF 118 Flora Terrace Unit Trust	
Prepared by	Planning Solutions	
Consultant Team	Town Planning Architecture Traffic Engineering Landscape Architecture Sustainability Waste Management	Planning Solutions Space Collective Architects (SCA) PTG Consulting See Design Studio Full Circle Design Services Talis Consultants

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1 PRELIMINARY

1.1 Introduction

Planning Solutions acts on behalf of 118 Flora Terrace Pty Ltd, the proponent of the proposed mixed use development at Lot 15 (118) Flora Terrace, North Beach (**subject site**).

Planning Solutions has prepared the following report in support of an application for development approval. This report will discuss various matters pertinent to the proposal, including:

- Site details.
- Proposed development.
- Statutory planning framework.

1.2 Pre-lodgement Consultation

On 13 February 2024, Pre-Application Written Advice was requested for a proposed 6-storey development at the subject site, including 24 multiple dwellings and a ground floor commercial tenancy. The City of Stirling responded on 20 March 2024, outlining key considerations for the development. This report has been prepared to support the proposed development and to demonstrate how it aligns with the objectives of the applicable planning framework.

1.3 Design Review Panel Presentation

1.3.1 Design Review Panel 1

The City of Stirling presented the proposed development to the City's Design Review Panel (DRP) on 29 February 2024. This first DRP assessment highlighted elements for refinement and further development prior to lodgement of a development application. The comments from the DRP were considered holistically and were integrated and reflected in an updated proposal. Given the level of review and amendments requested by the DRP, a second meeting was initiated for the proposed development prior to lodgement of this application.

1.3.2 Design Review Panel 2

A second DRP review was completed on 9 May 2024. The DRP's comments and recommendations from this meeting, and the design team's response, is detailed in **Table 1** below.

Table 1: Design Review Panel 2 comments and proponent response

DRP Recommendations	Proponent Response
Context and Character	
Comments a) The Panel is pleased with the improvements to the proposal since DRP1 and commented that this Design Principle is satisfied. b) The scale of the streetscape frontage, the commercial / retail interface, and the modulation of the façade through articulation and material composition is all commended. c) The improvements of the proposal include the creation of a softer transition to the southern neighbours and overshadowing looks to be satisfactorily resolved.	DRP support for this design principle is noted.

DRP Recommendations	Proponent Response
d) The Panel commended the Applicant on the local character references and stated the symmetrical form reflects the streetscape.	
Landscape Quality	
Comments a) Comment was made by the Panel this design principle is generally supported although requires some clarification and refinement. b) Although there was some concern with the location of trees and deep soil to the southern side of the property, the trees proposed contribute to the experience of the existing southern neighbours with outlook and privacy and is a good outcome. c) The Panel commented the landscaping introduced to the balconies is supported and is a positive outcome. d) The use of ground level private open spaces is largely successful and there is good opportunity for enhancement of the relationship between external and internal communal spaces on the ground level. e) The number of trees being proposed, above those that are required, is supported. f) It was noted by the Panel the addition of the Norfolk Island Pine is positive although it would be favourable to see a mature tree replant. Recommendations g) More clarity should be provided with relation to the depth of on structure planters as concern was expressed about suitable depths, and their detailing. h) It was suggested by the Panel the on-structure planting should be strata managed rather than leaving this responsibility to the tenants. This will require clarification and resolution as it impacts the successful opportunity of ground level private and landscaped open spaces. i) It was mentioned the bus stop would be a good outcome and pursuing this initiative would be beneficial. Some concern was raised about the available space for this element and this needs clarification. j) The Panel suggested reconsideration of the species list especially in relation to vulnerability to the Polyphagous shot-hole borer, and the vegetable planters to the south.	The panels support for this design principle was noted, with additional details regarding the proposed planter depths and details introduced into the development package prior to lodgement. This has included increasing the proposed planter depths to 1m, where possible. Management of the on-structure planting will be determined as part of the building's internal management systems, with either tenants or strata-body management elected as part of the detailed design stage. Development of the bus stop design will be completed as part of the detailed design stage, with management of space and discussions with Transperth required prior to development.
Built Form and Scale	
Comments a) The addressing of this design principle is supported by the Panel. b) The Panel expressed support for the three-storey podium with the additional top two floors being set back. c) It was acknowledged by the Panel the Applicant has worked hard on resolving the built form and minimising the bulk and height impact on the surrounding residential properties which is now supportable. d) The Panel commented the softer transition to the south is agreeable and supportable.	DRP support for this design principle is noted. The proposed development has been reviewed, with the internal arrangement of the apartments changed to include 20 larger apartments rather than 23. This has been done without changes to the building envelope, maintaining the massing and amenity considerations for adjoining lots.

DRP Recommendations	Proponent Response
Recommendations e) Whilst the presentation of the general form to the neighbourhood is appropriate and supported, the Panel expressed concerns that the number of apartments being included in this envelope is having a negative impact upon various other principles including (but not limited to) functionality, amenity, and safety. The proponent is encouraged to re-consider how this will be improved noting that any increases to the scale and dimensions of the envelope will not likely be supported.	
Functionality and build quality	
Recommendations a) The Applicants presentation indicated there was 80% activation to the street. It appears this could be less than presented. However, the activation strategy is supported and seen as a good outcome. Continue to develop. b) It was noted by the Panel the distance to the tenancies from the commercial bays seems arduous. c) The Panel queried mixing commercial and residential parking bays in the basement and stated this may not be the most functional solution. d) There was concern expressed by the Panel around the functionality of the communal entry area. Further information is requested to provide clarity and resolution. e) The Panel showed concern around the security to the mail room as there is no airlock. f) It was noted by the Panel the bike store is in an awkward location and there could be potential conflict between the bikes and pedestrians. There is opportunity to relocate this and improve functionality. g) It was mentioned by the Panel the depth of some apartments (vs ceiling height) may be problematic and requires resolution. h) The Panel questioned if the balcony screening (to the north side west facing balcony) is meeting privacy requirements. i) The functionality of the very large balconies for the penthouse were queried by the Panel. The question was asked what these would be used for and how might they be furnished? j) The Panel stated there are logistic issues associated with waste disposal. The current process of having to go through the lobby is not a good outcome. The moving the bins to the street in the narrow driveway also requires further explanation. k) The Panel expressed concern around the width of the driveway access to the ground floor basement. It is currently 4.5m with a blind corner and a steep ramp. Further information is sought including swept path analysis.	The development has been reviewed, with the building form intended to balance the additional height with the perspectives of the public realm. The street and side setbacks have been stepped to ensure overlooking and visual amenity is maintained for the adjoining lots and public realm. The front façade has been designed with full height glazing for the commercial tenancies, as well as breezeblock and vertical articulation to ensure there is visual connectivity, activation and interest between the public and private realms. The car park has been sleeved in the basement to ensure that there is no interruption in this visual link, with the commercial and parking visitor bays now situated in proximity to the lifts and stair access to the ground floor. Further, the residential entrance has been updated, with an airlock around the letterboxes and service panels provided. Additionally, the bike parking has been separated from the pedestrian pathway. This ensures that there is a clear delineation between the services areas and the pathway into the building. The development has been assessed against the Residential Design Codes (Volume 2), with the development providing adequate levels of natural ventilation and solar access across the building. Privacy screening has been assessed and placed as necessary to ensure overlooking was mitigated, without adversely impacting the functionality or amenity of the outdoor living areas on the site. Additionally, the ground floor layout has been reviewed, with the residential and commercial bin store areas located adjacent to the vehicle entrance and off the residential lobby area. This accessway has been designed with a marked pedestrian section for use on bin days, where residents will move the bins from the bin store to the verge along the vehicle entrance. Sufficient space has been provided for both vehicles and pedestrians to safely use the path, without conflict. Further, vehicle access will be managed by a signalized system which prioritises entering traffic. This will ensure that queuing does not impact on the public road, while also ensuring that traffic into and out of the site is safely managed.
Sustainability	

DRP Recommendations	Proponent Response
Comments a) Comment was made by the Panel the level of detail is a welcome response. b) The Panel commented 30kW inverter for the photo voltaic cells is great and an excellent outcome. Recommendations c) The Applicant was urged to be more ambitious in their response and commitment to sustainability due to the height and plot ratio discretions being sought.	The development has been upgraded, with a further 10kW of solar array proposed and capacity for the entire car parking area to be EV charging bays (10% operational on development). This has been developed further in the provided ESD report completed by Full Circle Design Studios (**Appendix 5**).
Amenity	
Comments a) The Panel commented the north facing lift lobby on the ground floor provides excellent amenity for residents. Recommendations b) The proponent is encouraged to re-consider how amenity can be improved generally. There are significant concerns amenity is being compromised due to the number of apartments being "squeezed" into the proposed building envelope, noting any increases to the scale and dimensions of the envelope will not likely be supported. c) The Panel has some concerns around the levels of sunlight, daylight, and cross ventilation to some of the apartments. The Panel believes that improvements should be sought by the design team to bring improvement to the occupants, especially due to the significant discretion being sought in relation to plot ratio. d) The Panel recommends further work be carried out to achieve dimensional compliance to apartments including (but not limited to) living space widths for the south facing one bedroom apartments. e) The communal space size was questioned, and the Panel suggests that it would benefit from additional design work including the relationship of the internal and external spaces. The Panel encourages ongoing coordination and collaboration between landscape architect and the architect. f) The width of the driveway and general dimensions of the carpark seem very tight and create less than ideal amenity for users.	The proposed development has been reviewed, with the internal arrangement of the apartments changed to include 20 larger apartments rather than 23. This has been done without changes to the building envelope, maintaining the massing and amenity considerations for adjoining lots. The realignment of the apartments has increased the levels of solar access across the development, from 72% to 75%, with the natural ventilation levels maintained at 90%. Further, the communal open space has been retained at the ground floor, with two trees and landscaping providing a cozy atmosphere around the provided seating areas and barbeque facilities. This open space is also adjacent to a communal work from home (co-working) space, which will allow residents to separate work and home without having to go into an office. The proposed vehicle access is 4.5m in width at the lot boundary and will be internally managed to ensure safe and efficient access and egress from the site. This management will ensure that queuing does not impact on the public road, while also ensuring that traffic into and out of the site is safely managed. Refer the provided analysis and swept paths provided by PTG Consulting (**Appendix 4**).
Legibility	
Comments a) This design principle is supported by the Panel.	DRP support for this design principle is noted.
Safety	
Recommendations a) The Panel expressed concern around the width of the driveway access to the ground floor basement. It is currently 4.5m (less than a 2-way driveaway) with a blind corner and a steep ramp which could pose a safety issue. Further clarification is required as to how this is being managed.	The proposed vehicle access is 4.5m in width at the lot boundary and will be internally managed to ensure safe and efficient access and egress from the site. This management will ensure that queuing does not impact on the public road, while also ensuring that traffic into and out of the site is safely managed. Refer the provided analysis and swept paths provided by PTG Consulting (**Appendix 4**).

DRP Recommendations	Proponent Response
b) Comment was made the manoeuvrability in the carpark has been impacted by yield and looks very tight. Swept paths should be provided to demonstrate how this will work. c) Although seen as a positive aesthetic feature, the Panel showed concern around the breeze blocks used on the ground floor and balconies as these could be climbed and pose a safety issue.	Further, the breezeblocks on the front façade are proposed to be core filled from ground up to 2.4m. This will prevent passersby, residents and visitors from being able to climb the façade, without losing the aesthetic features provided.
Community	
Comments a) This design principle is supported by the Panel. b) The Panel commended the Applicant on the diversity of the apartments and commented this is a positive outcome for the community. c) It was noted by the Panel the dog water station and foot wash on the ground floor is a good addition and supported. d) Comment was made by the Panel achieving a 100% silver living apartment rating is a strength of the proposal. Recommendations e) It was noted by the Panel clarification on the size of the communal open space would be beneficial.	The DRP support for this design principle is noted. In relation to the proposed communal open space, the development plans have been amended to clearly state the area as 140m^2.
Aesthetics	
Comments a) The Panel commended the Applicant on the outcome of this design principle and stated the aesthetics are supported. b) It was mentioned the Panel supports the approach taken and the material palette and stated it fits in with the streetscape and character of the location. Recommendations c) Comment was made by the Panel highly durable materials should be deployed in this location which are suitable for the coastal environment. This will minimise maintenance and extend the life cycle of the materials.	DRP support for this design principle is noted. Specifications for the proposed materials will be completed as part of the detailed design stage.

Given the works required to integrate the panels feedback into the proposed development, and third DRP review was sought by the proponent.

1.3.3 Design Review Panel 3

A third DRP review was completed on 20 June 2024. The DRP's comments and recommendations from this meeting, and the design team's response, is detailed in **Table 2** below.

Table 2: Design Review Panel 2 comments and proponent response

DRP Recommendations	Proponent Response
Context and Character	
Comments a) This Design Principle is satisfied and the Panel believes this is a high quality architectural solution and an excellent outcome for the community.	DRP support for this design principle is noted.

DRP Recommendations	Proponent Response
b) The scale of the streetscape frontage, the commercial / retail interface, and the modulation of the façade through articulation and material composition is all commended. c) The Panel commended the Applicant on the projects integration into the local character and context, existing and future.	
Landscape Quality	
Comments a) Comment was made by the Panel this design principle is generally supported although requires some minor refinements. b) It was noted by the Panel the addition of the Norfolk Island Pine is a positive outcome and is preferential over a bus stop. c) The Panel commented the landscaping introduced to the balconies is supported and is a positive outcome. d) The number of trees being proposed, above those that are required, is supported. Recommendations e) The 300mm depth of the planters on the large terraces above level 2 were questioned. It was suggested by the Panel these would only work if the planters had succulents and/or cacti planted in this depth of soil. f) It was suggested dark grout could be used for consistency on the planter boxes. g) The Panel suggested reconsideration of the species list especially in relation to the three trees which are noted as either Polyphagous shot-hole borer hosts or reproductive shot-hole borer hosts. It is noted two other species are temperate rainforest trees and may not be suited to climate adaption.	The panels support for this design principle was noted. The proposed planters are all intended to have a depth of 500mm minimum, including the terraced areas on level 2 and above. Trees are all proposed to be in areas with a minimum depth of 1m. Determination of grout for the planter boxes and other details will be determined as part of the detailed design stage. The panels suggestion for dark colours is noted. The proposed planting species list is based on the City of Stirling's preferred species list, as well as the intended character and coverage for the site. Further consideration for species will be undertaken as part of the detailed design stage.
Built Form and Scale	
Comments a) The addressing of this design principle is supported by the Panel. b) The presentation of the general form to the neighbourhood is appropriate and supported. c) The Panel was supportive of the reduction of the number of apartments being offered which has had a positive impact on various other principles. d) The Panel expressed support for the three-storey podium with the additional top two floors being set back. e) It was acknowledged by the Panel the Applicant has worked hard on resolving the built form and minimising the bulk and height impact on the surrounding residential properties.	DRP support for this design principle is noted.
Functionality and build quality	
Comments a) This design principle is satisfied. b) The Panel stated the communal open space has improved significantly and is a good result.	DRP support for this design principle is noted.

DRP Recommendations	Proponent Response
Recommendations c) The Panel advised best practice would be to separate the commercial and residential parking bays in the basement. d) The Panel thank the Applicant for the swept path diagrams although there was still some concern around manoeuvring of larger cars in the basement.	The proposed parking layout has been consolidated into the basement due to the site limitations and the development objectives and requirements for the area under the planning framework. This ensures the parking is sleeved behind (and below) the development, creating an inviting and connected façade that is not dominated by parking. Further, the proposed development is entirely compliant with the standards required, per the outcomes of the TIS (**Appendix 4**).
Sustainability	
Comments a) The Panel expressed appreciation for the additional interrogation of the sustainability principle which is a great outcome and is now supported by the Panel. b) Comment was made by the Panel the level of detail is a welcome response.	DRP support for this design principle is noted.
Amenity	
Comments a) Amenity of the proposal has been improved and this design principle is now supported by the Panel. b) It was mentioned by the Panel the increase of three bedroom apartments on the ground floor is a better outcome to accommodate families. c) The amenity of the proposal has been improved due to the number of apartments being reduced within the proposed building envelope. d) The Panel commented the north facing lift lobby on the ground floor provides excellent amenity for residents. e) The dimensional compliance to apartments including (but not limited to) living space widths for the south facing one bedroom apartments has been resolved. f) The communal open space amenity has been improved and is a good result. Recommendations g) The width of the driveway still seems very tight and creates less than ideal amenity for users.	DRP support for this design principle is noted. The proposed vehicle access is 4.5m in width at the lot boundary and will be internally managed to ensure safe and efficient access and egress from the site. This management will ensure that queuing does not impact on the public road, while also ensuring that traffic into and out of the site is safely managed. Refer the provided analysis and swept paths provided by PTG Consulting (**Appendix 4**).
Legibility	
Comments a) This design principle is supported by the Panel.	DRP support for this design principle is noted.
Safety	
Comments a) The Panel appreciate the solution implemented around the climb ability of the breeze blocks on the ground floor and stated this is a good outcome. Recommendations	The proposed vehicle access is 4.5m in width at the lot boundary and will be internally managed to ensure safe and efficient access and egress from the site. This management will ensure that queuing does not impact on the public road, while also ensuring that traffic into and out of the site is safely managed. Refer the provided analysis and swept paths provided by PTG Consulting (**Appendix 4**). Additionally, the proposed development is entirely compliant with the standards required, per the outcomes of the TIS.

DRP Recommendations	Proponent Response
b) The Panel stated there remains concern around traffic management on the ramp as it is not fully resolved. It was stated a more sophisticated traffic management solution is required and there is a need to elevate the system of access for exiting and entering to mitigate the risk. It was suggested a traffic light system could be introduced. c) Comment was made the manoeuvrability in the carpark still looks very tight, especially for large vehicles. d) Comment was made there is still some balconies which don't have a planter box behind them to alleviate this risk of this on the balconies.	Further, the breezeblocks on the front façade are proposed to be core filled from ground up to 2.4m. This will prevent passersby, residents and visitors from being able to climb the façade, without losing the aesthetic features provided. Provision for further planter boxes to balconies has also been reviewed, with additional planters provided where practical.
Community	
Comments a) This design principle is supported by the Panel. b) The Panel commended the Applicant on the diversity of the apartments and commented this is a positive outcome for the community. c) It was noted by the Panel the dog water station and foot wash on the ground floor is a good addition and supported. d) Comment was made by the Panel achieving a 100% silver living apartment rating is a strength of the proposal.	DRP support for this design principle is noted.
Aesthetics	
Comments a) The Panel commended the Applicant on the outcome of this design principle and stated the aesthetics are supported. b) It was mentioned the Panel supports the approach taken and the material palette and stated it fits in with the streetscape and character of the location. Recommendations c) Comment was made by the Panel highly durable materials should be deployed in this location which are suitable for the coastal environment. This will minimise maintenance and extend the life cycle of the materials.	DRP support for this design principle is noted. Specifications for the proposed materials will be completed as part of the detailed design stage.

Given the satisfaction with the design expressed by the DRP, and the suitable integration of the DRP1 and DRP2 feedback into the proposal by the design team, no further meeting was initiated for the proposed development prior to lodgement of this application.

2 SITE DETAILS

2.1 Land description

The subject site comprises a single freehold lot. Refer to **Table 3** below for the lot details.

Table 3 : Lot details

Lot	Deposited Plan	Volume	Folio	Area (m²)
15	45957	1381	593	1,686

Refer **Appendix 1** for a copy of the Certificate of Title.

2.2 Location

2.2.1 Local context, land use and topography

The subject site is located in the suburb of North Beach within the municipality of the City of Stirling (**City**) and is approximately 18km north-west of the Perth CBD.

The subject site has direct frontage to Flora Terrace, with commercial development to the northern boundary and residential development to the southern and western boundaries. The site is located within a local centre area, with the primary centre area located across Flora Terrace from the subject site. The site is approximately 150m from the coast, with access to Northbeach Beach via Flora Terrace and Castle Street/Malcolm Street and across West Coast Drive. West Coast Drive connects the subject site to the wider metropolitan area, with connections to Marmion Avenue and Reid Highway via North Beach Road to the south of the subject site.

Refer **Figure 1** below for an aerial image of the subject site and surrounds.

Figure 1: Aerial photograph

3 PROPOSED DEVELOPMENT

3.1 Development Summary

The proposed development seeks to develop a new mixed use development at the subject site. The proposed development includes an office tenancy and 23 residential apartment units. The specifics of the proposed development are included in **Table 4** below.

Table 4: Development specifics

Level	Development specifics
Basement	47 car parking bays including: - 1 ACROD bay; - 10 tandem bays (5 front, 5 rear); and - 7 commercial bays - 4 visitor bays 6 motorcycle bays. Vehicle access ramp. Two 5.9m^2 residential storerooms. 2 elevators. 1 stair.
Ground Floor	A 245.7m^2 office tenancy with universally accessible toilet/end of trip facility. Communal dining and co-working areas. Three 3-bed 2-bath residential tenancies with integrated storerooms. One 7.4m^2 residential store. 15 bike racks (10 residential, 2 visitor, 3 commercial). 2 elevators. 1 stair. Vehicle ramp access to the basement parking area. Service areas including separate commercial bin store and residential bin store areas.
Level 1	One 1-bed 1-bath residential tenancy. Two 2-bed 2-bath residential tenancies with integrated stores. Four 3-bed 2-bath residential tenancies, with associated storerooms on the level. 2 elevators. 1 stair. Service areas.
Level 2	One 1-bed 1-bath residential tenancy. Five 3-bed 2-bath residential tenancies, four with associated stores (5m^2). 2 elevators. 1 stair. Service areas.
Level 3	Three 3-bed 2-bath residential tenancy, with integrated stores (5m^2). 2 elevators. 1 stair.
Level 4	One 3-bed 3.5-bath residential tenancy with integrated 7.1m^2 store. 2 elevators. 1 stair.
Roof plan	200m^2 40kW solar array

Refer **Appendix 2** for a copy of the development plans and **Appendix 8** for a copy of the design report.

3.2 Landscaping

The proposed development features high-quality landscaped areas designed to integrate with the local context and enhance verge treatments. Despite the loss of six (6) trees, the landscape proposal includes 12 small trees, 2 medium trees, a large tree, and an additional verge tree to increase canopy cover.

Key elements include:

- **Coastal Geology Inspiration**: Reflects local natural reef formations and sand forms, using textures and materials unique to North Beach.
- **Verdant Planting**: Emphasises robust coastal vegetation with varied foliage textures and shades to mirror local dune vegetation.
- **Ground Floor Landscaping**: Includes a timber deck, communal garden space, private courtyards, and a Norfolk Island Pine.
- **Podium and Upper Floor Landscaping**: Features garden beds, green facades, balcony planters, and roof terraces for greenery throughout the building.
- **Tree Species**: Incorporates diverse trees like Eucalyptus caesia 'Silver Princess' and Melaleuca leucadendra, chosen for their ecological benefits and suitability to the local climate.
- **Deep Soil Zones**: Supports tree growth, enhances water filtration, and improves air quality. The deep soil planting includes 120 sqm on the ground floor (7.1%), 96 sqm on the podium, and 266 sqm planting on structure, totalling 386 sqm (22.8% of the site area).

The landscape design aims to create a vibrant, sustainable environment that enhances community well-being.

Refer to **Appendix 3** for the landscaping package by See Design Studio.

3.3 Transport

The site is located adjacent to an existing bus stop and provides a total of 48 car parking bays in the basement, all of which will be accessed via the 4.5m single direction crossover, which will be managed by a traffic light system (designed and installed by car park management specialists).

To ensure there are no impacts to the public road network, this system will have a resting green for inbound movements. During the AM peak period, vehicles leaving the sites would trigger sensors that would illuminate signals or signs warning inbound vehicles of another vehicle exiting. Given the low number of inbound trips typically observed during an AM peak period, this should lead to minimal inconvenience to the general traffic. During the PM peak period, the majority of trips will be inbound vehicles who will have mostly unimpeded access for the majority due to the resting inbound priority. Sensors would activate warning lights or signs that a vehicle is inbound before providing opportunity for drivers wishing to leave the site. This way, any minor queueing would occur within the site.

Refer **Appendix 4** for a copy of the Traffic Impact Statement (**TIS**) completed by PTG Consulting.

3.4 Sustainability

An Environmentally Sustainable Design (ESD) Strategy has been prepared in support of the application (**Appendix 5**). The development places a strong emphasis on management, energy efficiency and indoor environment quality to reduce operational costs and enhance the sustainability of the project and aims to achieve a 4-star green star rating. Best-practice principles of passive environmental design have been followed in this design concept to minimise the energy required to operate the building. These principles include:

- Maximising the benefit of winter sun to the main foyer and outdoor gathering spaces.

- Sheltering outdoor spaces from cold southerly winds with landscape and building placement.
- Using trees and landscape to create a comfortable micro-climate.
- Incorporating generous windows for optimum daylighting, accompanied by orientation-specific shading to control solar gain.
- Provision for natural and mixed-mode ventilation.
- Installation of rooftop photovoltaics (PVs).

Further opportunities include:

- Provision of bike racks.
- Use of low VOC materials.
- Battery storage for PVs.
- Low energy LED lighting.
- Smart Building Operating Systems linked to a Building Management System (BMS).
- An energy and water consumption display system.

3.5 Waste

A Waste Management Plan (**WMP**) has been prepared by Talis Consultants in support of the proposed development. The WMP considers estimation of general waste volumes and recommendations for appropriate collection, storage, handling and management of waste and recycling for the development.

The development proposes a dedicated bin store integrated into the development behind the commercial tenancy. The store provides sufficient general and recycling waste storage areas for the both the commercial and residential elements of the development.

Refer **Appendix 6 – Waste Management Plan**.

4 STATUTORY PLANNING FRAMEWORK

4.1 Metropolitan Region Scheme

Under the provisions of the Metropolitan Region Scheme (**MRS**) the subject site is zoned Urban. The proposed development is consistent with the intent of the Urban zone and may be approved accordingly.

The subject site is not affected by land reserved by the MRS, nor is it subject to any resolution or declaration made under the MRS.

4.2 Local planning scheme

4.2.1 Zoning

The subject site is zoned 'Local Centre' under the City's Local Planning Scheme No. 3 (**LPS3**). The objectives of the Local Centre zone under LPS3 are as follows:

a) *To provide for a limited range of small-scale retail, commercial and community facilities to meet the day-to-day needs of the immediate neighbourhood.*

b) *To ensure safe and convenient access to facilities, in an environment which is conducive to pedestrian movement.*

c) *To ensure development is sited and designed so as to reinforce a sense of place and attractive streetscapes.*

The proposed development has been designed to align with the local centre objectives without creating amenity impacts to the surrounding residential developments. Refer **Figure 2**, Zoning Map, below.

Figure 2: Zoning Map

4.2.2 Land use permissibility

The proposed land uses are classified as a 'Multiple Dwelling' and 'Office'. Multiple Dwelling is a 'D', discretionary, land use and Office is a 'P', permitted, land use within the Local Centre zone.

Multiple dwellings are noted as not being permitted on the ground floor fronting a road reserve greater than 10m in width. As the development has integrated the office land use into this space, the proposed mixed use development aligns with this requirement.

4.2.3 Development standards and requirements

Part 5 of LPS3 stipulates the general development requirements applicable to all development within the scheme area. **Table 5** below provides an assessment against the LPS3 development requirements relevant to this proposal.

Table 5: Assessment against LPS3 development requirements

Objective	Provided	Compliance
Cl 5.2 – Residential Design Codes		
Cl 5.2.2 Unless otherwise provided for in the Scheme, the development of land for any of the residential purposes dealt with by the Residential Design Codes is to conform with the provisions of those Codes.	Refer assessment against the provisions of the Residential Design Codes (Volume 2) included in **Appendix 7.**	✓
Cl 5.3 – Special Application of Residential Design Codes		
Cl 5.3.2 Except as otherwise required in the Scheme, Local Planning Policy, Structure Plan, Activity Centre Plan or Local Development Plan, residential development not within the Residential Zone is to comply with the relevant requirements under the R80 density coding in the Residential Design Codes.	The proposed development has been assessed against the provisions of the R-Codes (Volume 2) as per R80 density development requirements.	✓
Cl 5.13 – Trees and Development		
Cl 5.13.2(a) To promote development that enables existing significant trees to be retained on zoned land and to protect existing street trees on abutting road reserves.	The proposed development has been designed to retain as many trees as possible within the existing vegetated portions of the subject site. In order to mitigate the impact associated with the removal of trees, they will be replaced by associated landscaping works throughout the site as detailed in the landscaping plans contained within **Appendix 3.** Further, the existing street tree is proposed to be retained, and will be added to with a second Norfolk pine proposed for the street verge.	✓
Cl 5.13.2(b)To minimise the removal of significant trees on zoned land and street trees on abutting road reserves as a consequence of development; and	The proposed development seeks to minimise the removal of significant trees and all efforts have been undertaken to ensure significant trees are retained.	✓

Objective	Provided	Compliance
Cl 5.13.2(c)To ensure suitable advanced trees of appropriate size and maturity are planted where, on-site significant trees and street trees on abutting road reserves, have been removed or do not exist.	To offset the 5 trees being removed, provision of 12 small trees, 2 medium trees, 1 large tree and an additional street tree will be planted in and around the site. This will be accompanied by the provision of additional landscaping treatments and solutions as detailed in the landscaping plans contained within **Appendix 3**.	✓

As assessed above, the proposed development is entirely compliant with the development requirements of LPS3.

4.2.3.1 Special Control Area

The subject site is also within the Coastal Height Limit – Non-Residential Zones Special Control Area (**SCA**). The objective of the SCA is as follows:

> *To ensure that buildings over 12 metres in height do not have a detrimental impact on the amenity of the Special Control Area or adjoining sites.*

The proposed development has been designed to accommodate the surrounding locality. The setbacks for the boundary towards the existing R20 residential houses have been transitioned from 4.m to 16m to ensure that no amenity impacts are experienced by these southern neighbours. Similarly, the setbacks to Flora Terrace are stepped to ensure that the higher floors do not interrupt pedestrian views towards the coast, as compared to a deemed to comply building height.

This consideration of visual impacts and setback variation, along with the design considerations (as assessed in this report) demonstrates that the increased building height does not have a detrimental impact on the amenity of the area or adjoining sites, thus satisfying the objective of the SCA.

4.2.4 Draft Local Planning Scheme No.4

It is noted that the City has prepared Draft Local Planning Scheme No. 4 (**LPS4**), which is currently under review by the Department of Planning, Lands, and Heritage. In accordance with LPS4, the subject site is zoned 'Local Centre' with a residential density code of R50. The 'Dwelling' and 'Office' land uses will continue to be capable of approval ('D', discretionary use, and 'P', permitted use) in this zone. The proposed development does not create any conflicts with the draft provisions of LPS4. Since draft LPS4 has not been formally advertised, it is not yet considered a 'due regard' planning instrument.

4.3 Local Planning Policies

4.3.1 Local Planning Policy 4.2 – Mixed Use Design Guidelines

Local Planning Policy 4.2 (**LPP4.2**) applies to all non-residential, mixed use and residential multiple dwelling development in the Business, District Centre, Hotel, Local Centre, Mixed Use, Neighbourhood Centre, and Service Station Zones.

The relevant provisions of LPP4.2 have been integrated into the Residential Design Code Volume 2 Assessment, as provided in **Appendix 7** of this report.

4.3.2 Local Planning Policy 6.3 – Bin Storage Areas

Local Planning Policy 6.3 – Bin Storage Areas (**LPP6.3**) applies to all non-residential development in the City of Stirling and prescribes waste management and storage requirements for development.

Refer **Table 6** for an assessment against the relevant policy provisions.

Table 6: Assessment against LPP6.3 development requirements

Development Provision	Proposed	Compliance
Bin Storage Area Size		
Non Residential Zones • *Bin storage areas in non-residential zones shall have the following minimum sizes:* o *Size: 10m²*; and* o *Width: 3.5m.* *Note: *A larger area may be required for the turning of a refuse tuck.*	The proposed residential bin store is 30.4m² with a minimum dimension of 4.25m. The proposed office bin store is 4.3m² with a minimum dimension of 2m. Whilst the Office bin store is proposed to be smaller than the minimum dimensions, the aggregate of the two bin stores exceeds the requirements and the separation of the bin store for the Office allows for efficiency of waste management.	Discretion required
Location of Bin Storage Area		
• *shall be located behind the building setback line; and*	The bin storage areas are located behind the building setback line.	✓
• *shall ensure that adequate space is available for the bulk refuse truck to access the bin area and manoeuvre.*	Bins will be placed on the verge for collection by the City's standard waste collectors.	✓
Design of Bin Storage Area		
• *shall be screened from view to a minimum height of 1.8m so that it is not visible from the street;*	The bin storage areas are screened from view and integrated into the building.	✓
• *materials shall match with the building;*		✓
• *shall be sealed and regularly cleaned and maintained; and*	The bin storage area is sealed and will be regularly cleaned and maintained.	✓
• *stormwater and effluent drainage facilities shall be contained within this area.*	As indicated in the WMP (appendix 6), the bin storage areas will be provided with washing and drainage facilities.	✓
Bulk Bin Sizes		
• *For residential developments containing 13 or more dwelling units provision is required to be made for a bulk refuse bin of 1.53m², plus 0.38m per three dwellings in excess of 13. ** *Note *Alternative arrangements may be made for the use of MGB's (Green Bins) in consultation with the City's Sanitation Unit.*	The proposed development includes 23 dwelling units. Provision for 3.05m² (1.53m², plus 0.38m times 4 (10 units)) of bulk refuse storage has been provided for the residential units.	✓

As demonstrated above, the proposed development is largely compliant with the development requirements of LPP6.3. The only variation proposed is for the office bin store, which is smaller than the minimum bin area size required under LPP6.3. As demonstrated in the WMP completed by Talis, the commercial bin store will accommodate the waste materials for the office tenancy with one 240L recycling bin and one 240L refuse bin. All bins will be managed by the building manager and will be presented for weekly verge collection.

4.3.3 Local Planning Policy No. 6.6 – Landscaping

The City's Local Planning Policy No 6.6 – Landscaping (**LPP6.6**) stipulates the landscaping requirements for non-residential developments within the City.

The landscaped areas will be planted with species consistent with the City's desired plant species and have been carefully designed to enhance the amenity of the subject site. Landscaped areas will be reticulated and mulched as per LPP6.6 requirements. An assessment against the relevant provisions of LPP6.6 is provided in **Table 7** below.

Table 7: Assessment against LPP6.6 development requirements

Development Provision	Provided	Compliant
Landscaping Areas		
All individual planting areas, excluding those in or adjacent to car parks, must have a minimum width in any direction of 500mm and a minimum plantable area of 2m²; and the inclusion of verge areas (abutting the site) in the overall landscaping design is required.	All planter areas are of suitable size and have been carefully considered with regards to the needs of proposed plant species. Generally, the landscaped areas of the site contain garden beds which allow ample deep soil space for roots to establish themselves.	✓
Plant numbers and Types		
All landscaped areas (beds) are required to be planted with a suitable number of plants that satisfy the objectives of this policy (plant numbers will be assessed with due regard to the eventual size of the species selected). Species should be chosen to suit the climate, environment, location and required function whilst taking into consideration surrounding landscapes. The use of native species is encouraged to reduce water and fertiliser use.	The landscaping plan provides a species list inclusive of native vegetation which is generally consistent with the City's schedule of recommended plant species.	✓
Street Trees		
The provision of new street tree(s) are required where no street tree(s) currently exist. Species must be approved by the City.	The existing street tree is proposed to be retained, with an additional street tree (Norfolk Pine) proposed to add to the verge landscaping.	✓
Retention of Existing Vegetation		
Council encourages the retention of existing vegetation and will consider the exercise of discretion in its application of scheme requirements and adopted local policies where such a variation would allow for the retention of significant existing vegetation on a site. (Note: Concessions cannot apply to non-discretionary provisions such as residential density).	The existing street tree is proposed to be retained, with an additional Norfolk Pine also proposed for the verge area. This will increase the number of street trees, tree canopy and shading provided to the development and adjacent public realm.	✓
Reticulation and mulching		
All landscaped areas shall be reticulated unless the applicant can provide satisfactory evidence that reticulation is not necessary. A minimum depth of 75mm of mulch (gravel not permitted) is to be applied to all landscaping beds.	The provided landscaping plan in Appendix 3 include provision for reticulation to all landscaped areas. Further development of the reticulation plan will be completed as part of the detailed design stage.	✓
Specific Landscaping Provisions for Commercial Developments		
Development applications for commercial development must contain a minimum of 10% landscaping of the total site area. This must include 'soft' landscaped buffers, where setbacks are provided, to adjacent properties with a minimum width of 1.5m.	The proposed development incorporates 135m² of deep soil area and 276m² of on-structure planting. This results in a total percentage of landscaping of 411m², or approximately 24.3% landscaped area of the site.	✓

As assessed above, the proposed development is entirely compliant with the provisions of LPP6.6. The development includes significant levels of deep soil area, on-structure planting and tree provision which will activate the site and adjacent verge area and create a shaded and inviting environment for residents and visitors.

4.3.4 Local Planning Policy No. 6.7 – Parking and Access

The City's Local Planning Policy No. 6.7 – Parking & Access (**LPP6.7**) details the car parking standards and requirements for development in the City of Stirling. An assessment against the relevant provisions of LPP6.7 has been completed in **Table 8** below.

Table 8: Assessment against LPP6.7 development requirements

Development Requirement	Provision	Compliance
Delivery Bay Ratios		
In non-residential developments with over 500m² of GFA, a minimum of one bay shall be permanently set aside and marked for the exclusive use of delivery, service, and courier vehicles.	The office tenancy is 245.7m², which does not require the provision of a delivery or service bay.	✓
Activity Centre Car Parking Ratios		
Table 1: Activity Centre Car Parking Ratios identifies minimum car parking ratios for non-residential development unless otherwise approved by the City. Table 1 applies to select District, Neighbourhood and Local Centres identified in the City's Local Planning Strategy.	Flora Terrace is identified as Local Centre No. 21 under LPP6.7. The applicable parking ratio has been assessed in **Table 9** below.	✓
Alfresco Areas are not required to provide car parking where Table 1 applies to the development.	Noted	✓
Table 1 and the car parking ratios do not apply in the follow circumstances:		
c) To residential components of a residential or mixed use development. The car parking requirements of State Planning Policy 7.3 Residential Design Codes apply to all residential development;	Assessment of the residential parking requirements has been completed as part of the R-Codes Volume 2 assessment included in **Appendix 7**.	✓
e) The parking ratio for an Office land use located on the ground floor, will be as per the applicable ratio under Table 1. A parking ratio of 1 bay per 50m² GFA applies to Office land uses on upper floors as per Table 2. Reductions available in Table 3 are also applicable to Office land uses on upper floors;	The applicable parking ratio has been assessed in **Table 9** below.	✓
Non-Residential Parking Design		
Parking areas for all non-residential development: *a) Shall be sealed, drained, marked and maintained thereafter to the satisfaction of the City;*	All parking areas are to be sealed, drained, marked and maintained	✓
b) Shall be designed so as to enable all vehicles to return to the street in forward gear;	All parking areas are designed to enable vehicles to return to the street in forward gear.	✓
c) Shall have entry and exit points and vehicle circulation patterns that are clearly indicated;	All parking areas are to have clear circulation patterns and indications for entry and exit points.	✓
d) That include Universal Access parking bays, are required to be provided in accordance with Australian Standard AS 2890.6 (as amended);	All parking areas with Universal Access bays (ACROD bays) shall be designed in accordance with Australian Standard AS 2890.6 (as amended).	✓

Development Requirement	Provision	Compliance
e) That include tandem car parking bays, shall be a minimum length of 5.4 metres for each bay;	Where tandem bays are proposed, each bay is a minimum length of 5.4m.	✓
g) That include visitor parking which is to be outside any security barriers during operating hours and is to be clearly identifiable from the driveway or have signage as per the Australian Standards AS 1742 where necessary.	All visitor and commercial parking bays are located outside security barriers and will be clearly identifiable.	✓
Access to non-residential parking areas shall be provided in accordance with the provisions set out hereunder: *a) Be provided at a rate of no greater than one per street frontage;*	One crossover is proposed for the development.	✓
b) Be no less than 6.0 metres in width and no greater than 10 metres in width;	The proposed vehicle accessway is 4.5m in width.	Discretion required
c) Be no closer than 1.5 metres to a side boundary and no closer than 0.5 metres to street poles;	The proposed crossover is located adjacent to the lot boundary. An existing street pole will be relocated to allow for the development of the proposed crossover.	Discretion required
d) Be aligned at right angles to the street and parallel in width;	The proposed crossover is aligned at right angles to the street and parallel in width.	✓
e) Be provided with sight line truncations as per Australian Standards AS1890.1	The proposed crossover will be provided with sight line truncations as per Australian Standards AS1890.1	✓
f) Be designed so as to minimise traffic or pedestrian hazards, conflict with pedestrian/cyclist pathways and interference with public transport facilities;	The proposed crossover is designed to minimise traffic or pedestrian hazards and provides space for vehicles to wait behind the pedestrian footpath.	✓
g) Be designed in accordance with Australian Standard AS 1742 and AS 2890.1;	The proposed is designed in accordance with Australian Standard AS 1742 and AS 2890.1	✓
Motorcycle Parking Ratios		
Non-residential components of developments with 500m² or more gross floor area shall provide on motorcycle parking space for every 1000m² of gross floor area, This is in addition to the requirements for residential components under State Planning Policy 7.3 Residential Design Codes.	The office tenancy is 245.7m2, less than 500m². Thus, no requirement for motorcycle parking for the non-residential element of the development is triggered.	✓
Bicycle Parking Facilities		
The requirements for bicycle parking bays for non-residential components of developments are in addition to requirements in the State Planning Policy 7.3 Residential Design Codes for residential components.	Noted	✓
Bicycle parking spaces shall be provided in accordance with Table 4: Bicycle Parking Ratios for all non-residential components of developments with 400m² or more of gross floor area.	The office tenancy is 245.7m2, less than 400m². Thus, no requirement for bike parking for the non-residential element of the development is triggered.	✓

As assessed above, the proposed development is primarily compliant with the requirements of LPP6.7, with only the placement and width of the proposed vehicle access varying the development requirements. The vehicle access has been placed directly on the southern boundary to maximise the active frontage and align with the existing driveway located on the neighbouring grouped dwelling lot. This ensures that there is minimal impact from the driveway into the site on either the subject site or the adjacent lots. Further, the width of the crossover has also been varied to maximise the active frontage to the lot, and will be managed in accordance with the TIS (**Appendix 4**) with internal management and signals provided.

Table 9: Car parking requirement assessment

Land Use	Car parking ratio	Determinant	Required bays	Provided bays	Surplus/Shortfall
Office (Centre zone)	1 bay per 25m² GFA - in accordance with Table 1 of LPP6.7	245.7m²	9.83	7	2.83 bay shortfall

As assessed in **Table 9** above, the proposed development includes a 2.83 bay shortfall for commercial parking. This is balanced by the proposed visitor and residential parking, which includes 4 visitor bays and 36 residential bays. As such, the overall development has a surplus of parking, with a total required parking provision of 40 bays and 47 bays provided.

4.3.5 Local Planning Policy No. 6.11 – Trees and Development

The City's Local Planning Policy No. 6.11 – Trees and Development (**LPP6.11**) sets out tree retention and planting requirements applicable to development sites within the City of Stirling.

An assessment against the relevant provisions of LPP6.11 has been undertaken in **Table 10** below.

Table 10: Assessment against LPP6.11 development requirements

Development Requirement	Provision	Compliance
Trees on development sites		
Retain existing trees on site, where possible.	The proposed development removes the existing trees on site, as they are generally in poor health (refer **Appendix 3** – Landscaping Plan). However, these trees are proposed to be replaced with 12 small trees, 2 medium trees and a large tree on site, as well as the provision of an additional verge tree with the retention of the existing tree.	Discretion required
The Council may, as a condition of development approval, require advanced trees approved by the Council to be planted by the applicant in particular locations on the site in accordance with: *• In the case of Multiple Dwellings: Design Element 3.3 Table 3.3a of State Planning Policy 7.3 Residential Design Codes Volumes 2 – Apartments; or* *• For all other development: 1 tree per 500m²*	The proposed development includes the provision of 12 small trees, 2 medium trees and a large tree on site, as well as the provision of an additional verge tree with the retention of the existing tree. With the exiting six (6) trees removed, the development increases the overall tree yield on the subject site which is considered to be a good development outcome.	✓
The following minimum soil space (at ground level free of intrusions) is required around each tree: *• In the case of Multiple Dwellings: in accordance with Design Element 3.3 Table 3.3b of the Residential Design Codes – Volume 2; or* *• For all other development: 9m² deep soil area per tree (45m²)*	All trees are proposed to be planted in garden areas which allow for adequate space for roots to establish themselves. This will not restrict the growth of proposed trees.	✓
Street Trees		

Development Requirement	Provision	Compliance
Street and reserve trees need to be protected at development sites in order to preserve the amenity of streetscapes and neighbourhoods.	The exiting street tree will be protected throughout the development of the site.	✓
A minimum setback of a crossover/driveway from any street tree on the verge is required. *The setback distance will be in direct relation to the Diameter at Breast Height (DBH) of the street tree:* *• DBH of up to 200mm requires a minimum setback of one metre;* *• DBH of 201mm to 400mm requires a minimum setback of two metres;* *• DBH of 401mm or greater requires a minimum setback of three metres.* *Should the distances required need to be less than the above specifications, a site inspection will need to be conducted to determine if the distance can be reduced on a tree by tree basis. Council inspection fees and charges may apply.*	The proposed crossover is setback from the exiting street tree by approximately 3.5m.	✓

The proposed development includes the removal of 6 on-site trees, which will be replaced by 12 small trees, 2 medium trees and a large tree on site, as well as the provision of an additional verge tree. This will significantly increase the tree canopy coverage for the subject site, and create an inviting and comfortable space for residents and visitors. In this way, the proposed development is aligned with the intent of LPP6.11.

4.3.6 Local Planning Policy 6.12 – Public Art on Private Land

The City of Stirling *Local Planning Policy 6.12 – Public Art on Private Land* (**LPP6.12**) provides the expectation for public as a means to complement urban development. The policy is applicable to development which exceeds $2 million. As the total cost of the proposed development is $10 million, the provision of public art (or payment in lieu) is required as part of the development is required.

Public art will be provided as part of the detailed development stage.

4.4 State Planning Policies

4.4.1 Residential Design Codes (Volume 2)

In accordance with clause 5.3 of LPS3, the proposed development has been assessed at a density code of R80 under Volume 2 of the Residential Density Codes (**R-Codes**). As demonstrated in **Appendix 7**, the proposed development is aligned with the objectives of the R-Codes, with proposed dwellings that are larger than the minimum requirements, and provision of large private open spaces as well as the 140m^2 central communal open space. The dwellings are aligned with the requirements for the provision of natural cross ventilation and solar access, with all dwellings capable of natural ventilation and experiencing solar access throughout the year.

Refer **Appendix 7** for a copy of the Residential Density Codes Assessment for the proposal.

4.4.2 State Planning Policy 7.0 – Design of the Built Environment

State Planning Policy 7.0 – Design of the Built Environment (**SPP7.0**) addresses the importance of design quality, and sets out the principles, processes and considerations which apply to the design of the built environment in Western Australia, across all levels of planning and development.

SPP7.0 establishes a set of ten (10) 'Design Principles', providing a consistent framework to guide the design, review and decision-making process for planning proposals. An assessment of the proposed development against the 10 Design Principles of SPP7.0 is provided in **Table 11** below, with further comments also provided in the Architectural Design Report (**Appendix 8**).

Table 11: SPP7.0 Design Principles Statement

SPP7 Design Principle	Design Response
Context and character Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.	Development on the adjoining and nearby lots comprises a mix of two- to four-storey residential and mixed use buildings. The development has been designed to respond to this variation in building heights, with a 3 storey podium below an additional two floors that have been set back to ensure limited impacts are created on the neighbouring lots or public street.
Landscape quality Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.	The proposed development will ensure the provision of quality landscaped areas within the subject site. Landscaping plans have been prepared which depicts landscape planting, with species selected that suit the climate, environment, location and required function of the subject site. Where vegetation removal was required, this has been compensated for through the provision of additional trees above the minimum requirement, which will significantly enhance the overall landscaped and natural areas of the site.
Built form and scale Good design provides development with massing and height that is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.	The development has been designed with a building form intended to balance the additional height with the perspectives of the public realm. The street and side setbacks have been stepped to ensure overlooking and visual amenity is maintained for the adjoining lots and public realm. The front façade has been designed with full height glazing for the commercial tenancies, as well as breezeblock and vertical articulation to ensure there is visual connectivity, activation and interest between the public and private realms while maximizing the development potential of the subject site.
Functionality and build quality Good design meets the needs of users efficiently and effectively, balancing functional requirements to deliver optimum benefit and performing well over the full life cycle	The build quality and design of this development demonstrates an exceptional built for and attractive façade, which has been designed to tie into the surrounding locality. The development has balanced the 3-storey podium and additional two storeys of height to ensure that the apartments are functional without impacting the amenity of the existing surrounding developments.
Sustainability Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.	The proposed development incorporates environmentally conscious elements including 40kW solar array and EV charging capabilities for all car parking bays. Refer **Appendix 5** for the ESD Strategy. Socially, the proposed development will deliver opportunities for residents and visitors to interact, with dog wash and foot washing stations integrated into the front façade of the building. This integrates the development with the beach character of the locality, encourages visitors and residents to visit the beach located 150m west from the subject site, and will provide opportunities for social engagement outside the development. This will also be expanded to the economic considerations, with the increased residential population expected to increase the investment and engagement with the existing commercial tenancies located within the local centre located across Flora Terrace from the subject site.

SPP7 Design Principle	Design Response
Amenity Good design optimises internal and external amenity for occupants, visitors and neighbours, contributing to living and working environments that are comfortable and productive.	The internal arrangement of the apartments includes 20 larger apartments, to provide greater amenity levels to residents and visitors on the site. The proposed apartments experience adequate levels of solar access across the development, with the natural ventilation levels also maintained at high levels. Further, a communal open space has been provided on the ground floor, with two trees and landscaping providing an inviting atmosphere around the provided seating areas and barbeque facilities. This open space is also adjacent to a communal work from home (co-working) space, which will allow residents to separate work and home without having to go into an office.
Legibility Good design results in buildings and places that are legible, with clear connections and memorable elements to help people find their way around.	The proposed development has been designed with clear delineation between the commercial, private and public realms. Differences in setbacks, awnings, glazing and other articulation highlights the different areas along the street frontage without creating opportunities for concealment or confusion. The central lift area and communal areas ensure that visitors and residents will be able to navigate the building confidently across the different levels.
Safety Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.	The proposed development has been designed to remove opportunities for concealment, provide a secure and clear delineation between the private and public realms, and provide opportunities for passive and active surveillance into and from the subject site.
Community Good design responds to local community needs as well as the wider social context, providing buildings and spaces that support a diverse range of people and facilitate social interaction.	The proposed development includes a mix of 1-, 2- and 3-bedroom apartments, which have been arranged across the floors of the development. These apartments vary in layout, size and composition, and will provide opportunities for a mix of residents to purchase and live in the locality.
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.	The development has been designed with a colour palette that reflects the existing character and palette of the surrounding locality, with sandy and bronzed colours pulled from the nearby Northbeach Beach, and the use of breezeway blocks and white brickwork reflecting the existing surrounding buildings and structures in the locality. This builds on the coastal tones of the area, and assists in building the development as part of the local area character.

The proposed development suitably responds to the SPP7.0 design principles and warrants approval accordingly.

4.5 Matters to be considered

Clause 67(2) of the Deemed Provisions sets out the matters for which due regard is to be given when considering a development application. Refer **Table 12** below for an assessment of the relevant matters.

Table 12: Matters to be considered

Matter to be considered	Provided
(a) the aims and provisions of this Scheme (including any planning codes that are read, with or without modifications, into this Scheme) and any other local planning scheme operating within the Scheme area;	Refer section 4.2 of this report

Matter to be considered	Provided
(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;	Refer section 4.2.4 of this report.
(c) any approved State planning policy	Refer section 4.4 of this report.
(g) any local planning policy for the Scheme area;	Refer section 4.3 of this report.
(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 has been designed to reflect the local centre zoning and intent for the site with the existing residential development located on the adjacent lots. This has included a design that steps back the building from the lot boundaries with each level, to ensure that the development does not impact the amenity of the neighbouring lots and does not dominate the streetscape of Flora Terrace.
(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 proposed development incorporates a mixture of deep soil area, small, medium and large trees, design elements that reflect the locality and integrated sustainability services. The intent of these elements is to add positively to the existing coastal streetscape, and encourage positive sustainability outcomes for the development.
(p) whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved;	Refer sections 3.2, 4.3.2 and 4.3.5 of this report.
(q) the suitability of the land for the development taking into account the possible risk of flooding, tidal inundation, subsidence, landslip, bushfire, soil erosion, land degradation or any other risk	The subject site is located in a developed area, with the proposed mixed use development replacing the existing building. The site is not considered bushfire prone, and will not experience greater risks than the existing development on site.
(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;*	Refer section 3.2 of this report
(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;	Refer section 3.2 of this report
(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);*	Refer section 3.2 and section 4.3.2 of this report

Matter to be considered	Provided
(v) access by older people and people with disability;	

5 CONCLUSION

As detailed within this report, the development proposes to demolish the existing commercial building and develop a mixed use building in its place. The proposed development includes 20 apartments and a ground floor commercial (office) tenancy, and appropriately responds to all relevant aspects of the planning framework. The proposed development warrants approval for the following reasons:

- The City's Design Review Panel largely supported the development following three review sessions, with each iteration of the development receiving further support.
- The proposed land use is entirely suitable in the Local Centre zone.
- The proposed development has been accompanied by comprehensive technical reporting demonstrating landscaping, traffic, waste and sustainability considerations have been addressed, and will not create a nuisance in the locality.
- The proposed development is consistent with the relevant development standards and provisions of LPS3 and is consistent with the objectives of the Local Centre zone.

Having regard to the above, the proposal has been assessed to meet the requirements of the applicable planning framework and the application warrants approval accordingly.

Attachment 6 – City of Stirling Planning Assessment

Noise and Acoustics

The Applicant submitted an Acoustic Report prepared by Herring Storer Acoustics received 15 July 2024 in support of the proposed development. The Applicant's Acoustic Report includes recommendations in regards to the construction, operation and mechanical services which are to be implemented as part of the development as per the recommended condition setting.

The City has reviewed the submitted Noise Management Plan and supports the referenced recommendations with a condition imposed as part of the City's recommendation to comply with the submitted Environmental Assessment prepared by Herring Storer Acoustics and *Environmental (Noise) Regulations 1997*.

1. Local Planning Policy 4.2 – Mixed Use Design Guidelines

2.1 Section 4.2 – Streetscape Relationship

In accordance with the provisions of LPP4.2, Section 4.2 Ground Floor Frontage and Street Parapets, awnings are to include the following:

- Protrude a minimum of 2.0m from the building;
- Be provided over all footpaths that abut a building, including footpaths to the rear;
- Be provided above all entrances and exits of a building;
- Be solid construction using materials that are opaque and non-reflective (e.g. no glass): and
- Match the height of existing adjacent awnings.

The development proposal does not include awnings over all footpaths that abut a building, including footpaths to the rear and all entrances and exits.

Accordingly, the above variation requires assessment against the following objectives of the policy:

> *To ensure the ground floor frontage of a building provides an attractive and active street frontage and pedestrian shelter.*

The proposed ground floor of the development provides an attractive and active street frontage. The entry point of the development has been clearly defined through the use of a pathway, contrasting renders and a pedestrian entry overhang. The portico and awning overhang provide an additional design feature and ensure the entrance is clearly defined. The ability to provide awnings along the ground floor frontage is restricted given the verge depth, street trees and waste collection points.

2. State Planning Policy 7.0 – Design of the Built Environment (SPP7.0)

SPP 7.0 applies to all development in Western Australia. The purpose of SPP 7.0 is to inform and guide landowners, proponents, designers, reviewers and decision-makers to achieve good design outcomes in the built environment.

The City's summary of the proposed development against SPP7.0 is as follows:

SPP7.0 Design of the Built Environment	
Design Principle	**Officer Comment**
1.Context and Character Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.	The development carefully responds to the existing and future development context. The development provides for a three storey podium fronting the street and to the northern boundary which responds to the adjoining northern property and more intense streetscape to the north along Flora Terrace. The heights of the

Attachment 6 – City of Stirling Planning Assessment

SPP7.0 Design of the Built Environment	
Design Principle	**Officer Comment**
	development transition down towards the south and western boundary in response to the low-density residential properties. The colour and material palette is appropriate in relation to the existing and future development context.
2.Landscape Quality Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.	The development includes a total of 10.5% (178m²) of ground level deep soil area with an additional 119.1 m² on structure. The development includes the planting of 16 Trees, including two Large Trees and 14 Small Trees which will provide shade and green relief to both the subject site and the locality. The development includes landscaping to the sides and rear boundaries which provides greater separation to the adjoining residential properties.
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.*	Though the development exceeds the building height and plot ratio provisions of the City's planning framework, the development provides sufficient separation to mitigate any adverse impacts to adjoining properties. The proposed development is appropriate within its existing and future context.
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.*	Subject to the recommended condition setting, the proposed development provides for safe and legible access for pedestrians, cyclists and vehicles with adequate parking facilities provided. The development has been designed to meet the specific needs of users. The commercial component can be adapted to meet the needs of specific tenants and the apartments satisfy the various design provisions of the Residential Design Codes Volume 2. The proposed materials are durable and are easily maintained.
5. Sustainability *Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.*	The proposal incorporates passive sustainability measures into the design with north facing openings to the majority of dwellings with northern access also provided to residential amenities and the communal open space area. The proposed development includes the installation of solar panels on the roof to assist in reducing energy consumption. The landscaping plan incorporates appropriate species for the site location. The proposal provides infill development located within a Local Centre promoting short walkable trips in the immediate vicinity. The Office component further diversifies the commercial land uses in the area.

Attachment 6 – City of Stirling Planning Assessment

SPP7.0 Design of the Built Environment	
Design Principle	**Officer Comment**
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 development provides a high level of amenity to residents, there are no design issues that would substantially affect the liveability of the new dwellings. The commercial component is large and can be adapted to meet the needs of specific tenant. The height, bulk and scale of the development will not have an adverse impact on the adjoining properties with these matters appropriately addressed by the design of the development.
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.*	The development has a legible layout, with evident pathways and entrances internally and externally within the development. A clearly defined entry is accessible from Flora Terrace, with a pedestrian access provided from the entrance of the site and from the car parking area to facilitate safe pedestrian movement to and from the proposed development.
8. Safety *Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.*	The development incorporates passive surveillance measures and minimises safety risks from vehicle movements. Vehicle circulation areas have been designed to allow vehicles to enter the street in forward gear with unobstructed sightlines provided to minimise potential conflict to pedestrians, cyclists and vehicles. Subject to the recommended condition setting, there are no significant safety design issues present within the development.
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 proposed development provides for a commercial land use and infill development which are appropriate land uses within the Local Centre zone. The development provides for a diversity of dwelling types with one to four bedroom dwelling available which may provide for a diverse range of residents. The development provides opportunities for interaction between pedestrians at street with the commercial tenancy and internally for residents, within the communal open space area and residential amenities on the ground floor.
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.*	The proposed development provides for articulated facades to the street and to all boundaries. The development incorporates large openings on each elevation so as to break up overall bulk and uses alternating materials and colours to provide interest. These elements articulate the building and reduces the overall bulk. The design of the building has been refined and improved in response to the Design Review Panel's

SPP7.0 Design of the Built Environment	
Design Principle	**Officer Comment**
	comments within the context of the relevant planning framework.

3. Planning and Development (Local Planning Schemes) Regulations 2015

The proposed development is required to be considered against the relevant matters listed under Clause 67 (2) of the Deemed Provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

Commentary on the relevant considerations is provided below:

Deemed Provisions Clause 67 – Consideration of application by local government	
Provision	**Officer Comment**
(a) *the aims and provisions of this Scheme and Scheme and any other local planning scheme operating within the Scheme area;*	The proposed Office and Multiple Dwelling uses are consistent with the Local Centre zoning of the site as per LPS3. The built form of the proposed development exceeds the building height and plot ratio provisions of the planning framework, however the impacts of height, bulk and scale have been appropriately addressed and do not result in any adverse impacts.
(b) the requirements of orderly and proper planning including 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 development has been assessed in accordance with the applicable local and state planning instruments and is supported. Although the City has prepared Draft LPS4 and commenced advertising, the final form of LPS4 is not imminent nor certain at this time. Accordingly, no weight should be given to Draft LPS4 when determining this application. The development is consistent with LPS3 and the relevant planning instruments, and therefore is consistent with the requirements of orderly and proper planning.
(c) any approved State planning policy;	The City's assessment of the development application has considered the relevant State Planning Policies. The proposal satisfies the objectives and requirements of those policies.
(g) any local planning policy for the Scheme area;	The City's assessment of the development application has considered the relevant local planning policies. As assessed earlier in this report the proposal satisfies the objectives and provisions of those policies.
(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*	The proposed development is appropriate within its the setting with the development designed to mitigate any adverse impacts in terms of height bulk and scale.

on other land in the locality including, but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the development.	
(n) the amenity of the locality including the following – *(i) environmental impacts of the development;* *(ii) the character of the locality;* *(iii) social impacts of the development;*	The proposal includes 178m² (10.5%) of deep soil area and 119.1m² of planting on structure and the planting of two Large Trees on site and 14 Small Trees. The proposed development is appropriate within its setting and positively contributes to the area. The development provides for activation and passive surveillance of the public realm. The proposed development does not result in any anti-social issues.
(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;*	Subject to the recommended condition setting, the development provides for suitable vehicle access and egress The development provides for sufficient car parking for the commercial and residential components.
(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 Applicant submitted a Transport Impact Statement in support of the development, with additional traffic generated by the proposal being minimal and safely accommodated within the road network. The TIS has been reviewed and is supported by the City.
(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* *(v) access by older people and people with disability;*	The subject site located within 5m from a bus stop, providing the site with direct access to public transport services. Utility services are available to the development. A Waste Management Plan has been provided and meets the City's requirements. The development provides pedestrian access from the entrance of the site and from the car parking areas. The development accommodates access and parking for bicycles as per the planning framework. The development provides 'at grade' car parking and universal access design features throughout the site.
(y) any submissions received on the application;	The application has been formally advertised in accordance requirements of Clause 64(3) and (6)(a) of the Planning and Development (Local Planning Schemes) Regulations 2015 with comments received. These submissions have been considered as part of the City's assessment.
(za) the comments or submissions received from any authority consulted under clause 66;	Consultation to relevant authorities such as Water Corporation and Western Power has been undertaken as detailed earlier in the report under 'External Referral Agencies'.

Attachment 6 – City of Stirling Planning Assessment

Draft Local Planning Scheme No. 4 (LPS4)

On 15 August 2023, Council resolved (Council Resolution Number 0823/034) to prepare Local Planning Scheme No.4 (LPS4). City officers have prepared draft LPS4 with a report prepared for consideration by Council at its Ordinary Meeting on 5 December 2023. The purpose of this report was to obtain resolution of Council to support the commencement of advertising of draft LPS4 and to obtain advice from the Western Australian Planning Commission (WAPC) on any modifications to LPS4 prior to the commencement of advertising. At its Ordinary Meeting held on 5 December 2023, Council resolved to proceed to advertise draft LPS4 and the draft Scheme Map, subject to consent from the WAPC. Advertising of Draft LPS4 commenced on October 18 2024 and will conclude on 24 January 2025.

In relation to draft LPS4, a decision-maker can give due regard to a seriously entertained planning proposal when determining an application, in accordance with Schedule 2 Clause 67(2)(b) of the *Planning and Development (Local Planning Schemes) Regulations 2015*. The final form of draft LPS4 is not imminent nor certain at this time and accordingly no weight should be given to the proposed development controls when determining this application. Accordingly, the City has not assessed the development against draft LPS4. Notwithstanding the proposed planning provisions for the subject site include:

- Zoning: Local Centre with a Density Coding of R80.
- Dwelling is proposed to be a 'D' Land Use under Draft LPS4.
- Office is proposed to be a 'P' Land Use under Draft LPS4.
- The objectives for the Local Centre are proposed to be:
  - To provide a range of small-scale retail and service uses for the immediate neighbourhood, that are easily accessible, but which do not adversely impact on the amenity of adjoining residential areas.
  - To focus on the main daily household shopping and community needs.
  - To encourage high quality, pedestrian friendly, street-orientated development.
  - To ensure non-residential uses are located at street level and are compatible with adjoining residential us

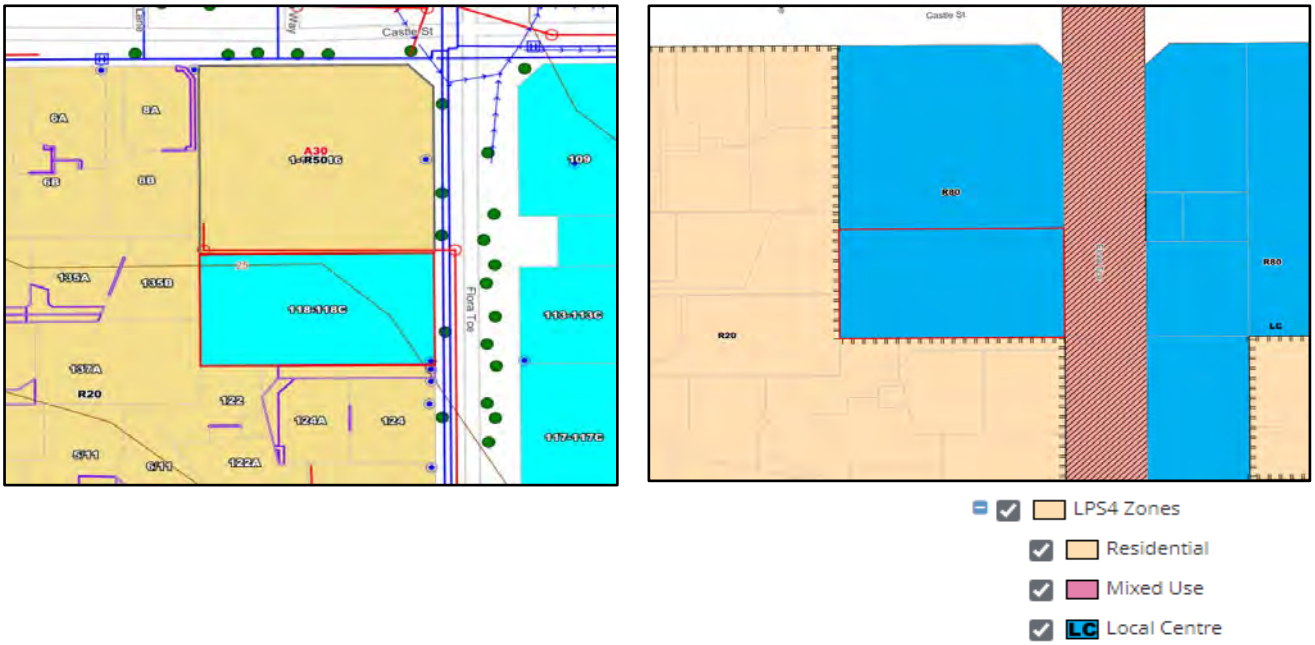

Figure 1 - Annotated draft LPS4 Zoning showing development site

Attachment 7a - Applicant's Response to Request for Information received 6 November 2024

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PS ref: 8888

6 November 2024

City of Stirling
PO Box 1533
Osborne Park WA 6916

Attention: Michael Italiano, Senior Planning Officer

Dear Michael,

LOT 15 (118) FLORA TERRACE, NORTH BEACH
APPLICATION FOR APPROVAL TO COMMENCE DEVELOPMENT
RESPONSE TO REQUEST FOR FURTHER INFORMATION AND PUBLIC SUBMISSIONS

We refer to the City of Stirling's (**City**) request for further information (RFI), received on 11 October 2024, regarding the application for approval of the proposed mixed-use development at Lot 15 (118) Flora Terrace, North Beach (**subject site**). In addition, this response addresses the schedule of public submissions received on 2 October 2024 during the advertising period.

RESPONSE TO CITY'S REQUEST FOR FURTHER INFORMATION

Refer **Table 1** below for our response to the City's request for further information.

Table 1: Response to City's Request for Further Information

City RFI Comment	Applicant Response
Boundary Wall	
LPP 4.2 replaces the acceptable outcomes of R-Codes Volume 2 for side and rear setbacks. As the adjoining northern site is zoned R50, the boundary wall requirements are to be assessed as per R50 requirements of R-Codes Volume 1 – Part C. Specifically, the development does not satisfy the required setbacks outlined below: - 3rd Storey - Proposed northern boundary wall with a height of 12.4m in lieu of 7m. - 3rd Storey - Proposed northern boundary wall length of 19.8m in lieu of 14m without a 3m separation in accordance with Figure 3.4h of R-Codes Volume 1 – Part C. The height of the proposed boundary wall is not supported with amended plans required which either reduce the height of the proposed boundary wall to address the permitted boundary wall heights and length or achieve a setback consistent with the provisions of R-Codes Volume 1 – Part C.	Refer **Attachment 1**, Amended Plans, and **Attachment 2**, Wall Visualisations. The proposed northern boundary wall has a height of 3 storeys and a length of 12.4m on Level 2 (third storey), representing a single storey variation from the 2-storey boundary wall deemed-to-comply requirement. The Level 2 boundary wall has been set back from the street, providing a podium appearance on the lower floors, and minimising any perceived bulk from the street. The combination of this recessing with balcony screening ensures that there are no overlooking, overshadowing, or amenity impacts on the northern neighbour. As the Wall Visualisations demonstrate, due to the existing built form on the northern property, increasing the setback of the Level 2 wall would have negligible impact on the perceived bulk of the building from the street. The strategic positioning of the development's bulk towards the northern boundary allows the southern residential properties to remain unaffected by overshadowing, which benefits existing residents and

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City RFI Comment	Applicant Response
	supports the planned intensification within the town centre. This proposal aligns with LPS3 and the Draft LPS4 which anticipates an increase in density for the adjacent site at 116 Flora Terrace from R50 to R80. These measures are consistent with the objectives of LPP 4.2 to balance development with streetscape and residential amenity.
Building Separation	
The proposed development does not satisfy the Element Objectives of Element 2.7 – Building Separation of the R-Codes Volume 2 as the development does not address the relevant Acceptable Outcomes and Design Guidance. Specifically, the development does not satisfy the recommended setbacks for the northern boundary to level four, which requires a 9m setback and has been provided with a 4.7m setback.	Refer **Attachment 1**, Amended Plans, and **Attachment 2**, Wall Visualisations. Level 4 of the proposed development is designed to meet the objectives of Element 2.7 by ensuring no impacts on visual privacy, overshadowing, or natural ventilation for surrounding properties. The 4.7m northern setback provides articulation and separation in line with Element 2.7 objectives, which include maintaining privacy and adequate building separation. The building colours and materials reinforce the perception of a two-storey podium, visually aligning the development with the existing northern neighbour. The darker cladding on upper levels and stepped setbacks provides a sense of space and separation without disrupting the continuity at ground level. Diagrams and images are provided to demonstrate that the northern setback minimises any perceived bulk and visual impact on the adjacent property
Visual Privacy	

The following apartments do not achieve the minimum setback requirements for visual privacy under Element 3.5 of the R-Codes.
- Level 1, Northern boundary – Apartment 103 – Living Room
  o Setback 4.5m in lieu of 6m.
- Levels 2, Northern boundary – Apartment 203 - Living Room
  o Setback 4.5m in lieu of 6m.
- Southern boundary – Apartment 102 – Balcony
  o Setback 6.7m in lieu of 7m.
- Level 3, Northern boundary – Apartment 303 – Living
  o Setback 4.3m in lieu of 4.5m.
The resultant overlooking is not supported with amended plans required. Any variation proposed to the recommended setbacks of Tables 3.5 of SPP 7.3 is to include detailed section drawings which clearly demonstrate the area of the adjoining areas impacted.
	Refer **Attachment 1**, Amended Plans, **Attachment 3**, Additional Drawings, and **Attachment 4**, Amended Landscaping Plan.
	
	Visual privacy is assessed with regard to the density coding of the impacted property, as opposed to the density coding of the development site.
	
	<u>Northern boundary</u>:
	
	Lot 300 abutting to the north is coded R50, and contains multiple dwellings. Accordingly, the visual privacy of the northern property is assessed under the R-Codes V1 Element 3.10 – Visual Privacy.
	
	Deemed-to-comply Clause C3.10.1 sets out that the 'cone of vision' setback (as depicted in Figure 3.10a) is measured to major openings and/or active habitable spaces on the impacted lot, not to the property boundary. The site survey lodged as part of the application indicates the dwelling in the southwestern

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City RFI Comment	Applicant Response

	portion of Lot 300 is setback 1.6m from the common boundary.
	
	The visual privacy separation for the proposed development, measured in accordance with V1 of the R-Codes (as applicable to the R50-coded Lot 300) are as follows:
	
	- Level 1, Northern boundary – Apartment 103 – Living Room
	  o Setback 6.1m (6m required).
	- Levels 2, Northern boundary – Apartment 203 - Living Room
	  o Setback 6.1m (6m required).
	- Level 3, Northern boundary – Apartment 303 – Living
	  o Floor plan amended to relocate living room. No major openings/habitable spaces to adjacent building.
	- Level 3, Northern boundary – Apartment 303 – Balcony
	  o Vertical and horizontal privacy design solutions in accordance with Figure 3.10d.
	
	Accordingly, the visual privacy setbacks to the northern boundary are deemed to comply with the R-Codes.
	
	Diagrams and images are provided to demonstrate that the Level 3 balcony achieves negligible visual privacy impacts for the northern neighbour. Additionally, sectional and SketchUp models confirm vertical and horizontal offsets for the south-facing study window of the southwestern dwelling on Lot 300, demonstrating cone of vision compliance.
	
	<u>Southern boundary</u>:
	
	On the southern boundary, amended plans have modified the apartment layout to remove the cone of vision encroachment.

Streetscape Relationship	
The proposed development does not satisfy the Objectives of LPP 4.2 or the Element Objectives of Element 4.10 – Façade Design of R-Codes Volume 2 as the development does not include an awning to the street. Specifically, the ground floor does not provide an active, safe and sheltered frontage. This matter has not been addressed in the Planning Report. Amended plans are required to include the addition of awnings along the ground floor frontage.	Refer to **Attachment 1** – Amended Plans, which includes the proposed retractable awnings along the ground floor frontage. Retractable awnings have been included along the ground floor frontage to meet the objectives of LPP 4.2 and Element 4.10 – Façade Design of R-Codes Volume 2, ensuring an active, safe, and sheltered frontage. This addition addresses the requirement for a cohesive streetscape relationship, enhancing ground-

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City RFI Comment	Applicant Response
	level activation and pedestrian shelter in accordance with the City's objectives.
Vehicle Access	
The City's assessment concludes the proposed development does not satisfy Australian Standards AS2890.1, with the following matters identified - All visitor car parking bays are to achieve a minimum width of 2.5m, free of intrusions. Currently the visitor car parking bay adjacent to the two motorcycles bays should be 2.5m wide. - The aisle serving bays 40 – 47 should be amended to be 6.1m wide as this is currently 6m. - The proposed crossover is to be setback 1.5m from the southern lot boundary in order to provide adequate sightlines. - Proposed commercial bays 23, 27, 29, and 31 require an additional 0.3m in width to allow for door openings due to obstructions. - A 2.0m x 2.5m sight truncation is required where the driveway meets the road reserve, in accordance with AS/NZS 2890.1 Figure 3.3. - A vehicle bay for commercial deliveries will be required as per Local Planning Policy 6.7 – Parking and Access, the commercial car parking bays would not be suitable for commercial deliveries. - The proposed crossover conflicts with the existing streetlight, which will need to be relocated, ensuring that lighting levels along Flora Terrace comply with Australian Lighting Standards and Western Power approvals are sought. All costs to be borne by the owner. - The proposed crossover and internal driveway is only 4.5m wide which does not permit a vehicle to enter the site if a vehicle is waiting to exit. The proposed 1.5m wide yellow painted strip effectively reduces the access even further. The proposed traffic light system will not address the issue of vehicles having to wait in Flora Terrace. Flora Terrace is a bus route, and vehicles waiting to enter the site will obstruct bus movements. There is also a bus stop approximately 6.5m south of the proposed developments crossover. Additionally, waiting vehicles will obstruct bus access to the existing stop, as well as departure from the stop. The City does not support vehicles having to wait in Flora Terrace, the crossover and connecting internal driveway must be widened to a minimum with of 6.0m to accommodate two-way vehicle access. Amended plans and additional information addressing the above matters are required for the City's consideration. Please refer to Engineering annotations attached for further clarification.	Refer **Attachment 1**, Amended Plans, which demonstrate: - A revised crossover and driveway access width, providing 1.5m visual truncation and space for vehicle passing off Flora Terrace; - Provision of additional 0.3m to resident parking bays, where impacted by obstructions; and - Indication of visitor/office parking bay allocations. Refer **Attachment 5**, Traffic Note, which provides additional assessment on: - Required parking, turnover, classification and bay and aisle widths under AS2890, including demonstration that the 2.4m wide parking bays satisfy the development requirements; - Demonstration of the provided 2.0m x 2.5m sight truncation is required where the driveway meets the road reserve, in accordance with AS/NZS 2890.1 Figure 3.3; - Analysis of updated vehicle crossover and passing point, demonstrating functionality and safety; and - Further explanation of traffic control systems as required to ensure safe access and egress from the site. With regard to delivery bays, LPP6.7 only requires a delivery bay where more than 500m^2 of non-residential floorspace is required. The proposed development comprises less than 250m2 of non-residential floorspace, and therefore does not require a dedicated delivery bay. The ground level tenancy will be occupied by an office use, with only occasional van/courier deliveries occurring. Further, **Attachment 1**, Amended Plans, proposes to relocate the existing light pole further north along Flora Terrace. Finalisation of the light pole relocation is subject to advice from Western Power.

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City RFI Comment	Applicant Response
Car parking	
The basement car park protrudes up to 2m from natural ground level along the western and southern lot boundaries which is not consistent with the existing levels and is considered to have an adverse impact on the amenity of the adjoining properties. The levels should be stepped to correspond to the existing levels of the adjoining properties to mitigate potential impacts. The City notes the development provides for an excess of 16 car parking bays, the reduction of car parking bays and/or reduction of the car parking area would assist in minimising the impact to the adjoining properties. On the basis of the above, amended plans are required to address this matter.	Refer to **Attachment 1** – Amended Plans, which includes the revised parking layout and reduced basement levels along the western and southern boundaries. The parking layout revises the total car bay provision to 49, with 38 residential bays, 4 visitor bays, and 7 commercial bays. The revised layout enables the basement to step down along the western boundary, aligning more closely with natural ground levels and minimising visual impact on adjacent properties. Additionally, vehicle access has been positioned on the southern boundary to support and provide an active frontage, aligning with the existing driveway on the neighbouring lot and reducing the visual impact of hardstand areas visible from the street.
Site Levels	
The proposed development includes site works up to a maximum of 2.7m along the southern and western lot boundaries, including protrusion of the basement car park up to 2m from the NGL. This is not supported as this does not respond to the existing levels of the adjoining properties and is considered to have an adverse impact on amenity. A review of the proposed site works indicates a reduction of the car parking and/or stepping of the basement, as well as reduction to the proposed terrace areas, would reduce the impact to the adjoining properties.	Refer **Attachment 1**, Amended Plans, demonstrating reduced levels to western boundary through terracing of ground level apartment courtyards.
Waste Collection	
The area shown for bin presentation to the street is not sufficient to accommodate the proposed 22 Mobile Garbage Bins (MGBs) for weekly collection (15 x 240L and 7 x 360L). The City's Waste Services can consider two weekly pickups to reduce the number of MGB's required for presentation at any one time. The City also requires an area to be put aside for on demand services such as skip bins, white goods, electrical waste and mattress collections. Please provide additional information where a minimum of 2.5m x 2.5m is located on the verge to cater for the on demand services, and update the proposed Waste Management Plan to reflect the available presentation space.	Refer **Attachment 6**, amended WMP. The updates include increasing to twice-weekly collection, allowing for reduced bin presentation area and storage, as well as provisions for bulky good collection and other service provision.
Street Light relocation	
There is an existing streetlight within the verge. Please advise whether you have sought comment from Western Power regarding the proximity to the	Refer **Attachment 1**, Amended Plans, demonstrating proposed location for streetlight.

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City RFI Comment	Applicant Response
proposed development and whether this is sufficient or if the pole will require relocation.	Further discussions with Western Power are on-going to finalise the street light relocation. This will be completed as part of the detailed design for the project.
Overshadowing	
The City requests amended overshadowing diagrams be provided addressing the specific acceptable outcomes of Element 3.2 – Orientation of R-Codes Volume 2. Please provide the City with additional overshadowing modelling of the adjoining properties to demonstrate the extent of overshadowing to the existing solar panels to the south to ensure solar access is maintained for four hours per day on 21 June.	Refer **Attachment 7,** Sun Hours Diagrams, showing the solar panels on the southern neighbours achieve a minimum of 6 hours of sunlight each day, across the year.
Car Parking	
The City requests amended plans and/or additional information in regards to the proposed car parking arrangements for the site. The allocation of visitor bays for the commercial development (office) and residential visitors is not clear. The City requires amended plans and/or further information which clearly delineates the car parking bays proposed for visitors for the commercial and residential components of the development.	Refer **Attachment 1**, Amended Plans, demonstrating an updated parking allocation within the amended basement floorplan.
Universal Design	
A minimum of four dwellings are required to incorporate the provisions of the Liveable Housing Design Guidelines, with the specific dwellings to be identified to ensure these are capable of addressing the specifications of the Liveable Housing Design Guidelines. Indicative Floor Plans should be submitted as part of the development application to ensure compliance with the specifications of the Liveable Housing Design Guidelines can be achieved to avoid any future issues.	All dwellings are included on the plans with indicative floor plans. Apartments 105, 106, 205 and 303 have been designed in accordance with the Silver Level Liveable Housing Design Guidelines, in accordance with universal design requirements.
Additionally, a minimum of four car parking bays with dimensions of 3.2m x 5.4m are required to be identified on the revised plans.	The pedestrian entry from Flora Terrace provides a level and continuous path of travel to each dwelling through the central hallways and lifts, satisfying the Silver Level requirements for Liveable Housing. Thus, the car parking bays are not required as part of this path of travel and do not trigger any increased parking bay width or length requirements. Refer **Attachment 5,** Traffic Note, for further justification on the proposed parking space dimensions.
Natural Ventilation	
Amended plans and/or additional information is required to address Element 4.2 – Natural Ventilation of RCodes Volume 2 with details relating to bathrooms and laundries of dwellings throughout the	Refer **Attachment 1**, Amended Plans, demonstrating further mechanical ventilation requirements where possible.

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development which do not have external windows. Design Guidance 4.2.7 and 4.2.8 of Element 4.2 – Natural Ventilation of R-Codes Volume 2 identify trickle vents, ceiling fans or energy efficient mechanical exchange systems may be required for these areas. The City requires further information regarding this matter.	Further provision of detail and confirmation of requirements will be completed at detailed development stage, as addressed by a condition of development approval.
Public Art on Private Land	
As per Local Planning Policy 6.12, the development is to provide public art as part of the development with a cost contribution at a rate of 1% of the cost of the development. As part of the development application, the proposed location of the public art is to be demonstrated along with a brief report showing how the public art will be integrated into the development. Amended plans are to demonstrate the location of the public art and the proposed typology.	Refer **Attachment 1**, Amended Plans, demonstrating indicative public art contributions. Specific details for public art contributions to be addressed by a condition of development approval.

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Conclusion

This application is for a mixed use development with 20 residential units and a commercial tenancy within a Town Centre area. The development will activate a currently underutilised site, and create links to the existing commercial tenancies across Flora Terrace as well as with the wider residential community. As demonstrated above, the development has considered the relevant planning requirements, and will introduce much needed housing and activation within an existing Town Centre and beachfront area.

We trust that the responses provided adequately address the planning considerations raised in the City's request for further information and the public submissions received during public consultation.

Should you have any queries or require further clarification in regard to the proposal, please do not hesitate to contact the writer.

Attachment 7b - Sustainability Strategy prepared by Full Circle Design Services received 15 July 2024

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June 2024

118 Flora Terrace

Sustainability Strategy

Graham Agar
FULL CIRCLE DESIGN SERVICES

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Report Nº: 2024_024_ESD_REP_01

Original Date of Issue: 30th April 2024

Title:	118 Flora Terrace - Sustainability Strategy
Author:	Graham Agar
Client:	Space Collective Architects
Contact:	Felipe Soto
Description:	This report provides the ESD strategy for the proposed development at 118 Flora Terrace in North Beach. The project includes 20 residential units and a commercial tenancy at ground floor. The design includes best practice sustainable design features across a range of assessment categories including renewable generation, thermal performance, embodied energy and sustainable transport.

Revision	Date	Checked by	Transmitted by
A	29th April 2024	CR	GEA
B	28th May 2024		GEA
C	6th June 2024		GEA
D	21st June 2024		GEA
E	26th June 2024		GEA

Distribution	Revision								
Receiver	A	B	C	D	E				
SCA	X	X	X	X	X				

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Executive Summary

The proposed residential development at 118 Flora Terrace comprises some 20 apartments over five occupied levels and a basement car park. At ground floor there is a commercial tenancy and communal spaces – including co-working and dining.

The design includes a range of apartment sizes and typologies to suit a variety of demographics and is committed to providing best practice sustainable design.

Considering the nature of the project and its location, the project team have developed four key sustainable design themes which support the project's value proposition and add to the experience for owners and occupiers:

- Healthy living
- Low carbon footprint and operational costs
- Climate resilience
- Sustainable transport

Supporting these themes are a range of sustainable design features and inclusions which will provide verifiable performance improvement over current business as usual design and construction practices. These features include:

- Photovoltaic array on site
- Embedded meter network
- Life cycle assessment
- Electric vehicle infrastructure
- Fossil fuel free site

This report provides additional information on the proposed themes and the verification pathway for the project.

At the most recent design review panel the project was urged to set more ambitious targets. The project has responded as follows:

Metric	Initial Target	Revised Target
NatHERS Rating	7 Stars	7.5 Stars
Solar Array	30kW Panels	40kW Panels
EV Charging	Capacity Only	Charging to 10% of Bays @ Opening
Energy Source & Climate Resilience	-	13kWhr Battery, capacity for island mode.

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1. Introduction

FCDS have been commissioned to assist the 118 Flora Terrace design team in developing and implementing a holistic sustainable design strategy which meets best practice design outcomes and provides verifiable performance metrics for external review and comment.

This report presents the proposed ESD themes the project has elected to pursue and outlines key design features to deliver measurable performance against these themes.

1.1 Project Description

The development includes 20 residential apartments, ranging in size, across four occupied levels. The building also includes undercover basement parking. At ground floor there is a commercial tenancy and communal spaces – including co-working and dining.

The project is located between Waterman's Bay and North Beach, with a relatively high walkability rating and reasonable public transport options.

1.2 Existing Site

The site is currently fully developed with a low rise commercial building and exposed parking adjacent. The new development therefore has the potential to improve activation of the street and reduce urban heat island effect with planting and light colour selections:

Above: Current street view (Google Maps)

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1.3 Strategic Project Aims

In progressing this development, the project team are keen to deliver best practice sustainable design outcomes for investors, occupiers, owners and the surrounding community and, therefore, have selected the following key sustainable design themes for the project. Design features, aligning with national best practice, have also been proposed as a means to demonstrate the project has met its intended outcomes:

- Healthy living
  - The design should promote occupant health and wellbeing, both through internal design decisions and access to external spaces.

- Low carbon footprint and operational costs
  - The design must ensure that operational utility use – such as energy and water – are minimised, with long life cycle products and low carbon technology where possible.

- Climate resilience
  - The development has a design life of in excess of 50 years. The final product must provide high performance in current climatic conditions, with flexibility and resilience to suit weather patterns in 2080 and beyond.

- Sustainable transport
  - The location of the project can assist occupants in reducing their dependence on cars. Integration and facilitation of sustainable transport options is key for project success.

Long term, the development is expecting to operate close to carbon neutral, with onsite renewable generation combined with energy and water efficient design to minimise carbon emissions. Design features will include sufficient metering and monitoring to permit owners to assess and offset the building carbon footprint in operation using either Green Star Performance or the NABERS Apartments tool (expected to be available within 24 months).

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2. Healthy Living

The location of the project is ideal for owners and occupiers seeking an active and healthy lifestyle.

The development is less than 400m to the beach and with local groceries, parks, specialty stores and the Star Swamp reserve, there is ample opportunity for a high degree of walkability and active living.

Above: Current aerial view (Google Maps)

The design also seeks to improve occupant health outcomes through the design features detailed in the following sections.

2.1 Low Toxicity Materials

The initial site remediation will include removal of any residual asbestos, lead or PCB contamination. In addition, internal finishes and joinery will prioritize low toxicity through minimisation of VOCs and formaldehyde:

- Walls and ceiling paints will target Ultra Low VOC compliance (<5g/l)
- Adhesives, sealants, trim paints, primers and sealers will comply with Green Star best practice benchmarks.
- All internal joinery will be certified as low (E0 or E1) formaldehyde

At building license stage the design team will provide a performance specification for all relevant products and, where selected, will ensure materials meet the performance requirements above.

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2.2 High Performance Envelope

The building design will prioritize the protection of glazing through the use of balconies on the east and west and optimising the views to the south. Northern glazing will be used for passive solar heating in winter.

Overall, the project intends to exceed the requirements of the current BCA by 1 star, exceeding R-Code requirements and improving thermal comfort and energy efficiency.

The project is to be located in North Beach, NatHERS climate file 52. Apartment performance is described below:

Compliance Requirement	BCA 2019		R-Codes		118 Flora Terrace	
	Stars	Thermal Load	Stars	Thermal Load	Stars	Thermal Load
Average Apartment	6.0	39 MJ/m^2 p.a.	6.5	34 MJ/m^2 p.a.	7.5	25 MJ/m^2 p.a.
Minimum Performance	5.0	51 MJ/m^2 p.a.	5.5	45 MJ/m^2 p.a.	6.0	34 MJ/m^2 p.a.

By reaching these targets the project team is reducing average apartment thermal loads by more than 25% and worst performing apartments by 30%. At building license, the NatHERS and Section J compliance reports will demonstrate the performance improvement.

2.3 Natural Ventilation

The design will ensure that all apartments meet or exceed the ventilation requirements of AS 1668.4 for natural ventilation and will achieve dual aspect ventilation on around 75% of residences.

At ground floor, apartments are to be surrounded by planting to improve local microclimate and make natural ventilation more effective.

At building license stage the mechanical designer will certify appropriate ventilation provisions for all habitable spaces.

In addition to the above, the project also intends to facilitate active transport through the integration with local footpaths and pedestrian infrastructure, street front activation and provision for bike parking for residents and visitors.

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3. Low Carbon Footprint and Operational Costs

The Greenhouse Effect and global warming has been identified as the most significant environmental challenge of our times. Increasingly corporations and governments are embracing the need to act through setting performance goals and penalising carbon inefficiency with increasing utility costs.

The 118 Flora project team are aware of the need for projects to act responsibly with their carbon footprint both initially and in operation through life cycle assessment and building design. Best practise design can successfully reduce energy and water consumption, divert waste from landfill and minimise refrigerant carbon footprint.

Many of the features in other categories contribute to improved building carbon efficiency, including natural ventilation, an efficient envelope and water efficiency measures. Sustainable transport options also reduce the carbon footprint of building occupants and visitors.

The following additional design features are intended to delivery embodied and operational carbon footprint improvements:

3.1 Embedded Meter Network

The design will include a single utility meter for electricity and water, with sub-meters to apartments and major uses within the development.

This feature allows the renewable energy generated on site to be distributed to the apartments or commercial tenancies, as needed at time of generation.

The feature also allows occupants to access near real-time data on their consumption and for building management to effectively monitor and tune building performance in operation.

The metering system will be configured to facilitate future carbon neutral assessment under either Green Star Performance or NABERS apartments rating systems (note NABERS Carbon Neutral for apartments is not yet available, expected eligibility by 2026).

Design specifications and schematics will be provided at building license stage and will include details on system design performance.

3.2 Fossil Fuel Free Site

The design will eliminate fossil fuel use on site as far as practical. Whilst emergency systems – such as pumps – may require diesel back up, however all apartment cooking, domestic hot water and heating will be delivered by electrical systems.

The transition away from fossil fuels reduces the carbon footprint for buildings, and will be reduced further as the Perth electrical network continues to transition to renewable energy. The use of gas fired equipment in any new project locks in the requirement for direct greenhouse gas emissions for the duration of the plant life time – potentially up to 30 years for large boiler systems.

At building license stage the design documentation will show electrical infrastructure for all residences to operate fossil fuel free.

3.3 Waste Management

The design includes a well sized and located waste store at ground floor. The space will meet best practice requirements for safe access for both occupants and waste contractors and will be sized sufficiently to cater for at least three waste streams; food and organic waste (FOGO), general waste and mixed recyclables.

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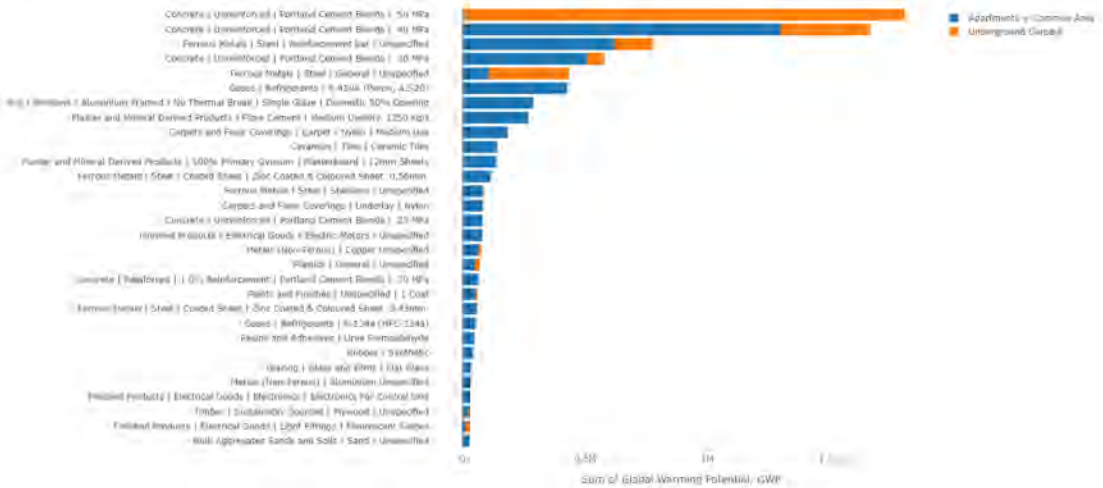
3.4 Renewable Energy

The design intent is to include around 40kW of solar panels at roof level for renewable energy generation. This system is expected to produce more than 50MWh of electricity annually and should be able to offset sufficient energy annually to cover the common areas and most of the commercial tenancies consumption. A 13kWhr battery will be provided to increase energy use on site with the potential to operate the building in island mode.

The provision of an embedded meter network means that the cost savings from the electricity can be shared between all owners, thereby helping to reduce strata costs as well as optimising the benefit of the solar system.

3.5 Embodied Energy

The proposed design will be targeting a reduction in upfront carbon through material selections, and design rationalisation. The image below shows the typical breakdown and embodied of different construction materials for apartment buildings over a project lifetime.



Assessment of similar style developments shows that concrete and steel make up the majority of the building's upfront carbon emissions. The design team will be reviewing the potential for the use of a post-tensioned slab, replacement of Portland cement and selection of sustainably sourced steel to assist in minimising this footprint.

In addition to concrete and steel, refrigerants can also play a major role in building embodied and upfront carbon. The mechanical design will seek to utilise R32 refrigerant in lieu of the more common blends, with systems aiming to be kept small and local to limit capacity and refrigerant in pipework.

3.6 Overall Performance

Overall, the project team are seeking to demonstrate at least a 40% performance improvement in operational energy and 10% water reduction against typical performance. Design features above will contribute to this target:

• Improved building envelope:	+1 Star NatHERS performance
• Efficient Services	10% Margin on Section J Compliance
• Low water use	WELS rated fittings and appliances
• Onsite Generation	~50MWh annually
• Tuning	Embedded network for all major uses
• Controls	Automated lighting and car park ventilation

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4. Climate Resilience

FCDS has undertaken a base review of the project and the potential likely impacts of climate change on the site, based on the following likely impacts of climate change in South West WA:

Variable	Current	Predicted	Expected Change	Possible Range
Annual Average Temperature (°C)	25.8°C	29.3°C	+3.5°C	28.4 – 30°C
Number of days over 35°C	28	63	+35	50-72
Annual Average Rainfall (mm)	851.7mm	698mm	-18%	536 – 809mm
Summer	40.5mm	38.5mm	-5%	27.9 – 55.1mm
Autumn	144.1mm	135.4mm	-6%	98 – 162.8mm
Winter	398.2mm	282.7mm	-29%	223 – 338.5mm
Spring	147.5mm	94.4mm	-36%	60.5 – 126.8mm
Annual Average Potential Evaporation	1800mm	1836mm	+2%	1818-1872mm
Annual Relative Humidity	55%	54.4%	-0.6%	53.7 – 55%

4.1 Risk Review

The development site is not considered to be at significant risk of climate impacts, as confirmed through the GBCA climate change risk assessment checklist:

Checklist	Criteria Response	Future Climate Exposure Reviewed?	Risk to the project identified?	Risk treatment identified?	Design / Operational Measure
Has the project area been previously impacted by extreme climate events?	No	Yes	No	No	NA
Is the project located in a cyclone zone?	No	Yes	No	No	NA
Is the project located in or adjacent to a bushfire prone area?	No	Yes	No	No	NA
Is the project located in or adjacent to a flood prone area?	No	Yes	No	No	NA
Is the project located at or adjacent to the coastline or tidally influenced waterway?	Yes	Yes	No	No	NA
Will the project accommodate occupants vulnerable to the impacts of climate extremes?	No	Yes	No	No	Improved envelope. Onsite generation.

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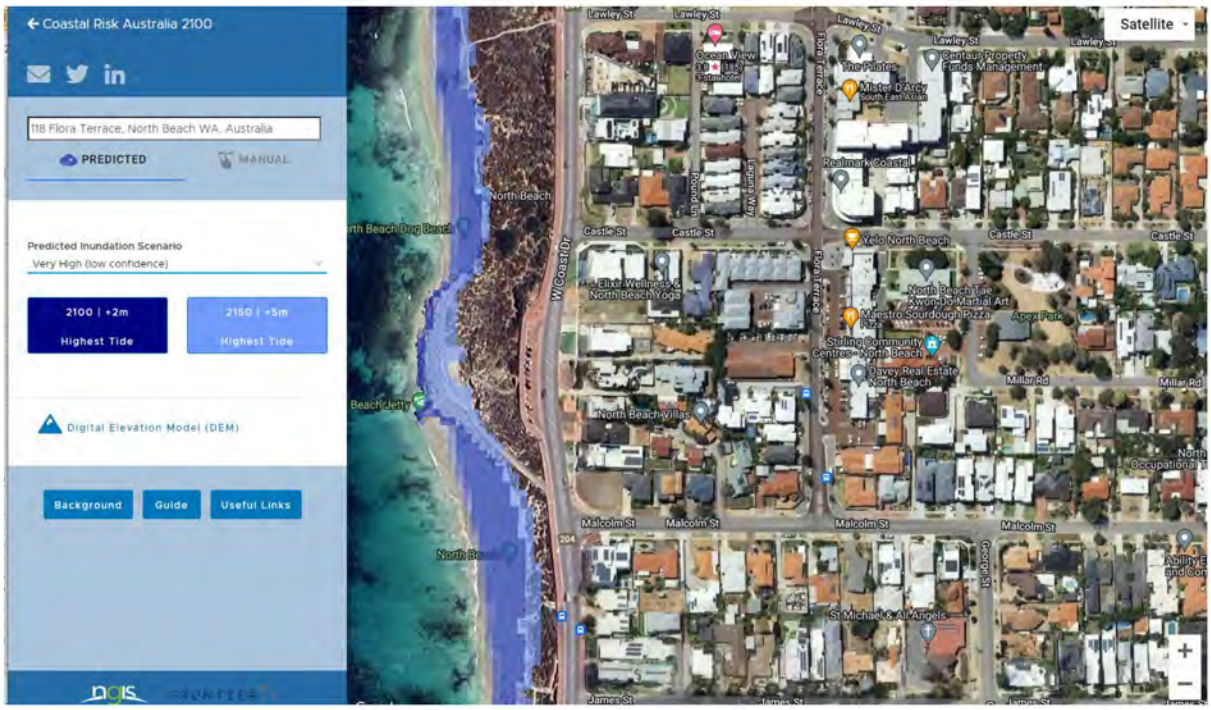
4.1.1 Flood Risk – Very High Inundation Scenario

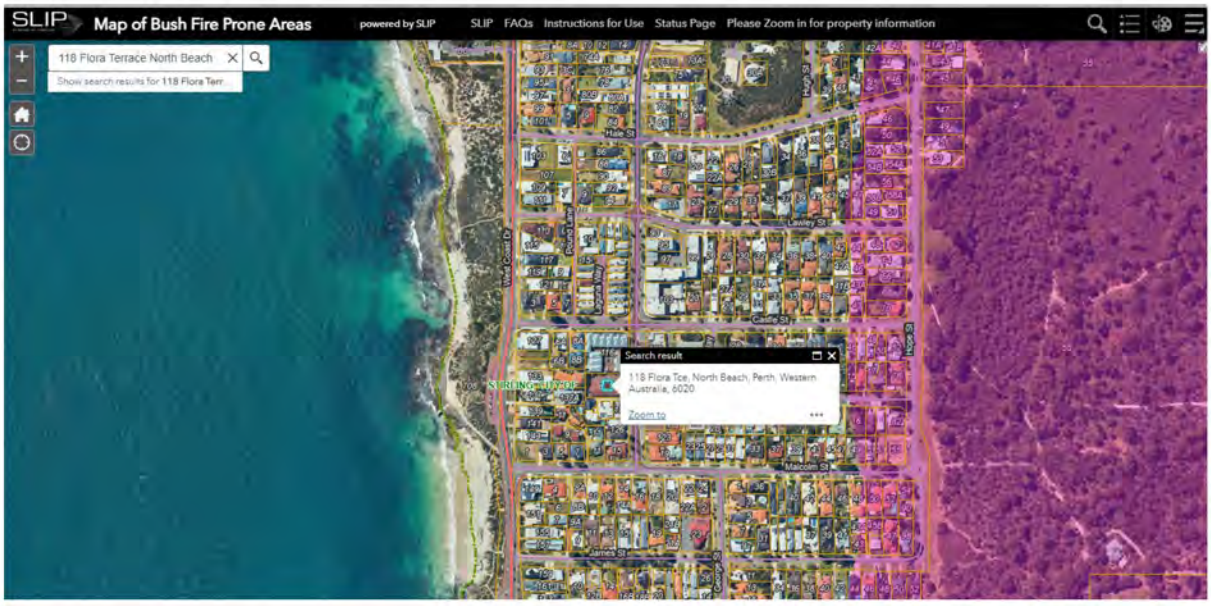
Coastal risk maps indicate that the site is not expected to be subjected to coastal flooding.



Above: Coastal Risk Australia

4.1.2 Bushfire Prone Areas

Bushfire zone maps show that the site is out of the bushfire prone zone, albeit will be subjected to smoke if bushfires occur in the adjacent reserve.



Above: Bushfire Prone Areas - DFES

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4.2 Design Response

Notwithstanding the low risk rating, the design team have included the following features to mitigate risks and provide an improved outcome for occupants and the local community:

Climate Change Impact	Risk	Proposed Response
Increased temperatures lead to increased bushfire risk and intensity.	Low due to current classification of site.	Provide dual aspect orientation for most apartments. Provide filters on air conditioning units to mitigate bushfire smoke infiltrating into apartments.
Rising sea levels and increased flood risk.	Very low.	Avoid key infrastructure construction below ground level. Ensure structure can adapt to changing water levels.
Reduced rainfall	Increasing requirement for irrigation, increased cost of scheme water.	Utilise smart irrigation, including moisture detection and prioritise drought tolerant planting. Utilise native planting where possible.
Increased temperatures lead to increased reliance on air conditioning.	Building is unable to provide comfortable environment for extended periods.	Provide high efficiency air conditioning systems with automatic controls. Upgrade building envelope in excess of BCA minimum requirements. Reduce urban heat island effect.
Increased temperatures lead to increased power demand.	Operating cost increases as electrical prices increase. Power security becomes questionable.	Good control systems and energy efficient design. Installation of solar photovoltaics for renewable generation.

Further specific design features are discussed in the following sections.

4.2.1 Water Efficient Fittings

Where provided, fittings and appliances will target high water efficiency, generally within 1 Star of the best available WELS rating for each fitting type:

Fixture Type	Minimum WELS rating	Maximum Flow Allowable
Taps	5 stars	4.5-6 L/min
Urinals	5 stars	1.0 L / Flush + Smart demand flush device
Toilets	4 stars	<3.5 L average flush <4.7L full flush, <3.2 half flush
Showers	3 stars	6.0 – 7.5 L/min
Clothes Washing Machines	4 stars	Size Dependent
Dishwashers	5 stars	Size Dependent

Low flow fittings save water, operational costs, carbon emissions and energy use when they utilise hot water.

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4.2.2 Native or Drought Tolerant Planting

The project includes deep soil planted area, as well as planting on structure as part of private balconies and terraces. The design team will be including water efficient planting and irrigations to target a 30% reduction in water use against Green Star benchmarks and to minimise operational costs and carbon emissions.

Building license documentation will include these elements.

4.2.3 Urban Heat Island Mitigation

The existing site condition is considered poor for urban heat island, with dark colours and limited planting:

Above: Current aerial view (Google Maps)

The project team intend to meet Green Star best practice guidelines for urban heat island by maintaining 75% of the site as either vegetation, shaded areas or elements with a 3-year SRI of 64 or greater.

Building license plans and finish selections will demonstrate this performance outcome.

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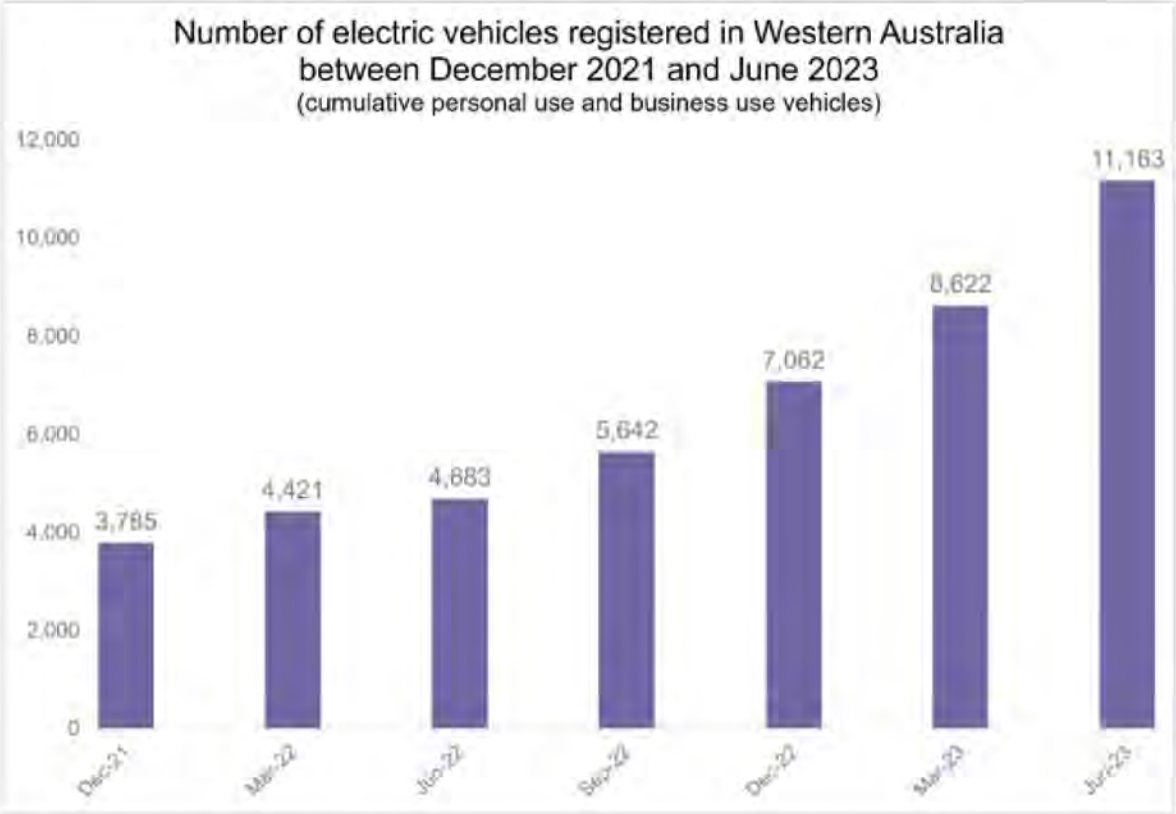
5. Sustainable Transport

Increasingly, Perth drivers are transitioning away from tradition Internal Combustion Engine vehicles – with the current rate of 6.6% of new vehicles (2023) set to be ~10% by 2025 and more than 50% in 2030 (https://www.watoday.com.au/politics/western-australia/future-planning-is-this-the-year-petrol-will-disappear-from-wa-20231218-p5esbe.html).

The graph below shows the uptake in electric vehicles since the end of 2021:



Source: Department of Transport data

Recognising this shift, the 118 Flora Terrace design will be seeking to facilitate alternate transport options, as described in the following sections.

5.1 Electric Vehicle Facilitation

The design will include a dedicated EV distribution board for the basement carpark, sized to cater the entire carpark if fully occupied by electric vehicles. The design will include key infrastructure provisions, including:

- Load management systems to deliver at least 12kWh per bay between 11PM and 7AM daily
- Space to allow for electricity metering, as part of the embedded network provision
- Cable containment consideration to provide chargers to all bays
- Potential for use of 7kW / 32A type two chargers
- Chargers for 10% of bays at opening

Electrical design documentation will show these provisions at building license stage.

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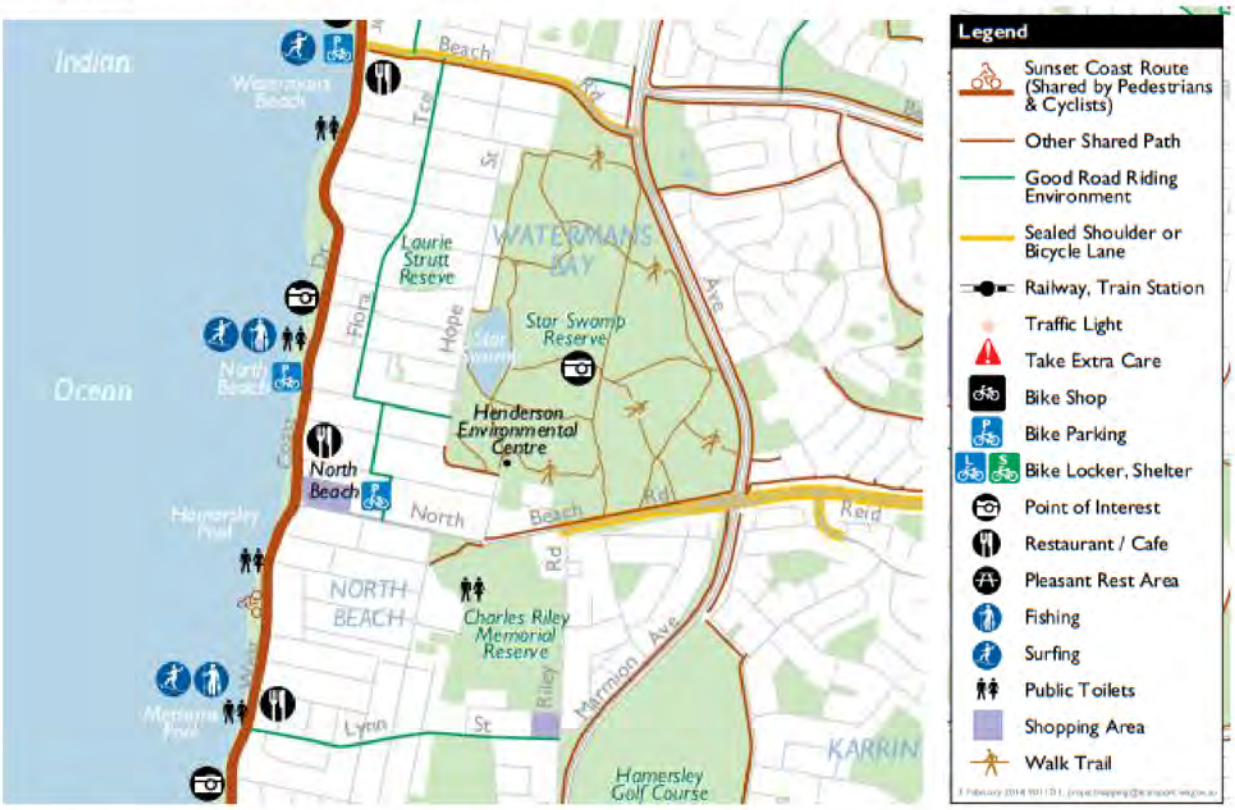
5.2 Active Transport

The designers will be seeking to encourage the use of active transport through the provision for bike parking for occupants and visitors.

Space at ground level will cater for commercial premises, with apartments having access to basement parking.

Connection with local pedestrian infrastructure will include paths linking to the Flora Terrace system – classified as a 'Good Riding Environment' on the Department of Transport's Northern Bike Route map and less than 100m from the Sunset Coast ride route:



Above: Department of Transport's Northern Bike Route map

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6. Feature Summary

Many of the features proposed above offer performance improvements across a range of themes. The following table outlines the proposed features and the demonstration pathway – aligning with national best practice benchmarks – selected for the project team.

Design Feature	Benchmark Performance	Verification Method	Healthy Living	Carbon Footprint	Climate Resilience	Sustainable Transport
Bike Parking	1 visitor bay + apartment bike racks	Design documents	X	X		X
EV Facilitation	Dedicated EV DB, Capacity to service 100% of bays, 10% of bays fitted with chargers at opening.	Design documents		X		X
Efficient Envelope	NatHERS – 7.5 Star Average (+1.5 Star to NCC 2024)	Building License Report	X	X	X	
Native Planting	Demonstrate 30% reduction in water use against Green Star Standards	Report at Building License		X	X	
Fossil Fuel Free Site	No fossil fuels for domestic hot water, cooking or heating	Design documents		X	X	
Renewable Energy	40kW Solar PV Panels – sufficient to offset energy consumption in common and commercial areas	Performance Specification		X	X	
Urban Heat Island	Achieve 75% of site with a 3 year SRI of 64 or greater	Design documents	X	X	X	
Embedded Meter Network	Provide electrical, cold water and hot water meters, with central reading system.	Design documents		X	X	X
Waste Plan	Waste store to allow for three streams	Design documents		X		
Embodied Energy	Target 20% reduction in life cycle footprint, as demonstrated with peer reviewed LCA report.	LCA Report at Building License		X	X	
Water Efficiency	WELS rated fittings – Within 1 Star of best available	Design documents		X	X	
Low Toxicity Materials	Utilise low VOC and formaldehyde internal finishes, adhesives and sealants.	Material review at Building License	X			
Natural Ventilation	Comply with AS 1668.4 for natural ventilation to all apartments	Report at Building License	X	X	X	
Operational Footprint	40% reduction in operational energy through envelope, services and onsite generation.	Report at Building License		X	X	

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Version: 1, Version Date: 15/07/2024

Attachment 7c - Transport Impact Statement prepared by ptg consulting received 15 July 2024

PTG/00112

Transport Impact Statement
118 Flora Terrace, North Beach

27th June 2024 | Revision B

Prepared for Space Collective Architects

www.ptgconsulting.com.au

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REPORT DETAILS

Unique Document Identification

	Information
Document Title	Transport Impact Statement – 118 Flora Terrace, North Beach
Project Number	PTG/00102
Document ID	Rev B
Client	Space Collective Architects

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Revision Details

Revision No.	Date	Comments
Rev A	26/6/24	For Issue
Rev B	27/6/24	For Issue

Document Approval

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Director – Transport Advisory

1 INTRODUCTION

1.1 Background

PTG Consulting WA (PTG) has been commissioned by Space Collective Architects to prepare a Traffic Impact Statement (TIS) for a proposed mixed-use development located at 118 Flora Terrace, North Beach.

This TIS report has been prepared in accordance with the Western Australian Planning Commission (WAPC) Transport Assessment Guidelines for Developments: Volume 4 – Individual Developments (2016) and the Transport Impact Statement (TIS) Checklist is included in Appendix A.

This report aims to assess the operations of Site internally, with a focus on access and accessibility.

This report also outlines the requirements and opportunities associated with traffic and transport within the development, referencing relevant Council and WAPC policies and guidelines as well as best-practice planning within Western Australia.

2 PROPOSED DEVELOPMENT

2.1 Existing Land Use

The Site is located at 118 Flora Terrace, North Beach within the City of Stirling, WA. Refer to **Figure 1** for the Site location.

Figure 1 Site Location

Source: Google Maps

2.2 Context with Surrounds

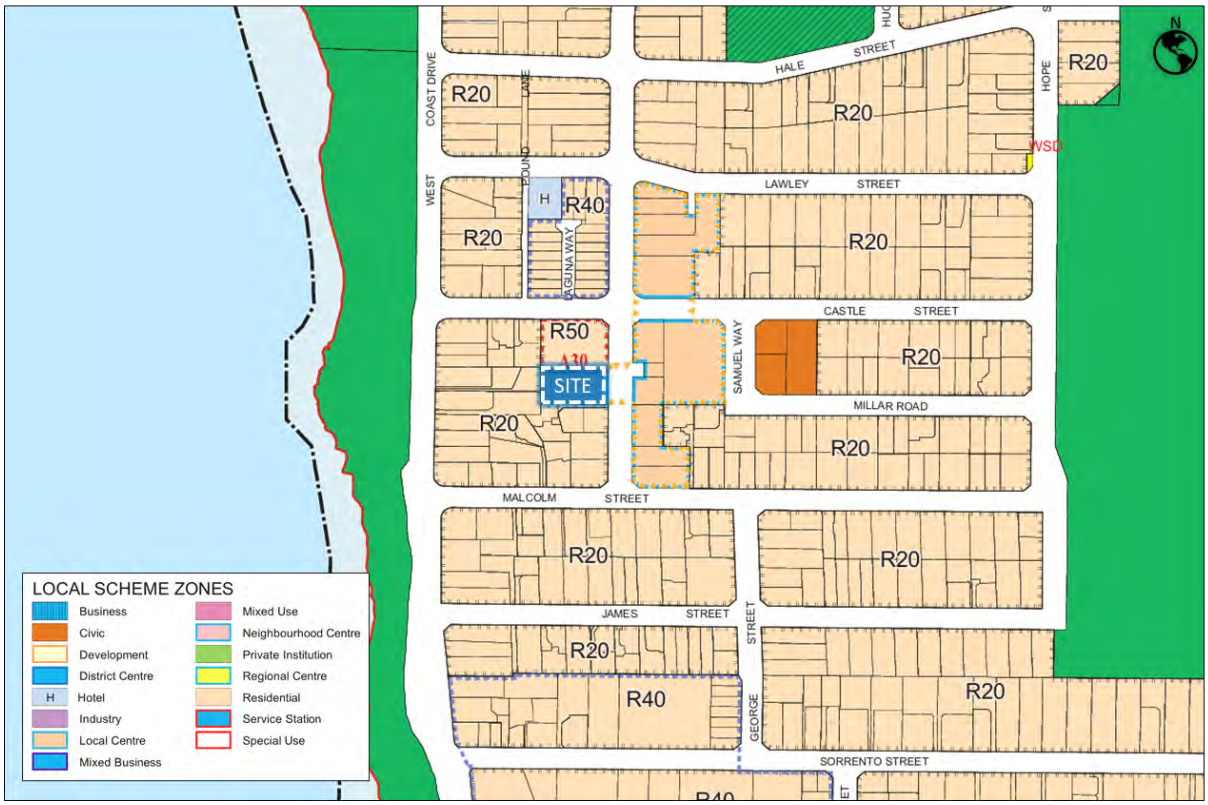
The major attractors and generators within 800m of the subject site include:

- North Beach (approximately 300m walking distance, to the west of the Site)
- Star Swamp Reserve (approximately 400m walking distance, to the east of the Site)

In addition to the above, a number of small businesses are located on the opposite side of Flora Terrace.

The Site, along with its surrounding lots, is classified under the zoning designation of Local Centre as shown in **Figure 2.**

Figure 2 Land Use Zoning within the Surrounding Area of the Site



Source: City of Stirling Local Planning Scheme No. 3

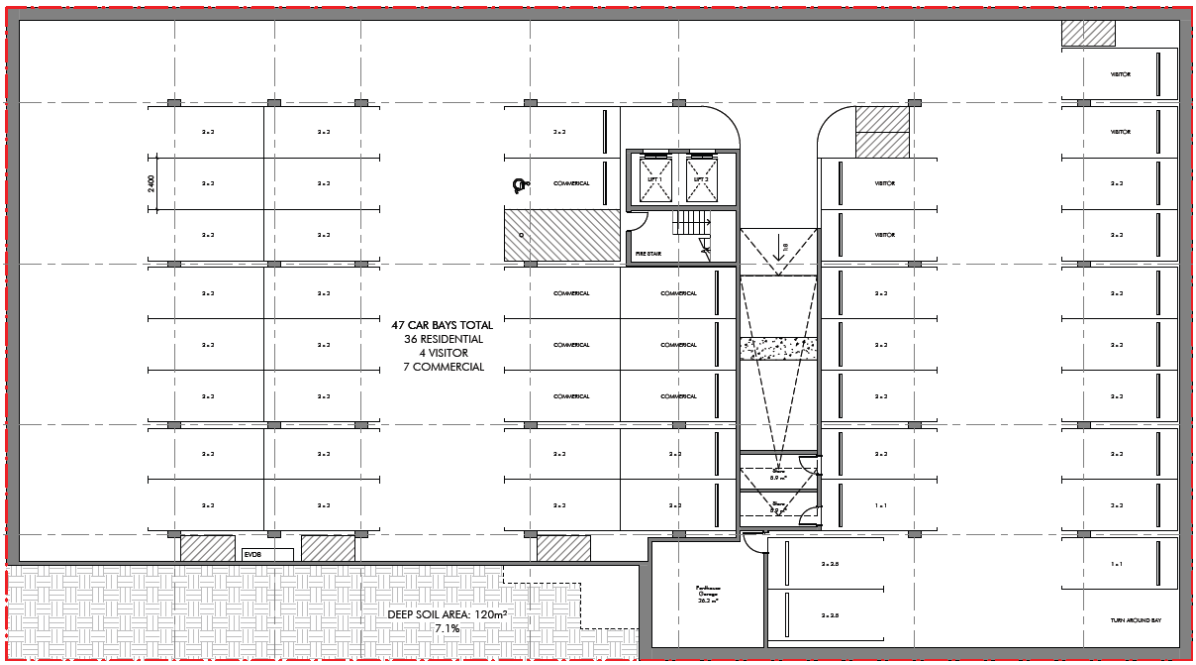
2.3 Development Land Use

The development is a multi-storey building that will include the following components:

> 20 residential apartments (including 2 1x1 apartments)
> Ground-floor office tenancy of approximately 245.7m^2
> Basement car-park that will provide parking spaces for 47 cars, and 6 motorcycles

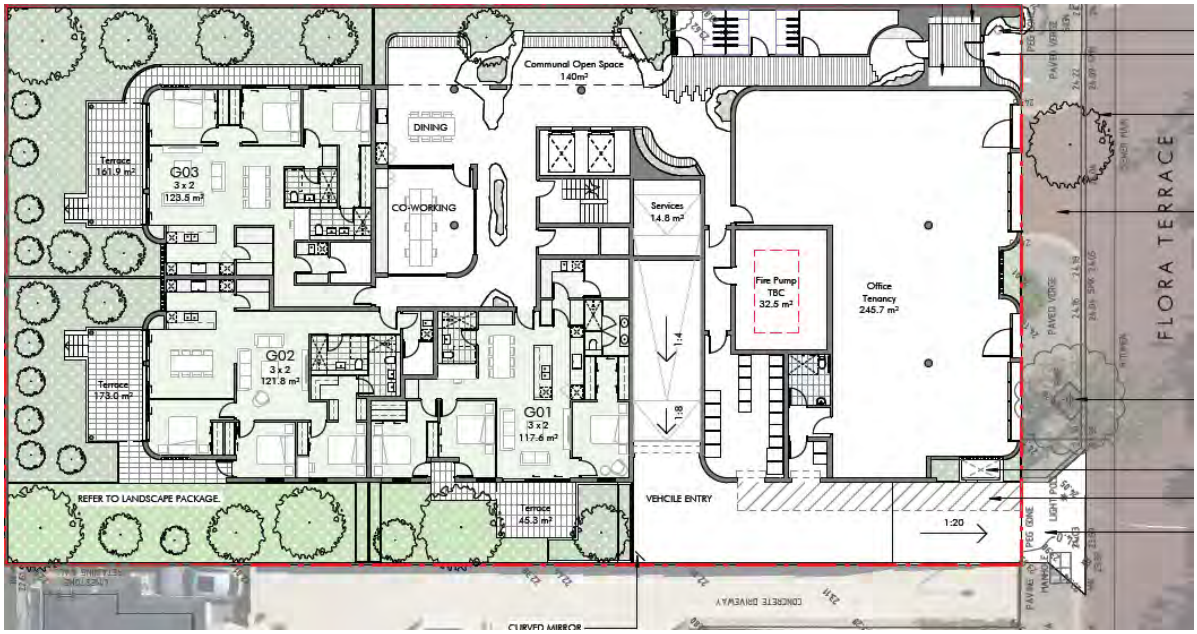
The Basement, Ground Floor and Level 1 are site plans are shown in **Figure 3** to **Figure 5**, while high-resolution site plans are included in **Appendix B**.

Figure 3 Proposed Layout – Basement



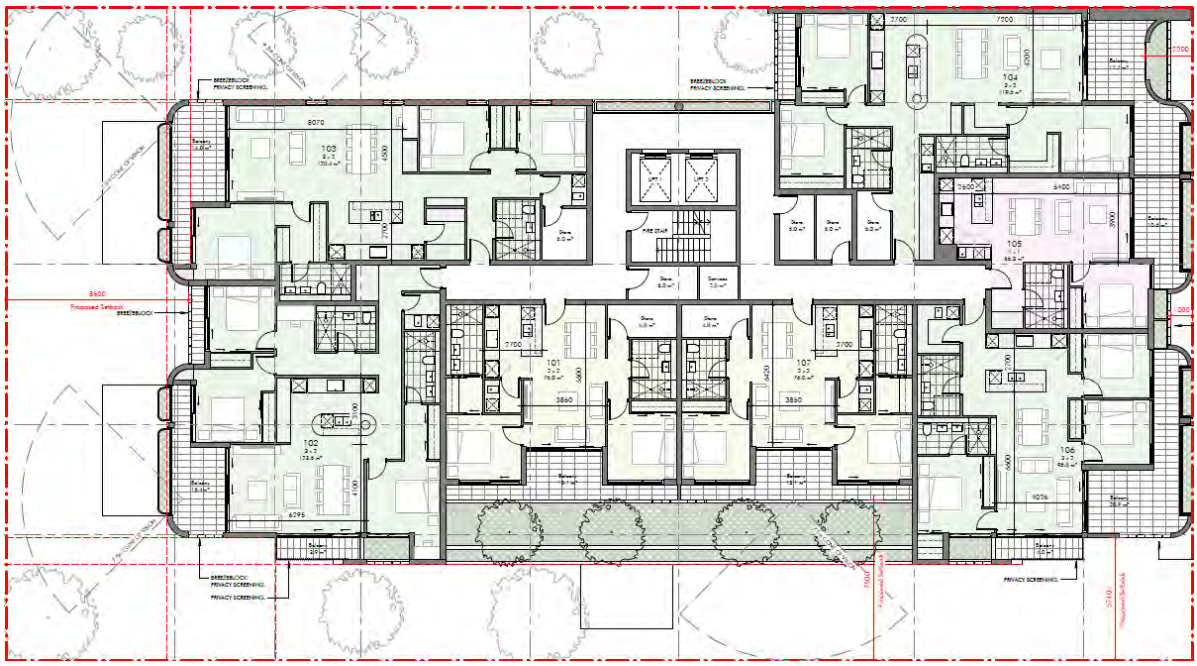
Source: Space Collective Architects

Figure 4 Proposed Layout – Ground Floor



Source: Space Collective Architects

Figure 5 Proposed Layout – Level 1



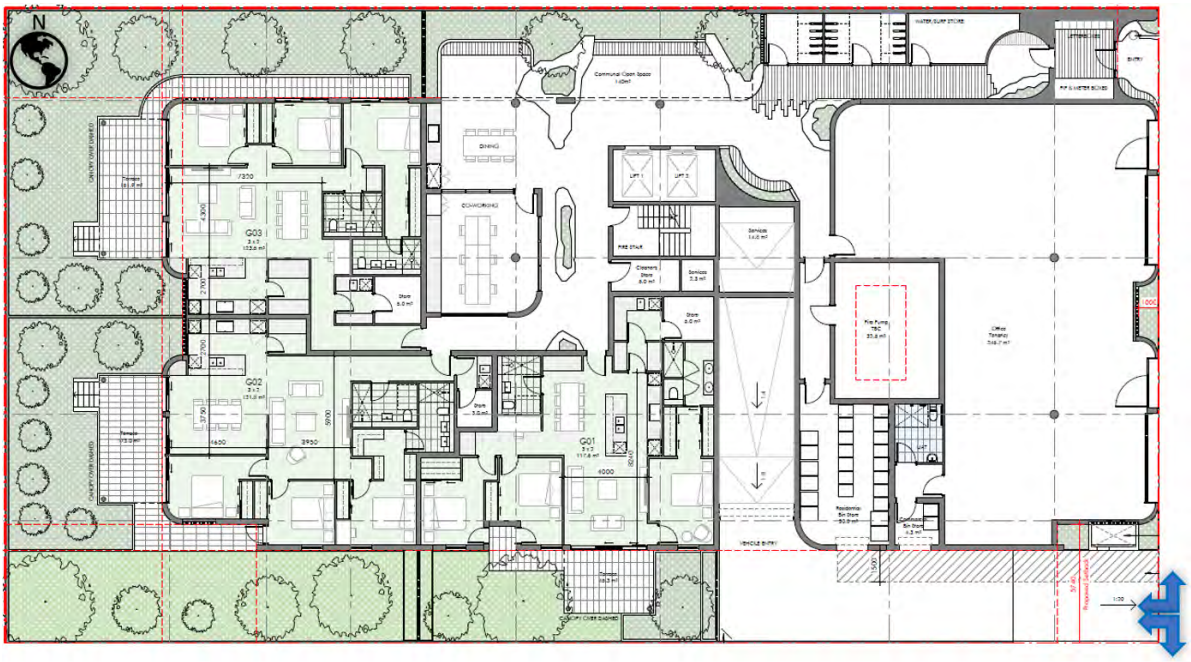
Source: Space Collective Architects

3 VEHICULAR ACCESS AND PARKING

3.1 Access Arrangements

Vehicles will enter the Site via a proposed cross-over on Flora Terrace, as shown in **Figure 6.**

Figure 6 Proposed Site Access



Source: Space Collective Architects

Due to the proposed width of 4.5m for the driveway, the driveway is not sufficiently wide to accommodate 2-way traffic. As such, traffic management is required to ensure the inbound and outbound traffic movements do not conflict.

The ideal form of traffic management for this access arrangement scenario would be a traffic light type system designed and installed by car park management specialists. To ensure minimal impacts on the public road network, it is suggested that a system that has a resting green for inbound movements be adopted. During the AM peak period, vehicles leaving the site would trigger sensors that would illuminate signals or signs warning inbound vehicles of another vehicle exiting. Given the low number of inbound trips typically observed during an AM peak period, this should lead to minimal inconvenience to the general traffic. During the PM peak period, the majority of trips will be inbound vehicles who will have mostly unimpeded access for the majority due to the resting inbound priority. Sensors would activate warning lights or signs that a vehicle is inbound before providing opportunity for drivers wishing to leave the site. This way, any minor queueing would occur within the site.

3.2 Public, Private, Disabled Parking Set-Down & Pick-Up

As outlined in **Table 1**, the proposed development requires a total parking supply of 40 car parking bays based on the City of Stirling Local Planning Scheme statutory car parking requirements. As the basement car park will provide 47 parking bays, this represents a net surplus of 7 bays. It is also noted that the Site is located in close proximity to adjacent on-street and off-street parking facilities, as well as close proximity to public transport services.

Table 1 Car Parking Requirements and Supply

Proposed Land Use	Yield	Car Parking Requirements	Parking Bays Required	Parking Bays Provided	Parking Supply Surplus
Residential (1 bedroom)	2 units	1 per unit[1]	2	2	-
Residential (2+ bedrooms)	18 units	1.25 per unit[1]	23 (rounded up)	34	+11
Residential (visitors)	20 units	1 per 4 units up to 12, then 1 bay per 8 units above 13 units[1]	5 (rounded up)	4	-1
Office	247.5m^2	1 per 25m^2 GFA[2]	10 (rounded up)	7 (including 1 ACROD bay)	-3
TOTAL			40 (rounded up)	47	+7

[1]: source: Volume 2 Residential Design Codes

[2]: source: 6.7 Parking and Access – City of Stirling Local Planning Scheme No. 3

3.2.1 Swept Path

Swept path of the car park entry and circulation, as well as parking manoeuvres in/out of selected bays, was undertaken for B85 vehicles.

The swept paths for the ground level driveway and basement ramp is shown in **Figure 7**, while the swept paths for the basement car park are shown in **Figure 8**.

High-resolution swept path plans are included in Appendix C.

Figure 7 B85 Swept Paths for Ground Level Driveway and Basement Ramp

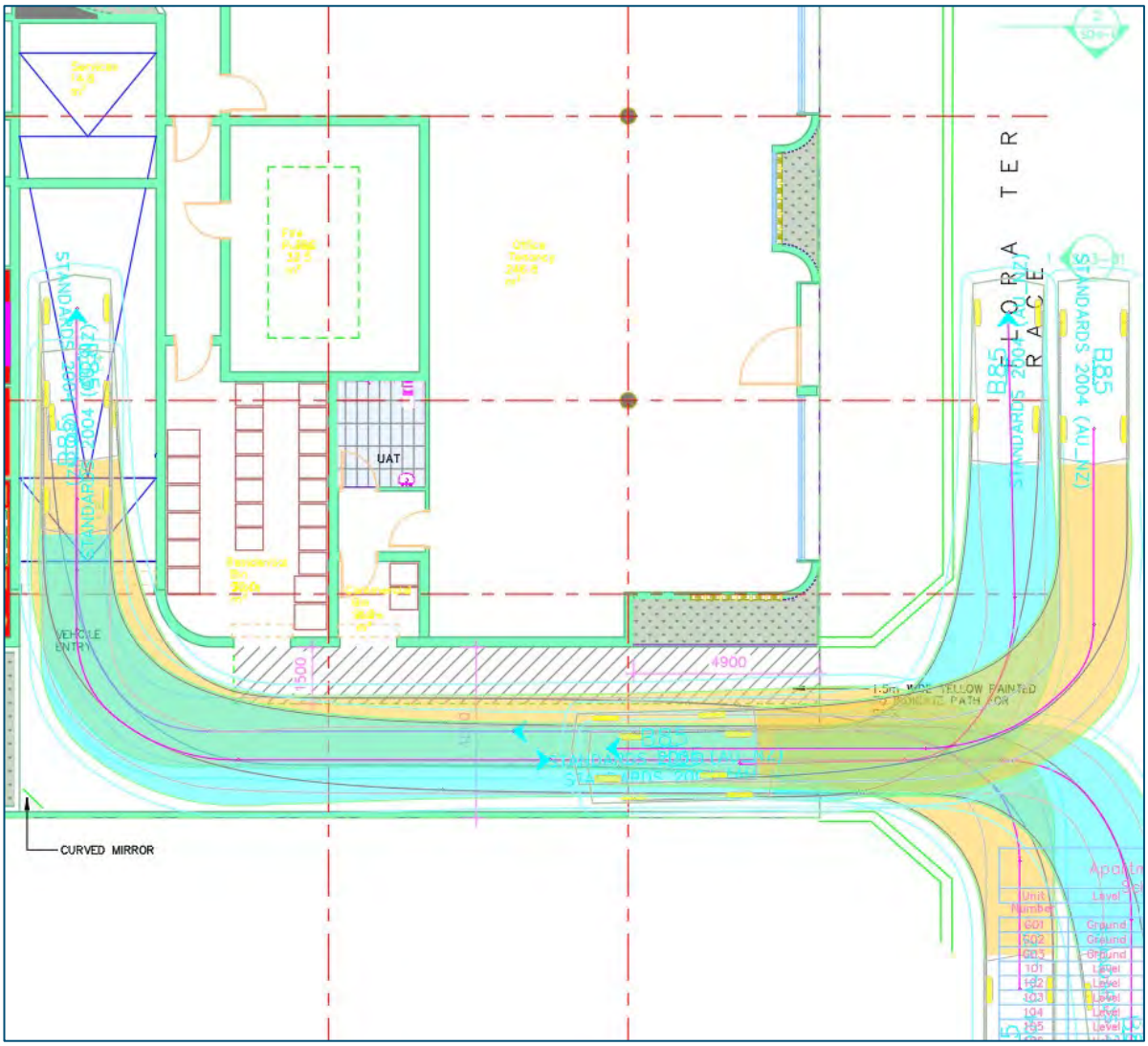


Figure 8 B85 Swept Paths for Basement Car Park

4 SERVICE/DELIVERY VEHICLES (NON-RESIDENTIAL)

4.1 Loading Facilities

Any deliveries to the Office Tenancy are expected to be of relative small nature and therefore limited to van deliveries. These vehicles will be able to park in the parking bays allocated to the office tenancy, where any loading and unloading activities will occur.

5 SERVICE VEHICLES (RESIDENTIAL)

As described in the Waste Management Plan (WMP) Report, residents will be required to move their bins from the Bin Storage area to the Flora Terrace verge, where they will be picked up by a waste collection vehicle.

1.5m wide pavement markings will be provided on the driveway, between the Bin Storage areas and the driveway, to reduce the risk of vehicles driving on this area when the residents are transferring their bins between the bin storage areas and the verge.

6 HOURS OF OPERATION (NON-RESIDENTIAL)

The office tenancy is expected to operate during regular business hours (approximately 8:00 – 18:00), as well as limited opening hours during Saturdays.

7 TRAFFIC VOLUMES

7.1 Daily / Peak Traffic Volumes

7.1.1 Existing Traffic Volumes

As shown in **Figure 9**, no traffic data is available for Flora Terrace or the adjacent roads.

Figure 9 Traffic Data Locations on Traffic Map

7.1.2 Development Trip Generation

The development trip generation rates are summarised in **Table 2**, while the directional distributions are summarised in **Table 3** and the total trip generation volumes are summarised in **Table 4**.

Table 2 Development Trip Generation Rates

Land Use	Source	Daily Rate	AM Peak Rate	PM Peak Rate
Mid-rise Apartment	ITE (category 221)	4.54 trips per apartment	0.35 trips per apartment	0.39 trips per apartment
Office	ITE (category 715)	14.07 trips per 100m² GFA	1.99 trips per 100m² GFA	1.89 trips per 100m² GFA

Table 3 Directional Distribution

Land Use	Daily		AM Peak		PM Peak	
	In	Out	In	Out	In	Out
Mid-rise Apartment	50%	50%	26%	74%	60%	40%
Office	50%	50%	89%	11%	15%	85%

Table 4 Total Development Trip Generation

Land Use	Yield	Daily		AM Peak		PM Peak	
		In	Out	In	Out	In	Out
Mid-rise Apartment	20	45.4	45.4	1.8	5.2	4.7	3.1
Office	245.7m²	17.3	17.3	4.4	0.5	0.7	3.9
Total		62.7	62.7	6.2	5.7	5.4	7.0
		125		12		12	

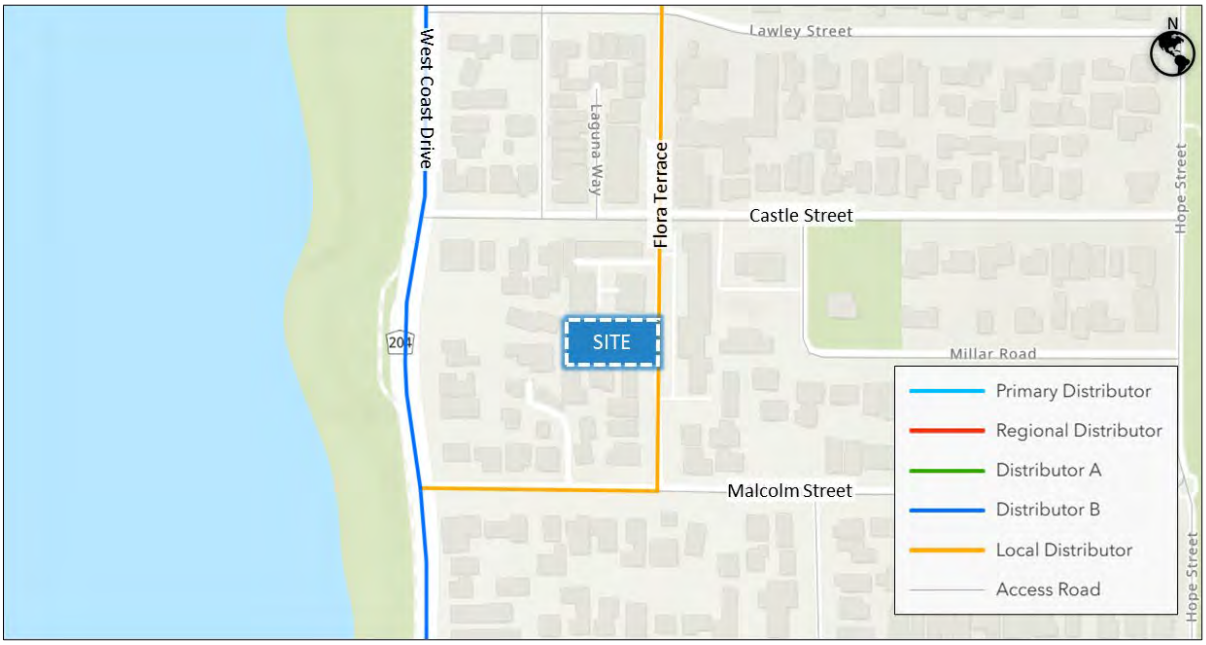
7.2 Types of Vehicles

Given the intended land use, it is anticipated that the primary vehicle type for the development will be private cars, with occasional deliveries to the office tenancy to be undertaken by delivery vans.

8 TRAFFIC MANAGEMENT ON FRONTAGE STREETS

The Site fronts onto Flora Terrace. **Figure 10** illustrates the surrounding area's road hierarchy, while **Table 2** provides a summary of the characteristics of the surrounding road network.

Figure 10 Road Hierarchy



Source: MRWA Road Information Mapping

Table 5 Road Network Classification

Road Name	Hierarchy	Lanes	Footpaths	Width	Speed Limit
West Coast Drive	Distributor B	2	2	11 m	50 km/h
Flora Terrace	Local Distributor	2	2	6.5 m	40 km/h
Castle Street	Access Road	2	2	10 m	50 km/h
Malcolm Street	Access Road	2	2	6 m	50 km/h

Source: MRWA Road Information Mapping

Access to/from the Site will only be via the driveway connecting the basement car park to Flora Terrace. Vehicles will only enter and exit the Site in forward-gear.

9 PUBLIC TRANSPORT ACCESS

9.1 Nearest Bus / Train Routes

The Site is serviced by Bus Route 423, which runs from Stirling Station to Warwick Station via Karrinyup Bus Station & Hillarys Boat Harbour, as illustrated in **Figure 11.**

Figure 11 Public Transport

Source: Google Maps

9.2 Nearest Bus Stops

The nearest bus stops to the site are shown in **Figure 11** and are described as follows:

- Stop No. 14320 – West Coast Dr After Malcolm St
- Stop No. 18862 – West Coast Dr After James St
- Stop No. 18910 – Flora Tce Before Malcolm St
- Stop No. 18911 – Flora Tce After Malcolm St

The bus service frequencies range between 10 - 30 minutes during the AM and PM peak hours (depending on the direction), with service frequencies during the non-peak periods ranging from 30 – 60 minutes.

9.3 Pedestrian / Cycle Links to Bus Stops

Figure 12 shows the pedestrian/cycle links between the Site and the bus stops.

Figure 12 Path to Bus Stops

Source: Google Maps

9.4 Future Public Transport Facilities

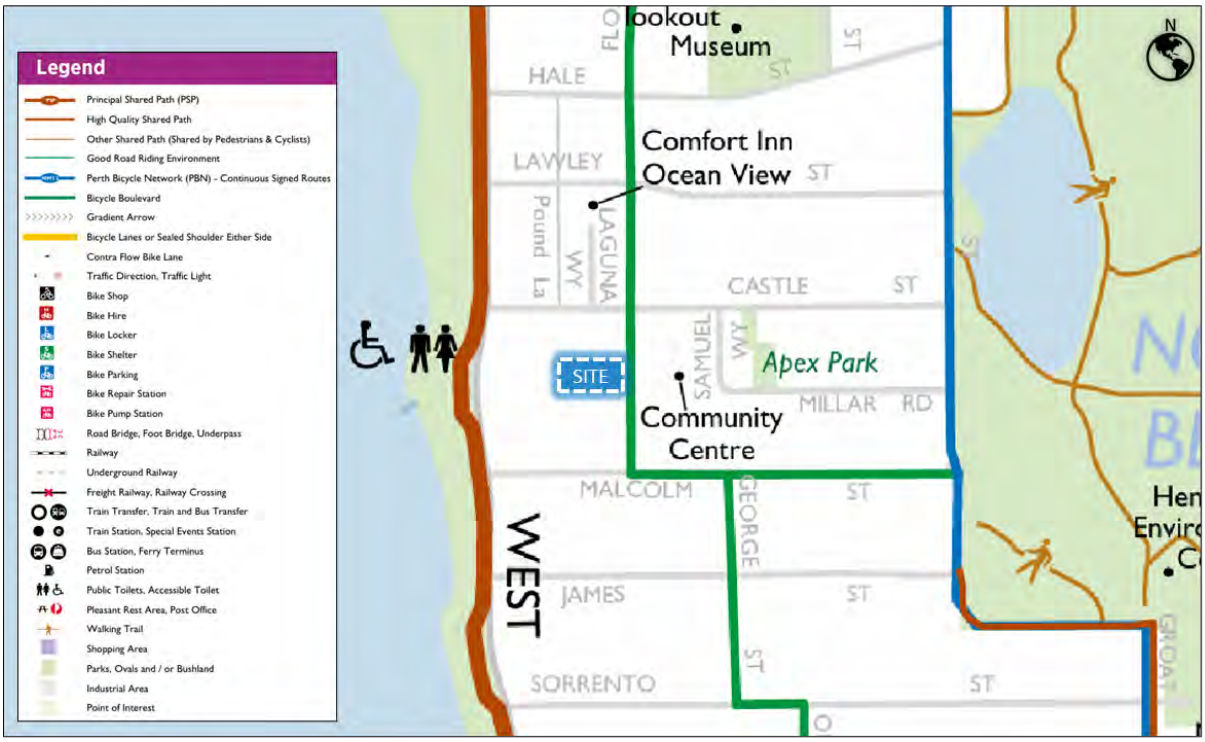
PTG is not aware of any proposed changes to the public transport services or facilities.

10 PEDESTRIAN AND CYCLE ACCESS FACILITIES

10.1 Existing Pedestrian / Cycling Network

Figure 13 shows the pedestrian/cycle networks within the surrounding area of the Site. A High-Quality Shared Path is provided along West Coast Drive, while both Flora Terrace and Malcolm Street are considered to have "*Good Road Riding Environment*".

Figure 13 Existing Pedestrian / Cycling Network



Source: Joondalup and Stirling Comprehensive Bike Map

10.2 Future Pedestrian / Cycling Network

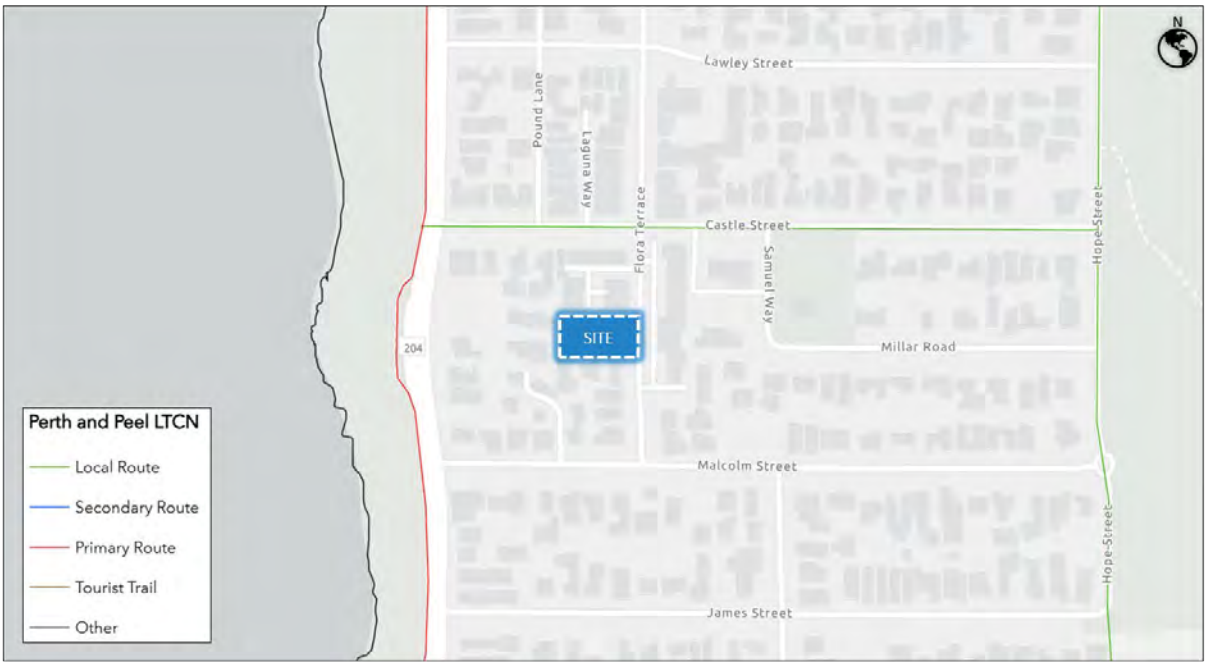
The Long-Term Cycle Network (LTCN) for Perth designates West Coast Drive as one of the Primary Routes, while Castle Street will be a Local Route.

These routes are defined as:

- Primary routes are high demand corridors connecting major destinations and are the backbone of cycle networks. Primary routes are often located next to major roads and railways.
- Local routes experience a lower level of demand than primary and secondary routes, and provide access to other routes, local amenities and recreational spaces.

The LTCN for the immediate surrounds of the Site is shown in **Figure 14**.

Figure 14 Long Term Cycle Network Plan



Source: Department of Transport Long Term Cycle Network for Perth and Peel

11 SITE SPECIFIC ISSUES

N/A.

12 SAFETY ISSUES

As noted in Section 3.1, a traffic management system will be required to facilitate inbound and outbound traffic movements without conflicts. A traffic light type system is recommended for this purpose.

As noted in Section 5, 1.5m wide pavement markings will be provided on the driveway, between the Bin Storage areas and the driveway, to reduce the risk of vehicles driving on this area when the residents are transferring their bins between the bin storage areas and the verge.

13 SUMMARY AND CONCLUSIONS

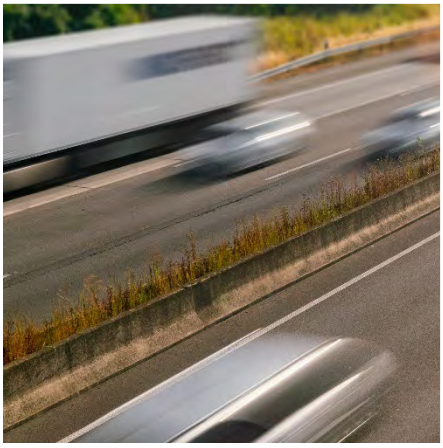
This report has been prepared in accordance with the Western Australian Planning Commission (WAPC) Transport Assessment Guidelines for Developments: Volume 4 – Individual Developments (2016); the checklist is included at Appendix A.

The following conclusions can be drawn from this TIS:

- The predicted traffic increase from the development is expected to be minimal.
- Public transportation services to Stirling Station and Warwick Station are available in close proximity to the Site.
- Good pedestrian and bicycle connections are located in close proximity to the Site.
- A traffic management system will be required to the facilitate inbound and outbound traffic movements without conflicts.
    - A traffic light type system is recommended for this purpose.
- The proposed parking supply represents a net surplus of 7 bay when compared to the statutory requirements.
- Due to the nature of the development, it is considered that any impact on road safety would be negligible.

Appendix A

WAPC CHECKLIST FOR INDIVIDUAL DEVELOPMENT - TRANSPORT IMPACT STATEMENT

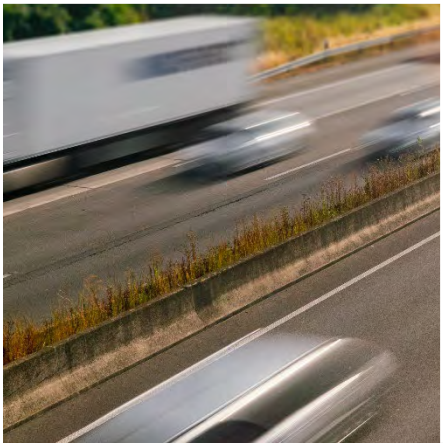


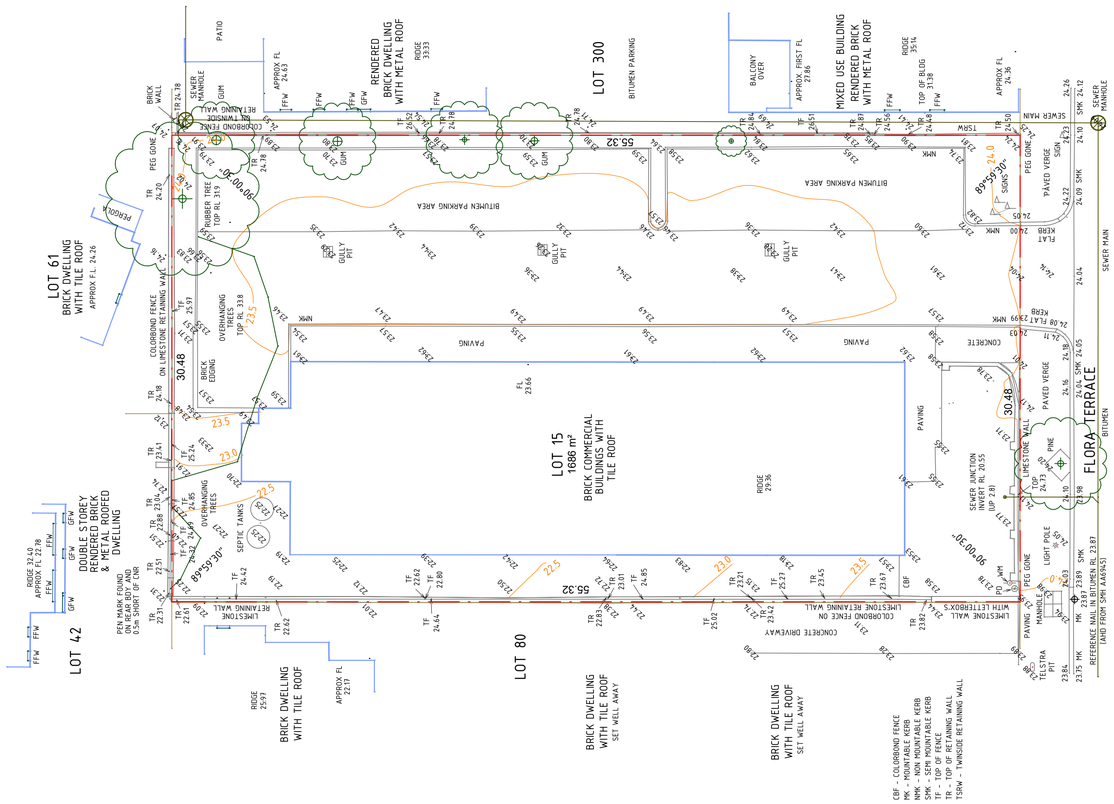
APPENDIX A – WAPC CHECKLIST

Item	Status	Comments/Proposal
Proposed development	Section 2	
proposed land use	Section 2	
existing land uses	Section 2	
context with surrounds	Section 2	
Vehicular access and parking	Section 3	
access arrangements	Section 3	
public, private, disabled parking set down / pick up	Section 3	
Service vehicles (non-residential)	Section 4	
access arrangements	Section 4	
on/off-site loading facilities	Section 4	
Service vehicles (residential)	Section 5	
Rubbish collection and emergency vehicle access	Section 5	
Hours of operation (non-residential only)	Section 6	
Traffic volumes	Section 7	
daily or peak traffic volumes	Section 7	
type of vehicles (e.g. cars, trucks)	Section 7	
Traffic management on frontage streets	Section 8	
Public transport access	Section 9	
nearest bus/train routes	Section 9	
nearest bus stops/train stations	Section 9	
pedestrian/cycle links to bus stops/train station	Section 9	
Pedestrian access/facilities	Section 10	
existing pedestrian facilities within the development (if any)	Section 10	
proposed pedestrian facilities within development	Section 10	
existing pedestrian facilities on surrounding roads	Section 10	
proposals to improve pedestrian access	NA	
Cycle access/facilities	Section 10	
existing cycle facilities within the development (if any)	Section 10	
proposed cycle facilities within the development	N/A	
existing cycle facilities on surrounding roads	Section 10	
proposals to improve cycle access	N/A	
Site specific issues	Section 11	
Safety issues	Section 12	
identify issues	N/A	
remedial measures	N/A	

Appendix B

Site Plans





Flora Residences
118 Flora Terrace, North Beach

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SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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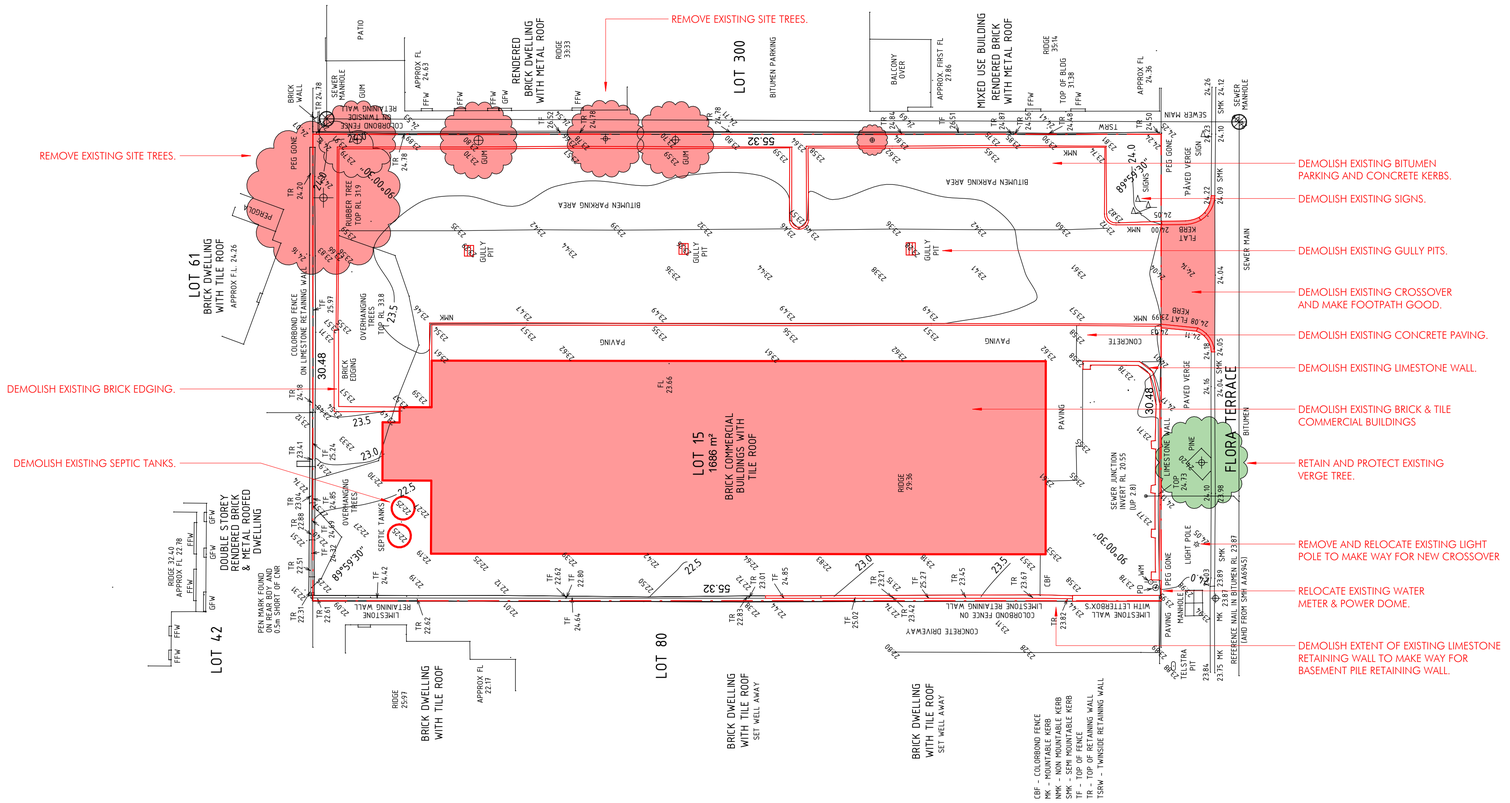

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SCALE	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
1 : 200 @A1 (1:200 (A3))	27.06.24	DEMOLITION PLAN PROJECT PHASE: DA	2401	SD1-01	A

Flora Residences
118 Flora Terrace, North Beach

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SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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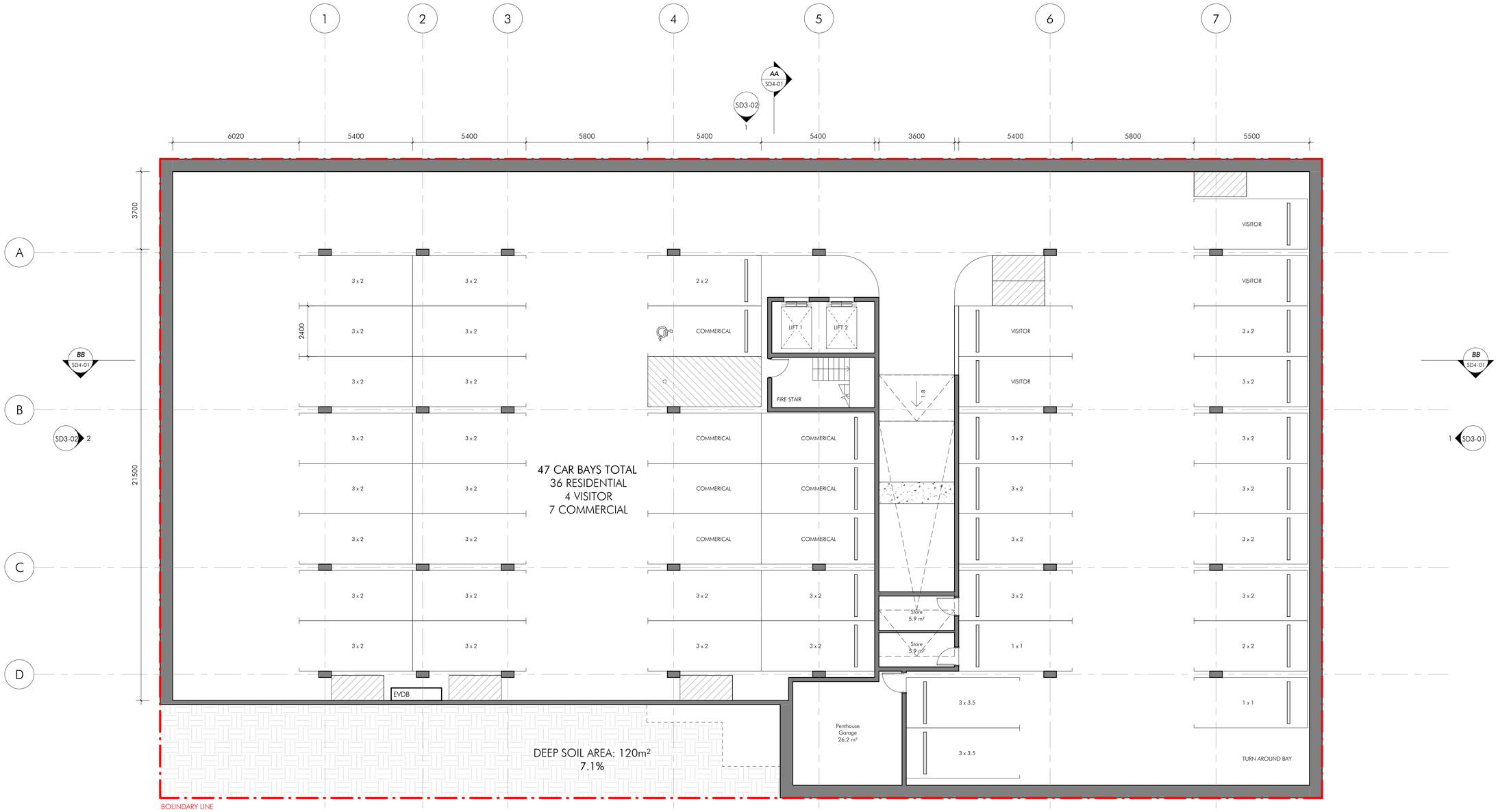

BASEMENT

Parking Schedule	
Type Comments	Count
ACROD Bay	1
Car Bay - 2400 x 5400	34
Car Bay - Tandem	12
Motorcycle Bay	6

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118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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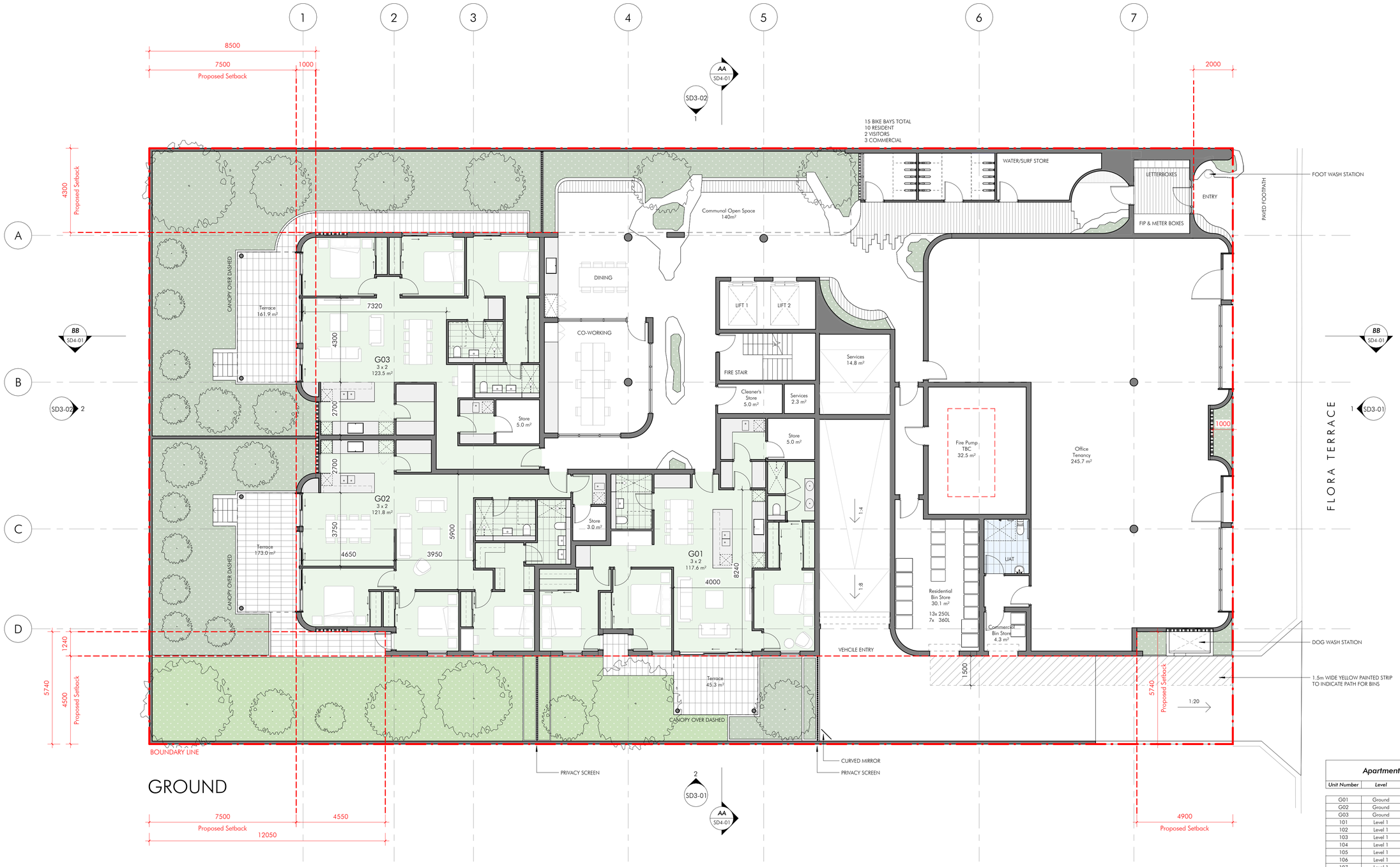

Apartment Area Schedule

Unit Number	Level	Layout	Internal Area
G01	Ground	3 x 2	117.6 m²
G02	Ground	3 x 2	121.8 m²
G03	Ground	3 x 2	123.5 m²
101	Level 1	2 x 2	76.0 m²
102	Level 1	3 x 2	123.5 m²
103	Level 1	3 x 2	128.4 m²
104	Level 1	3 x 2	119.5 m²
105	Level 1	1 x 1	56.3 m²
106	Level 1	3 x 2	95.8 m²
107	Level 1	2 x 2	76.0 m²
201	Level 2	3 x 2	149.5 m²
202	Level 2	3 x 2	130.0 m²
203	Level 2	3 x 2	128.3 m²
204	Level 2	3 x 2	119.5 m²
205	Level 2	1 x 1	56.3 m²
206	Level 2	3 x 2	100.1 m²
301	Level 3	3 x 2	130.5 m²
302	Level 3	3 x 2	153.7 m²
303	Level 3	3 x 2	142.3 m²
401	Level 4	3 x 3.5	255.4 m²
Total Units: 20			2,404.0 m²

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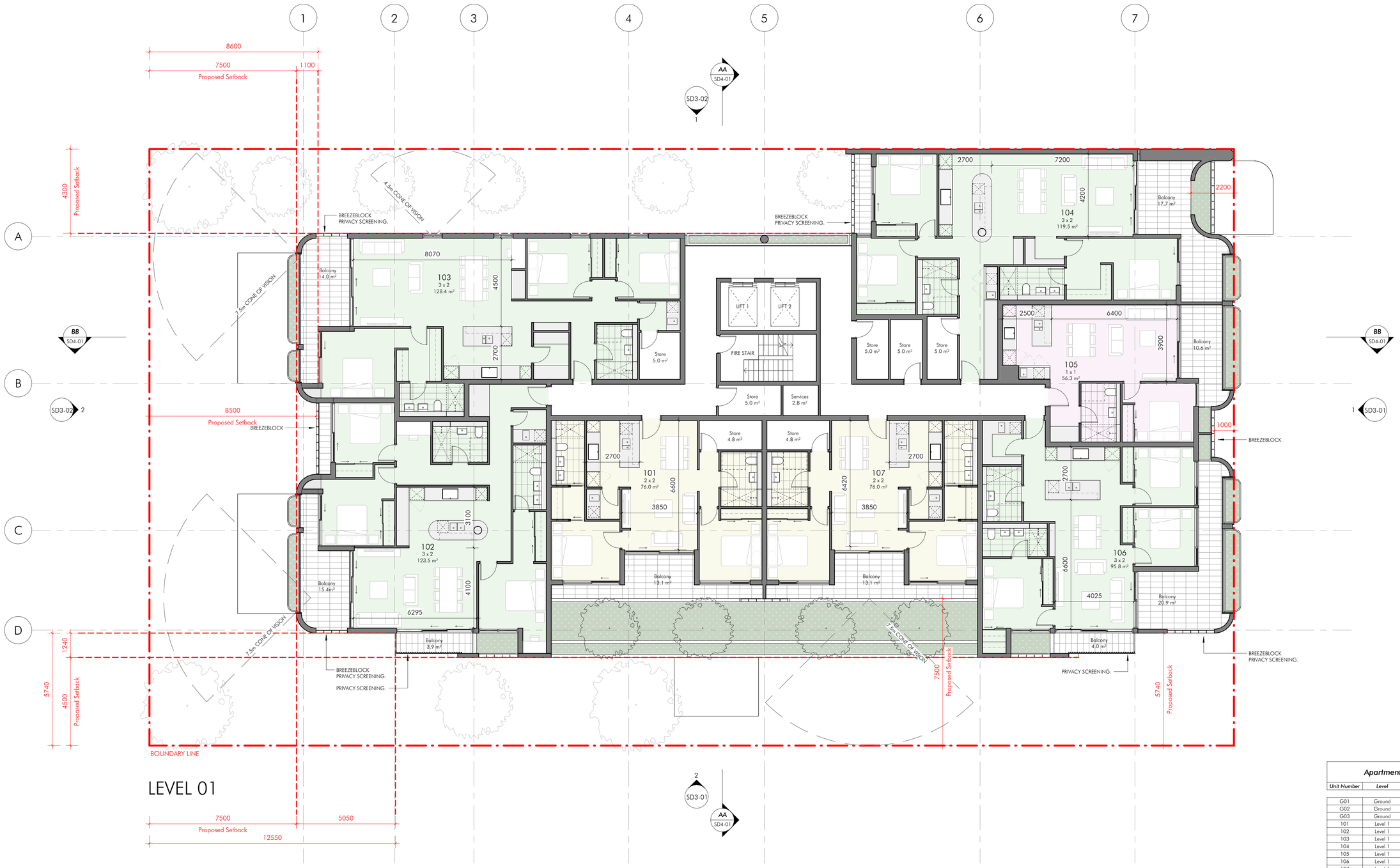
Flora Residences
118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
1 : 100 @A1 1:200 (A3) 0 1 2 3 4 5 m		27.06.24	GROUND FLOOR PLAN PROJECT PHASE DA	2401	SD2-01	C



LEVEL 01

Apartment Area Schedule

Unit Number	Level	Layout	Internal Area
G01	Ground	3 x 2	117.6 m²
G02	Ground	3 x 2	121.8 m²
G03	Ground	3 x 2	123.5 m²
101	Level 1	2 x 2	76.0 m²
102	Level 1	3 x 2	123.5 m²
103	Level 1	3 x 2	128.4 m²
104	Level 1	3 x 2	119.5 m²
105	Level 1	1 x 1	56.3 m²
106	Level 1	3 x 2	95.8 m²
107	Level 1	2 x 2	76.0 m²
201	Level 2	3 x 2	149.5 m²
202	Level 2	3 x 2	130.0 m²
203	Level 2	3 x 2	128.3 m²
204	Level 2	3 x 2	119.5 m²
205	Level 2	1 x 1	56.3 m²
206	Level 2	3 x 2	100.1 m²
301	Level 3	3 x 2	130.5 m²
302	Level 3	3 x 2	153.7 m²
303	Level 3	3 x 2	142.3 m²
401	Level 4	3 x 3.5	255.4 m²
Total Units: 20			2,404.0 m²

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118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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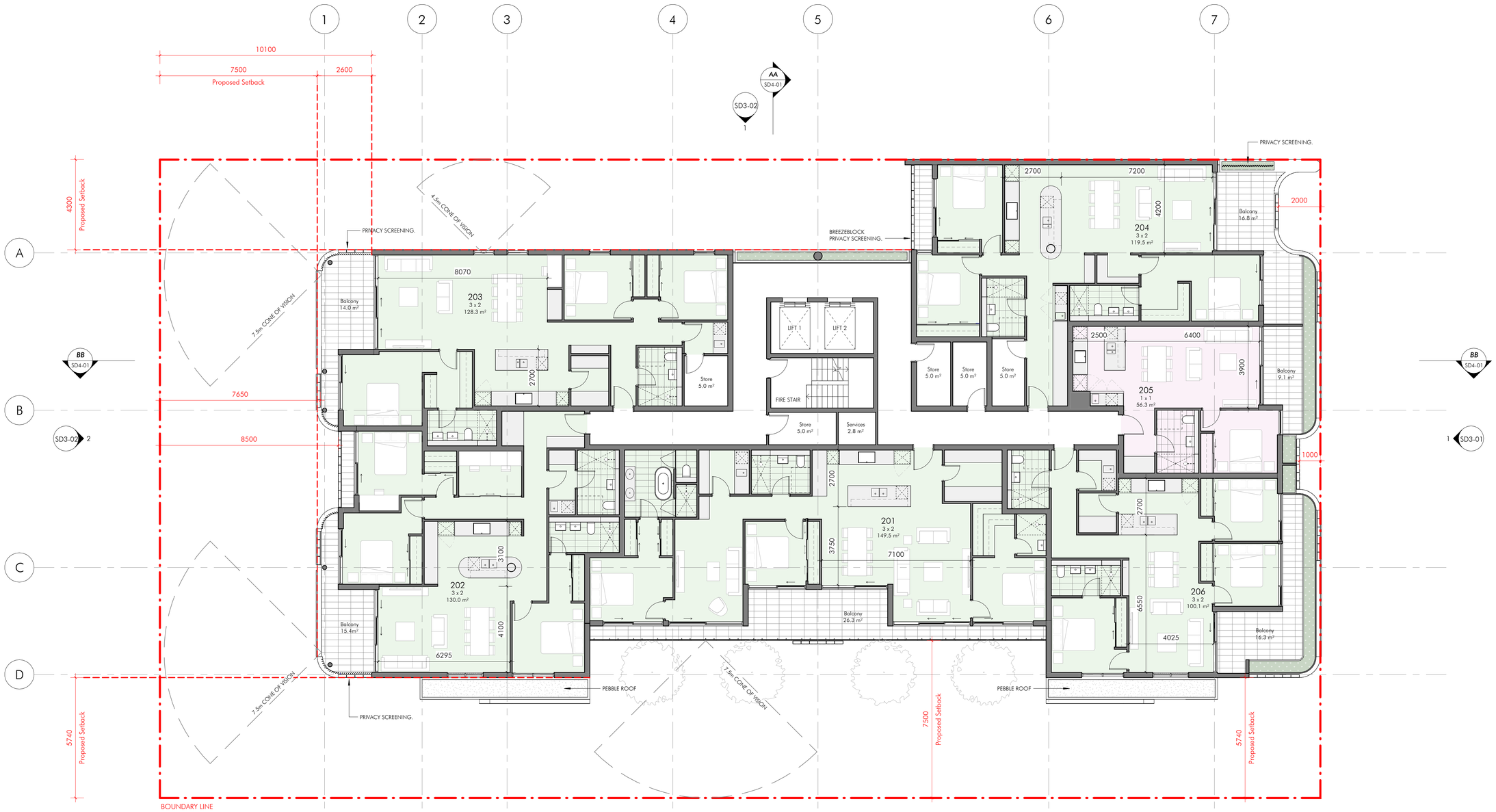

LEVEL 02

Apartment Area Schedule

Unit Number	Level	Layout	Internal Area
G01	Ground	3 x 2	117.6 m²
G02	Ground	3 x 2	121.8 m²
G03	Ground	3 x 2	123.5 m²
101	Level 1	2 x 2	76.0 m²
102	Level 1	3 x 2	123.5 m²
103	Level 1	3 x 2	128.4 m²
104	Level 1	3 x 2	119.5 m²
105	Level 1	1 x 1	56.3 m²
106	Level 1	3 x 2	95.8 m²
107	Level 1	2 x 2	76.0 m²
201	Level 2	3 x 2	149.5 m²
202	Level 2	3 x 2	130.0 m²
203	Level 2	3 x 2	128.3 m²
204	Level 2	3 x 2	119.5 m²
205	Level 2	1 x 1	56.3 m²
206	Level 2	3 x 2	100.1 m²
301	Level 3	3 x 2	130.5 m²
302	Level 3	3 x 2	153.7 m²
303	Level 3	3 x 2	142.3 m²
401	Level 4	3 x 3.5	255.4 m²
Total Units: 20			2,404.0 m²

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Flora Residences
118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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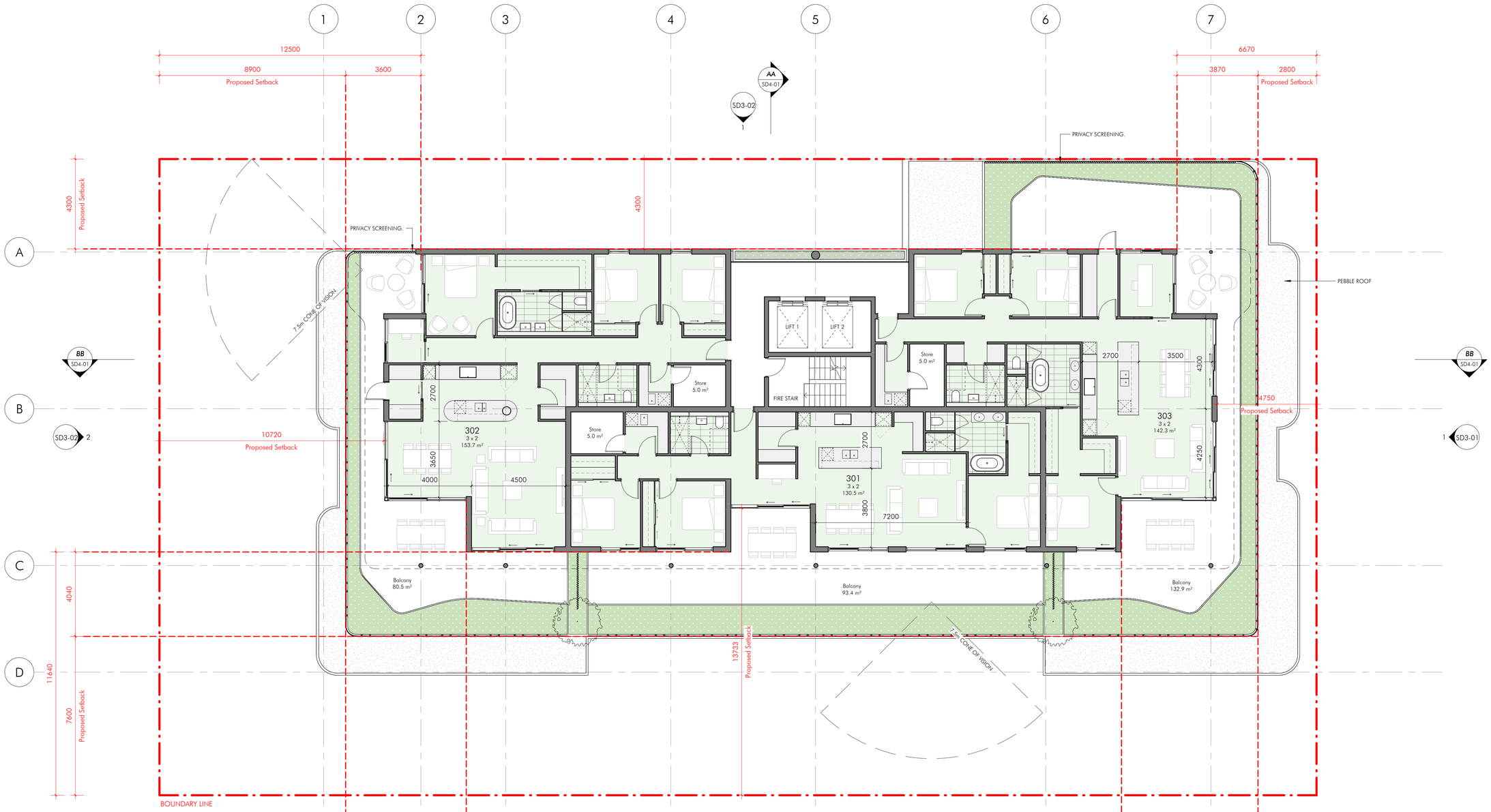

LEVEL 03

Apartment Area Schedule

Unit Number	Level	Layout	Internal Area
G01	Ground	3 x 2	117.6 m²
G02	Ground	3 x 2	121.8 m²
G03	Ground	3 x 2	123.5 m²
101	Level 1	2 x 2	76.0 m²
102	Level 1	3 x 2	123.5 m²
103	Level 1	3 x 2	128.4 m²
104	Level 1	3 x 2	119.5 m²
105	Level 1	1 x 1	56.3 m²
106	Level 1	3 x 2	95.8 m²
107	Level 1	2 x 2	76.0 m²
201	Level 2	3 x 2	149.5 m²
202	Level 2	3 x 2	130.0 m²
203	Level 2	3 x 2	128.3 m²
204	Level 2	3 x 2	119.5 m²
205	Level 2	1 x 1	56.3 m²
206	Level 2	3 x 2	100.1 m²
301	Level 3	3 x 2	130.5 m²
302	Level 3	3 x 2	153.7 m²
303	Level 3	3 x 2	142.3 m²
401	Level 4	3 x 3.5	255.4 m²
Total Units: 20			2,404.0 m²

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Flora Residences
118 Flora Terrace, North Beach

SCALE	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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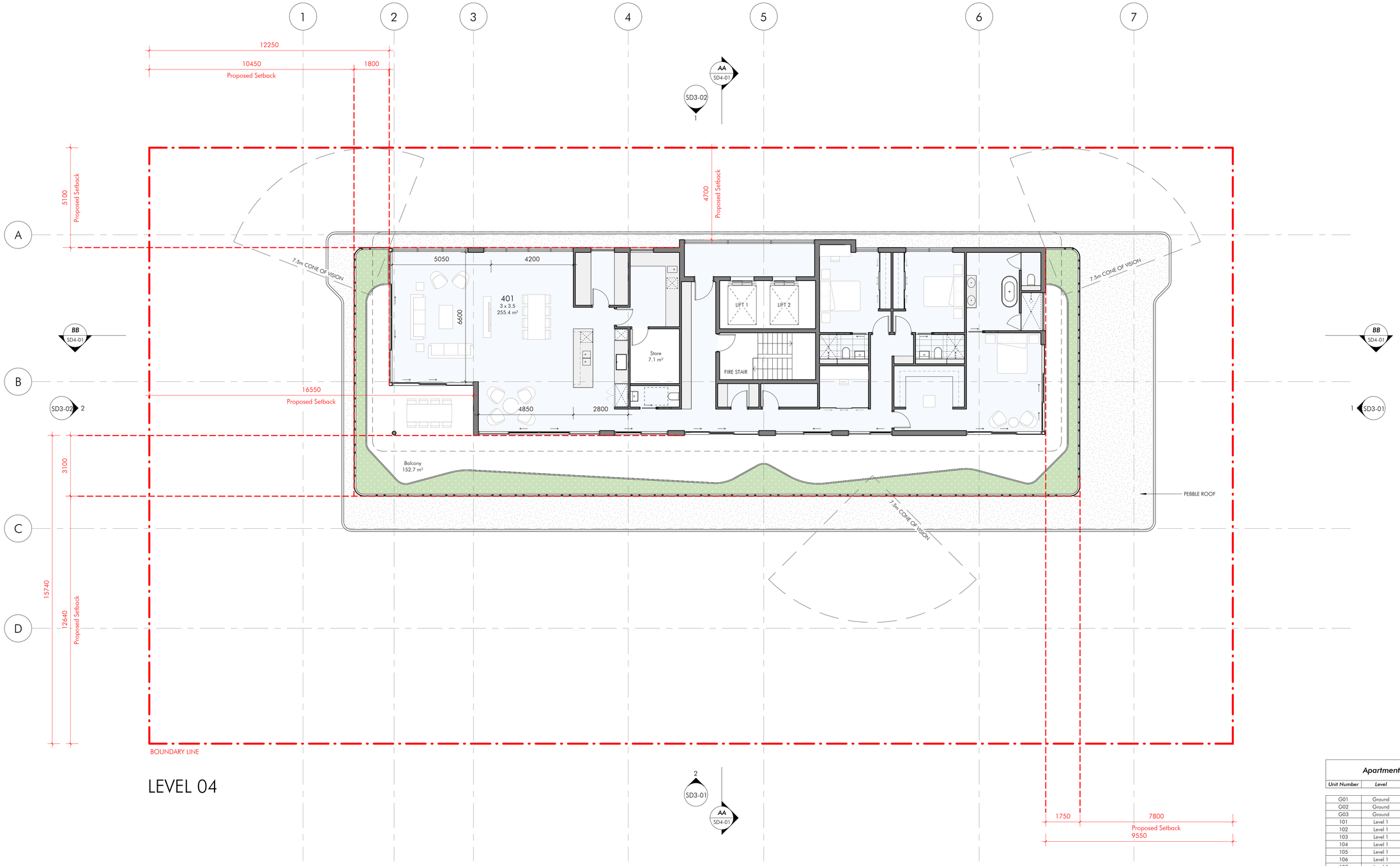

LEVEL 04

Apartment Area Schedule

Unit Number	Level	Layout	Internal Area
G01	Ground	3 x 2	117.6 m²
G02	Ground	3 x 2	121.8 m²
G03	Ground	3 x 2	123.5 m²
101	Level 1	2 x 2	76.0 m²
102	Level 1	3 x 2	123.5 m²
103	Level 1	3 x 2	128.4 m²
104	Level 1	3 x 2	119.5 m²
105	Level 1	1 x 1	56.3 m²
106	Level 1	3 x 2	95.8 m²
107	Level 1	2 x 2	76.0 m²
201	Level 2	3 x 2	149.5 m²
202	Level 2	3 x 2	130.0 m²
203	Level 2	3 x 2	128.3 m²
204	Level 2	3 x 2	119.5 m²
205	Level 2	1 x 1	56.3 m²
206	Level 2	3 x 2	100.1 m²
301	Level 3	3 x 2	130.5 m²
302	Level 3	3 x 2	153.7 m²
303	Level 3	3 x 2	142.3 m²
401	Level 4	3 x 3.5	255.4 m²
Total Units: 20			2,404.0 m²

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118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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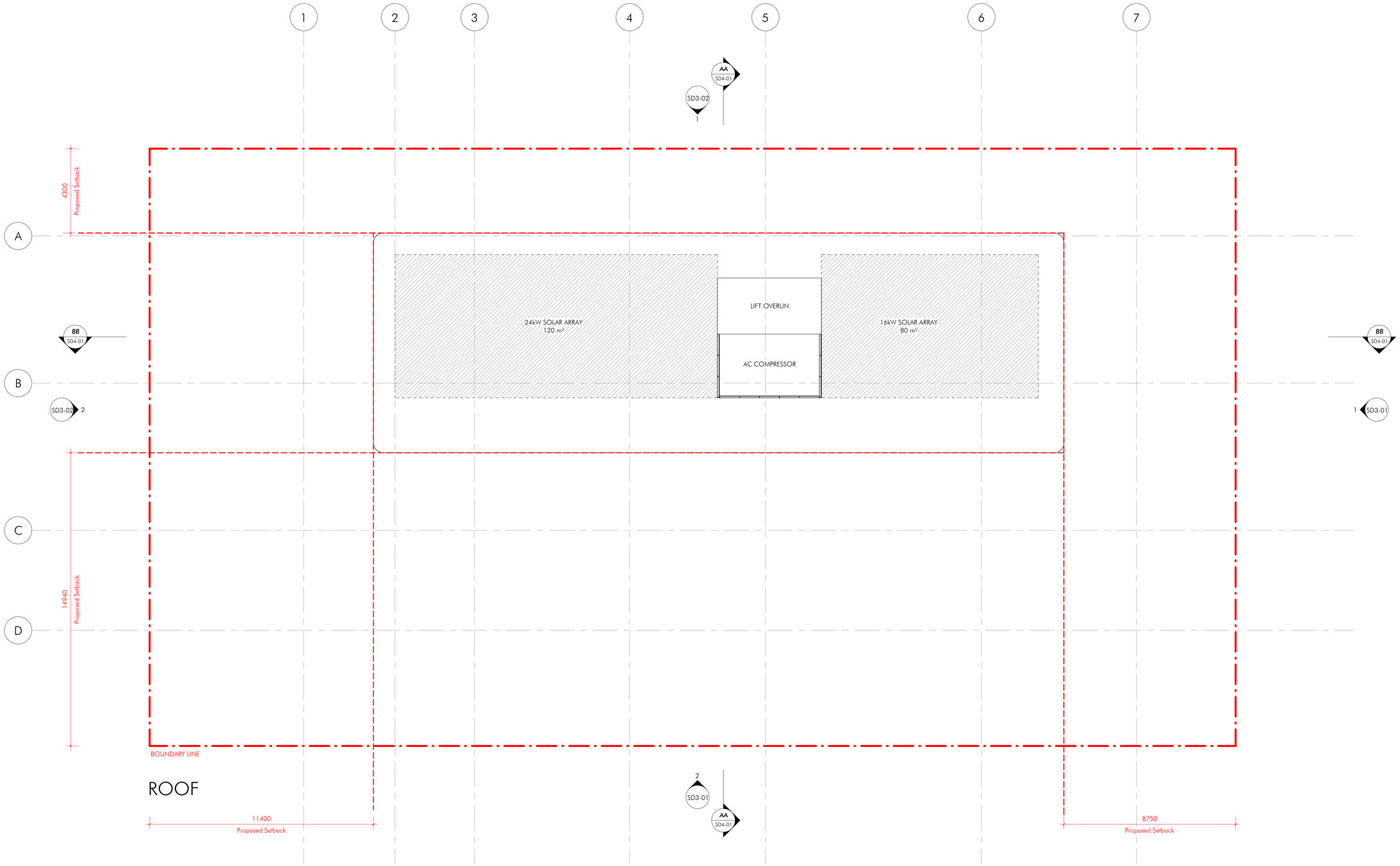

ROOF

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118 Flora Terrace, North Beach

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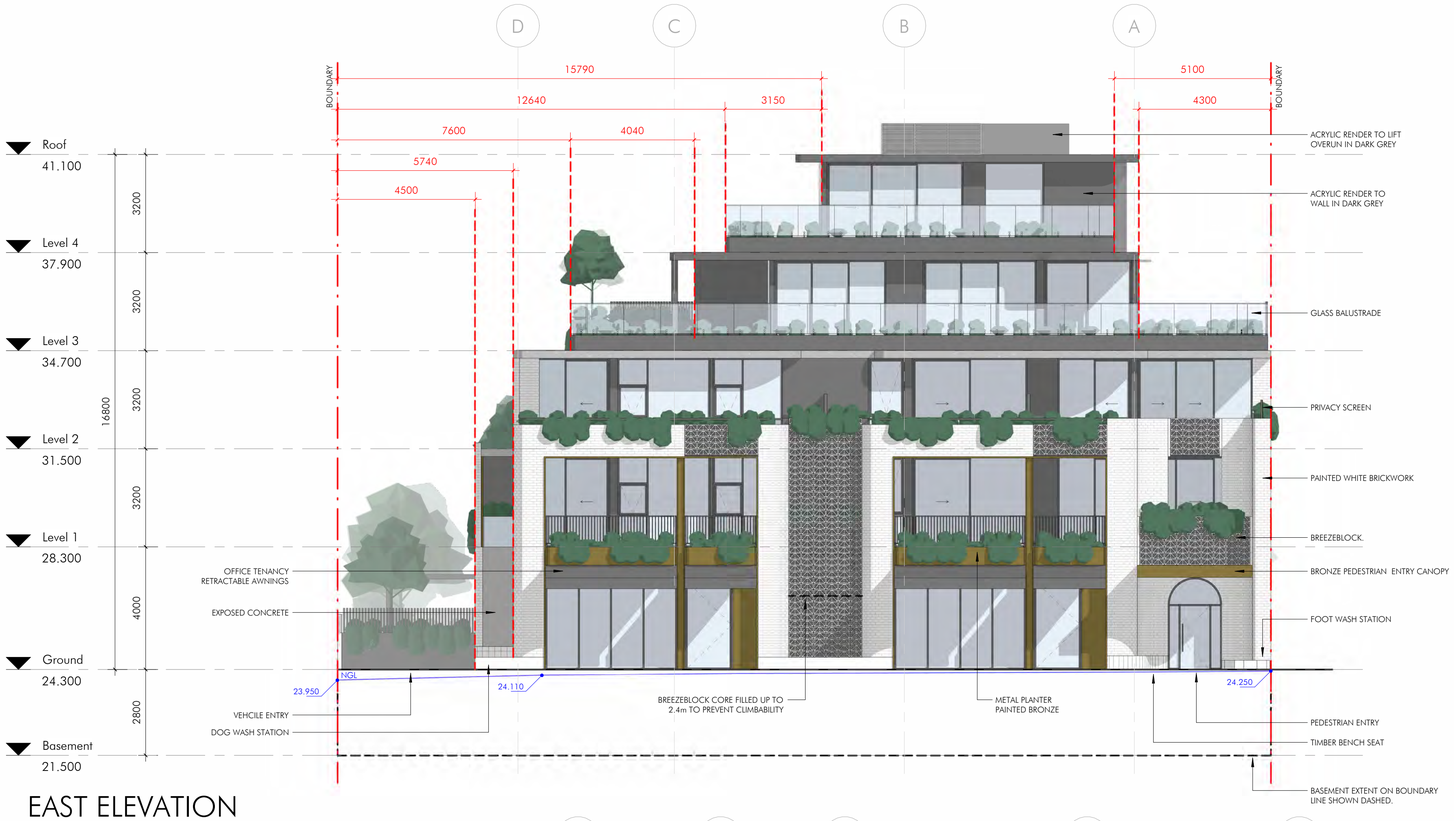

EAST ELEVATION

SOUTH ELEVATION

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118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
1 : 100 @A1 1:200 (A3) 0 1 2 3 4 5 m		27.06.24	ELEVATIONS PROJECT PHASE DA	2401	SD3-01	B

WEST ELEVATION

NORTH ELEVATION

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Flora Residences
118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
1 : 100 @A1 1:200 (A3) 0 1 2 3 4 5 m		27.06.24	ELEVATIONS PROJECT PHASE DA	2401	SD3-02	B

SECTION AA

SECTION BB

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118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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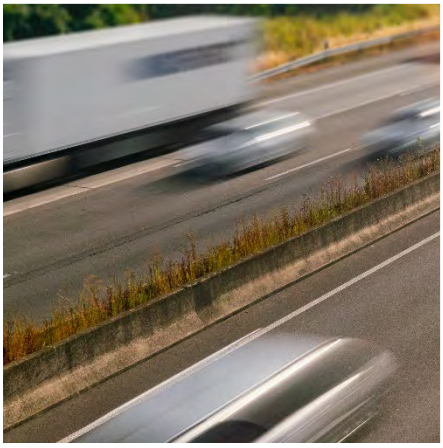
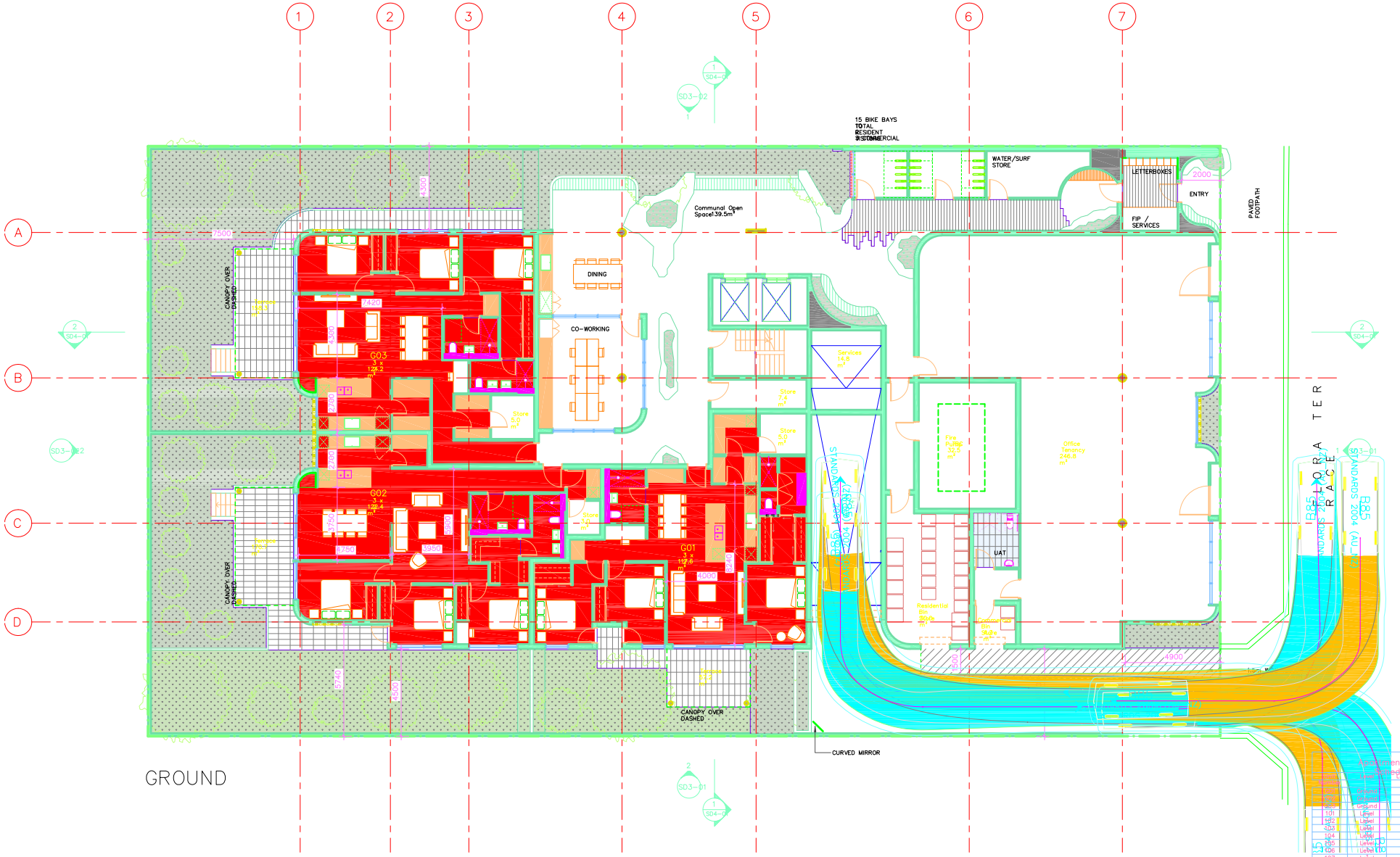
Appendix C

Swept Path Plans





GROUND

Apartment Area Schedule				
Unit No.	Level	Layout		Internal Area
101	Ground	3	x	117.6
102	Ground	3	x	122.4
103	Ground	3	x	124.2
104	Ground	3	x	119.5
105	Ground	1	x	59.3
106	Ground	1	x	59.2
107	Ground	2	x	76.0
201	Level 1	3	x	161.1
202	Level 1	3	x	126.4
203	Level 1	3	x	126.6
204	Level 1	3	x	119.5
205	Level 1	1	x	59.3
206	Level 1	3	x	101.1
301	Level 2	3	x	126.5
302	Level 2	3	x	153.7
303	Level 2	3	x	149.3
401	Level 3	3	x	217.2
Total Units: 20		4	3.5	2,355.5 m²

Flora
Residences
18 Flora Terrace, North Beach

SCALE	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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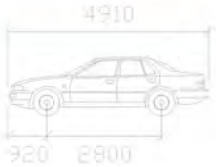
NP		PROJECT STAGE: SCHEMATIC DESIGN			

47 CAR BAYS
T(36)
RE4
7 COMMERCIAL



DEEP SOIL AREA:
120m² 7.1%

B85

	mm
Width	1870
Track	1770
Lock to Lock Time	6.0
Steering Angle	34.1

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www.ptgconsulting.com.au

Technical Memorandum

Attachment 7d - Technical Memorandum in response to City Request for Information prepared by ptg consulting received 6 November 2024

Subject	118 Flora Terrace – Responses to City of Stirling Traffic and Access RFI Items		
Client	118 Flora Terrace Pty Ltd ATF 118 Flora Terrace Unit Trust	Project No.	PTG/00102
Date	6/11/2024	Revision	A
Prepared by	Andreas Wang	Discipline	Traffic and Transport
Reviewed by	Ray Cook	Office	Perth

1 INTRODUCTION

PTG Consulting Pty Ltd (PTG) has previously prepared a Transport Impact Statement (TIS) (PTG/00102, Revision B, dated 27/6/2024) for the proposed mixed-use development located at 118 Flora Terrace, North Beach. Subsequent to lodgement of the Development Application (DA) of the proposed development, the City of Stirling ("the City") has issued a Request for Further Information (RFI) to request additional information related to a number of issues

The purpose of this technical memorandum is to provide the additional information requested by the City related to Vehicle Access and Car Parking.

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2 VEHICLE ACCESS

2.1 Driveway Entry Waiting Area

As described in the TIS, the proposed width of the driveway is 4.5m which is not sufficiently wide to accommodate 2-way traffic. However, for the first 6.9m of the driveway, the driveway will have a width of 5.6m. This will allow a B85 vehicle to wait at the entry of the driveway while a B99 vehicle is exiting the driveway, which is considered a realistic worst-case scenario, particularly as the proposed development only includes 20 apartments and a small office tenancy.

The vehicle waiting area is shown in **Figure 1**, while the swept path for a B99 exit movement while a B85 vehicle is waiting, is shown in **Figure 2**.The swept path shows that the B99 is able to exit without conflicting with the B85 vehicle.

Figure 1 Vehicle Waiting Area at Entry

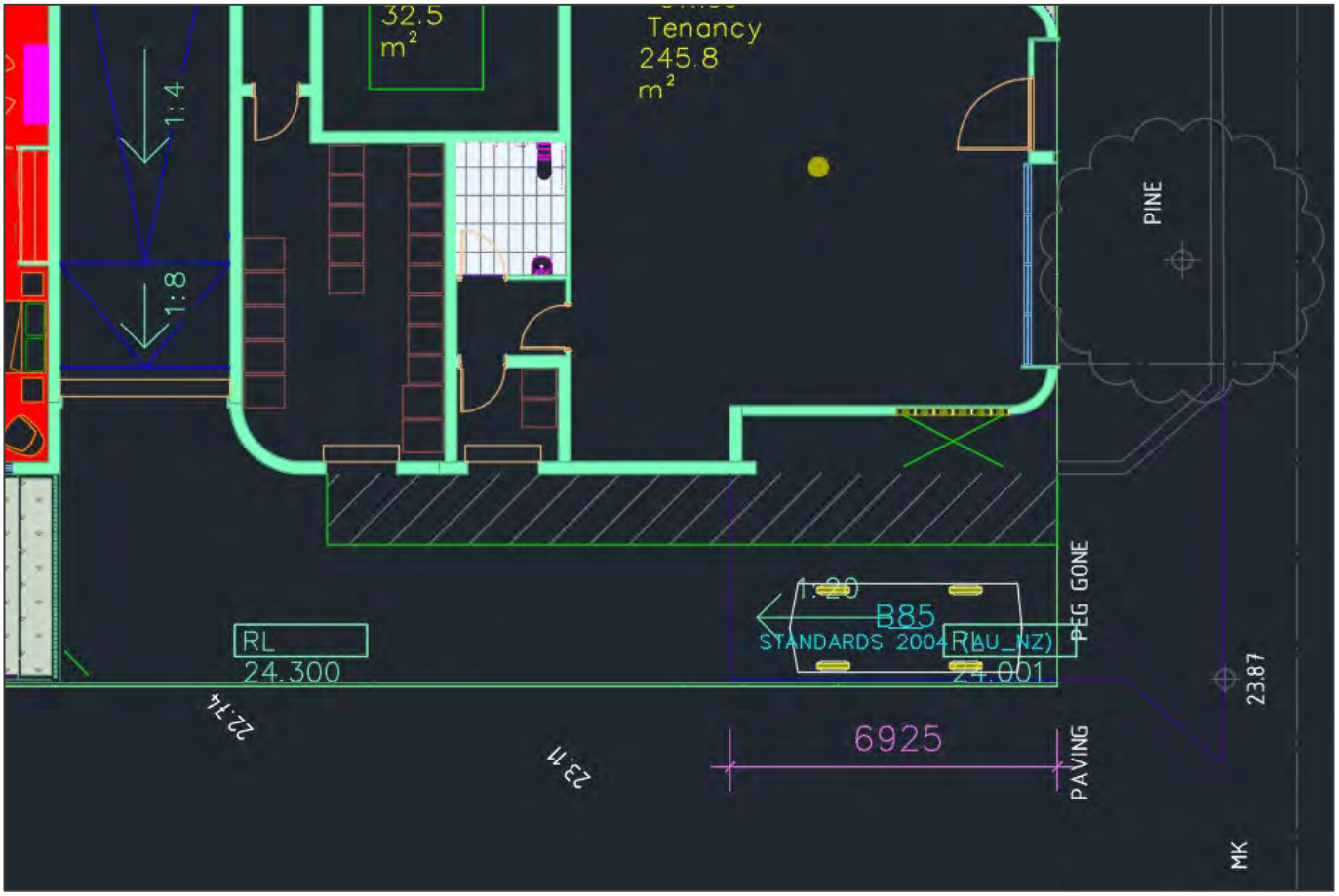
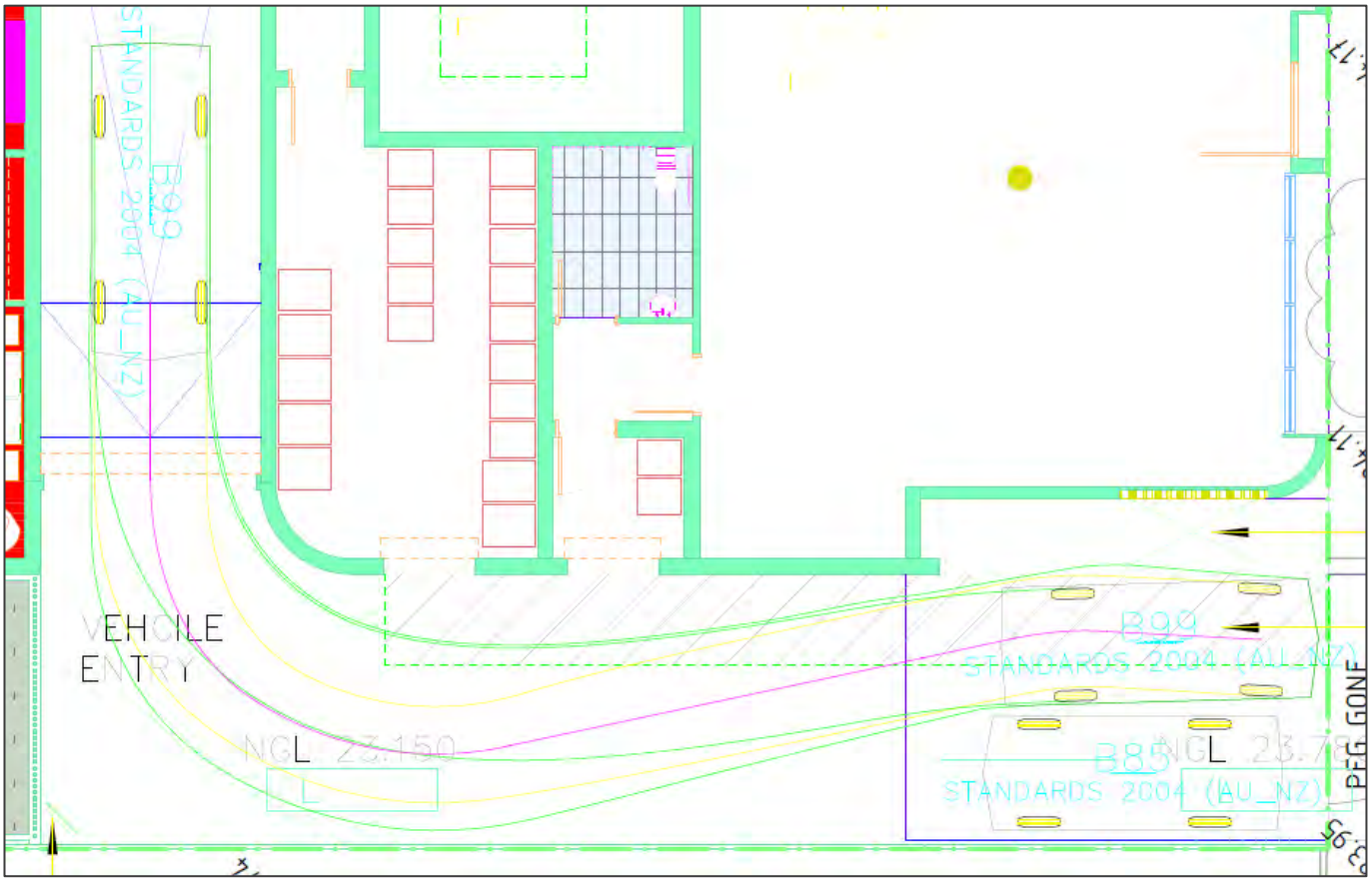


Figure 2 Swept Path for B99 Vehicle Exiting with B85 Vehicle Waiting



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2.2 Driveway Traffic Management System

A traffic management system is proposed to ensure the inbound and outbound traffic movements do not conflict. This will consist of a traffic light system with red & green traffic lights at the driveway entry and in the basement, along with sensors (either on-ground loop detectors or beam sensors), that will ensure that one direction has a green light at any one time.

As there are many different companies that offer these products, the exact product specifications will be confirmed as part of the detailed design process. Examples of these traffic management systems are shown in **Figure 3** and **Figure 4**.

Figure 3 Example of Traffic Light Management System

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Source: https://trafficparking.com.au/vehicle-priority-systems.php (TPS Group)

Figure 4 Example of Traffic Light Management System

Source: https://www.trafficlightsystems.com/traffic-light-installs (Traffic Light Systems)

Notwithstanding the different systems available, below is a description of the principles of how the system is proposed to operate for each of the following scenarios:

- AM Peak Hour – inbound trigger – refer to Figure 6
- AM Peak Hour – outbound trigger – refer to Figure 7
- PM Peak Hour – inbound trigger – refer to Figure 8
- PM Peak Hour – outbound trigger – refer to Figure 9

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In addition to the traffic management system, as shown in **Figure 5**, a curved mirror will also be installed at the bend along the driveway, to allow entering and exiting vehicles to see opposing vehicles around the corner in the mirror.

Figure 5 Proposed Curved Mirror

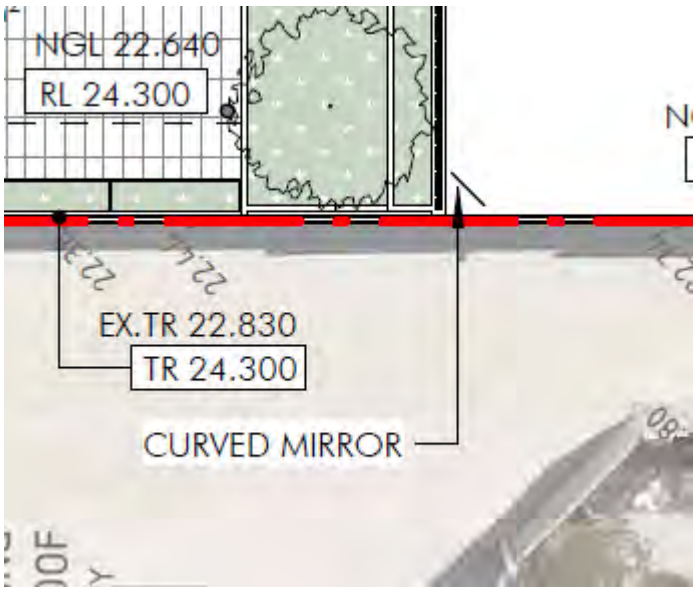

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Figure 6 Example of AM Peak Operation – Inbound Trigger

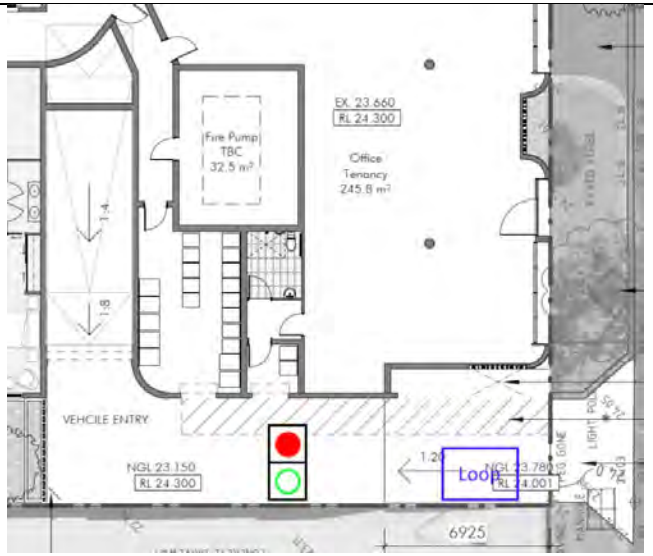
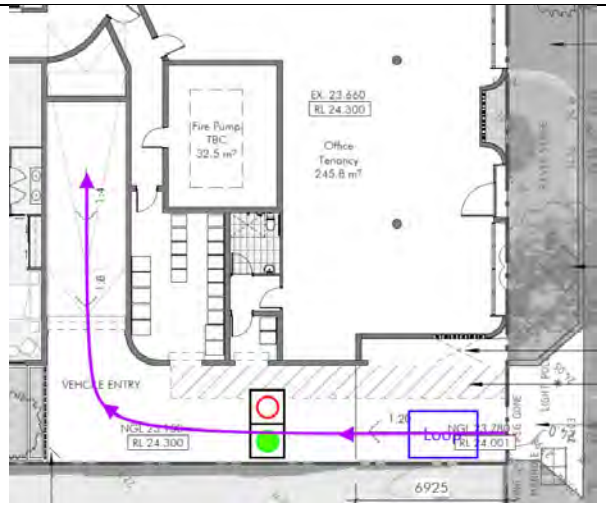
Description	Ground Floor Operation	Basement Operation
No vehicle activity – Resting Operation (green for outbound, red for inbound)		
Vehicle enters from Flora Terrace and triggers detector at entry. The vehicle waits in the waiting bay until the traffic light has switched to green, while the traffic light in the basement changes to red. Once the traffic light at the entry has changed to green, the inbound vehicle can drive down to the basement. Any outbound vehicles from the basement will have to wait until the traffic lights switch again.		

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Figure 7 Example of AM Peak Operation – Outbound Trigger

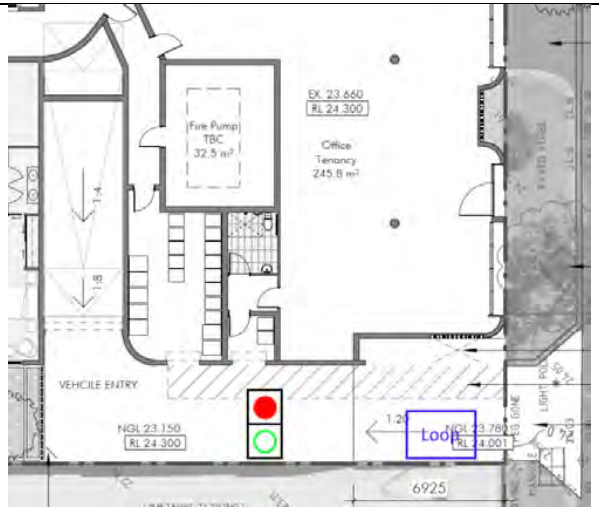
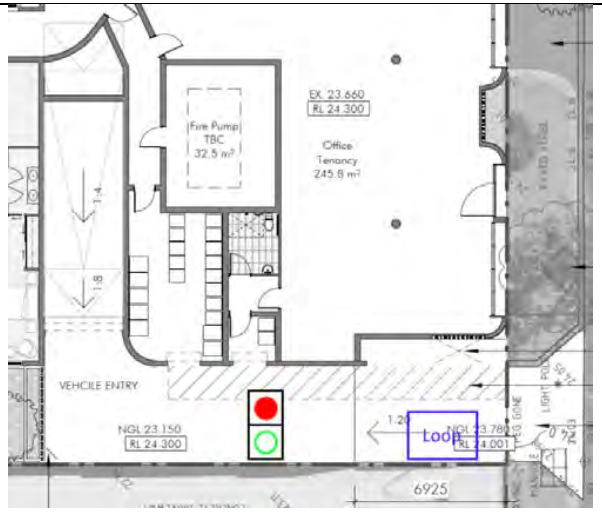
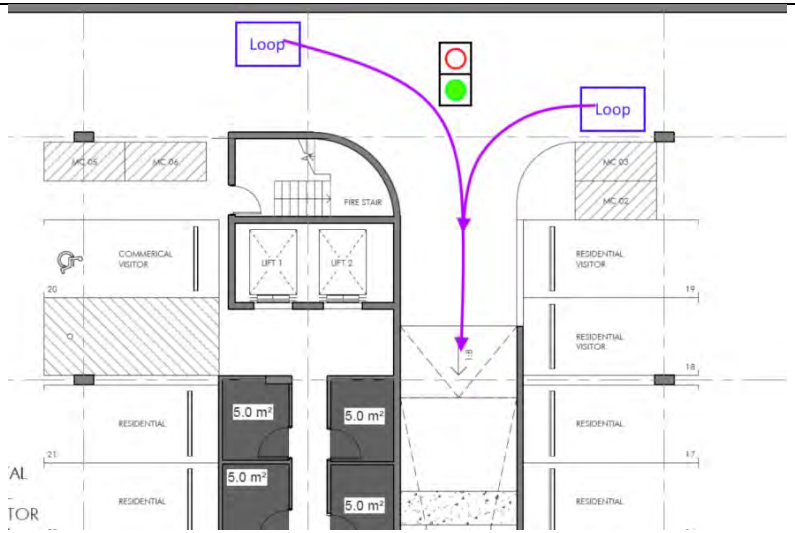
Description	Ground Floor Operation	Basement Operation
No vehicle activity – Resting Operation (green for outbound, red for inbound)		
Vehicle exiting from the basement car park triggers one of the detectors in the basement. This will ensure the traffic light at the entry remains red at least until the car exiting has cleared the ramp and the driveway. Any inbound vehicles from Flora Terrace will have to wait in the waiting bay until the exiting vehicle has completed the exit.		

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Figure 8 Example of PM Peak Operation – Inbound Trigger

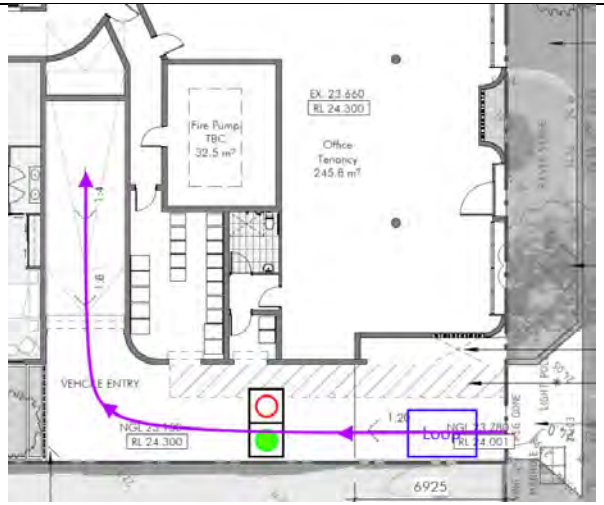
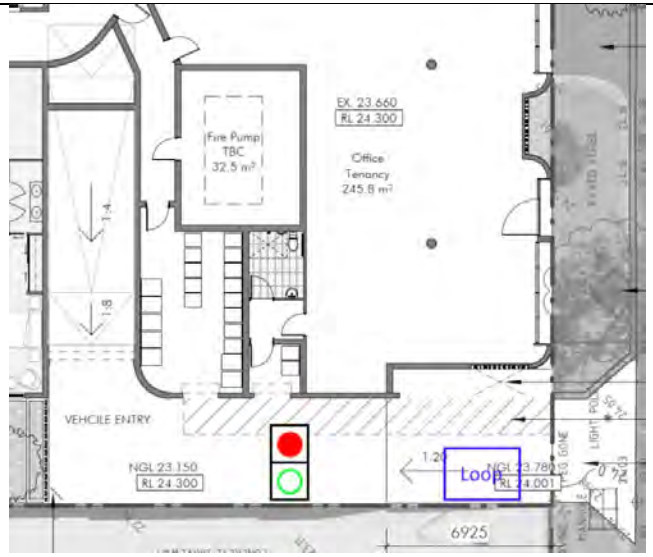
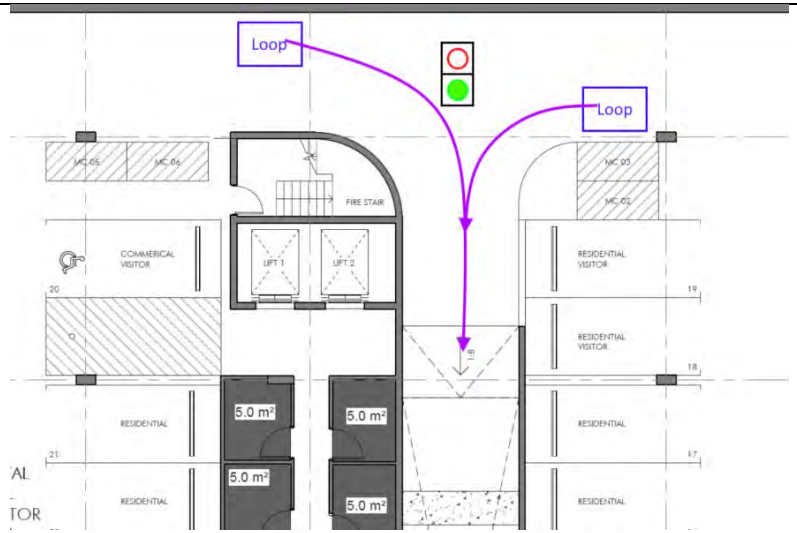
Description	Ground Floor Operation	Basement Operation
No vehicle activity – Resting Operation (green for inbound, red for outbound)		
Vehicle enters from Flora Terrace and triggers the detector at entry. This will ensure the traffic light in the Basement remains red at least until the car entering has cleared the driveway and ramp. Any exiting vehicles from the basement will have to wait until the entering vehicle has cleared the basement ramp and the traffic lights switch.		

Figure 9 Example of PM Peak Operation – Outbound Trigger

Description	Ground Floor Operation	Basement Operation
No vehicle activity – Resting Operation (green for inbound, red for outbound)		
Exiting vehicle triggers trigger in basement. This will change the traffic light in the basement to green and the traffic light on the ground floor to red, allowing the vehicle from the basement to exit. Any inbound vehicles from Flora Terrace will have to wait in the waiting bay until the exiting vehicle has completed the exit.		

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2.3 Car Parking

2.3.1 Commercial Delivery Parking Bay

As described in the TIS, any deliveries to the Office Tenancy are expected to be of relatively small nature and therefore limited to van deliveries. These vehicles will be able to park in the parking bays allocated to the office tenancy, where any loading and unloading activities will occur. Alternatively, there is also a substantial amount of nearby public parking bays that could be used for these occasional vehicles.

A dedicated commercial delivery parking bay will not be provided as the Gross Floor Area (GFA) of the office tenancy is 245.8m2. In accordance with Section 5.1.1 of the City of Stirling LPS Policy 6.7 - Access and Parking, dedicated commercial delivery parking bays are only required for non-residential development with GFA greater than 500m2.

2.3.2 Residential Visitor Parking Bay Widths

The width of the residential visitor parking bays is proposed to be 2.4m as residential visitors are considered to fall under the User Class 1A as shown in **Figure 9** due to the following reasons:

> Most residential visitors will likely be regular users of these parking bays and therefore familiar with the car park layout and able to manoeuvre in and out of these visitor bays in a more efficient manner.

> Due to the relatively small nature of the car park, as well as the general low turn-over rate of the parking bays, it is considered unlikely that other vehicles would be waiting in the parking aisle while the residential visitor vehicle completes the parking manoeuvre to enter or exit the parking bay, causing the driver of the residential visitor vehicle to rush the manoeuvre and potentially hitting an adjacent parked vehicle.

Figure 10 User Classes as per AS/NZS 2890.1:2004

TABLE 1.1

CLASSIFICATION OF OFF-STREET CAR PARKING FACILITIES

User class	Required door opening	Required aisle width	Examples of uses (Note 1)
1	Front door, first stop	Minimum for single manoeuvre entry and exit	Employee and commuter parking (generally, all-day parking)
1A	Front door, first stop	Three-point turn entry and exit into 90° parking spaces only, otherwise as for User Class 1	Residential, domestic and employee parking
2	Full opening, all doors	Minimum for single manoeuvre entry and exit	Long-term city and town centre parking, sports facilities, entertainment centres, hotels, motels, airport visitors (generally medium-term parking)
3	Full opening, all doors	Minimum for single manoeuvre entry and exit	Short-term city and town centre parking, parking stations, hospital and medical centres
3A	Full opening, all doors	Additional allowance above minimum single manoeuvre width to facilitate entry and exit	Short term, high turnover parking at shopping centres
4	Size requirements are specified in AS/NZS 2890.6 (Note 2)		Parking for people with disabilities

Source: AS/NZS 2890.1:2004

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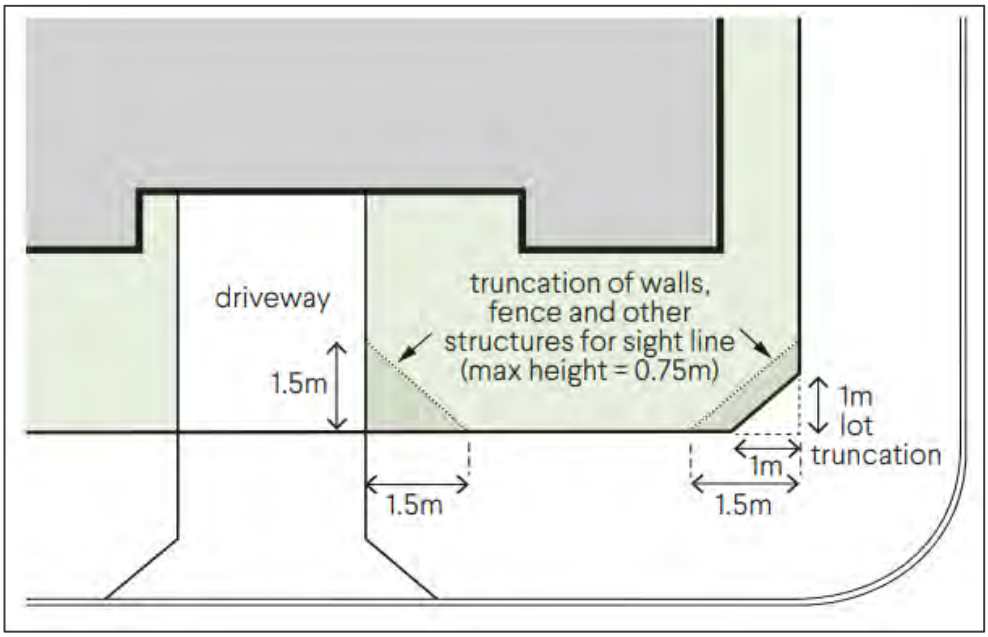
2.3.3 Visual Sightlines for Exiting Vehicles

As shown in **Figure 11**, a 1.5m visual truncation is required under Section 3.8 of the Residential Design Codes (Volume 2 - 2024) at the interface with the road reserve, to ensure vehicles exiting the car park will be able to observe pedestrians walking on the adjacent sidewalk.

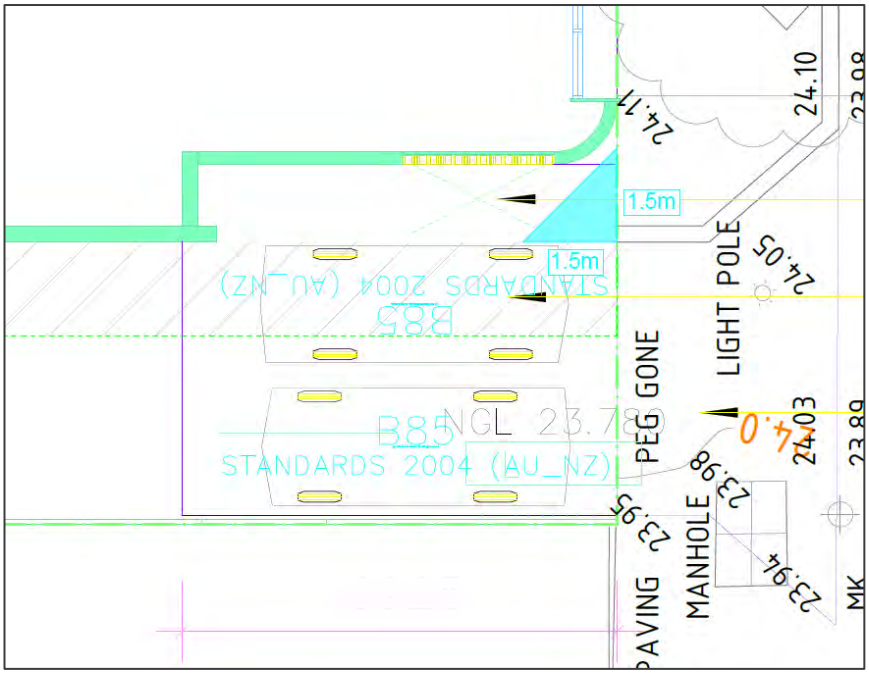
Figure 11 Visual Truncation Requirements for Driveways (Residential Design Codes Volume 2)



Source: Section 3.8 of the Residential Design Codes (Volume 2 - 2024)

As shown in **Figure 12**, the required visual truncation is achieved at the driveway exit location for a worst case scenario where the exiting vehicle has to pass a stationary vehicle waiting at the entry to the driveway. If there is no stationary vehicle waiting, the exiting vehicle will be positioned towards the centre of the driveway, which will increase the visual sight-lines for the driver in the exiting vehicle.

Figure 12 Visual Truncation for Worst Case Scenario



Attachment 7e - Acoustic Report prepared by Herring Storer Acoustics received 15 July 2024

HERRING STORER ACOUSTICS

SPACE COLLECTIVE ARCHITECTS

118 FLORA TERRACE
NORTH BEACH

DEVELOPMENT APPLICATION
ACOUSTIC REPORT

JULY 2024

OUR REFERENCE: 33091-1-24266

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118 FLORA TERRACE
NORTH BEACH

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FOR

SPACE COLLECTIVE ARCHITECTS

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APPENDICIES

A Development Application Plans

1.0 INTRODUCTION

Herring Storer Acoustics was commissioned by Space Collective Architects to conduct a preliminary review of the proposed development at 118 Flora Terrace, North Beach.

This report has been based on the Development Application drawings provided.

2.0 PROPOSED DEVELOPMENT

The proposed development site is located at 118 Flora Terrace, North Beach.

The following summarises the development:

Basement

- Parking.
- Residential Lobby.

Ground Floor

- Office Tenancy.
- Communal spaces.
- Apartments.

Levels One to Four

- Apartments

3.0 CRITERIA

3.1 BCA PROVISIONS

For Class 2 or 3 buildings, Part F5 of the National Construction Code (NCC), outlines the minimum acoustic isolation of apartments. The following summarises the acoustic criteria:

3.1.1 Walls

Wet to wet	$R_W + C_{tr}$ not less than 50 dB.
Living to living	$R_W + C_{tr}$ not less than 50 dB.
Wet to living construction.	$R_W + C_{tr}$ not less than 50 dB plus discontinuous
Kitchens to living construction.	$R_W + C_{tr}$ not less than 50 dB plus discontinuous
SOU to Lobby	R_W not less than 50 dB.

Note: Where kitchens are part of an open living area, we consider the kitchen to be part of the living area and in these cases a discontinuous construction is required. This also includes cases where kitchens are back-to-back, however, discontinuous construction is only required on one side.

3.1.2 Floors

Floors $R_W + C_{tr}$ not less than 50 dB.

Impact Isolation $L_{n,w}$ not more than 55 dB is recommended.

Note: The impact isolation criteria under the BCA is an $L_{n,w}$ of not more than 62 dB. However, as a member firm of the Association of Australasian Acoustic Consultants, (AAAC) we recommend a criteria of an $L_{n,w}$ of not more than 55 dB be adopted for a development of this type.

3.1.3 Service Risers

to Habitable Rooms $R_W + C_{tr}$ not less than 40 dB.

to Non-Habitable Rooms $R_W + C_{tr}$ not less than 25 dB.

3.1.4 Hydraulics

The above requirements also apply to storm water down pipes.

3.1.5 Doors

Door (Connecting to a lobby) R_W not less than 30 dB.

The development will be designed to comply with the requirements of Part F5 of the BCA.

3.2 ENVIRONMENTAL PROTECTION (NOISE) REGULATIONS 1997

The *Environmental Protection (Noise) Regulations 1997* stipulate the allowable noise levels at any noise sensitive premises from other premises. The allowable or assigned noise levels for noise sensitive premises are determined by the calculation of an influencing factor, which is added to the baseline criteria set out in Table 1 of the Regulations. The baseline assigned noise levels are listed in Table 3.1. For commercial premises, the allowable or assigned noise levels are the same for all hours of the day. Table 3.1 also lists the assigned noise levels for commercial premises.

TABLE 3.1 – ASSIGNED NOISE LEVELS

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		$L_{A\,10}$	$L_{A\,1}$	$L_{A\,max}$
Noise sensitive premises within 15 metres of a dwelling	0700 - 1900 hours Monday to Saturday	45 + IF	55 + IF	65 + IF
	0900 - 1900 hours Sunday and Public Holidays	40 + IF	50 + IF	65 + IF
	1900 - 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

Note: The L_{A10} noise level is the noise that is exceeded for 10% of the time.
The L_{A1} noise level is the noise that is exceeded for 1% of the time.
The L_{Amax} noise level is the maximum noise level recorded.

It is a requirement that noise from the site be free of annoying characteristics (tonality, modulation and impulsiveness) at other premises, defined below as per Regulation 9.

"impulsiveness" means a variation in the emission of a noise where the difference between L_{Apeak} and $L_{Amax\ Slow}$ is more than 15dB when determined for a single representative event;

"modulation" means a variation in the emission of noise that –

(a) is more than 3dB $L_{A\ Fast}$ or is more than 3dB $L_{A\ Fast}$ in any one-third octave band;
(b) is present for more at least 10% of the representative assessment period; and
(c) is regular, cyclic and audible;

"tonality" means the presence in the noise emission of tonal characteristics where the difference between –

(a) the A-weighted sound pressure level in any one-third octave band; and
(b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands,

is greater than 3 dB when the sound pressure levels are determined as $L_{Aeq,T}$ levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as $L_{A\ Slow}$ levels.

Where the above characteristics are present and cannot be practicably removed, the following adjustments are made to the measured or predicted level at other premises.

TABLE 3.2 – ADJUSTMENTS FOR ANNOYING CHARACTERISTICS

Where tonality is present	Where modulation is present	Where impulsiveness is present
+ 5 dB	+ 5 dB	+ 10 dB

Figure 1 shows the development location and surrounds.

FIGURE 1 – AERIAL OF DEVELOPMENT LOCATION AND SURROUNDS

From a review of the development, the influencing factor for the premises identified in proximity to the development would be 10 dB, based on the following :

Major Roads within outer circle;	
West Coast Drive	+ 2 dB
Commercial Premises within the inner circle;	
20 %	+ 1 dB
Total IF	**+ 3 dB**

Hence the influencing factor would be + 10 dB and the assigned noise levels would be as listed in Table 3.3.

TABLE 3.3 - ASSIGNED OUTDOOR NOISE LEVEL

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise sensitive premises within 15 metres of a dwelling	0700 - 1900 hours Monday to Saturday	48	58	68
	0900 - 1900 hours Sunday and Public Holidays	43	53	68
	1900 - 2200 hours all days	43	53	58
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	38	48	58

Note: L_{A10} is the noise level exceeded for 10% of the time.
L_{A1} is the noise level exceeded for 1% of the time.
L_{Amax} is the maximum noise level.

We note that noise emissions from the premises need to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997*. This includes noise associated with mechanical services (ie air conditioning and ventilation systems).

3.3 NOISE INGRESS

Whilst the development is not located with a trigger distance of a major road to warrant an assessment of traffic noise in accordance with State Planning Policy 5.4, due to the proximity of West Coast Drive, consideration for the noise impact – and ensuring the façade of the development provides a reasonable level of internal amenity – is recommended to be undertaken.

Based on State Planning Policy 5.4, and our experience, it is recommended that a design level listed below is implemented.

INTERNAL

$L_{Aeq(Day)}$ of 40 dB(A) in living and work areas; and
$L_{Aeq(Night)}$ of 35 dB(A) in bedrooms.

4.0 BCA REQUIRMENTS

The proposed development will be constructed to comply with the requirements of Part F5 of the NCC.

It is noted that adopting the flooring criteria of not more than 55 $L_{nT,w}$ dB provides greater amenity than basic BCA compliance.

5.0 NOISE INGRESS

A review of the surrounding premises indicated that the noise environment in the area is dominated by traffic noise associated with West Coast Drive.

A preliminary noise impact assessment has been undertaken with the details of this assessment contained in a separate report to accompany the development application (Our Ref: *33090-1-24266*).

During the design process a full assessment of noise ingress into the development will be undertaken to ensure compliance with the internal criteria and assist in glazing selections.

6.0 NOISE FROM DEVELOPMENT

The main source of noise from the proposed development will be from mechanical services consisting of air-conditioning plant. Noise received at neighbouring premises, and premises within the development, from these items need to comply with the assigned noise levels as determined under the *Environmental Protection (Noise) Regulations 1997*.

6.1 MECHANICAL SERVICES

The main source of noise from the proposed development will be from mechanical services consisting of air-conditioning plant and condenser units. Noise received at residence (neighbours and residence within the development) from these items need to comply with the assigned noise levels as determined under the *Environmental Protection (Noise) Regulations 1997*.

As the mechanical services could operate during the night, noise emissions from the development needs to comply with the assigned L_{A10} night period noise level of 38 dB(A) at residential premises. Potentially, noise emissions from mechanical services could be tonal, in which case an +5 dB(A) penalty for a tonal component could be applied to the resultant noise levels. Therefore, the design level at the neighbouring residential premises would be 33 L_{A10} dB.

The air conditioning for the apartments is not yet known. Once the design of the system is finalised, an acoustic assessment will be carried out of noise emissions from the mechanical plant and any noise amelioration required will be incorporated into the design to ensure compliance with the *Environmental Protection (Noise) Regulations 1997*. However, we believe that compliance would be easily achieved, and any noise mitigation would be minimal, with the proposed design.

Similarly, carpark exhaust ventilation systems will need to be compliant with the Regulations. It has been assumed that the basement carpark will require mechanical ventilation, with careful selection of the car park exhaust fans, and perhaps inclusion of podded silencers, compliance with the required Assigned Noise Levels is not considered problematic.

APPENDIX A

DEVELOPMENT APPLICATION PLANS

BASEMENT

Parking Schedule	
Type Comments	Count
ACROD Bay	1
Car Bay - 2400 x 5400	34
Car Bay - Tandem	12
Motorcycle Bay	6

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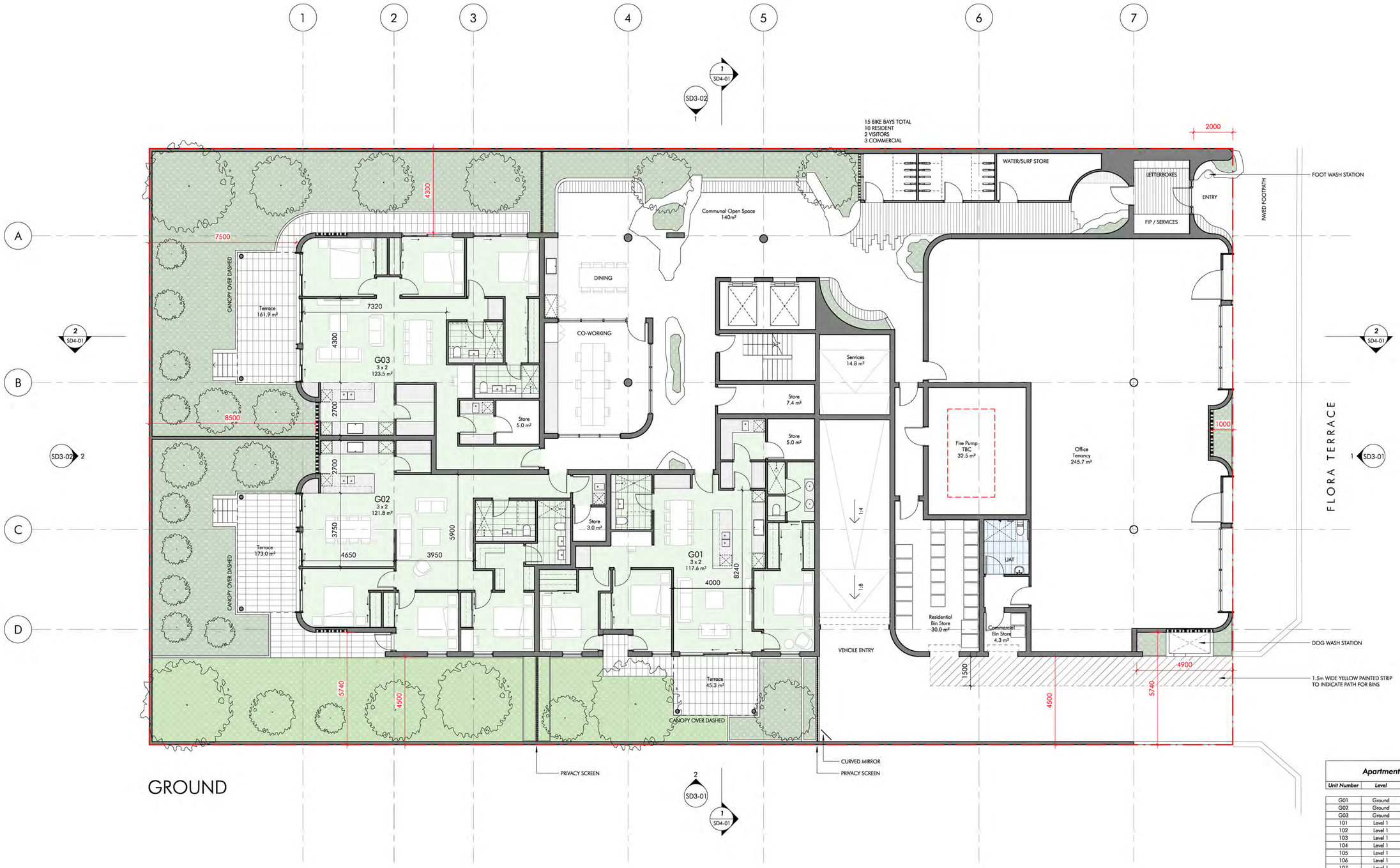
Flora Residences
118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
1 : 100 @A1 1:200 (A3) 0 1 2 3 4 5 m		21.06.24	BASEMENT PLAN PROJECT PHASE SCHEMATIC DESIGN	2401	SD2-00	C



Apartment Area Schedule

Unit Number	Level	Layout	Internal Area
G01	Ground	3 x 2	117.6 m²
G02	Ground	3 x 2	121.8 m²
G03	Ground	3 x 2	123.5 m²
101	Level 1	2 x 2	76.0 m²
102	Level 1	3 x 2	123.5 m²
103	Level 1	3 x 2	128.4 m²
104	Level 1	3 x 2	119.5 m²
105	Level 1	1 x 1	56.3 m²
106	Level 1	3 x 2	94.2 m²
107	Level 1	2 x 2	76.0 m²
201	Level 2	3 x 2	149.5 m²
202	Level 2	3 x 2	130.0 m²
203	Level 2	3 x 2	128.3 m²
204	Level 2	3 x 2	119.5 m²
205	Level 2	1 x 1	56.3 m²
206	Level 2	3 x 2	100.1 m²
301	Level 3	3 x 2	130.5 m²
302	Level 3	3 x 2	153.7 m²
303	Level 3	3 x 2	142.3 m²
401	Level 4	3 x 3.5	255.4 m²
Total Units: 20			2,402.6 m²

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SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
1 : 100 @A1 1:200 (A3) 0 1 2 3 4 5 m		21.06.24	GROUND FLOOR PLAN PROJECT PHASE SCHEMATIC DESIGN	2401	SD2-01	C

LEVEL 01

Apartment Area Schedule			
Unit Number	Level	Layout	Internal Area
G01	Ground	3 x 2	117.6 m²
G02	Ground	3 x 2	121.8 m²
G03	Ground	3 x 2	123.5 m²
101	Level 1	2 x 2	76.0 m²
102	Level 1	3 x 2	123.5 m²
103	Level 1	3 x 2	128.4 m²
104	Level 1	3 x 2	119.5 m²
105	Level 1	1 x 1	56.3 m²
106	Level 1	3 x 2	94.2 m²
107	Level 1	2 x 2	76.0 m²
201	Level 2	3 x 2	149.5 m²
202	Level 2	3 x 2	130.0 m²
203	Level 2	3 x 2	128.3 m²
204	Level 2	3 x 2	119.5 m²
205	Level 2	1 x 1	56.3 m²
206	Level 2	3 x 2	100.1 m²
301	Level 3	3 x 2	130.5 m²
302	Level 3	3 x 2	153.7 m²
303	Level 3	3 x 2	142.3 m²
401	Level 4	3 x 3.5	255.4 m²
Total Units: 20			2,402.6 m²

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SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
1 : 100 @A1 1:200 (A3) 0 1 2 3 4 5 m		21.06.24	LEVEL 01 PLAN PROJECT PHASE SCHEMATIC DESIGN	2401	SD2-02	C

LEVEL 02

Apartment Area Schedule			
Unit Number	Level	Layout	Internal Area
G01	Ground	3 x 2	117.6 m²
G02	Ground	3 x 2	121.8 m²
G03	Ground	3 x 2	123.5 m²
101	Level 1	2 x 2	76.0 m²
102	Level 1	3 x 2	123.5 m²
103	Level 1	3 x 2	128.4 m²
104	Level 1	3 x 2	119.5 m²
105	Level 1	1 x 1	56.3 m²
106	Level 1	3 x 2	94.2 m²
107	Level 1	2 x 2	76.0 m²
201	Level 2	3 x 2	149.5 m²
202	Level 2	3 x 2	130.0 m²
203	Level 2	3 x 2	128.3 m²
204	Level 2	3 x 2	119.5 m²
205	Level 2	1 x 1	56.3 m²
206	Level 2	3 x 2	100.1 m²
301	Level 3	3 x 2	130.5 m²
302	Level 3	3 x 2	153.7 m²
303	Level 3	3 x 2	142.3 m²
401	Level 4	3 x 3.5	255.4 m²
Total Units: 20			2,402.6 m²

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SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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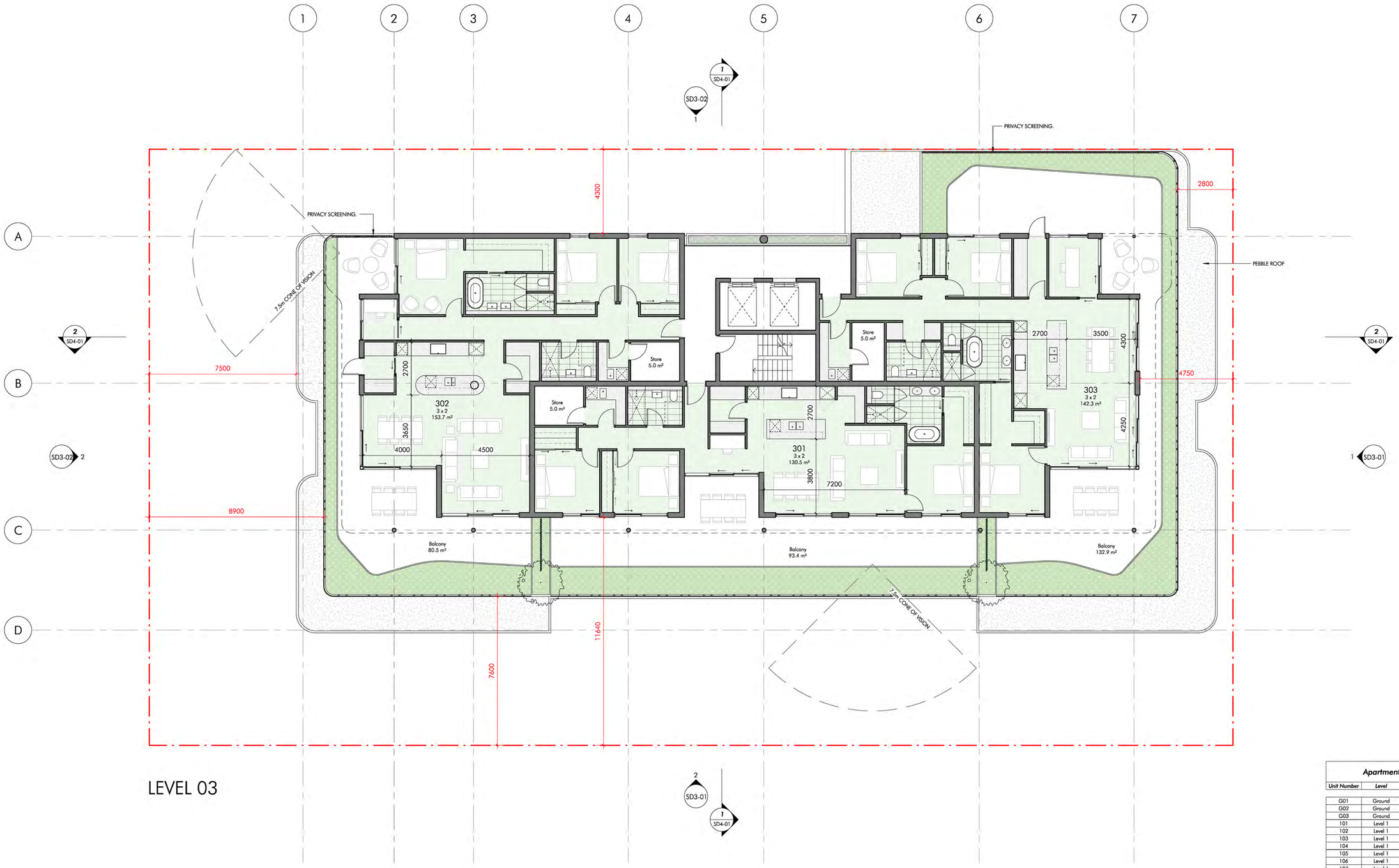

LEVEL 03

Apartment Area Schedule

Unit Number	Level	Layout	Internal Area
G01	Ground	3 x 2	117.6 m²
G02	Ground	3 x 2	121.8 m²
G03	Ground	3 x 2	123.5 m²
101	Level 1	2 x 2	76.0 m²
102	Level 1	3 x 2	123.5 m²
103	Level 1	3 x 2	128.4 m²
104	Level 1	3 x 2	119.5 m²
105	Level 1	1 x 1	56.3 m²
106	Level 1	3 x 2	94.2 m²
107	Level 1	2 x 2	76.0 m²
201	Level 2	3 x 2	149.5 m²
202	Level 2	3 x 2	130.0 m²
203	Level 2	3 x 2	128.3 m²
204	Level 2	3 x 2	119.5 m²
205	Level 2	1 x 1	56.3 m²
206	Level 2	3 x 2	100.1 m²
301	Level 3	3 x 2	130.5 m²
302	Level 3	3 x 2	153.7 m²
303	Level 3	3 x 2	142.3 m²
401	Level 4	3 x 3.5	255.4 m²
Total Units: 20			2,402.6 m²

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118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
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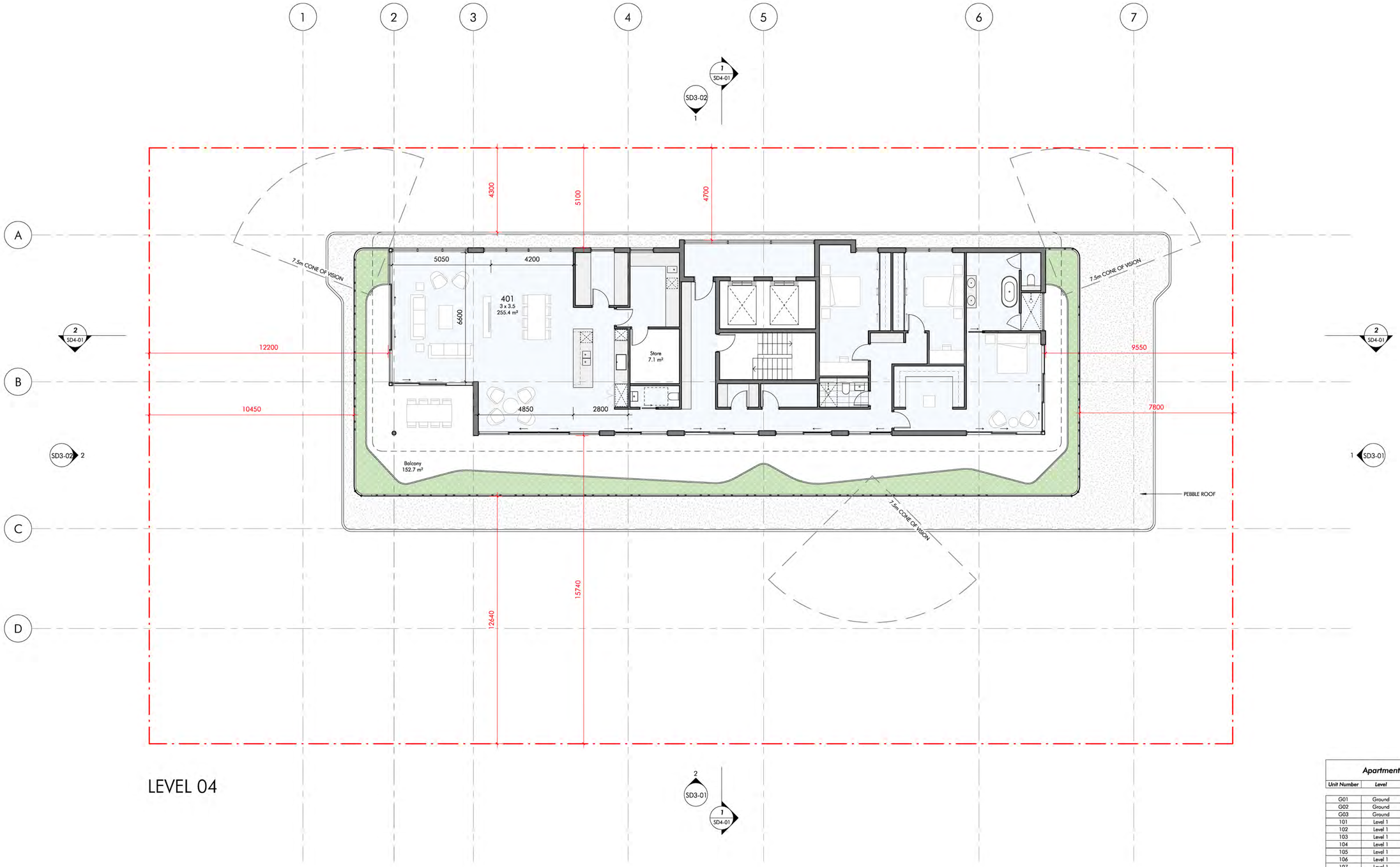

LEVEL 04

Apartment Area Schedule

Unit Number	Level	Layout	Internal Area
G01	Ground	3 x 2	117.6 m²
G02	Ground	3 x 2	121.8 m²
G03	Ground	3 x 2	123.5 m²
101	Level 1	2 x 2	76.0 m²
102	Level 1	3 x 2	123.5 m²
103	Level 1	3 x 2	128.4 m²
104	Level 1	3 x 2	119.5 m²
105	Level 1	1 x 1	56.3 m²
106	Level 1	3 x 2	94.2 m²
107	Level 1	2 x 2	76.0 m²
201	Level 2	3 x 2	149.5 m²
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203	Level 2	3 x 2	128.3 m²
204	Level 2	3 x 2	119.5 m²
205	Level 2	1 x 1	56.3 m²
206	Level 2	3 x 2	100.1 m²
301	Level 3	3 x 2	130.5 m²
302	Level 3	3 x 2	153.7 m²
303	Level 3	3 x 2	142.3 m²
401	Level 4	3 x 3.5	255.4 m²
Total Units: 20			2,402.6 m²

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Flora Residences
118 Flora Terrace, North Beach

SCALE	NP	DATE ISSUED	DRAWING NAME	PROJECT No.	DRAWING No.	REV
1 : 100 @A1 1:200 (A3) 0 1 2 3 4 5 m		21.06.24	LEVEL 04 PLAN PROJECT PHASE SCHEMATIC DESIGN	2401	SD2-05	C

Attachment 7f - Noise Management Plan prepared by Herring Storer Acoustics received 15 July 2024

HERRING STORER ACOUSTICS

SCA ARCHITECTS

118 FLORA TERRACE
NORTH BEACH

SPP 5.4 NOISE MANAGEMENT PLAN

JULY 2024

OUR REFERENCE: 33090-1-24266

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118 FLORA TERRACE
NORTH BEACH

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APPENDICES

A Plans

B Glazing Requirements

C Main Roads Traffic Flow Data

1. INTRODUCTION

Herring Storer Acoustics were commissioned through SCA Architects to carry out an acoustic study with regards to traffic related noise for the proposed development at 118 Flora Terrace, North Beach.

The purpose of the study was to:

- Assess the noise that would be received within the development area from vehicles travelling on West Coast Drive for future traffic volumes.
- Compare the results with accepted criteria and if exceedances exist, develop the framework for the management of noise.

A plan is attached in Appendix A.

It is noted that whilst this study references *State Planning Policy 5.4* as the criteria, some parts of the assessment have not been conducted under strict accordance with the policy, although a conservative approach where possible has been utilised. The intent of this preliminary assessment is to inform of general acoustic requirements as well as garner development approval.

The location of the development is such that an assessment in accordance with SPP 5.4 is required – hence, this work is intended to inform the development application process to ensure that internal noise levels within the development attain a satisfactory, industry standard, level.

2. SUMMARY

The noise measurements and modelling for the development location indicates that an upgrade to façade construction – primarily glazing – is recommended to be included during the design development phase of the project.

These recommendations will ensure that the internal noise environment within the development meets the recommended noise levels consistent with residential premises.

Recommended glazing upgrades are listed in Appendix B of this report. It is noted that the required upgrades are such that it is considered possible that other requirements will dictate the glazing selections (energy efficiency, thermal etc).

3. ACOUSTIC CRITERIA

3.1 NOISE

The Western Australian Planning Commission (WAPC) released on 6th September 2019 State Planning Policy 5.4 *"Road and Rail Noise"*. The requirements of State Planning Policy 5.4 are outlined below.

POLICY APPLICATION (Section 4)

When and where it applies (Section 4.1)

SPP 5.4 applies to the preparation and assessment of planning instruments, including region and local planning schemes; planning strategies, structure plans; subdivision and development proposals in Western Australia, where there is proposed:

a) *noise-sensitive land-use within the policy's trigger distance of a transport corridor as specified in **Table 1**.*
b) *New or major upgrades of roads as specified in **Table 1** and maps **(Schedule 1,2 and 3);** or*
c) *New railways or major upgrades of railways as specified in maps (**Schedule 1, 2 and 3);** or any other works that increase capacity for rail vehicle storage or movement and will result in an increased level of noise.*

Policy trigger distances (Section 4.1.2)

***Table 1** identifies the State's transport corridors and the trigger distances to which the policy applies.*

*The designation of land within the trigger distances outlined in **Table 1** should not be interpreted to imply that land is affected by noise and/or that areas outside the trigger distances are un-affected by noise.*

*Where any part of the lot is within the specified trigger distance, an assessment against the policy is required to determine the likely level of transport noise and management/ mitigation required. An initial screening assessment (**guidelines: Table 2: noise exposure forecast**) will determine if the lot is affected and to what extent."*

TABLE 1: TRANSPORT CORRIDOR CLASSIFICATION AND TRIGGER DISTANCES

Transport corridor classification	***Trigger distance***	***Distance measured from***
Roads		
Strategic freight and major traffic routes *Roads as defined by Perth and Peel Planning Frameworks and/or roads with either 500 or more Class 7 to 12 Austroads vehicles per day, and/or 50,000 per day traffic volume*	*300 metres*	*Road carriageway edge*
Other significant freight/traffic routes *These are generally any State administered road and/or local government road identified as being a future State administered road (red road) and other roads that meet the criteria of either >=23,000 daily traffic count (averaged equivalent to 25,000 vehicles passenger car units under region schemes)*	*200 metres*	*Road carriageway edge*
Passenger railways		
	100 metres	*Centreline of the closest track*
Freight railways		
	200 metres	*Centreline of the closest track*

Proponents are advised to consult with the decision making authority as site specific conditions (significant differences in ground levels, extreme noise levels) may influence the noise mitigation measures required, that may extend beyond the trigger distance.

POLICY MEASURES (Section 6)

The policy applies a performance-based approach to the management and mitigation of transport noise. The policy measures and resultant noise mitigation will be influenced by the function of the transport corridor and the type and intensity of the land-use proposed. Where there is risk of future land-use conflict in close proximity to strategic freight routes, a precautionary approach should be applied. Planning should also consider other broader planning policies. This is to ensure a balanced approach takes into consideration reasonable and practical considerations.

Noise Targets (Section 6.1)

***Table 2** sets out noise targets that are to be achieved by proposals under which the policy applies. Where exceeded, an assessment is required to determine the likely level of transport noise and management/mitigation required.*

In the application of the noise targets the objective is to achieve:

- *indoor noise levels as specified in **Table 2** in noise sensitive areas (for example, bedrooms and living rooms of houses, and school classrooms); and*
- *a reasonable degree of acoustic amenity for outdoor living areas on each residential lot. For non-residential noise-sensitive developments, for example schools and child care centres the design of outdoor areas should take into consideration the noise target.*

It is recognised that in some instances, it may not be reasonable and/or practicable to meet the outdoor noise targets. Where transport noise is above the noise targets, measures are expected to be implemented that balance reasonable and practicable considerations with the need to achieve acceptable noise protection outcomes.

TABLE 2: NOISE TARGETS

Proposals	New/Upgrade	Noise Targets		
		Outdoor		Indoor
		Day (L_{Aeq}(Day) dB) (6 am-10 pm)	Night (L_{Aeq}(Night)dB) (10 pm-6 am)	(L_{Aeq} dB)
Noise-sensitive land-use and/or development	New noise sensitive land use and/or development within the trigger distance of an existing/proposed transport corridor	55	50	L_{Aeq} (Day) 40(Living and work areas) L_{Aeq} (Night) 35 (bedrooms)
Roads	New	55	50	N/A
	Upgrade	60	55	N/A
Railways	New	55	50	N/A
	Upgrade	60	55	N/A

Notes:

- *The noise target is to be measured at one metre from the most exposed, habitable façade of the proposed building, which has the greatest exposure to the noise-source. A habitable room has the same meaning as defined in State Planning Policy 3.1 Residential Design Codes.*
- *For all noise-sensitive land-use and/or development, indoor noise targets for other room usages may be reasonably drawn from Table 1 of Australian Standard/New Zealand Standard AS/NZS 2107:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors (as amended) for each relevant time period.*
- *The 5dB difference in the criteria between new and upgrade infrastructure proposals acknowledges the challenges in achieving noise level reduction where existing infrastructure is surrounded by existing noise-sensitive development.*
- *Outdoor targets are to be met at all outdoor areas as far as is reasonable and practical to do so using the various noise mitigation measures outlined in the guidelines. For example, it is likely unreasonable for a transport infrastructure provider to achieve the outdoor targets at more than 1 or 2 floors of an adjacent development with direct line of sight to the traffic.*

Noise Exposure Forecast (Section 6.2)

*When it is determined that SPP 5.4 applies to a planning proposal as outlined in Section 4, proponents and/or decision makers are required to undertake a preliminary assessment using **Table 2**: noise exposure forecast in the guidelines. This will provide an estimate of the potential noise impacts on noise-sensitive land-use and/ or development within the trigger distance of a specified transport corridor. The outcomes of the initial assessment will determine whether:*

- *no further measures are required.*
- *noise-sensitive land-use and/or development is acceptable subject to deemed-to-comply mitigation measures; or*
- *noise-sensitive land-use and/or development is not recommended. Any noise-sensitive land-use and/ or development is subject to mitigation measures outlined in a noise management plan."*

4. ACOUSTIC ENVIRONMENT

The noise measurements were conducted at 03:30 PM on the 25th July 2024 for a short term period to determine the L_{A10} noise level traffic for approximately 15 minutes. This time period has been identified as peak traffic period for the road to ensure of a conservative measurement. Traffic volume details for this road section are included in Appendix C.

Utilising this measurement, reference to the DEFRA publication (*Method for Converting the UK Road Traffic Noise $L_{A10,18h}$ to the EU Noise Indices for Road Noise Mapping, ref: st/05/91/AGG04442)* has been sought and the difference between the $L_{A10,18hr}$ and the $L_{Aeq,8hr}$ and the $L_{Aeq,16hr}$ has been calculated. The location of the measurements is shown in Appendix A.

Noise measurements were conducted with a Larson Davis 831 Sound Level Meter. The Sound Level Meter was calibrated prior to and after use with a Bruel and Kjaer 4230 Calibrator. All equipment used is currently NATA laboratory calibrated. Calibration certificates are available on request.

TABLE 4.1: SUMMARY OF MEASURED NOISE LEVELS

Measurement Location	Measured/Calculated Noise Level, dB(A)		
	L_{A10}	$L_{Aeq,\ day\ (6am\ to\ 10pm)}$	$L_{Aeq,\ night\ (10pm\ to\ 6am)}$
West Coast Drive, North Beach	70.8	68.2	60.0

5. MODELLING

To determine the noise levels from traffic on West Coast Drive acoustic modelling was carried out using Sound Plan, using the Calculation of Road Traffic Noise (CoRTN)[1] algorithms.

The input data for the model included:

- Topographical and cadastral data supplied by client (Shown in Appendix A).
- Traffic data as per Table 5.1 (Obtained from MRWA Traffic Map, Attached in Appendix C).
- Adjustments as listed in Table 5.2.

TABLE 5.1 - NOISE MODELLING INPUT DATA

Parameter	West Coast Drive (Current) 2024*	West Coast Drive (Future) 2044*
Traffic Volumes	16,990 vpd	25,240 vpd
Percentage traffic 0600 – 2400 hours (Assumed)	94%	94%
Heavy Vehicles (%) (Assumed)	5.8%	5.8%
Speed (km/hr)	50km/hr	50km/hr
Road Surface	Asphalt**	Asphalt**

*Future extrapolated road traffic figures based on the MRWA Traffic counts (attached in Appendix C)
**Assumed

TABLE 5.2 – ADJUSTMENTS FOR NOISE MODELLING

Description	Value
Façade Reflection Adjustment	+2.5 dB
Conversion from $L_{A10\ (18\ hour)}$ to $L_{Aeq\ (16\ hour)}$ (Day) West Coast Drive	-2.6 dB

6. TRAFFIC NOISE ASSESSMENT

Using the data contained in Tables 4.1, 5.1 and 5.2, modelling was carried out under existing conditions for calibration. The Sound Plan model for the site has been set up for the 2043 scenario as defined in Table 5.1. The following assumptions have been made:

- 18-hour traffic count will be 94% of daily figures.
- Traffic figures used are MRWA Traffic Counts (Attached in Appendix C)
- Noise model calibrated to measured noise level as per Table 4.1
- The same diurnal relationship will exist in the future between the $L_{A10\ (18\ hour)}$ and the L_{Aeq} parameters; and
- 2.5 dB(A) has been added to the results for façade reflection.

The noise requirements based on the above have been listed in Appendix B.

It is noted that these requirements pertain to acoustic requirements only, with regard to *State Planning Policy 5.4,* and may be superseded by other requirements (BAL, Thermal, etc).

1 *Calculation of Road Traffic Noise* UK Department of Transport 1987

7. CONCLUSION

In accordance with the WAPC Planning Policy 5.4, an assessment of the noise that would be received within the development of 118 Flora Terrace, North Beach from vehicles travelling on West Coast Drive has been undertaken.

In accordance with the Policy, the following would be the acoustic criteria applicable to this project:

External	
Day	55 dB(A) L_{Aeq}
Night	50 dB(A) L_{Aeq}
Internal	
Sleeping Areas	35 dB(A) $L_{Aeq(night)}$
Living Areas	40 dB(A) $L_{Aeq(day)}$

It is noted that walls of the development would be recommended to be constructed of either masonry or tilt up concrete panel. If a lightweight construction or similar is desirable, investigation into constructions that would meet the requirements of State Planning Policy 5.4 would have to be undertaken.

The results of the acoustic assessment indicate that noise received at the development from future traffic, exceed external noise level criteria. Therefore, noise amelioration in the form of quiet house design listed in Appendix B, as well as notifications on the title are required.

It is noted that due to the development's proximity to West Coast Drive, glazing upgrades will likely be required for windows at the façades.

Upgraded construction in the form of a Quiet House Design Package will also likely need to be implemented for walls and ceilings.

Herring Storer Acoustics recommends the findings of this preliminary assessment are reviewed once detailed designed is finalised to provide a more accurate assessment – this would include finalised window sizes, façade constructions and the like to be accounted for.

APPENDIX A

PLANS

GROUND

Apartment Area Schedule

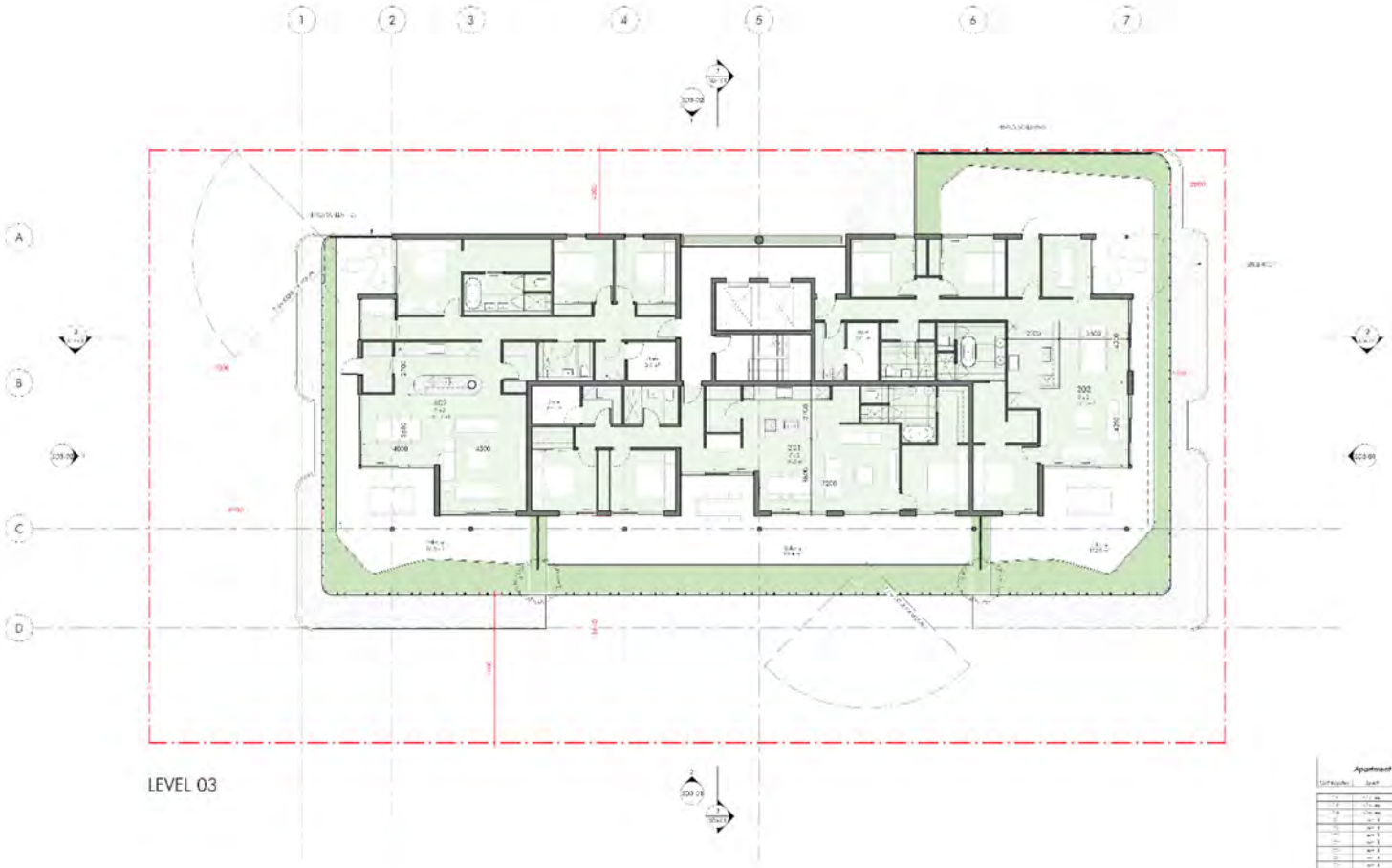
Unit Number	Level	Level	Unit Area (Sq.m)
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

LEVEL 01

Apartment Area Schedule

LEVEL 02

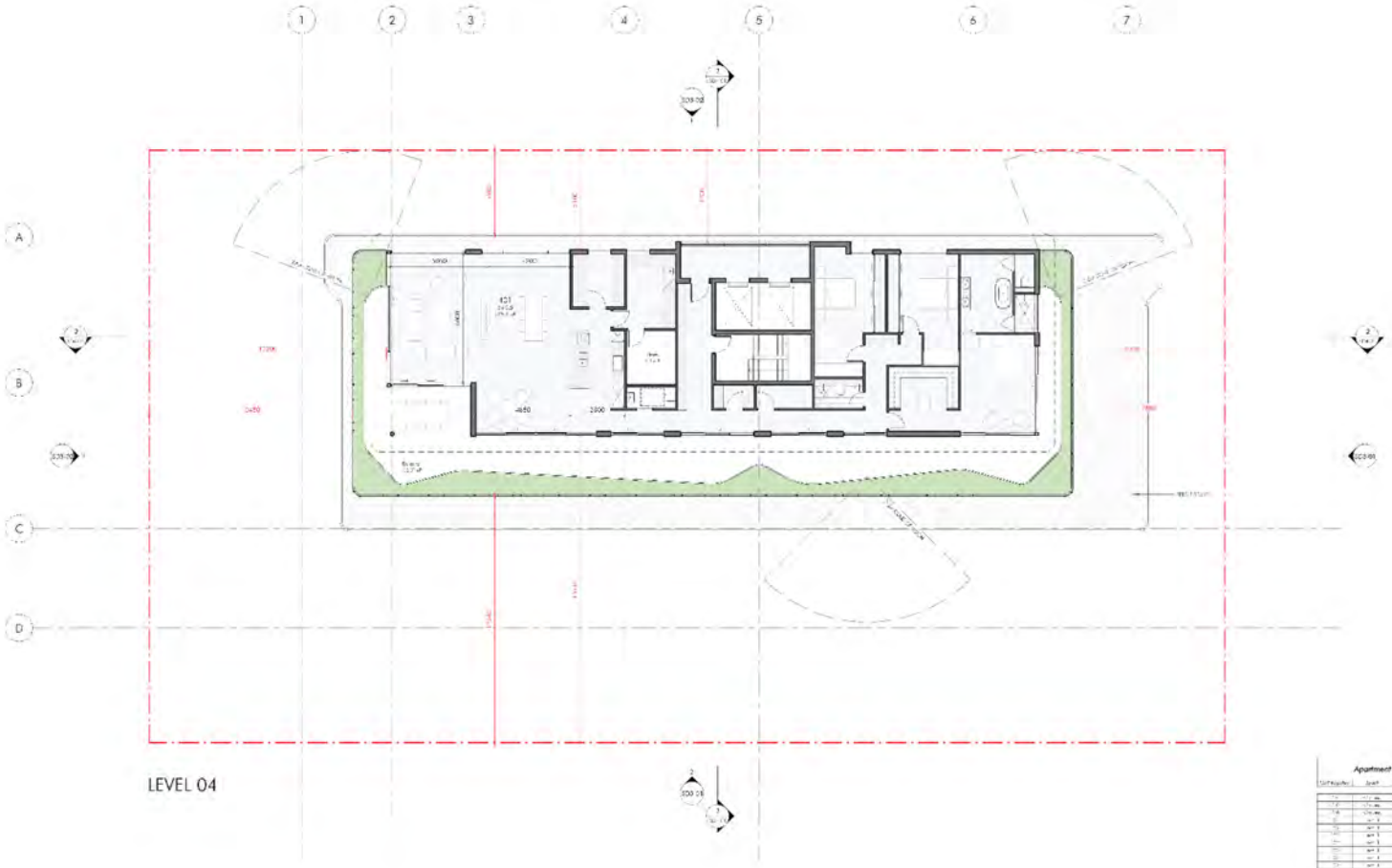
Apartment Area Schedule



LEVEL 03

Apartment Area Schedule

Unit Number	Level	Level	Unit Area (Sqm)
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]



LEVEL 04

Apartment Area Schedule

Unit Number	Level	Level	Unit Area (Sqm)
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

APPENDIX B

GLAZING REQUIREMENTS

PROPOSED DEVELOPMENT

Facade	Calculated Noise Levels and Required R_w and C_{tr} Ratings					
	Proposed Development		Window to Room Area Ratio 0.4		Window to Room Area Ratio 0.6	
	Floor	Level dB(A)	Bedroom $R_w + C_{tr}$	Living Room $R_w + C_{tr}$	Bedroom $R_w + C_{tr}$	Living Room $R_w + C_{tr}$
East	GF	41	23	23	23	23
	F 1	38	23	23	23	23
	F 2	42	23	23	23	23
	F 3	46	23	23	23	23
	F 4	48	23	23	23	23
North	GF	47	23	23	23	23
	F 1	49	23	23	23	23
	F 2	51	23	23	23	23
	F 3	53	24	23	26	23
	F 4	55	26	23	28	23
South	GF	46	23	23	23	23
	F 1	48	23	23	23	23
	F 2	51	23	23	23	23
	F 3	53	24	23	26	23
	F 4	55	26	23	27	23
West	GF	48	23	23	23	23
	F 1	51	23	23	23	23
	F 2	53	24	23	25	23
	F 3	55	26	23	27	23
	F 4	56	27	23	29	24

Notes: The required R_W rating can be reduced by reducing the area of glazing.
Requirements pertain to only acoustic advice in regard to *State Planning Policy 5.4* and may be superseded by other requirements (BAL, Thermal, etc).

APPENDIX C

MRWA TRAFFIC FLOW DATA

mainroads WESTERN AUSTRALIA

SITE 5342

Hourly Volume

West Coast Dr (1252130)

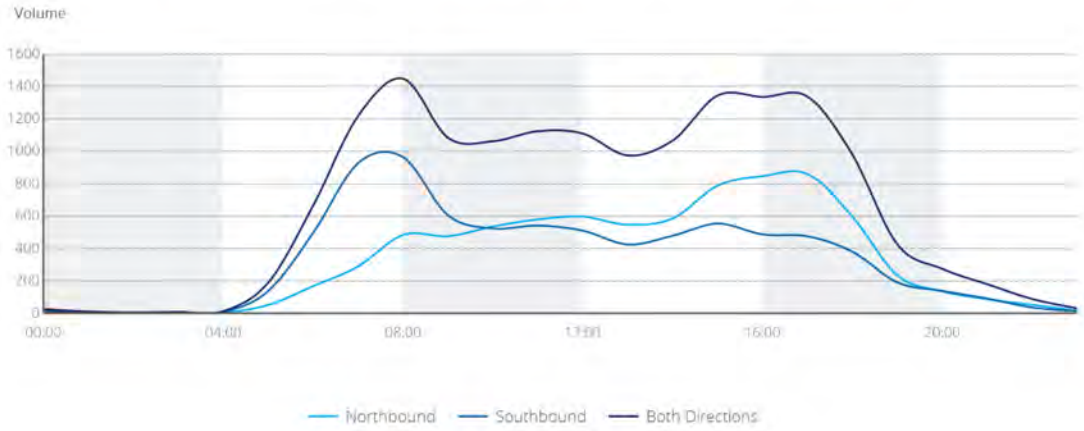
South of Beach Rd (SLK 3.84)

2020/21
Monday to Friday

	All Vehicles			Heavy Vehicles			
	NB	SB	Both	NB	SB	Both	%
00:00	13	13	26	0	0	0	0.0
01:00	8	3	11	1	0	1	9.1
02:00	2	4	6	0	1	1	16.7
03:00	6	3	9	1	1	2	22.2
04:00	5	9	14	2	0	2	14.3
05:00	52	139	191	5	4	9	4.7
06:00	180	490	668	24	33	57	8.5
07:00	291	928	1219	35	33	68	5.6
08:00	485	963	1448	34	27	61	4.2
09:00	477	606	1083	38	20	58	5.4
10:00	537	525	1062	48	20	68	6.4
11:00	581	543	1124	48	18	66	5.9
12:00	598	511	1109	56	21	77	6.9
13:00	548	426	974	46	18	64	6.6
14:00	587	480	1067	63	21	84	7.9
15:00	790	556	1345	79	16	95	7.1
16:00	848	488	1336	83	12	95	7.1
17:00	861	476	1337	56	6	62	4.6
18:00	597	381	978	30	5	35	3.6
19:00	234	191	425	10	1	11	2.6
20:00	136	139	275	7	2	9	3.3
21:00	88	92	180	2	0	2	1.1
22:00	53	36	89	1	1	2	2.2
23:00	18	13	31	2	0	2	6.5
TOTAL	7984	8023	16007	671	260	931	5.8

Peak Statistics

AM	TIME	11:30	07:30	07:45	11:30	06:30	06:30
	VOL	636	1089	1467	54	39	74
PM	TIME	17:00	15:30	15:30	16:00	12:30	14:30
	VOL	861	560	1384	83	26	97



ELEMENT 2.2	BUILDING HEIGHT	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O2.2.1 – The height of development responds to the desired future scale and character of the street and local area, including existing buildings that are unlikely to change.	The proposed development varies the 3 storey height maximum under LPP4.2 to a total of 5 storeys (16.8m in lieu of 12m). Significant consideration of visual impacts and setback variations has been made to ensure that the increased building height does not have a detrimental impact on the amenity of the area or adjoining sites in accordance with the development objectives for building height under LPP4.2. This has been done through the use of increased setbacks, which ensure the visual perspective of pedestrians and visitors approaching the site is comparable to the view provided by a deemed to comply development. The proposed development is designed to maximise solar access and daylight within and around the development, with the building bulk stepped away from the R20 lots located to the south of the subject site and focused to the north and adjacent R50 and centre lots.	
O2.2.2 – The height of buildings within a development responds to changes in topography.		
O2.2.3 – Development incorporates articulated roof design and/or roof top communal open space where appropriate.		
O2.2.4 – The height of development recognises the need for daylight and solar access to adjoining and nearby residential development, communal open space and in some cases, public spaces.		

ACCEPTABLE OUTCOMES
Acceptable Outcome pathway may not be applicable where a performance solution is provided

A2.2.1 – Development complies with the building height limit (storeys) set out in Table 2.1, except where modified by the local planning framework, in which case development complies with the building height limit set out in the applicable local planning instrument.

(Excerpt from table 2.1)

Streetscape contexts and character *refer A2*	Low-rise		Medium-rise		Higher density residential		Neighbourhood centre	Mid-rise urban centres	High density urban centres		Planned areas
Site R-Coding	R40	R50	R60	R80	R100	R160	R-AC4	R-AC3	R-AC2	R-AC1	R-AC0
Building height (storeys) *refer 2.2*	2	3	3	4	4	5	3	6	7	9	

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	Per LPP4.2 (replaces) *LPP4.2 Building Height development objective:*

	To ensure the height of buildings does not adversely impact on the street-scape and amenity of adjoining residents by minimising building bulk and maintaining daylight and solar access. *<u>Acceptable Development Provisions:</u>* *The maximum building height for all development is 3 storeys.* *The maximum building height may be varied through the adoption of a Local Development Plan prepared for a Centre. The Local Development Plan must meet the Design Principles, Objectives and design intent of this Policy. A Local Development Plan may be prepared for a portion of a Centre, at the discretion of the local government.*

ELEMENT 2.3	**STREET SETBACKS**	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O2.3.1 – The setback of the development from the street reinforces and/or complements the existing or proposed landscape character of the street.	Per the acceptable development requirements under LPP4.2, the proposed development includes a nil setback to the street, excluding the pedestrian entrance which includes a 2m covered alcove area and the vehicle access point. The vehicle access provides additional setback along the boundary adjoining existing residential development, with a street setback of 4.9m and a side boundary setback of 5.74m. This is a minor variation from the development requirements of LPP4.2, with the 0.26m variation not impacting on the streetscape continuity or the transitions between the adjacent land uses as the vehicle entrance provides a transitional zone between the lots. The nil setback and significant areas of glazing and activation along the front façade also ensure there is a high level of passive surveillance to and from the development.	
O2.3.2 – The street setback provides a clear transition between the public and private realm.		
O2.3.3 – The street setback assists in achieving visual privacy to apartments from the street.		
O2.3.4 – The setback of the development enables passive surveillance and outlook to the street.		
ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*		
A3.2.1 – Development complies with the street setback set out in Table 2.1, except where modified by the local planning framework, in which case development complies with the street setback set out in the applicable local planning instrument *(Excerpt from table 2.1)*		

Streetscape contexts and character *refer A2*	Low-rise		Medium-rise		Higher density residential		Neighbourhood centre	Mid-rise urban centres	High density urban centres		Planned areas
Site R-Coding	R40	R50	R60	R80	R100	R160	R-AC4	R-AC3	R-AC2	R-AC1	R-AC0
Minimum primary and secondary street setbacks *refer 2.3*	4m [4]	2m	2m		2m		2m or Nil [5]	2m or Nil [5]	2m or Nil [5]		

(4) Minimum secondary street setback 1.5m

(5) Nil setback applicable if commercial use at ground floor

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	Per LPP4.2 (replaces) *<u>LPP4.2 Building setbacks development objective:</u>* *To ensure that building setbacks provide streetscape continuity and a suitable transition between land uses.* *<u>Acceptable Development Provisions:</u>* *Buildings shall have a Nil setback to primary and secondary streets.* *Where adjoining sites are zoned Residential or abut a residential land use, buildings street setback shall be stepped back when appropriate from the:* o *Street; and* o *Side Boundary, the distance of the street setback, as per the street setback requirements of that adjoining residential development (refer Figure 1).* *<u>Activity and uses</u>* *Buildings designed to provide passive surveillance of the street.*

ELEMENT 2.4 SIDE AND REAR SETBACKS

ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	APPLICANT COMMENT	ASSESSOR COMMENT
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O2.4.1 – Building boundary setbacks provide for adequate separation between neighbouring properties.	The development is compliant with the side setback requirements for the ground floor, in accordance with the R-Codes Volume 1 for walls with major openings. The only variation proposed is for the 2nd floor (level 1) and above to the southern boundary, with a minimum setback of 5.74m in lieu of the 6m required under	
O2.4.2 – Building boundary setbacks are consistent with the existing streetscape pattern or the desired streetscape character.		

O2.4.3 – The setback of development from side and rear boundaries enables retention of existing trees and provision of deep soil areas that reinforce the landscape character of the area, support tree canopy and assist with stormwater management.	LPP4.2. This variation is balanced with the articulation provided to the building, with provision of a 7.5m setback to the proposed level 1 balconies facing the southern boundary. As such no amenity impacts, or visual privacy issues, are created by the variation to the setback requirements. This demonstrates that the proposed variation is aligned with the objective of LPP4.2 and ensures there are suitable transitions between the land uses on adjacent lots. The minimum rear boundary setback is 7.5m, satisfying the LPP4.2 acceptable development requirement for a 6m minimum.	
O2.4.4 –The setback of development from side and rear boundaries provides a transition between sites with different land uses or intensity of development.		

ACCEPTABLE OUTCOMES

Acceptable Outcome pathway may not be applicable where a performance solution is provided

A2.4.1 - Development complies with the side and rear setbacks set out in Table 2.1, except where:

a) modified by the local planning framework, in which case development complies with the side and rear setbacks set out in the applicable local planning instrument

AND /OR

b) a greater setback is required to address *3.5 Visual privacy*.

(Excerpt from table 2.1)

Streetscape contexts and character *refer A2*	Low-rise		Medium-rise		Higher density residential		Neighbourhood centre	Mid-rise urban centres	High density urban centres		Planned areas
Site R-Coding	**R40**	**R50**	**R60**	**R80**	**R100**	**R160**	**R-AC4**	**R-AC3**	**R-AC2**	**R-AC1**	**R-AC0**
Boundary wall height (storeys)[1,2] *refer 2.4*	1[3]		1[3]	2[3]	2[3]		2	3	4		
Minimum side setbacks[6] *refer 2.4*	2m	3m	3m		3m		Nil				
Minimum rear setback *refer 2.4*	3m		3m		6m		6m	Nil	Nil		
Average side setback where building length exceeds 16m *refer 2.4*	2.4m	3.5m	3.5m	3.5m	3.5m	4.0m	NA	NA	NA		

(1) Wall may be built up to a lot boundary, where it abuts an existing or simultaneously constructed wall of equal or greater proportions

(2) Where the subject site and an affected adjoining site are subject to different density codes, the length and height of any boundary wall on the boundary between them is determined by reference to the lower density code

(3) Boundary wall only permitted on one boundary, and shall not exceed 2/3 length.

(6) Boundary setbacks will also be determined by provisions for building separation and visual privacy within this SPP and building separation provisions of the NCC.
A2.4.2 – Development is setback from the boundary in order to achieve the Objectives outlined in *2.7 Building separation*, *3.3 Tree canopy and deep soil areas*, *3.5 Visual privacy* and *4.1 Solar and daylight access*.

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	Per LPP4.2 (replaces) *LPP4.2 Building setbacks development objective:* *To ensure that building setbacks provide streetscape continuity and a suitable transition between land uses.* *Acceptable Development Provisions:* *Buildings shall have a Nil setback to side boundaries, except where adjoining sites are zoned Residential.* *Where adjoining sites are zoned Residential or abut a residential land use, side setbacks shall be calculated as per the R-Codes applicable to the adjoining site.* *Buildings shall have the following minimum setback to rear lot boundaries:* o *6m – Abutting lots coded R60 and under;* o *3m – Abutting lots coded R80 and over, or Corner lots abutting lots coded R60 and under; or* o *Nil – Corner lots abutting lots coded R80 and over.* *Where adjoining sites are zoned Residential, floors above 2 storeys shall be setback 6.0m from the common lot boundary, except where the adjoining residential building is 3 storeys or higher.*

ELEMENT 2.5 PLOT RATIO

ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	APPLICANT COMMENT	ASSESSOR COMMENT
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O2.5.1 – The overall bulk and scale of development is appropriate for the existing or planned character of the area.	The proposed development has been designed to ensure a smooth transition between the northern adjoining R50 zoned site and the southern adjoining R20 residential properties. In line with the DRP comments, the three-storey podium reflects the intended character of the local centre, while the increased setbacks provided to the upper two floors ensure that the additional height and bulk of the building do not negatively impact amenity. Therefore, the development is considered appropriate in bulk and scale for the existing and planned character of the area.	

ACCEPTABLE OUTCOMES
Acceptable Outcome pathway may not be applicable where a performance solution is provided

A2.5.1 – Development complies with the plot ratio requirements set out in Table 2.1, except where modified by the local planning framework, in which case development complies with the plot ratio set out in the applicable local planning instrument.

(Excerpt from table 2.1)

Streetscape contexts and character *refer A2*	Low-rise		Medium-rise		Higher density residential		Neighbourhood centre	Mid-rise urban centres	High density urban centres		Planned areas
Site R-Coding	R40	R50	R60	R80	R100	R160	R-AC4	R-AC3	R-AC2	R-AC1	R-AC0
Plot ratio [7] *refer 2.5*	0.6	0.7	0.8	1.0	1.3	2.0	1.2	2.0	2.5	3.0	

(6) Refer to Definitions for calculation of plot ratio

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 2.6 BUILDING DEPTH

ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	APPLICANT COMMENT	ASSESSOR COMMENT
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O2.6.1 – Building depth supports apartment layouts that optimise daylight and solar access and natural ventilation.	Acceptable outcomes achieved. The proposed development includes a mix of single and dual aspect apartments, with all apartments having a maximum depth of less than 20m. All apartments are set out to maximise access to solar access and natural ventilation, with a majority of the apartments capable of cross-ventilation. Similarly, all dwellings achieve adequate access to daylight, with room depths and orientations designed to ensure maximum solar access for each apartment.	
O2.6.2 – Articulation of building form to allow adequate access to daylight and natural ventilation where greater building depths are proposed.		
O2.6.3 – Room depths and / or ceiling heights optimise daylight and solar access and natural ventilation.		

ACCEPTABLE OUTCOMES
Acceptable Outcome pathway may not be applicable where a performance solution is provided

A2.6.1 – Developments that comprise single aspect apartments on each side of a central circulation corridor shall have a maximum building depth of 20m. All other proposals will be assessed on their merits with particular consideration to *4.1 Solar and daylight access* and *4.2 Natural ventilation*.	
LOCAL PLANNING FRAMEWORK	**REQUIREMENT**
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 2.7	BUILDING SEPARATION	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O2.7.1 – New development supports the desired future streetscape character with spaces between buildings.	The proposed development aligns with the future intended streetscape for the locality as a local centre area, with increases in building setback from the street ensuring the development does not dominate the streetscape or negatively impact the amenity of the adjacent residential lots.	
O2.7.2 – Building separation is in proportion to building height.	The proposed development increases the boundary setbacks for upper floors, ensuring that the separation is reflective of the increased height of the development.	
O2.7.3 – Buildings are separated sufficiently to provide for residential amenity including visual and acoustic privacy, natural ventilation, sunlight and daylight access and outlook.	The increasing setbacks ensure that the buildings are separated sufficiently, and provide for residential amenity including visual and acoustic privacy, natural ventilation, sunlight and daylight access and outlook both within and around the development.	
O2.7.4 – Suitable areas are provided for communal and private open space, deep soil areas and landscaping between buildings	Provision of 140m^2 communal open space is included within the development, which includes provision of two small trees and related deep soil areas. This is centralised to the development, and co-located with other central communal areas (indoors) to provide a sociable centre to the development.	

ACCEPTABLE OUTCOMES
Acceptable Outcome pathway may not be applicable where a performance solution is provided

A2.7.1 – Development complies with the separation requirements set out in Table 2.7.

Table 2.7 Building separation

	Separation between:	Building height		
		≤ 4 storeys (up to 15m)	5-8 storeys (up to 28m)	≥ 9 storeys (over 28m)
Within site boundary	Habitable rooms/balconies	12m	18m	24m
	Habitable and non-habitable rooms	7.5m	12m	18m
	Non-habitable rooms	4.5m	6m	9m
To adjoining property boundaries	Habitable rooms/balconies and boundary	Refer *2.4 Side and rear setbacks* (Table 2.1) and *3.5 Visual privacy* (Table 3.5)	9m	12m

Distances apply from major openings of rooms, or the inside of balustrading of balconies.
Average dimensions may be applied subject to major openings meeting other requirements for privacy, daylight and the like.

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 3.2 ORIENTATION

ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	APPLICANT COMMENT	ASSESSOR COMMENT
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O3.2.1 – Building layouts respond to the streetscape, topography and site attributes while optimising solar and daylight access within the development.	Acceptable outcomes achieved. The proposed development is designed to address the street, with the office tenancy located against the street boundary.	
O3.2.2 – Building form and orientation minimises overshadowing of the habitable rooms, open space and solar collectors of neighbouring properties during mid-winter.	The development is oriented to maximise northern solar access to the residential tenancies, with a majority of the units receiving a minimum of 2 hours of sunlight on 21 June. Overshadowing to the southern R20 residential lots is compliant with A3.2.3, with less than 25% overshadowing created. Further, the site is compliant with A3.2.4, with all existing solar collectors receiving at least 5-6 hours of sunlight on 21 June.	

ACCEPTABLE OUTCOMES
Acceptable Outcome pathway may not be applicable where a performance solution is provided

A3.2.1 – Buildings on street or public realm frontages are oriented to face the public realm and incorporate direct access from the street.

A3.2.2 – Buildings that do not have frontages to streets or public realm are oriented to maximise northern solar access to living areas.

A3.2.3 – Development in climate zones 4, 5 and 6 shall be designed such that the shadow cast at midday on 21st June onto any adjoining property does not exceed:

- adjoining properties coded R25 and lower – 25% of the site area[1]
- adjoining properties coded R30 – R40 - 35% of the site area[1]
- adjoining properties coded R50 – R60 – 50% of the site area[1]
- adjoining properties coded R80 or higher – Nil requirements.

(1) Where a development site shares its southern boundary with a lot, and that lot is bound to the north by other lot(s), the limit of shading at A3.2.3 shall be reduced proportionally to the percentage of the affected properties northern boundary that abuts the development site. (Refer to Figure A7.2 in Appendix 7)

A3.2.4– Where adjoining sites are coded R40 or less, buildings are oriented to maintain 4 hours per day solar access on 21 June for existing solar collectors on neighbouring sites.

LOCAL PLANNING FRAMEWORK	REQUIREMENT

Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 3.3	TREE CANOPY AND DEEP SOIL AREAS	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O3.3.1 – Site planning maximises retention of existing healthy and appropriate and protects the viability of adjoining trees.	The proposed development includes the removal of six (6) existing trees on site, and the retention of the existing street (verge) tree. These trees, despite varying from the acceptable outcome requirements for tree retention, are proposed to be replaced, with provision of 12 small trees, 2 medium trees, a large tree and an additional verge tree all included in the development plans. These trees are proposed to be located in deep soil and on-structure planting areas and exceed the tree provision requirements for the site. Similarly, on planting structures have a minimum of 1m width and 1m depth where on structure trees are proposed, with the 120m^2 of deep soil at ground level providing for the remaining proposed tree planting.	
O3.3.2 – Adequate measures are taken to improve tree canopy (long term) or to offset reduction of tree canopy from pre-development condition.		
O3.3.3 – Development includes deep soil areas, or other infrastructure to support planting on structures, with sufficient area and volume to sustain healthy plant and tree growth.		

ACCEPTABLE OUTCOMES
Acceptable Outcome pathway may not be applicable where a performance solution is provided

A3.3.1 – Retention of existing trees on the site that meet the following criteria:

- healthy specimens with ongoing viability **AND**
- species is not included on a State or local area weed register **AND**
- height of at least 4m **AND/OR**
- trunk diameter of at least 160mm, measured 1m from the ground **AND/OR**
- average canopy diameter of at least 4m.

A3.3.2 – The removal of existing trees that meet any of the criteria at A3.3.1 is supported by an arboriculture report.

A3.3.3 – The development is sited and planned to have no detrimental impacts on, and to minimise canopy loss of adjoining trees.

A3.3.4 – Deep soil areas are provided in accordance with Table 3.3a. Deep soil areas are to be co-located with existing trees for retention and/or adjoining trees, or alternatively provided in a location that is conducive to tree growth and suitable for communal open space.

Table 3.3a Minimum deep soil area and tree provision requirements

Site Area	Minimum deep soil area	Minimum requirement for trees [1]
Less than 700m²	10% **OR** 7% if existing tree(s) retained on site (% site area)	1 medium tree and small trees to suit area
700 – 1,000m²		2 medium trees **OR** 1 large tree and small trees to suit area
›1,000m²		1 large tree and 1 medium tree for each additional 400m² in excess of 1000m² **OR** 1 large tree for each additional 900m² in excess of 1000m² and small trees to suit area
[1] Minimum requirement for trees includes retained or new trees Refer Table 3.3b for tree sizes		

A3.3.5 – Landscaping includes existing and new trees with shade producing canopies in accordance with Tables 3.3a and 3.3b.

Table 3.3b Tree sizes

Tree size	Indicative canopy diameter at maturity	Nominal height at maturity	Required DSA per tree	Recommended minimum DSA width	Minimum DSA width where additional rootable soil zone (RSZ) width provided[1] (min 1m depth)	Indicative pot size at planting
Small	4-6m	4-8m	9m²	2m	1m (DSA) + 1m (RSZ)	100L
Medium	6-9m	8-12m	36m²	3m	2m (DSA) + 1m (RSZ)	200L
Large	›9m	›12m	64m²	6m	4.5m (DSA) + 1.5m (RSZ)	500L
[1] Rootable areas are for the purposes of determining minimum width only and do not have the effect of reducing the required DSA.						

A3.3.6 – The extent of permeable paving or decking within a deep soil area does not exceed 20 per cent of its area and does not inhibit the planting and growth of trees.

A3.3.7 – Where the required deep soil areas cannot be provided due to site restrictions, planting on structure with an area equivalent to two times the shortfall in deep soil area provision is provided.

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 3.4	COMMUNAL OPEN SPACE	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O3.4.1 – Provision of quality communal open space that enhances resident amenity and provides opportunities for landscaping, tree retention and deep soil areas.	Acceptable outcomes achieved. 140m² (surplus of 20m²) of communal open space is located adjacent to the central lobby and lift area on the ground floor, with barbeque, seating, and a separate co-working area provided. The open space area includes covered and uncovered areas, with provision for two small trees and landscaping elements within the uncovered space. The communal open space is located centrally to the development and is designed to ensure there are no overlooking or privacy impacts on the adjacent private residences, with no openings connecting directly from the open space into adjacent private residences.	
O3.4.2 – Communal open space is safe, universally accessible and provides a high level of amenity for residents.		
O3.4.3 – Communal open space is designed and oriented to minimise impacts on the habitable rooms and private open space within the site and of neighbouring properties.		

ACCEPTABLE OUTCOMES
Acceptable Outcome pathway may not be applicable where a performance solution is provided

A3.4.1 – Developments include communal open space in accordance with Table 3.4

Table 3.4 Provision of communal open space

Development size	Overall communal open space requirement	Minimum accessible / hard landscape area (included in overall area requirement)	Minimum open space dimension
Up to 10 dwellings	Informal seating associated with deep soil or other landscaped areas	NA	NA
More than 10 dwellings	Total: 6m² per dwelling up to maximum 300m²	At least 2m² per dwelling up to 100m²	4m

A3.4.2 – Communal open space located on the ground floor or on floors serviced by lifts must be accessible from the primary street entry of the development.

A3.4.3 – There is 50 per cent direct sunlight to at least one communal open space area for a minimum of two hours between 9am and 3pm on 21 June.

A3.4.4– Communal open space is co-located with deep soil areas and/or planting on structure areas and/ or co-indoor communal spaces.

A3.4.5 – Communal open space is separated or screened from adverse amenity impacts such as bins, vents, condenser units, noise sources and vehicle circulation areas.

A3.4.6 – Communal open space is well-lit, minimises places for concealment and is open to passive surveillance from adjoining dwellings and/or the public realm.

A3.4.7 – Communal open space is designed and oriented to minimise the impacts of noise, odour, light-spill and overlooking on the habitable rooms and private open spaces within the site and of neighbouring properties.

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 3.5	VISUAL PRIVACY	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O3.5.1 – The orientation and design of buildings, windows and balconies minimises direct overlooking of habitable rooms and private outdoor living areas within the site and of neighbouring properties, while maintaining daylight and solar access, ventilation and the external outlook of habitable rooms.	Acceptable outcomes achieved. The proposed development is compliant with A3.5.1, with all unscreened balconies and major openings set back in accordance with Table 3.5. Primary balconies are unscreened for at least 25% of their perimeter in accordance with A3.5.2, and are connected to living rooms with an external outlook that is not obscured (per A3.5.3). All windows and balconies have been considered to reduce the reliance on high sill levels or permanent screening in accordance with A3.5.4.	

ACCEPTABLE OUTCOMES
Acceptable Outcome pathway may not be applicable where a performance solution is provided

A3.5.1 – Visual privacy setbacks to side and rear boundaries are provided in accordance with Table 3.5.

Table 3.5 Required privacy setback to adjoining sites

Cone of vision from unscreened:	First 4 storeys		5th storey and above
	Adjoining sites coded R50 or lower	Adjoining sites coded higher than R50	
Major opening to bedroom, study and open access walkways	4.5m	3m	Refer Table 2.7
Major openings to habitable rooms other than bedrooms and studies	6m	4.5m	
Unenclosed private outdoor spaces	7.5m	6m	

A3.5.2 – Balconies are unscreened for at least 25 per cent of their perimeter (including edges abutting a building).

A3.5.3 - Living rooms have an external outlook from at least one major opening that is not obscured by a screen.

A3.5.4 – Windows and balconies are sited, oriented, offset or articulated to restrict direct overlooking, without excessive reliance on high sill levels or permanent screening of windows and balconies.

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 3.6	PUBLIC DOMAIN INTERFACE	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O3.6.1 – The transition between the private and public domain enhances the privacy and safety of residents.	The public domain interface has been designed to encourage passive surveillance and interaction between the public and private realms. In accordance with LPP4.2, the ground floor façade has a mix of clear glazing, openable and fixed windows/doors, and does not create significant blank walls or blind corners. The proposed front façade windows are full height, with the parapet above designed with articulation and material changes to create visual interest, while retractable awnings over the office tenancy windows will provide shade and shelter to the public footpath in adverse weather. The site is proposed to be levelled to ensure that step free access is available from the front footpath into the development (office or residential access), with provision of lighting and visual connection to the areas between private and public realms to ensure safe and convenience access to and from the site.	
O3.6.2 – Street facing development and landscape design retains and enhances the amenity and safety of the adjoining public domain, including the provision of shade.		

ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*
A3.6.1 – The majority of ground floor dwellings fronting onto a street or public open space have direct access by way of a private terrace, balcony or courtyard.
A3.6.2 – Car-parking is not located within the primary street setback; and where car parking is located at ground level behind the street setback it is designed to integrate with landscaping and the building façade (where part of the building).
A3.6.3 – Upper level balconies and/or windows overlook the street and public domain areas.
A3.6.4 – Balustrading includes a mix of visually opaque and visually permeable materials to provide residents with privacy while maintaining casual surveillance of adjoining public domain areas.
A3.6.5 – Changes in level between private terraces, front gardens and the ground floor level of the building and the street level average less than 1m and do not exceed 1.2m.
A3.6.6 – Front fencing includes visually permeable materials above 1.2m and the average height of solid walls or fences to the street does not exceed 1.2m.
A3.6.7 – Fencing, landscaping and other elements on the frontage are designed to eliminate opportunities for concealment.
A3.6.8 – Bins are not located within the primary street setback or in locations visible from the primary street.

A3.6.9 – Services and utilities that are located in the primary street setback are integrated into the design of the development and do not detract from the amenity and visual appearance of the street frontage.[1]

(1) Firefighting and access to services such as power and water meters require careful consideration in the design of the front façade. Consult early with relevant authorities to resolve functional requirements in an integrated design solution.

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	Per LPP4.2 (amends) *<u>LPP4.2 Safety and lighting/ground floor frontage, activity and weather protection development objectives:</u>* *To ensure outdoor public spaces are safe, secure and enable community interaction and reduce opportunities for concealment or entrapment.* *To ensure that buildings provide an active, safe and sheltered frontage/ facade.* *<u>Acceptable Development Provisions:</u>* *<u>Ground Floor frontage and street parapets</u>* *The ground floor building façade shall:* o *be at least 50% clear glazed of the surface area of that storey;* o *provides a mixture/combination of openable and fixed windows and doors;* o *provides active and passive surveillance;* o *not include roller shutter screens unless they are a minimum 75% visually permeable;* o *not contain signage which covers more than 20% of area of individual windows; and* o *in the case of nil setbacks to the street, have a minimum window sill height of 0.5m above finished ground floor level.* *Awnings are to:* o *protrude a minimum of 2.0m from the building;* o *be provided over all footpaths that abut a building, including footpaths to the rear;* o *be provided above all entrances and exits of a building;* o *be of solid construction using materials that are opaque and non-reflective (eg. No glass); and* o *match the height of existing adjacent awnings.* *All buildings with a nil street setback shall contain street parapets which include:* o *indentations;* o *differing materials, colours and textures: and* o *variation in parapet heights and designs for each building so as to provide additional interest to the street.* *Note: Street Parapet means the portion of the façade of the building that extends upright above the roof, positioned on street boundaries.* *<u>Fencing</u>* *Fencing is not:* o *permitted between the building and any street boundary:* o *permitted above 1.8m in height; and* o *to be located where it obstructs access and views to visitor parking bays.*

	<u>Levels</u> *On sloping sites development shall be stepped so as to avoid differences between the footpath level and the finished ground floor level of the building;* *There shall be no level difference between the finished ground floor level and the footpath level of a building to ensure pedestrian access; and* *Filling of a site up to 0.5m above Natural Ground Level shall be permitted to enable level sites.* *<u>Service Access</u>* *Parking for service/loading vehicles be:* o *provided on-site;* o *accessed via a Rights of Way where possible; and* o *screened from view from the street and abutting residential sites (eg, sleeved by buildings).* *The provision of parking for service/loading vehicles may be considered off-site in adjacent streets where the Design Intent for Service Access is met.* *<u>Design and Lighting</u>* *Service/loading areas and accessways:* o *be designed to minimise light and noise nuisance to adjoining land uses;* o *be visible from indoor areas where located behind a building; and* o *do not create:* ▪ *Entrapment areas, blind corners and narrow pathways:* ▪ *Long expanses of blank walls;* ▪ *Dead ends and hidden recesses; and* ▪ *Landscaping which forms a visual barrier between 0.5m and 2.0m above ground level.* • *Lighting be provided:* o *under awnings;* o *in parking areas;* o *in service areas;* o *over footpaths;* o *over entry points; and* o *to illuminate elements of buildings and landscaping features.*

ELEMENT 3.7	PEDESTRIAN ACCESS AND ENTRIES	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O3.7.1 – Entries and pathways are universally accessible, easy to identify and safe for residents and visitors.	Pedestrian access and footpaths will be provided in accordance with the requirements of LPP4.2. Pedestrian paths connect parking areas to building entrances and along all street frontages, and provide access between the street and rear parking areas. The existing pedestrian path is maintained along the building frontages, with clear view corridors from end to end provided along all pathways.	
O3.7.2 – Entries to the development connect to and address the public domain with an attractive street presence.		

ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*
A3.7.1 – Pedestrian entries are connected via a legible, well-defined, continuous path of travel to building access areas such as lift lobbies, stairs, accessways and individual dwelling entries.
A3.7.2 – Pedestrian entries are protected from the weather.
A3.7.3 – Pedestrian entries are well-lit for safety and amenity, visible from the public domain without opportunity for concealment, and designed to enable casual surveillance of the entry from within the site.
A3.7.4 – Where pedestrian access is via a shared zone with vehicles, the pedestrian path is clearly delineated and/or measures are incorporated to prioritise the pedestrian and constrain vehicle speed.
A3.7.5 – Services and utilities that are located at the pedestrian entry are integrated into the design and do not detract from the amenity of the entry.
A3.7.6 – Bins are not located at the primary pedestrian entry.

LOCAL PLANNING FRAMEWORK	**REQUIREMENT**
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	Per LPP4.2 (replaces) *<u>Acceptable Development Provisions:</u>* *Pedestrian access and footpaths be provided:* o *from parking areas to building entrances and along all street frontages;* o *between the street and rear parking areas;* o *along building frontages; and* o *with clear view corridors from end to end.*

ELEMENT 3.8	VEHICLE ACCESS	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O3.8.1 – Vehicle access points are designed and located to provide safe access and egress for vehicles and to avoid conflict with pedestrians, cyclists and other vehicles.	Only a single crossover is proposed, in accordance with the development requirements of LPP4.2. Additionally, the proposed development is compliant with Acceptable Outcomes A3.8.2 to A3.8.5 and A3.8.7, with the vehicle access point located to be: • identifiable from the street; • separated from street intersections; • avoid interaction between apartments and headlights; • is not located where walls, fences or other structures interfere with visibility to the public street. The proposed vehicle access includes provision for a designated pedestrian pathway; this is intended to allow the movement of waste bins from the store to the kerb. The driveway access will be maintained to ensure flow and limit queuing impacts on the road network, in accordance with the Traffic Impact Statement for the project.	
O3.8.2 – Vehicle access points are designed and located to reduce visual impact on the streetscape.		

ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*
A3.8.1 – Vehicle access is limited to one opening per 20m street frontage that is visible from the street.
A3.8.2 – Vehicle entries are identifiable from the street, while being integrated with the overall façade design and/ or located behind the primary building line.
A3.8.3 – Vehicle entries have adequate separation from street intersections.
A3.8.4 – Vehicle circulation areas avoid headlights shining into habitable rooms within the development and adjoining properties.
A3.8.5 – Driveway width is kept to a functional minimum, relative to the traffic volumes and entry/egress requirements.
A3.8.6 – Driveways designed for two way access to allow for vehicles to enter the street in forward gear where: - the driveway serves more than 10 dwellings - the distance from an on-site car parking to the street is 15m or more **OR** - the public street to which it connects is designated as a primary distributor, district distributor or integrated arterial road.
A3.8.7 – Walls, fences and other structures truncated or reduced to no higher than 0.75m within 1.5m of where walls, fences, other structures adjoin vehicle access points where a driveway meets a public street and where two streets intersect (refer Figure 3.8a).

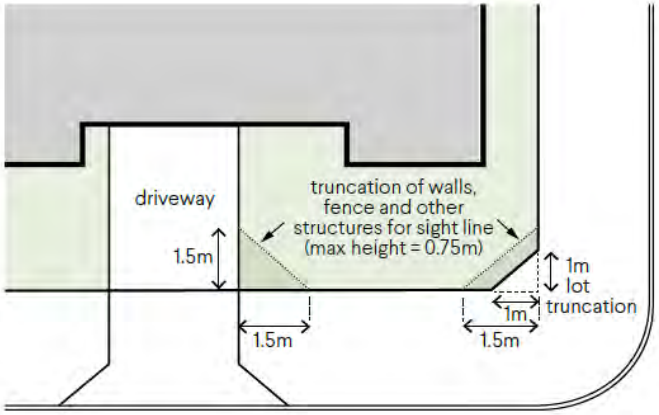


Figure 3.8a Truncation at street corner to provide sightlines (refer A3.8.7).

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	Per LPP4.2 (amends) *<u>Acceptable Development Provisions:</u>* *A maximum of two vehicle crossovers be permitted onto a site.*

ELEMENT 3.9	CAR AND BICYCLE PARKING	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O3.9.1 – Parking and facilities are provided for cyclists and other modes of transport.	The provided 34 parking bay exceeds the 30-bay residential parking requirement and allows for the provision of parking bays for the commercial tenancy. The parking has all been sleeved in the basement as the most cohesive solution to both the residential and commercial parking requirements that ensured the parking did not dominate the streetscape. The development provides for 15 bicycle bays on the ground floor, including 10 bays for residents, 2 bays for visitors and 3 bays for the office tenancy (compliant as assessed under LPP6.7). Further, a total of 6 motorcycle bays have been provided in the basement. The car parking and vehicle circulation areas are designed in accordance with AS2890.1 (as amended), with the basement parking integrated with the building. Visitor and office tenancy bays will be clearly labelled and are proposed to be located in proximity to the building access. The vehicle entrance does not present as a dominant element from the street, with the basement car parking designed in accordance with Figure 4 of LPP4.2, where the car parking is located entirely below ground with no impacts to the front facade.	
O3.9.2 – Car parking provision is appropriate to the location, with reduced provision possible in areas that are highly walkable and/or have good public transport or cycle networks and/or are close to employment centres.		
O3.9.3 – Car parking is designed to be safe and accessible.		
O3.9.4 – The design and location of car parking minimises negative visual and environmental impacts on amenity and the streetscape.		
ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*		
A3.9.1 – Secure, undercover bicycle parking is provided in accordance with Table 3.9 and accessed via a continuous path of travel from the vehicle or cycle entry point.		

Table 3.9 Parking ratio

Parking types		Location A	Location B
Car parking[1]	1 bedroom dwellings	0.75 bay per dwelling	1 bay per dwelling
	2+ bedroom dwellings	1 bay per dwelling	1.25 bays per dwelling
	Visitor	1 bay per four dwellings up to 12 dwellings 1 bay per eight dwellings for the 13th dwelling and above	
Bicycle parking[1]	Resident	0.5 space per dwelling	
	Visitor	1 space per 10 dwellings	
Motorcycle/ Scooter parking[2]	Developments exceeding 20 dwellings provide 1 motorcycle/scooter space for every 10 car bays		

[1] Calculations of parking ratios shall be rounded up to the next whole number.
[2] For each five motorcycle/scooter parking bays provided in accordance with Table 3.9, car parking bays may be reduced by one bay.

Definitions:
Location A: within 800m walkable catchment of a train station and/or 250m of a transit stop (bus or light rail) of a high-frequency route and/or within the defined boundaries of an activity centre.
Location B: not within Location A.

A3.9.2 – Parking is provided for cars and motorcycles in accordance with Table 3.9.

A3.9.3 – Maximum parking provision does not exceed double the minimum number of bays specified in Table 3.9

A3.9.4 – Car parking and vehicle circulation areas are designed in accordance with AS2890.1 (as amended) or the requirements of applicable local planning instruments.

A3.9.5 – Car parking areas are not located within the street setback and are not visually prominent from the street.

A3.9.6 – Car parking is designed, landscaped or screened to mitigate visual impacts when viewed from dwellings and private outdoor spaces.

A3.9.7 – Visitor parking is clearly visible from the driveway, is signed 'Visitor Parking' and is accessible from the primary entry or entries.

A3.9.8 – Parking shade structures, where used, integrate with and complement the overall building design and site aesthetics and have a low reflectance to avoid glare into apartments.

A3.9.9 – Uncovered at-grade parking is planted with trees at a minimum rate of one tree per four bays.

A3.9.10 – Basement parking does not protrude more than 1m above ground, and where it protrudes above ground is designed or screened to prevent negative visual impact on the streetscape.

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	Per LPP4.2 (amends) *<u>LPP4.2 Car Parking (Design, Location and Screening) development objective:</u>* *To ensure car parking areas do not detract from the amenity of the streetscape.* *<u>Acceptable Development Provisions</u>* *Parking and vehicle entries should not present as a dominant element when viewed from the street.* *Appropriate and innovative screening and screen planting should be incorporated where necessary.* *Car parking within buildings should be sleeved, as depicted in Figures 2, 3, 4, 5 and 6. Use of other screening from the street, such as landscaping and / or articulated screening, may be acceptable where an applicant can demonstrate that sleeving is not achievable.*

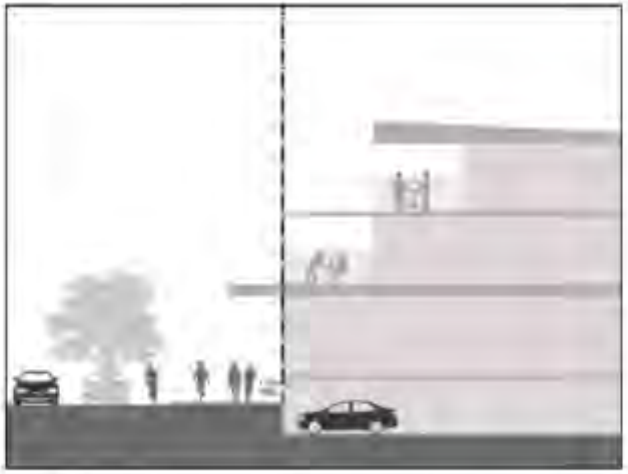


Figure 4 - Permitted parking areas below ground floor level for all development

At grade car parking areas shall be obscured from view from the primary street and not located within the front setback area.

Note: The primary street will be designated by the local government.

ELEMENT 4.1	SOLAR AND DAYLIGHT ACCESS	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.1.1 – In climate zones 4, 5 and 6: the development is sited and designed to optimise the number of dwellings receiving winter sunlight to private open space and via windows to habitable rooms.	Acceptable outcomes achieved. Over 72% of the proposed dwellings experience greater than 2 hours of sunlight between 9am and 3pm on 21 June, with all dwellings experiencing a level of direct sunlight between 9am and 3pm on 21 June. All habitable rooms have a window to an external wall, with no reliance on lightwells and/or skylights for daylight access. Awnings and shading devices have been incorporated where the building orientation requires management of direct sunlight in summer months.	
O4.1.2 – Windows are designed and positioned to optimise daylight access for habitable rooms.		
O4.1.3 – The development incorporates shading and glare control to minimise heat gain and glare: - from mid-spring to autumn in climate zones 4, 5 and 6 **AND** - year-round in climate zones 1 and 3.		

ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*
A4.1.1 – In climate zones 4, 5 and 6 only: **a)** Dwellings with a northern aspect are maximised, with a minimum of 70 per cent of dwellings having living rooms and private open space that obtain at least 2 hours direct sunlight between 9am and 3pm on 21 June **AND** **b)** A maximum of 15 per cent of dwellings in a building receiving no direct sunlight between 9am and 3pm on 21 June.
A4.1.2 – Every habitable room has at least one window in an external wall, visible from all parts of the room, with a glazed area not less than 10 per cent of the floor area and comprising a minimum of 50 per cent of clear glazing.
A4.1.3 – Lightwells and/or skylights do not form the primary source of daylight to any habitable room.
A4.1.4 – The building is oriented and incorporates external shading devices in order to: - minimise direct sunlight to habitable rooms: ▪ between late September and early March in climate zones 4, 5 and 6 only **AND** ▪ in all seasons in climate zones 1 and 3 - permit winter sun to habitable rooms in accordance with A 4.1.1 (a).

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 4.2	NATURAL VENTILATION	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.2.1 – Development maximises the number of apartments with natural ventilation.	Acceptable outcomes achieved. Over 90% of the proposed dwellings achieve natural cross ventilation, with a majority of the single aspect apartments designed to ensure that room depths are not greater than 3x the ceiling height and capture the prevailing cooling wind direction.	
O4.2.2 – Individual dwellings are designed to optimise natural ventilation of habitable rooms.		
O4.2.3 – Single aspect apartments are designed to maximise and benefit from natural ventilation.		

ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*
A4.2.1 – Habitable rooms have openings on at least two walls with a straight line distance between the centre of the openings of at least 2.1m.
A4.2.2 – **(a)** A minimum 60 per cent of dwellings are, or are capable of, being naturally cross ventilated in the first nine storeys of the building

(b) Single aspect apartments included within the 60 per cent minimum at (a) above must have: ▪ ventilation openings oriented between 45° – 90° of the prevailing cooling wind direction **AND** ▪ room depth no greater than 3 × ceiling height **(c)** For dwellings located at the 10th storey or above, balconies incorporate high and low level ventilation openings.
A4.2.3 – The depth of cross-over and cross-through apartments with openings at either end and no openings on side walls does not exceed 20m.
A4.2.4 – No habitable room relies on lightwells as the primary source of fresh-air.

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 4.3	SIZE AND LAYOUT OF DWELLINGS	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.3.1 – The internal size and layout of dwellings is functional with the ability to flexibly accommodate furniture settings and personal goods, appropriate to the expected household size.	Acceptable outcomes achieved. All apartments are larger than the minimum requirements, with ceiling heights and room dimensions all proportioned to ensure natural ventilation and daylight access is maintained.	
O4.3.2 – Ceiling heights and room dimensions provide for well-proportioned spaces that facilitate good natural ventilation and daylight access.		

ACCEPTABLE OUTCOMES
Acceptable Outcome pathway may not be applicable where a performance solution is provided

A4.3.1 – Dwellings have a minimum internal floor area in accordance with Table 4.3a.

Table 4.3a Minimum floor areas for dwelling types

Dwelling type	Minimum internal floor area
Studio	37m²
1 bed	47m²
2 bed × 1 bath[1]	67m²
3 bed × 1 bath[1]	90m²

[1]An additional 3m² shall be provided for designs that include a second or separate toilet, and 5m² for designs that include a second bathroom.

A4.3.2 – Habitable rooms have minimum floor areas and dimensions in accordance with Table 4.3b.

Table 4.3b Minimum floor areas and dimensions for habitable rooms

Habitable room type	Minimum internal floor area	Minimum internal dimension
Master bedroom	10m²	[1]3m
Other bedrooms	9m²	[1]3m
Living room – studio and 1 bed apartments	N/A	3.6m
Living room – other dwelling types	N/A	4m

[1] Excluding robes

A4.3.3 – Measured from the finished floor level to finished ceiling level, minimum ceiling heights are:

- Habitable rooms – 2.7m
- Non-habitable rooms – 2.4m
- All other ceilings meet or exceed the requirements of the NCC.

A4.3.4 – The length of a single aspect open plan living area is equal to or less than 3 x the ceiling height. An additional 1.8m length may be provided for a kitchen, where the kitchen is the furthest point from the window in an open plan living area provided that the maximum length does not exceed 9m.

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 4.4	PRIVATE OPEN SPACE AND BALCONIES	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.4.1 – Dwellings have good access to appropriately sized private open space that enhances residential amenity.	All dwellings include a private open space that is directly accessed off the primary living area that enhances the amenity available to residents. These spaces are integrated with the overall design of the building and are integrated into each of the dwellings to enhance the liveability and functionality of the dwellings for each of the residents. These balcony and private open spaces integrate balustrading that is a minimum of 50% visually permeable across the development, in accordance with LPP4.2 development requirements.	
O4.4.2 – Private open space is sited, oriented and designed to enhance liveability for residents.		
O4.4.3 – Private open space and balconies are integrated into the overall architectural form and detail of the building.		

ACCEPTABLE OUTCOMES
Acceptable Outcome pathway may not be applicable where a performance solution is provided

A4.4.1 – Each dwelling has private open space accessed directly from a habitable room with dimensions in accordance with Table 4.4.

Table 4.4 Private open space requirements

Dwelling type	Minimum Area[1]	Minimum Dimension[1]
Studio apartment + 1 bedroom	8m²	2.0m
2 bedroom	10m²	2.4m
3 bedroom	12m²	2.4m
Ground floor / apartment with a terrace	15m²	3m

[1] Services and fixtures located within private open space, including but not limited to air-conditioner units and clothes drying, are not visible from the street and/or are integrated into the building design.

A4.4.2 – Where private open space requires screening to achieve visual privacy requirements, the entire open space is not screened and any screening is designed such that it does not obscure the outlook from adjacent living rooms.

A4.4.3 – Design detailing, materiality and landscaping of the private open space is integrated with or complements the overall building design.

A4.4.4 – Services and fixtures located within private open space, including but not limited to air-conditioner units and clothes drying, are not visible from the street and/or are integrated into the building design.

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	Per LPP4.2 (amends) *Acceptable Development Provisions*

	Balcony balustrades shall be at least 50% visually permeable.

ELEMENT 4.5	CIRCULATION AND COMMON SPACES	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.5.1 – Circulation spaces have adequate size and capacity to provide safe and convenient access for all residents and visitors.	Circulation spaces are centralised and universally accessible, with a centralised lift and corridors providing access to all apartments. As all apartments are accessed from the central corridors/lifts, opportunities for social interaction between residents are supported, with common spaces highlighted by provided landscaping and solar access considerations.	
O4.5.2 – Circulation and common spaces are attractive, have good amenity and support opportunities for social interaction between residents.		
ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*		
A4.5.1 – Circulation corridors are a minimum 1.5m in width.		
A4.5.2 – Circulation and common spaces are designed for universal access.		
A4.5.3 – Circulation and common spaces are capable of passive surveillance, include good sightlines and avoid opportunities for concealment.		
A4.5.4 – Circulation and common spaces can be illuminated at night without creating light spill into the habitable rooms of adjacent dwellings.		
A4.5.5 – Bedroom windows and major openings to living rooms do not open directly onto circulation or common spaces and are designed to ensure visual privacy and manage noise intrusion.		
LOCAL PLANNING FRAMEWORK	**REQUIREMENT**	
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:		

ELEMENT 4.6	STORAGE	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.6.1 – Well-designed, functional and conveniently located storage is provided for each dwelling.	Acceptable outcomes achieved. All apartments have a store room provided that is either integrated into the dwelling or provided on the basement, ground floor or first floor level. These storerooms are located conveniently to the car parking bays and primary pedestrian entrance, with the central lift providing easy access from within and outside the development. Where integrated store rooms do not satisfy the minimum area requirements, an additional store has been allocated to the apartment to ensure adequate storage provision is provided.	

ACCEPTABLE OUTCOMES
Acceptable Outcome pathway may not be applicable where a performance solution is provided

A4.6.1 – Each dwelling has exclusive use of a separate, ventilated, weatherproof, bulky goods storage area. This can be located either internally or externally to the dwelling with dimensions in accordance with Table 4.6.

Table 4.6 Storage requirements

Dwelling type	Storage area[1]	Minimum dimension[1]	Minimum height[1]
Studio dwelling	3m²	1.5m	2.1m
1 bedroom dwelling	3m²		
2 bedroom dwellings	4m²		
3 bedroom dwellings	5m²		

[1] Dimensions exclusive of services and plant.

A4.6.2 – Bulky good stores that are not directly accessible from the dwelling/private open space are located in areas that are convenient, safe, well-lit, secure and subject to passive surveillance.

A4.6.3 – Storage provided separately from dwellings or within or adjacent to private open space[1], is integrated into the design of the building or open space and is not readily visible from the public domain.

(1) Storage on/adjacent to private open space is additional to required open space area and dimensions.

LOCAL PLANNING FRAMEWORK	REQUIREMENT

Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 4.7	MANAGING THE IMPACT OF NOISE	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.7.1 – The siting and layout of development minimises the impact of external noise sources and provides appropriate acoustic privacy to dwellings and on-site open space.	The proposed development is designed to minimise the impact of acoustic impacts on dwellings and on-site private space, as well as between the subject site and adjacent properties.	
O4.7.2 – Acoustic treatments are used to reduce sound transfer within and between dwellings and to reduce noise transmission from external noise sources.		
ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*		
A4.7.1 – Dwellings exceed the minimum requirements of the NCC, such as a rating under the AAAC Guideline for Apartment and Townhouse Acoustic Rating (or equivalent).		
A4.7.2 – Potential noise sources such as garage doors, driveways, service areas, plant rooms, building services, mechanical equipment, active communal open space and refuse bins are not located adjacent to the external wall of habitable rooms or within 3m of a window to a bedroom.		
A4.7.3 – Major openings to habitable rooms are oriented away or shielded from external noise sources.		
LOCAL PLANNING FRAMEWORK	**REQUIREMENT**	
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:		

ELEMENT 4.8	DWELLING MIX	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.8.1 – A range of dwelling types, sizes and configurations is provided that caters for diverse household types and changing community demographics.	Acceptable outcomes achieved. The development includes provision of 16x 3-bedroom, 2x 2-bedroom, and 2x 1-bedroom apartments, a 20% variation as required.	

ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*
A4.8.1 – **a)** Dwelling mix is provided in accordance with the objectives, proportions or targets specified in a local housing strategy or relevant local planning instrument **OR** **b)** Where there is no local housing strategy, developments of greater than 10 dwellings include at least 20 per cent of apartments of differing bedroom numbers.
A4.8.2 – Different dwelling types are well distributed throughout the development, including a mix of dwelling types on each floor.

LOCAL PLANNING FRAMEWORK	**REQUIREMENT**
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 4.9	UNIVERSAL DESIGN	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.9.1 – Development includes dwellings with universal design features providing dwelling options for people living with disabilities or limited mobility and/or to facilitate ageing in place.	Acceptable outcomes achieved. As provided by the DRP comments, all the apartments are designed to achieve Silver level requirements under Liveable Housing Australia, with a centralised lift included in the design for universal access.	

ACCEPTABLE OUTCOMES
Acceptable Outcome pathway may not be applicable where a performance solution is provided

A4.9.1 –

a) 20 per cent of all dwellings, across a range of dwelling sizes, meet Silver Level requirements as defined in the Liveable Housing Design Guidelines (Liveable Housing Australia) **OR**

b) 5 per cent of dwellings are designed to Platinum Level as defined in the Liveable Housing Design Guidelines (Liveable Housing Australia).

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 4.10	FAÇADE DESIGN	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.10.1 – Building façades incorporate proportions, materials and design elements that respect and reference the character of the local area.	The development includes articulation, various materials and colour to create a visually appealing façade that clearly demonstrates building entrances, the site's relationship to the street and the various communal and private areas within the site. Additionally, the development integrates screening and awnings into the building façade to provide visual privacy and shading as necessary, without impacting the visual appearance and contribution of the proposal to the street. The front façade includes a mix of glazing, textured screening, openings, colours and textures in accordance with the acceptable provisions of LPP4.2, with canopy elements and breezeblock elements includes to add visual interest and variety. All service fixtures are located behind the street setback and will be screened from view.	
O4.10.2 – Building façades express internal functions and provide visual interest when viewed from the public realm.		

ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*
A4.10.1 – Façade design includes: - scaling, articulation, materiality and detailing at lower levels that reflect the scale, character and function of the public realm - rhythm and visual interest achieved by a combination of building articulation, the composition of different elements and changes in texture, material and colour.
A4.10.2 – In buildings with height greater than four storeys, façades include a defined base, middle and top for the building.
A4.10.3 – The façade includes design elements that relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights.
A4.10.4 – Building services fixtures are integrated in the design of the façade and are not visually intrusive from the public realm.
A4.10.5 – Development with a primary setback of 1m or less to the street includes awnings that: - define and provide weather protection to entries - are integrated into the façade design - are consistent with the streetscape character.
A4.10.6 – Where provided, signage is integrated into the façade design and is consistent with the desired streetscape character.

LOCAL PLANNING FRAMEWORK	REQUIREMENT

Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	Per LPP4.2 (replaces) *<u>LPP4.2 Building Facade, Parapets and Balconies development objective</u>* *To ensure buildings provide architectural interest and positively contribute to streetscapes.* *<u>Acceptable Development Provisions:</u>* *<u>Building Appearance</u>* *Glazing limited to a maximum of 75% of the surface area per storey of all facades of a building;* *The façade above ground floor level for all buildings provide at least four of the following:* o *openings;* o *balconies;* o *awnings over windows;* o *different colours and textures; and* o *indentations, extrusions and wall/floor articulations to break the building into individual elements; and* *Air conditioning units, ducts and other services be screened from view from abutting sites and not located on the building façade facing the street.*

ELEMENT 4.11	ROOF DESIGN	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.11.1 – Roof forms are well integrated into the building design and respond positively to the street.	Acceptable outcomes achieved. The building has integrated significant amounts of green façade and balcony areas across the development, which is reflected in the flat roof design. Building services on the roof will not be visually obtrusive from the street (if visible), with all provided balcony and roof spaces set back to minimize overlooking and noise impacts on private open space and habitable rooms within the development and on adjoining sites.	
O4.11.2 – Where possible, roof spaces are utilised to add open space, amenity, solar energy generation or other benefits to the development.		
ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*		
A4.11.1 – The roof form or top of building complements the façade design and desired streetscape character.		
A4.11.2 – Building services located on the roof are not visually obtrusive when viewed from the street.		
A4.11.3 – Useable roof space is safe for users and minimises overlooking and noise impacts on private open space and habitable rooms within the development and on adjoining sites.		
LOCAL PLANNING FRAMEWORK	**REQUIREMENT**	
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:		

ELEMENT 4.12	LANDSCAPE DESIGN	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.12.1 – Landscape design enhances streetscape and pedestrian amenity; improves the visual appeal and comfort of open space areas; and provides an attractive outlook for habitable rooms.	Acceptable outcomes achieved. The proposed landscaping plan was completed by See Design Studio, and includes provision for deep soil areas, mature trees, and green elements for the façade and screening elements in and around the development. All on-structure planting is aligned with the requirements of Table 4.12, with proposed plants aligned with the locality and waterwise requirements.	
O4.12.2 – Plant selection is appropriate to the orientation, exposure and site conditions and is suitable for the adjoining uses.		
O4.12.3 – Landscape design includes water efficient irrigation systems and where appropriate incorporates water harvesting or water re-use technologies.		
O4.12.4 – Landscape design is integrated with the design intent of the architecture including its built form, materiality, key functional areas and sustainability strategies.		
ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*		
A4.12.1 – Submission of a landscape plan prepared by a competent landscape designer. This is to include a species list and irrigation plan demonstrating achievement of Waterwise design principles.		
A4.12.2 – Landscaped areas are located and designed to support mature, shade-providing trees to open space and the public realm, and to improve the outlook and amenity to habitable rooms and open space areas.		
A4.12.3 – Planting on building structures meets the requirements of Table 4.12.		

Table 4.12 Planting on structure: minimum soil standards for plant types and sizes

Plant type	Definition	Soil volume	Soil depth	Soil area
Large tree	Over 12m high, crown spread at maturity	76.8m³	1,200mm	64m² with minimum dimension 7m
Medium tree	8-12m high, crown spread at maturity	36m³	1,000mm	36m² with minimum dimension 5m
Small tree	4-8m high, crown spread at maturity	7.2m³	800mm	3m × 3m
Small ornamentals	3-4m high, crown spread at maturity	3.2m³	800mm	2m × 2m
Shrubs	--	--	500-600mm	--
Ground cover	--	--	300-450mm	--
Turf	--	--	200mm	--

A4.12.4 – Building services fixtures are integrated in the design of the landscaping and are not visually intrusive.

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 4.13	ADAPTIVE REUSE – Element N/A

ELEMENT 4.14	MIXED USE	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.14.1 – Mixed use development enhances the streetscape and activates the street.	Acceptable outcomes achieved. The proposed development includes provision of a 245.7m2 office tenancy, with the residential tenancies sleeved behind. This will activate the street through the direct access and has been designed to integrate into the building with shared parking and service areas added into the development footprint. The impacts on the residential element of the development have been mitigated, with separation between the tenancy and dwellings provided by the vehicle accessway.	
O4.14.2 – A safe and secure living environment for residents is maintained through the design and management of the impacts of non-residential uses such as noise, light, odour, traffic and waste.		

ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*
A4.14.1 – Where development is located within a mixed use area designated within the local planning framework, ground floor units are designed for future adaption to non-residential uses.
A4.14.2 – Ground floor uses including non-commercial uses, such as communal open space, habitable rooms, verandahs and courtyards associated with ground floor dwellings, address, enhance and activate the street.
A4.14.3 – Non-residential space in mixed use development is accessed via the street frontage and/or primary entry as applicable.
A4.14.4 – Non-residential floor areas provided in mixed use development has sufficient provision for parking, waste management, and amenities to accommodate a range of retail and commercial uses in accordance with the requirements
A4.14.5 – Mixed use development is designed to mitigate the impacts of non-residential uses on residential dwellings, and to maintain a secure environment for residents.

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 4.15	ENERGY EFFICIENCY	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.15.1 – Reduce energy consumption and greenhouse gas emissions from the development.	The proposed development is designed to maximise the solar orientation and access for the development. The proposal incorporates a 40kW solar array on the roof, satisfying the acceptable outcome a) below.	

ACCEPTABLE OUTCOMES
Acceptable Outcome pathway may not be applicable where a performance solution is provided

A4.15.1 –

a) Incorporate at least one significant energy efficiency initiative within the development that exceeds minimum practice (refer Design Guidance) **OR**

b) All dwellings exceed the minimum NATHERS requirement for apartments by 0.5 stars.[1]

Compliance with the NCC requires that development shall achieve an average star-rating across all dwellings that meets or exceeds a nominated benchmark, and that each unit meets or exceeds a slightly lower benchmark. Compliance with this Acceptable Outcome requires that each unit exceeds that lower benchmark by at least half a star.

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 4.16	WATER MANAGEMENT AND CONSERVATION	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.16.1 – Minimise potable water consumption throughout the development.	Acceptable outcomes achieved. Dwellings will be individually metered for water usage. Stormwater runoff from small rainfall events will be managed on site. Stormwater management will direct runoff from major rainfall events to the local stormwater drainage system.	
O4.16.2 – Stormwater runoff from small rainfall events is managed on-site, wherever practical.		
O4.16.3 – Reduce the risk of flooding so that the likely impacts of major rainfall events will be minimal.		
ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*		
A4.16.1 – Dwellings are individually metered for water usage.		
A4.16.2 – Stormwater runoff generated from small rainfall events is managed on-site.		
A4.16.3 – Provision of an overland flow path for safe conveyance of runoff from major rainfall events to the local stormwater drainage system.		
LOCAL PLANNING FRAMEWORK	**REQUIREMENT**	
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:		

ELEMENT 4.17	WASTE MANAGEMENT	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.17.1 – Waste storage facilities minimise negative impacts on the streetscape, building entries and the amenity of residents.	Acceptable outcomes achieved. The proposed development includes storage areas for waste from the residential apartments in the basement of the building, alongside the car and bicycle parking provision. All waste storage areas are sleeved behind the building frontage, and accessible from within the building. Waste management will include provision of both recycling and waste bins for residential dwellings, with collection completed by the City's weekly waste collector from the verge.	
O4.17.2 – Waste to landfill is minimised by providing safe and convenient bins and information for the separation and recycling of waste.		

ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*
A4.17.1 – Waste storage facilities are provided in accordance with the Better Practice considerations of the *WALGA Multiple Dwelling Waste Management Plan Guidelines* (or local government requirements where applicable).
A4.17.2 – A Level 1 Waste Management Plan (Design Phase) is provided in accordance with the *WALGA Multiple Dwelling Waste Management Plan Guidelines* - Appendix 4A (or equivalent local government requirements).
A4.17.3 – Sufficient area is provided to accommodate the required number of bins for the separate storage of green waste, recycling and general waste in accordance with the *WALGA Multiple Dwelling Waste Management Plan Guidelines* - Level 1 Waste Management Plan (Design Phase) (or local government requirements where applicable).
A4.17.4 – Communal waste storage is sited and designed to be screened from view from the street, open space and private dwellings.

LOCAL PLANNING FRAMEWORK	REQUIREMENT
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:	

ELEMENT 4.17	WASTE MANAGEMENT	
ELEMENT OBJECTIVES *Development is to achieve the following Element Objectives*	**APPLICANT COMMENT**	**ASSESSOR COMMENT**
	Outline the rationale demonstrating that the proposal has met the Element Objectives, through either a performance based solution or using the Acceptable Outcomes. The Design Guidance provided in the policy may be of assistance.	
O4.18.1 –The site is serviced with power, water, gas (where available), wastewater, fire services and telecommunications/broadband services that are fit for purpose and meet current performance and access requirements of service providers.	The site will be serviced with power, water, gas, wastewater and fire management services and telecommunications as per requirements for residential dwellings.	
O4.18.2 – All utilities are located such that they are accessible for maintenance and do not restrict safe movement of vehicles or pedestrians.	All utilities are located to be accessible for maintenance without interference with the safe movement of vehicles or pedestrians.	
O4.18.3 – Utilities, such as distribution boxes, power and water meters are integrated into design of buildings and landscape so that they are not visually obtrusive from the street or open space within the development.	All utilities are integrated into the design of the building and are not visually obtrusive from the street or open spaces within the development.	
O4.18.4 – Utilities within individual dwellings are of a functional size and layout and located to minimise noise or air quality impacts on habitable rooms and balconies.	Utilities are provided within individual dwellings and are of a functional size and layout for use. Location of internal utilities minimises noise and amenity impact on habitable rooms and balconies.	
ACCEPTABLE OUTCOMES *Acceptable Outcome pathway may not be applicable where a performance solution is provided*		
A4.18.1 – Utilities that must be located within the front setback, adjacent to the building entry or on visible parts of the roof are integrated into the design of the building, landscape and/or fencing such that they are accessible for servicing requirements but not visually obtrusive.		
A4.18.2 – Developments are fibre-to-premises ready, including provision for installation of fibre throughout the site and to every dwelling.		
A4.18.3 – Hot water units, air-conditioning condenser units and clotheslines are located such that they can be safely maintained, are not visually obtrusive from the street and do not impact on functionality of outdoor living areas or internal storage.		
A4.18.4 – Laundries are designed and located to be convenient to use, secure, weather-protected and well-vented; and are of an overall size and dimension that is appropriate to the size of the dwelling.		
LOCAL PLANNING FRAMEWORK	**REQUIREMENT**	
Does the local planning framework amend or replace the above stated controls? If yes, state the applicable requirement:		

Attachment 7h - Design Report by Space Collective Architects received 15 July 2024

DESIGN REPORT

118 Flora Terrace, North Beach

June 2024

DESIGN REPORT
Contents

10 DESIGN PRINCIPLES

01	Context & Character	03
02	Built Form & Scale	14
03	Landscape Quality	24
04	Functionality & Build Quality	30
05	Sustainability	34
06	Amenity	38
07	Legibility	41
08	Safety	42
09	Community	43
10	Aesthetics	44

Local Centre Locations & Activities

Royal Dyrcleaners

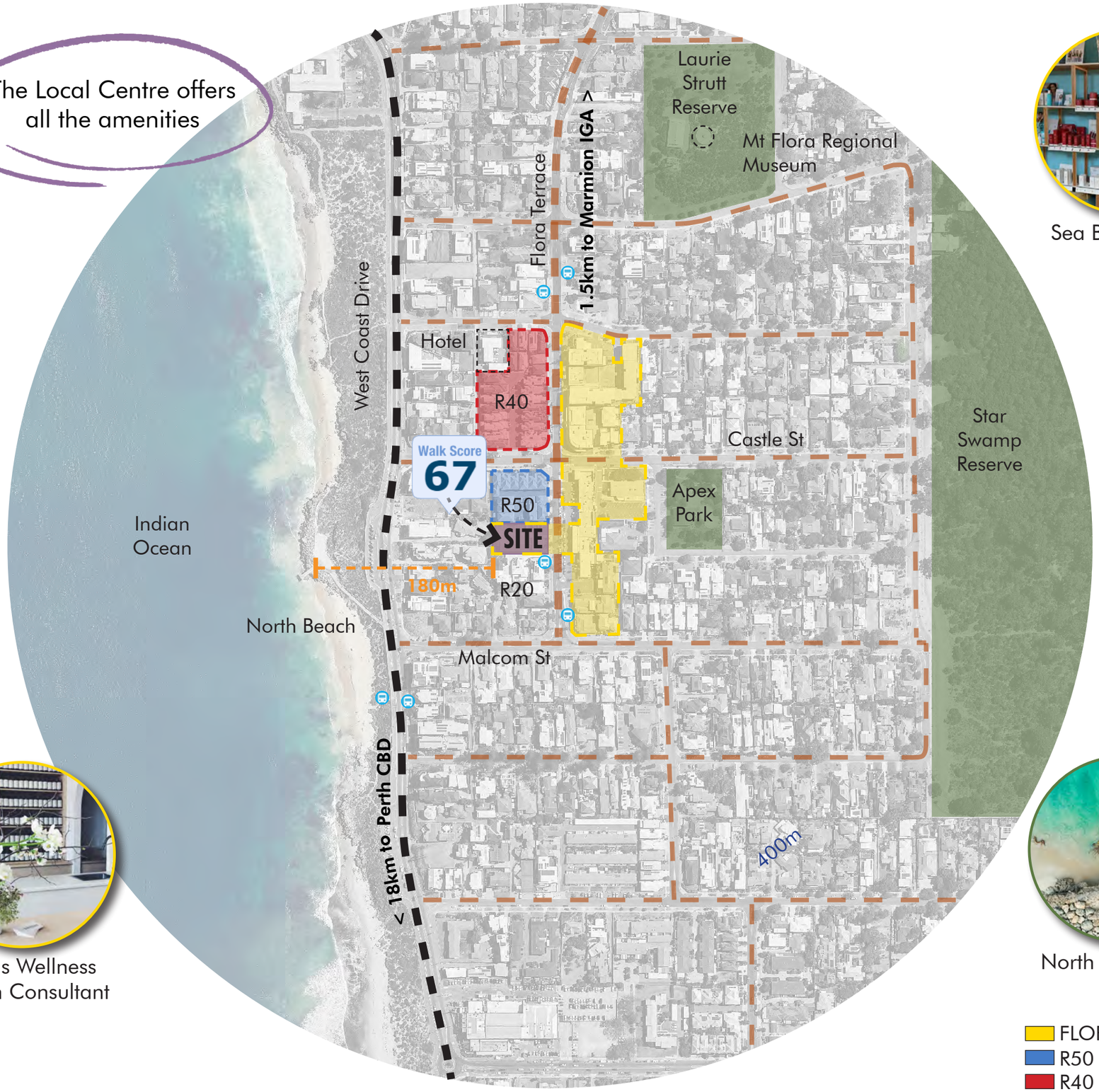
Move Forward Physio

The Pilates Co.

Maestro Sourdough Pizza

Sanus Wellness Health Consultant

The Local Centre offers all the amenities



Sea Beauty Salon

Flow Space Co-Working

Star Swamp Reserve

Apex Park

North Beach Jetty

Mt Flora Regional Museum

FLORA TCE LOCAL CENTRE
R50
R40
PARKS
VEHICLE ACCESS

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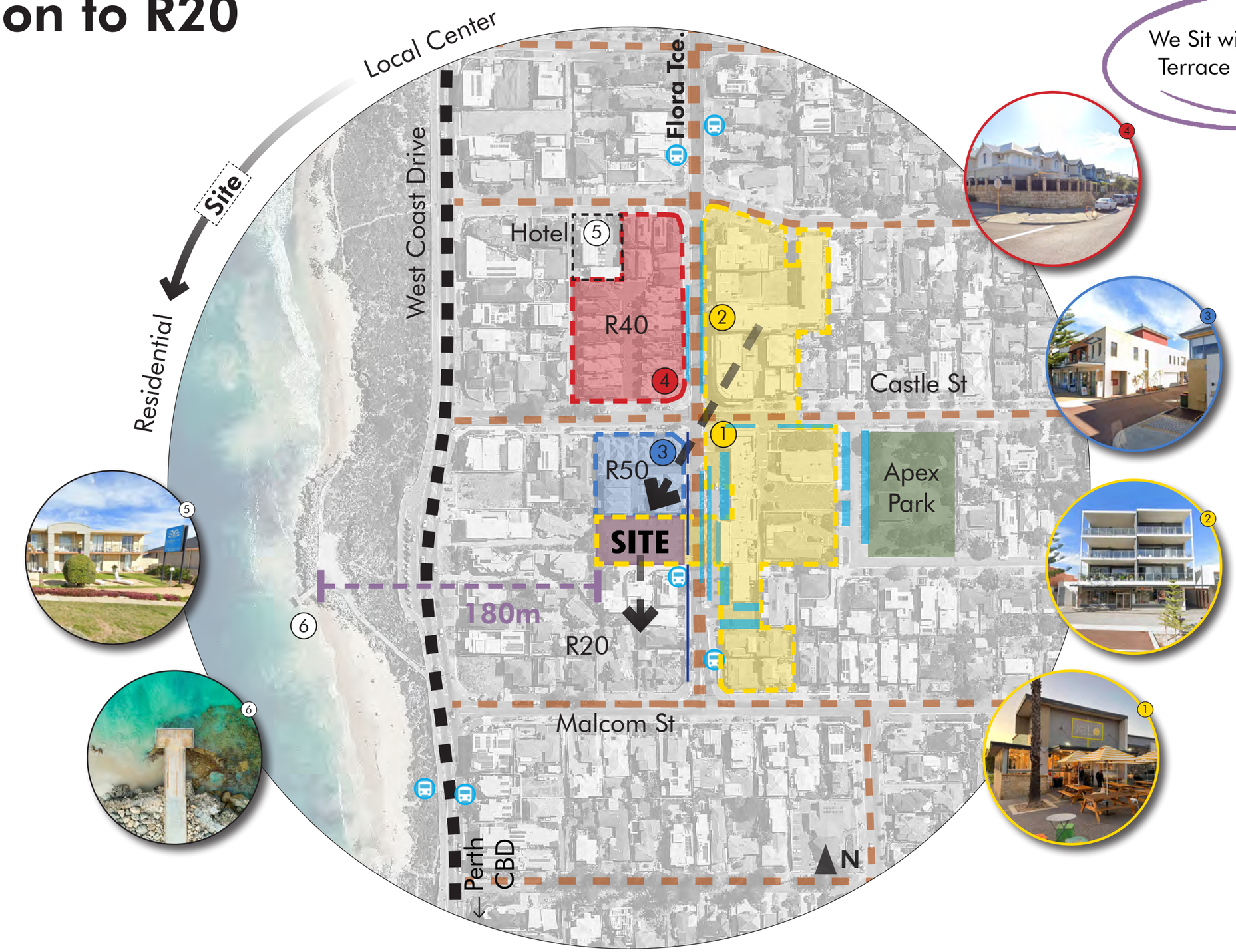
Transition to R20

We Sit within the Flora Terrace Local Centre



We are at **South-West** end of the **Local Centre** and creating a **gentle transition** to **R20** is **key...**

- LOCAL CENTRE
- R50
- R40
- NEARBY STREET PARKING
- PEDESTRIAN ACCESS

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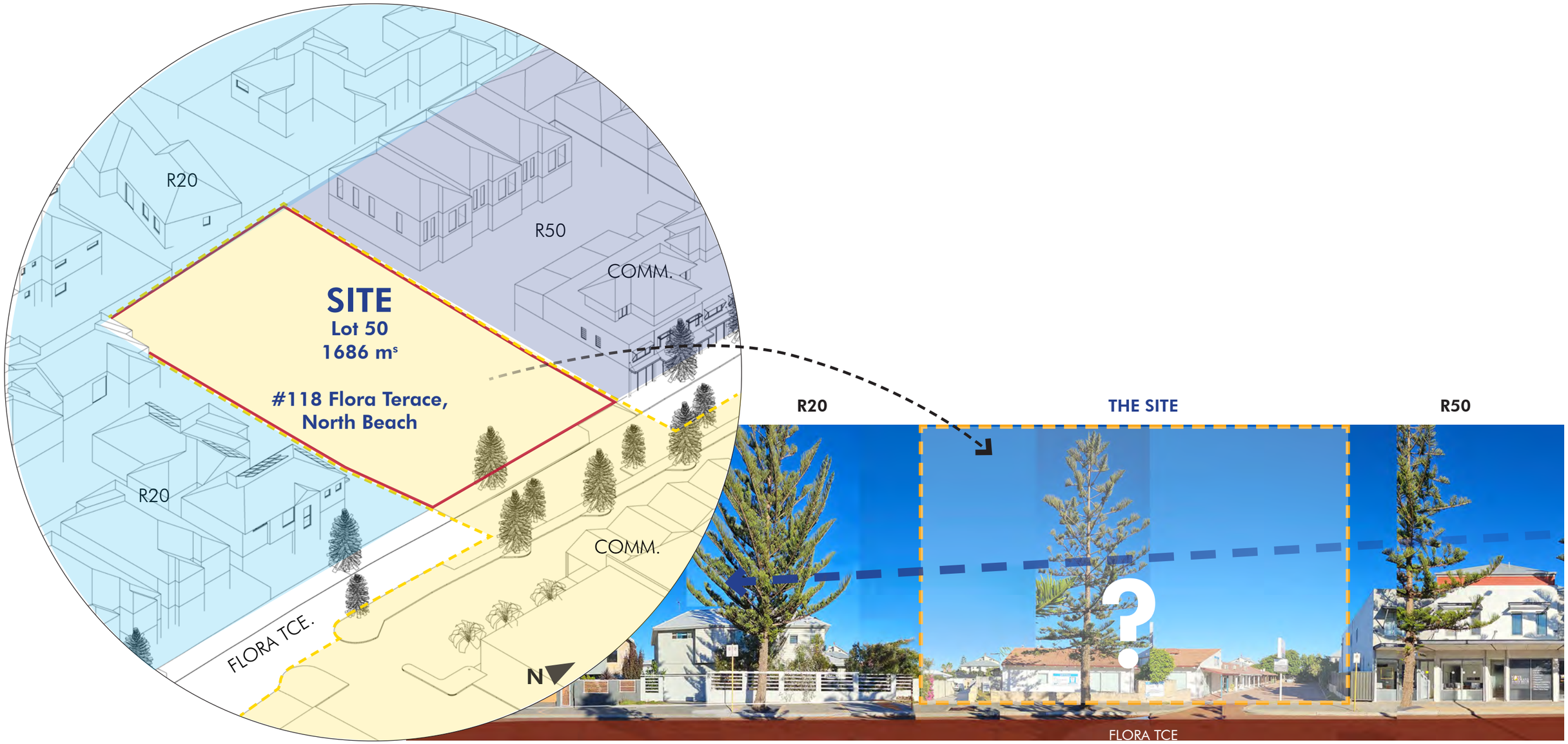
The Site



Looking at a **gentle transition** to our **neighbours...**

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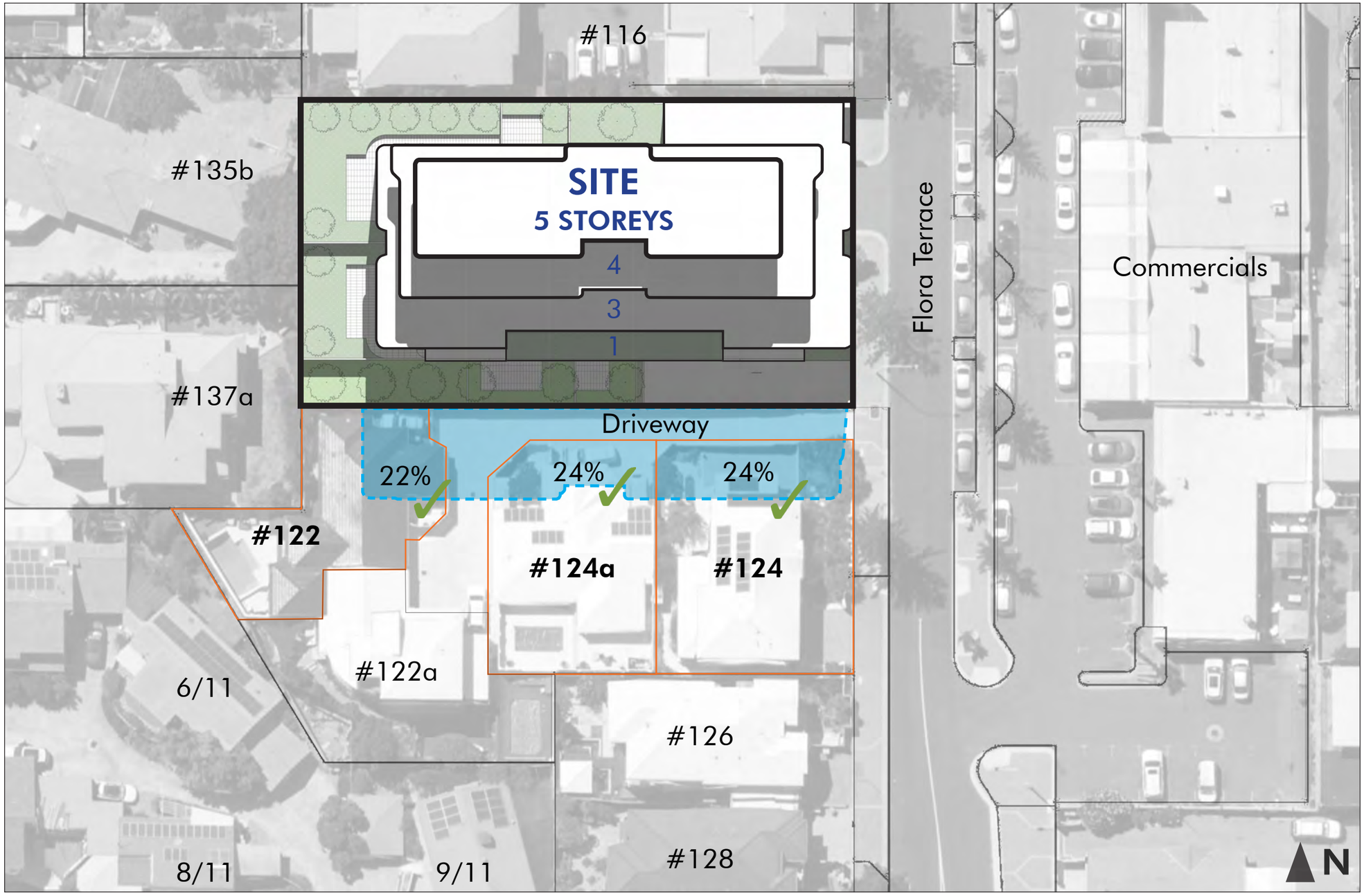
Overshadowing Studies

Proposed Massing Overshadowing - - -

Winter Solstice (21st of June)

12pm



It is possible to pursue **additional height** while delivering a **better outcome**

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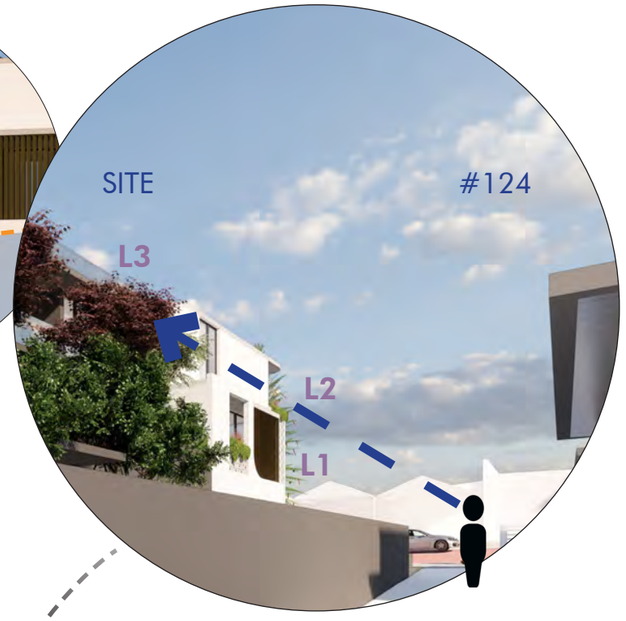
We Want To Be A Good Neighbour

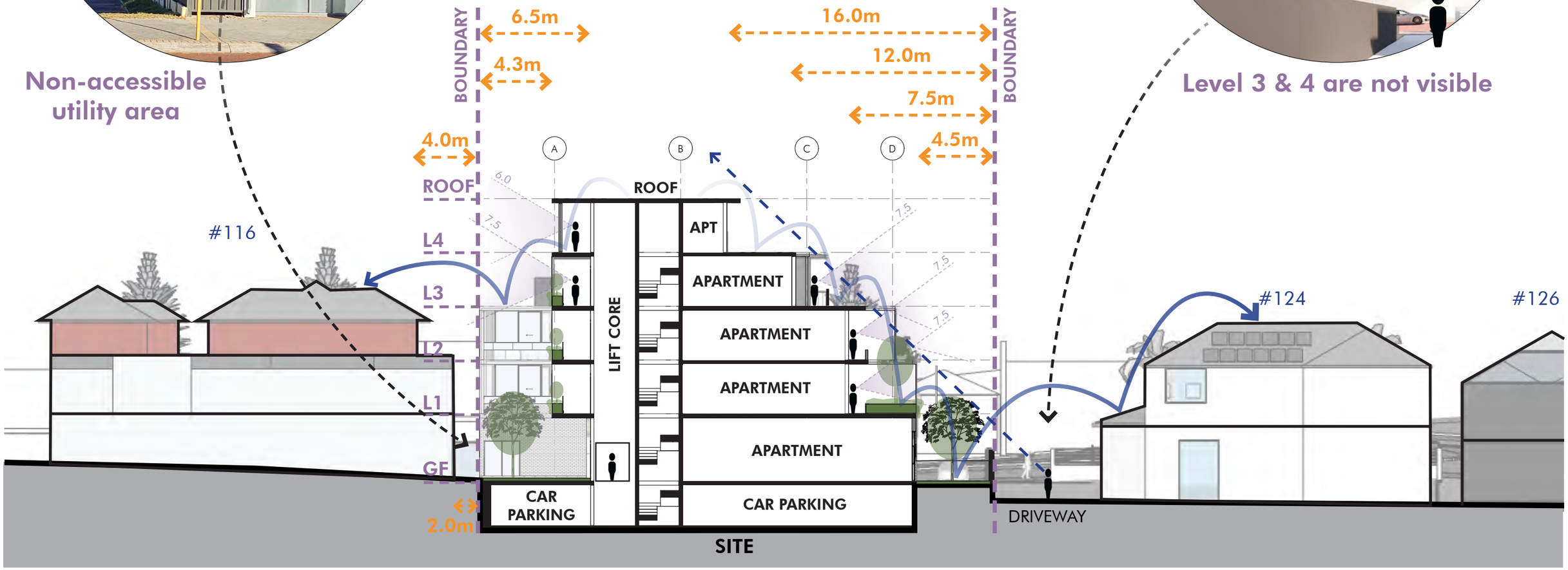
Non-accessible utility area

Viewing from #124a

Viewing from #124



Level 3 & 4 are not visible



A **Significant Transition To Our Neighbours** On The South

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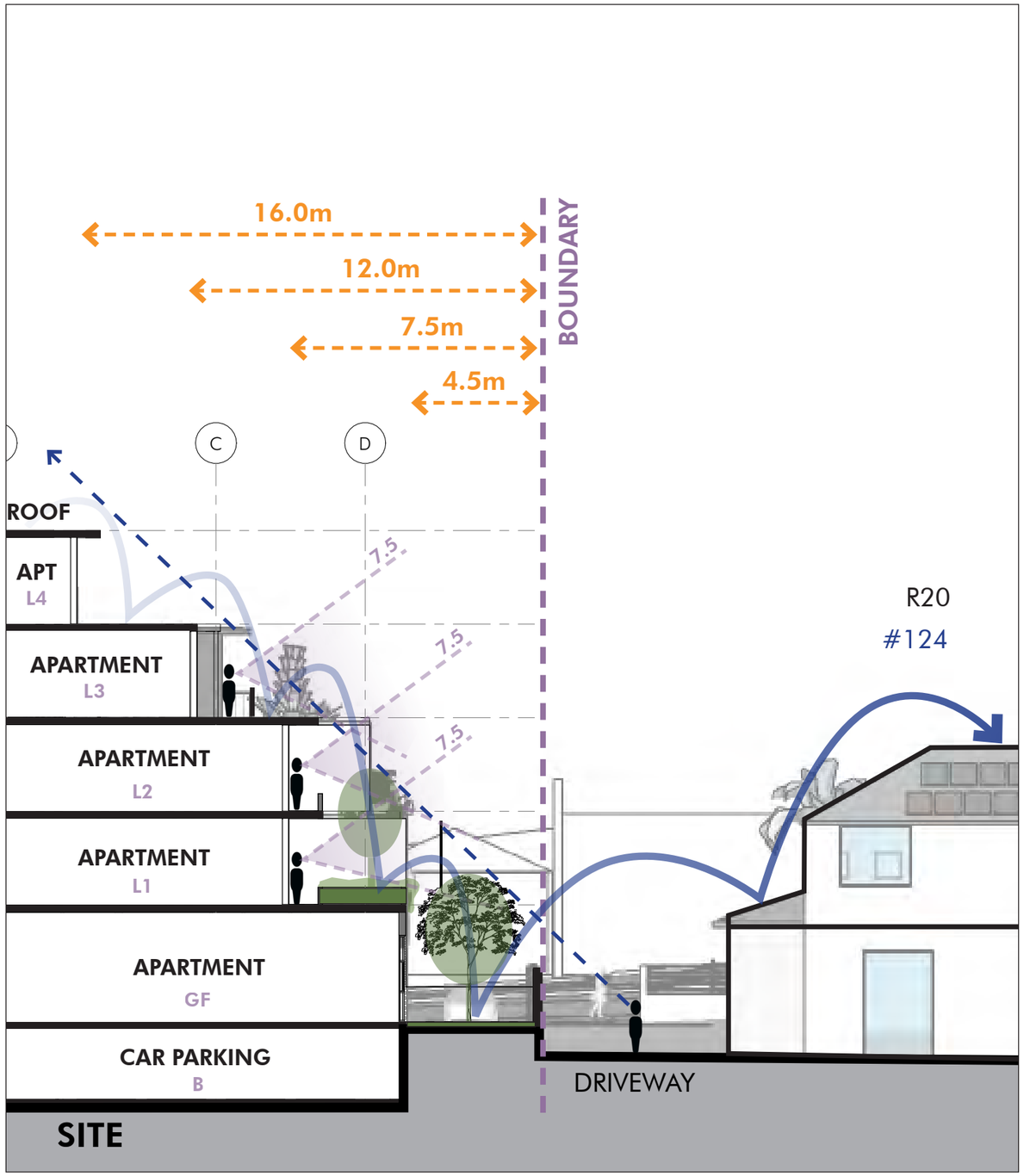
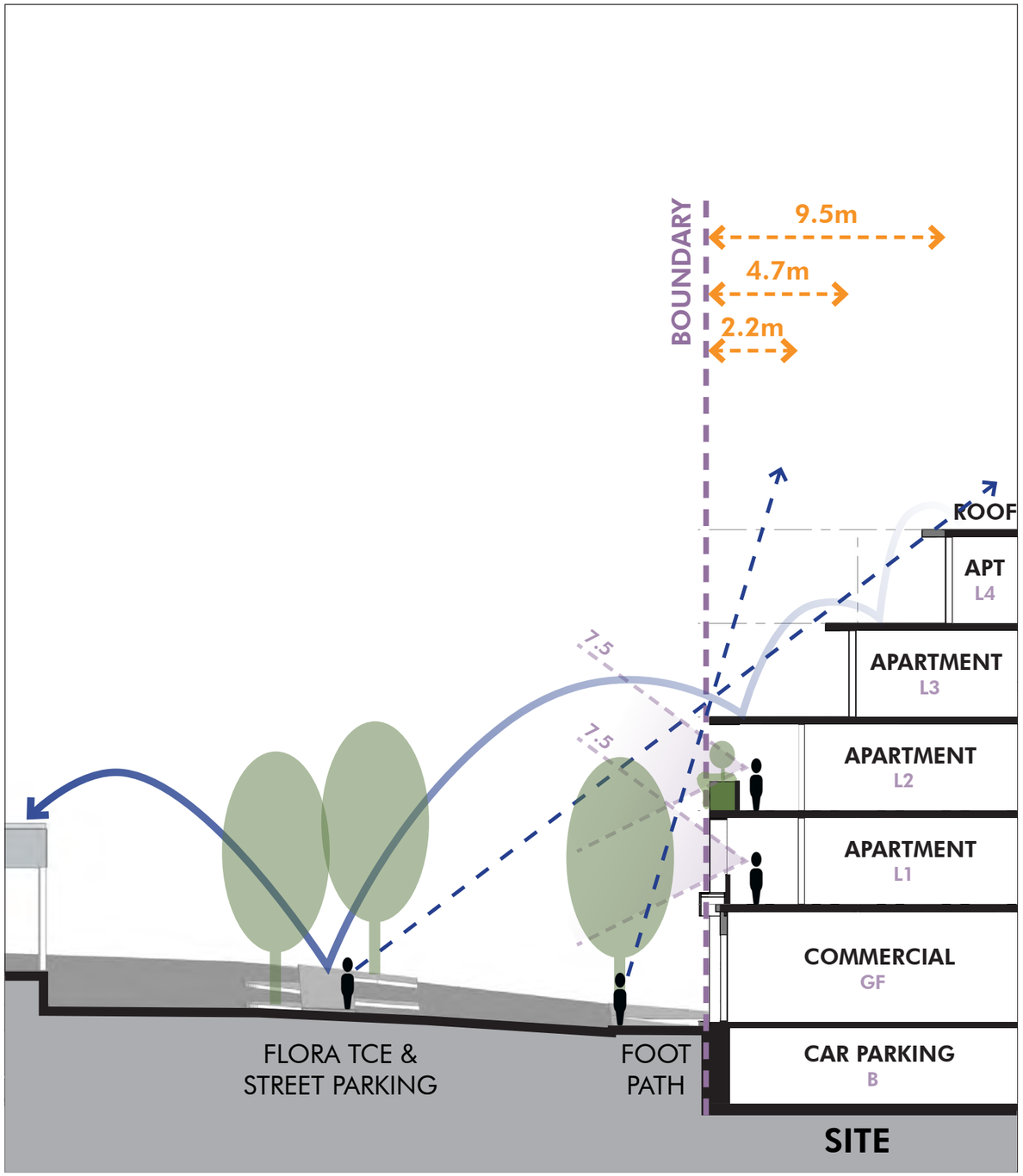
We Want To Be A Good Neighbour



R20 Transition



Flora Tce Interface

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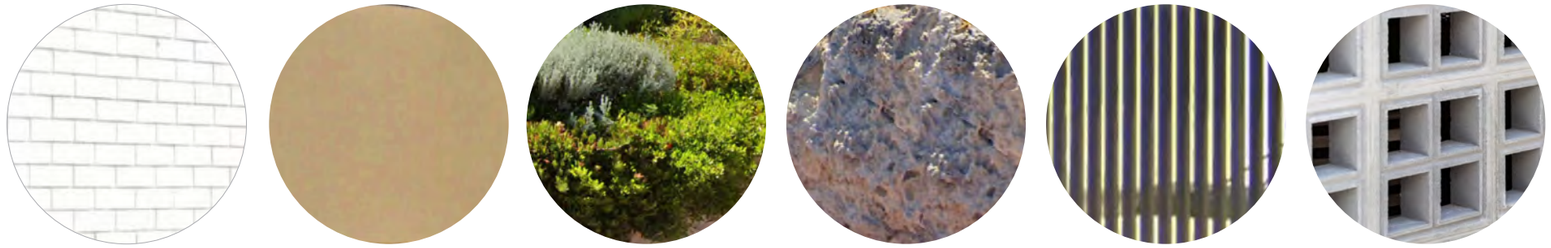
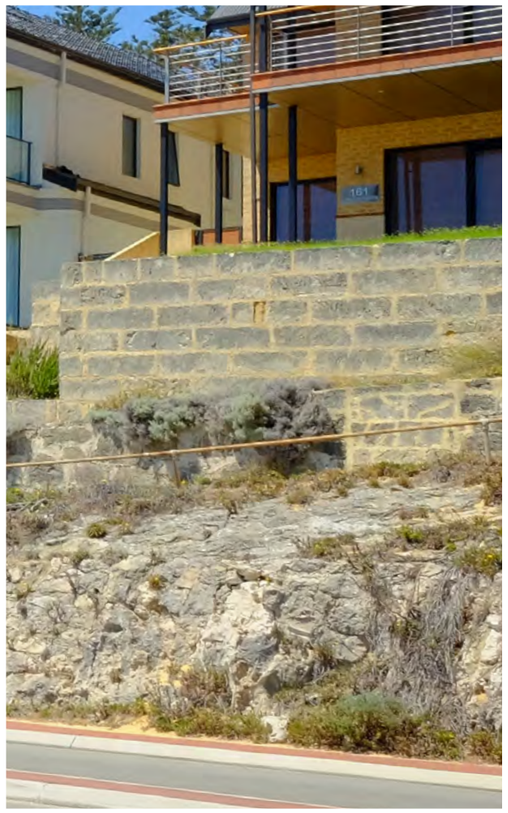
Design Drivers/ Palettes





Drawing on the **coastal tones** and **textures** from Flora Terrace

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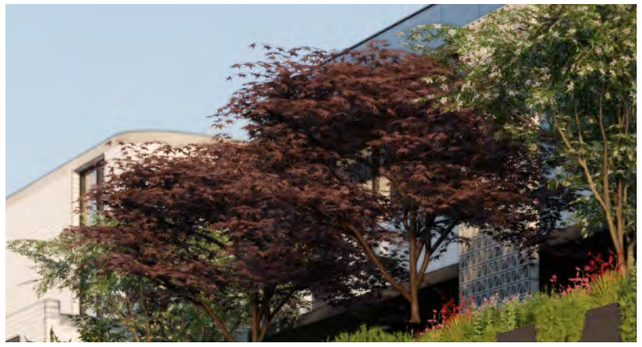
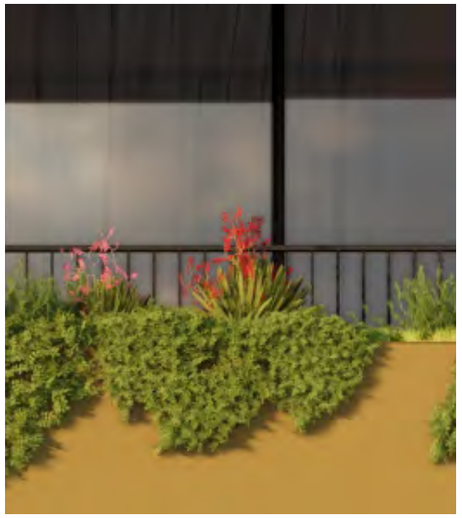
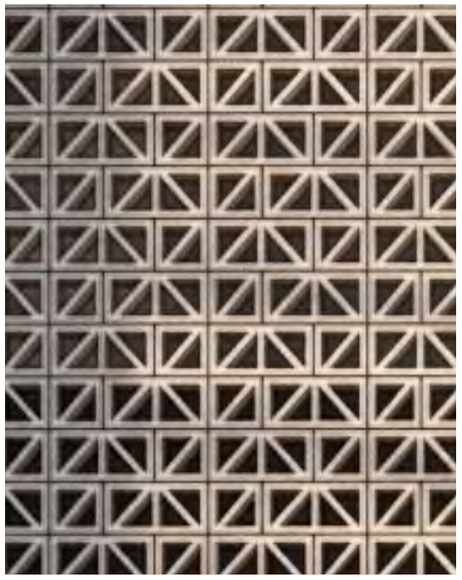
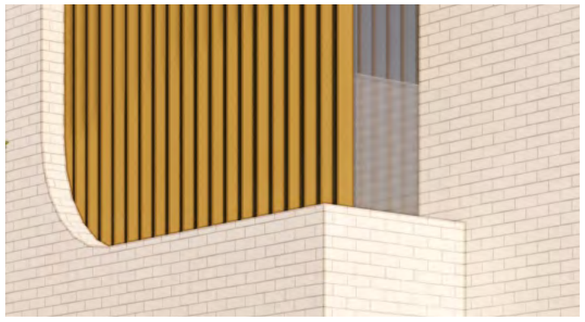
Tones & Textures

Local References









Material Palettes

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Material Palettes

Breeze Block

Concrete &
Dark Render

Concrete Look
Breeze Blocks

Bronze & Glass

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VIEW FROM FLORA TCE

CONTEXT & CHARACTER

Flora Terrace Streetscape
(existing)

Flora Terrace Streetscape
(proposed)

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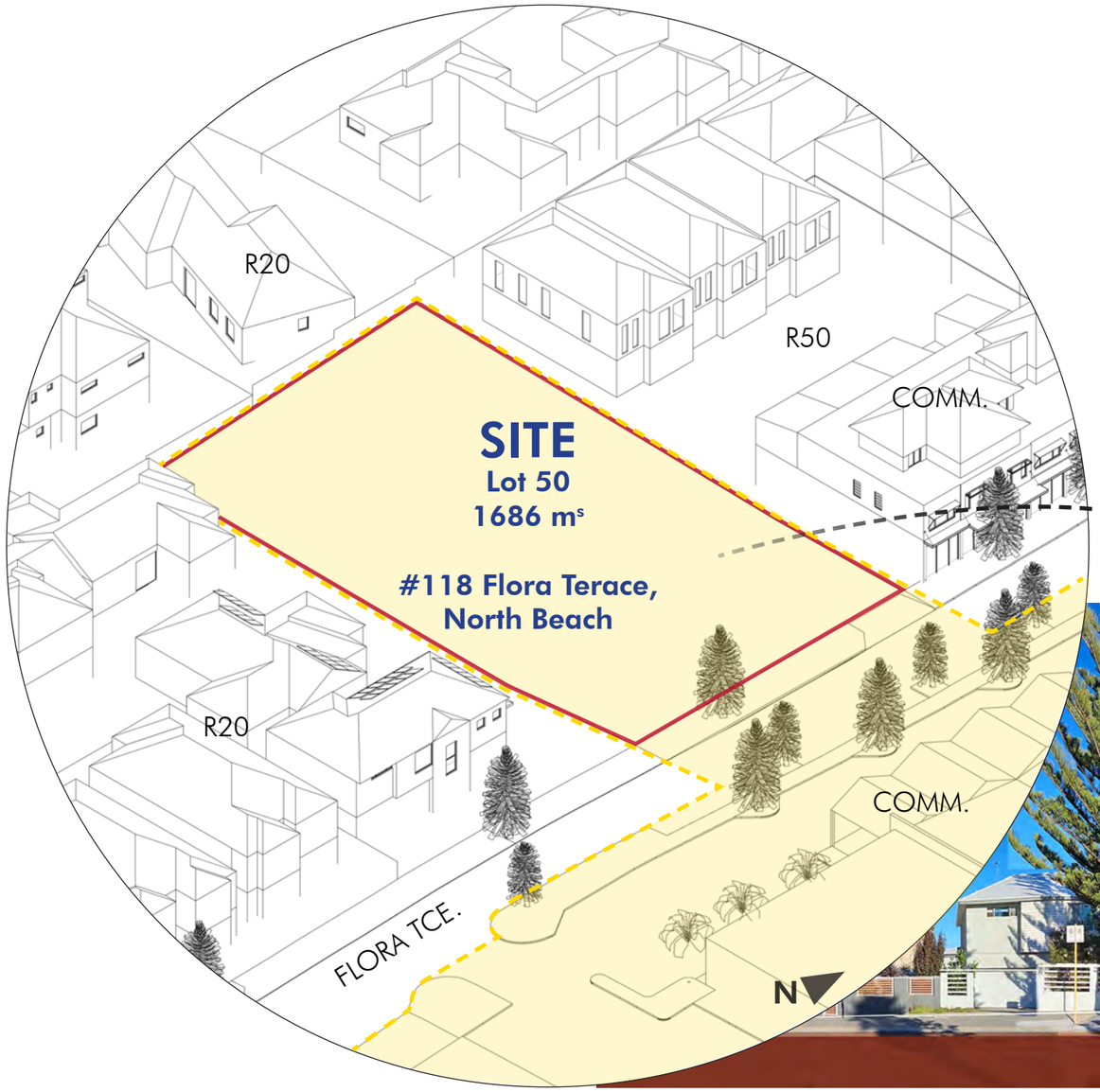
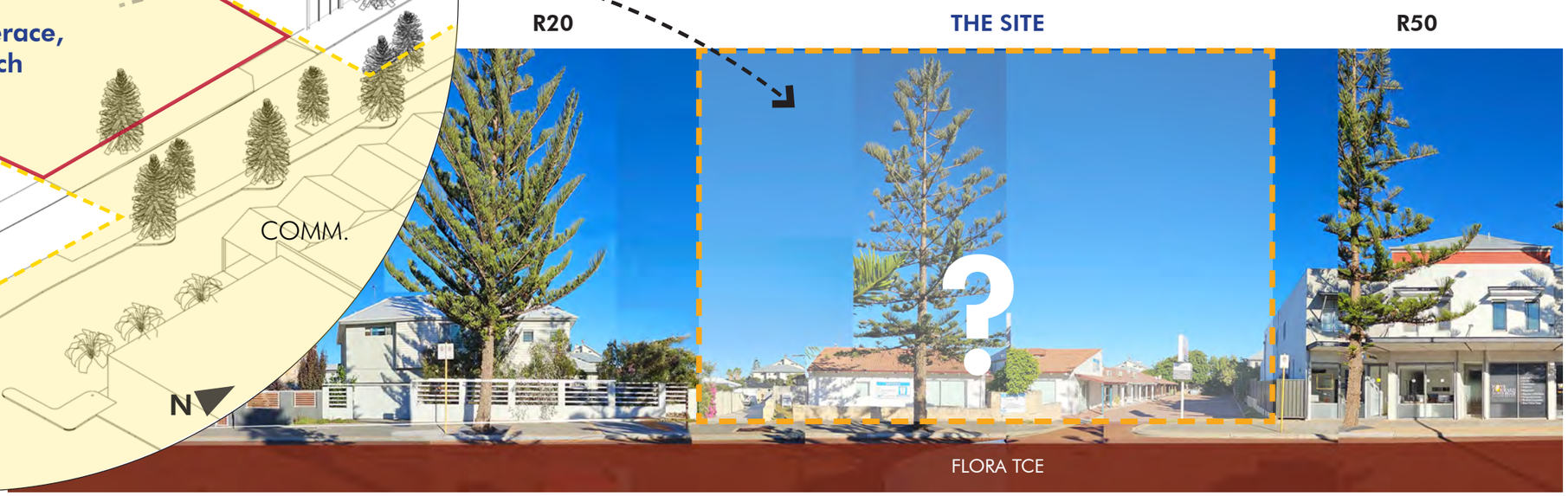
The Site

FLORA TCE LOCAL CENTRE





Looking at a **meaningful addition** to the **local centre**

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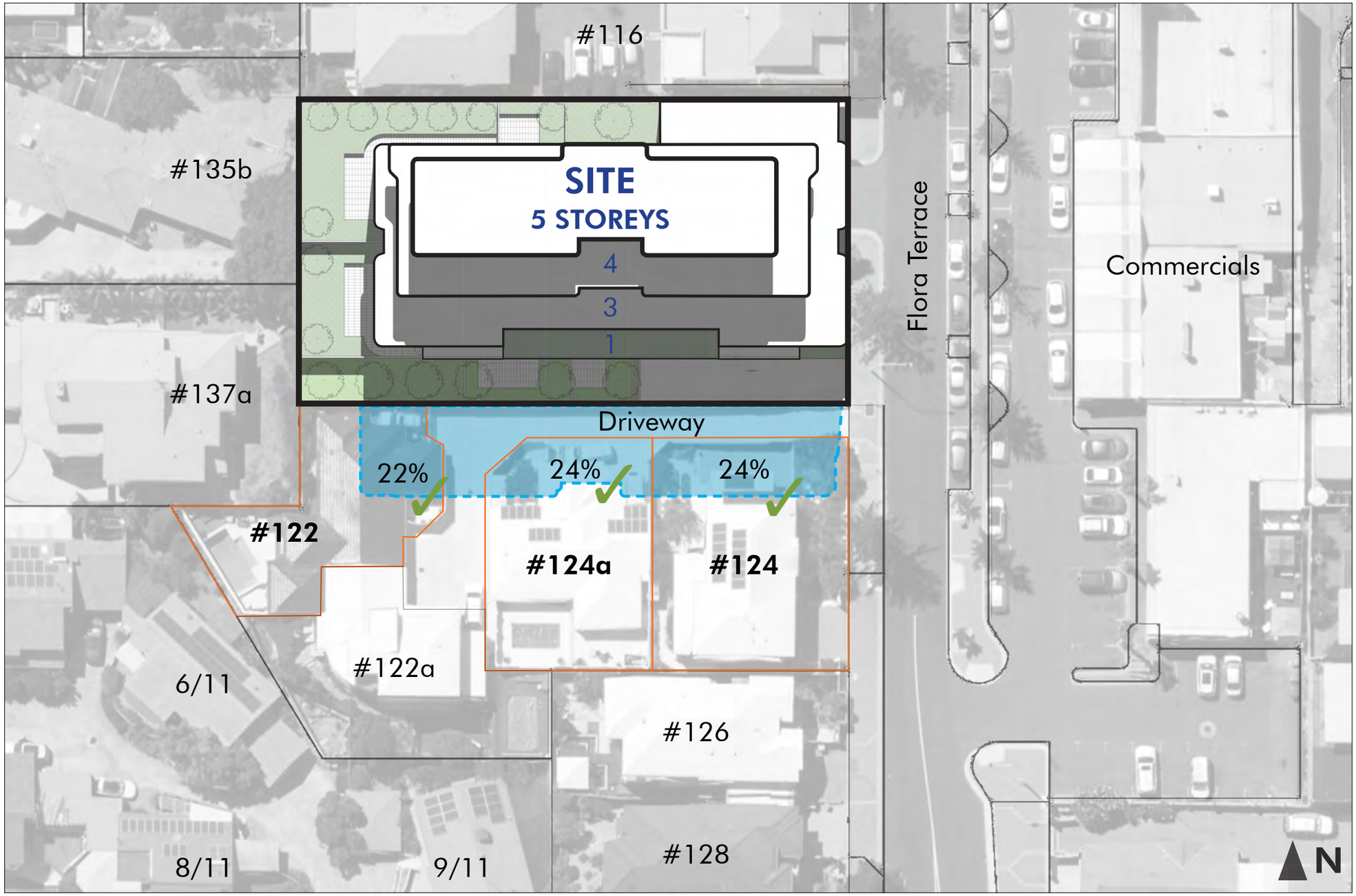
Overshadowing Studies

Proposed Massing Overshadowing

Winter Solstice (21st of June)

12pm



Delivering a **better overshadowing outcome** while pursuing **additional height...**

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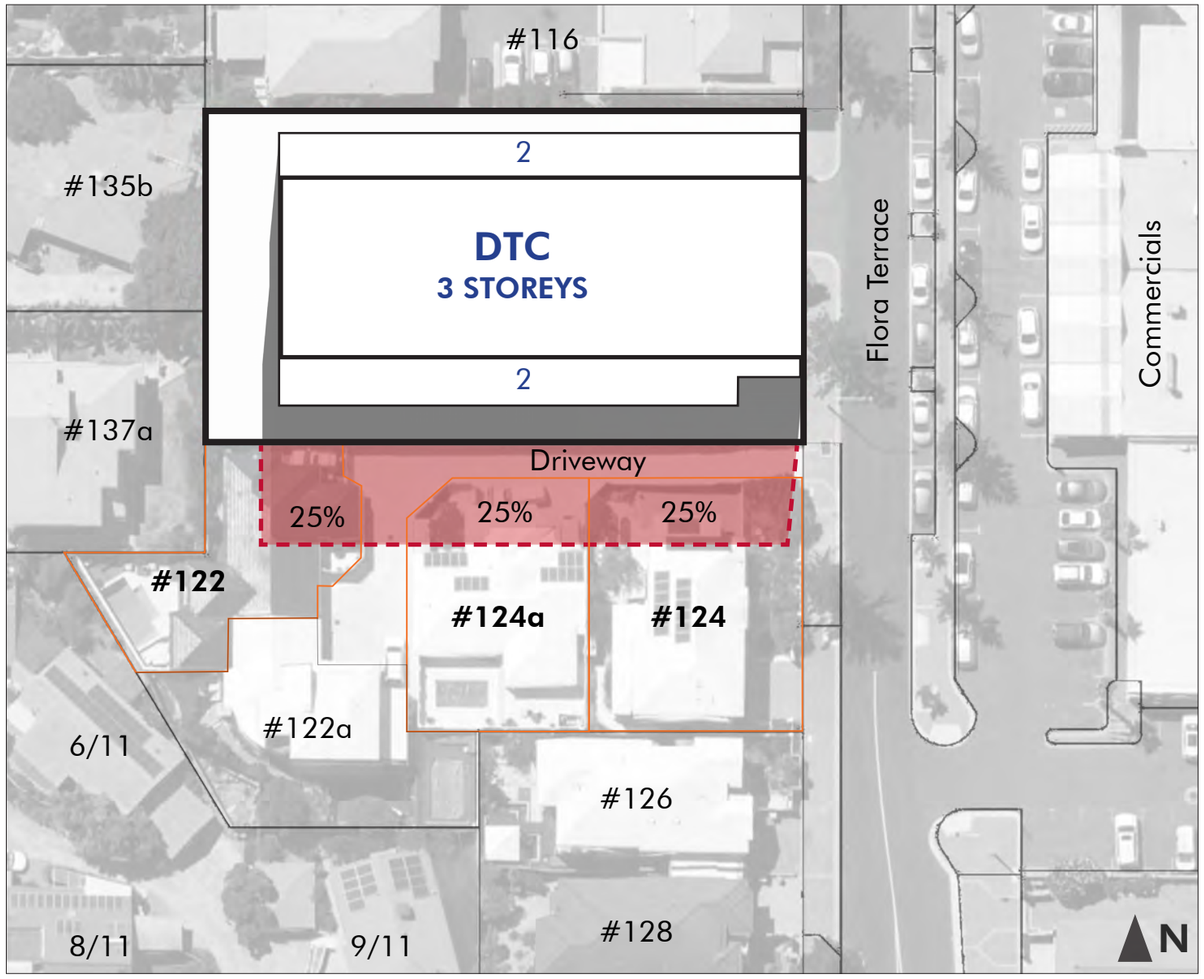
Overshadowing Studies

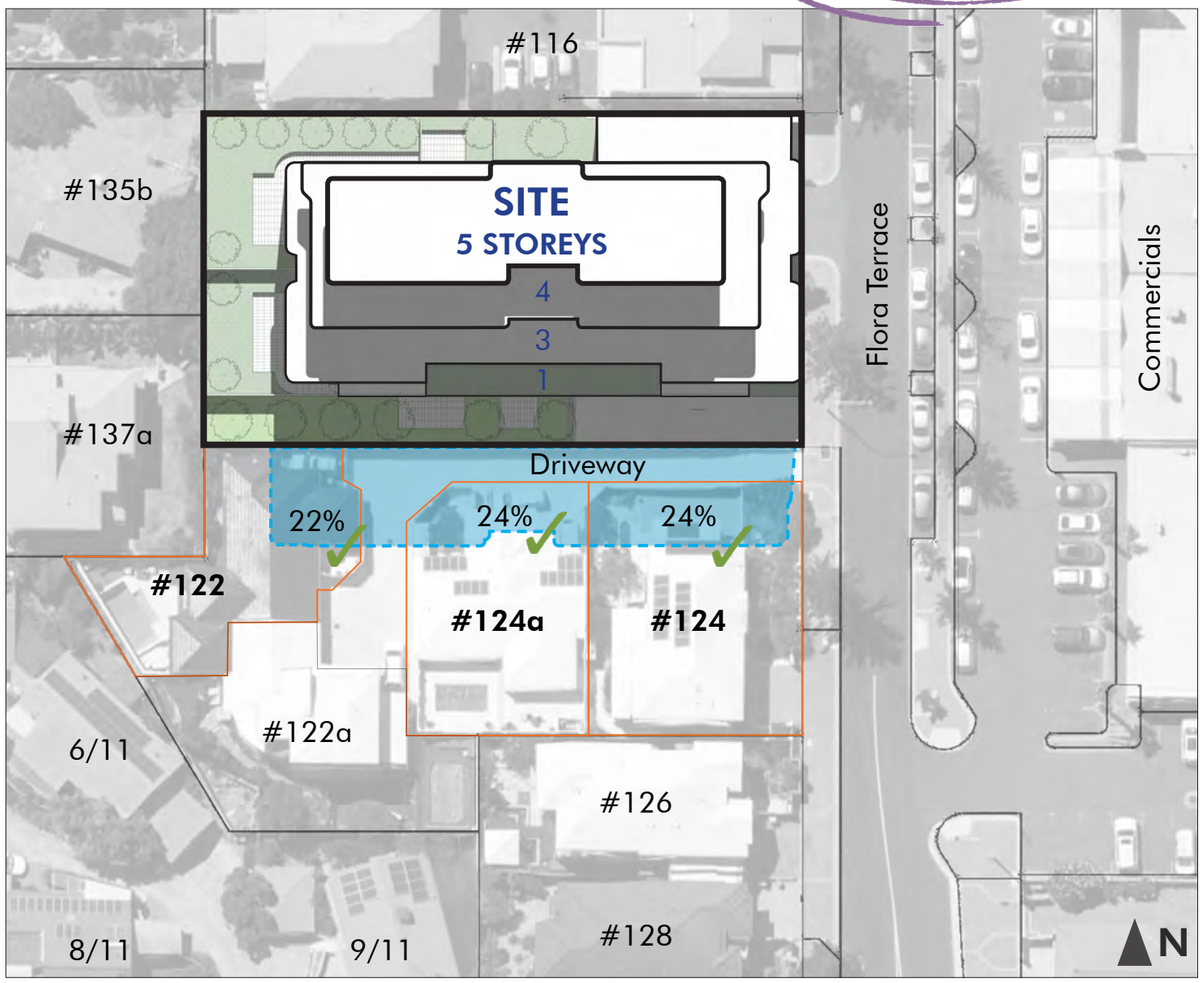
Proposed Massing Overshadowing
DTC Massing Overshadowing

Winter Solstice (21st of June) 12pm

We have achieved **a better result**



DTC Massing
(setback, height & overshadowing)



Proposed Massing

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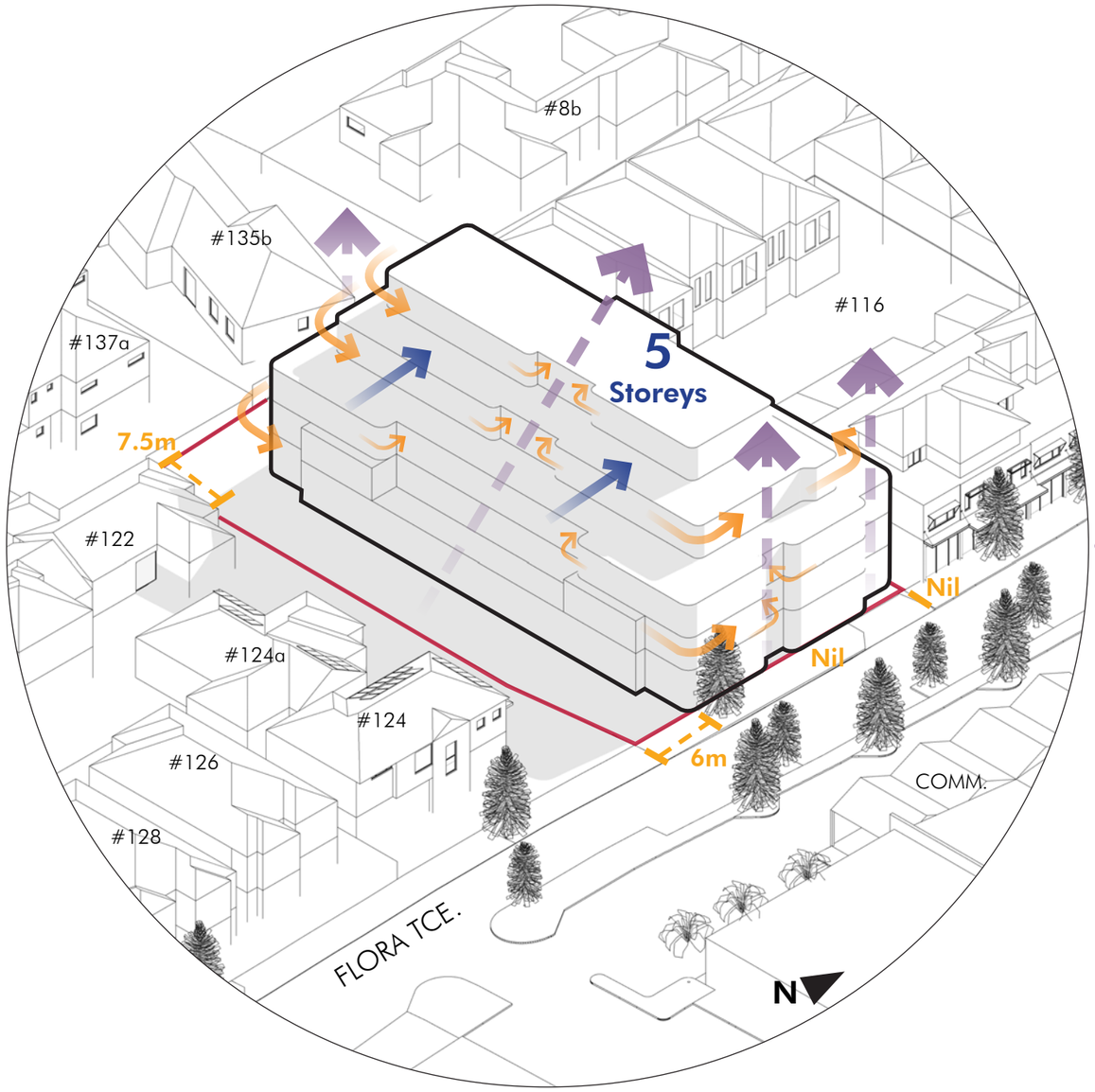
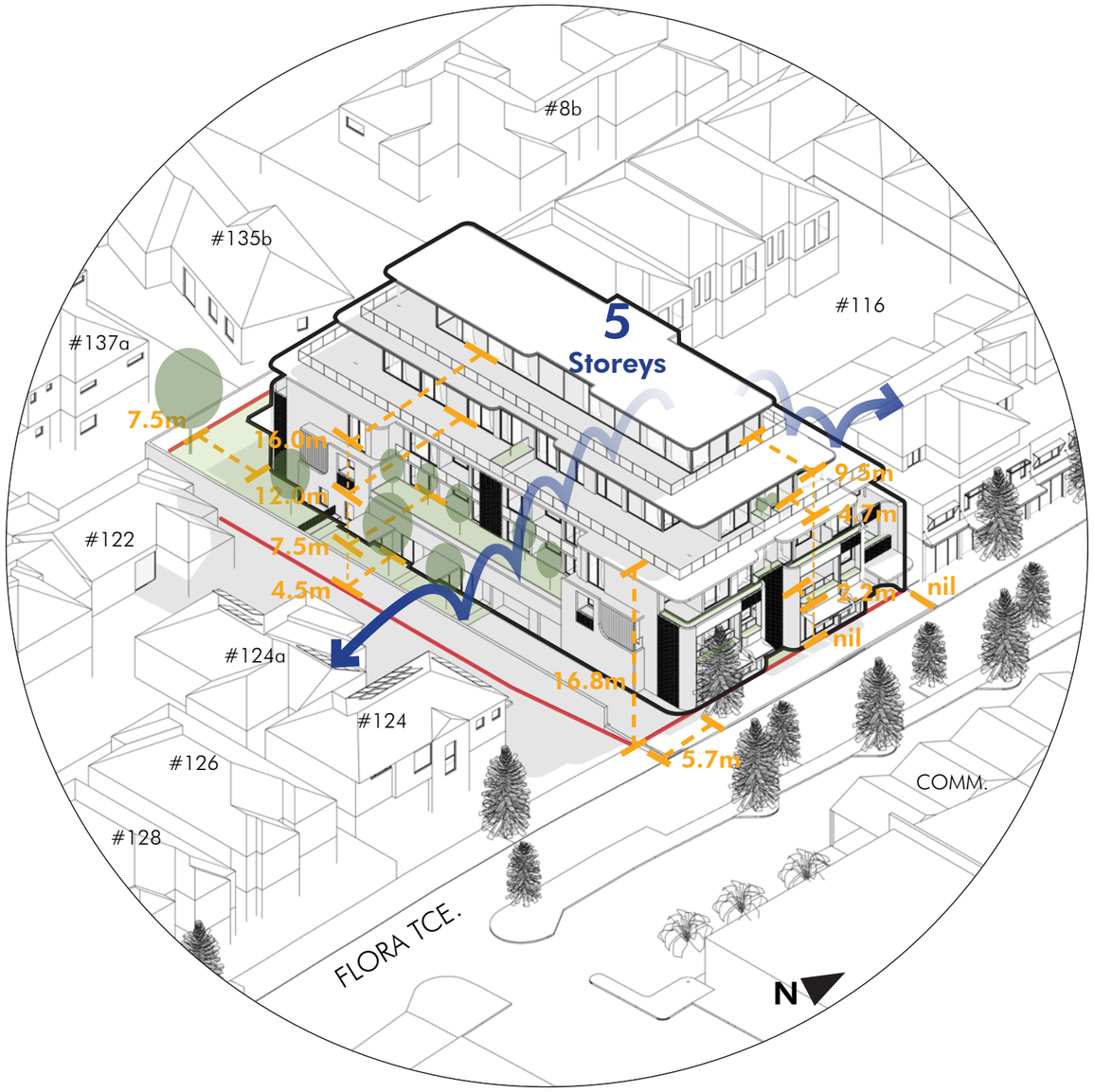
Massing Opportunities

Proposed Massing



Articulating the massing by **curving** the **corners** and **creating cuts**

Proposed Built Form



Additional setbacks to upper levels for a **better transition** to neighbours

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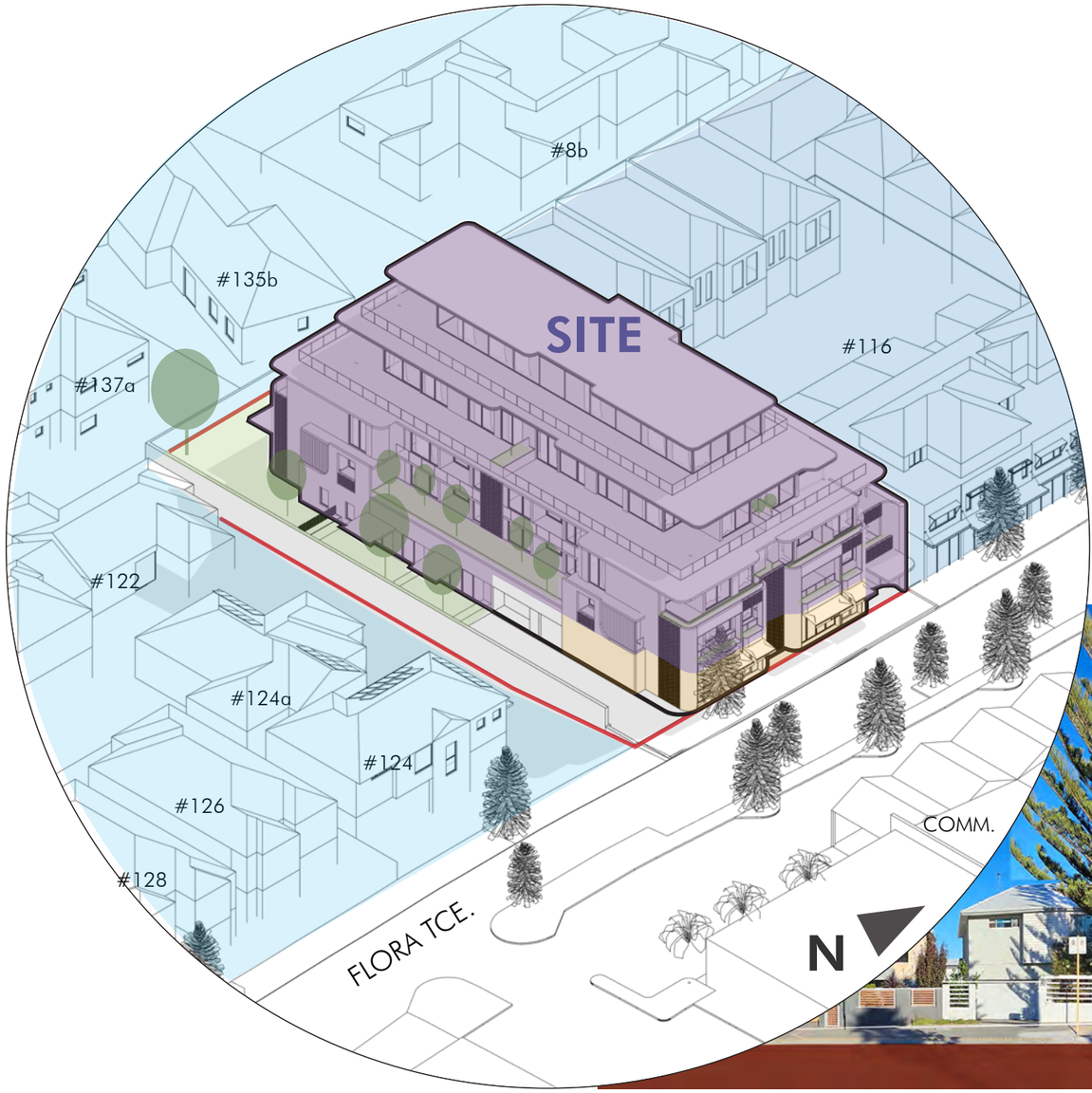
Dwelling Mix

APARTMENTS
COMMERCIAL



20 Apartments

1 x 1 BED: 2
2 x 2 BED: 2
3 x 2 BED: 15
3 x 3.5 BED: 1

Commercial Tenancy

246 sqm

47 Car Bays

Located in basement

Massing

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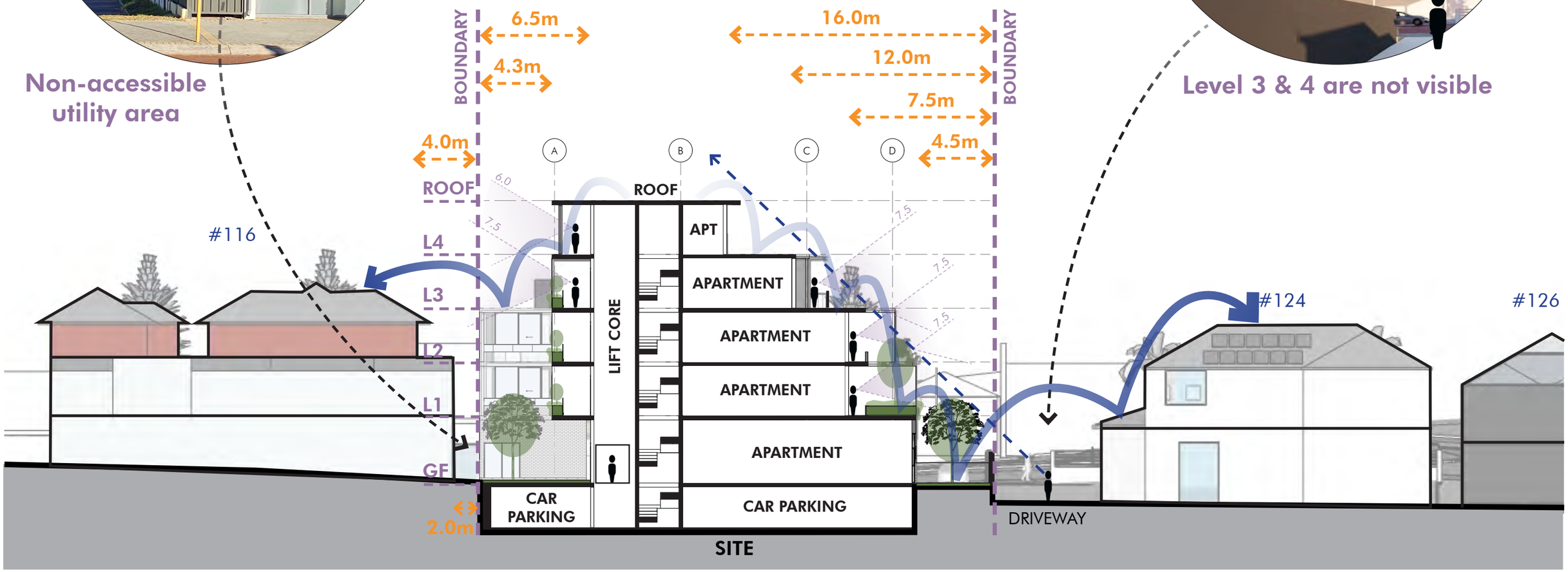
Transition To Our Neighbours

Non-accessible utility area

Viewing from #124a

Viewing from #124

Level 3 & 4 are not visible



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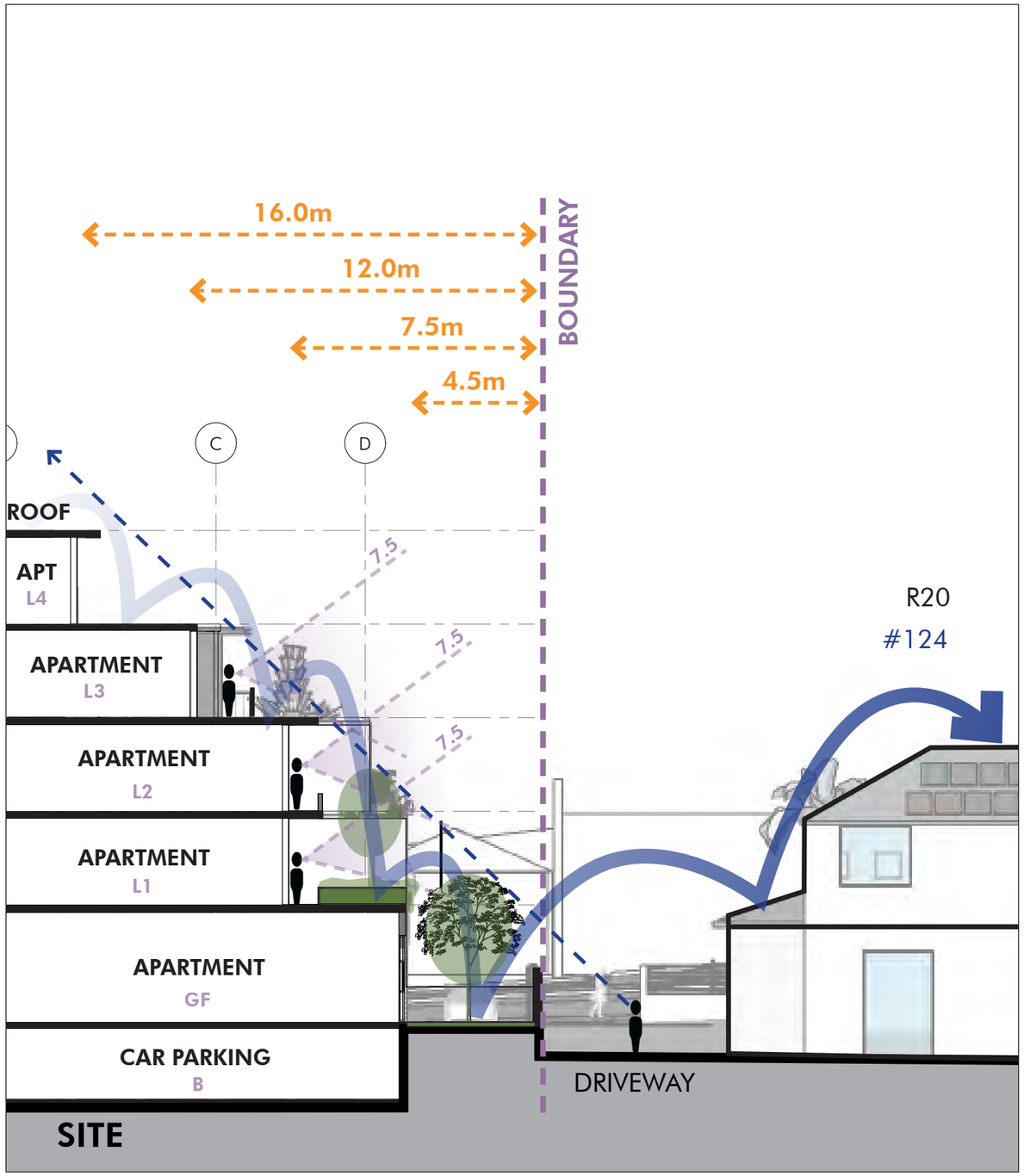
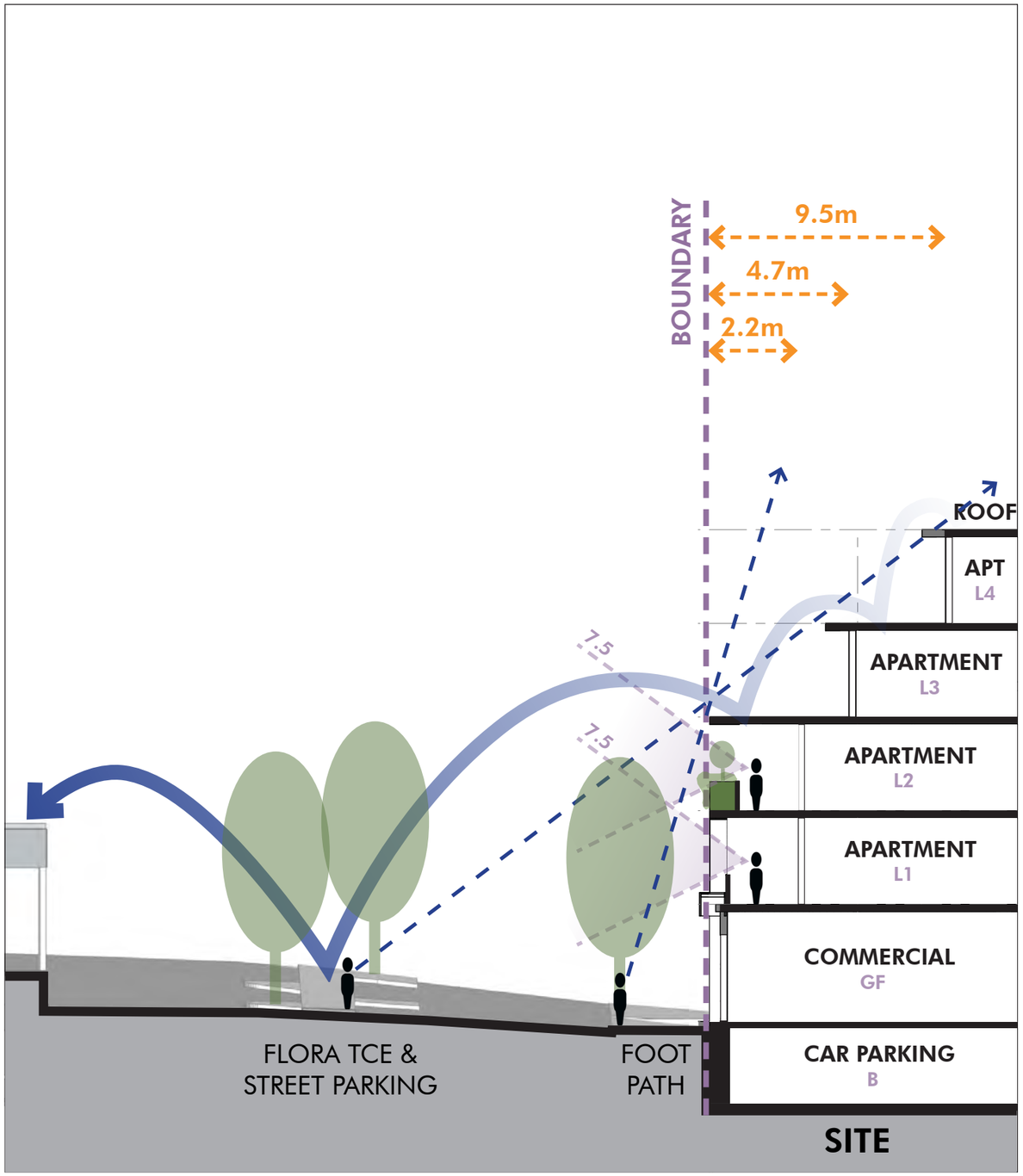
A **Significant Transition To Our Neighbours** On The South

Transition To Our Neighbours



R20 Transition



Flora Tce Interface

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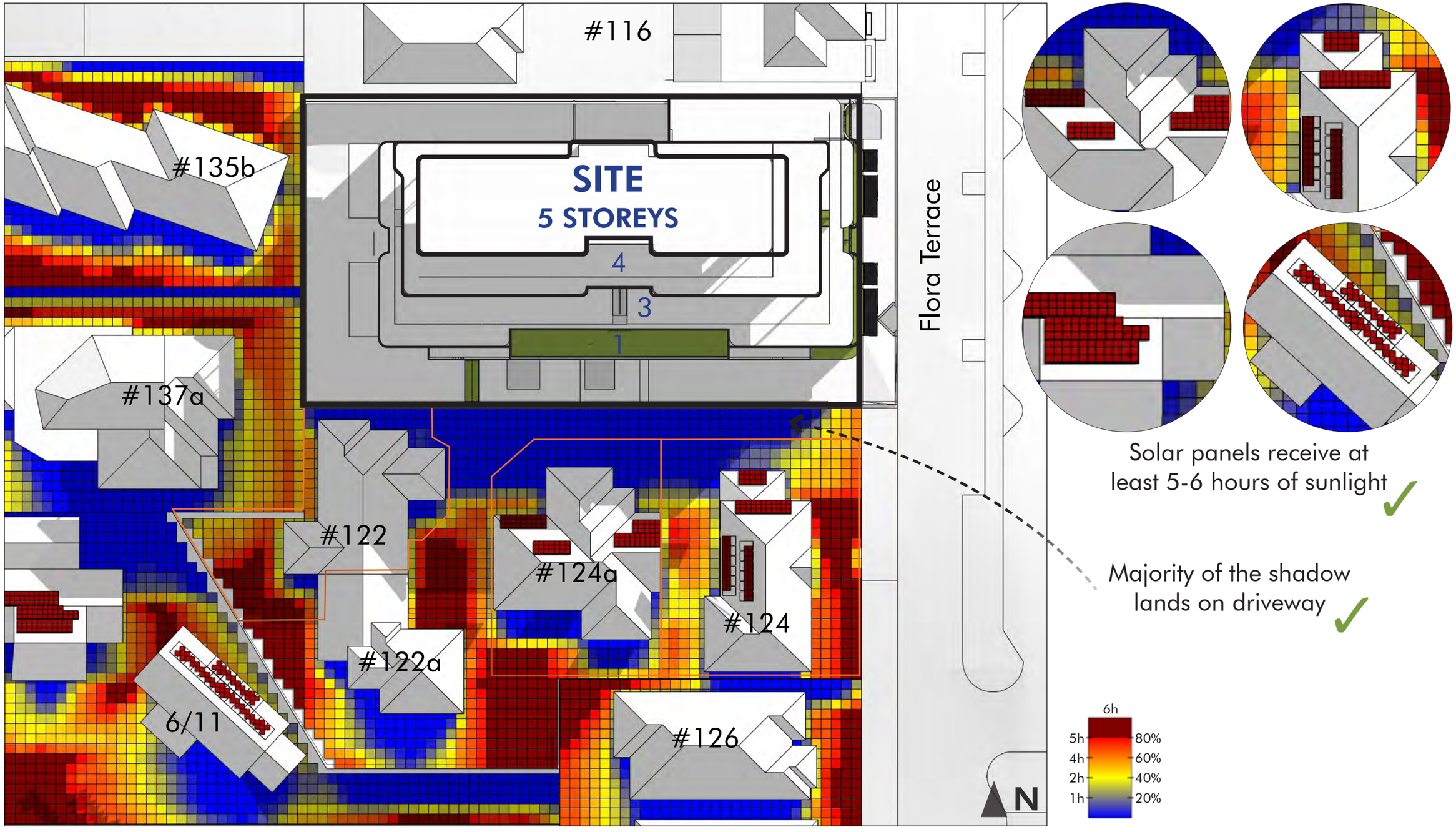
Solar Access Studies

Proposed Massing Overshadowing - - -

Winter Solstice (21st of June)

12pm



Solar panels receive at least 5-6 hours of sunlight ✓

Majority of the shadow lands on driveway ✓

Significant Improvement in **Solar Access**

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BUILT FORM & SCALE

Flora Terrace Streetscape
(proposed)

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Marrying the **streetscape** and responding to the **public realm**

VIEW FROM FLORA TCE

Landscape Summary

Deep Soil Area

Total Site Area	1686sqm
Deep Soil Planting Required (10%)	168sqm
Ground Floor DSA	120sqm
Ground Floor DSA Shortfall	48sqm
Planting on Structure (min. 1m wide x 1m deep)	266sqm
Total DSA and Planting on Structure	**386sqm**
Total DSA Percentage	**22.8%**

Deep Soil Planting

On-structure Planting

Ground Floor

1st Floor

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Landscape Summary

Tree Requirements

Total Site Area	1686sqm
Tree Required (>1000sqm)	1 large, 2 medium & small trees
Large Tree	1
Medium Tree	2
Small Tree	12
Total Tree Numbers	**15**
Total Tree Canopy Area	**244sqm**

Small tree
(9sqm each tree)

Medium tree
(36sqm each tree)

Large tree
(64sqm each tree)

Ground Floor

1st Floor

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Ground Floor

Legend

01 Entry area with footwash
02 Timber deck
03 Seat with garden bed
04 Communal garden space
05 Private courtyard
06 Driveway
07 Dog water station
08 Proposed norfolk Island Pine
09 Veggie planters

1:200 @ A3

N

Street View

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Ground Floor Private Courtyard

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Private Courtyard and Terraces

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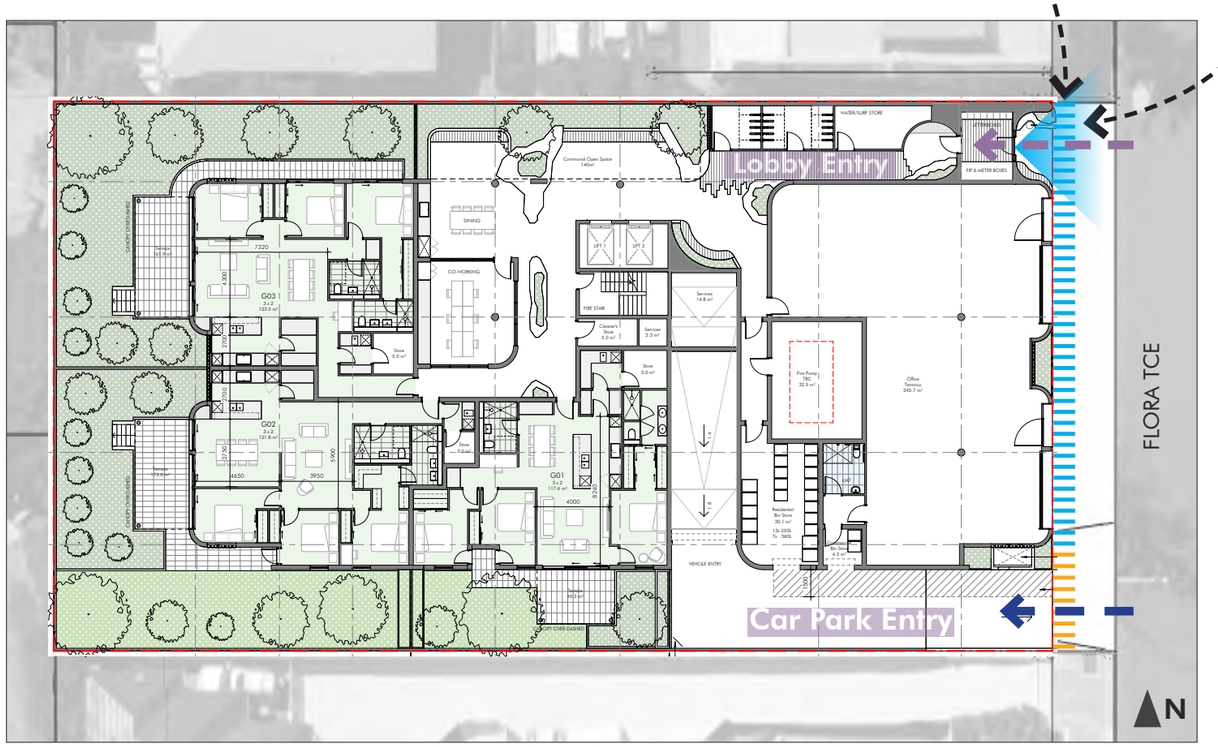
Passive Surveillance & CPTED

Activated Street Frontage
Other Street Frontage
Res. Lobby Access
Vehicle Access

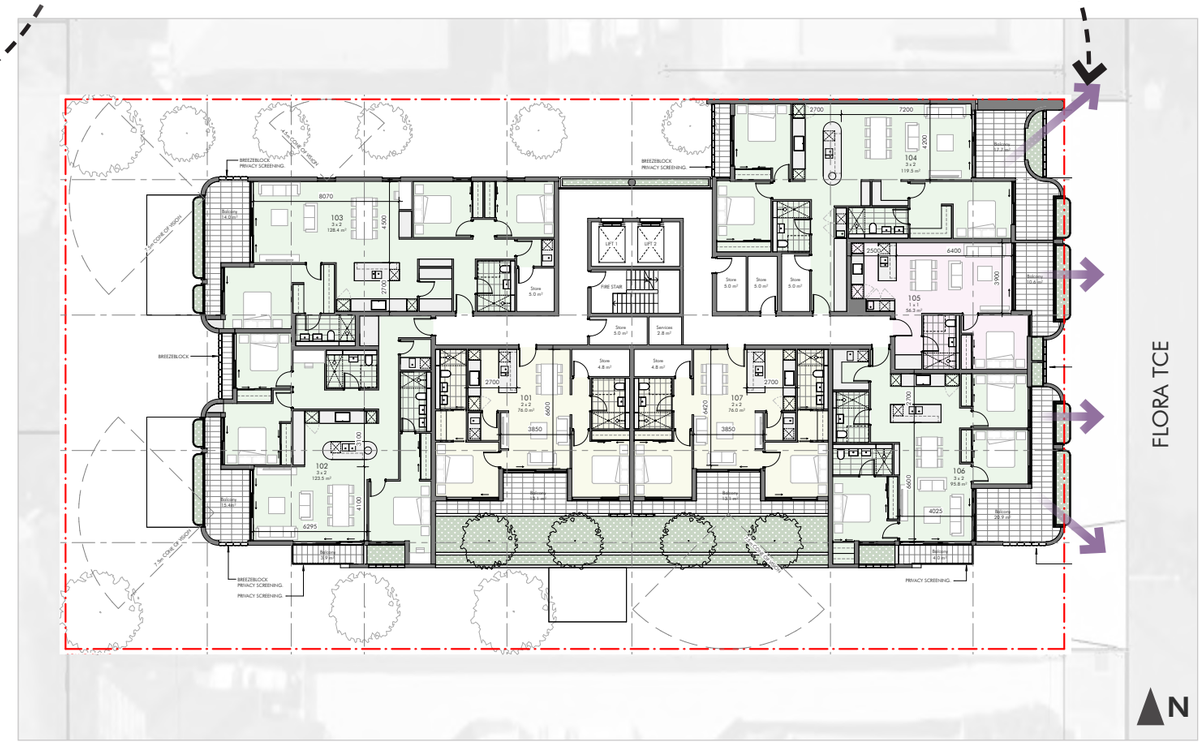
Up to **82%** of **activated street frontage**

Lobby entrance in close proximity to the street

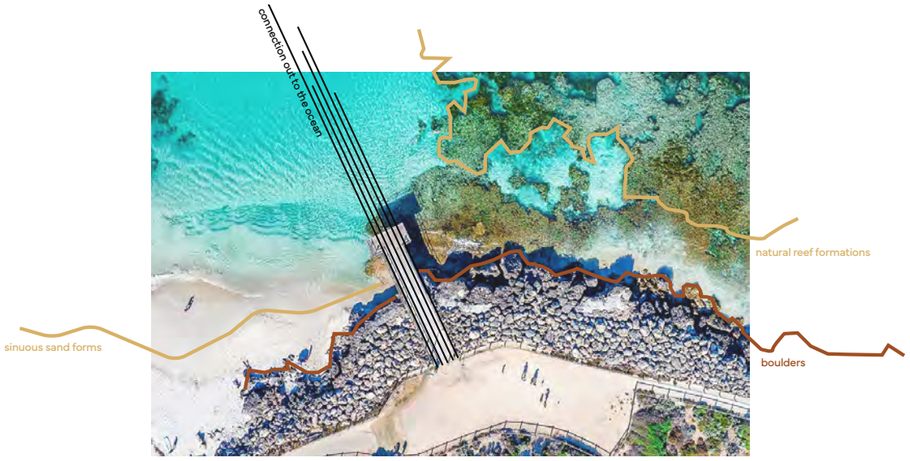
Passive surveillance to the street



Ground Floor Plan



Level 1 Plan



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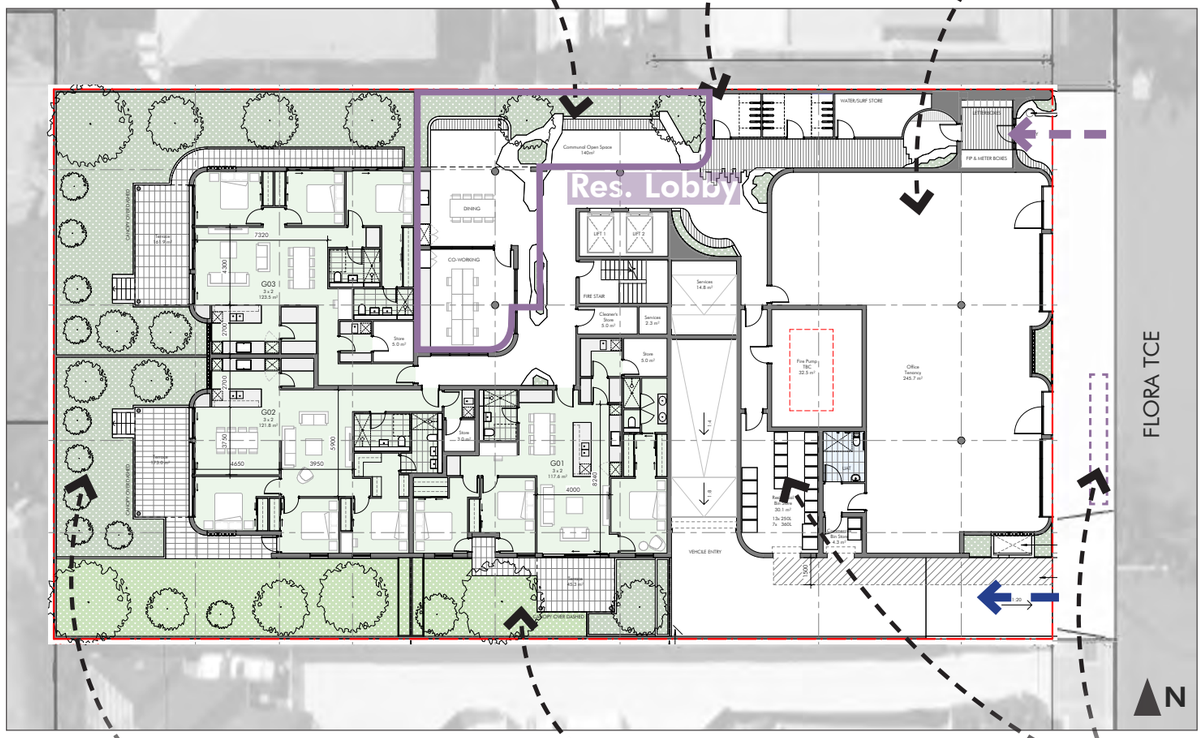
Ground Floor & Apartment Levels

Res. Lobby Access
Vehicle Access

140sqm of communal amenities

15 bicycle spaces

4.0m high ground floor



240qm of on structure landscape on ground floor

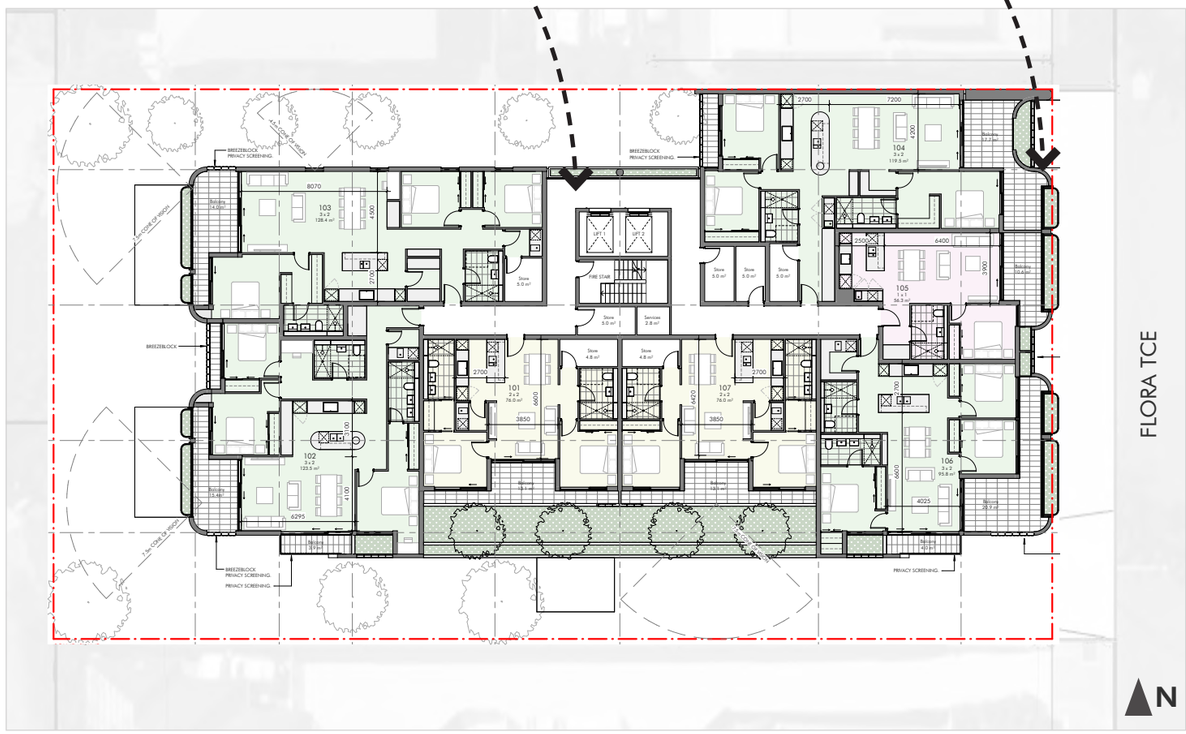
120sqm of true deep soil on ground floor

Bin store & bin presentation

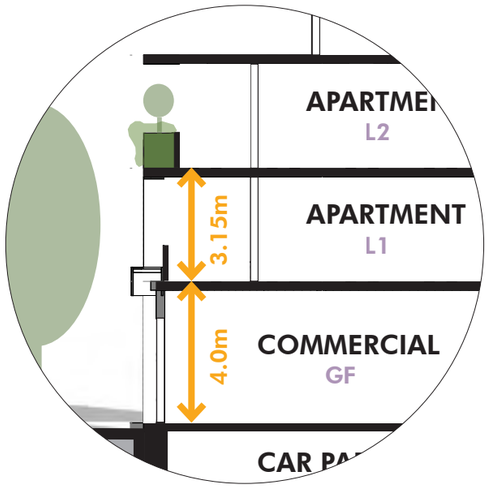
Ground Floor Plan

Naturally ventilated corridor

Landscaped building edge



Level 2 Plan



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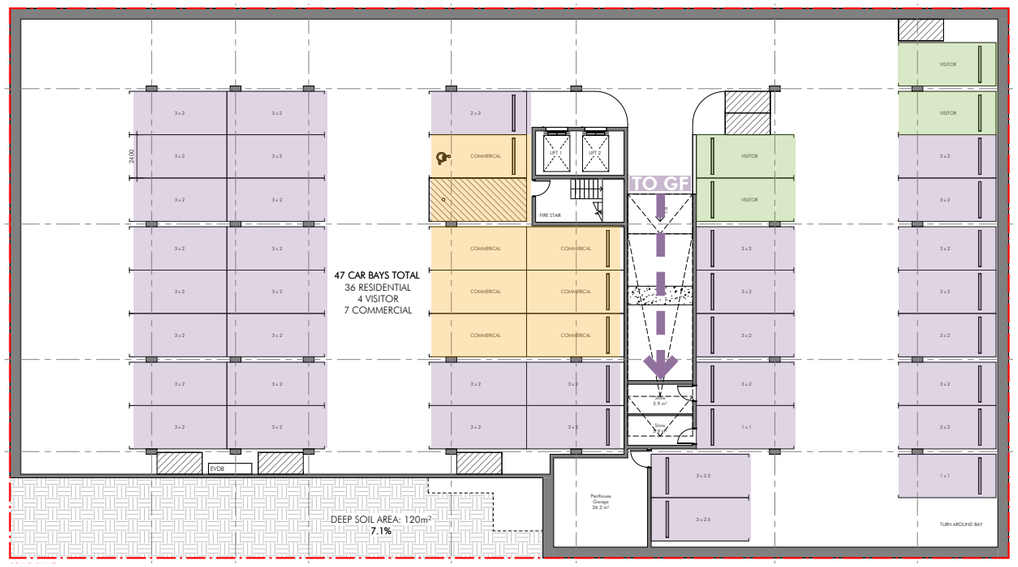
Vehicle Parking



- 36 Residential Car Bays
- 4 Residential Visitor Car Bays
- 6 Residential Motorcycle Bays
- 7 Commercial Car Bays

N

Basement Plan

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VIEW FROM FLORA TCE

ESD Summary

1. **Dedicated EV DB**
2. **NatHERS 7.5 star average (+1.5 to NCC 2024)**
3. **40kW PV array**
4. **20% reduction in life cycle footprint**
5. **40% reduction in operational energy through envelope.**
6. **30% reduction in water use through native planting**
7. **Low VOC and formaldehyde internal finishes**

Design Feature	Benchmark Performance	Verification Method	Healthy Living	Carbon Footprint	Climate Resilience	Sustainable Transport
Bike Parking	1 visitor bay + apartment bike racks	Design documents	X	X		X
EV Facilitation	Dedicated EV DB, Capacity to service 100% of bays. 4 Bays Operational Day 1.	Design documents		X		X
Efficient Envelope	NatHERS – 7.5 Star Average (+20% Current BCA Requirement)	Building License Report	X	X	X	
Native Planting	Demonstrate 30% reduction in water use against Green Star Standards	Report at Building License		X	X	
Fossil Fuel Free Site	No fossil fuels for domestic hot water, cooking or heating	Design documents		X	X	
Renewable Energy	40kW Solar PV Panels – sufficient to offset energy consumption in common and commercial areas	Performance Specification		X	X	
Urban Heat Island	Achieve 75% of site with a 3-year SRI of 64 or greater	Design documents	X	X	X	
Embedded Meter Network	Provide electrical, cold water and hot water meters, with central reading system.	Design documents		X	X	X
Waste Plan	Waste store to allow for three streams	Design documents		X		
Embodied Energy	Target 20% reduction in life cycle footprint, as demonstrated with peer reviewed LCA report.	LCA Report at Building License		X	X	
Water Efficiency	WELS rated fittings – Within 1 Star of best available	Design documents		X	X	
Low Toxicity Materials	Utilise low VOC and formaldehyde internal finishes, adhesives and sealants.	Material review at Building License	X			
Natural Ventilation	Comply with AS 1668.4 for natural ventilation to all apartments	Report at Building License	X	X	X	
Operational Footprint	40% reduction in operational energy through envelope, services and onsite generation.	Report at Building License		X	X	

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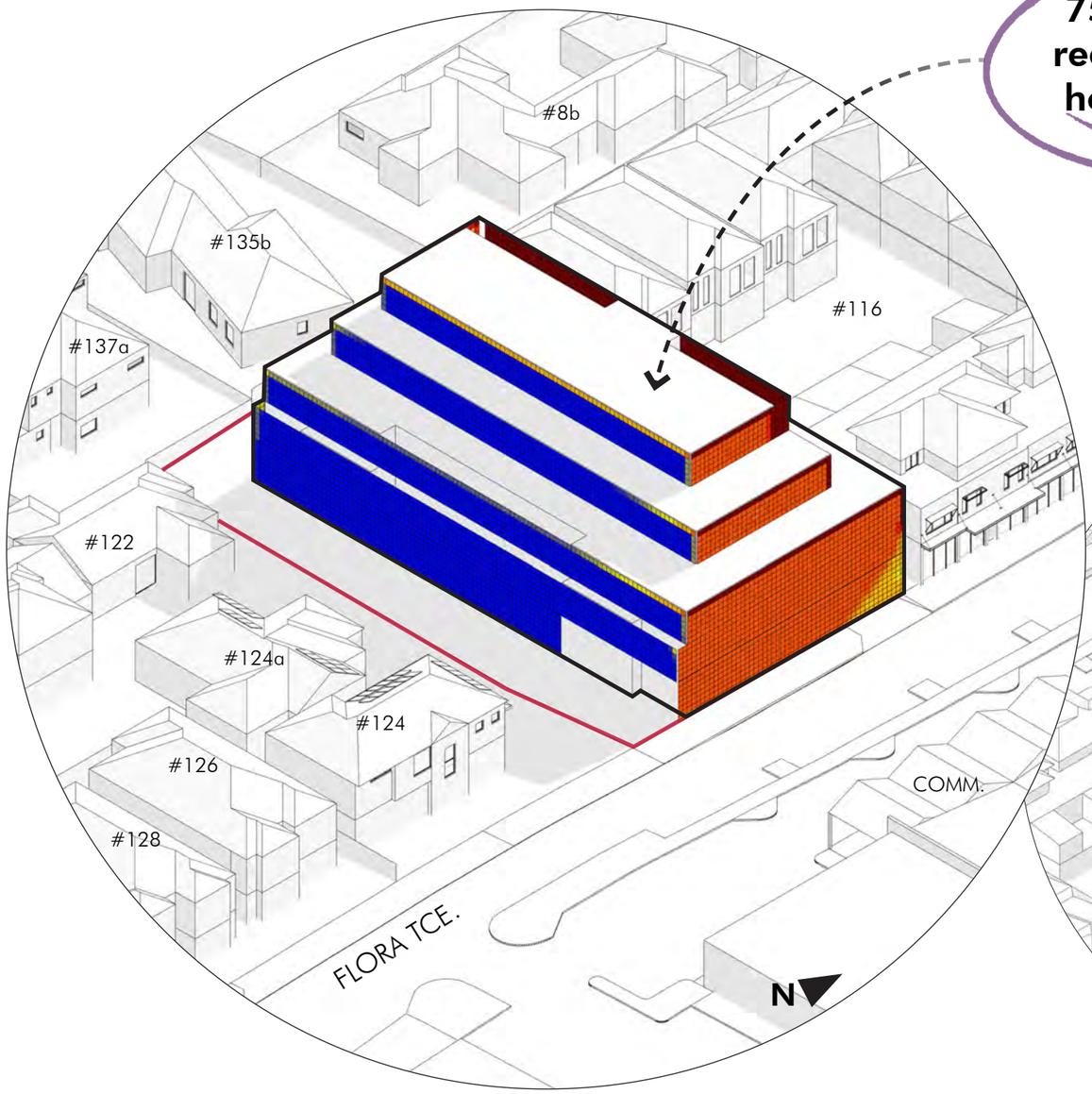
Design Response

Climate Change Impact	Risk	Proposed Response
Increased temperatures lead to increased bushfire risk and intensity.	Low due to current classification of site.	Provide dual aspect orientation for most apartments. Provide filters on air conditioning units to mitigate bushfire smoke infiltrating into apartments.
Rising sea levels and increased flood risk.	Very low.	Avoid key infrastructure construction below ground level. Ensure structure can adapt to changing water levels.
Reduced rainfall	Increasing requirement for irrigation, increased cost of scheme water.	Utilise smart irrigation, including moisture detection and prioritise drought tolerant planting. Utilise native planting where possible.
Increased temperatures lead to increased reliance on air conditioning.	Building is unable to provide comfortable environment for extended periods.	Provide high efficiency air conditioning systems with automatic controls. Upgrade building envelope in excess of BCA minimum requirements. Reduce urban heat island effect.
Increased temperatures lead to increased power demand.	Operating cost increases as electrical prices increase. Power security becomes questionable.	Good control systems and energy efficient design. Installation of solar photovoltaics for renewable generation.

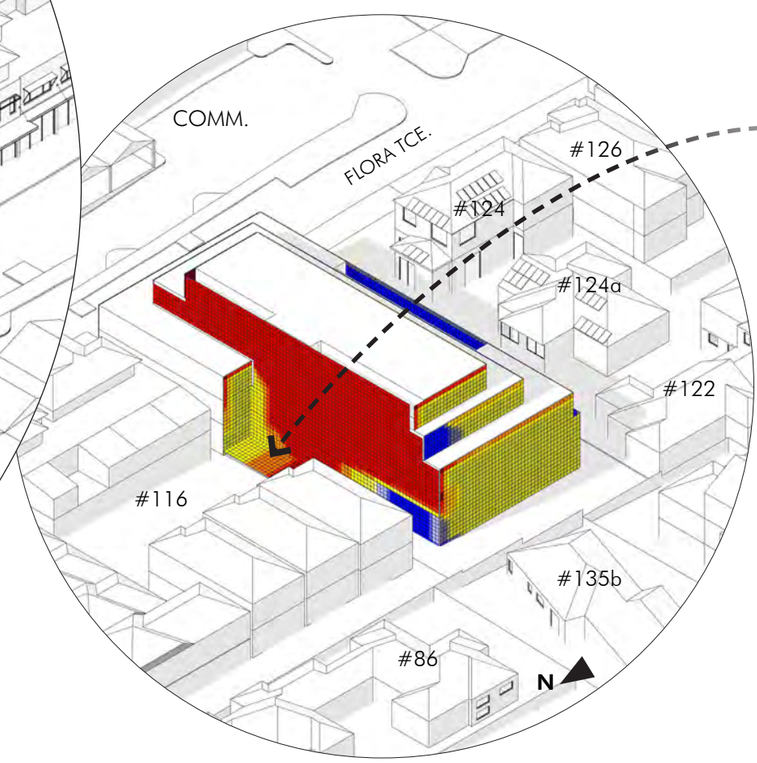
Fixture Type	Minimum WELS rating	Maximum Flow Allowable
Taps	5 stars	4.5-6 L/min
Urinals	5 stars	1.0 L / Flush + Smart demand flush device
Toilets	4 stars	<3.5 L average flush <4.7L full flush, <3.2 half flush
Showers	3 stars	6.0 – 7.5 L/min
Clothes Washing Machines	4 stars	Size Dependent
Dishwashers	5 stars	Size Dependent

Solar Access

75% of apartment **received at least 2 hours of sunlight** ✓

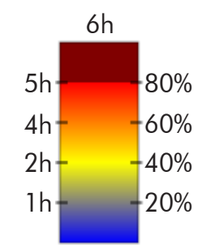


Level	Total Apt Units	**Apt Units Complied**
GF	3	**2**
1	7	**5**
2	6	**5**
3	3	**2**
4	1	**1**
Total	20	**15** ✓



Primary communal open space receives more than 2hrs of sunlight

Winter Solstice - June 21st



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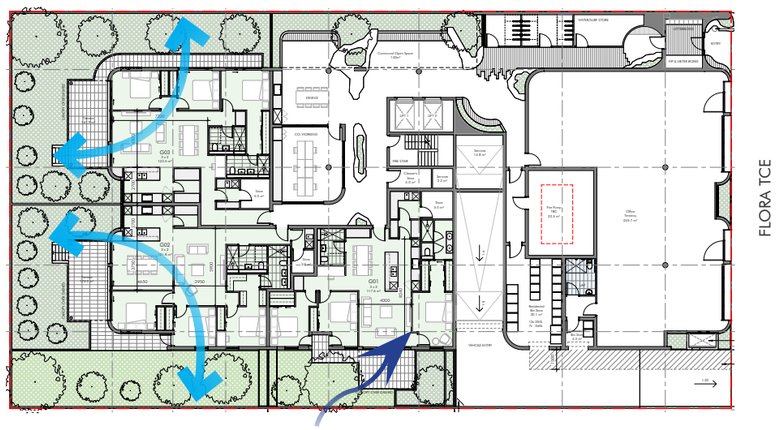
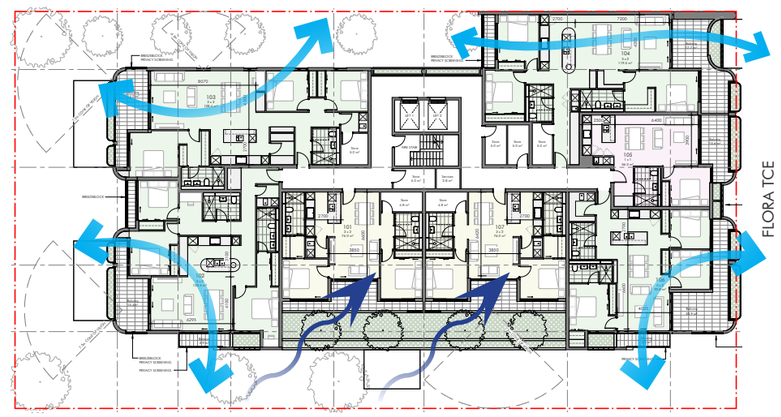
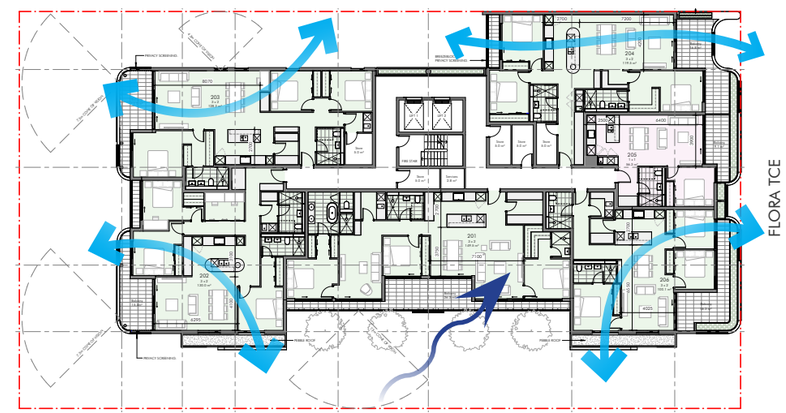
Cross Ventilation



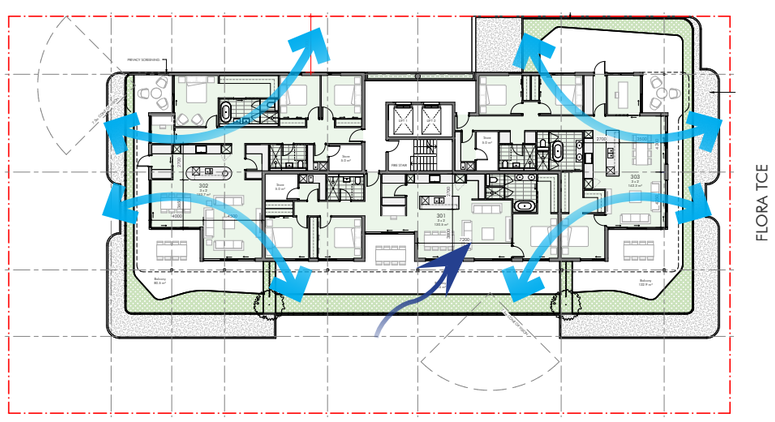
Ground Floor Plan



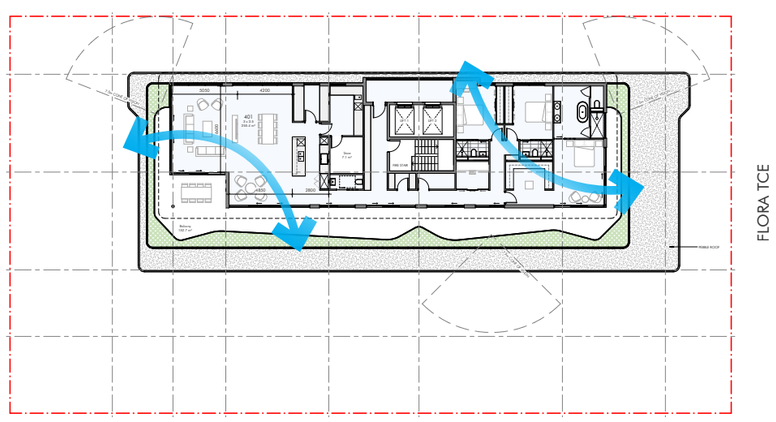
Level 1 Plan



Level 2 Plan



Level 3 Plan



Level 4 Plan

Level	Total Apt Units	**Apt Units Complied**
GF	3	**3**
1	7	**6**
2	6	**5**
3	3	**3**
4	1	**1**
Total	20	**18** ✓

90% of apartments **achieved natural cross ventilation** ✓

A 4.2.2 **(a)** A minimum 60 per cent of **dwellings** are, or are capable of, being **naturally cross ventilated** in the first nine **storeys** of the **building**

(b) **Single aspect apartments** included within the 60 per cent minimum at (a) above must have:

- ventilation openings oriented between 45° – 90° of the prevailing cooling wind direction **AND**
- room depth no greater than 3 × ceiling height

DesignWA
Residential Design Codes Vol. 2

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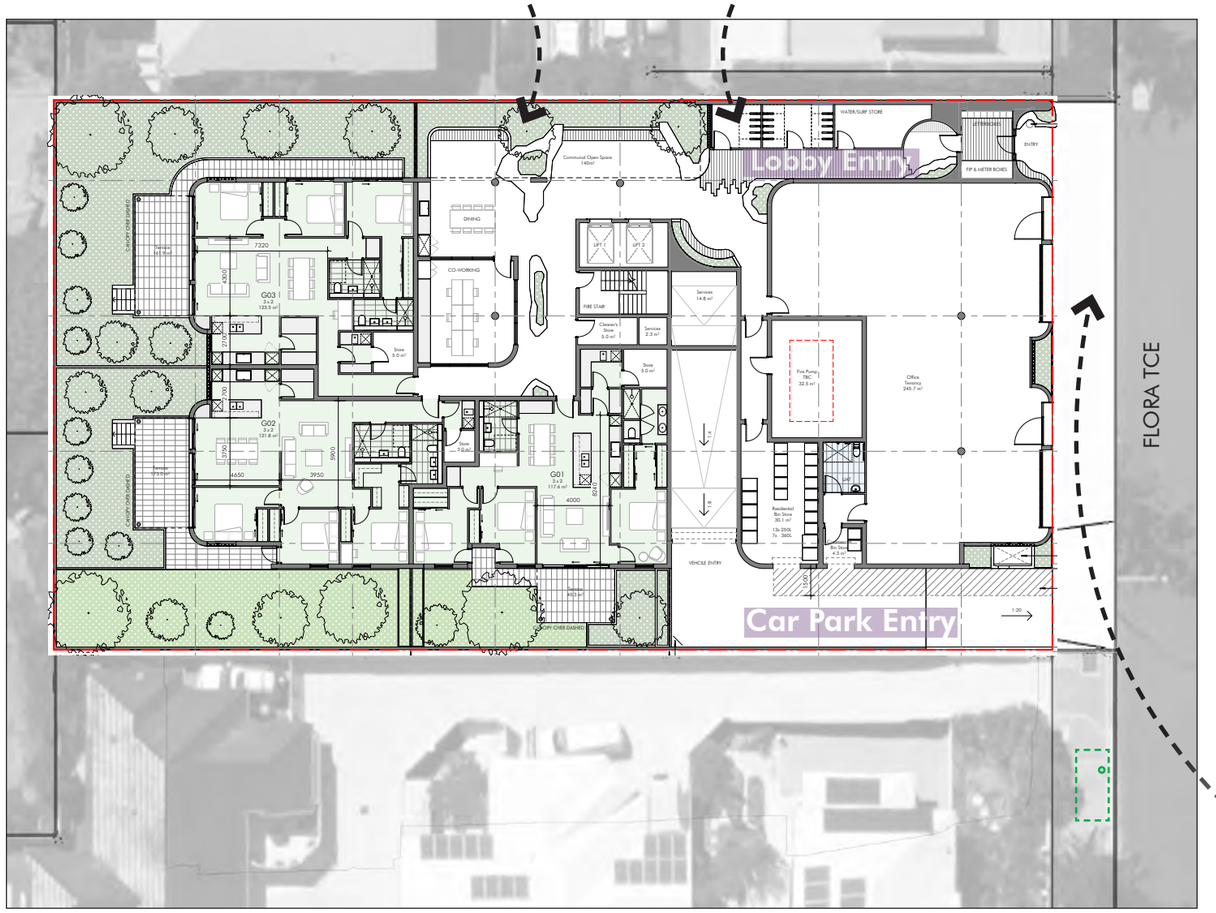
Community & Resident Amenities

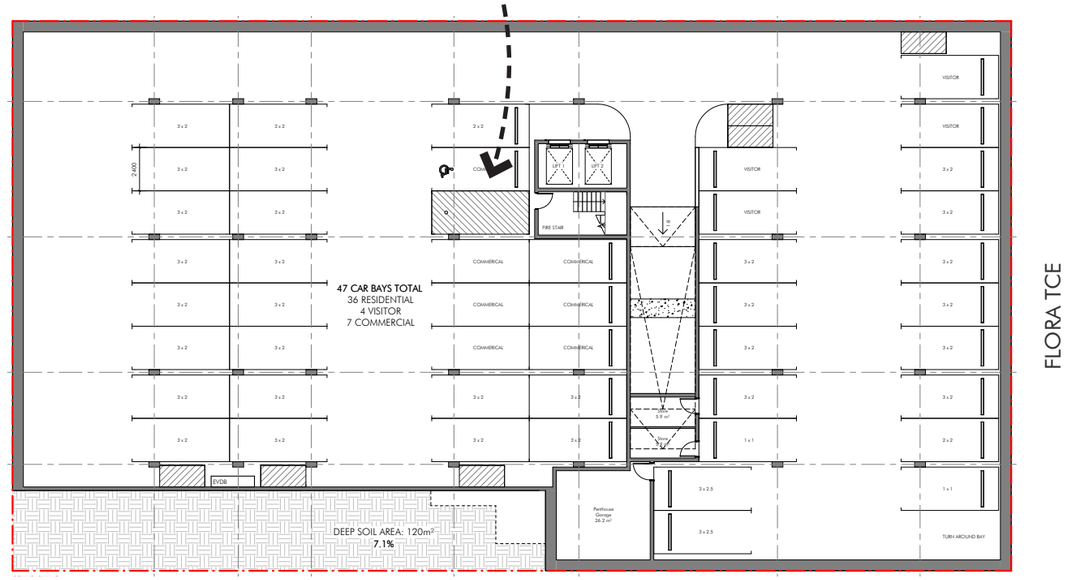
140sqm of landscaped and communal spaces

15 secured bicycle spaces



Ground Floor Plan

ACORD Parking bay



Basement Plan

Additional tree to street frontage

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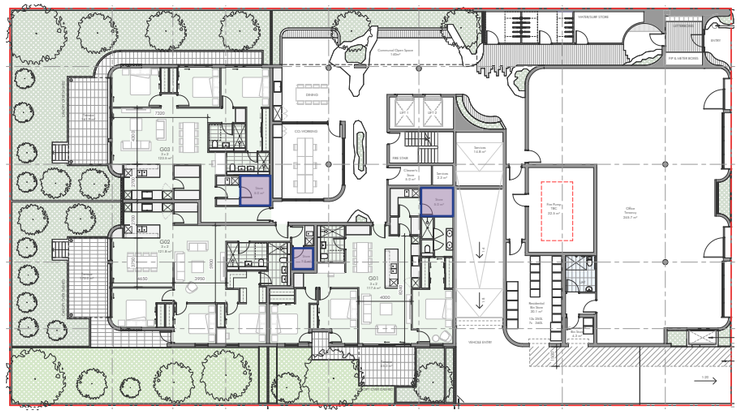
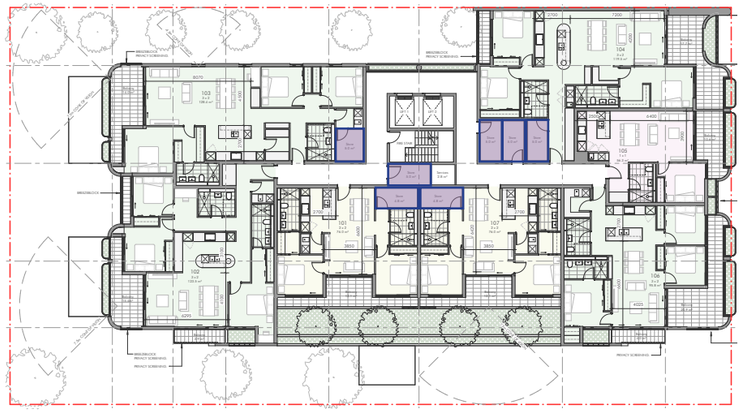
Residential Store Rooms

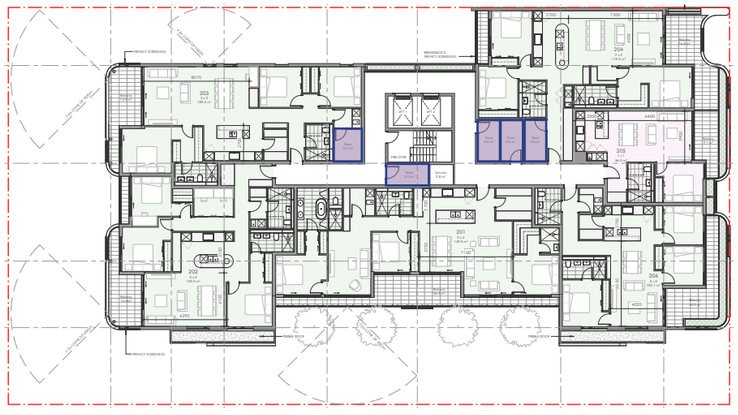
Internal & External Stores



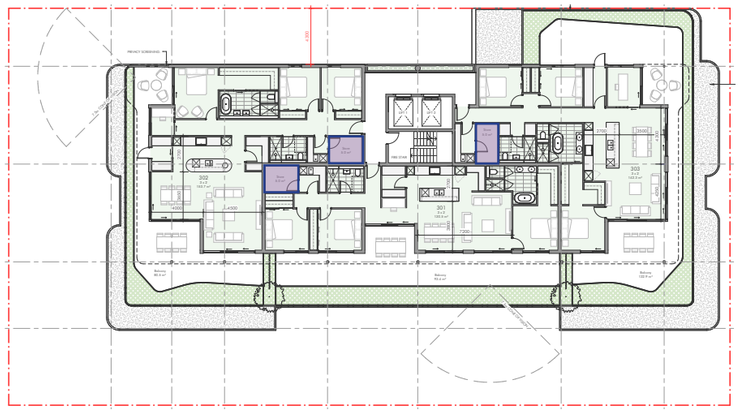
Ground Floor Plan



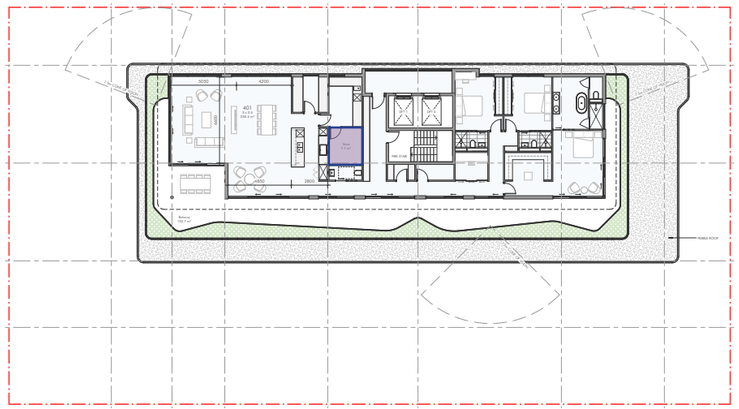
Level 1 Plan



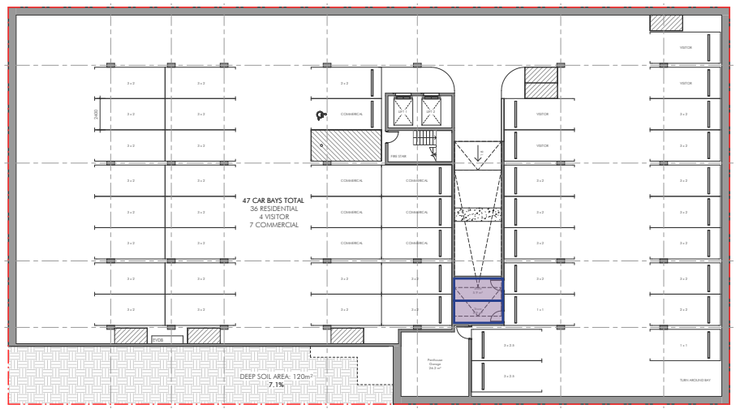
Level 2 Plan



Level 3 Plan



Level 4 Plan



Basement Plan

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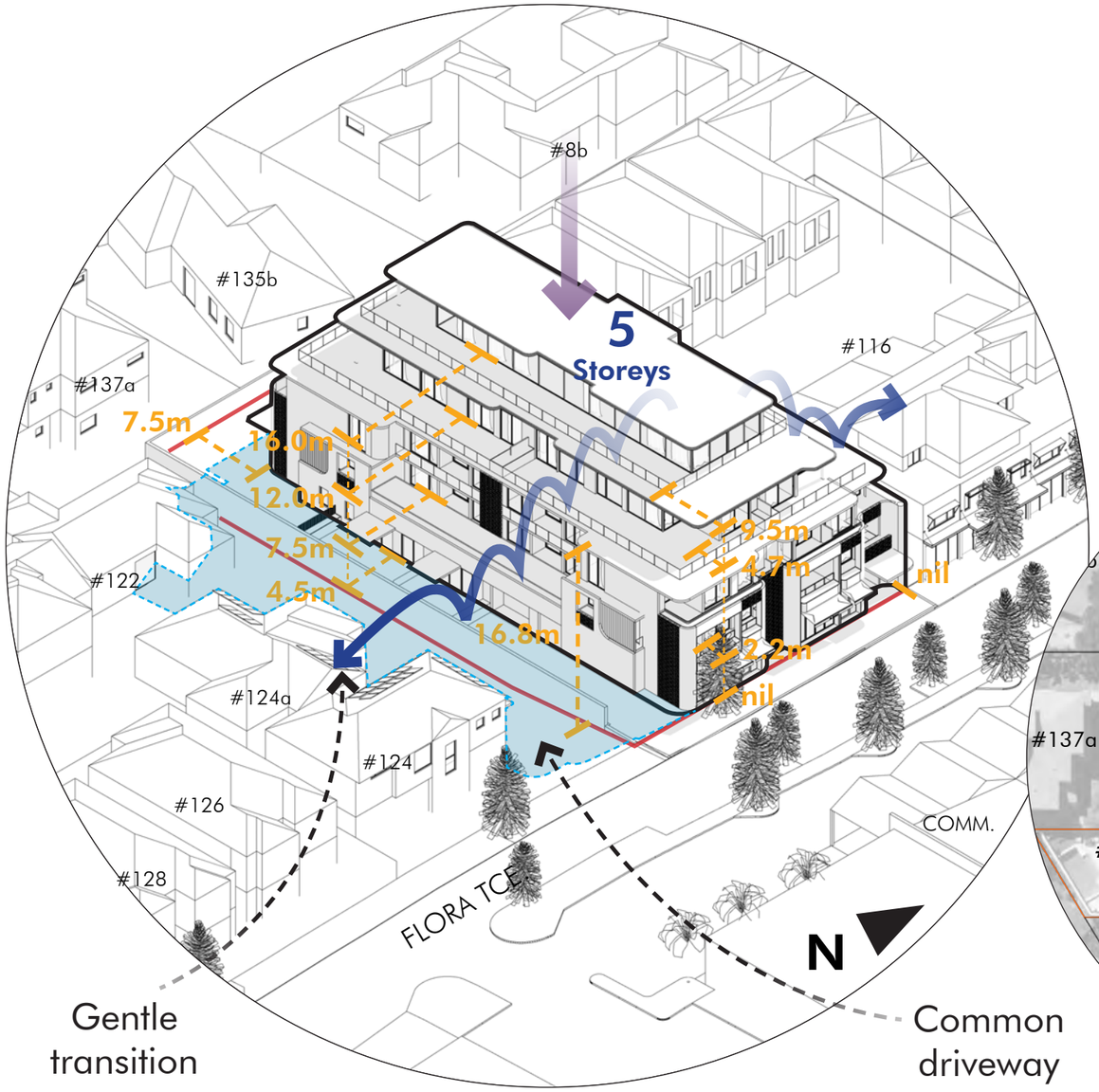
Respecting Our Neighbour's Amenity

Winter Solstice (21st of June)

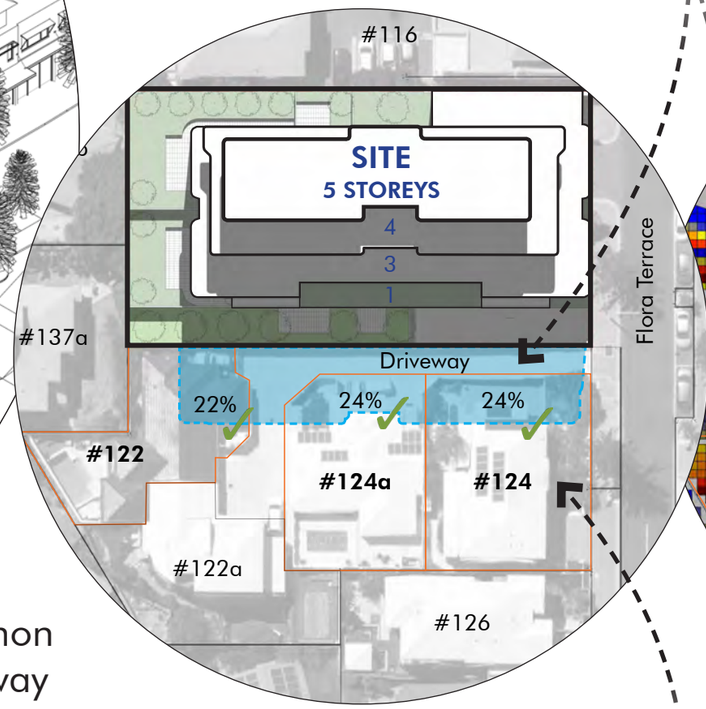


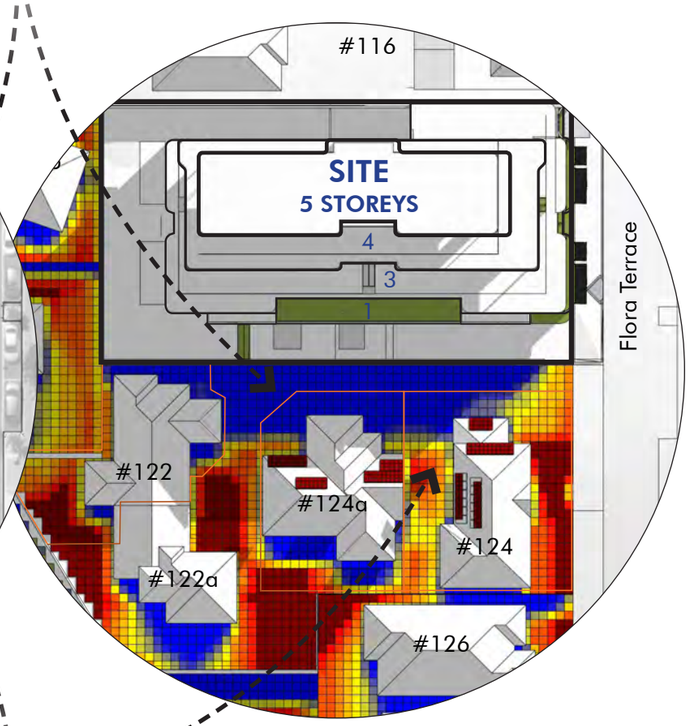
Gentle transition

Common driveway

Revised Massing

Majoriy of the shadow lands on common driveway





Solar access at private open spaces remain great

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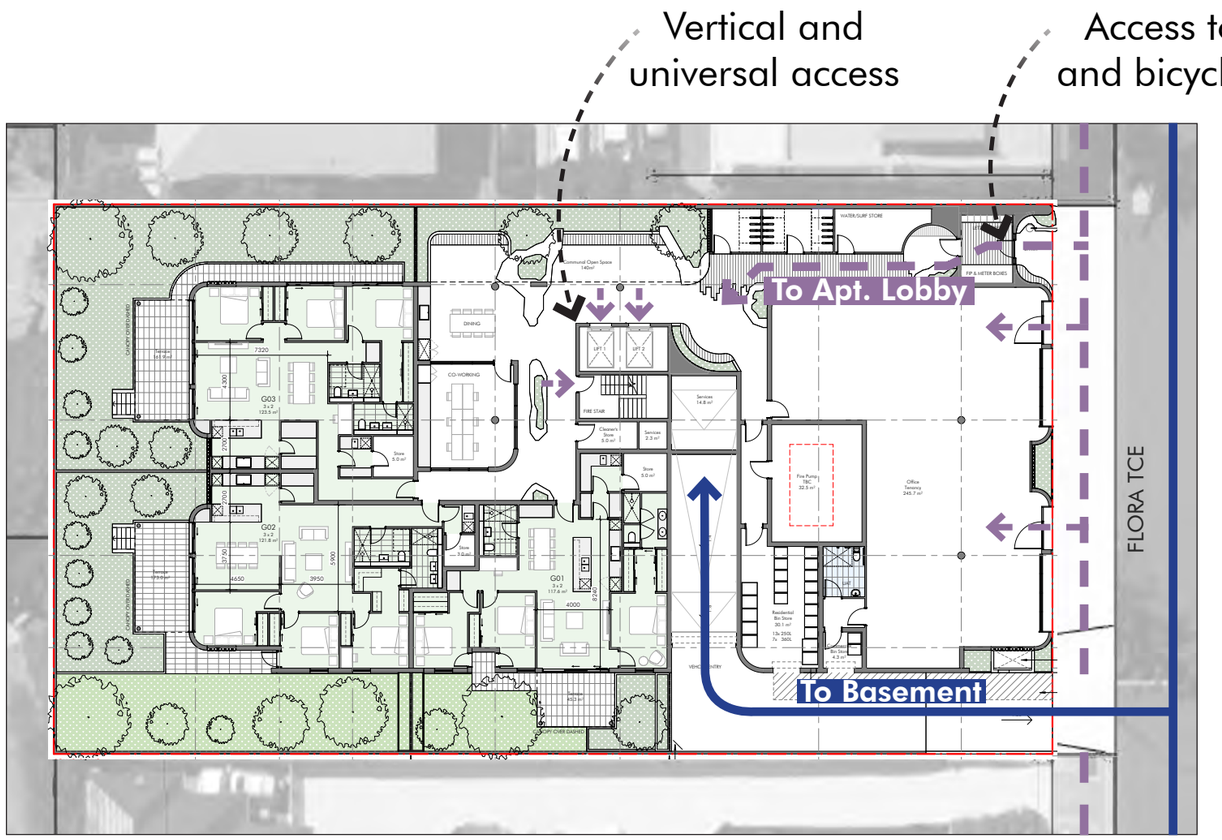
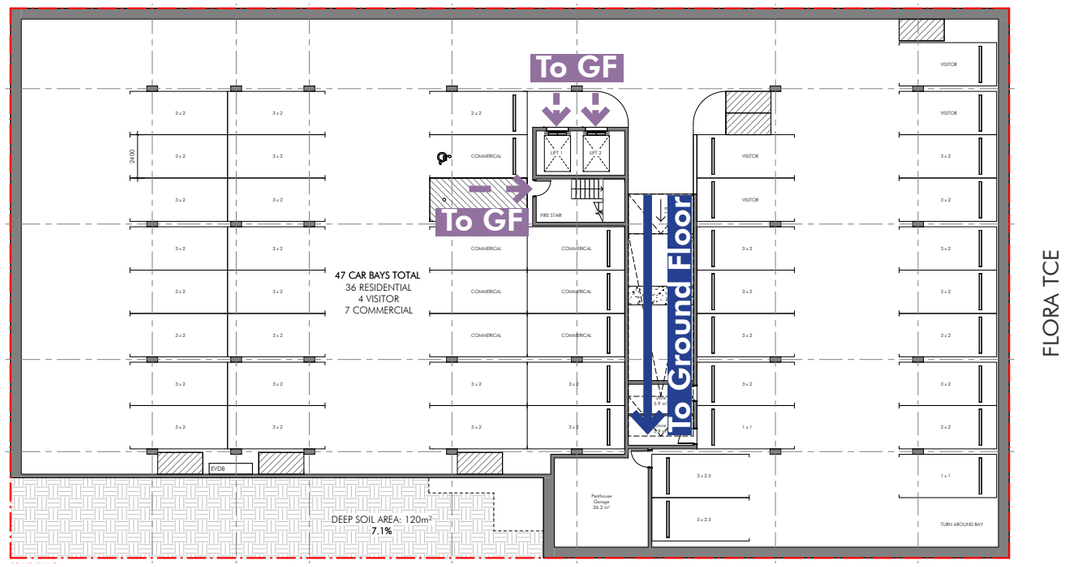
Pedestrian & Vehicle Entry Points

Pedestrian Movement
Vehicle Movement



Ground Floor Plan



Basement Plan

N

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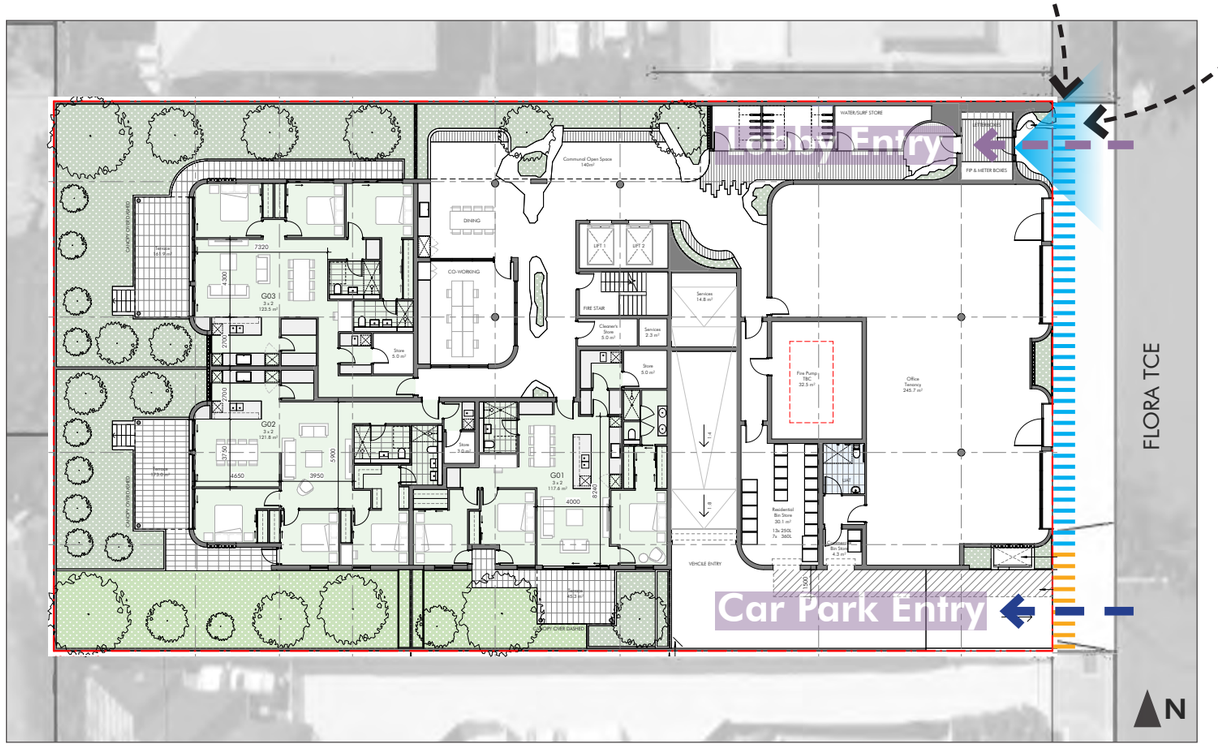
Passive Surveillance

Activated Street Frontage
Other Street Frontage
Res. Lobby Access
Vehicle Access

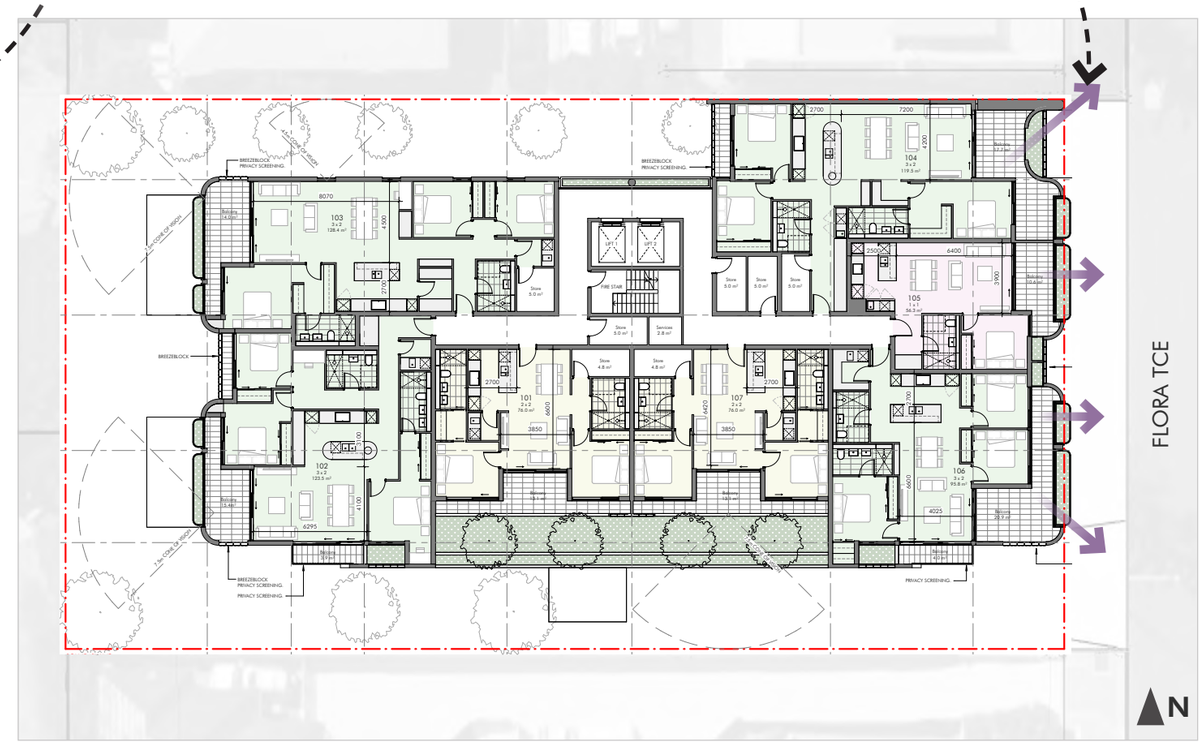
Up to **82%** of **activated street frontage**

Lobby entrance in close proximity to the street

Passive surveillance to the street



Ground Floor Plan



Level 1 Plan

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Community Benefits

- Additional **pine tree** to Flora Tce. street frontage to continue the landscape rhythm.
- **100% silver living apartments**.
- **Dog water station** and **foot wash** on ground floor.

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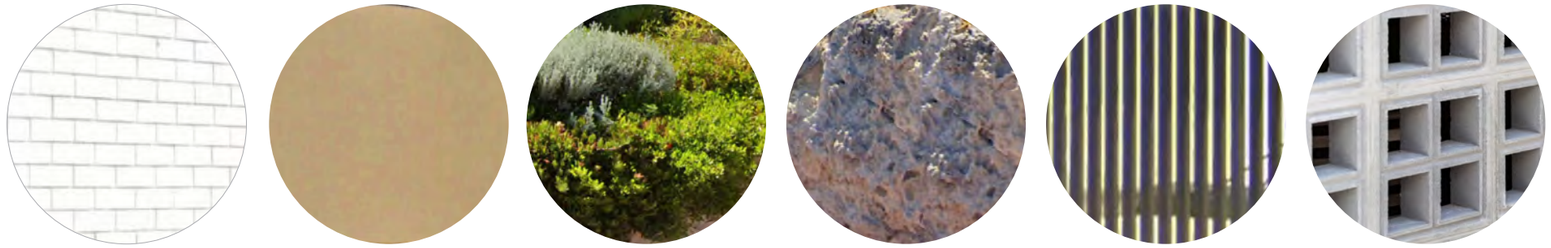
Design Drivers/ Palettes



Drawing on the **coastal tones** and **textures** from the Flora Terrace

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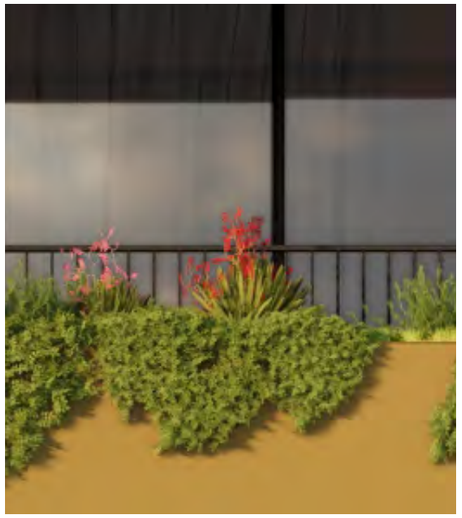
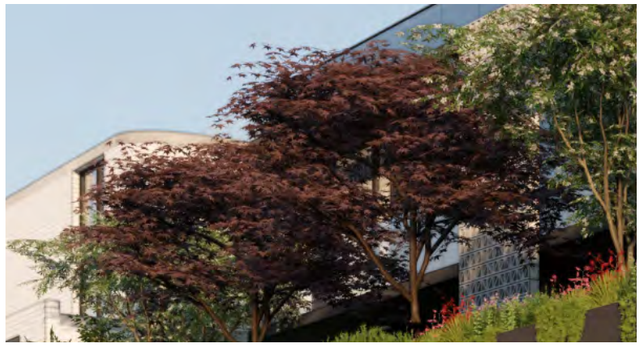
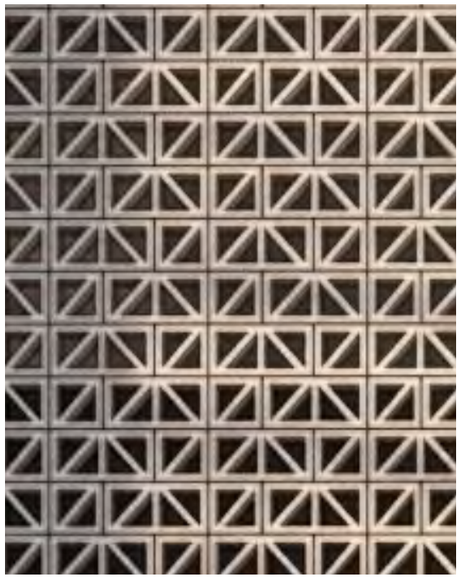
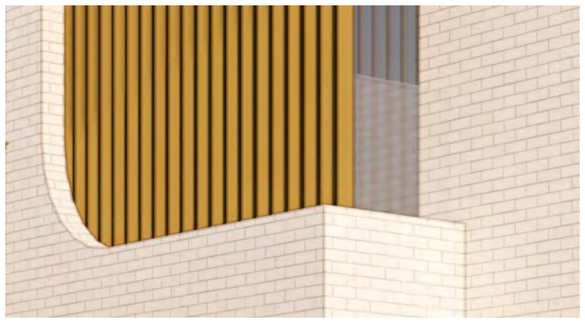
Tones & Textures

Local References









Material Palettes

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Bringing Coastal Tones and Textures to The Building

VIEW FROM FLORA TCE

VIEW FROM FLORA TCE

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Pedestrian view to West

City of Stirling
6 November 2024
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Pedestrian View to South

City of Stirling
6 November 2024
RECEIVED

Pedestrian view to South

City of Stirling
6 November 2024
RECEIVED

Pedestrian view to South

City of Stirling
6 November 2024
RECEIVED

Pedestrian view to North

City of Stirling
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Pedestrian view to North

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Pedestrian view to North

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Pedestrian view to West

Additional 3 Metre Setback

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Pedestrian view to South

Additional 3 Metre Setback

City of Stirling
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Pedestrian view to North

Additional 3 Metre Setback

City of Stirling
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Pedestrian view to South

Additional 3 Metre Setback

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Pedestrian view to North

Additional 3 Metre Setback

View from L3 Balcony to North:

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6 November 2024
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View from L3 Balcony to North:

City of Stirling
6 November 2024
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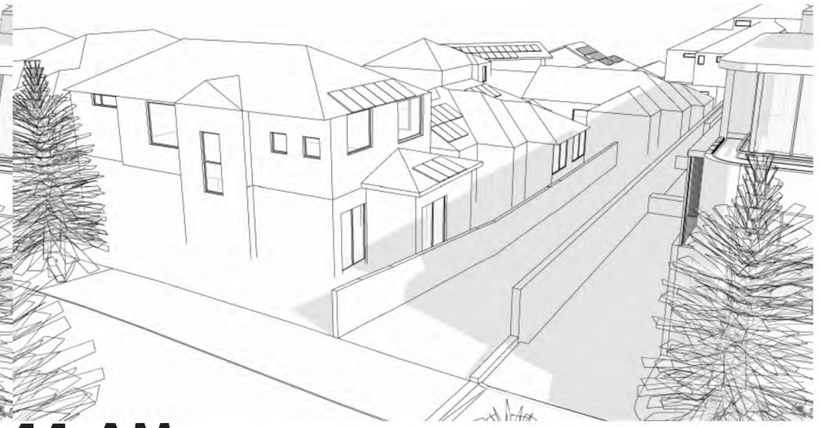
Attachment 7j - Overshadowing illustrations by Space Collective Architects received 6 November 2024

ELEVATION SHADOWS

Winter Solstice - June 21st

9 AM

10 AM



11 AM

12 PM

1 PM

2 PM

3 PM

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6 November 2024
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Built Form & Scale

OVERSHADOWING - JUNE 21ST

DTC Scheme (3 Storey)
Proposed Scheme (5 Storey)

9am

12pm

3pm

10am

11am

1pm

2pm

Winter Solstice:
09:00 AM

City of Stirling
6 November 2024
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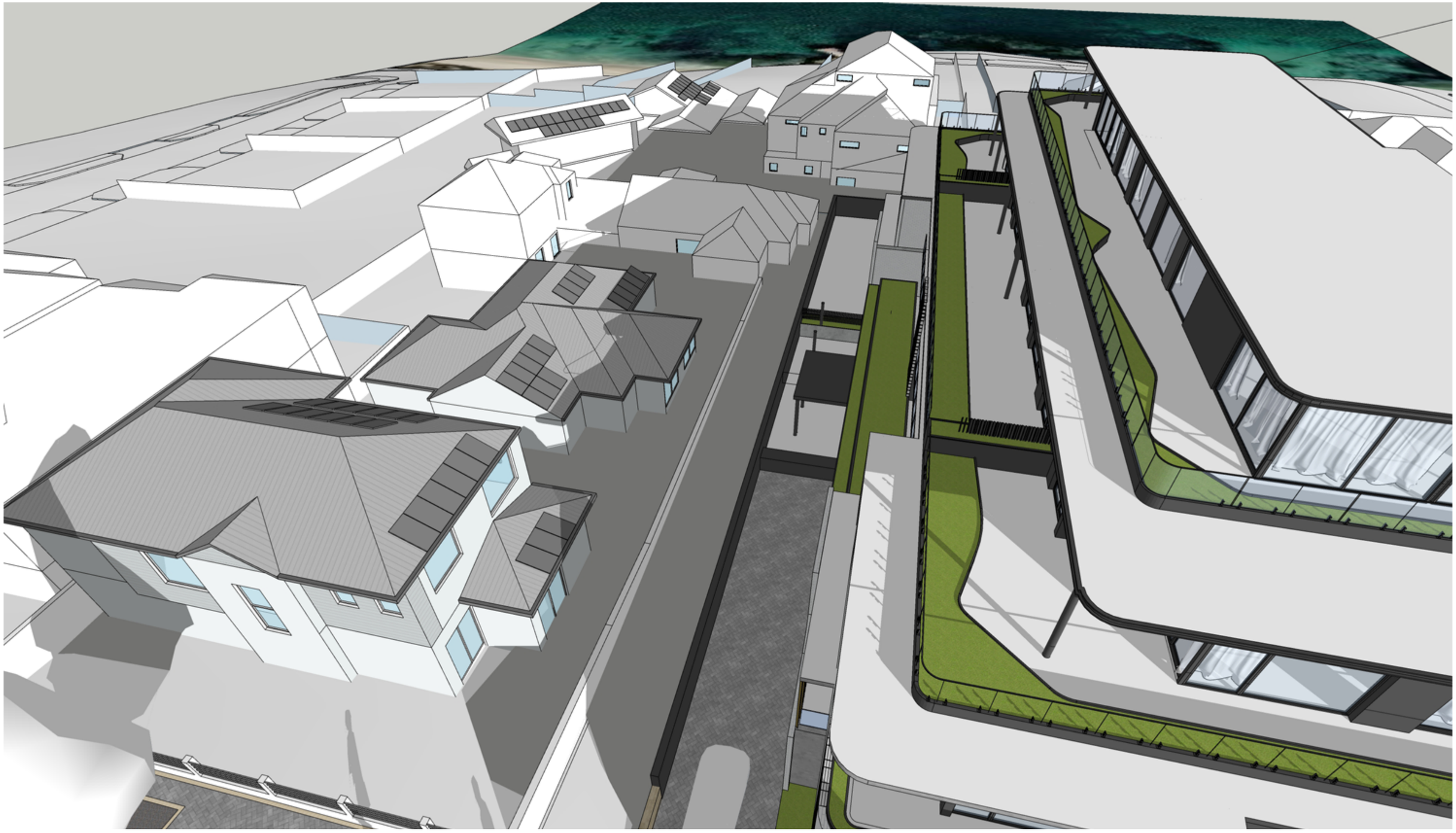

Winter Solstice:
10:00 AM

City of Stirling
6 November 2024
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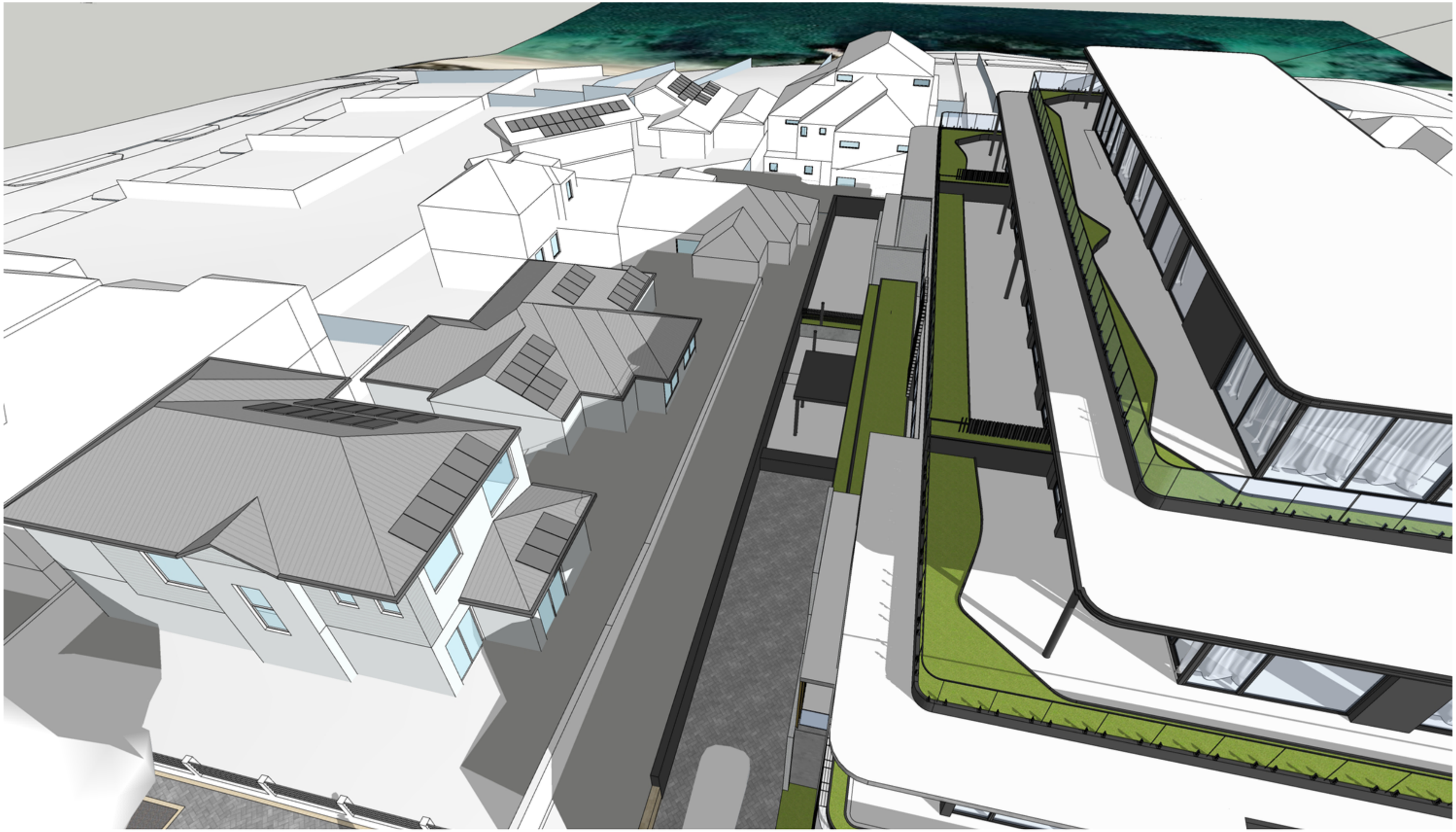
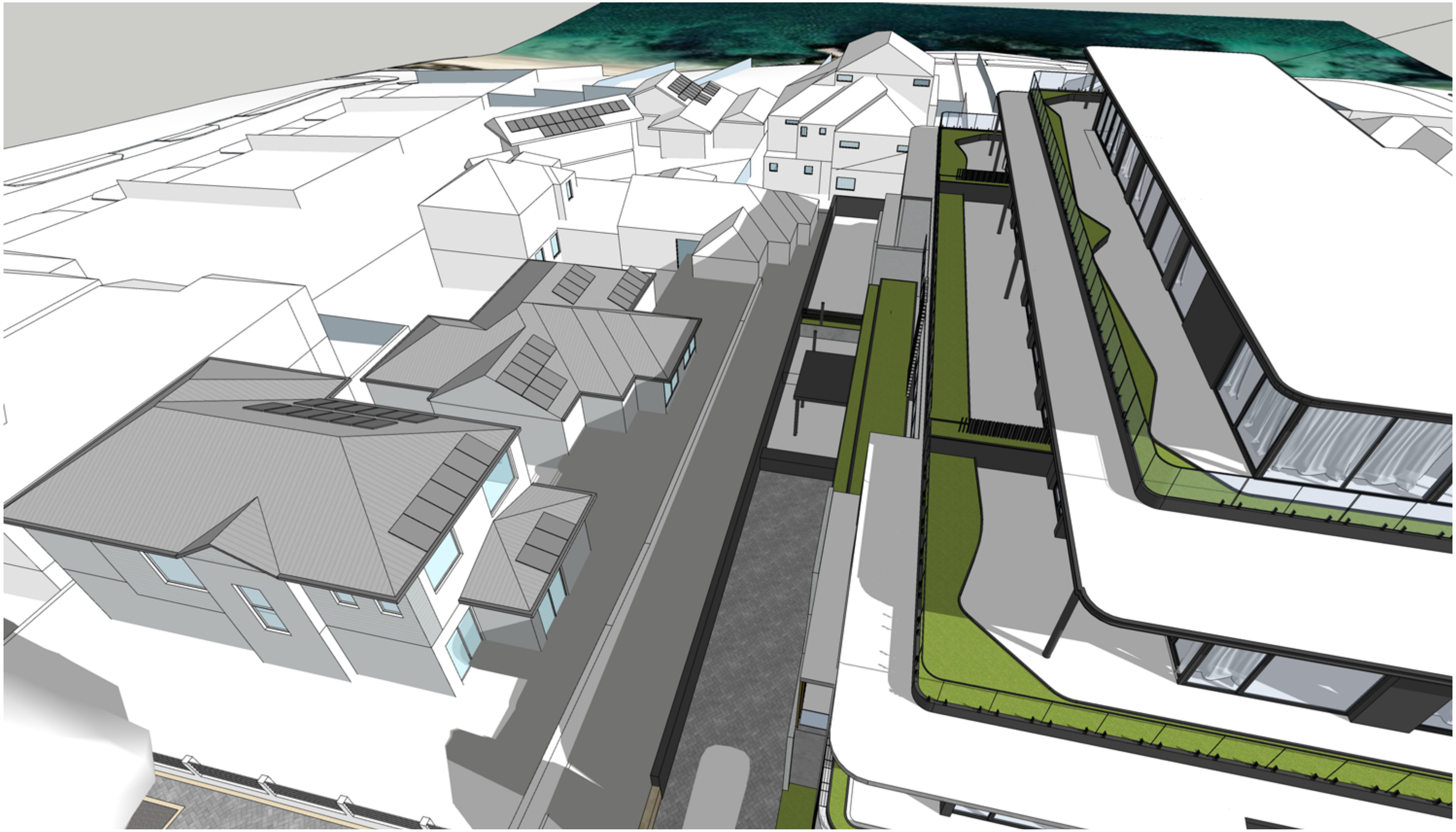


Winter Solstice:
11:00 AM

City of Stirling
6 November 2024
RECEIVED



Winter Solstice:
12:00 PM

City of Stirling
6 November 2024
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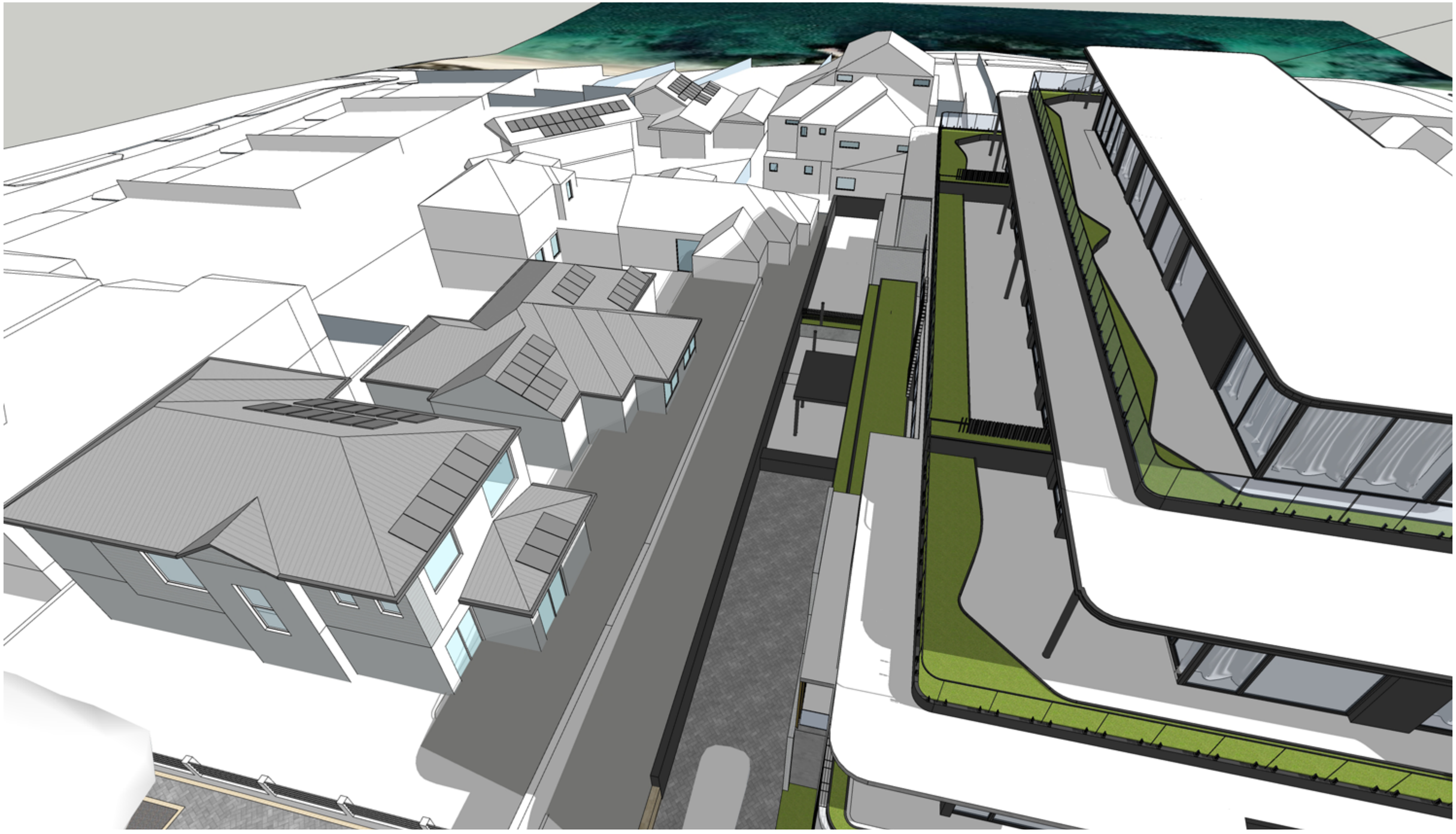
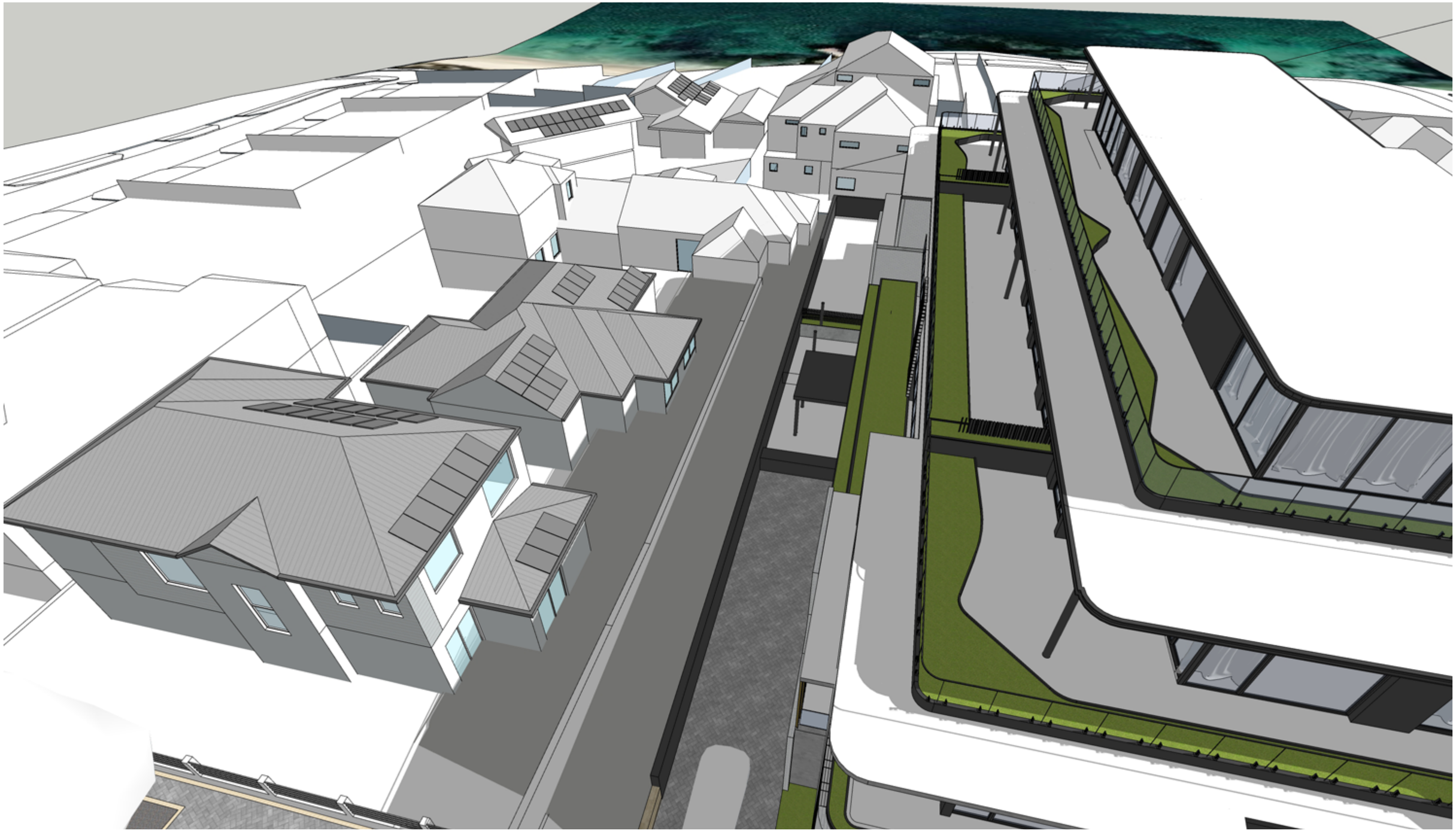


Winter Solstice:
01:00 PM

City of Stirling
6 November 2024
RECEIVED



Winter Solstice:
02:00 PM

City of Stirling
6 November 2024
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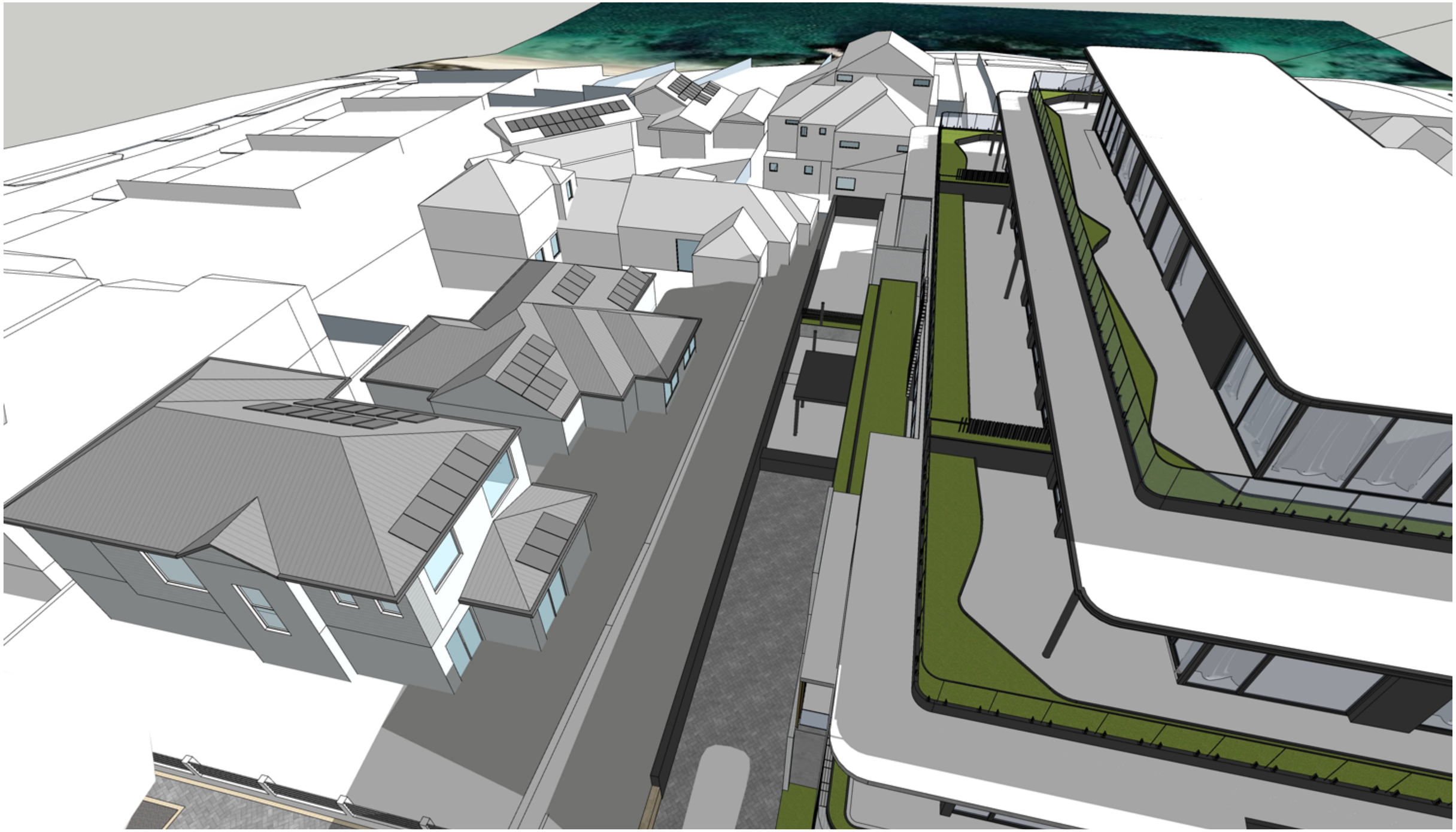

Winter Solstice:
03:00 PM

City of Stirling
6 November 2024
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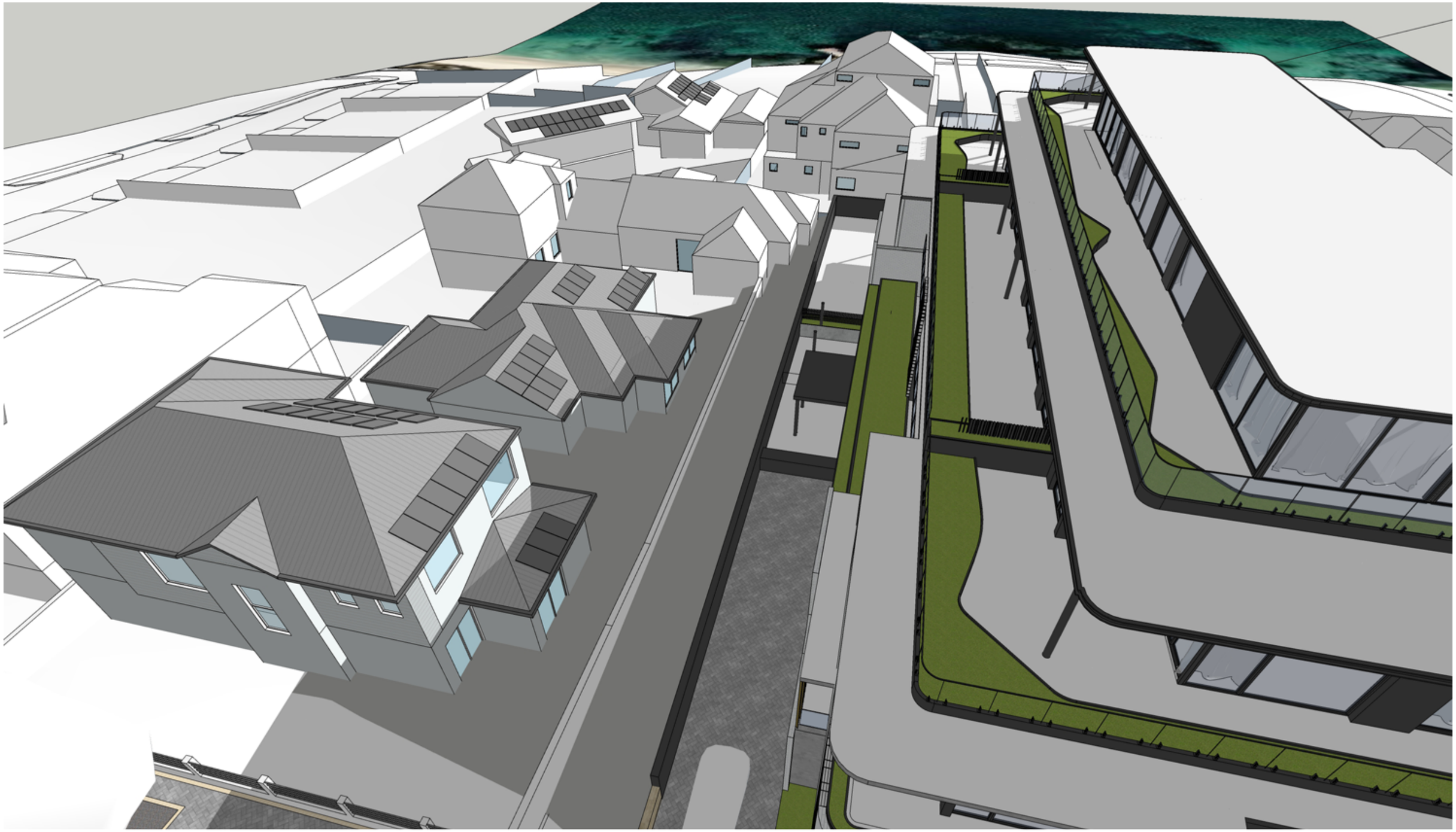

Winter Solstice - Solar access to southern neighbour's PV panels:

TOTAL: 6 HOURS

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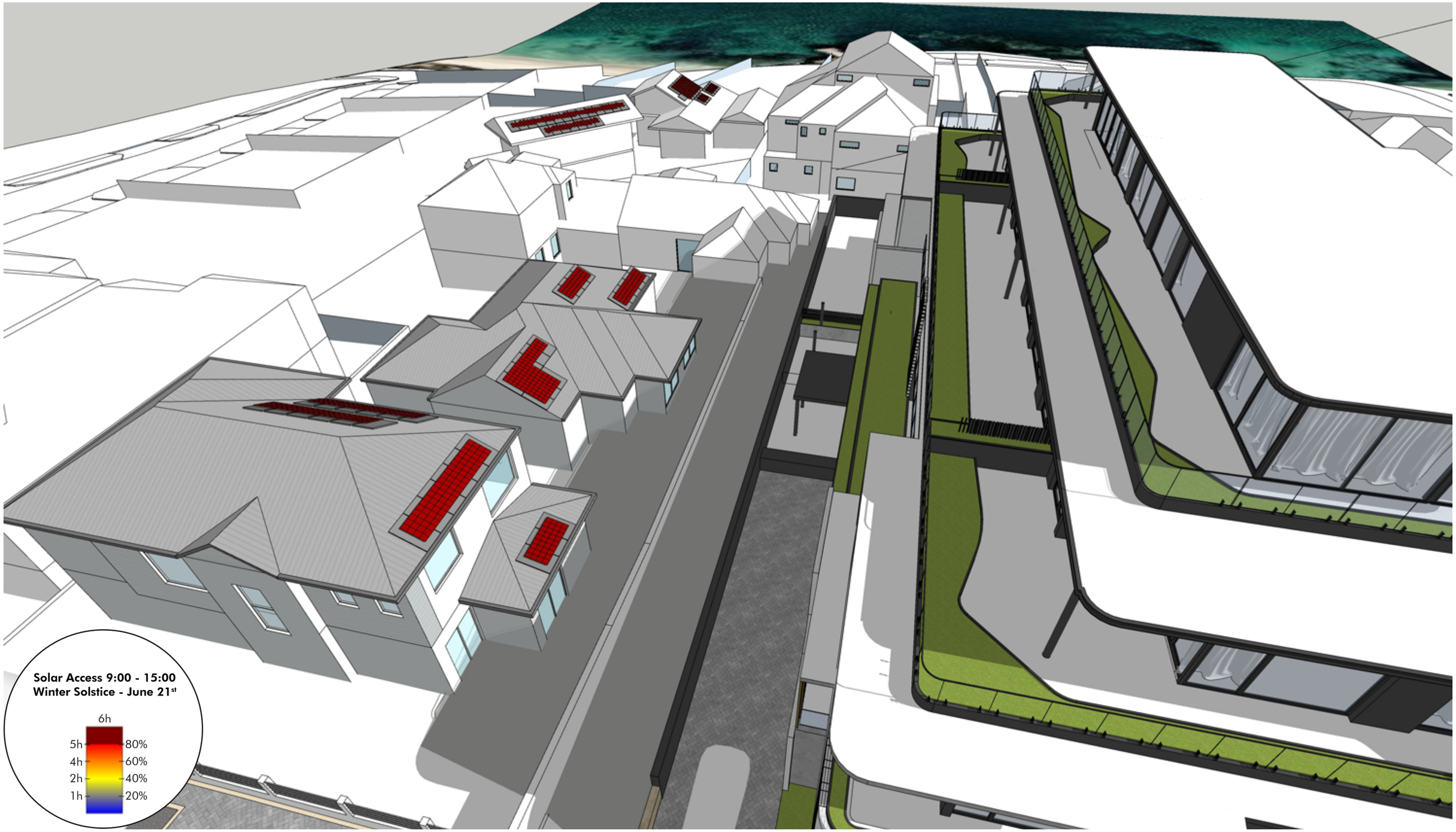

Attachment 7k - Applicant's Landscaping Plans prepared by See Design Studio dated 6 November 2024

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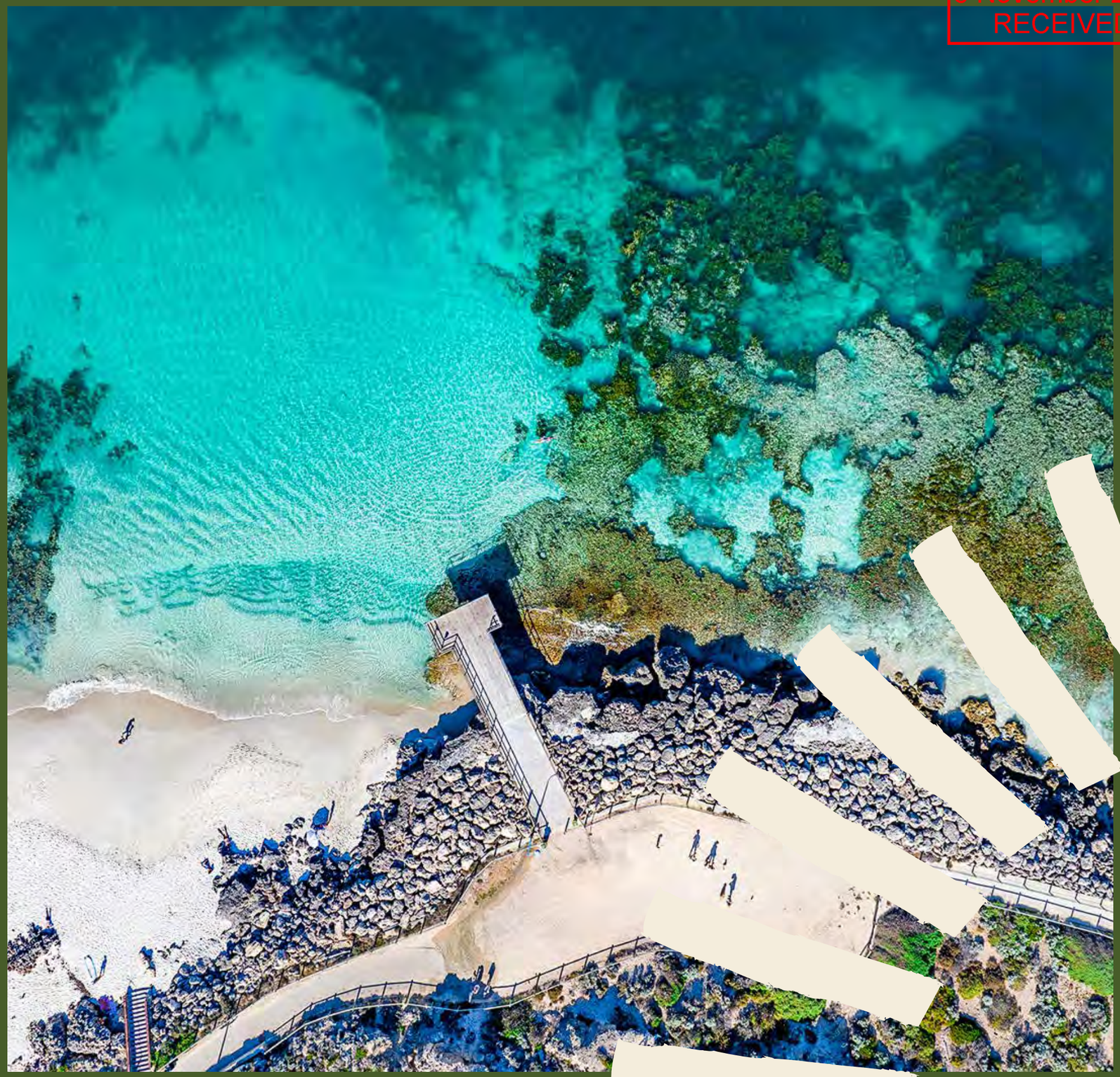
118 FLORA TERRACE

NORTH BEACH



Landscape Architecture

Development Application Report

05.11.2024

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Contents

The Site 3

Concept Diagrams 6

Selections 17

Deep Soil + Trees 21

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THE SITE

Site Context

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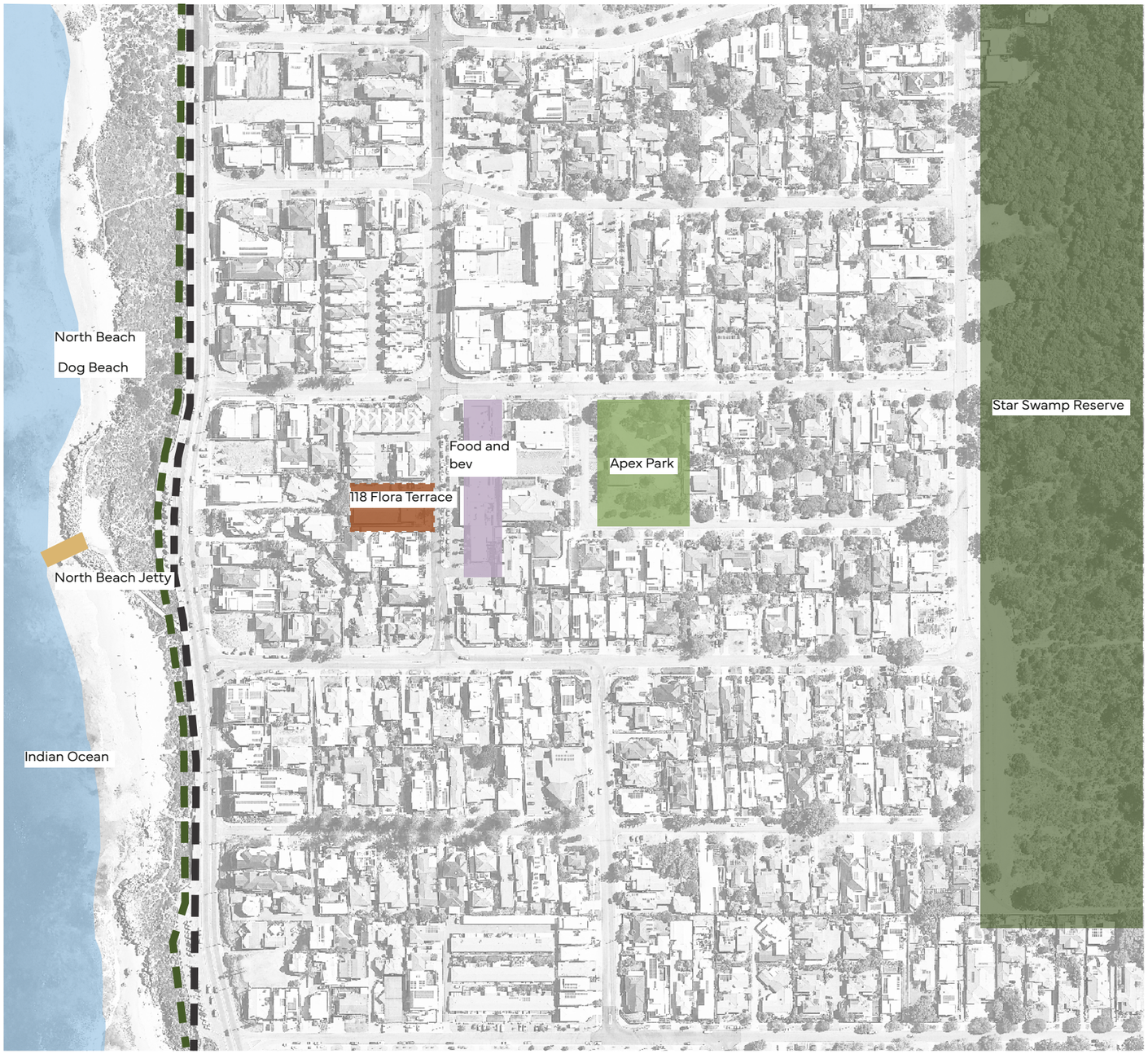
Legend

- The Site
- West Coast Drive
- Shared use path
- Eateries and small businesses
- North Beach Jetty
- Indian Ocean
- Apex Park
- Star Swamp Reserve



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Site Analysis

Legend

- The Site
- Bus route
- Shared use path
- Beach access
- Bus stop
- Food and beverage
- Public open space
- Commercial
- Existing street tree
- Playground

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CONCEPT DIAGRAMS

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Landscape Character

Coastal geology

The coastal geology at North Beach will inspire textures and forms used in the design at 118 Flora Street, with the material palette reflecting the sense of place unique to this Perth beach.

Verdant planting

Robust coastal planting with an emphasis on foliage textures and contrasting shade of grey and green will create a planting scheme that creates a sophisticated analogy of the local dune vegetation. These plantings will thrive in this exposed coastal location.

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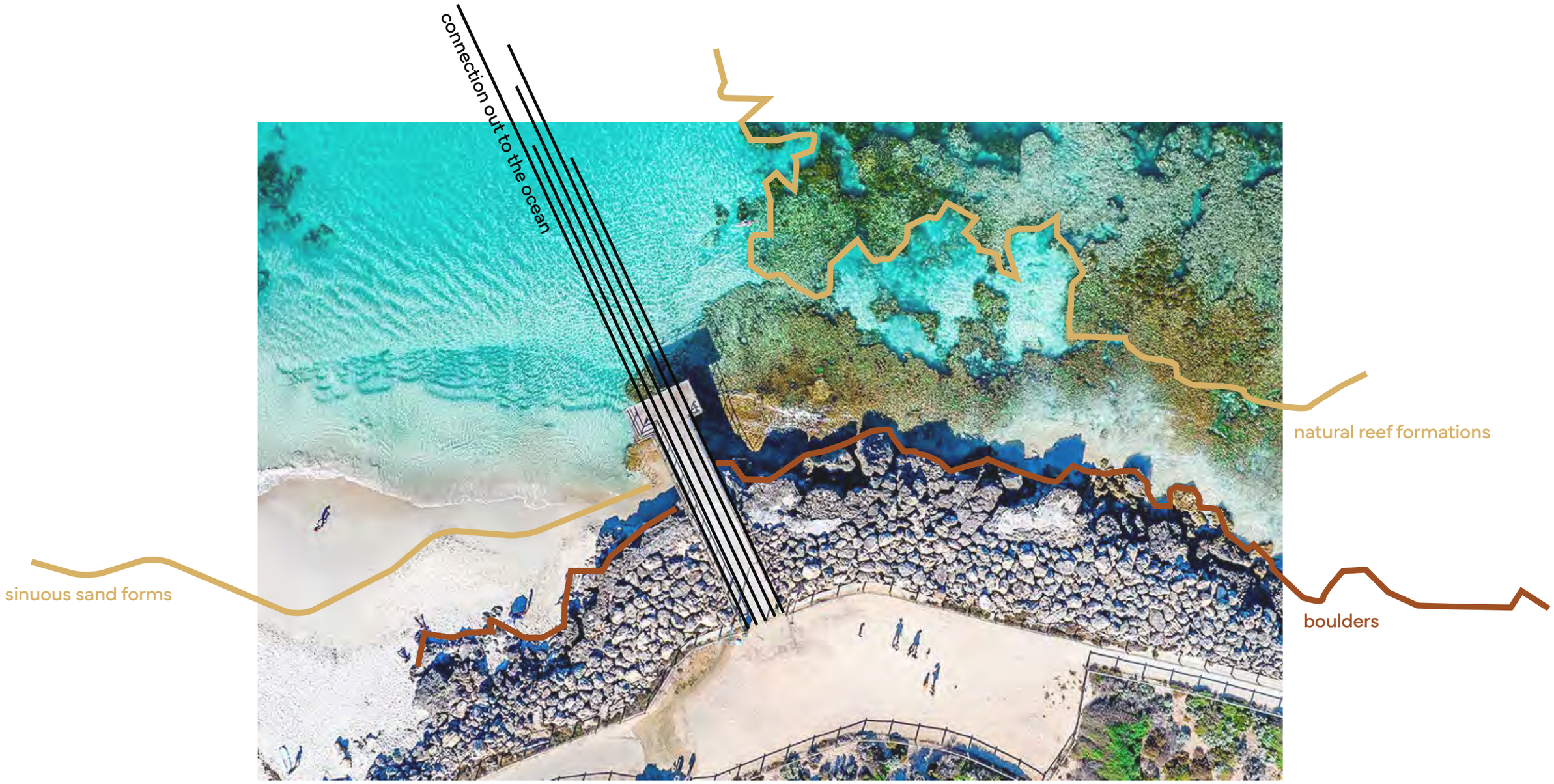
Local Coastal Influence



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Ground floor design imagery

feature boulders

texture and colour

organic forms

coastal lobby aesthetic

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6 November 2024
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Podium design imagery

sculptural forms

local materials

Integrated furniture

generous planting proportions

trailing plants

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6 November 2024
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Ground Floor Landscape Plan

Legend

01 Entry area with footwash
02 Timber deck
03 Seat with garden bed
04 Communal garden space
05 Private courtyard
06 Driveway
07 Dog water station
08 Proposed norfolk Island Pine
09 Veggie planters
10 Water feature

1:200 @ A3

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1st Floor Landscape Plan

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Legend

01 Garden bed with small trees
02 Green facade
03 Water feature
04 Boulders

1:200 @ A3

N

2nd Floor Landscape Plan

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Legend

01 Green facade

02 Balcony planter

1:200 @ A3

N

3rd Floor Landscape Plan

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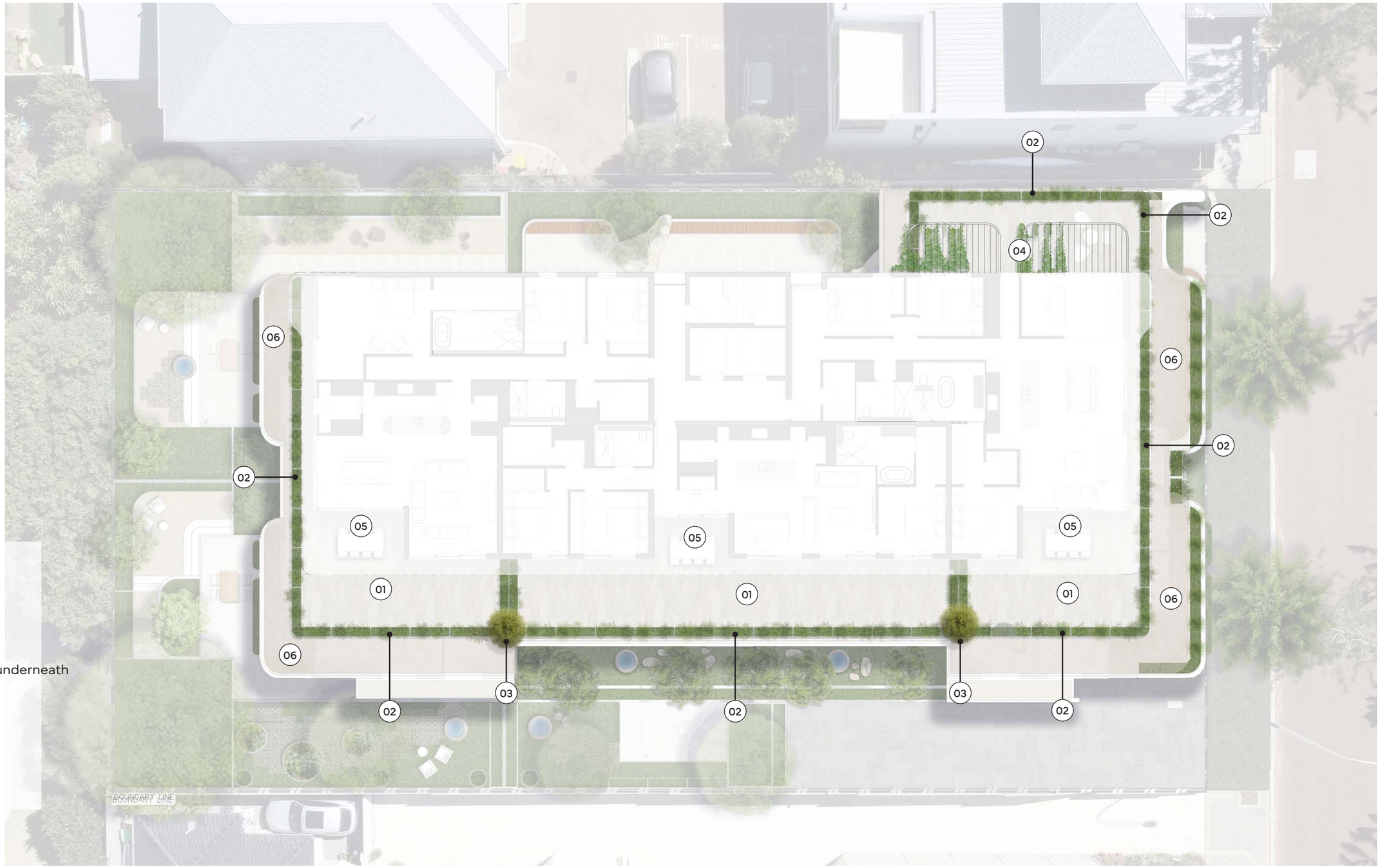

Legend

01 Roof terrace
02 Raised planters
03 Small tree
04 Arbour with seating underneath
05 Alfresco dining area
06 Gravel roof garden

1:200 @ A3

N

4th Floor Landscape Plan

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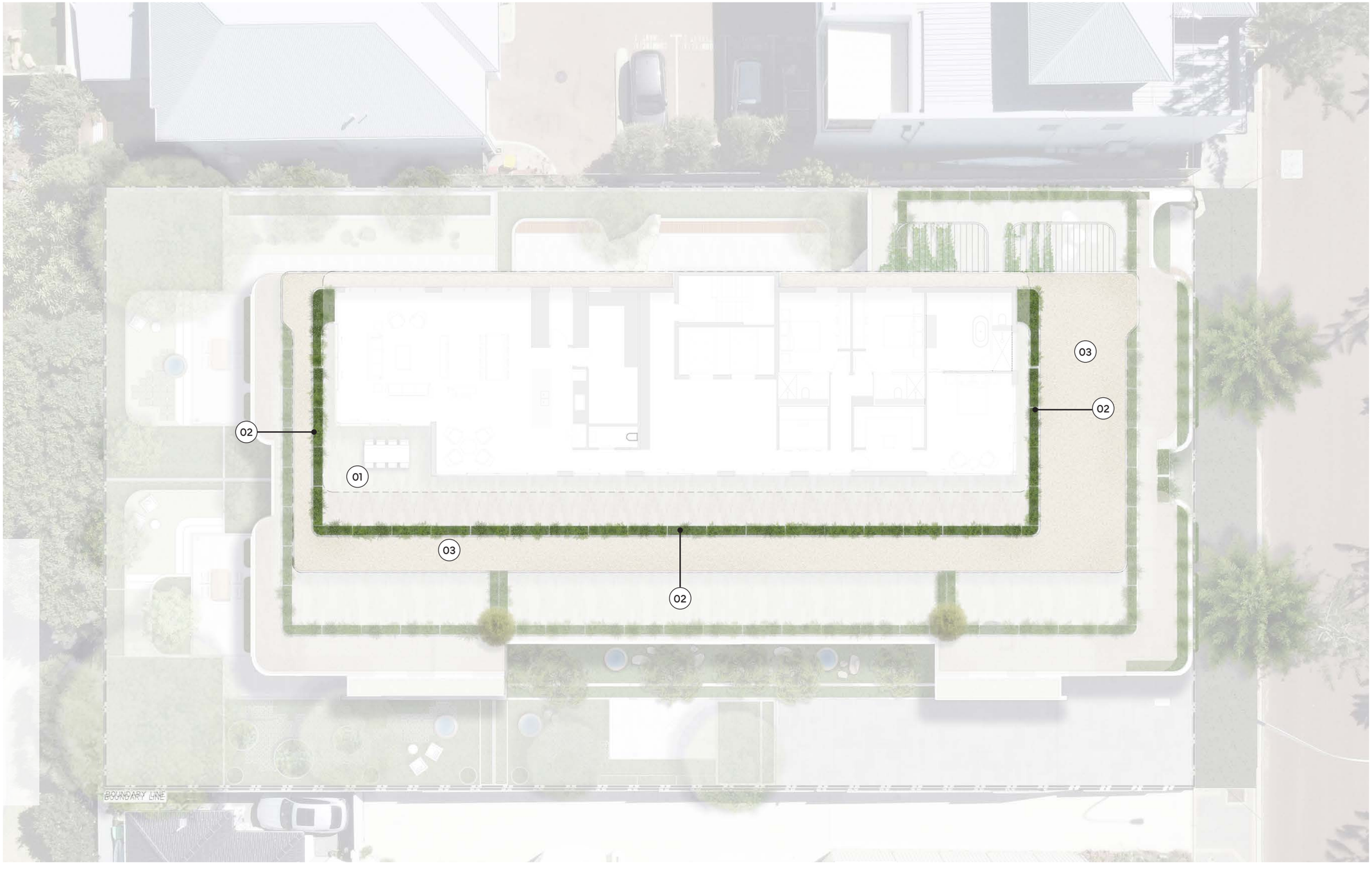

Legend

01 Roof terrace
02 Raised planters
03 Gravel roof garden

1:200 @ A3

N

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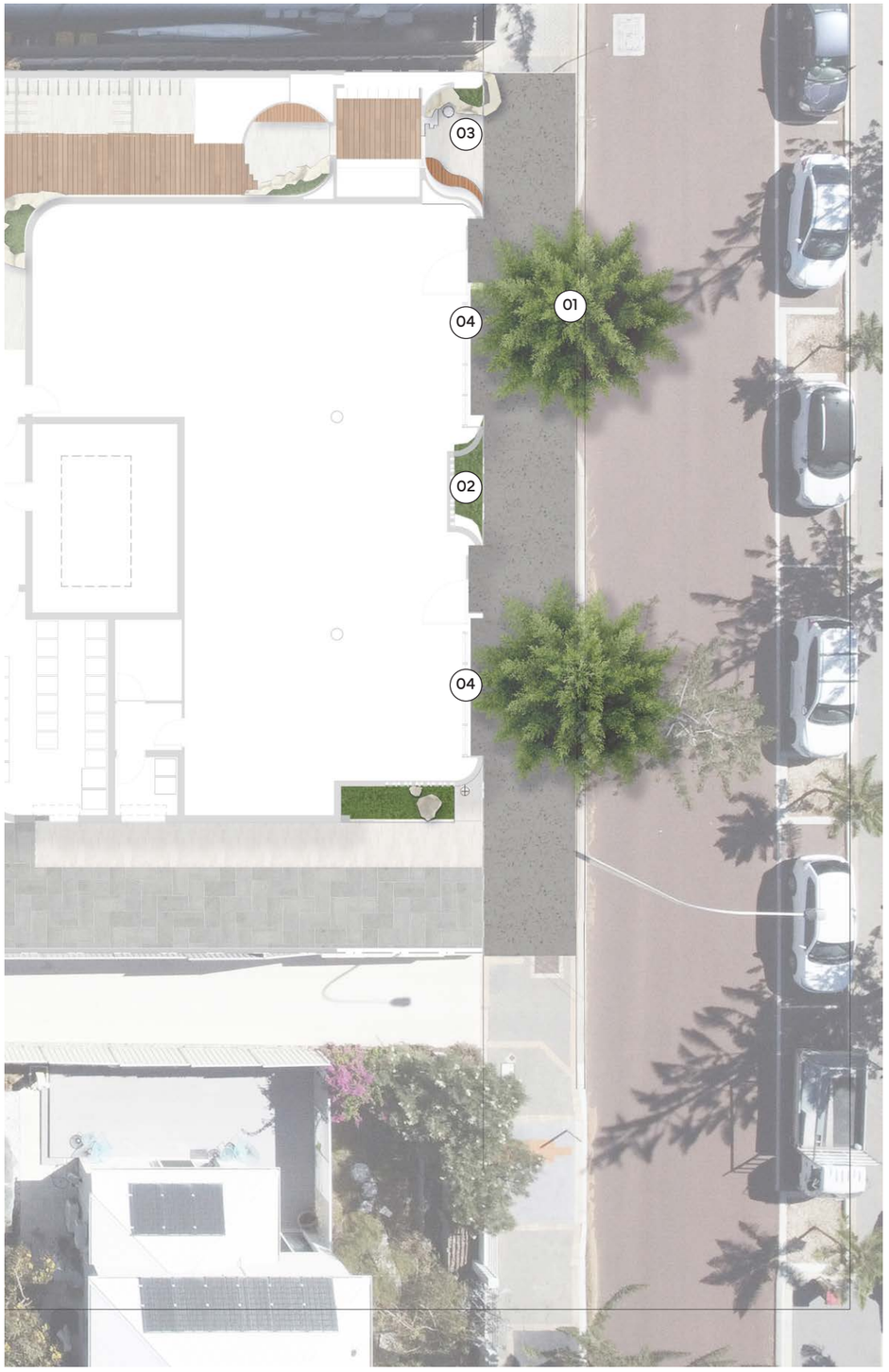
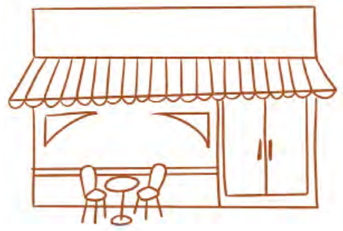
Community Benefit



01 Additional tree to street frontage

02 Green facade

03 Community dog and beach foot wash facilities



04 Commercial street activation

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SELECTIONS

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Ground Floor Planting Palette

Low plants

Westringia sp.

Lomandra 'tanika'

Rosmary 'tuscany blue'

Leucophyta brownii

Liriope sp.

Acacia howittii 'honey bun'

Viola hederacea

Dichondra 'silver falls'

Kalanchoe 'silver spoons'

Acacia cognata 'limelight'

Hardenbergia mini meema

Banksia nivea

Chrysocephalum apiculatum

Crassula ovata undulata

Casuarina 'Green Wave'

Conostylis candicans

Leucospermum yellow

Correa alba

Cascading

Myoporum parvifolium

Casuarina Glauca 'Cousin it'

Acacia saligna prostrate

Eremophila 'Kalbarri Carpet'

Banksia inegtrifolia 'Rollercoaster'

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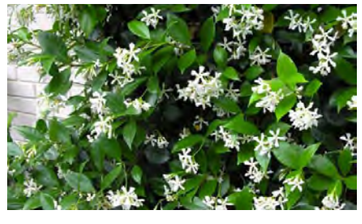
Podium Planting Palette

Ficus pumila

Hibertia scandens

Lomandra 'Tanika'


Trachelospermum jasmineoides

Rosmary 'tuscany blue'

Liriope sp.

Liriope 'Emerald Cascade'

Acacia howitii 'Honey Bun'

Rhaphiolepis 'Oriental Pearl'

Crassula ovata undulata

Dichondra Silver Falls

Grevillea 'Gin Gin Gem'

Viola hederacea

Carpobrotus 'Aussie Rambler'

Eremophila 'Silver Ball'

Westringia 'Grey Box'

Cotyledon silver waves

Melaleuca Little Red

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Tree Species

Eucalyptus caesia 'Silver Princess'
6h x 4w

Eucalyptus forrestiana 'Fuchsia Gum'
6h x 4w

Melaleuca leucadendra

12h x 6w

Magnolia grandiflora 'Teddy Bear'

6h x 4w

Elaeocarpus reticulatus 'Blueberry Ash'

6h x 4w

Waterhousia floribunda

8h x 5w

Eucalyptus victrix

8h x 4w

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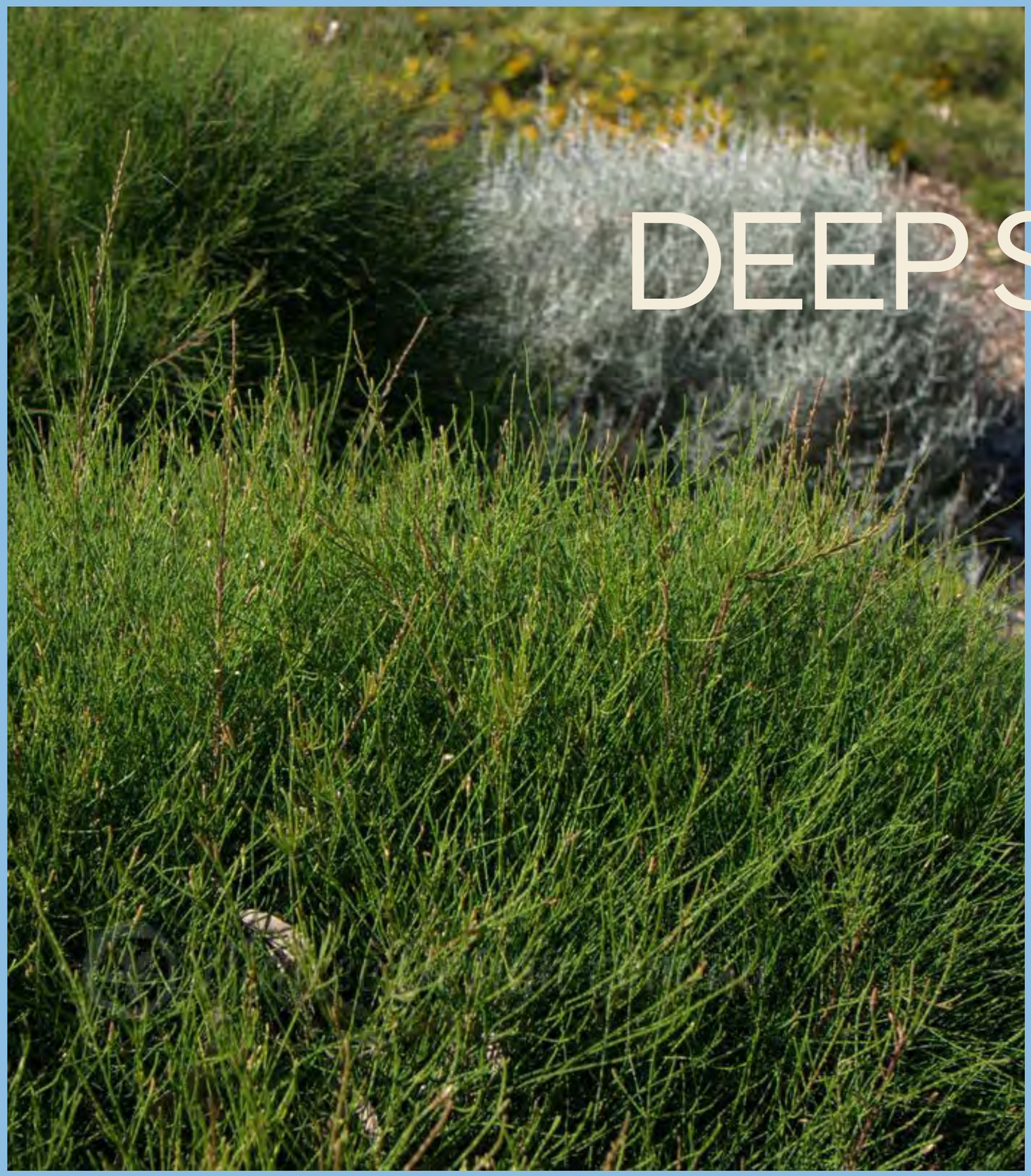

DEEP SOIL + TREES

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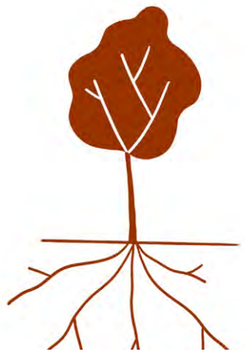
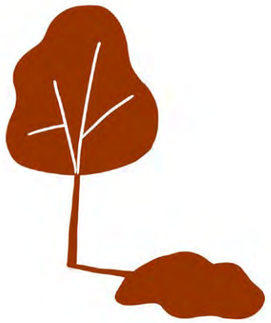
Deep Soil Zone Benefits



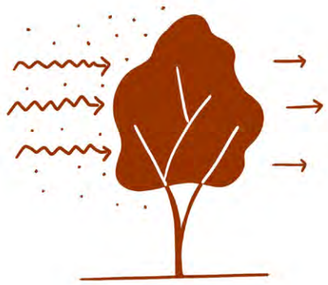
Healthy roots = healthy tree

Enhance water filtration



Comfortable Micro-Climate + Reduction of Urban Heat Island Effect

Create Habitat



Improve Air Quality

Community Health through increased canopy coverage

Trees and gardens make a significant contribution to the ecology, character and amenity of neighbourhoods. They provide habitat for fauna, shade, storm water management and micro-climate benefits, as well as improve apartment outlook and privacy.

The provision of deep soil areas to support and sustain the development of tree canopy can also make a major contribution to the retention of existing trees. A deep soil area is an area of soil that is free of built structure and has sufficient area and depth to support tree growth and infiltrate rainwater. Site planning should seek to co-locate deep soil areas with existing trees on and adjacent to the site, and in locations best suited to the development of a viable tree canopy and landscaping.

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Deep Soil Calculation

Summary

Deep Soil Total	
Total Site Area	1686 sqm
Deep Soil Planting required	168 sqm
Ground Floor DSA	156.9 sqm (9.3%)
Ground Floor DSA shortfall	11.1 sqm
Podium planting requirement (min 1m wide x 1m deep)	22.2 sqm
Planting on structure (min 1m wide x 1m deep)	119.1 sqm
Total DSA and Planting on Structure	276 sqm
Total DSA percentage	16.3%

Deep Soil Planting

Planting on Structure

Ground Floor

1st Floor

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Tree Requirements

Tree Requirements	Area
Site Area	1,686 sqm
Site wide tree requirements (>1,000m2)	1 large, 2 medium & small trees to suit area
TOTAL TREE NUMBERS	Large trees = 2 total
	Medium trees = 0 total
	Small trees = 14 total

Legend

- Small tree (9m2 DSA per tree)
- Large tree (64m2 DSA per tree)
- Small tree (not counted for DSA)
- New street tree

Ground Floor

1st Floor

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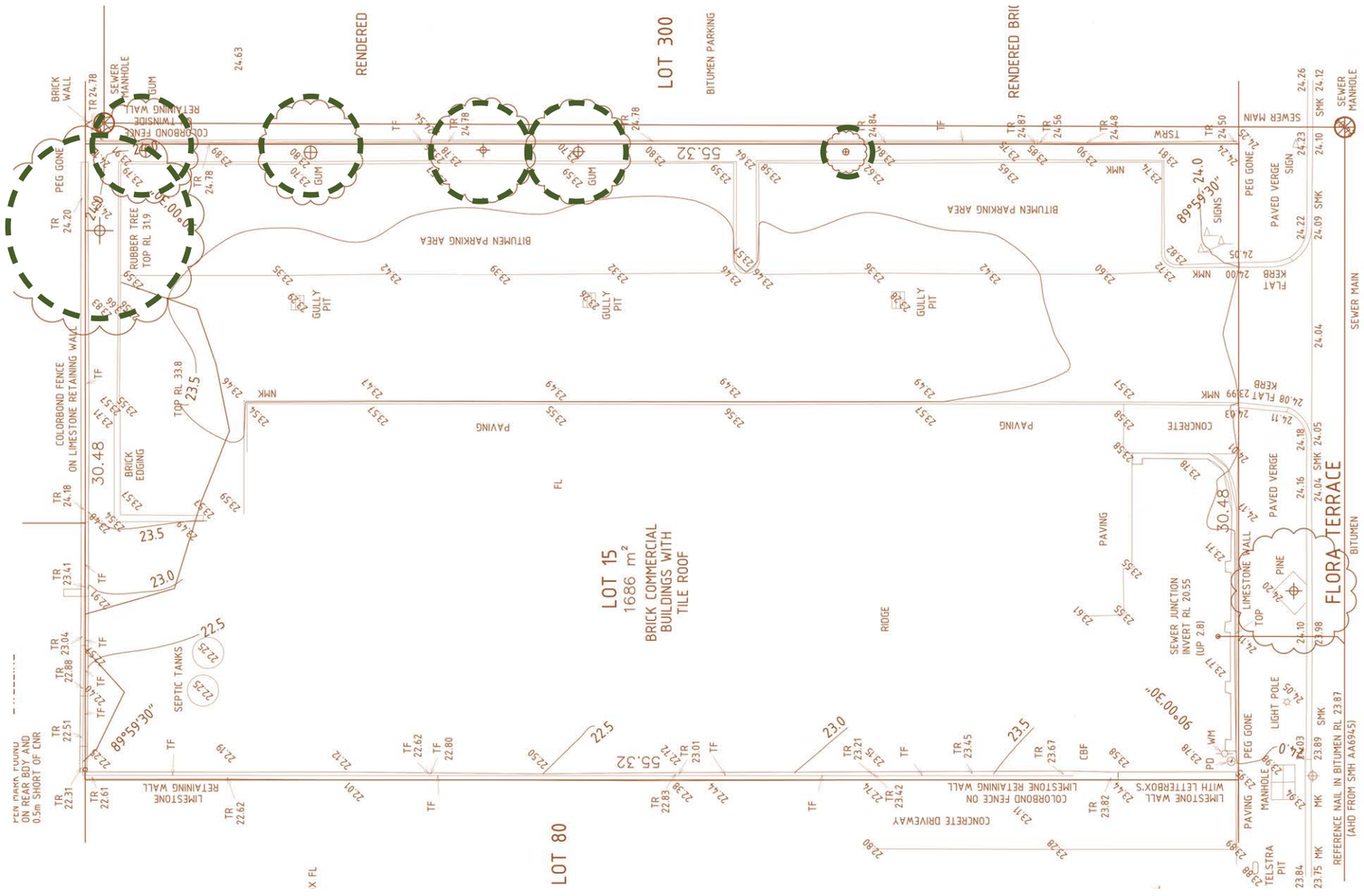
Tree Demolition Plan

Legend

Existing Tree to be removed

Existing Tree Schedule

1. Schefflera actinophylla - fair health
2. Meleleuca sp. - poor health
3. Melaleuca sp. - poor health
4. Melaleuca sp. - poor health
5. Melaleuca sp. - poor health
6. Schefflera actinophylla - poor health



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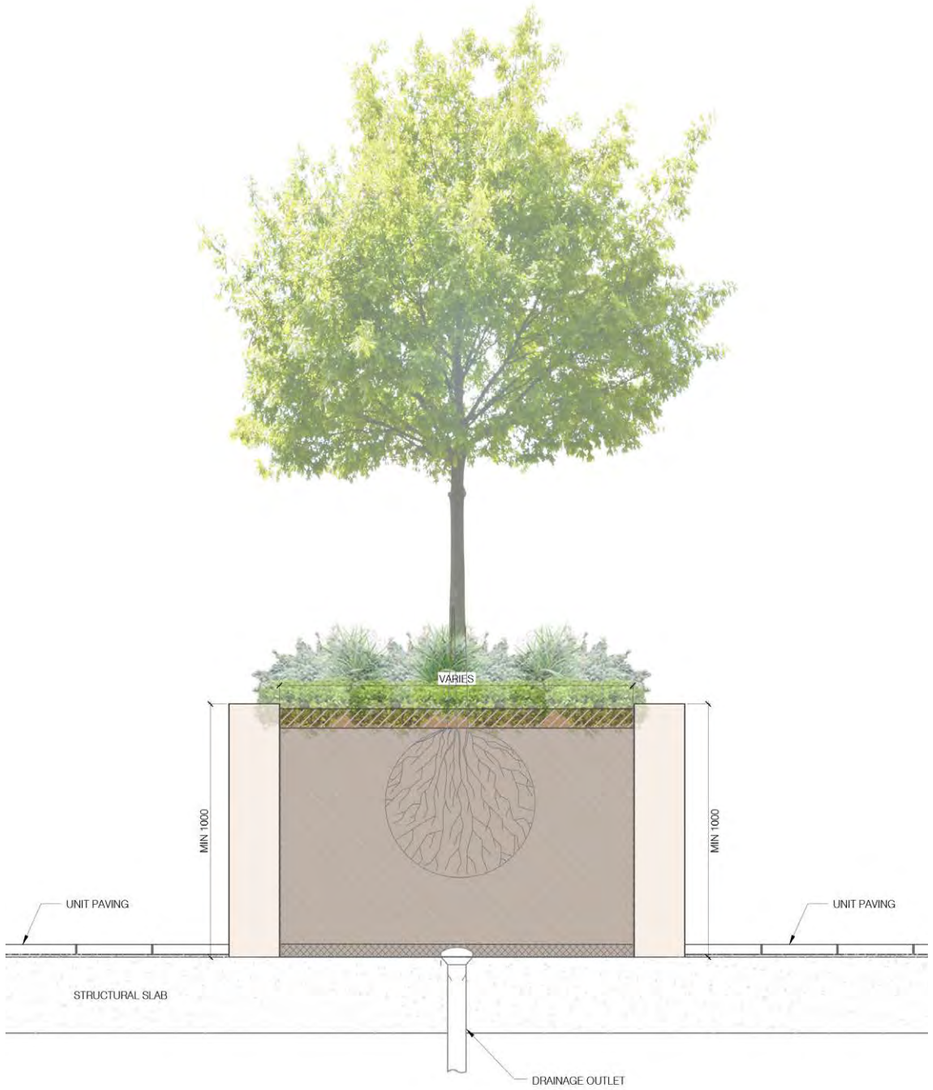
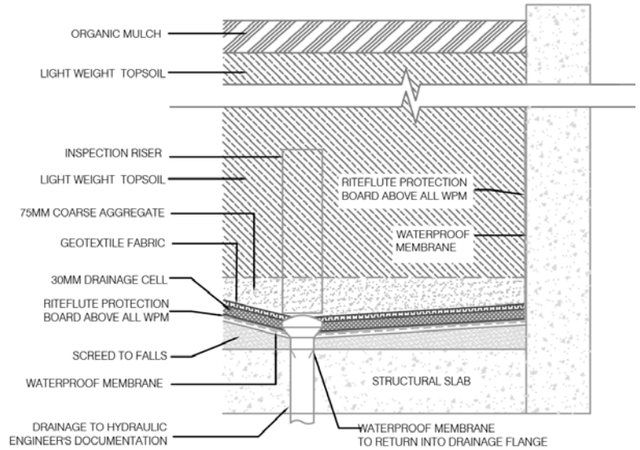
Planting on Podium Detailing

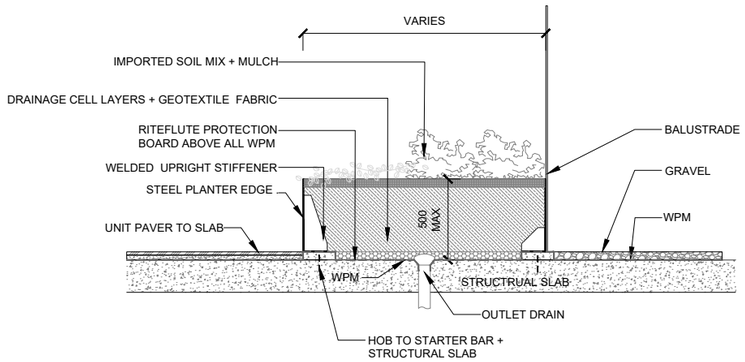
Typical 1m Deep Planter on Podium Detail



Typical Planter Lining Detail



Typical Shallow Planter on Podium Detail



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See Design Studio
Landscape Architects

Please feel free to contact us with any inquiries.

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Attachment 7I. Waste Management Plan prepared by Tails Consultants received 6 November 2024

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talis consultants

Waste Management Plan

118 Flora Terrace, North Beach

Prepared for 118 Flora Terrace Pty Ltd ATF 118 Flora Terrace Unit Trust

6 November 2024

Project Number: WMP24036

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DOCUMENT CONTROL

Version	Description	Date	Author	Reviewer	Approver
1.0	First Approved Release	27/06/2024	MA	DP	DP
2.0	Second Approved Release	6/11/2024	MA	DP	DP

Approval for Release

Name	Position	File Reference
Dilan Patel	Project Manager – Senior Waste Strategy Consultant	WMP24036-02_Waste Management Plan_2.0
Signature	Dilan Patel Digitally signed by Dilan Patel Date: 2024.11.06 12:17:37 +08'00'	

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Executive Summary

118 Flora Terrace Pty Ltd is seeking development approval for the proposed mixed-use development located at 118 Flora Terrace, North Beach (the Proposal).

To satisfy the conditions of the development application the City of Stirling (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements.

A summary of the bin size, numbers, collection frequency and collection method is provided in the below table.

Proposed Waste Collection Summary

Waste Type	Generation (L/week)	Bin Size (L)	Number of Bins	Collection Frequency	Collection
Residential Bin Storage Area					
Refuse	1,960	240	Five	Twice each week	City of Stirling
Recycling	2,400	240	Five	Twice each week	
FOGO	840	240	Two	Twice each week	
Commercial Bin Storage Area					
Refuse	172	240	One	Once each week	City of Stirling
Recycling	172	240	One	Once each week	

The City will collect refuse, recyclables and FOGO from the Proposal utilising its kerbside collection service. The City's waste collection vehicle will service the bins from the Bin Presentation Area on Flora Terrace.

A building manager/caretaker will oversee the relevant aspects of waste management at the Proposal.

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Diagram 1: Residential Bin Storage Area

Diagram 2: Commercial Bin Storage Area

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Figure 1: Locality Plan

1 Introduction

118 Flora Terrace Pty Ltd is seeking development approval for the proposed mixed-use development located at 118 Flora Terrace, North Beach (the Proposal).

To satisfy the conditions of the development application the City of Stirling (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements.

The Proposal is bordered by housing developments to the north, south and west, and Flora Terrace to the east, as shown in Figure 1.

1.1 Objectives and Scope

The objective of this WMP is to outline the equipment and procedures that will be adopted to manage waste (refuse, recyclables and FOGO) at the Proposal. Specifically, the WMP demonstrates that the Proposal is designed to:

- Adequately cater for the anticipated volume of waste to be generated;
- Provide adequately sized Bin Storage Areas, including appropriate bins; and
- Allow for efficient collection of bins by appropriate waste collection vehicles.

To achieve the objective, the scope of the WMP comprises:

- Section 2: Waste Generation;
- Section 3: Waste Storage;
- Section 4: Waste Collection;
- Section 5: Waste Management; and
- Section 6: Conclusion.

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2 Waste Generation

The following section shows the waste generation rates used and the estimated waste volumes to be generated at the Proposal.

2.1 Proposed Tenancies

The anticipated volume of refuse, recyclables and FOGO is based on the number of residential units/penthouse and the floor area (m^2) of the commercial tenancy at the Proposal. The Proposal consists of the following:

Residential:

- One Bedroom Unit – 2;
- Two Bedroom Unit – 2;
- Three Bedroom Unit – 15; and
- Four Bedroom Penthouse.

Commercial:

- Office – 246.0m^2.

2.2 Waste Generation Rates

In order to achieve an accurate projection of waste volumes for the Proposal, consideration was given to the City of Stirling's *Waste Guidelines for New Developments*.

Table 2-1 shows the waste generation rates which have been applied to the Proposal.

Table 2-1: Waste Generation Rates

Tenancy Use Type	City of Stirling Guideline Reference	Refuse Generation Rate	Recycling Generation Rate	FOGO Generation Rate*
Residential				
Units/Penthouse	Standard Service – Communal Use Bins	98L/week	120L/week	42L/week
Commercial				
Office	Offices	10L/100m^2/day	10L/100m^2/day	-

**FOGO has been calculated based on 30% of the refuse waste generation rate from the City's Guidelines*

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2.3 Waste Generation Volumes

Waste generation is estimated by volume in litres (L) as this is generally the influencing factor when considering bin size, numbers and storage space required.

2.3.1 Residential Waste Generation

Waste generation volumes in litres per week (L/week) adopted for this waste assessment is shown in Table 2-2. It is estimated that the residential units/penthouse at the Proposal will generate 1,960L of refuse, 2,400L of recyclables and 840L of FOGO each week.

Table 2-2: Estimated Waste Generation – Residential

Residential Units/Penthouse	Number of Units/Penthouses	Waste Generation Rate (L/week)	Waste Generation (L/week)
Refuse	20	98	**1,960**
Recyclables	20	120	**2,400**
FOGO	20	42	**840**
		Total	**5,200**

2.3.2 Commercial Waste Generation

Waste generation volumes in litres per week (L/week) adopted for this waste assessment is shown in Table 2-3. It is estimated that the commercial tenancy at the Proposal will generate 172L of refuse and 172L of recyclables each week.

Table 2-3: Estimated Waste Generation – Commercial

Office	Area (m^2)	Waste Generation Rate ($L/100m^2/day$)	Waste Generation (L/week)
Refuse	246.0	10	**172**
Recyclables	246.0	10	**172**
		Total	**344**

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3 Waste Storage

Waste materials generated within the Proposal will be collected in the bins located in the Bin Storage Areas, as shown in Diagram 1 and Diagram 2, and discussed in the following sub-sections.

3.1 Internal Transfer of Waste

To promote positive recycling behaviour and maximise diversion from landfill, internal bins will be available throughout the Proposal for the source separation of refuse and recycling.

The residential units/penthouse will have room to accommodate two under the counter/kitchen bins for the source separation of refuse and recycling and a caddy for the separation of FOGO. The residents will then take the contents of these internal bins to the Residential Bin Storage Area for consolidation into the appropriate bins.

Staff/cleaners for the commercial tenancy will take the contents of their internal bins to the Commercial Bin Storage Area for consolidation in the appropriate bins.

All bins will be colour coded and labelled in accordance with Australian Standards (AS 4123.7) to assist tenants, residents, staff/cleaners to dispose of their separate waste materials in the correct bins.

3.2 Bin Sizes

Table 3-1 gives the typical dimensions of standard bins sizes that may be utilised at the Proposal. It should be noted that these bin dimensions are approximate and can vary slightly between suppliers.

Table 3-1: Typical Bin Dimensions

Dimensions (m)	Bin Sizes	
	240L	360L
Height (mm)	1,080	1,120
Depth (mm)	735	905
Width (mm)	675	700

Reference: City of Stirling Waste Guidelines for New Developments

3.3 Bin Storage Area Size

3.3.1 Residential Bin Storage Area Size

To ensure sufficient area is available for storage of the Residential bins, the amount of bins required for the Residential Bin Storage Area was modelled utilising the estimated waste generation in Table 2-2, bin sizes in Table 3-1 and based on collection of refuse, recyclables and FOGO twice each week.

Based on the results shown in Table 3-2 the Residential Bin Storage Area has been sized to accommodate:

- Five 240L refuse bins;
- Five 240L recycling bins; and
- Two 240L FOGO bins.

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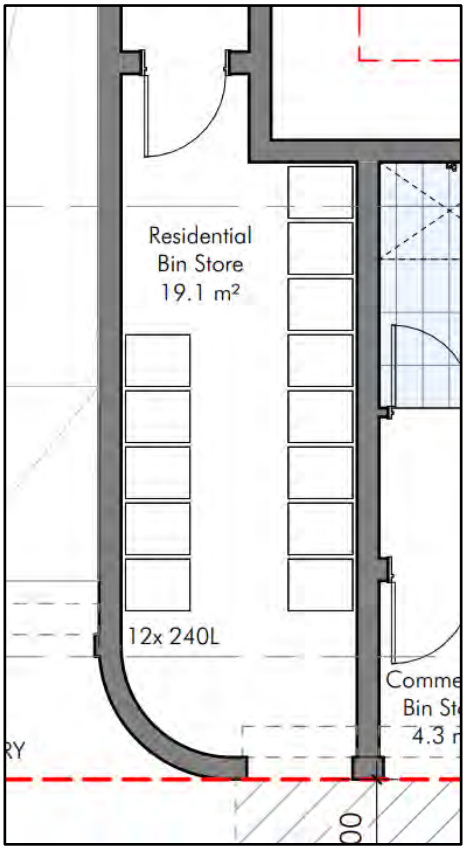
Table 3-2: Bin Requirements for Bin Storage Area – Residential

Waste Stream	Waste Generation (L/week)	Number of Bins Required	
		240L	360L
Refuse	1,960	5	-
Recycling	2,400	5	4
FOGO	840	2	-

The configuration of these bins within the Residential Bin Storage Area is shown in Diagram 1. It is worth noting that the number of bins and corresponding placement of bins shown in Diagram 1 represents the maximum requirements assuming two collections each week of refuse, recyclables and FOGO.

Diagram 1: Residential Bin Storage Area



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3.3.2 Commercial Bin Storage Area Size

To ensure sufficient area is available for storage of the office bins, the amount of bins required for the Commercial Bin Storage Area was modelled utilising the estimated waste generation in Table 2-3, bin sizes in Table 3-1 and based on collection of refuse and recyclables once each week.

Based on the results shown in Table 3-3 the Commercial Bin Storage Area has been sized to accommodate:

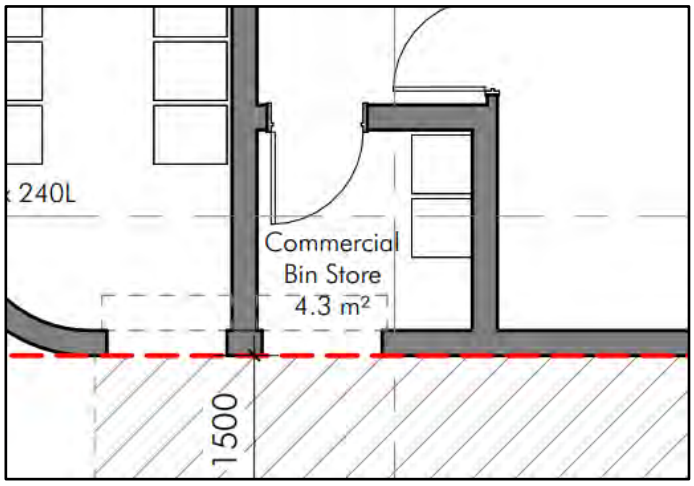
- One 240L refuse bin; and
- One 240L recycling bin.

Table 3-3: Bin Requirements for Bin Storage Area – Commercial

Waste Stream	Waste Generation (L/week)	Number of Bins Required
		240L
Refuse	172	1
Recycling	172	1

The configuration of these bins within the Commercial Bin Storage Area is shown in Diagram 2. It is worth noting that the number of bins and corresponding placement of bins shown in Diagram 2 represents the maximum requirements assuming one collection each week of refuse and recyclables.

Diagram 2: Commercial Bin Storage Area



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3.4 Bin Storage Area Design

The design of the Bin Storage Areas will take into consideration:

- Smooth impervious floor sloped to a drain connected to the sewer system;
- Taps for washing of bins and Bin Storage Area;
- Adequate aisle width for easy manoeuvring of bins;
- No double stacking of bins;
- Doors to the Bin Storage Area self-closing and vermin proof;
- Doors to the Bin Storage Area wide enough to fit bins through;
- Ventilated to a suitable standard;
- Appropriate signage;
- Undercover where possible and be designed to not permit stormwater to enter into the drain;
- Located behind the building setback line;
- Bins not to be visible from the property boundary or areas trafficable by the public; and
- Bins are reasonably secured from theft and vandalism.

Bin numbers and storage space within the Bin Storage Areas will be monitored by the building manager/caretaker during the operation of the Proposal to ensure that the number of bins and collection frequency is sufficient.

4 Waste Collection

The City will service the Proposal by providing the residential units/penthouse and commercial tenancy with the appropriate bins as detailed in Section 3.3 and Section 3.4.

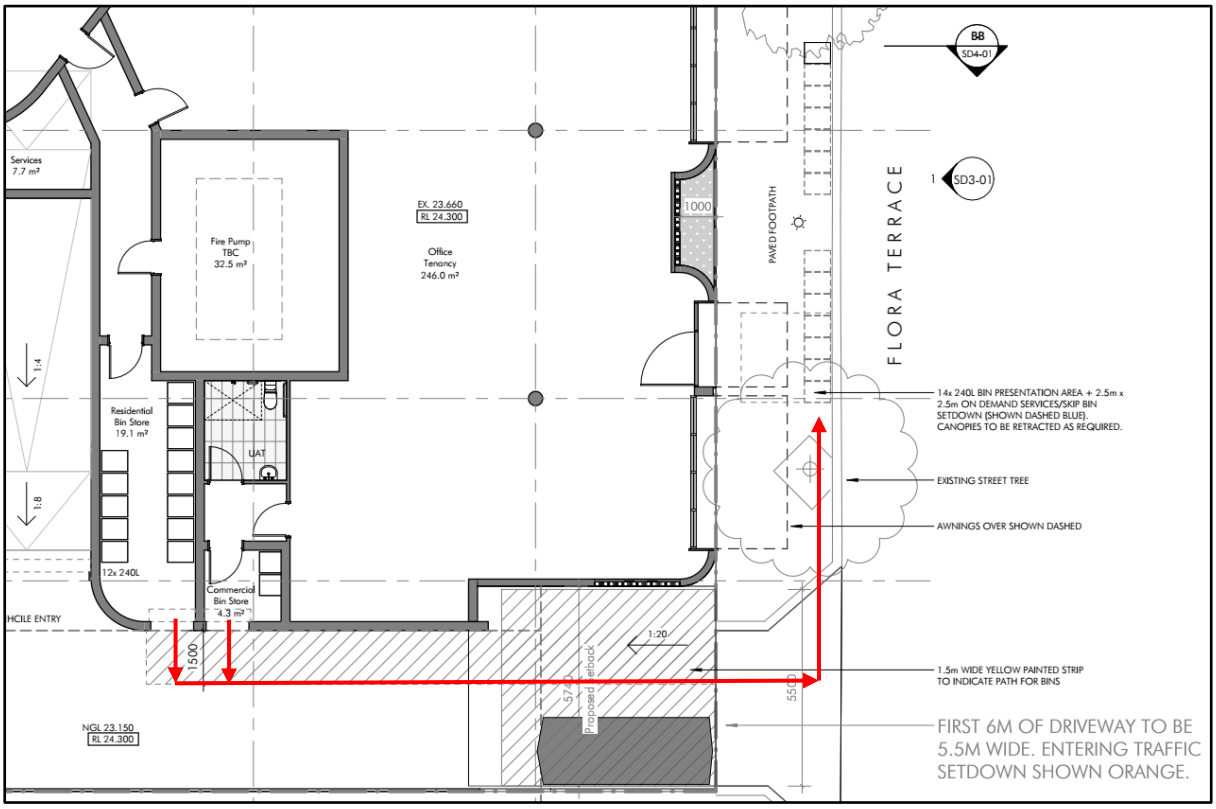
The City will collect refuse, recyclables and FOGO twice each week from the Residential Bin Storage Area and refuse and recycling once each week from the Commercial Bin Storage Area utilising the City's side arm/rear waste collection vehicle.

The City will service bins from the Bin Presentation Area on the verge on Flora Terrace at the front of the Proposal, as shown in Diagram 3.

Bins will be presented for collection 1m from the verge with the wheels and handles facing away from the street. The bins will remain clear of obstructions such as power poles, signs and street trees, and will be placed so as not to obstruct pedestrians, footpaths or bike lanes. Bins will be lined up neatly and in a single row along the verge, with sufficient space between each bin to facilitate collection by the City's waste collection vehicle.

The building manager/caretaker will ferry the bins to and from the Bin Presentation Area on collection days. The travel path between the Bin Storage Areas and the Bin Presentation Area will be kept free of obstacles. The building manager/caretaker will return the bins to the Bin Storage Areas as soon as possible on the same day following collection.

Diagram 3: Bin Presentation Areas and Travel Path



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4.1 Residential Bulk Waste

To assist with the reduction of illegal dumping of bulky wastes, each unit has an allocated storage room of at least 3m² located which could be used for the temporary storage of bulk wastes.

The City offers residents the following on demand collection services annually:

- One – 3m³ skip bin;
- One – E-waste collection;
- One – Whitegoods collection; and
- One – Mattress collection.

A 2.5m x 2.5m set down area has been allocated on the verge for the placement of a skip bin and for use as a collection point for e-wastes, whitegoods, and mattresses, as required. The building manager/caretaker will liaise with residents on procedures for bulky waste disposal and collection, as required, refer Diagram 3.

4.2 Commercial Bulk and Specialty Waste

Adequate space may be allocated throughout the Proposal for placement of cabinets/containers for collection and storage of bulk and specialty wastes that are unable to be disposed of within the bins in the Commercial Bin Storage Area. These may include items such as:

- Refurbishment wastes from fit outs;
- Batteries and E-wastes;
- White goods/appliances;
- Cleaning chemicals; and
- Commercial Light globes.

Bulk and speciality wastes will be removed from the Proposal as they are generated. Removal of these wastes will be monitored by building manager/caretaker, who will liaise with tenant, staff and cleaners to assist as required.

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5 Waste Management

A building manager/caretaker will be engaged to complete the following tasks:

- Monitoring and maintenance of bins and the Bin Storage Areas;
- Cleaning of bins and Bin Storage Areas, when required;
- Ferrying of bins to and from the Bin Storage Areas and Bin Presentation Area on collection days;
- Ensure all tenants, residents, staff/cleaners at the Proposal are made aware of this WMP and their responsibilities thereunder;
- Monitor tenants, residents, staff/cleaners behaviour and identify requirements for further education and/or signage;
- Monitor bulk and speciality waste accumulation and assist with its removal, as required;
- Regularly engage with tenants, residents, staff/cleaners to develop opportunities to reduce waste volumes and increase resource recovery; and
- Regularly engage with the City to ensure efficient and effective waste service is maintained.

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6 Conclusion

As demonstrated within this WMP, the Proposal provides a sufficiently sized Bin Storage Areas for storage of refuse, recyclables and FOGO, based on the estimated waste generation volumes and suitable configuration of bins. This indicates that an adequately designed Bin Storage Areas has been provided, and collection of refuse, recyclables and FOGO can be completed from the Proposal.

The above is achieved using:

Residential:

- Five 240L refuse bins, collected twice each week;
- Five 240L recycling bins, collected twice each week; and
- Two 240L FOGO bins, collected twice each week.

Commercial:

- One 240L refuse bin, collected once each week; and
- One 240L recycling bin, collected once each week.

The City's waste collection vehicle will service the bins from the Bin Presentation Area on the Flora Terrace verge at the front of the Proposal.

A building manager/caretaker will oversee the relevant aspects of waste management at the Proposal.

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Figures

Figure 1: Locality Plan

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P: PO Box 454, Leederville WA 6903 | A: 604 Newcastle St, Leederville WA 6007 | T: 1300 251 070 | W: www.talisconsultants.com.au

LEGEND

- Site Boundary

Cadastre

- Freehold
- Road
- Strata Plan or Lot
- Easement

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LOCALITY

0 1 2 3 4 5 km

LOCALITY

118 Flora Terrace
North Beach WA 6020

Space Collective Architects

N

0 5 10 15 20 m

Coordinate System: GDA2020 MGA Zone 50
Scale @ A3: 1:500

Prepared:	E Jackson	Date:	8/04/2024
Reviewed:	M Ang	Revision:	A
Project:	WMP24036		

talis consultants

Figure 01

Assets | Engineering | Environment | Noise | Spatial | Waste

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Design Review Report – Item 1

Local government:	City of Stirling	
Item no.:	Item 1 - PDA24/0035 – 118 Flora Terrace, North Beach - Pre Development Application – Multiple Dwelling	
Chairperson:	Philip Gresley	
Panel members:	Brett Wood-Gush Tony Blackwell David Karotkin	
Local government officers:	Joseph Rowe-Martin Karina Bowater Michael Italiano Simone Palmer	Acting Manager Development Services Acting Coordinator Planning Senior Planning Officer DRP Support Officer
Observers	Gareth Glanville Olivia Abbonizio David Jack	Coordinator City Future Projects Senior Strategic Planning Officer • City Future Specialist Strategic Planner – City Future
Date:	20 June 2024	Time: 2pm
Venue:	City of Stirling – Challenger Room	

Proponent/s		
	Felipe Soto Ben Doyle Ryan Henderson Graham Agar Mitchell Hender	Space Collective Architects (Applicant) Planning Solutions Developer Full Circle Design Space Collective Architects
	Owners	Mr Neil D Bowie
Observer/s		

Briefings		
Development assessment overview	Michael Italiano	Senior Planning Officer
Technical issues	Michael Italiano	Senior Planning Officer
Design Review		
Proposed development	Item 1 - PDA24/0035 – 118 Flora Terrace, North Beach - Pre Development Application – Multiple Dwelling	
Property address	118 Flora Terrace, North Beach	
Background		
Proposal		
Applicant or applicant's representative address to the design review panel	Felipe Soto Graham Agar	Space Collective Architects Full Circle Design

Key issues / recommendations	The Panel commends the applicant for the high-quality proposal which will set a positive benchmark for development in this North Beach precinct. The project carefully balances bulk, scale and amenity of its neighbours to create a considered medium density outcome for this site which sits comfortably within its planning context. The proposal has continued to improve since DRP1 and aside some minor, but important considerations, the Panel supports the proposal. Another full Panel review meeting is not required. The Chair will make himself available to the City's to review any updates if required. Refer to attached Design Quality Evaluation Report.
Chairperson signature	

Design quality evaluation **Item 1 – PDA24/0035 – 118 Flora Terrace, North Beach – Pre Development Application – Multiple Dwelling** **DRP Meeting – Thursday 20 June 2024**		
	S	*Design Principle satisfied*
	P	*Design Principle pending further attention*
	N	*Design Principle not satisfied*
Principle 1 **Context and character**		*Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.*
	S	1a. This Design Principle is satisfied and the Panel believes this is a high quality architectural solution and an excellent outcome for the community. 1b. The scale of the streetscape frontage, the commercial / retail interface, and the modulation of the façade through articulation and material composition is all commended. 1c. The Panel commended the Applicant on the projects integration into the local character and context, existing and future.
Principle 2 **Landscape quality**		*Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.*
	P	2a. Comment was made by the Panel this design principle is generally supported although requires some minor refinements. 2b. It was noted by the Panel the addition of the Norfolk Island Pine is a positive outcome and is preferential over a bus stop. 2c. The Panel commented the landscaping introduced to the balconies is supported and is a positive outcome. 2d. The number of trees being proposed, above those that are required, is supported. 2e. The 300mm depth of the planters on the large terraces above level 2 were questioned. It was suggested by the Panel these would only work if the planters had succulents and/or cacti planted in this depth of soil. 2f. It was suggested dark grout could be used for consistency on the planter boxes. 2g. The Panel suggested reconsideration of the species list especially in relation to the three trees which are noted as either Polyphagous shot-hole borer hosts or reproductive shot-hole borer hosts. It is noted two other species are temperate rainforest trees and may not be suited to climate adaption.
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.*
	S	3a. The addressing of this design principle is supported by the Panel. 3b. The presentation of the general form to the neighbourhood is appropriate and supported. 3c. The Panel was supportive of the reduction of the number of apartments being offered which has had a positive impact on various other principles. 3d. The Panel expressed support for the three-storey podium with the additional top two floors being set back. 3e. It was acknowledged by the Panel the Applicant has worked hard on resolving the built form and minimising the bulk and height impact on the surrounding residential properties.
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.*

	S	4a. This design principle is satisfied. 4b. The Panel advised best practice would be to separate the commercial and residential parking bays in the basement. 4c. The Panel stated the communal open space has improved significantly and is a good result. 4d. The Panel thank the Applicant for the swept path diagrams although there was still some concern around manoeuvring of larger cars in the basement.
Principle 5 **Sustainability**		*Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.*
	S	5a. The Panel expressed appreciation for the additional interrogation of the sustainability principle which is a great outcome and is now supported by the Panel. 5b. Comment was made by the Panel the level of detail is a welcome response.
Principle 6 **Amenity**		*Good design optimises internal and external amenity for occupants, visitors and neighbours providing environments that are comfortable, productive and healthy.*
	S	6a. Amenity of the proposal has been improved and this design principle is now supported by the Panel. 6b. It was mentioned by the Panel the increase of three bedroom apartments on the ground floor is a better outcome to accommodate families. 6c. The amenity of the proposal has been improved due to the number of apartments being reduced within the proposed building envelope. 6d. The Panel commented the north facing lift lobby on the ground floor provides excellent amenity for residents. 6e. The dimensional compliance to apartments including (but not limited to) living space widths for the south facing one bedroom apartments has been resolved. 6f. The communal open space amenity has been improved and is a good result. 6g. The width of the driveway still seems very tight and creates less than ideal amenity for users.
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.*
	S	7a. This design principle is supported by the Panel.
Principle 8 **Safety**		*Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.*
	P	8a. The Panel stated there remains concern around traffic management on the ramp as it is not fully resolved. It was stated a more sophisticated traffic management solution is required and there is a need to elevate the system of access for exiting and entering to mitigate the risk. It was suggested a traffic light system could be introduced. 8b. Comment was made the manoeuvrability in the carpark still looks very tight, especially for large vehicles. 8c. The Panel appreciate the solution implemented around the climb ability of the breeze blocks on the ground floor and stated this is a good outcome. Comment was made there is still some balconies which don't have a planter box behind them to alleviate this risk of this on the balconies.
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.*
	S	9a. This design principle is supported by the Panel.

		9b. The Panel commended the Applicant on the diversity of the apartments and commented this is a positive outcome for the community. 9c. It was noted by the Panel the dog water station and foot wash on the ground floor is a good addition and supported. 9d. Comment was made by the Panel achieving a 100% silver living apartment rating is a strength of the proposal.
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.*
	S	10a. The Panel commended the Applicant on the outcome of this design principle and stated the aesthetics are supported. 10b. It was mentioned the Panel supports the approach taken and the material palette and stated it fits in with the streetscape and character of the location. 10c. Comment was made by the Panel highly durable materials should be deployed in this location which are suitable for the coastal environment. This will minimise maintenance and extend the life cycle of the materials.

Design Review progress
Item 1 – PDA24/0022 and PDA24/0007 – 118 Flora Terrace, North Beach – Pre Development Application - Multiple Dwelling
DRP Meeting – Thursday 20 June 2024, 9 May 2024 and 29 February 2024

S	*Design Principle satisfied*
P	*Design Principle pending further attention*
N	*Design Principle not satisfied*

	DR1 29/2/2024	***DR2 9/5/2024***	***DR3 20/6/2024***
Principle 1 - **Context and character**	N	S	S
Principle 2 - **Landscape quality**	P	P	P
Principle 3 - **Built form and scale**	N	S	S
Principle 4 - **Functionality and build quality**		P	S
Principle 5 - **Sustainability**		P	S
Principle 6 - **Amenity**	N	P	S
Principle 7 - **Legibility**		S	S
Principle 8 - **Safety**		N	P
Principle 9 - **Community**	N	S	S
Principle 10 - **Aesthetics**		S	S

DR1 – DRP Recommendations DRP Meeting – 29/2/2024	DR2 – Applicant Response DRP Meeting – 29/2/2024	DR2 - DRP Recommendations DRP Meeting – 9/5/2024	DR2 – Applicant Response DRP Meeting – 9/5/2024	DR3 – DRP Recommendations DRP Meeting – 20/6/2024
2b. Comment was made by the Panel it would be beneficial to understand if there are existing trees on the site and what they are and if they bring amenity to the site. 2d. The Panel encourages the design team to optimise the ground level opportunities in the landscape to optimise amenity for these apartments.		2f. More clarity should be provided with relation to the depth of on structure planters as concern was expressed about suitable depths, and their detailing. 2g. It was suggested by the Panel the on-structure planting should be strata managed rather than leaving this responsibility to the tenants. This will require clarification and resolution as it impacts the successful opportunity of ground level private and landscaped open spaces. 2h. It was mentioned the bus stop would be a good outcome and pursuing this initiative would be beneficial. Some concern was raised about the available space for this element and this needs clarification. 2i. The Panel suggested reconsideration of the species list especially in relation to vulnerability to the Polyphagous shot-hole borer, and the vegetable planters to the south.	2f. Typical detail for podium deep planter has been added. 2g. Noted. 2h. Noted. We are still investigating the feasibility of this initiative. 2i. Noted.	2e. The 300mm depth of the planters on the large terraces above level 2 were questioned. It was suggested by the Panel these would only work if the planters had succulents and/or cacti planted in this depth of soil. 2f. It was suggested dark grout could be used for consistency on the planter boxes. 2g. The Panel suggested reconsideration of the species list especially in relation to the three trees which are noted as either Polyphagous shot-hole borer hosts or reproductive shot-hole borer hosts. It is noted two other species are temperate rainforest trees and may not be suited to climate adaption.
3c. Comment was made by the Panel overshadowing especially to the south and south-west is		3a. The addressing of this design principle is supported by the Panel. 3e. Whilst the presentation of the general form to the	3a. No action required. 3e. The number of apartments has been reduced from 23 to 20, with an average area increase of 10% per	3a. The addressing of this design principle is supported by the Panel.

problematic. 3d. The Panel also had concerns around the rationale presented for overshadowing, highlighting that the "Deemed to Comply" scheme used for comparison was in fact the maximum allowable massing envelope, which does not acknowledge other design requirements such as overshadowing to R20 and passive solar design requirements. The maximum allowable development envelope does not automatically accommodate good design or satisfy the 10 design principles of SPP7.0.		neighbourhood is appropriate and supported, the Panel expressed concerns that the number of apartments being included in this envelope is having a negative impact upon various other principles including (but not limited to) functionality, amenity, and safety. The proponent is encouraged to re-consider how this will be improved noting that any increases to the scale and dimensions of the envelope will not likely be supported.	unit.	
4b. The Panel queried the ground floor, floor to ceiling height to accommodate the intended use.		4d. There was concern expressed by the Panel around the functionality of the communal entry area. Further information is requested to provide clarity and resolution. 4f. It was noted by the Panel the bike store is in an awkward location and there could be potential conflict between the bikes and pedestrians. There is opportunity to relocate this and improve functionality. 4g. It was mentioned by the Panel the depth of some	4a. The communal entry area has been further developed and offers clearer connections. 4f. The bike store has been refined to better accommodate pedestrian flow. 4g. Apartment sizes have increased throughout the building with improvements to living & dining layouts. 4j. A visually denoted area has been allocated along the driveway following discussions with traffic engineer.	4a. This design principle is satisfied. 4b. The Panel advised best practice would be to separate the commercial and residential parking bays in the basement. 4c. The Panel stated the communal open space has improved significantly and is a good result.

		apartments (vs ceiling height) may be problematic and requires resolution. 4j. The Panel stated there are logistic issues associated with waste disposal. The current process of having to go through the lobby is not a good outcome. The moving of the bins to the street in the narrow driveway also requires further explanation. 4k. The Panel expressed concern around the width of the driveway access to the ground floor basement. It is currently 4.5m with a blind corner and a steep ramp. Further information is sought including swept path analysis.	4k. Noted – reviewed with traffic engineer. Please refer to ground floor swept paths.	
5a. Although there are encouraging aspects to the current ambitions, more information is needed and this design principle is not yet assessable. 5b. The Panel commended the commitment to a life cycle assessment but seek more information on benchmarks and comparison targets.		5c. The Applicant was urged to be more ambitious in their response and commitment to sustainability due to the height and plot ratio discretions being sought.	5c. The sustainability target has been revised upwards with increases in NatHERS rating, PV generation, EV charging and battery capacity.	5a. The Panel expressed appreciation for the additional interrogation of the sustainability principle which is a great outcome and is now supported by the Panel. 5b. Comment was made by the Panel the level of detail is a welcome response.
6a. It was stated by the Panel there is a lack of communal open space. The question was asked why this was not considered? There is an		6a. The proponent is encouraged to re-consider how amenity can be improved generally. There are	6a. The number of apartments has been reduced from 23 to 20, with an average increase of 18% per unit. 6c. With a reduced number of	6a. Amenity of the proposal has been improved and this design principle is now supported by the Panel.

expectation for this to be addressed prior to the next DRP review. 6b. It was noted by the Panel there are no resident storerooms. Escape into the lobby area and stores are important for the residential component of this design.		significant concerns amenity is being compromised due to the number of apartments being “squeezed” into the proposed building envelope, noting any increases to the scale and dimensions of the envelope will not likely be supported. 6c. The Panel has some concerns around the levels of sunlight, daylight, and cross ventilation to some of the apartments. The Panel believes that improvements should be sought by the design team to bring improvement to the occupants, especially due to the significant discretion being sought in relation to plot ratio. 6d. The Panel recommends further work be carried out to achieve dimensional compliance to apartments including (but not limited to) living space widths for the south facing one bedroom apartments. 6e. The communal space size was questioned, and the Panel suggests that it would benefit from additional design work including the relationship of the internal and external spaces. The	apartments and revised layouts, more units have access to daylight and cross ventilation. 6d. With a reduced number of apartments and revised layouts, all units now achieve dimensional compliance. 6e. With fewer ground level apartments and revised layouts, the communal open spaces have been expanded.	

		Panel encourages ongoing coordination and collaboration between landscape architect and the architect.		
		8a. The Panel expressed concern around the width of the driveway access to the ground floor basement. It is currently 4.5m (less than a 2-way driveaway) with a blind corner and a steep ramp which could pose a safety issue. Further clarification is required as to how this is being managed. 8b. Comment was made the manoeuvrability in the carpark has been impacted by yield and looks very tight. Swept paths should be provided to demonstrate how this will work.	8a. The corner geometry has been revised and a reflector mirror added to aid safe passage. 8b. Noted – reviewed with traffic engineer. Please refer to basement swept paths.	8a. The Panel stated there remains concern around traffic management on the ramp as it is not fully resolved. It was stated a more sophisticated traffic management solution is required and there is a need to elevate the system of access for exiting and entering to mitigate the risk. It was suggested a traffic light system could be introduced. 8b. Comment was made the manoeuvrability in the carpark still looks very tight, especially for large vehicles. 8c. The Panel appreciate the solution implemented around the climb ability of the breeze blocks on the ground floor and stated this is a good outcome. Comment was made there is still some balconies which don't have a planter box behind them to alleviate this risk of this on the balconies.
9a. It was stated by the Panel the community benefit for this proposal is important if the Applicant is seeking discretions for the height		9a. This design principle is supported by the Panel. 9e. It was noted by the Panel clarification on the size of the communal open space would be	9a. No action required.	9. This design principle is supported by the Panel.

of the building. 9b. The community benefit for the height discretions should be communicated and dialogue and justification around what is being given back to the Community is imperative to gain support for additional height.		beneficial.		
		10c. Comment was made by the Panel highly durable materials should be deployed in this location which are suitable for the coastal environment. This will minimise maintenance and extend the life cycle of the materials.	10. No action required.	10a. The Panel commended the Applicant on the outcome of this design principle and stated the aesthetics are supported.

Attachment 9a - Water Corporation received 30 August 2024.

Development Services
629 Newcastle Street Leederville WA 6007
PO Box 100 Leederville WA 6902
T (08) 9420 2099
F (08) 9420 2203

WATER CORPORATION

Your Ref: DA24/0971
Our Ref: 179678731 - DAP414068

Email: building.services@watercorporation.com.au

30 August 2024

Senior Planning Officer
City Of Stirling
PO BOX 130
OSBORNE PARK WA 6017

Attention of: Michael Italiano

Re: Lot 15, 118 Flora Terrace, North Beach

Thank you for your email dated 28th August 2024. We offer the following comments regarding this proposal.

Water
Reticulated water is available to the subject lot. A 25mm water service exists on the property.

Wastewater
Reticulated sewerage is available to the subject lot. A 150mm PVC sewer main runs parallel to the outside the side boundary. Any portion of the proposed building which is within the zone of influence to sewer main may require suitable footings in accordance with our technical guidelines. Please refer to our website: www.watercorporation.com.au/Developing-and-building/Working-near-assets.

Protect Sewer
It should be noted that existing sewerage mains are located near the subject land near the side boundary. Due consideration will be required when developing in this area. The developer is required to fund the full cost of protecting or modifying any of the existing infrastructure which may be affected by the proposed development. In accordance with Section 90 of the Water Services Act 2012 whenever development is proposed near Water Corporation assets the applicant/developer/owner needs approval prior to construction.

Approval for works
Any works carried out in proximity to our Assets must receive prior approval by applying for an Asset Protection Risk Assessment (APRA). To assess whether the proposed development will require an APRA, details of the Prescribed Proximities are available on our website: www.watercorporation.com.au/Developing-and-building/Working-near-assets/Approval-for-works.

Building Approval Application
The applicant is required to submit a Commercial/Multi Residential Application by using our online portal BuilderNet: login-buildernet.watercorporation.com.au.

Attachments required for approval will include:

- Final construction site & architectural floor plans
- Engineer certified piling detail plans (if required)
- Hydraulic Plans – Water & Wastewater
- Trade Waste Application Form - Application forms (watercorporation.com.au)
- Trade Waste Supplement Form

The information provided above is subject to review and may change. If the proposal has not proceeded within the next 6 months, please contact us to confirm that this information is still valid. Please provide the above comments to the landowner, developer and/or their representative. Should you have any queries or require further clarification on any of the above issues, please do not hesitate to contact our Enquiries Officer.

Kind regards,

Advisor – Building Services
Development Services

From: Planning and Land Development Referrals <planning.land.development.referrals@westernpower.com.au>
Sent: Thursday, 7 November 2024 9:30 AM
To: Michael Italiano <Michael.Italiano@stirling.wa.gov.au>
Subject: RE: [EXTERNAL] Western Power - Referral of Development Application - DA24/0971 - 118 Flora Terrace NORTH BEACH

Attachment 9b - Western Power received 7 November 2024.

Hi Michael,

Please see the link below which will take you directly to the western power application to remove or relocate a street light.
Move or remove streetlights

If you have any question or require any further details please complete the Pre-App enquiry so that the design team can help

Pre-application enquiry

Many thanks

She, Her
Customer Support Officer – Planning and Land Development
Customer Connection Services

A 363 Wellington Street Perth 6000 | **T** 13 10 87
E planning.land.development.referrals@westernpower.com.au
Available – Wed and Thurs 8am - 2pm
westernpower.com.au

From: Michael Italiano <Michael.Italiano@stirling.wa.gov.au>

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6 November 2024
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City RFI Comment	Applicant Response
development which do not have external windows. Design Guidance 4.2.7 and 4.2.8 of Element 4.2 – Natural Ventilation of R-Codes Volume 2 identify trickle vents, ceiling fans or energy efficient mechanical exchange systems may be required for these areas. The City requires further information regarding this matter.	Further provision of detail and confirmation of requirements will be completed at detailed development stage, as addressed by a condition of development approval.
Public Art on Private Land	
As per Local Planning Policy 6.12, the development is to provide public art as part of the development with a cost contribution at a rate of 1% of the cost of the development. As part of the development application, the proposed location of the public art is to be demonstrated along with a brief report showing how the public art will be integrated into the development. Amended plans are to demonstrate the location of the public art and the proposed typology.	Refer **Attachment 1**, Amended Plans, demonstrating indicative public art contributions. Specific details for public art contributions to be addressed by a condition of development approval.

RESPONSE TO PUBLIC SUBMISSIONS

The proposed development was advertised for a period of 29 days, from 27 August 2024 to 25 September 2024. A total of 25 objections and 4 supportive submissions were received.

Refer to **Table 2** below, which provides our response to the consistent themes raised in the submissions that were identified within the submissions.

Table 2 – Response to submissions received during advertising on the proposed development

Submission Theme	Applicant Response
Traffic Flow and Safety Concerns about increased congestion, insufficient parking, and potential misuse of neighbouring driveways.	The access has been designed to ensure that there are no queues on the street due to traffic entering or exiting the subject site. As demonstrated in the lodged TIA and additional Traffic Note, the proposed development has exceeded the minimum deemed to comply parking requirement and will not create significant impacts on the surrounding road network. The provided parking includes provision for 54 car parking spaces, which allows for residential parking, commercial parking and visitor parking.
Building Height and Zoning Compliance Objections to the building exceeding the three-storey height limit.	The development proposes to vary the deemed to comply height requirement from 12m to 16.8m for a total of 5 storeys, with each storey set back to reduce the perception of building height and bulk from a pedestrian perspective. The proposed development is located with a local centre area, with existing 3 and 4-storey buildings along Flora Terrace also located within the local centre zoned areas.
Visual Privacy Protest against loss of privacy due to anticipated direct views into neighbouring properties.	The proposed development setbacks are largely compliant, with any potential overlooking areas screened in accordance with the Residential Design Codes.

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Submission Theme	Applicant Response
Noise Impact Concerns regarding increased noise from car bays, garage doors, and general activity.	As provided in the completed Acoustic Report, the proposed development is intended to be developed in accordance with the required building provisions for acoustic management. The development will be designed in compliance with the *Environmental Protection (Noise) Regulations 1997*.
Overshadowing and Visual Bulk Requests for protection of solar panels/installation from overshadowing due to the proposed retaining wall.	The proposed development has assessed the solar access for adjoining and adjacent properties, including consideration for existing solar panels, with all properties provided with compliant solar access across the year. The assessment accounts for the changes in topography across the adjacent lots, including consideration for retaining and building height.
Water Runoff and Drainage Potential for increased water runoff leading to flooding of neighbouring properties.	The development will be designed to retain all stormwater on site, in accordance with building and planning requirements.
Light Impact Apprehension for light spill into nearby habitable rooms.	The proposed development has been designed with compliant setbacks and screening to ensure privacy, which will also assist in managing light spill. Any provision for outdoor lighting will be considered at the detailed design stage to similarly reduce light spill.
Lack of consultation Frustration from neighbours about the lack of engagement	The proposed development has undergone the required advertising, with on-site signage, letters to surrounding neighbours and online information provided per the minimum statutory timeframes for a small-medium scale project.
Construction Impact Concerns about noise, dust, and potential damage during construction.	Any management of construction activity will be completed by the builder at the time of development.
Safety and Security Increased security risks from visibility into neighbouring homes and safety concerns during construction.	Management of security during construction will be managed by the builder at the time of development, with visual privacy issues addressed as above.

Conclusion

This application is for a mixed use development with 20 residential units and a commercial tenancy within a Town Centre area. The development will activate a currently underutilised site, and create links to the existing commercial tenancies across Flora Terrace as well as with the wider residential community. As demonstrated above, the development has considered the relevant planning requirements, and will introduce much needed housing and activation within an existing Town Centre and beachfront area.

We trust that the responses provided adequately address the planning considerations raised in the City's request for further information and the public submissions received during public consultation.

Should you have any queries or require further clarification in regard to the proposal, please do not hesitate to contact the writer.

PART D – OTHER BUSINESS

1. State Administrative Tribunal Applications and Supreme Court Appeals

2. Meeting Closure