



Metro North-West Joint Development Assessment Panel Agenda

Meeting Date and Time: 18 November 2019, 9:30 AM
Meeting Number: MNWJDAP/274
Meeting Venue: Department of Planning, Lands and Heritage
140 William Street, Perth

Attendance

DAP Members

Ms Karen Hyde (Presiding Member)
Ms Sheryl Chaffer (Deputy Presiding Member)
Mr Fred Zuideveld (Specialist Member)
Cr Christine Hamilton-Prime (Local Government Member, City of Joondalup)
Cr Philippa Taylor (Local Government Member, City of Joondalup)

Officers in attendance

Mr Chris Leigh (City of Joondalup)
Mr Jeremy Thompson (City of Joondalup)
Mr Tim Thornton (City of Joondalup)
Ms Grace Neamtu (City of Joondalup)

Minute Secretary

Ms Adele McMahon (DAP Secretariat)

Applicants and Submitters

Item 8.1
Mr Josh Watson (Planning Solutions)
Ms Alysha Cass (BP Australia)
Ms Ana Kovacevic (Hodge Collard Preston)

Item 10.1
Mr Giles Harden Jones (H J Architects)
Mr Kevin McKay
Mr Denis Charron
Mr Kevan McGill

Members of the Public / Media

Nil

1. Declaration of Opening

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



2. Apologies

Nil

3. Members on Leave of Absence

Nil

4. Noting of Minutes

Signed minutes of previous meetings are available on the [DAP website](#).

5. Declarations of Due Consideration

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

6. Disclosure of Interests

Nil

7. Deputations and Presentations

7.1 Mr Josh Watson (Planning Solutions) presenting in support of the application at 8.1. The presentation will address speak in support of the proposed BP Sorrento redevelopment.

7.2 Mr Kevin McKay presenting against the application at 10.1. The presentation will address issues of overlooking, overshadowing and lack of tree canopy.

7.3 Mr Denis Charron presenting against the application at 10.1. The presentation will address important issues not properly explored in the City's report that relate to neighbour's shrubs, the Water Corporation sewer, risks created by the design of the underground carpark, visitors reversing into Davallia Rd and risks created by the use of timber screening.

7.4 Mr Kevan McGill presenting against the application at 10.1. The presentation will address concerns that the proposal is out of scale and character with the neighbourhood and has numerous non-compliance within the requirements.
** Please Note: Mr McGill may not be available to present at the meeting.

7.5 Mr Giles Harden Jones (Harden Jones Architect) presenting in support of the application at 10.1. The presentation will address RAR & Refusal Reasons and an alternative recommendation for approval.

The City of Joondalup may be provided with the opportunity to respond to questions of the panel, as invited by the Presiding Member.



8. Form 1 – Responsible Authority Reports – DAP Applications

| | | |
|-----|--------------------------|---|
| 8.1 | Property Location: | Lot 153 (128) West Coast Drive and Lot 154 (1) Raleigh Road, Sorrento |
| | Development Description: | Redevelopment of existing BP service station with associated access, signage, landscaping and parking |
| | Applicant: | Planning Solutions |
| | Owner: | BP Australia Pty Ltd |
| | Responsible Authority: | City of Joondalup |
| | DAP File No: | DAP/19/01628 |

9. Form 2 – Responsible Authority Reports – Amending or cancelling DAP development approval

Nil

10. Appeals to the State Administrative Tribunal

| | | |
|------|--------------------------|---|
| 10.1 | Property Location: | Lot 96 & 97 (9 & 11) Davallia Road, Duncraig |
| | Development Description: | 13 Multiple Dwellings |
| | Applicant: | C/- Harden Jones Architects |
| | Owner: | Magdalena Korycka, Mark Grynglas, Ewa Harwas, John Harwas |
| | Responsible Authority: | City of Joondalup |
| | DAP File No: | DAP/18/01536 |

| Current Applications | | |
|----------------------|--|--|
| LG Name | Property Location | Application Description |
| City of Joondalup | Lot 96 & 97 (9 & 11) Davallia Road, Duncraig | 13 Multiple Dwellings |
| City of Joondalup | Lot 104 & 105 (8 & 10) Brechin Court, Duncraig | 3 Levels, 16 Apartments, Multiple Dwellings |
| City of Stirling | Lot 101 (191) Balcatta Road, Balcatta | Extension to the Existing Bunnings Warehouse |
| City of Stirling | Lot 90 (38) Geneff Street & Lot 89 (59) Hertha Road, Innaloo | Multiple Dwelling Development |

11. General Business / Meeting Closure

In accordance with Section 7.3 of the DAP Standing Orders 2017 only the Presiding Member may publicly comment on the operations or determinations of a DAP and other DAP members should not be approached to make comment.



Form 1 – Responsible Authority Report (Regulation 12)

| | |
|-----------------------------------|--|
| Property Location: | Lot 153 (128) West Coast Drive and Lot 154 (1) Raleigh Road, Sorrento |
| Development Description: | Redevelopment of existing BP service station with associated access, signage, landscaping and parking |
| DAP Name: | Metro North-West JDAP |
| Applicant: | Mr Josh Watson, Planning Solutions |
| Owner: | BP Australia Pty Ltd |
| Value of Development: | \$2.6 Million |
| LG Reference: | DA19/0544 |
| Responsible Authority: | City of Joondalup |
| Authorising Officer: | Dale Page, Director Planning and Community Development |
| DAP File No: | DAP/19/01628 |
| Report Due Date: | 4 November 2019 |
| Application Received Date: | 20 June 2019 |
| Application Process Days: | 90 Days |
| Attachment(s): | <ol style="list-style-type: none">1. Location plan2. Revised development plans3. Revised building perspectives4. Revised landscape concept plan5. Applicant response to deferral6. Original development plans7. Original building perspectives8. Original landscape concept plan9. Original applicant DA report and response to City's preliminary comments10. Traffic impact assessment11. Acoustic report12. Pollution prevention report13. Previous RAR (23 September 2019) |

Officer Recommendation:

That the Metro North-West JDAP resolves to:

Refuse DAP Application reference DAP/19/01628 and accompanying plans (Attachment 2) in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the City of Joondalup *Local Planning Scheme No. 3*, and pursuant to clause 24(1) and 26 of the *Metropolitan Region Scheme* for the following reasons:

1. In accordance with Schedule 2, clause 67 (h) of the *Planning and Development (Local Planning Scheme) Regulations 2015*, the proposed development does not meet the requirements of the *Sorrento Activity Centre Plan* as:
 - a. The proposed development does not meet the minimum development standards and therefore does not achieve the intent of providing a consistent built form outcome within the activity centre.

- b. The retention of the vehicle access point to West Coast Drive, lack of active building frontage to the street and visibility of car parking to the street does not enhance the public realm and pedestrian environment.

Details: outline of development application

| | | |
|---------------------|------|---|
| Zoning | MRS: | Urban |
| | LPS: | Centre |
| Use Class: | | Service station |
| Strategy Policy: | | Not applicable |
| Development Scheme: | | City of Joondalup <i>Local Planning Scheme No. 3</i> |
| Lot Size: | | 1,601m ² combined (Lot 153 - 707m ² Lot 154 - 894m ²) |
| Existing Land Use: | | Service station |

The proposed development consists of the following:

- Demolition of the existing service station (retail building and canopy).
- A new retail building on the western portion of the site, with a gross lettable area of 253m².
- A fuel bowser canopy with a height of 6.1 metres.
- Vehicle access points retained from West Coast Drive and Raleigh Road.
- Four fuel bowsers with eight refuelling spaces (two per bowser).
- Four on-site car parking bays for customers and staff, and one air/water bay.
- Four bicycle spaces on the western side of the retail building, fronting West Coast Drive.
- Landscaping on-site and within the adjacent verge.
- Retaining and site works to accommodate the proposed development.
- Operating hours of 24 hours a day, seven days a week.
- One pylon sign and various wall signs.

The amended development plans, building perspectives and landscaping concept plans are provided as Attachments 2, 3 and 4 respectively.

Background:

The subject site (Lots 153 and 154) is currently a BP service station and has been operating as a service station since its initial approval in 1966. It is bound by a vacant residential lot to the east, two storey commercial development to the north west, West Coast Drive to the south west and Raleigh Road to the south (Attachment 1 refers).

The subject site is zoned 'Centre' under the City's *Local Planning Scheme No. 3* (LPS3) and is subject to the *Sorrento Activity Centre Plan* (SACP), approved by the Western Australian Planning Commission on 18 September 2018. Under the SACP the 'Commercial' zone is applied to the site. The land use 'service station' is a discretionary ("D") use within the 'Commercial' zone.

On 23 September 2019, the Metro North-West Joint Development Assessment Panel (JDAP) considered the original development plans (Attachment 6) and resolved the following:

“That the consideration of DAP Application 19/01628 be deferred for a period of six (6) weeks, in accordance with section 5.10.1a of the DAP Standing Orders 2017, for the following reasons;

- 1. To enable the applicant to submit revised plans that;
 - a. Adequately address the development standards and intent of the Sorrento Activity Centre Plan in particular, by providing a more consistent built form;*
 - b. Enhances the public realm and pedestrian environment by providing a wider active building frontage or frame to the street and softens the visibility of cars parked on the site;*
 - c. Provides landscaping along the northern boundary as a buffer between the commercial development and adjoining residential property (Lot 155) and to create a more notable landmark feature at the corner of West Coast Drive and Raleigh Road; and*
 - d. Consideration of the location of the disabled parking bays.**
- 2. To enable the applicant to consult with the owner of the adjacent commercial land with a view to consider formalising shared access arrangements; and*
- 3. To enable the responsible authority to prepare a revised RAR following receipt and assessment of the submitted revised plans referred to above.”*

The applicant has provided amended plans and additional information in response to the deferral (Attachments 2 - 5 refer). The amended development plans include:

- Extending and reconfiguring the proposed fuel canopy along the West Coast Drive and Raleigh Road frontage. The canopy increases in size from 277m² to 493m².
- Provision of visually permeable timber cladding screens at the West Coast Drive and Raleigh Road intersection.
- Increasing the height of the retail building from 5.25m to 6.09m.
- Increasing the awning along the West Coast Drive frontage from 11% to 18% of the total frontage.
- Relocating the accessible parking closer to the retail building entrance.
- Removing two parallel car parking bays along the eastern lot boundary and replacing them with a three metre landscaping strip.
- Minor relocation/reorientation of the pylon sign and increasing the number and size of wall signs as well as providing a new semaphore sign on the West Coast Drive frontage of the retail building.
- Relocating the vent pipes from the rear of the site to adjacent to the service yard.

Legislation and Policy:

Legislation

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

State Government Policies

- *State Planning Policy 7.0 Design of the Built Environment.*

Activity Centre Plan

- *Sorrento Activity Centre Plan*

Local Policies

- *Signs Local Planning Policy*
- *Environmentally Sustainable Design Policy*

Consultation:

Public Consultation

The initial proposal was advertised for a period of 14 days, commencing on 21 August 2019 and concluding on 4 September 2019. Consultation was undertaken in the following manner:

- a letter was sent to owners and occupiers of 20 properties in the vicinity of the subject site;
- a sign was installed on the site on the corner of West Coast Drive and Raleigh Road; and
- development plans were made available for public viewing on the City's website and at the City's Administration building.

A total of seven submissions were received, being three objections, three non-objections and one submission supporting the development. The issues raised in the submissions are summarised in City's initial Responsible Authority Report (Attachment 13 refers).

Revised plans were submitted on 7 October 2019. This did not give sufficient time for any additional public consultation to be undertaken and still meet the RAR deadline. Notwithstanding the revised development addresses some of the issues raised during consultation and is considered to more closely reflect the requirements of the SACP than the original proposal.

Consultation with other Agencies or Consultants

Due to the '*possible contaminated – investigation required*' memorial on the Certificate of Title the application was referred to the Department of Water and Environmental Regulation (DWER) for comment. DWER advised that as the development is not proposing a more sensitive land use, the site is suitable for proposed redevelopment.

An advice note requiring a site management plan to address the potential exposure of impacted soil or groundwater during earthworks was requested should the application be supported.

Joondalup Design Reference Panel (JDRP)

The original proposal was presented to the JDRP at its meeting held on 17 July 2019. The proposal responded as outlined in the original RAR (Attachment 13 refers).

Revised plans were submitted on 7 October 2019. This did not give sufficient time for the matter to be presented back to the JDRP and still meet the RAR deadline. Notwithstanding the revised development addresses some of the issues raised by the JDRP as part of its review and is considered to more closely reflect the requirements of the SACP than the original proposal.

Planning Assessment:

Local Planning Scheme

The City has completed an assessment of the revised proposal against the relevant provisions of the Regulations, LPS3, SACP and City policies. The proposal does not comply with the requirements listed below:

| Item | Requirement | Proposal | Compliance |
|--|---|--|---|
| Sorrento Activity Centre Plan | | | |
| 4.4.3 – Commercial Net Lettable Area (NLA) | Commercial NLA not to exceed: Lot 153 – 188m ² Lot 154 – 238m ² | Lot 153 – 230m² Lot 154 - no NLA | Does not comply. Is considered appropriate as outlined in the previous RAR. |
| 5.2 and Plan 2 – Building Height | A minimum building height of three storeys and maximum height of four storeys. | The development (retail building and canopy) has a height of 6.09m (previously 5.25m). | Does not comply. See officer comments below. |
| 5.3.1 - Street Setback | Minimum – nil Maximum – two metres | Retail building - 0.5 metres Amended plan has the fuel bowser canopy setback nil along West Coast Drive and up to 0.707 metres on Raleigh Road. | The proposal now complies with the minimum and maximum setback requirements. See officer comments below. |

| Item | Requirement | Proposal | Compliance |
|--|--|--|--|
| | | Previously the fuel bowser canopy was setback between 1.5 metres and 17 metres to West Coast Drive, and 1.5 metres to 2.787 metres to Raleigh Road. | |
| 5.4.5 – Lot Boundary Setbacks and Plan 2 | The side boundary setback to the eastern boundary (between Lot 154 and the adjoining residential site) shall be nine metres, comprising a six metre access easement and a three metre landscaping strip. | <p>The fuel canopy is setback 10 metres from the adjoining residential site.</p> <p>A three metre landscaping strip has now been provided between the properties for a large extent of the boundary except where required to maintain existing access from Raleigh Road.</p> | The proposal now complies with the three metre landscaping strip requirements. |
| 5.5.1 – Building Design | A continuous awning shall be provided along the street frontage | Awning provided to a portion of the retail building for 18% of the total site frontage (previously 11%). | <p>Does not comply.</p> <p>See officer comments below.</p> |
| 5.5.2 – Corner Buildings | Corner buildings are to be designed to address both street frontages with equal importance. | Development does not front both streets with equal importance with the retail building set back approximately 25 metres from Raleigh Road. | <p>Does not comply.</p> <p>Refer to officer comments below.</p> |
| 5.6.1 – Street Interface | 80% of the primary street and 50% of the secondary street shall have an Active Frontage. | Only 18% of the street is 'Active Frontage' as defined under the | <p>Does not comply.</p> <p>Refer to officer comments below.</p> |

| Item | Requirement | Proposal | Compliance |
|--|---|---|--|
| | Active Frontage is defined as 'a ground floor space where there is visual engagement between those in the street and those on the ground floors of buildings.' | SACP (being the retail building). | |
| 5.8.2 – General Parking Location | Car parking should generally be contained within the building envelope or sleeved behind the development and shall be screened from view from the public realm. | Revised plans provide additional screening. This screening is visually permeable which will not completely screen the view of the car park from the public realm. | The screen will provide enough material to sufficiently impede the view or divert attention from the parking from the public realm. This is considered to meet the intent of the provision and is considered acceptable. |
| 5.8.6 – Vehicular Access | Vehicular access shall be limited to the three access points as shown on Plan 2 (Raleigh Road, The Plaza and West Coast Drive into Lot 2). | Access provided from Raleigh is in accordance with Plan 2. Access from West Coast Drive is not shown on Plan 2. | Does not comply. See officer comments below. |
| Plan 2 – Active Edge | Plan 2 identifies an 'Active Edge' to be provided along the frontage of the subject site. | Only the retail building provides an active edge to West Coast Drive, being 18% of the total street frontages. | Does not comply. See officer comments below. |
| Plan 2 – Direction of Primary Building Orientation | The primary building orientation is to both Raleigh Road and West Coast Drive. | Development on Lot 154 is supplementary to the retail development and does not orientate towards Raleigh Road. | Does not comply. See officer comments below. |

| Item | Requirement | Proposal | Compliance |
|------------------------------------|---------------|------------------|--|
| Signs Local Planning Policy | | | |
| Pylon Sign - Width. | 2 metre width | 2.05 metre width | Does not comply. Is considered appropriate as outlined in the previous RAR. |

Officer Comments

Reasons for deferral

At its meeting on 23 September 2019, the JDAP resolved to defer the proposal for the applicant to address a number of matters with the proposed development.

A full copy of the applicant's response is provided as Attachment 5.

| No. | Issue raised | Summary of applicant's response | City's comment |
|---|---|--|--|
| <i>1. To enable the applicant to submit revised plans that;</i> | | | |
| | <i>Adequately address the development standards and intent of the Sorrento Activity Centre Plan in particular, by providing a more consistent built form;</i> | The updated designs for the proposed service station have considered the standards and intent of the SACP. Aspects of the built form have been modified to further align with the built form requirements of the SACP, in particular, the height and scale of the development and its interaction with West Coast Drive. | <p>The proposed modifications bring the development closer to meeting the requirements of the SACP, particularly relating to street setbacks.</p> <p>However, it is still considered that the scale of the development does not adequately achieve the intent of the SACP.</p> <p>The proposed building height and lack of street activation will maintain the disparate nature of buildings in the activity centre and will not provide a strong street presence or enhance the public realm.</p> |

| No. | Issue raised | Summary of applicant's response | City's comment |
|-----|---|--|--|
| | <i>Enhances the public realm and pedestrian environment by providing a wider active building frontage or frame to the street and softens the visibility of cars parked on the site;</i> | The modifications to the size and setback of the fuel canopy have been considered in the context of the streetscape and the required built form of the SACP. The uniquely rounded fuel canopy and its reduced setback to West Coast Drive are considered appropriate in the context of the area and size/shape of the subject site. The framed screening design features at the West Coast Drive / Raleigh Road intersection emphasises the site's prominent corner location, with the materials used being sympathetic to its coastal location. | <p>The proposal provides a continuous building setback incorporating the retail building and fuel canopy, as well as screening to the main refuelling area.</p> <p>Notwithstanding the modifications, the development still appears as a service station, with a large percentage of the frontage not being activated, and the additional vehicle access being maintained on West Coast Drive. This is still considered to be inconsistent with the intent of the SACP and does not sufficiently enhance the public environment.</p> |
| | <i>Provides landscaping along the northern boundary as a buffer between the commercial development and adjoining residential property (Lot 155) and to create a more notable landmark feature at the corner of West Coast Drive and Raleigh Road; and</i> | The revised plans provide increased and enhanced areas of soft landscaping within and adjacent to the subject site. The verge fronting the West Coast Drive / Raleigh Road intersection contains landscaping features that complement the overall built form of the site and coastal setting. | The increased landscaping along the eastern boundary is now considered to provide an appropriate buffer to the future residential development to the east and meets the requirement of the SACP. |
| | <i>Consideration of the location of the disabled parking bays.</i> | The disabled parking bay has been relocated to abut the storage area. | The City considers the location of the disabled bay acceptable, noting that the revised plan reflects the recommendation made by the JDAP. |

| No. | Issue raised | Summary of applicant's response | City's comment |
|-----|--|--|---|
| 2 | <i>To enable the applicant to consult with the owner of the adjacent commercial land with a view to consider formalising shared access arrangements; and</i> | BP as the registered proprietor of the subject site has consulted with the owner (Megara) of the adjacent commercial land to the north (Lot 2) with a view to consider formalising the shared access arrangement. Megara has advised that no consideration will be made to formalise the shared access for BP's development. | The proposal does not include access in accordance with the SACP, with an additional access point being maintained from West Coast Drive. With no formalisation of access with the adjoining lot this will result in the existing crossover to West Coast Drive being retained and does not provide a high level of amenity to the public realm as required by the SACP. |
| 3 | <i>To enable the responsible authority to prepare a revised RAR following receipt and assessment of the submitted revised plans referred to above.</i> | No response required. | No response required. |

Options/Alternatives:

Not applicable.

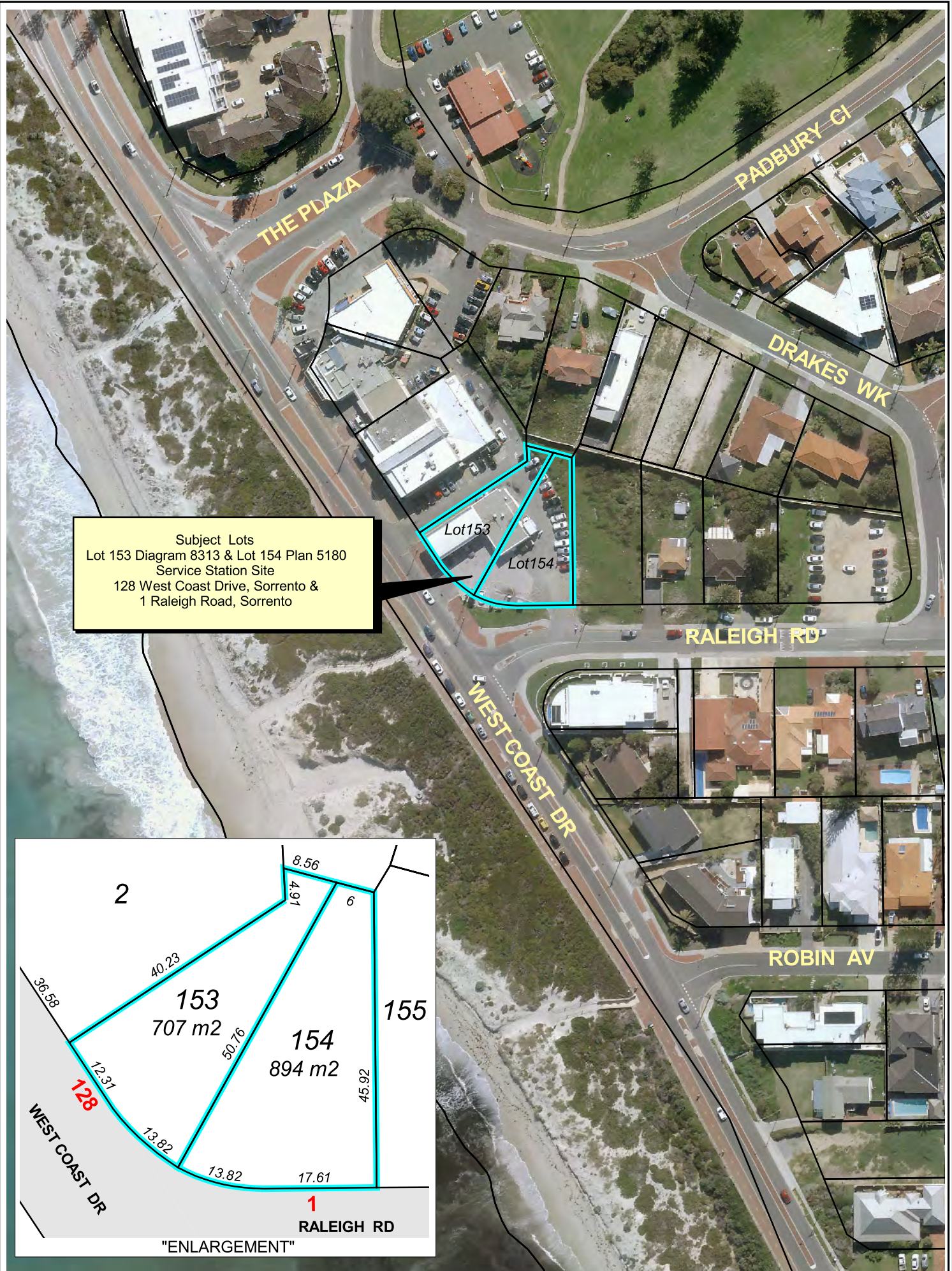
Council Recommendation:

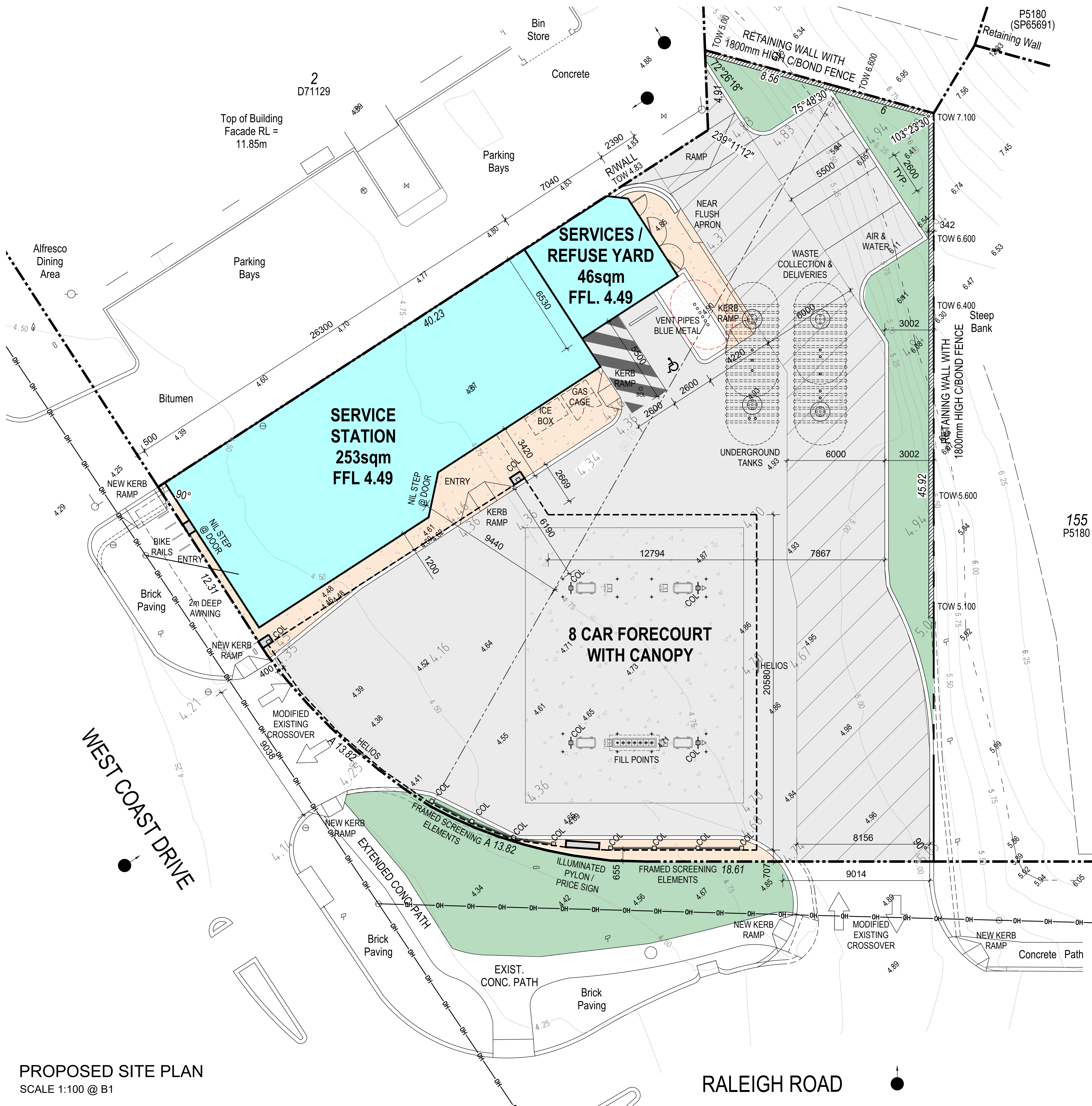
Not applicable.

Conclusion:

As detailed above, whilst it is acknowledged that a service station has unique built form requirements, the proposed development is not considered to meet the intent and objectives of the SACP.

It is therefore recommended that the application is refused.





LEGEND:

EXTENT OF LANDSCAPING -
REFER TO LANDSCAPING DRAWINGS FOR DETAILS

EXTENT OF CONCRETE PAVING TO CANOPY FORECOURT

EXTENT OF CONCRETE PAVING

EXTENT OF BUILDING

EXTENT OF HARDSTAND

4.64

EXISTING RL

4.64

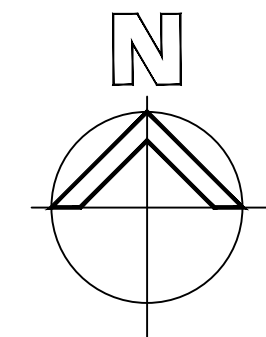
PROPOSED FFL & RL

TOW

TOP OF WALL HEIGHT

PROPOSED SITE PLAN
SCALE 1:100 @ B1

RALEIGH ROAD

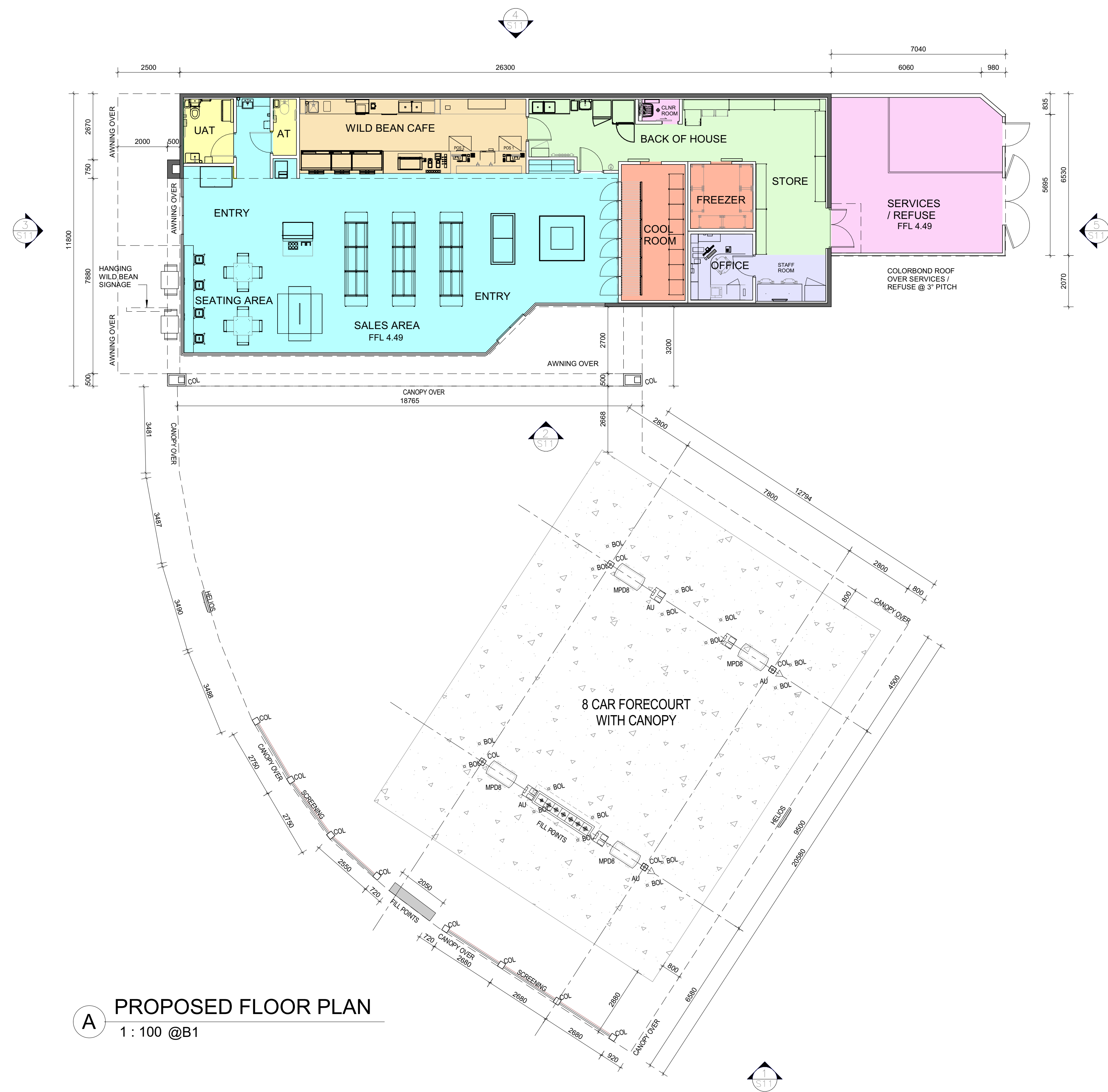


| | | | | |
|----------------|--|--------------------|------------|------------|
| D | REVISED SITE LAYOUT & CANOPY DESIGN | AK | NP | 04.10.2019 |
| C | RE-ISSUED FOR DA | AC | AK | 06.08.2019 |
| B | ISSUED FOR DA | AC | AK | 29.05.2019 |
| A | ISSUED FOR CLIENT REVIEW | AC | AK | 08.05.2019 |
| revision/issue | description | drawn | checked | date |
| project | BP SORRENTO | | | |
| location | LOT 153 WEST COAST DRIVE & LOT 154 RALEIGH ROAD SORRENTO | | | |
| drawn | AC | PROPOSED SITE PLAN | | |
| checked | AK | | | |
| scale | 1:100 | date | 07.05.2019 | |
| 081 | | project no | 18.19 | dwg no S01 |
| | | rev | D | |

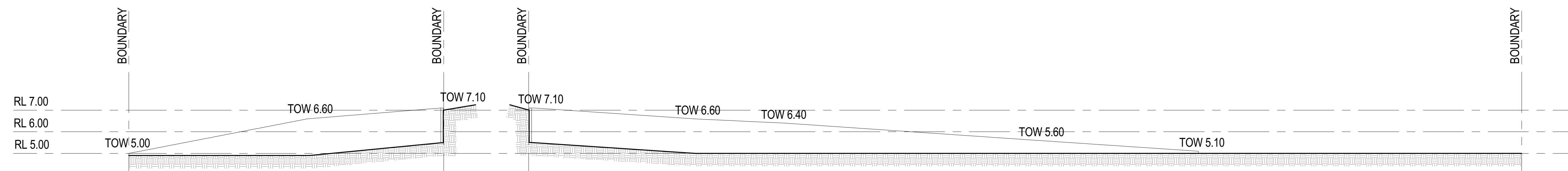
HodgeCollardPreston

ARCHITECTS

Third Floor, 38 Richardson Street,
West Perth, WA 6005
PO Box 743, West Perth, WA 6872
Ph: (08) 9322 5144
Fax: (08) 9322 5140
Email: admin@hpcarch.com



A PROPOSED FLOOR PLAN
1: 100 @B1

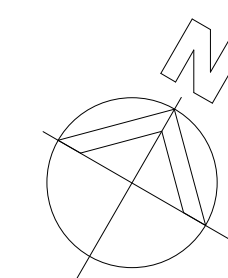


RETAINING WALL ON NORTH BOUNDARY
ELEVATION

RETAINING WALL ON EAST BOUNDARY
ELEVATION

NOTE -
RETAINING WALL TO CIVIL ENGINEER'S DETAILS

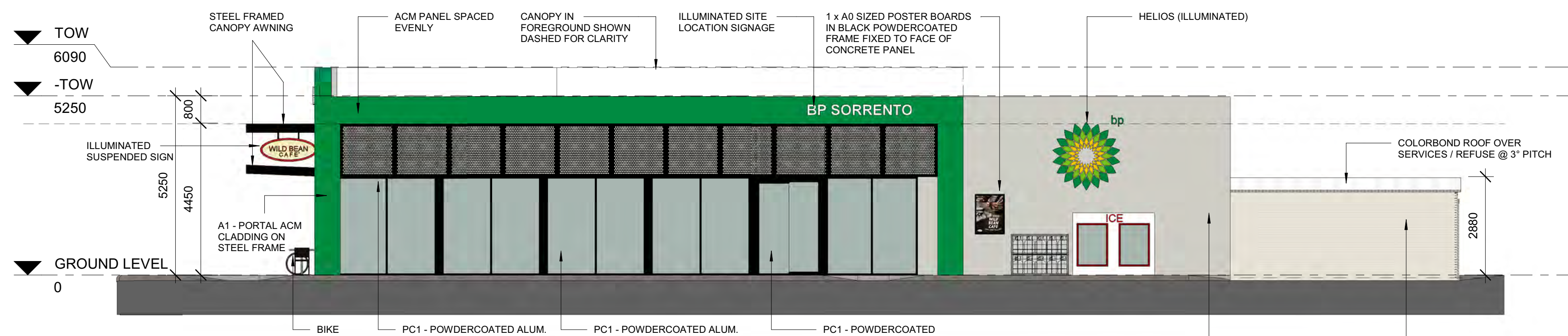
RETAINING WALL
1: 100 @B1



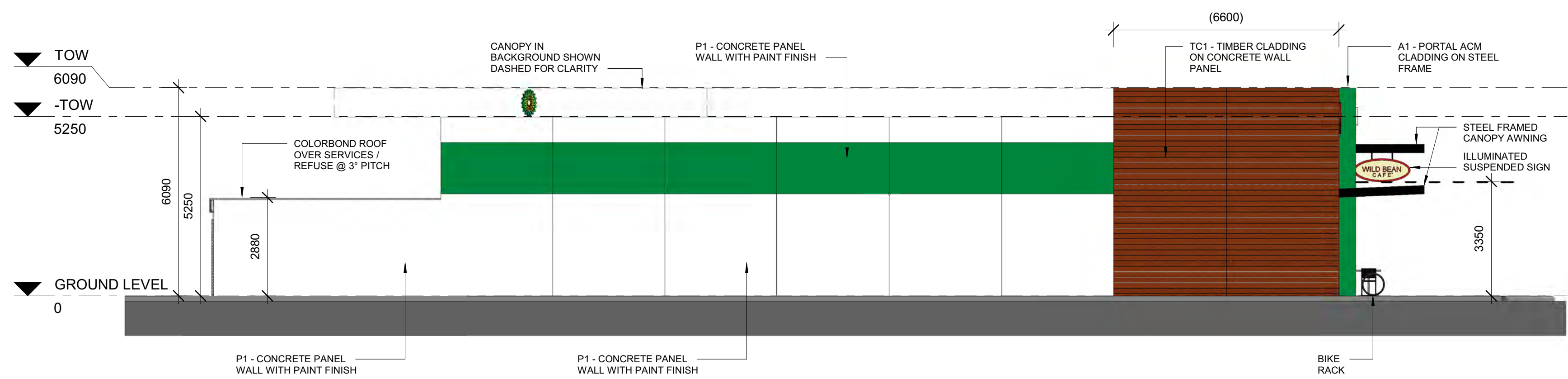
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|--|------------------|----------|-------------------|------------|--|
| | | | | | |
| | | | | | |
| A | RE-ISSUED FOR DA | AC | AK | 07.10.2019 | |
| revision/ issue | description | drawn by | check by | date | |
| project | | drawn | description | | |
| BP SORRENTO | | AC | SERVICE STATION & | | |
| location | | checked | CAR CANOPY FLOOR | | |
| LOT 153 WEST COAST DRIVE & LOT 154 RALEIGH ROAD SORRENTO | | AK | PLAN | | |
| | | scale | date | 07.10.2019 | |
| | | 1: 100 | project no. | | |
| | | | 18.19 | | |
| | | | dwg no. | S10 | |
| | | | rev | A | |



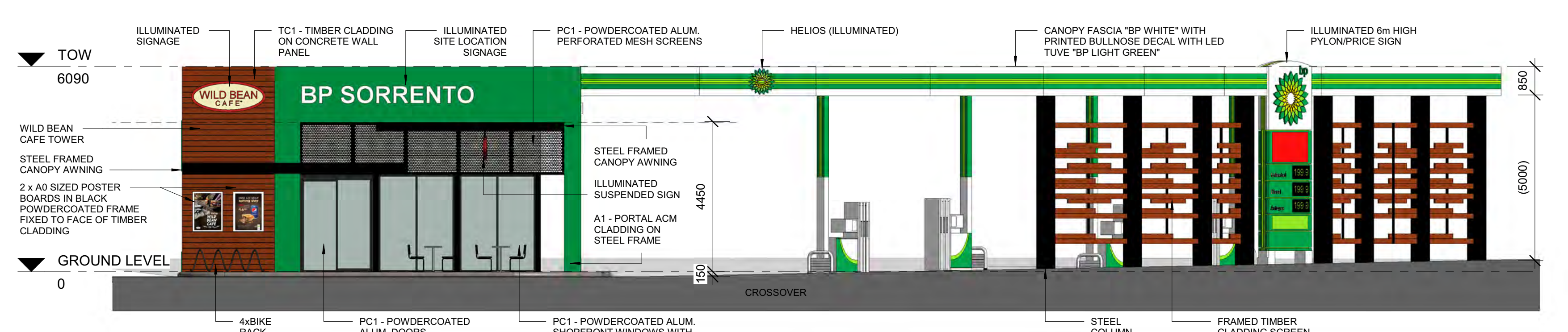
1 CANOPY ELEVATION
1 : 100



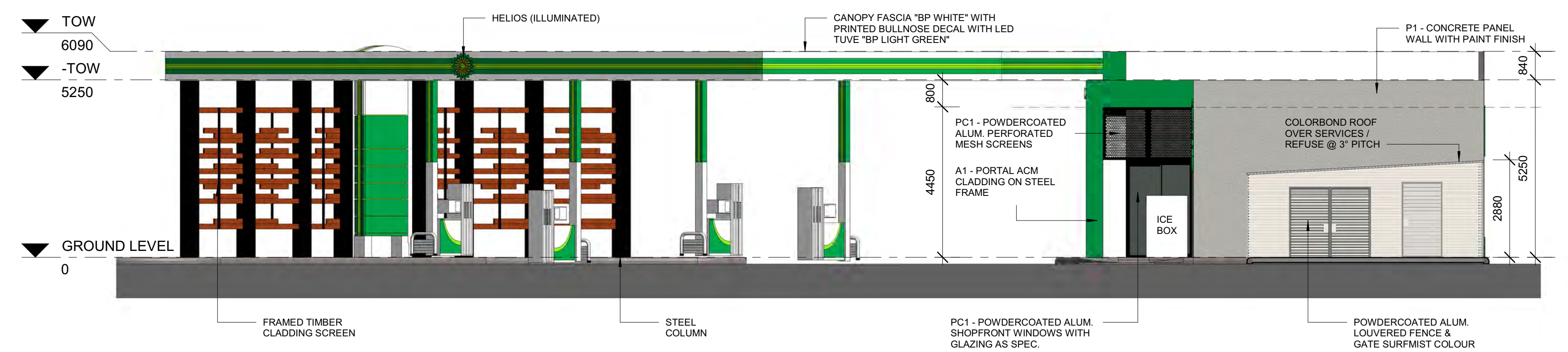
2 SOUTH-EAST ELEVATION
1 : 100



4 NORTH-WEST ELEVATION
1 : 100



3 SOUTH-WEST ELEVATION
1 : 100



5 NORTH-EAST ELEVATION
1 : 100

| | | | | | |
|----------------------------------|--|--|----------|---|------------|
| A | | RE-ISSUED FOR DA | AC | AK | 07.10.2019 |
| revision/ issue | description | | drawn by | check by | date |
| project | BP SORRENTO | | Author | SERVICE STATION & CAR CANOPY ELEVATIONS | |
| location | LOT 153 WEST COAST DRIVE & LOT 154 RALEIGH ROAD SORRENTO | | checked | Checker | |
| Hodge Collard Preston ARCHITECTS | | Third Floor, 38 Richardson Street, West Perth, WA 6005 PO Box 743, West Perth, WA 6872 Ph: (08) 9322 5144 Fax: (08) 9322 5140 Email: admin@hpcarch.com | scale | date | 07.10.2019 |
| | | | 1 : 100 | project no. | 18.19 |
| | | | | dwg no. | S11 |
| | | | | rev | A |



| | | | | | | | | |
|--|------------------|--|-------------|----------|------------|------------|--------|--|
| | | | | | | | | |
| B | RE-ISSUED FOR DA | | AC | AK | 07.10.2019 | | | |
| A | ISSUED FOR DA | | AC | AK | 07.06.2019 | | | |
| revision / issue | Description | | drawn by | check by | date | | | |
| project | | | drawn AC | | | | | |
| BP SORRENTO | | | | | | | | |
| location | | | description | | | | | |
| LOT 153 WEST COAST DRIVE & LOT 154 RALEIGH ROAD SORRENTO | | | checked AK | | | | | |
| | | | scale | | date | 07.10.2019 | | |
| HodgeCollardPreston ARCHITECTS | | | | | project no | S08 | dwg no | |
| | | | | | rev | 18.19 | | |
| | | | | | | | | |



VIEW OF SHOP ENTRY FROM WEST COAST DRIVE



VIEW OF CANOPY PROXIMITY FROM WEST COAST DRIVE

| | | | | | |
|-----------------|--|------------|-------------|------------|--|
| | | | | | |
| B | RE-ISSUED FOR DA | AC | AK | 07.10.2019 | |
| A | ISSUED FOR DA | AC | AK | 07.06.2019 | |
| revision/ issue | description | drawn by | checked by | date | |
| project | BP SORRENTO | drawn | description | | |
| location | LOT 153 WEST COAST DRIVE & LOT 154 RALEIGH ROAD SORRENTO | checked | | | |
| | | AK | | | |
| | | scale | date | 07.10.2019 | |
| | | project no | dwg no | | |
| | | 18.19 | S09 | | |
| | | rev | B | | |

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Fax: (08) 9322 5140
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| PLANT SCHEDULE | | | | | |
|----------------|--------|--|--------------------------|---------------------------------|--------|
| Plant type | Symbol | Botanic Name | Mature height x width | Minimum installation size | Number |
| TREES | | | | | |
| | | Corymbia ficifolia 'Coral Pink' | 5m x 3m | 75 litre | 2 |
| | | Eucalyptus torquata 'Coral Gum' | 8m x 3m | 45 litre | 2 |
| | | Hymnenosporum flavum | 7m x 4m | 75 litre | 3 |
| SHRUBS | | | | | |
| | | Correa pulchella 'Little Cate' | 50cm x 1.5m | 14cm | 8 |
| | | Kunzea baxteri 'Solomons Pink' | 2m x 1m | 13cm | 23 |
| | | Leptospermum laevigatum 'Shore Tuff' | 50cm x 1.2m | 14cm | 5 |
| | | Olearia axillaris 'Beach Ball' | 40cm x 80cm | 14cm | 23 |
| | | Pimelea ferruginea 'White Solitaire' | 50cm x 60cm | 14cm | 23 |
| GRASSES | | | | | |
| | | Dianella revoluta 'Revelation' | 50cm x 55cm | 14cm | 71 |
| GROUND COVER | | | | | |
| | | Acacia saligna 'Springtime Cascade' | 30cm x 2.5m | 14cm | 9 |
| | | Eremophila glabra prostrate 'Roseworthy' | 30cm x 2m | 13cm | 15 |
| | | Dampiera linearis 'Blue' | 30cm x 1m | 13cm | 27 |
| | | Grevillea obtusifolia 'Gin Gin Gem' | 30cm x 2m | 14cm | 14 |
| TOTAL PLANTS | | | | | 225 |



DISCLAIMER
All symbols and elements depicted in this plan are artistic representations to illustrate conceptual ideas and are subject to approval by the relevant professionals or authority.

It is the client's responsibility to ensure the required certifications, licenses and approvals are held prior to installation.
Levels and measurements must be checked on site prior to construction.

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CLIENT
Hodge Collard Preston
Architects for BP Australia

PROJECT
BP Sorrento
Lot 153 West Coast Drive
& Lot 154 Raleigh Road,
Sorrento WA

DRAWING Landscape Plan

DATE 04.10.2019

PROJECT NUMBER 19109
REVISION 06
DESIGNER Amelia Coleman

Scale 1:200 @ A1

NOTES

All plants are depicted at estimated mature size.

All garden beds to be mulched to a depth of 75mm minimum - 100mm maximum. Mulch is pine bark wood chips.

Planting must conform to City of Joondalup's standard drawings 'Typical Tree Planting' (STD 101) and 'Typical Shrub Planting' (STD 102).



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PS ref: 6024
City Ref: DA19/0544
DAP Ref: DAP/19/01628

7 October 2019

City of Joondalup
Planning Services
PO Box 21
JOONDALUP WA 6919

Attention: Jeremy Thompson, Senior Urban Planner

Dear Sir,

**LOT 153 (128) WEST COAST DRIVE AND LOT 154 (1) RALEIGH ROAD, SORRENTO
PROPOSED SERVICE STATION REDEVELOPMENT
SUBMISSION FOLLOWING MNWJDAP MEETING - REVISED PLANS**

Planning Solutions acts on behalf of BP Australia Pty Ltd in support of an Application for Approval to Commence Development for the redevelopment of the BP service station on Lot 153 (128) West Coast Drive and Lot 154 (1) Raleigh Road, Sorrento (**subject site**).

We refer to the Metro North West Joint Development Assessment Panel (**MNWJDAP**) meeting held on 23 September 2019, where the application was deferred for the following reasons:

That the consideration of DAP Application DAP/19/01628 be deferred until 15 November 2019, in accordance with section 5.10.1a of the DAP Standing Orders 2017, for the following reasons:

- 1) *To enable the applicant to submit revised plans that;*
 - a) *Adequately address the development standards and intent of the Sorrento Activity Centre Plan in particular, by providing a more consistent built form;*
 - b) *Enhances the public realm and pedestrian environment by providing a wider active building frontage or frame to the street and softens the visibility of cars parked on the site;*
 - c) *Provides landscaping along the northern boundary as a buffer between the commercial development and adjoining residential property to the east (lot 155) and to create a more notable landmark feature at the corner of West Coast Drive and Raleigh Road; and*
 - d) *Consideration of the location of the disabled parking bays.*
- 2) *To enable the applicant to consult with the owner of the adjacent commercial land with a view to consider formalising shared access arrangement; and*
- 3) *To enable the responsible authority to prepare a revised RAR following receipt and assessment of the submitted revised plans referred to above.*

The following submission has been prepared in response to comments from the MNWJDAP and the City of Joondalup (**City**) received during the meeting on 23 September 2019 and addresses the comments received. This submission should be read in conjunction with the amended development plans and further information attached to this letter.

1 Amended Development Plans

The development plans have been further refined and improved to respond to the MNWJDAP deferral and Sorrento Activity Centre Plan (**SACP**) requirements (refer **Appendix 1**). The following modifications have been made to the development plans in support of the proposed redevelopment:

Retail Building and Canopy

1. Extend and reconfigure the proposed fuel canopy along the West Coast Drive and Raleigh Road Frontage. The canopy increases in size from 277m² to 493m². The modified fuel canopy provides a non-standard curved design to correspond to the lot alignment and provides a visual extension to the proposed retail building (refer **Perspective 1**). The non-standard BP fuel canopy is designed specifically for the subject site to provide uniformity in built form and a more visually active frontage and increased interaction with the pedestrian realm of West Coast Drive.
2. Provision of framed timber cladding screens to the West Coast Drive / Raleigh Road intersection (refer **Perspective 2**). These screens are visually permeable and are attached to the canopy structure to provide a notable presence of the canopy on the prominent corner. The framed timber cladding screens provide a consistent built form edge along the boundary of the subject site whilst partially screening cars refuelling / parked on the site when viewed from West Coast Drive.
3. Increase in the height of the retail building fronting West Coast Drive to be consistent with the height of the fuel canopy. This provides a uniform built form and scale of development along the frontage of the site, that then wraps around the corner of the retail building. The extension of the timber cladding in this north west aspect of the building provides further visual interest to the corner of the building when viewed from the north on West Coast Drive.
4. A modified retail building awning fronting West Coast Drive. The awning has been tiered to provide the required level of coverage from the elements above the entrance, while increasing in height and prominence as it transitions to the height of the fuel canopy. This gradual increase in height articulates the development and increases the legibility of the pedestrian entrance on West Coast Drive. The extension of the awning provides additional coverage from the elements to pedestrians on West Coast Drive and customers of BP's Wild Bean Café, where patrons may utilise alfresco seating.



Perspective 1: Updated retail building and canopy viewed from West Coast Drive to the south.



Perspective 2: Updated retail building and canopy viewed from West Coast Drive to the east.

Site Layout and Car Parking

5. Relocation of the accessible parking bay from the rear of the site closer to the retail building entrance, adjacent to the service yard. The revised location will allow easier and safer access to the retail building.
6. Modifications to the service yard and surrounding area to accommodate the relocation of the accessible parking bay, including removal of soft landscaping, reorientation of the service yard entry and delivery / waste collection area.
7. Removal of the two parallel car parking bays along the eastern lot boundary.
8. Relocation of the vent pipes from the rear of the site, adjacent to the services yard. This provides for increased landscaping along the eastern boundary of the site.

Landscaping

9. Improve the landscaping located within the road reserve on the corner of West Coast Drive and Raleigh Road. The landscaping design includes two trees within the road reserve which will support the variety of flowering native flora species. The improved landscaping will provide a feature to the corner which will support the upgrades to the fuel canopy.
10. Additional landscaping is provided to the rear of the site, resulting in a high level of amenity when viewed from the adjoining Lot 155 to the east, from West Coast Drive or from within the site. Attractive native flora is proposed in this area which provides a substantially improved interface to the neighbouring Lot 155 to the east. Refer **Appendix 2** Amended Landscape Plan.

Signage

11. Minor relocation / reorientation of the fuel ID (monolith) sign fronting the West Coast Drive / Raleigh Road intersection. The location of the sign has been modified to respond to the upgrades to the proposed canopy and ensure appropriate exposure of the facility for vehicles and pedestrians travelling on West Coast Drive.
12. A new Wild Bean Café sign is provided underneath the retail building awning, at the West Coast Drive entrance. The purpose of the additional sign is to identify the facility to pedestrians walking on the West Coast Drive footpath. The signage is consistent with signage used along 'main streets' to identify commercial tenancies where buildings have a nil setback to the street.
13. An increase in size of the Wild Bean Café sign and BP Sorrento sign at the front of the retail building facing West Coast Drive. The proposed increase in size of the signs is a result of the increase in height of the retail building to match the height of the fuel canopy. The increase in the size of signage reduces the amount of blank wall space on this façade.
14. An increase in the size of the BP Helios sign on the south eastern elevation of the retail building, reducing the amount of blank wall space and identifying the facility when viewed from the south / southeast.

Refer to **Appendix 1** for a copy of the revised development plans. The following submission provides further information and justification in support of the amendments to the proposed redevelopment and addresses the comments received from the MNWJDAP and the City at the meeting held on 23 September 2019.

2 Sorrento Activity Centre Plan

The updated designs for the proposed service station have considered the standards and intent of the SACP. Aspects of the built form have been modified to further align with the built form requirements of the SACP, in particular the height and scale of the development and its interaction with West Coast Drive.

The proposed development addresses the built form and intent of the SACP as follows:

1. The retail building and fuel canopy has been designed specifically for the subject site. The uniform height and building interface to the street provides a notable landmark feature for the site.
2. Provision of framed timber cladding provides a consistent built form to the street and screens the refuelling of vehicles and carparking to the West Coast Drive / Raleigh Road intersection.
3. The built form is consistent with the setback requirements of the SACP, in particular to the residential properties to the rear.
4. The building materials and landscaping is site specific, robust and takes into consideration the site's prominent coastal location.
5. The retail building incorporates an active frontage to West Coast Drive, incorporating sustainable glazing, awning and architectural features to provide a prominent commercial development to motorists and pedestrians.
6. Increased landscaping is proposed to the rear and side of the subject site to provide an appropriate buffer to the residential zoned properties to the north and east.

Taking into consideration the above, the redeveloped service station adequately addresses the development standards and general intent of the SACP.

3 Site Layout / Vehicle Access

The layout of the site from an access perspective remains largely unchanged. The only changes to site layout include removal of the two parallel car parking bays on the eastern boundary, the relocation of the accessible parking bay closer to the retail building and new landscaping areas adjacent to the eastern lot boundary. Refer to **Appendix 1** for the revised development plans.

Due to the modifications to the bin storage area, the waste collection point has also been relocated. Waste will now be collected from within the 6m access easement. The revised swept path analysis by Porters Engineering contained in **Appendix 3** confirms that all vehicular movements remain suitable after these modifications.

BP as the registered proprietor of the subject site has consulted with the owner (Megara) of the adjacent commercial land to the north (Lot 2) with a view to consider formalising the shared access arrangement. Megara has advised that no consideration will be made to formalise the shared access for BP's development. Refer to the email correspondence between BP and Megara contained in **Appendix 4**.

4 Built Form

The modifications to the size and setback of the fuel canopy have been considered in the context of the streetscape and the required built form of the SACP. The uniquely rounded fuel canopy and its reduced setback to West Coast Drive are considered appropriate in the context of the area and size/shape of the subject site. The framed screening design features at the West Coast Drive / Raleigh Road intersection emphasises the site's prominent corner location, with the materials used being sympathetic to its coastal location.

The existing footpath along West Coast drive in front of the fuel canopy is situated closer to the roadway and not in alignment with the lot boundaries. Therefore, a landscaping feature is proposed in this area to improve the amenity for the pedestrian and overall streetscape. This landscaping treatment when coupled with the proposed screening to the canopy is considered to provide a wider active frontage to the street.

5 Landscaping

The revised plans provide increased and enhanced areas of soft landscaping within and adjacent to the subject site. The verge fronting the West Coast Drive / Raleigh Road intersection contains landscaping feature that compliments the overall built form of the site and coastal setting. Two *Corymbia ficifolia* 'Coral Pink' trees are provided and when combined with the framed screening design features will result in a notable landmark feature for this corner.

The removal of the two car bays and relocation of the vent pipes along the eastern boundary allows for this area to be replaced with soft landscaping. Three *Hymenosporum flavum* and two coral gums are located along this boundary which have mature heights of 7m and 8m respectively. Attractive native flora in this area provides a substantially improved interface to the neighbouring Lot 155. This landscaping also provides a level of amenity for pedestrians and for customers using the site, by providing screening of the rear boundary fence and an attractive interface when viewed from the west.

Refer to the amended landscaping plan contained in **Appendix 2**.

6 Conclusion

The amended development plans improve the overall service station redevelopment in line with the comments from the MNWJDAP deferral of the application on the 23 September 2019. The amended plans provide a more uniform built form which provides visual interest to the streetscape whilst continuing to provide an important service to the Sorrento locality. The proposed modifications warrant support as the development plans have been modified to:

1. Further address the development standards and intent of the Sorrento Activity Centre Plan by providing a more consistent built form;
2. Enhance the public realm and pedestrian environment by providing a wider active building frontage to the street;
3. Soften the visibility of cars parked on the site;
4. Provide landscaping along the eastern boundary as a buffer between the redeveloped BP service station and the adjoining residential property to the east (Lot 155).
5. Create a more notable landmark feature at the corner of West Coast Drive and Raleigh Road.
6. Relocation of the disabled parking bay to improve pedestrian access.

We respectfully request the City consider the amended plans on their merits and recommend approval for the proposed service station redevelopment to the Metro North West JDAP.

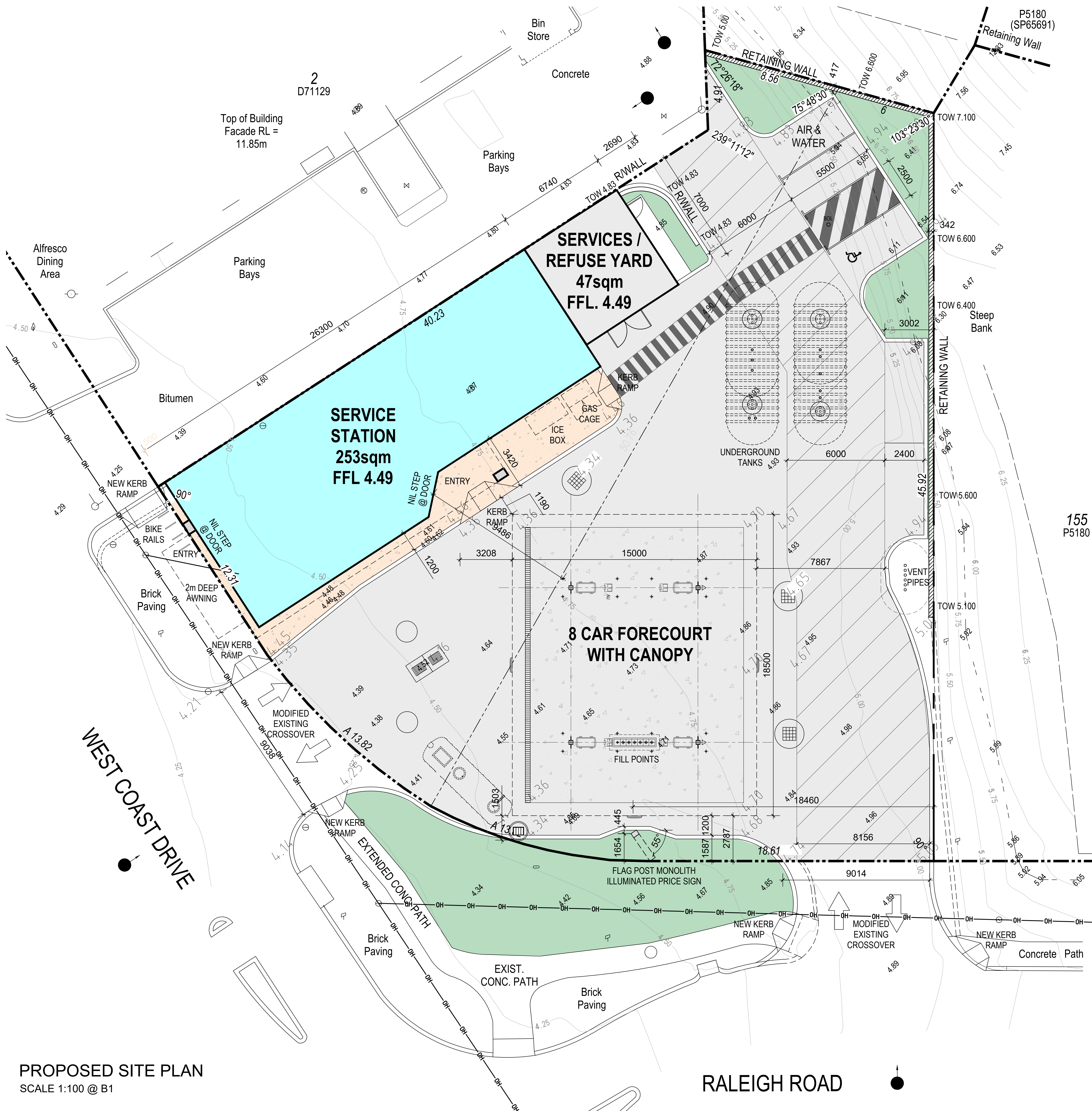
Should you have any queries or require further clarification in regard to the above matter please do not hesitate to contact the undersigned.

Yours sincerely,



JOSH WATSON
ASSOCIATE

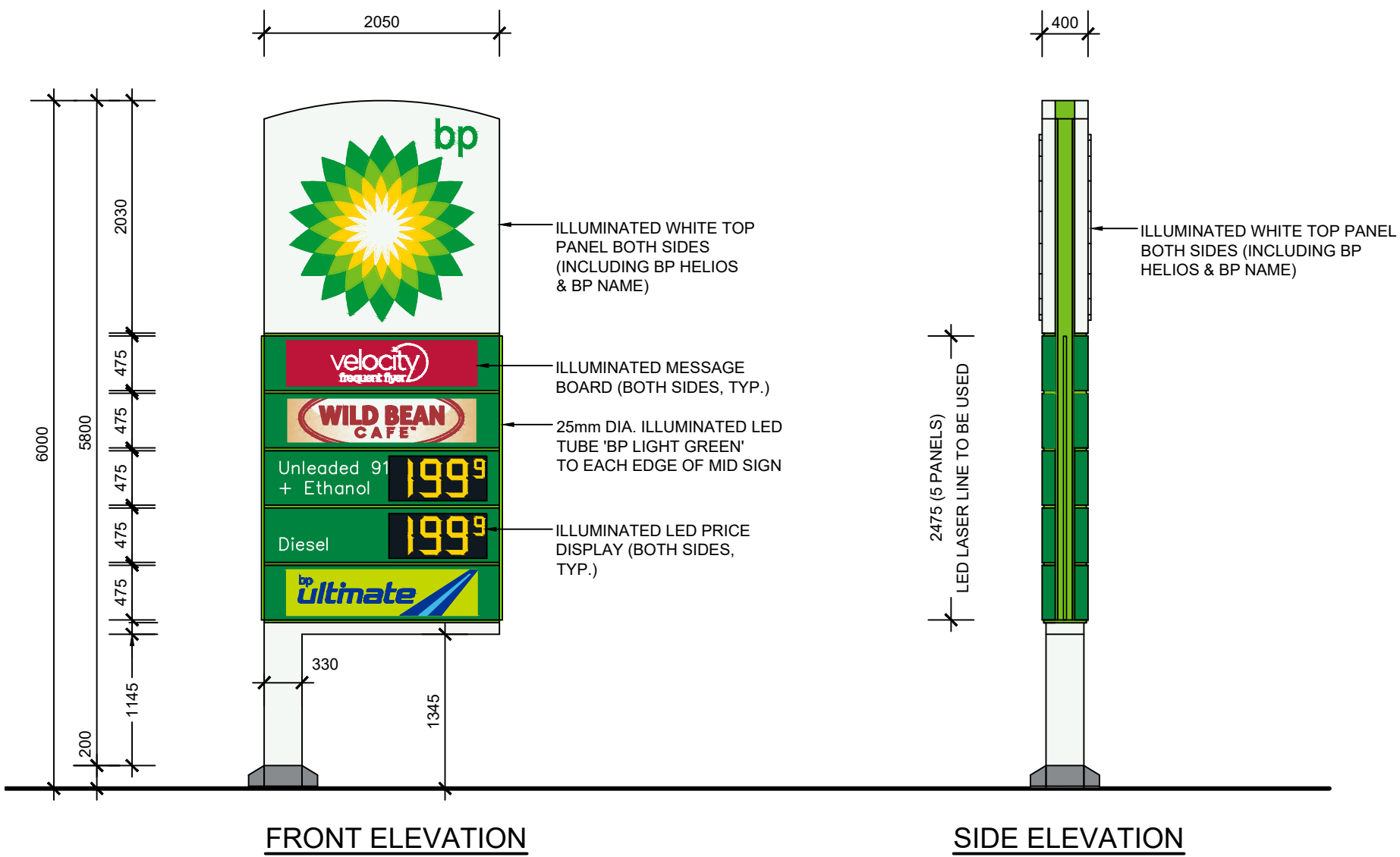
191007 6024 Letter to City - Amended Plans



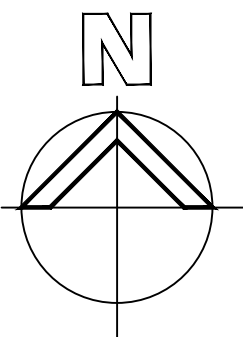
PROPOSED SITE PLAN
SCALE 1:100 @ B1

LEGEND:

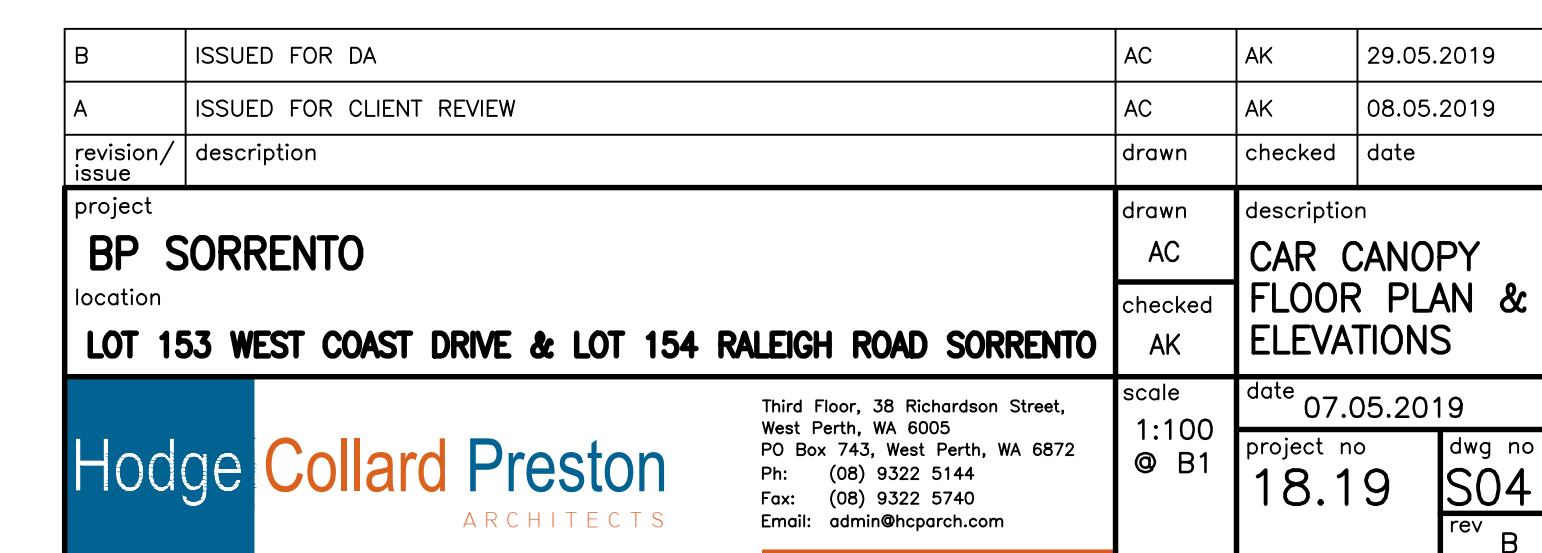
- EXTENT OF LANDSCAPING - REFER TO LANDSCAPING DRAWINGS FOR DETAILS
- EXTENT OF CONCRETE PAVING TO CANOPY FORECOURT
- EXTENT OF CONCRETE PAVING
- EXTENT OF BUILDING
- EXTENT OF HARDSTAND
- EXISTING RL
- PROPOSED FFL & RL
- TOW TOP OF WALL HEIGHT

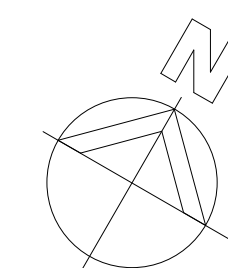


PROPOSED 6m HIGH FLAG POLE
MONOLITH ILLUMINATED PRICE SIGN
SCALE 1:50 @ B1



| | | | | |
|----------------|--|---------|--------------------|------------|
| C | RE-ISSUED FOR DA | AC | AK | 06.08.2019 |
| B | ISSUED FOR DA | AC | AK | 29.05.2019 |
| A | ISSUED FOR CLIENT REVIEW | AC | AK | 08.05.2019 |
| revision/issue | description | drawn | checked | date |
| project | BP SORRENTO | drawn | description | |
| location | LOT 153 WEST COAST DRIVE & LOT 154 RALEIGH ROAD SORRENTO | AC | PROPOSED SITE PLAN | |
| | | checked | AK | |
| | | scale | date | 07.05.2019 |
| | | 1:100 | project no | 18.19 |
| | | @B1 | dwg no | S01 |
| | | | REV | C |





RETAINING WALL ON EAST BOUNDARY ELEVATION

RETAINING WALL
1 : 100

| | | | | | |
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| B | RE-ISSUED FOR DA | | HB | AK | 06.08.19 |
| A | ISSUED FOR DA | | AC | AK | 07.06.19 |
| revision / issue | Description | | drawn by | check by | date |
| project | drawing | | drawn AC | description | |
| location | | | checked AK | SERVICE STATION FLOOR PLAN & ELEVATIONS | |
| BP SORRENTO | | | scale | date | |
| LOT 153 WEST COAST DRIVE & LOT 154 RALEIGH ROAD SORRENTO | | | 1 : 100 | 06 . 08 . 2019 | |
| | | | | dwg no | S07 |
| | | | | rev | |
| | | | | 18.19 | |



VIEW FROM WEST COAST DRIVE & RALEIGH ROAD INTERSECTION



VIEW FROM CAR PARKING



VIEW OF SHOP ENTRY FROM STREET

| | | | | | |
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| | | | | | |
| A | ISSUED FOR DA | AC | AK | 07.06.2019 | |
| revision/ issue | description | drawn by | check by | date | |
| project | | drawn | description | | |
| | BP SORRENTO | AC | | | RENDERS SHEET 1 |
| location | | checked | | | |
| | LOT 153 WEST COAST DRIVE & LOT 154 RALEIGH ROAD SORRENTO | AK | | | |
| | | scale | date | 07.06.2019 | |
| | | | project no | | dwg no |
| | | | 18.19 | | S08 |
| | | | | | rev |
| | | | | | A |

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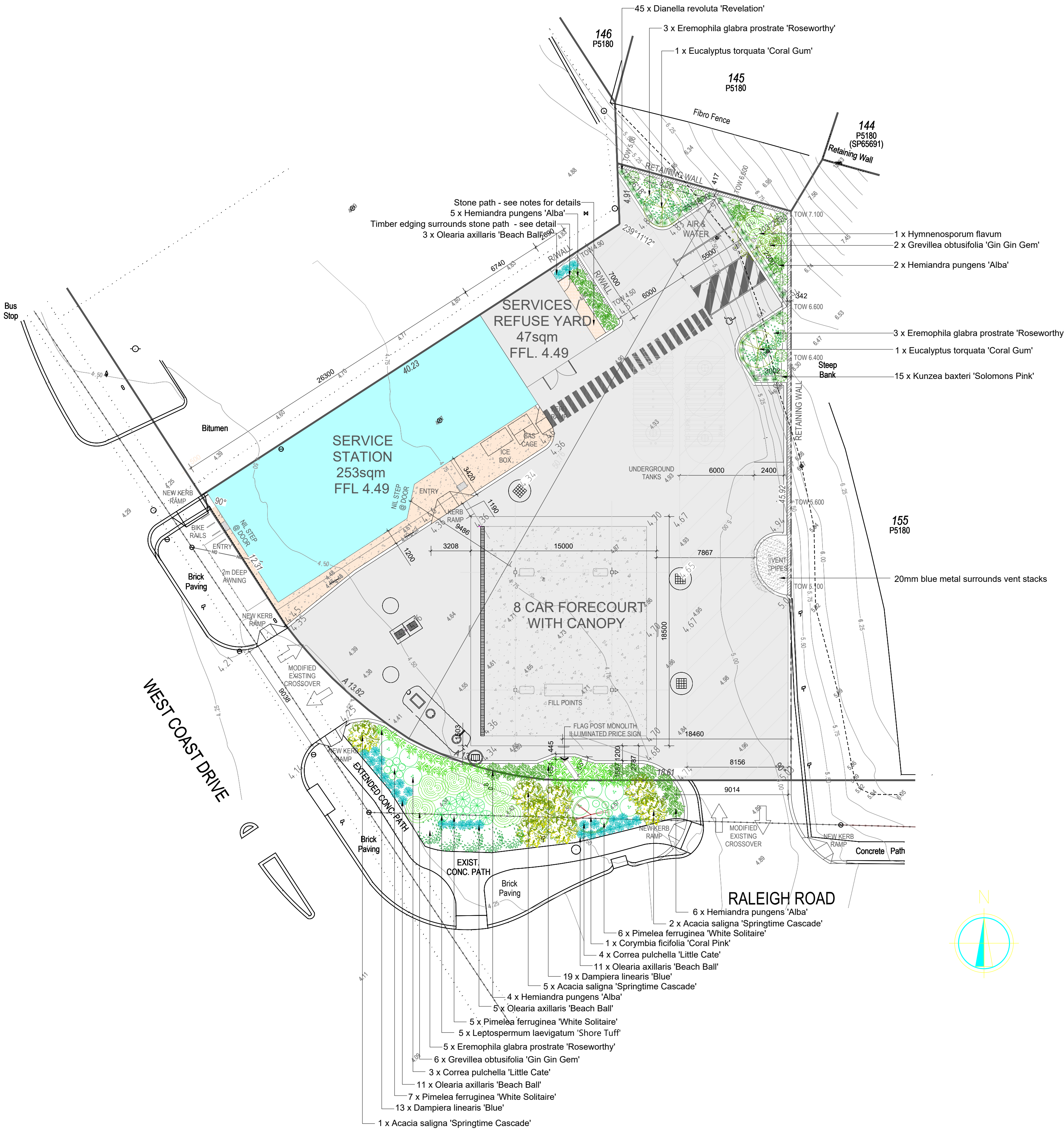
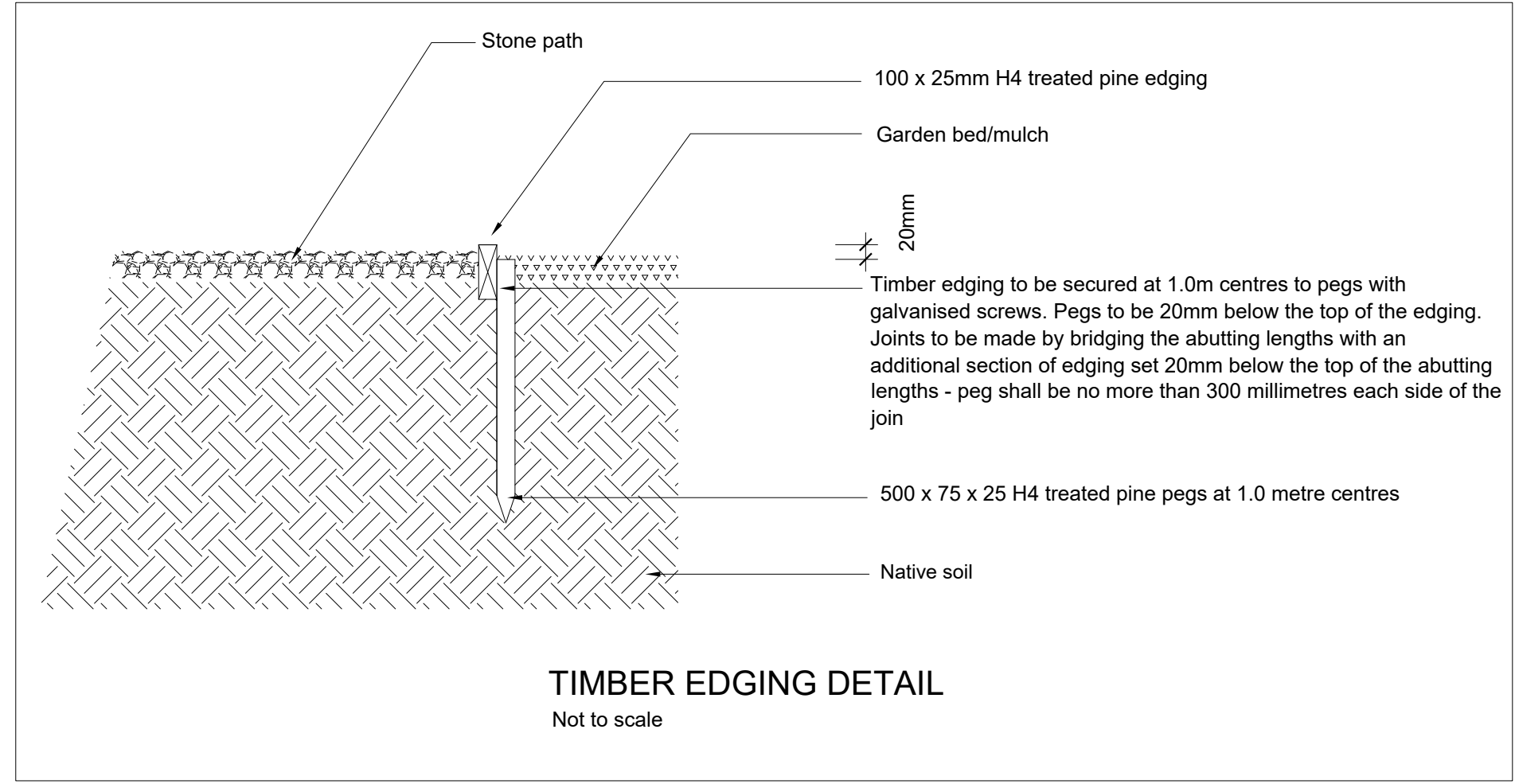
VIEW OF SHOP FRONT



VIEW OF CANOPY PROXIMITY FROM WEST COAST DRIVE

| | | | | |
|-----------------|---------------|----------|-------------|------------|
| | | | | |
| A | ISSUED FOR DA | AC | AK | 07.06.2019 |
| revision/ issue | description | drawn by | check by | date |
| project | | drawn | description | |
| | | AC | | |
| location | | checked | | |
| | | AK | | |
| | | scale | date | 07.06.2019 |
| | | | project no | 18.19 |
| | | | dwg no | S09 |
| | | | rev | A |

| PLANT SCHEDULE | | | | | |
|----------------|--------|--|--------------------------|---------------------------------|--------|
| Plant type | Symbol | Botanic Name | Mature height x width | Minimum installation size | Number |
| TREES | | | | | |
| | | Corymbia ficifolia 'Coral Pink' | 5m x 3m | 75 litre | 1 |
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| | | Olearia axillaris 'Beach Ball' | 40cm x 80cm | 14cm | 30 |
| | | Pimelea ferruginea 'White Solitaire' | 50cm x 60cm | 14cm | 18 |
| GRASSES | | | | | |
| | | Dianella revoluta 'Revelation' | 50cm x 55cm | 14cm | 45 |
| GROUND COVER | | | | | |
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| | | Eremophila glabra prostrate 'Roseworthy' | 30cm x 2m | 13cm | 11 |
| | | Dampiera linearis 'Blue' | 30cm x 1m | 13cm | 32 |
| | | Grevillea obtusifolia 'Gin Gin Gem' | 30cm x 2m | 14cm | 8 |
| | | Hemiandra pungens 'Alba' | 20cm x 1.5m | 13cm | 17 |
| TOTAL PLANTS | | | | | 200 |



DISCLAIMER

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CLIENT

Hodge Collard Preston
Architects for BP Australia

PROJECT

BP Sorrento
Lot 153 West Coast Drive
& Lot 154 Raleigh Road,
Sorrento WA

DRAWING

Landscape Plan

DATE

01.08.2019

PROJECT NUMBER

19109

REVISION

04

DESIGNER

Amelia Coleman

Scale 1:200 @ A1

NOTES

All plants are depicted at estimated mature size.

All garden beds to be mulched to a depth of 75mm minimum - 100mm maximum. Mulch is pine bark wood chips. Gravel path is 20mm Rainbow Stone installed as per industry standards for a stone pedestrian path.

Timber garden bed edging is pegged-in treated pine - see detail.

All garden beds to be irrigated - see Certified Irrigation Plan for watering detail. Watering schedule to be per Water Corporation's 'Water Efficiency Measures'.

Planting must conform to City of Joondalup's standard drawings 'Typical Tree Planting' (STD 101) and 'Typical Shrub Planting' (STD 102).



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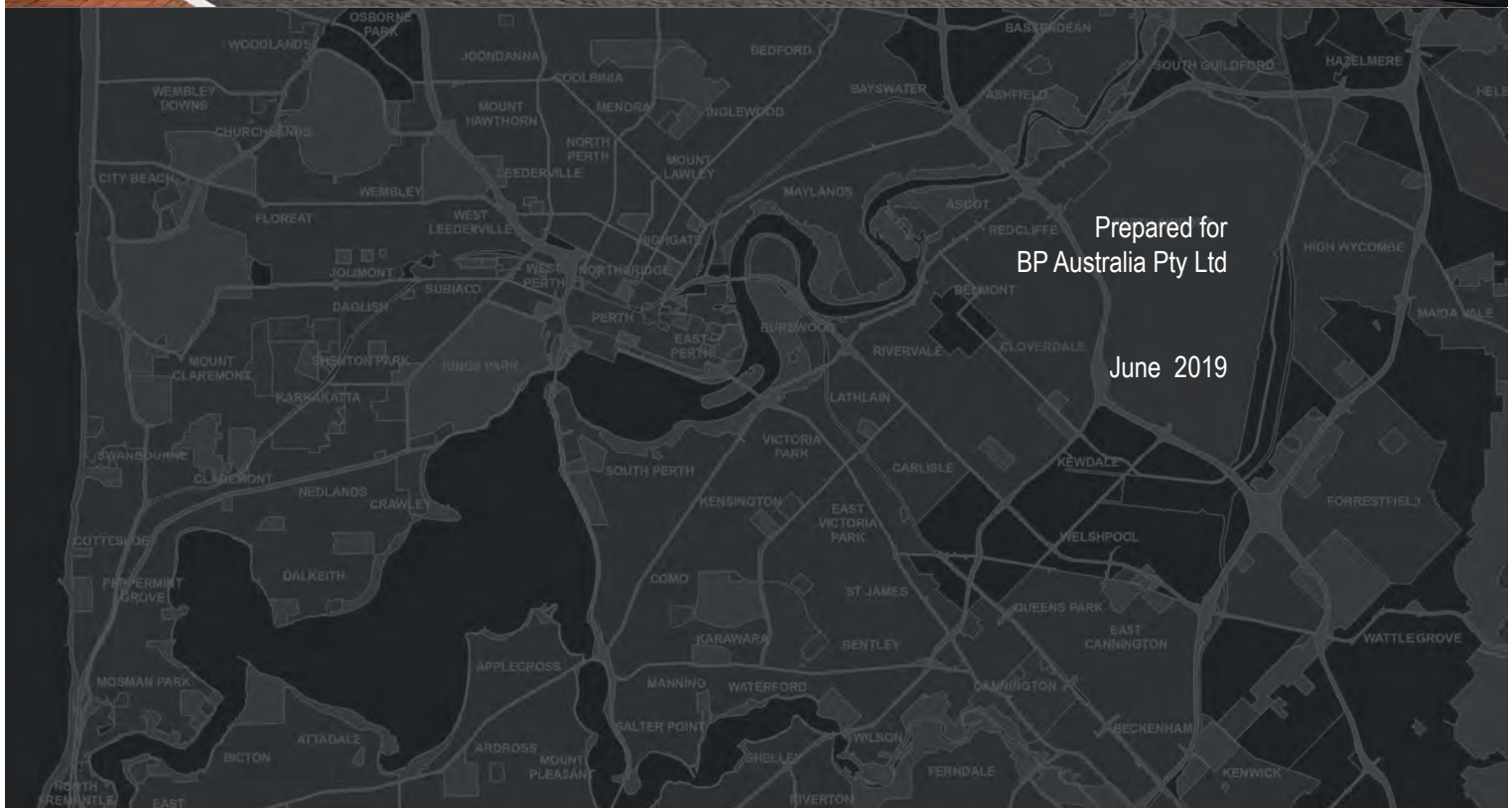
ABN: 31494997428

Development Application

Lot 153 (128) West Coast Drive and Lot 154 (1) Raleigh Road
Sorrento, WA

PLANNING SOLUTIONS
URBAN & REGIONAL PLANNING

PS



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This report has been prepared with particular attention to our Client's instructions and the relevant features of the subject site. Planning Solutions (Aust) Pty Ltd accepts no liability whatsoever for:

1. a third party's use of, or reliance upon, this report;
2. use of, or reliance upon, this report in relation to any land other than the subject site; or
3. the Client's implementation, or application, of the strategies recommended in this report.

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Phone: 08 9227 7970
Email: admin@planningsolutions.com.au
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Project details

| | | |
|-----------------|--|--|
| Job number | 6024 | |
| Client | BP Australia Pty Ltd | |
| Prepared by | Planning Solutions | |
| Consultant Team | Town Planning Drafting and Design Traffic Engineering Acoustic Consultant | Planning Solutions Hodge Collard Preston Porter Consulting Engineers Lloyd George Acoustics |

Document control

| Revision number | File name | Document date |
|-----------------|-------------------------------------|---------------|
| Rev 0 | 190618 6024 DA Report – BP Sorrento | 18 June 2019 |

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| Appendix 6: | Conceptual Stormwater Plan |
| Appendix 7: | SPEL Purceptor Information |
| Appendix 8: | Environmental Noise Assessment |

1 Preliminary

1.1 Introduction

Planning Solutions acts on behalf of BP Australia Pty Ltd, the proponent of the proposed service station redevelopment on Lot 153 (128) West Coast Drive and Lot 154 (1) Raleigh Road, Sorrento (**subject site**). Planning Solutions has prepared the following report in support of the Application for Development Approval.

This report will discuss various matters pertinent to the proposal, including:

- Background.
- Site details.
- Proposed development.
- Statutory planning framework.

This application involves the redevelopment of the existing BP service station on the subject site that has been operating on the site since the early 1970's. The proposed facility will continue to provide essential fuel and convenience retail offerings to vehicles travelling along West Coast Drive and the established Sorrento community, including local residents, beachgoers, boat users, fishermen and patrons of the Hillarys Boat Harbour.

The proposed redevelopment features a highly activated and functional design, suitable access arrangements, and will result in a non-standard built form outcome, responding to the site's prominent corner location and intent envisaged for the Sorrento Activity Centre.

We respectfully request the Metro North West Joint Development Assessment Panel (**JDAP**) grant approval to the proposed development.

1.2 Background

Consultation and pre-lodgement engagement occurred with the City of Joondalup (**City**) with respect to the proposed development.

On 3 April 2019, Planning Solutions, Hodge Collard Preston and representatives of BP Australia attended a meeting with senior officers at the City. The City provided no 'in principle' objection to the redevelopment of the service station on the subject site from a land use planning perspective, subject to compliance with the relevant development standards of the Sorrento Activity Centre Plan.

2 Site details

2.1 Land description

The subject site comprises two freehold title lots. Refer to **Table 1** below for the lot details and a description of the subject site.

Table 1 – Lot details

| Lot | Plan / Diagram | Volume | Folio | Registered Proprietor | Area (m ²) |
|-------|----------------|--------|-------|-----------------------|------------------------|
| 153 | D8313 | 2044 | 194 | BP Australia Ltd | 707 |
| 154 | P5180 | 2044 | 195 | BP Australia Ltd | 894 |
| Total | | | | | 1,601 |

Refer to **Appendix 1** for a copy of the Certificates of Title, Plan and Diagram.

2.1.1 Notifications and Encumbrances

One encumbrance (Memorial L583904) is listed on both Certificates of Title for Lot 153 (Volume 2044; Folio 194) and Lot 154 (Volume 2044; Folio 195). The encumbrance classifies the subject site as “possible contaminated – investigation required”. Refer to **Appendix 2** for a copy of the memorial (L583904).

It should be noted that the DWER contaminated sites database lists the site and having been remediated, and as such removed from the database. The site’s remediated status therefore does not preclude the proposed development.

However, routine environmental monitoring undertaken by BP and a pre-rebuild environmental assessment completed by GHD in April 2019 identified hydrocarbons in groundwater and soil beneath the site. As part of the redevelopment, BP’s environmental consultant and an accredited contaminated sites auditor will review all environmental assessment and remediation works. Refer to **Appendix 3** for a copy of the BP letter outlining the current environmental status and environmental activities to be completed in conjunction with the redevelopment of the site.

2.2 Location

2.2.1 Regional context

The subject site is located approximately 17km north-west of the Perth CBD and approximately 11km south of the Joondalup Town Centre. The subject site is also located 1km south-east of Hillarys Boat Harbour.

The subject site fronts West Coast Drive and Raleigh Road. West Coast Drive is a north-south district distributor road which connects the subject site to Karrinyup Road and West Coast Highway in the south, and to Hepburn Avenue and Whitfords Avenue in the north, in addition to providing access to Hillarys Boat Harbour and the surrounding beaches. Raleigh Road is an east-west local road, providing access to the surrounding residential areas to the east.

The subject site is in the municipality of the City of Joondalup (**City**), and the suburb of Sorrento.

2.2.2 Local context, land use and topography

The subject site is bounded by West Coast Drive to the west, Raleigh Road to the south, an adjoining commercial lot to the north-west, and residential properties to the north and east. Sorrento Beach is located approximately 100m west of the subject site.

The subject site contains an existing BP service station facility, comprising an associated retail building and light vehicle fuel canopy. The retail building is located centrally along the northern portion of the subject site, and the fuel canopy protrudes west from the retail building and adjacent to the northern property boundary of the subject site. An existing vehicle access way adjoins the site's north-eastern boundary, providing vehicular access to the rear of the commercial lots fronting West Coast Drive. Approximately fourteen parking bays are provided along the eastern lot boundary.

The residential lot adjacently east of the subject site is undeveloped and comprises areas of sparse coastal vegetation. The development site is in proximity to the following uses/activities:

- Residential properties across Raleigh Road to the south east, east and north east of the subject site.
- Commercial lots north of the subject site comprising the Voyage Kitchen, White Salt Bar Café Restaurant, Madam Queenie Asian Bar & Kitchen, and a BWS Liquor Store.
- The Sorrento Community Hall approximately 100m north of the subject site.
- The Sorrento Surf Lifesaving Club WA approximately 300m north west of the subject site.

In terms of topography, the subject site is generally flat. It should be noted that the land east and north east of the subject site slopes upwards, away from the site.

Refer to **Figure 1** for an aerial photograph depicting the subject site and surrounds.



LEGEND

Subject Site

3 Proposed development

The proposal involves the redevelopment of the existing BP service station on the subject site. The proposed development is attractively designed, comprising a unique version of BP's contemporary retail building, a fuel canopy, associated parking, minor modifications to access, landscaping and signage.

The overall development is suitably located at a prominent corner site, historically developed and used as a BP service station. The existing and proposed BP facility provides fuel retailing and convenience services to a relatively high frequency of patrons travelling along West Coast Drive.

The development is designed in an attractive manner which addresses the site's corner location and frontage to West Coast Drive. The proposed retail building (as detailed in **Figure 2** below) comprises a range of non-standard architectural treatments and a building height which departs from the standard service station design, including the use of various colours, treatments and materials, all resulting in a unique and active presence to West Coast Drive.

The overall redevelopment configuration has been considered carefully and holistically to ensure internal operation and site functionality are maximised. The facility is designed responsively to the locality, the applicable planning framework and the types of vehicles (including the towing and refuelling of boats) and pedestrians travelling on the surrounding road network.



Figure 2: Perspective of retail building (western and southern elevations) as viewed from West Coast Drive.

3.1 Service station

The redeveloped BP service station will continue to provide the retail sale of fuel to light vehicles and those towing boats, as well as an improved range of convenience goods and amenities. Specifically, the proposed development comprises:

- A BP retail building of 253m² gross floor area (**GFA**) positioned in the north-western portion of the subject site, addressing West Coast Drive and orientated in a south-eastern direction towards the refuelling canopy. Internally, the retail building will comprise a 'Wild Bean Café', customer seating, sales and preparation areas associated with the sale of convenience goods and commercial offerings.

- A 47m² enclosed bin storage area and service yard at the north-eastern side of the retail building, contained within a 2.4m high roofed enclosure, constructed of powder coated Colorbond aluminium with louvres and comprising a “surfmist” colour.
- A fuel canopy for light vehicles comprising a clearance height of 5.0m from the forecourt’s finished floor level (FFL) and a total height of 5.85m. The canopy houses four fuel bowsers (totalling eight refuelling spaces) for light vehicles and towed boats.
- Two underground fuel storage tanks to the north of the fuel canopy, and an associated filling point beneath the southern portion of the fuel canopy, appropriately positioned to accommodate the satisfactory uninterrupted movements of BP’s 15m fuel tankers.
- Five car parking bays for customers and staff (which includes one air/water bay and one universal access bay) and eight refuelling bays.
- Various signage and imagery associated with the proposed redeveloped BP service station, including a 7m flag post fuel ID sign fronting the intersection of West Coast Drive and Raleigh Road.
- High quality landscaping along the development site’s frontage to Raleigh Road and West Coast Drive, and adjacent to car parking at the northern aspect of the site.

The proposed service station will continue to operate 24 hours per day, seven days per week, and accommodate 2 – 4 staff members at any one time.

The subject site adjoins an informal vehicle access way to its northern boundary. A connection to the vehicle access way is maintained within the northern aspect of the site. A minimum 6m wide future public access easement will run along the subject site’s eastern boundary (from the Raleigh Road crossover), and intersect with the existing connection to the adjoining Lot 2 (130) West Coast Drive and Padbury Circle further north. No physical structures will be located within the future access easement, only upgrades to existing hardstand is proposed.

The proposed retail building is located in the north-western aspect of the subject site, adjacent to the northern lot boundary and orientated both towards West Coast Drive and the fuel canopy. The location addresses the site’s prominent corner frontage to the West Coast Drive / Raleigh Road intersection. The proposed seating area within the retail building will provide seating and table settings for patrons overlooking West Coast Drive and Sorrento Beach. A variety of external treatments, colours and substantial shopfront glazing frames the retail building’s interface with the streetscape, to enhance its presentation to the public realm. The retail building is set back 0.5m to West Coast Drive.

The proposed fuel canopy is set back 1.503m to 2.787 (east to west) from Raleigh Road. The positioning of the proposed retail building and forecourt allows vehicles to enter and exit the development site via the two existing crossovers from West Coast Drive and Raleigh Road. This allows for efficient circulation and traffic flow through the subject site, which is enhanced through line markings and directional signage. The fuel canopy is a visually permeable open structure, supported by structural beams integrated into the bowsers (located centrally within the canopy itself).

The service yard / bin storage area is located at the north-eastern side of the retail building, within a 2.4m high enclosure constructed of powder coated Colorbond aluminium with louvres, in a “surfmist” colour. The service yard is accessed via double gates, with an appropriate area of hardstand available to cater for the temporary stopping of service vehicles. The temporary stopping of vehicles will not impact upon the pedestrian walkway, with deliveries occurring outside of peak refuelling times.

A 7m high internally illuminated 'flag post monolith' ID sign is proposed within the landscaping strip to the southern side of the fuel canopy, maximising visibility and exposure for vehicles travelling along West Coast Drive and Raleigh Road. This arrangement ensures patrons travelling in any direction (north, south or west) have sufficient exposure to identify the facility, and ingress the subject site in a safe and coordinated manner.

The proposed development provides a total thirteen car parking bays (inclusive of one universal access bay, one air/water bay and 8 refuelling bays). Three bays are located at the rear of the site and two bays are parallel to the eastern lot boundary. The eight car refuelling bays are provided beneath the fuel canopy.

Refer to **Appendix 4** for the development plans, which depict the proposed redevelopment.

3.2 Design and built form

The proposed development incorporates a range of architectural design features, which depart from the traditional service station format, and results in a high-quality built form outcome that is specific to the site.

These features include an attractively designed retail building which incorporates BP's colours and imagery plus a range of complementary finishes and treatments which contribute positively to the public realm and the Sorrento locality. Such treatments and finishes include:

- A mixture of horizontal timber cladding, contemporary signage, powdercoated aluminium louvres, green panelling and substantial shopfront glazing at the West Coast Drive elevation.
- A steel framed awning and transparently glazed access door provides pedestrian access from West Coast Drive for enhanced activation and passive surveillance. Substantial glazing provides a degree of activation and passive surveillance to pedestrian traffic along West Coast Drive.
- Green panelling along the outer edges of the retail building, protruding from the retail building shopfront. This provides an awning ('portal') over the primary retail building shopfront, providing added weather protection for pedestrians within the site and those travelling along West Coast Drive.
- A mixture of precast concrete, powdercoated aluminium louvres, and substantial glazing along the majority of the retail building shopfront, facing the forecourt area. Substantial glazing (4.45m in height from FFL) ensures permeability and passive surveillance between the retail and forecourt area.
- The use of powder coated aluminium louvres and associated textures to break up the building's appearance and provide internal shading from the sun.
- Integrated signage which is sympathetic to the layout and design of the overall building, softening any perceived visual impact(s) on the site's prominent corner location, whilst maintaining its commercial purpose.

Refer to **Appendix 4** for the development plans which depict the proposed development and **Figure 3** below for a perspective of the retail building.



Figure 3: Perspective of retail building entrance (western elevation) and as viewed from West Coast Drive.

3.3 Access and traffic circulation

The proposed redevelopment is supported by a Transport Impact Assessment (TIA) prepared by Porter Consulting Engineers (refer to **Appendix 5**). The assessment confirms the proposed redevelopment is satisfactory from a traffic and access perspective, and that there will be an insignificant impact on the surrounding road network.

Access to the redeveloped BP facility will be provided via the two existing crossovers, which will be upgraded and formalised to both full-movement crossovers. The upgraded crossovers to both West Coast Drive and Raleigh Road will comprise the following:

- 9.038m wide full-movement crossover to West Coast Drive (western crossover); and
- 9.014m wide full-movement crossover to Raleigh Road (southern crossover).

The proposed development provides a small-scale retail fuel facility which will only cater for passenger vehicles, and vehicles towing boats and caravans. The facility is deliberately configured such that the retail building orientates itself towards the forecourt area whilst vehicles are refuelling, and allows vehicles to circulate the site in a safe and coordinated manner for a high-level of safety and functionality. Coordinated vehicle flows and traffic safety are further enhanced through the use of line marking and directional signage.

Swept path analysis is also included within the TIA in **Appendix 5** which demonstrates the safe and efficient manoeuvrability of light vehicles towing a boat trailer are able to access the site without conflicting with kerbing or physical structures on site.

A minimum 6m-wide portion of hardstand will remain free of physical structures to allow light vehicles to traverse through the future public access easement, as demonstrated in the Sorrento Activity Centre Plan (detailed further in Section 4.2.5 of this report below). This will ensure light vehicles, when entering the site, can opt to either navigate towards the forecourt area, carparking to the rear of the subject site, or simply traverse the future easement to adjoining at Lot 2 (to the north). This arrangement maintains patrons' ability to access commercial development located elsewhere within the wider Sorrento Activity Centre without first having to re-enter the surrounding road network, including West Coast Drive.

A dedicated pedestrian pathway is provided between the retail building shopfront and light vehicle car parking located to the northern portion of the subject site. A pedestrian footpath also traverses from West Coast Drive to Raleigh Road around the subject site. Both crossovers will also contain new kerb ramps for safe pedestrian crossings.

The proposed access arrangements are intuitive, safe and acceptable. Refer to **Appendix 5** for the Transport Impact Assessment prepared by Porter Consulting Engineers.

3.3.1 Servicing arrangements

The redeveloped BP service station is designed to facilitate the safe and efficient movements of fuel tankers and service vehicles. As demonstrated by the swept path plans contained within the TIA at **Appendix 4**, the following service vehicles can safely access and navigate the proposed service station development:

- 15.0m semitrailer fuel tankers.
- 12.5m delivery/waste collection vehicle.

Fuel tankers will enter the subject site via the modified Raleigh Road crossover, navigate towards the southern edge of the fuel canopy and underground fuel tank refill connection points. Fuel tankers will then proceed forward towards the full-movement crossover to West Coast Drive. Delivery/waste collection vehicles will ingress the site via the 9.038m-wide crossover to West Coast Drive, navigate towards the northern aspect of the fuel canopy, and reverse towards the service yard at the northern side of the retail building. Once ready, service vehicles will then proceed towards the eastern aspect of the development site (in forward gear) and egress via the full movement crossover to Raleigh Road.

Fuel tankers will generally make between two to four deliveries per week, depending on retail fuel consumption and general demand. Stock deliveries will generally take place outside of peak traffic periods to ensure minimal disturbance to the site's operations and external traffic.

Refer to **Appendix 4** for the development plans and **Appendix 5** for the Transport Impact Assessment.

3.4 Stormwater

3.4.1 Stormwater management

A conceptual stormwater plan is provided in **Appendix 6** for the subject site, detailing stormwater discharge in accordance with the City's requirements. A detailed stormwater management plan can be provided in accordance with an appropriately worded condition of development approval.

3.4.2 Stormwater treatment

Stormwater runoff associated with the BP service station will be treated through the use of a SPEL Purceptor system, which captures runoff within the forecourt area. The Purceptor is an underground collection system which treats stormwater by separating fuels, oils and other potential contaminants from stormwater runoff. The treated stormwater is then discharged into the site's main stormwater management system, while the captured contaminants are retained within a separate chamber for collection and removal off site.

Use of the SPEL Puraceptor is a standard industry practice, and is generally implemented on all new fuel sites across Australia. A stormwater management plan can be provided post-approval in accordance with a condition of planning approval.

Refer to **Appendix 7** for details regarding the SPEL system.

3.5 Noise management

An Environmental Noise Assessment has been undertaken by Lloyd George Acoustics (refer to **Appendix 8**) for the proposed development, noting 24 hour operation is proposed and the subject site is within proximity of sensitive uses.

The assessment has modelled and assessed potential noise sources associated with the proposed development, and demonstrates the development will comply with the *Environmental Protection (Noise) Regulations 1997* at all times, subject to:

- Mechanical plant to be located within a solid screened service yard of at least 2.0m wall height. An acoustic absorptive lining should be installed to the inside facades of this wall to reduce reflection noise. Any ventilation louvres required are to be acoustically rated;
- Roof top exhaust fans to be axial type with inline attenuators / silencers;
- Eastern boundary to be fenced with a minimum Colorbond-type fence construction of minimum 1.8m height above retaining walls.
- Rooftop mechanical plant (exhaust fans) to be located behind local screening or as close to parapets as possible;
- Mechanical plant to be in line with those assumed in the modelling – refer Table 3-2; Air service beeper to be replaced with a non-beeping unit.

With regard to the service yard wall, it is noted the proposed service yard features a wall height of 2.4m, 400mm in lieu of the acoustic reports recommendations. The mechanical plant will also be enclosed (above) with a roof, comprising Colorbond materials, as depicted on the elevations contained within the suite of development plans at **Appendix 4**. The particulars and composition of materials forming the service yard walls will be confirmed prior to lodgement of a building permit application.

The remainder of recommendations outlined within the Environmental Noise Assessment will also be incorporated within the final construction drawings which would be lodged as part of a building permit application to the City.

Accordingly, the above mitigation measures are acceptable to the proponent. The measures can be incorporated into the development as part of a condition of development approval.

Refer to **Appendix 8** for a copy of the Environment Noise Assessment undertaken by Lloyd George Acoustics.

3.6 Signage

The proposal incorporates various advertising signage on the development site. Specifically, the proposed signage comprises:

- One 7m metre high internally illuminated flag post fuel ID sign along the southern side of the fuel canopy, addressing the intersection of West Coast Drive and Raleigh Road. The proposed ID sign comprises an LED digital price board and internally illuminated acrylics sign boxes.
- Illuminated Wild Bean Café signage integrated to the northern edge of the south-western elevation of the retail building.
- Two A0 sized poster boards affixed to the northern portion of the south-western elevation of the retail building.
- One A0 sized poster board affixed to the south eastern façade of the retail building shopfront, east of the store entrance.
- One illuminated 1.6m BP Helios sign integrated into the south eastern aspect of the retail building shopfront.
- Three illuminated 914mm BP Helios canopy signs integrated within the fuel canopy.
- One 'BP Sorrento' identification lettering integrated on the retail building shopfront, above the store entrance.

Refer to **Appendix 4** for the development plans which contain elevations depicting the proposed signage.

3.7 Landscaping

The proposed development provides approximately 232m² of soft landscaped areas (88m² within the lot boundaries).

Landscaping is provided along the lot frontages and within the development site, comprising a mixture of native coastal species of low and medium scale. The proposed landscaping will enhance the overall presentation of the development and improve the visual appearances of the proposed development.

Refer to **Appendix 4** for the development plans, which contain a landscaping plan.

4 Statutory planning framework

4.1 Metropolitan Region Scheme

The subject site is zoned Urban under the provisions of the Metropolitan Region Scheme (**MRS**).

The proposed development is consistent with the provisions of the MRS and is an appropriate development to service the surrounding locality. The land use is continued, and as such, warrants approval accordingly.

4.2 City of Joondalup Local Planning Scheme No. 3

4.2.1 Zoning

The subject site is zoned 'Centre' under the City of Joondalup Local Planning Scheme No. 3 (**LPS3**), with an applicable density coding of R80. Refer to **Figure 4** - Zoning map.

Specifically, the Centre zone of LPS3 provides the following objectives.

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

The proposal is consistent with the Centre zone for the following reasons:

- The development will continue to provide, and expand upon, the offering of convenience goods and offerings to the local community and patrons predominantly travelling along West Coast Drive. The proposed retail building will provide a convenience service for current and future inhabitants of the area.
- The proposed development will not by nature of its operations, detrimentally impact upon residential and other sensitive land uses in vicinity of the subject site.
- The proposal seeks continuation of the existing land use which is appropriately located within an existing commercial setting, within the Sorrento Activity Centre. The proposed development is consistent with the objectives, and largely consistent with the development requirements of the Activity Centre plan as outlined further below within this report.

The proposed redeveloped BP facility will not undermine current or future development within the Sorrento locality, as it is simply providing a facility which will improve the functionality and services provided on site, whilst improving the built form and amenity of the streetscape.



4.2.2 Land use classification and permissibility

The proposed land use is classified as a service station, defined by LPS3 as:

service station: means premises other than premises used for a transport depot, panel beating, spray painting, major repairs or wrecking, that are used for:

(a) the retail sale of petroleum products, motor vehicle accessories and goods of an incidental or convenience retail nature; and/or

(b) the carrying out of greasing, tyre repairs and minor mechanical repairs to motor vehicles;

The proposal simply seeks to upgrade the existing BP facility, which provides for the retail sale of fuel and convenience goods. The proposed upgrades include a new attractively-designed and modern retail building, refuelling canopy, landscaping, signage and updated access arrangements, all contributing to an improved site layout and functionality. Therefore, the proposed development will not change the existing land use on the subject site, and clearly satisfies the elements of the service station definition under LPS3.

The zoning Table of LPS3 does not prescribe land use permissibility in the Centre zone. Clause 18(7) of LPS3 states:

If the zoning table does not identify any permissible uses for land in a zone the local government may, in considering an application for development approval for land within the zone, have due regard to any of the following plans that apply to the land:

- a) A structure plan;*
- b) An activity centre plan;*
- c) A local development plan.*

Accordingly, the Sorrento Activity Centre Plan (**SACP**) applies to the subject site which is addressed in section 4.2.3 of this report. The SACP designates a 'Commercial' zoning to the subject site under LPS3. We note that a 'Service Station' land use is a 'D' (discretionary) use within the Commercial zone, meaning that the use is not permitted by the Scheme unless the local government has exercised its discretion by granting development approval.

4.2.3 Development Assessment

Part 4 of LPS3 stipulates the general development requirements applicable to all development within the Scheme area. There are no general or site-specific development requirements that apply to the subject site within Part 4 of LPS3 which apply in addition to those standards set out in the SACP.

An assessment against the relevant provisions of the SACP is provided in Section 4.2.4 of this report below.

4.2.4 Sorrento Activity Centre Plan

The Sorrento Activity Centre Plan (**SACP**) applies to the subject site (including the adjoining commercial lots to Padbury Circle) and stipulates the requirements and standards applicable to land use, built form and site design. An assessment of the proposed BP service station redevelopment against the provisions of the SACP is provided in **Table 2** below.

Table 2 – SACP Built Form Requirements

| Requirement | Provided | Compliance |
|---|--|------------|
| 4.1 Land Use Permissibility | | |
| 4.1.1 Land use permissibility within the Activity Centre Plan area shall be in accordance with the corresponding zone or reserve under the Scheme. | <p>The subject site is zoned Commercial pursuant to the SACP. Under the zoning table of LPS3, the 'Service Station' land use is a 'D' (discretionary) use on the site, meaning that the use is not permitted by the Scheme unless the local government has exercised its discretion by granting development approval.</p> <p>The use is capable of approval and is the same land use to that which currently exists on the subject site. As such, the service station use is entirely appropriate.</p> | ✓ |
| 4.1.2 In addition to the land use permissibility within the "Commercial" zone of the Scheme, a "Multiple Dwelling" is considered a 'P' (Permitted) use. | N/A – This development application applies to the redevelopment of the BP service station only. | N/A |
| 4.4 Commercial Zone | | |
| 4.4.1 Active uses such as restaurants, cafes and retail shops must be provided at the ground floor level of development. | The retail building component of the service station is at ground level, fronting the pedestrian footpath and West Coast Drive. The building provides substantial glazing for interaction with the public realm as well as internal Wild Bean Café seating facing the street for further activation. | ✓ |
| 4.4.2 Residential land uses shall not be permitted at the ground floor level for lots within the Commercial zone. | N/A – No residential land uses are proposed as part of this application. | N/A |
| <p>4.4.5 The recommended NLA threshold shall be distributed across the Activity Centre Plan area on a pro-rata land area basis per Table 1 with the exception of Lot 146 on which commercial/retail land use is prohibited.</p> <p><u>Lot 153: 707m²</u> Share of recommended threshold NLA per relevant planning control: 12.76%.</p> <p><u>Lot 154: 894m²</u> Share of recommended threshold NLA per relevant planning control: 16.14%.</p> | <p>The subject site has a maximum permitted retail floor space NLA of 462.7m², enough to accommodate a service station retail building.</p> <p>The proposed development does not exceed the recommended NLA threshold, with the retail store component comprising an NLA of 253m². The subject site therefore compliant with its NLA allocation.</p> | ✓ |

| 5.1 Plot Ratio | | |
|---|---|----------------------------|
| No maximum plot ratio applies to the Activity Centre Plan Area. | N/A - No maximum plot ratio applies to the subject site. | N/A |
| 5.2 Building Height | | |
| <p>5.2.1 The provisions of the City of Joondalup Height of Non-Residential Buildings Local Planning Policy do not apply to the Activity Centre Plan area with the following provisions being applicable with regard to building height. A minimum building height of 10.6m (3 storeys) measured from natural ground level and a maximum building height of 17.0m (5 storeys) applies to the following lots:</p> <ul style="list-style-type: none"> • Lot 148 The Plaza; • Lot 149 West Coast Drive; • and Lot 2 West Coast Drive. <p>The fifth storey element is to be focused around The Plaza and western frontage and detailed through the development application process.</p> | N/A – The building height standards for the subject site are prescribed below. | N/A |
| <p>5.2.2 A maximum building height of 13.5m (4 storeys) from natural ground level applies to the following lots:</p> <ul style="list-style-type: none"> • 147 Padbury Circle; • 153 West Coast Drive; and • 154 Raleigh Road. | <p>The proposed service station redevelopment comprises the following buildings heights:</p> <p><u>Retail Building</u> 5.25m</p> <p><u>Fuel Canopy</u> 5.85m to 6.45m</p> <p><u>Services / refuse storage</u> 3m</p> <p>The proposed buildings heights do not exceed the maximum permitted 13.5m (4 storeys) and are therefore compliant and entirely acceptable.</p> | <p>✓</p> <p>✓</p> <p>✓</p> |
| 5.2.3 A maximum building height of 10.6m (3 storeys) measured from natural ground level applies to Lot 146 Padbury Circle. | N/A – Not applicable to the subject site. | N/A |
| 5.3 Street Setbacks | | |
| 5.3.1 The minimum street setback in the Commercial zone is nil and the maximum street setback is 2.0 metres. Minor variations to this are permitted for building entries and architectural articulation. | <p>The retail building provides a 0.5m setback to the West Coast Drive Street frontage.</p> <p>The fuel canopy provides between a 1.5m to 2.8m setback to the Raleigh Road street frontage due to the irregular shape of the lots (being rounded corner lots). The 0.8m variation to the maximum 2m street setback is considered acceptable as the canopy is an open structure and Raleigh Road is the secondary street frontage.</p> | <p>✓</p> <p>Variation</p> |

| | | |
|---|--|-----------|
| | The intention of the reduced setbacks is to provide activation to the pedestrian realm on West Coast Drive, with the 0.5m setback of the retail building achieving this. | |
| 5.3.2 A minimum street setback of 2.0m shall be provided to all lots within the Residential zone. | N/A – The subject site is not within the Residential zone. | N/A |
| 5.4 Lot Boundary Setbacks | | |
| 5.4.1 Unless otherwise stipulated under Clauses 5.4.2 - 5.4.5, all boundary setbacks are to be in accordance with the R-Codes. | N/A - Refer below as Clauses 5.4.2 - 5.4.5 apply to the subject site. | N/A |
| 5.4.2 A 8.0m wide view corridor shall be provided between Lot 2 and Lot 153 which is to comprise a 4.0m side boundary setback above the 3rd storey of development to the north-western boundary of Lot 153 and a 4.0m side boundary setback shall be provided above the 3 rd storey of development to the south-western boundary of Lot 2. | <p>N/A - The proposed redevelopment does not comprise buildings heights exceeding 6.45m (maximum height of fuel canopy height). The retail building (5.25m in height) provides a Nil setback to the Lot 2 northern property boundary.</p> <p>As no building exceeds 3 storeys in height, the required 4.0m side boundary setback is not required to be provided on the subject site.</p> | N/A |
| 5.4.3 Side boundary setbacks between Lot 146 Padbury Circle and Lot 145 Drakes Walk shall be in accordance with the R-Codes. | N/A – These properties do not form part of this application. | N/A |
| 5.4.4 A 3.0m rear setback shall be provided above the 3rd storey of development to Lots 153, 154 and 2. | <p>The proposed redevelopment does not provide building heights in excess of 3 storeys. The rear setbacks vary due to the shape of the subject site and are as follows:</p> <p><u>Retail Building</u> 20.5m to 25.25m</p> <p><u>Fuel Canopy</u> 26m to 28m</p> <p><u>Services / refuse storage</u> 10m to 18m</p> | ✓ |
| 5.4.5 The side boundary setback between Lot 154 and Lot 155 Raleigh Road shall be 9.0m, comprising a 6.0m access easement and a 3.0m landscaping strip. | The side boundary setbacks between Lot 154 and Lot 155 Raleigh Road are as follows: | ✓ |
| | <u>Retail Building</u> 20.5m | ✓ |
| | <u>Fuel Canopy</u> 10.8m | ✓ |
| | <u>Services / refuse storage</u> 15.7m | ✓ |
| | A 6.0m access easement is provided along the eastern side and rear lot boundaries. | ✓ |
| | A 3m landscaping strip is not provided along the entire eastern side boundary, however, a 58m ² area of high-quality landscaping is located to the rear of the subject site to compensate for this variation. | Variation |

| | | |
|---|--|-------------------|
| | A 3m landscaping strip along the entire site boundary is unable to be provided due to physical site and operational constraints. The requirement of the 6m access easement combined with a 3m landscaping strip would effectively create a 9m portion of land reserved for access and landscaping. This cannot be accommodated without jeopardising safe vehicle movements on the irregularly shaped and already constricted subject site. | |
| 5.5 Built Form | | |
| 5.5.1 Building Design | | |
| a) A continuous awning shall be provided along the street frontage with the exception of Lot 146 Padbury Circle. | A 2m deep and 7.5m long steel framed canopy awning is provided above the retail building entrance fronting the West Coast Drive street frontage. | ✓ |
| b) All awnings and colonnades shall have a minimum clearance of 2.75 metres above ground level and a minimum depth of 2.0 metres. | The proposed awning comprises a minimum clearance of 2.9m, exceeding the required minimum of 2.75m. A compliant depth of 2m is also provided. | ✓ |
| c) Colonnades may be provided to a maximum depth of 2.5m. | N/A – No colonnades are proposed. | N/A |
| d) A minimum of 60% of the total length of the building facade at the ground floor level is to be clear glazing. | <p><u>South west building façade (West Coast Drive)</u> Length: 11.25m Clear glazing length: 6.9m (61% of 11.25m)</p> <p><u>South east building façade (facing internally)</u> Length: 26.9mm Clear glazing length: 17.2m (63.9% of 26.9m)</p> <p>The north west and north east façades do not comprise clear glazing. The north west elevation provides a nil setback to the adjoining Lot 2, with future development to also provide a nil setback.</p> <p>Clear glazing is intended to be provided to the street frontages only, providing activation between the development and the street. As such, the provision of glazing on the retailing building is compliant and is intended for by Provision 5.5.1 d).</p> | <p>✓</p> <p>✓</p> |
| e) Development on Lot 154 Raleigh Road is to address building bulk and privacy impacts on Lot 155 through the design and architecture of the building at development application stage having particular regard to side walls facing Lot 155. | <p>The proposed redevelopment on the portion of Lot 154 Raleigh Road has been designed in accordance with the requirements of the SACP, with the retail building and fuel canopy located in the western portion of the subject site.</p> <p>A 6m wide access easement is proposed along the eastern portion of the subject site, in accordance with the SACP and will provide separation between the retail building / fuel canopy and Lot 155.</p> <p>The rear of the subject site slopes upwards toward the adjoining lots. As such, any potential adverse impacts to the privacy of adjoining properties resulting from the redeveloped service station is limited.</p> | ✓ |

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| <p>5.5.2 Materials and Finishes</p> <p><i>a) Buildings must be constructed of high quality materials including but not limited to stone, concrete, brick, timber and glass. Materials should be durable and suited to a coastal location.</i></p> | <p>A range of materials including timber cladding, powder coated aluminium, glazing, steel and precast concrete are incorporated into the redevelopment.</p> <p>Materials are durable and suitable for the development's coastal location, able to withstand the sun, rain, salt and wind that characterise coastal locations. Materials will be maintained to the highest standard, as is the case with all BP service station developments.</p> | <p style="text-align: center;">✓</p> |
| <p><i>b) Buildings must incorporate appropriate design features to enhance appearance, create visual interest and reduce blank walls, including a combination of the following:</i></p> <ul style="list-style-type: none"> • Varied colours, textures, finishes and materials; • Varied roof forms and design; • Balconies and balustrades; • Windows, screens and sun shading devices; • Design features that respond to the natural environment and architecture characteristic of the area. | <p>The proposed service station redevelopment includes a variety of colours, textures, finishes and materials to ensure an attractive and interesting built form.</p> <p>Horizontal timber cladding, contemporary signage, powdercoated aluminium louvres, green panelling and substantial shopfront glazing at the West Coast Drive elevation. A steel framed awning and transparently glazed access door provides pedestrian access from West Coast Drive for enhanced activation and passive surveillance. Substantial glazing provides a degree of activation and passive surveillance to pedestrian traffic along West Coast Drive.</p> <p>The use of powder coated aluminium louvres and associated textures to break up the building's appearance and provide internal shading from the sun.</p> | <p style="text-align: center;">✓</p> |
| <p><i>c) Architectural character and visual interest is to be provided to all sides of buildings that are viewed from the public realm. This can be achieved with articulation, colour and/or materials (including glazing).</i></p> | <p>Please refer to the above response. The building facades fronting West Coast Drive and facing internally within the development uses a variety of colours, materials and architectural features to create visual interest and street activation.</p> | <p style="text-align: center;">✓</p> |
| <p><i>d) Blank walls fronting the street are not permitted.</i></p> | <p>No blank walls are proposed to front West Coast Drive or Raleigh Road.</p> | <p style="text-align: center;">✓</p> |
| <p><i>e) Corner buildings are to be designed to address both street frontages with equal importance.</i></p> | <p>N/A – The proposed service station redevelopment does not include a corner building.</p> | <p style="text-align: center;">N/A</p> |
| <p style="text-align: center;">5.6 Street and Public Realm Interface</p> | | |
| <p>5.6.1 Street Interface</p> <p><i>a) Developments are to activate the street frontages and create a safe urban environment in accordance with the Crime Prevention Through Environmental Design ('CPTED') principles.</i></p> | <p>The proposed redevelopment of the service station will result in a safe urban environment by the 24 hour operation of the service station, incorporated lighting and a presence of activity.</p> <p>Substantial areas of glazing on the retail building façade fronting West Coast Drive and the façade facing internally towards the refuelling area ensures articulation and appropriate surveillance in and around the subject site.</p> | <p style="text-align: center;">✓</p> |
| <p><i>b) Adjacent verge and footpath areas to be upgraded to a high quality and to facilitate space activation.</i></p> | <p>The adjacent verge area at the West Coast Drive / Raleigh Road intersection will be upgraded with high quality landscaping, replacing the existing neglected grassed area.</p> | <p style="text-align: center;">✓</p> |

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| | <p>The existing concrete footpath on Raleigh Road is to be extended along West Coast Drive, with new kerb ramps address to the crossovers to ensure safe pedestrian and bicycle movements surrounding the subject site.</p> <p>This will assist in activating the space within and around the Sorrento Activity Centre.</p> | |
| <p>c) Development addressing primary streets to provide a minimum of 80% activated frontage at street level.</p> | <p>The frontage of the retail building provides an activated frontage to West Coast Drive.</p> <p>It is not reasonable for a service station use to provide 80% of the frontage as 'activated' due to the nature of the use.</p> <p>Bicycle parking bays are located north of the West Coast Drive retail building entrance. This results in active frontage by encouraging users to cycle to the development and park their bikes at the store front.</p> <p>The seating area of the Wild Bean Café provides viewing to West Coast Drive and Sorrento Beach, resulting in substantial amounts of interaction between users of the facility and the pedestrian realm.</p> <p>The nature of the use and the location of the subject site prevents a level of 80% active frontage at street level. The 61% and 63.9% provided by the clear glazing is substantial and is considered appropriate in this context.</p> | Variation |
| <p>d) Development addressing secondary streets to provide a minimum of 50% activated frontage at street level.</p> | <p>It is not reasonable for a service station use to provide 50% of its secondary street frontage as 'activated' due to the nature of the use. Nonetheless the development provided visual engagement to those in the street.</p> | Variation |
| <p>e) An "active frontage" is defined as follows: Active frontage - a ground floor space where there is visual engagement between those in the street and those on the ground floors of buildings.</p> | <p>N/A – No assessment is required as this provision merely states a definition. However, the proposed development does provide active frontages.</p> | N/A |
| <p><u>5.6.3 Building Entrances</u></p> <p>a) All entrances to the buildings must be easily identifiable.</p> | <p>The two entrances to the retail building are legible and easily identified by incorporated signage.</p> | ✓ |
| <p>b) The main entrance must be easily accessible from the primary street.</p> | <p>The retail building entrance fronting West Coast Drive (primary street) is easily accessible by pedestrians from West Coast Drive, as is the entrance facing internally within the site.</p> | ✓ |
| 5.7 Landscaping and Private Open Space | | |
| <p><u>5.7.1 Landscaping</u></p> <p>a) Where fronting streets, landscaped areas are to be integrated with the streetscape including the use of consistent materials and planting and accommodate pedestrian movement, alfresco and</p> | <p>A 160m² area of high-quality landscaping is proposed to front the West Coast Drive / Raleigh Road intersection. No pedestrian movements will be impeded by the landscaping area, as the pedestrian footpath traverses around the area.</p> | ✓ |

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| seating areas in a shaded environment where appropriate. | | |
| b) Durability of landscape elements, paving materials and street furniture shall be of high quality, and easy to maintain to the satisfaction of the City. | All landscaping and paving materials will be of the highest quality, as is the case with every BP service station development. The landscaping and materials will be maintained to the satisfaction of BP and the City and remain as a well presented facility. | ✓ |
| c) Landscaped areas shall be designed for high water efficiency through use of 'waterwise' planting and preferably use species native to the area, or which reinforce existing landscape character of nearby parks and reserves. | The selected flora species for the proposed landscaping are waterwise, native to the area and provide high levels of visual amenity. Refer to Appendix 4 for a copy of the landscaping plan. | ✓ |
| d) Landscaping is to include trees and plants native to the area or which reinforce existing landscape character of nearby parks and reserves. | High quality native plants are proposed within the designated landscaping areas. The selected fauna species are located in coastal areas surrounding Perth and are suited to the subject site's coastal location. Selected ground cover and shrub species produce colourful flowers, adding visual interest to the development. Refer to Appendix 4 for a copy of the landscaping plan. | ✓ |
| 5.8 Parking and Access | | |
| <u>5.8.1 Car Parking Provision</u> | N/A – This provision is not applicable to this service station redevelopment. | N/A |
| a) Residential car parking including visitor car parking is to be provided in accordance with the R-Codes. | | |
| b) Non-residential car parking is to be provided at a rate of 1 on-site bay per 20sqm of net lettable area ('NLA'). | The proposed development comprises an NLA of 253m ² . Car parking bays required: 12.65 bays (rounded to 13 bays). The proposed redevelopment provides 5 car parking bays for retail customers and 8 bays within the refuelling area adjacent to the bowzers. 13 bays are required and 13 bays are provided. The proposed redevelopment provides a compliant number of car parking bays. | ✓ |
| <u>5.8.2 General Parking Location</u> | Car parking bays are located at the rear of the site and predominantly sleeved by the retail building when viewed from West Coast Drive. | ✓ |
| a) Car parking should generally be contained within the building envelope or sleeved behind the development and shall be screened from view from the public realm. | | |
| b) Shared parking arrangements shall generally be permitted between the following lots: i) Lots 146-148; ii) Lot 149 and Lot 2; and iii) Lot 153 and 154. | The subject site and proposed redevelopment comprises Lots 153 and 154 and maintains a shared accessway to the adjoining lots at the rear of the site. | ✓ |

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| <p><u>5.8.3 On-street Parking</u></p> <p>a) <i>The existing car parking bays within the road reserve of The Plaza abutting Lots 149 and 148 may only be credited to the subject lots and count toward the overall parking provision if access to these parking bays is maintained. However, it is the City's preference that these bays are removed, and all car parking bays are provided on site in accordance with the stated parking standard.</i></p> | <p>N/A – This provision is not applicable to the service station redevelopment.</p> | <p>N/A</p> |
| <p><u>5.8.5 End of trip facilities</u></p> <p>a) <i>End of Trip Facilities per development site are to be provided at a rate of one (1) unisex accessible toilet and shower for the first 10 secure non-residential bicycle parking bays or part thereof and one (1) secure locker for each bicycle parking bay (may be provided in conjunction with staff locker requirements).</i></p> | <p>One unisex accessible toilet is provided within the retail building.</p> <p>A shower has not been provided as it is unsuitable for this type of development and BP's internal layouts. The service station land use typically does not require end of trip facilities for its staff due to the nature of the work undertaken.</p> <p>Secure lockers are provided for staff use and are located in the back of house as shown of the floor plan.</p> | <p>✓</p> <p>Variation</p> <p>✓</p> |
| <p>b) <i>Separate male and female end of trip facilities need only be provided should the total number of bicycle bays exceed 10 bays.</i></p> | <p>N/A – The total number of bicycle bays does not exceed 10 bays.</p> | <p>N/A</p> |
| <p>c) <i>End of trip facilities may also be utilised for commercial employee change rooms.</i></p> | <p>N/A - This provision is not applicable to the service station redevelopment.</p> | <p>N/A</p> |
| <p><u>5.8.6 Vehicular Access</u></p> <p>a) <i>Vehicular access shall be limited to the three access points as shown on Plan 2.</i></p> | <p>Existing crossovers to the subject site are maintained, with no new access points proposed. The existing crossovers will be slightly modified to accommodate the new layout of the development and new vehicle movements.</p> | <p>✓</p> |
| <p>b) <i>A minimum 6m wide public access easement is to be provided to connect Raleigh Road to Padbury Circle generally in accordance with the alignment depicted on Plan 1 and Plan 2.</i></p> | <p>A minimum 6m wide public access easement is proposed in the eastern portion of the subject site to connect Raleigh Road to Padbury Circle. This location is in accordance with the alignment depicted on Plan 1 and Plan 2 of the SACP.</p> | <p>✓</p> |
| <p>5.9 Utilities and Facilities</p> | | |
| <p><u>5.9.1 Location</u></p> <p>a) <i>The location of plant service equipment and lift overruns should not be visible from the adjoining street or public realm.</i></p> | <p>No plant service equipment is visible from the West Coast Drive or Raleigh Road frontages. All plant service equipment is either housed internally or within the enclosed services / refuse storage at the rear of the retail building.</p> | <p>✓</p> |
| <p>b) <i>Service access / yards screened from view from the street or public realm must be provided to cater for the loading and unloading of goods and waste collection.</i></p> | <p>The redeveloped BP service station is designed to facilitate the safe and efficient movements of fuel tankers and service vehicles as well as provide screening of service access / yards. As demonstrated by the swept path plans contained within the TIA at Appendix 5, 15.0m semitrailer fuel tankers and 12.5m delivery/waste collection vehicles can safely access and navigate the proposed service station development:</p> | <p>✓</p> |

As demonstrated in **Table 2** above, the proposed development has been appropriately designed as to adhere to the relevant development requirements of the SACP.

4.2.5 Additional Information

Section 7 of the SACP requires additional information to be provided prior to the lodgement of development applications and/or with the development application. The development of the subject site requires a contamination assessment prior to development. Section 2.1.1 of this report and **Appendix 3** details the contamination assessment undertaken by GHD in April 2019 and the remediation works that will be undertaken during redevelopment of the facility.

4.2.6 Matters to be considered

Clause 67 – Part 9 – Schedule 2 (deemed provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015 (LPS Regulations)* stipulates matters to be given due regard by local government when considering development applications. **Table 3** below provides an assessment against matters relevant to this proposal.

Table 3 – Matters to be considered by local government

| Relevant matters to be considered | Comment |
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| a) <i>The aims and provisions of this Scheme and any other local planning scheme operating within the Scheme area.</i> | The proposed use and development is consistent with the aims and provisions of the City's LPS3 as addressed within Section 4.2.1 of this report. |
| b) <i>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.</i> | This report demonstrates the proposed development is consistent with the local planning framework applicable to the development site. There is no known amendment to LPS3 affecting the proposed development. |
| c) <i>Any approved State planning policy.</i> | N/A – Not applicable to the proposed redevelopment. |
| d) <i>Any environmental protection policy approved under the Environmental Protection Act 1986 31(d).</i> | Section 4.4 of this report provides a comprehensive assessment against the EPA's <i>Guidance for the Assessment of Environmental Factors – Separation Distances between Industrial and Sensitive Land Uses</i> . The assessment appropriately demonstrates all potential impacts are capable of being managed. |
| h) <i>Any structure plan, activity centre plan, or local development plan that relates to the development.</i> | The proposed development is generally consistent with the provisions of the Sorrento Activity Centre Plan. Refer to Section 4.2.4 and Table 2 above for a detailed assessment against the provisions of the SACP. |
| (g) <i>Any local planning policy for the Scheme area.</i> | This report demonstrates the proposed development is consistent with the City's Local Planning Policies as addressed within Section 4.3 of this report. |
| m) <i>The compatibility of the development with its setting including the relationship of the development to development on adjoining land or on other land in the locality including, but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the development.</i> | <p>The proposed development is entirely compatible with its setting for the following reasons:</p> <ul style="list-style-type: none"> The proposed development has been designed to minimise any potential impact on nearby properties, including the residential development located east of the subject lot, and to integrate with future commercial development on the adjacent northern lots. |

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| | <ul style="list-style-type: none"> Landscaping is provided at the rear of the site and provides separation between vehicle movements throughout the subject site and the adjoining residential properties. The built form is oriented towards West Coast Drive and Raleigh Road, with building height, bulk and scale considered appropriate in the context of the existing land use and proposed redevelopment. <p>Having regard to the above, the nature of the proposed redevelopment of the existing service station development is entirely compatible with its surrounds and is appropriate for the development site.</p> |
| <p>n) <i>The amenity of the locality, including the following –</i></p> <p>(i) <i>environmental impacts of the development.</i></p> <p>(ii) <i>the character of the locality.</i></p> <p>(iii) <i>social impacts of the development.</i></p> | <p>Environmental Impacts</p> <p>As outlined in this report, the proposed development will be constructed in full compliance with relevant Australian Standards regarding fuel tank separation from adjacent buildings and siting of infrastructure. Further to this, all potential environmental risks associated with the storage of fuel is regulated by the statutory Dangerous Goods licencing process under the <i>Dangerous Goods Safety Act 2004</i>.</p> <p>Character of the Locality</p> <p>A service station has been operating on this site since the early 1970's and forms part of the character of the locality. The redevelopment ensures that the character of Sorrento and its coastal nature is maintained through a high quality and interactive design.</p> <p>Social Impacts</p> <p>The proposed redevelopment will not have any adverse social impacts on the surrounding locality for the following reasons:</p> <ul style="list-style-type: none"> The continued 24 hour operation of the service station ensures a level of surveillance of the surrounding area during all hours. The proposed BP service station redevelopment will provide its services to vehicles and pedestrians travelling along West Coast Drive, beachgoers, local residents and boat users of Hillarys Boat Harbour. The development will continue to provide employment opportunities. |
| p) <i>whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or vegetation on the land should be preserved.</i> | High quality, native, waterwise landscaping is incorporated into the development, resulting in a high level of amenity for customers, pedestrians and passers-by. |
| q) <i>The suitability of the land for the development taking into account the possible risk of flooding, tidal inundation, subsidence, landslip, bush fire, soil erosion, land degradation or any other risk.</i> | The land is not subject to any known risk of flooding, tidal inundation, subsidence, landslip, soil erosion or land degradation. |
| r) <i>The suitability of the land for the development taking into account the possible risk to human health or safety.</i> | The proposed BP service station redevelopment is intended to be developed to the highest environmental standards to ensure no contamination occurs to the land or to human health as part of best practice service station design. |
| s) <i>The adequacy of –</i> | As demonstrated in Section 3.3 of this report and the supporting Traffic Impact Assessment prepared by Porter Consulting Engineers |

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| (i) <i>The proposed means of access to and egress from the site.</i> | (Appendix 5) , the proposed means of access to and from the site is satisfactory and utilises existing crossovers. |
| (ii) <i>Arrangements for the loading, unloading, manoeuvring and parking of vehicles.</i> | <p>Fuel tankers will enter the subject site via the modified Raleigh Road crossover, navigate towards the southern edge of the fuel canopy and underground fuel tank refill connection points. Fuel tankers will then proceed forward towards the full-movement crossover to West Coast Drive.</p> <p>Regarding service deliveries, delivery/waste collection vehicles will ingress the site via the crossover to West Coast Drive, navigate towards the northern aspect of the fuel canopy, and reverse towards the service yard at the northern side of the retail building. Once ready, service vehicles will then proceed towards the eastern aspect of the development site (in forward gear) and egress via the full movement crossover to Raleigh Road.</p> |
| t) <i>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.</i> | The Traffic Impact Assessment prepared by Porter Consulting Engineers (Appendix 5) demonstrates that all traffic generation associated with the proposed redevelopment will not adversely impact the surrounding road network, and that West Coast Drive and Raleigh Road are entirely capable of accommodating traffic associated with the proposed use and development. Furthermore, the service station use is one that already exists on the site, with the majority of traffic utilising a service station already being on the road network. |
| w) <i>The history of the site where the development is to be located.</i> | As mentioned above, a service station land use has been operating on this site since the early 1970's, with its continued use considered entirely appropriate. |
| (x) <i>the impact of the development on the community as a whole notwithstanding the impact of the development on particular individuals.</i> | The redevelopment of the BP service station will provide notable benefits to the community in terms of visual amenity and the services and convenience goods offered by the facility. |

Having regard to **Table 3** above, the proposal appropriately addresses matters to be given due regard as set out by the deemed provisions. The proposal therefore warrants approval accordingly.

4.3 Local planning policies

4.3.1 City of Joondalup Signs Local Planning Policy

The City of Joondalup's Signs Local Planning Policy (**Signage Policy**) stipulates the requirements and standards applicable to signage on private property. An assessment of the proposed signage is provided in **Table 4** below.

Table 4 – Signage assessment

| Signs policy requirement | Provided | Compliance |
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| 4.1. Design Principles | | |
| <i>be located on land to which they relate and only advertise goods or services that relate to the land use of the site, commensurate with the realistic commercial need for such advertising;</i> | All signage is located on the service station land and will only display products and services offered by the service station. | ✓ |
| <i>promote a high standard of design and presentation in outdoor advertising;</i> | All on site signage is designed to a high standard and in a way that does not adversely affect visual amenity. BP prides itself on the presentation of their facilities and the signage of BP Sorrento will continue to present attractively. | ✓ |
| <i>not be located on land zoned or used for residential purposes, unless expressly permitted in this Policy;</i> | N/A – The land is not zoned Residential or used for residential purposes. | N/A |
| <i>integrate with the building design, particularly through the provision of signage panels within the building façades, where possible;</i> | The signage on the facades of the retail building and fuel canopy are integrated into the building design by the way of signage panels. The number of panels are limited to avoid proliferation. | ✓ |
| <i>be contained within the boundary of the lot on which they are situated, unless expressly permitted within this policy;</i> | All signs on the retail building and fuel canopy are wholly located within the boundaries of the subject site. | ✓ |
| <i>not to be located within a road reserve, unless expressly permitted in this Policy;</i> | The base of the flag post pylon sign is located wholly within the boundaries of the subject site. However, due to the physical nature of the sign and the curvature of the southern lot boundary, the sign overhangs the boundary. | Variation |
| | This minor variation is justified as it protrudes by only 1.48m into the verge area. The edge of the sign then provides a further 5.1m separation of landscaping verge area to the pedestrian footpath. With the clearance of the flag post pylon sign, the minor overhang into landscaped verge area and a further 5m to the pedestrian footpath, the sign will result in no safety issues. | ✓ |
| | Current signage on site is partly within the verge area and is necessary for appropriate commercial exposure to motorists travelling on West Coast drive. | |

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| | Lastly, the pylon sign requirements do not outline that the signs needs to be contained within the boundary of the lot. Therefore, this sign is entirely appropriate for the subject site in the context of the area. | |
| <i>maintain the existing amenity of the locality, including minimising noise generated by the sign or supporting structures;</i> | The proposed signage will not adversely impact upon the existing amenity of the Sorrento locality, as a service station and signage currently exists on the site. The signage will generate no noise. | ✓ |
| <i>not present a hazard or be misleading to vehicles or pedestrians;</i> | Signage will not be a hazard to pedestrians or motorists. All signage will display products and services provided by the BP service station and will not be misleading in anyway. | ✓ |
| <i>not obstruct visual sightlines required for vehicular access to and from properties;</i> | Signage will not obstruct any sightlines for vehicles entering, exiting or manoeuvring through the subject site. The physical nature of the flag post sign provides clear sightlines for motorists and pedestrians on the road network and within the sight. | ✓ |
| <i>not obstruct access to or from any door, window or fire escape;</i> | Signage is not located in areas that will obstruct doors, windows or fire escapes. | ✓ |
| <i>not contain any obscene or vulgar material;</i> | Signage will not display any offensive material and only products related to the BP service station. | ✓ |
| <i>not be affixed to boundary fences or boundary walls;</i> | No signage is affixed or located on boundary fences or boundary walls. | ✓ |
| <i>not include the use of flashing lights that chase or pulse; and</i> | Any illuminated signage will not contain any flashing or pulsing lights. | ✓ |
| <i>not be superfluous or unnecessary by virtue of colours, height, prominence, visual impact, size, relevance to the premises on which they are located, number and content.</i> | Signage is not considered to be excessive in terms of its characteristics. All BP signage is specifically designed to a standard for necessary exposure and with BP's corporate branding. | ✓ |
| Wall Sign | | |
| <p>Area: max. 25% of the façade.</p> <p>Must:</p> <ul style="list-style-type: none"> not extend beyond the top or either end of the wall; and not obscure architectural details. | Wall signage proposed does not exceed 25% of any façade/elevation area, nor extend beyond the top/side of any walls. (including refuelling canopy 'BP Helios'). | ✓ |
| Single - Tenancy Pylon Sign | | |
| Max area: 6m ² | 9m ² | Variation |
| Max height: 6m | 7m | Variation |
| <p>Justification:</p> <p>The proposed minor variations are considered acceptable for the following reasons:</p> <ul style="list-style-type: none"> The irregular shape of the site limits appropriate locations for the pylon sign without compromising the area for safe vehicle movements throughout the site. Furthermore, adjacent developments to the north sleeve the subject site and | | |

the services it offers. The dimensions and location of the pylon sign have been deliberately chosen to provide appropriate exposure for the BP facility.

- The 1m height variation is considered acceptable as the base of the pylon sign comprises a single upright beam only, with sightlines maintained under the sign face. The sign is required to display the price of fuel, the velocity points program and the Wild Bean Café facility within the development. To display this information clearly and safely to motorists, a 7m sign height and 9m² sign face are required.
- The proposed pylon sign is designed to overhang verge landscaping proposed at the intersection of Raleigh Road with West Coast Drive.
- No activity including the manoeuvrability of vehicular or pedestrian traffic is proposed under or within the vicinity of the proposed pylon sign, with consideration to the direction of its overhang (southerly direction).
- Pedestrian footpaths are provided along the site's frontage, secluded from the pylon sign, thus unlikely to result in limiting pedestrian manoeuvrability.

The proposed 3m² sign area variation and 1m maximum height variation are considered acceptable and are unlikely to result in any adverse impacts to amenity of the site. The sign provides essential commercial exposure for BP, as is required for any service station development and to ensure to motorists travelling on West Coast Drive are provided with enough notice of the facility. The proposed pylon sign therefore warrants approval.

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| <i>Must be restricted to 1 sign per lot except for a corner lot where 1 sign per frontage is permitted.</i> | 1 pylon sign proposed. | ✓ |
| <i>Must where there are multiple tenancies, incorporate all signs into 1 composite sign.</i> | Pylon sign incorporated multiple panels, reflective of commercial offerings available at the site including: <ul style="list-style-type: none"> • BP identification logo and lettering. • 'Wild Bean Café'. • Fuel branding and pricing. | ✓ |
| <i>Must not be permitted where another free standing sign has been approved and erected, or will not supersede another valid approval on the same frontage;</i> | Existing signage to be removed, and replaced with proposed signage as part of redevelopment. | ✓ |
| <i>Must be no closer than 15 m to the intersecting point of corner truncations;</i> | The proposed pylon sign located within the boundaries of the subject site, well secluded from the corner truncation of West Coast Drive and Raleigh Road. | ✓ |
| <i>Must not impede vehicle sightlines within the lot for access to and from the property.</i> | Due to the irregular corner shape of the site, substantial verge fronting the site and proposed location of the pylon sign within the boundaries of the site, the proposed pylon sign (supported by a single upright) is setback behind vehicle sightlines egressing the Raleigh Road crossover. The pylon sign will not cause any undue impact upon vehicle sightlines utilising either Raleigh Road or West Coast Drive crossovers. | ✓ |

Having regard to **Table 4** above, the proposed signage is generally compliant with the provisions of the City's Signage Policy and warrants approval accordingly.

4.4 Environmental Protection Authority Guidance Statement No. 3 – Separation Distances between Industrial and Sensitive Land Uses

The Environmental Protection Authority (EPA) Guidance Statement No. 3 – Separation Distances between Industrial and Sensitive Land Uses (**EPA Guidance Statement No. 3**) provides generic buffer distances intended to mitigate impacts of industrial developments on sensitive land uses.

With regard to retail fuel developments (service stations etc.) proposing 24-hour operation, the EPA Guidance Statement No. 3 identifies potential impacts as gaseous, noise, odour and risk, and recommends a generic buffer distance of 200m. The buffers recommended by EPA Guidance Statement No. 3 are not absolute separation distances, but instead are default distances providing general guidance in the absence of site specific technical studies.

Table 5 below provides further information on the potential externalities from the continued operation of the existing service station following redevelopment and provides justification to demonstrate the location of the development continues to remain appropriate.

Table 5 – Mitigation of potential amenity or environmental impacts

| Potential amenity or environmental impact | Mitigation methods |
|---|---|
| Noise | <p>An Environmental Noise Assessment has been prepared for this proposal, incorporating a comprehensive assessment of noise sources as required by the <i>Environmental Noise Protection (Noise) Regulations 1997</i>. Refer Appendix 8 for a copy of the Environmental Noise Assessment undertaken by Lloyd George Acoustics.</p> <p>The Environmental Noise Assessment confirms that noise generated by the proposed development will comply with the necessary noise requirements during all time periods (over 24-hour period), subject to mitigation measures. These mitigation measures are acceptable to the proponent and can be incorporated into the development as a condition of planning approval.</p> |
| Risk | <p>As the proposed service station provides for the retail sale of fuel, the proponent must obtain a Dangerous Goods Storage and Handling Licence to store and sell petrol on the subject site (post development approval). The is assessed and considered as part of obtaining the licence:</p> <ul style="list-style-type: none"> • Separation distances to boundaries, public places, protected places and impact on adjoining properties. • Site accessibility for fuel delivery tankers and vehicles. • Spill containment. • Emergency preparedness and management. • Operator training. • Maintenance provisions. • Lighting. • Equipment to be installed. <p>Accordingly, risk is appropriately assessed through the dangerous goods licensing process, which will follow the development approval process. The site has been designed to ensure it can obtain a Dangerous Goods and Handling Licence.</p> |
| Odour/Gaseous | <p>The underground fuel storage tanks will be equipped with a Stage 1 Vapour Recovery System. A Stage 1 Vapour Recovery System ensures all petrol vapours from the underground tanks are drawn back into the fuel tanker being emptied and returned to the supply terminal where the vapours are recondensed into liquid. Additionally, vapour recovery lines are connected to the fuel bowsers for further mitigation.</p> |

| Potential amenity or environmental impact | Mitigation methods |
|---|--|
| | The dangerous goods licensing process assesses the likely impact from vapours/odours. Accordingly, the assessment of petrol vapours and odours is appropriately assessed and managed through the dangerous goods licensing process and will require implementation of appropriate design measures to mitigate potential risk impact. |
| Lighting | <p>Potential sources of light spill from the proposed development are primarily the lighting of the retail building frontage, the petrol canopy, and any external lights throughout the forecourt area.</p> <p>It should be noted any light from the retail building is likely to be buffered by the forecourt area. Additionally, lights within the petrol canopy are baffled and orientated internally to ensure light spill is contained within the confines of the development site.</p> <p>The final design of lighting will be subject to, and regulated by <i>Australian Standard 4282 – Control of Obtrusive Effects of Outdoor Lighting</i> and any other relevant regulatory requirements. In addition to regulatory requirements, the layout/orientation of the development and the location/direction of the lighting will further control potential light spill.</p> <p>Street lighting exists along the West Coast Drive and Raleigh Road frontages.</p> |

As demonstrated in **Table 5** above, the proposed development has been appropriately designed and sited to mitigate any potential amenity and environmental impacts on any nearby sensitive land uses.

5 Conclusion

This application seeks approval for the redevelopment and use of the BP service station on the subject site, which is proposed to operate 24 hours and cater for the refuelling of light vehicles and boats.

In summary, the proposal warrants approval for the following reasons:

- BP have been a long term owner and operator of this site, with the redevelopment resulting in a substantial improvement to the existing service station facility within the Sorrento Activity Centre.
- The proposed facilities will provide essential fuel retailing services and retail conveniences to the residents of Sorrento, passing motorists, beachgoers and boat users.
- A service station is a 'D' (discretionary) use within the commercial zone of the SACP and maintains its status as a permissible use on the subject site, demonstrating the suitability/appropriateness of the use on the subject site.
- The proposed development is supported by a Transport Impact Assessment and is configured in a manner which maximises traffic coordination and safety. Any additional vehicular traffic from the development is able to be accommodated by the existing road network resulting no adverse impacts.
- The proposed development is supported by an Environmental Noise Assessment, and is designed and operated in a manner which minimises noise.
- It has been demonstrated, through a comprehensive assessment against relevant EPA guidelines, that the proposed service station redevelopment will achieve regulatory requirements and have minimal, in any adverse impacts on the locality.

Having regard to the above, the proposal clearly demonstrates the suitability of the redevelopment of the existing facility on the subject site. Accordingly, we respectfully request the Metro North West JDAP grant approval to the proposed development.

PS ref: 6024
City Ref: DA19/0544
DAP Ref: DAP/19/01628

06 August 2019

City of Joondalup
Planning Services
PO Box 21
JOONDALUP WA 6919

Attention: Jeremy Thompson, Senior Urban Planner

Dear Sir,

**LOT 153 (128) WEST COAST DRIVE AND LOT 154 (1) RALEIGH ROAD, SORRENTO
PROPOSED SERVICE STATION REDEVELOPMENT
RESPONSE TO REQUEST FOR FURTHER INFORMATION**

Planning Solutions acts on behalf of BP Australia Pty Ltd in support of an Application for Approval to Commence Development of a service station on Lot 153 (128) West Coast Drive and Lot 154 (1) Raleigh Road, Sorrento (**subject site**).

We refer to the Request for Further Information (**RFI**) from the City of Joondalup (**City**) received via email on 23 July 2019. In addition to the City's planning comments, we provide a response to the comments received at the Joondalup Design Reference Panel (**JDRP**) meeting on 17 July 2019, at which the proposed BP service station redevelopment was presented.

1.0 AMENDED DEVELOPMENT PLANS

Please find enclosed an amended set of development plans (refer to **Appendix 1**), reflecting the following proposed modifications to the site plan and elevations:

1. A modified north west elevation of the retail building, providing an extension of timber cladding to the rear of the building and additional paint finish, adding visual interest and reducing blank wall space.
2. Minor relocation of the pylon sign, so that it is wholly located within the lot boundaries of the subject site. The sign face is angled south west towards West Coast Drive. To clarify any discrepancies in the DA report and DA plans, the proposed pylon sign is 6m high.
3. Annotation of top of wall heights for the retaining wall on the eastern lot boundary.
4. Minor relocation of the universal access bay to the eastern bay of the rear car parking area, to provide a more direct access to the retail building.
5. An additional bicycle rail to provide a total of four bicycle rails fronting West Coast Drive.

Please also find the attached landscaping plan (**Appendix 3**) with revised landscaping design, including inclusion of three trees to the rear of the site and one tree in the verge area at the West Coast Drive / Raleigh Road intersection. All other plant species are native, low growing, low maintenance and water wise varieties from the City's approved plant material list.

The above modifications are outlined in further detail within this submission.

2.0 SUITABILITY OF THE BP SORRENTO REDEVELOPMENT

The main consideration informing the RFI relates to the suitability of the proposal in the context of the Sorrento Activity centre Plan (**SACP**). Specifically, we refer to the following statement from the RFI:

Fundamentally the City has concerns that the development does not meet the intent of the Sorrento Activity Centre Plan (SACP). Whilst noting the land use is existing the proposal is not in line with the intention as demonstrated in Plan 2.

The application does not propose a change of the service station use which has operated on the subject site for the past 45 years. Refer to the Landgate historical aerial photograph below from 1985, with records suggesting a service station has operated since 1974. The subject site has also been owned by BP for over 20 years.



Photograph 1: Landgate historical aerial image from 1985, showing the use of the subject site as a service station.

Under the SACP, the subject site is designated a 'Commercial' zoning, with land use permissibility to be in accordance with the corresponding zone under LPS3. A Service Station land use is a 'D' (discretionary) use within the Commercial zone and capable of approval on the subject site. The built form required by the SACP is not conducive for a service station, a use that is capable of approval under the provisions of LPS3. As such, we consider the continued use of the site for the purposes of a service station to be entirely appropriate.

Service Station Design

The design of the redeveloped service station has incorporated many of the built form provisions outlined by the SACP. The proposed development incorporates a unique built form, differing from the typical BP service station. Specifically, the design incorporates a reduced street setback of the retail building to West Coast Drive to provide a direct interface with the street. This design feature is coupled with layout considerations that include car parking at the rear, vehicle access and an easement to link to the adjoining property to the north.

The retail building provides opportunities for interaction with West Coast Drive, with the reduced setback resulting in an activated streetscape, providing for high levels of pedestrian interaction. The reduced setback and café seating provide a social environment to interact with customers and/or pedestrians. The proposed landscaping provides a high level of external amenity for pedestrians, customers, passing motorists and nearby dwellings and is a substantial improvement to what currently exists. The retail building also provides an increased scale in terms of building height, responding to the sites prominent location fronting West Coast Drive and in response to the prescribed development standards of the SACP. The increased height in addition to the provision of substantial glazing achieves maximum activation and interaction with the streetscape, whilst maintaining the practicality of the site for use as a service station.

These are all features that demonstrate the SACP has been considered in the overall design of the proposed development. These efforts were additionally acknowledged by several of the JDRP members at the meeting on 17 July 2019, but not formalised within the minutes.

There are some built form components of the SACP that simply cannot be achieved in consideration of the unique operational and layout requirements of a service station. Such requirements identified by the City's officers include a minimum building height of 3 storeys and a nil setback along the entire West Coast Drive street frontage. The built form and characteristics of a service station are highly specialised and need to be considered as part of a service station development. Every service station contains a fuel canopy, refuelling forecourt, retail building, fuel tanker fill points and ideally two points of access / egress. The locations of these components require careful consideration to achieve optimal functionality and operation of a facility. In addition, these considerations further extend to the dangerous goods licence requirement which dictate where components of a service station can and cannot be located.

All of the design features have been considered carefully throughout the design of the proposed service station to ensure the built form is of high quality, high amenity and responds to the context and character of the locality. The proposed service station is generally consistent with the built form standards contemplated by the planning framework.

Taking into consideration the above, the overall service station design process is complex and needs to be considered holistically to ensure the development is functional, capable of operating and considered in response to the planning framework.

Planning And Development (Local Planning Schemes) Regulation 2015

The SACP is the planning instrument guiding built form for the subject site. The specific built form standards the City's officers have identified as not being considered as part of this application include achieving the minimum building heights and street activation by providing a continuous frontage to West Coast Drive. Pursuant to Clause 43 (1), Part 5, Schedule 2 – Deemed Provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015*:

A decision-maker for an application for development approval or subdivision approval in an area that is covered by an activity centre plan that has been approved by the Commission is to have due regard to, but is not bound by, the activity centre plan when deciding the application. [Emphasis added].

The Deemed Provisions clearly establishes that discretion should be applied by the decision maker in determining an application for development approval, with an Activity Centre Plan only a 'due regard' document. Whilst incorporating as many of the SACP built form requirements as possible, it is not possible to achieve all as part of a service station development, as outlined above.

Taking into consideration the information contained within this submission and development application, we respectfully request that discretion be applied by the City in their assessment of the proposed development and recommendation to the Joint Development Assessment Panel.

3.0 SERVICE STATION EXAMPLES

A number of existing service station developments have been approved in contexts where the planning framework has typically required a higher and more intensive use of the land. Two such examples are provided in **Table 1** below.

Although the planning framework may envision a higher and more intense built form / use for a site, any application to redevelop an existing facility, with a continuation of the existing / use is warranted and should be assessed on its merits. The particular built form requirements of a due regard document such as an Activity Centre Plan or Local Development Plan should be considered in response to the type of use and development being proposed.

Table 1 – Service station examples

| Site | Summary of development and relevant planning framework |
|---|--|
| BP Nookanburra Lot 31 (386) Scarborough Beach Road, Innaloo. | <ul style="list-style-type: none"> The redevelopment of the existing service station facility was approved by the Metro North-West Joint Development Assessment Panel on 30 May 2018. The Stirling City Centre Activity Centre Plan and the Southern Precinct Local Development Plan envisioned a mixed-use, Main Street Built form. The development standards of both due regard documents ultimately envisioned mixed use development with a <u>minimum of 2 storeys</u> and <u>maximum of 12 storeys</u>. |
| Caltex Applecross Lot 22 (918) Canning Highway, Applecross. | <ul style="list-style-type: none"> The redevelopment of the existing service station facility approved by the Metro Central JDAP on 7 August 2013. The Canning Bridge Activity Centre Plan was a seriously entertained document at the time the application was under assessment. The planning framework envisages mixed use development with a building height of <u>15 storeys</u> and continuous <u>nil setback street edge</u>. |

These two sites provide a clear example of how this type of development has been considered in relation to a planning framework that is similar to the SACP.

4.0 CASE PRECEDENTS

Precedents have also been set by State Administrative Tribunal (**SAT**) in cases of a similar nature and context to that of the proposed development. In the matter of *Caltex Australia Petroleum Pty Ltd and the Town of Vincent* [2010] WASAT 174 (**Caltex Leederville decision**), the State Administrative Tribunal (**SAT**) considered the issues to determine if an application for the redevelopment of the longstanding Caltex facility was consistent with orderly and proper planning. Specifically, the Tribunal explored:

Whether the development is consistent with orderly and proper planning and the conservation of the amenities of the locality having regard to the location, height, scale, design and nature of the proposal and the terms of the Masterplan.

The Caltex Leederville decision is relevant to this application, as the Town of Vincent resolved to refuse a development application for the redevelopment of the Caltex facility that had operated on the site for 40 years, based off inconsistencies with a Masterplan (due regard) document. The Town of Vincent contended that the proposed redevelopment of the Caltex facility was inconsistent with the aims and intended built form of the Masterplan, an under-development of a key site and was considered contrary to orderly and proper planning.

The Tribunal recognised the importance and role of policy in guiding planning decisions and promoting rational and consistent decision-making, however, ultimately resolved that policies ‘*should not be applied so inflexibly that where a variance may be appropriate, it is simply ignored*’. As pointed out by *Nicholson J in Falc Pty Ltd and Anor v State Planning Commission (1991) 5 WAR 522*:

‘the function of the Tribunal is to have regard to that policy but to exercise its discretion in relation to it in the light of the evidence in the particular case’.

The guidelines for built form were conceptual and provided principles that should be incorporated into the built form of new developments. The Tribunal accepted that the proposed development had conscientiously made an effort to embody some of the built form principles advocated in the Masterplan guidelines, effectively having due regard for the document.

There are a number of consistent themes with Caltex Leederville decision and the BP Sorrento site. Both sites have a service station as a land use that is capable of approval; the use is a continuing use (and one that has operated on the site for in excess of 40 years); the application only relates to the physical development of the land; and the landowner / proponent had due regard to the applicable planning framework and actively made efforts to incorporate achievable aspects of the planning framework into the design of the facility.

The proposed redevelopment of the BP Sorrento service station has had due regard for the specific built form requirements of the SACP, considered these requirements in the design of the redeveloped facility while maintaining the essential built form standards applicable to the service station use. The proposal results in a substantially improved development in terms of amenity and functionality. As much as the planning framework envisions a higher and more intense built form for the subject site, the landowner and operator of this longstanding service station site has made all possible efforts to incorporate the achievable aspects of the SACP into the design of the redeveloped service station.

4.0 RESPONSE TO CITY'S COMMENTS

Refer to **Table 2** below for the response to the general comments and requested amendments contained within the City's RFI.

Table 2 – Response to City's RFI and requested amendments (via email on 23 July 2019)

| # | City's comment | Recommended applicant response |
|----|--|--|
| a. | <i>The development does not meet the minimum building heights applied in Note 3 of Plan 2. This furthers the argument above that the development is not in keeping with the intent of the SACP.</i> | Refer to Sections 2 and 3 above. |
| b. | <i>The proposed frontage of 10.6m and glazing area (active frontage as defined by 5.6.1 e of SACP) of 7.2 is not considered sufficient for the Active Edge as identified in Plan 2. This equates to 20% of the frontage area of 34.44m (43.44m minus 9m for access and landscaping). Justification that the proposed service station use cannot provide this due to the nature of the use is not sufficient.</i> | <p>The size of the site and the service station land use does not allow for further increases in the amount of active frontage. Service stations require two street crossovers for optimal functionality, as discussed later in this submission. This significantly inhibits the amount of street frontage that can be developed. This could only be achieved if a continuous wall/glazing were provided along the frontage in front of the canopy. We do not consider this to be a good built form outcome for the corner site and it is questionable whether a solid façade would result in greater activation than a development of an open nature.</p> <p>Furthermore, an active frontage is a highly subjective term, with the service station and associated Wild Bean café considered to largely be an active use. Pedestrians are encouraged to access the facility from the already active West Coast Drive. When patrons are refuelling their car, there is an opportunity for interaction with the street. For example, a patron may see someone they know walking along West Coast Drive and engage in a form of interaction.</p> <p>The proposed development maintains clear sightlines and a built form that is appropriate for the coastal location. High quality landscaping provided at the intersection increases the amenity of the public realm.</p> |
| c. | <i>No landscaping strip is proposed on the eastern boundary of Lot 154 as required by SACP Plan 2 and element 5.4.5.</i> | <p>A landscaping strip is not proposed on the entirety of the eastern boundary of Lot 154 to ensure a more suitable vehicle access arrangement and crossover location within proximity to the intersection. Providing a landscaping strip in the prescribed location would require the Raleigh Road crossover to be shifted closer towards the West Coast Drive / Raleigh Road intersection, which is not ideal from a safety perspective.</p> <p>A high-quality landscaping area is provided to the rear of the site to compensate for no landscaping strip along the lot boundary.</p> |

| | | |
|----|--|--|
| | | The purpose of the landscaping strip's location is unclear. We understand the intent of the landscaping strip was to provide a separation between Lot 154 and Lot 155. The proposed development does not contain multiple level / mixed use development and does not require this separation in built form as the area is provided with hardstand. Lot 155 has historically remained vacant and it is unknown whether any future development will occur on this site. |
| d. | <i>The transport report (specifically swept paths) show conflicts between vehicle movements and the fill points. The development also has a significant number of movements that cross to the wrong side of the road/access.</i> | Refer to the technical note and additional swept path analysis provided by Porter Consulting Engineers in Appendix 2 . The vehicle movements are lane correct and the only movement on the wrong side of the crossover relates to service vehicles and boats which are a small percentage of vehicle movements. This is common for service station developments. |
| e. | <i>Noting the access points are existing, they are not in accordance with the SACP.</i> | <p>The crossovers are existing, with only minor modifications proposed to allow for suitable access in response to the amended design. The Raleigh Road crossover is in accordance with the location prescribed in the SACP. The transport assessment that was undertaken for the SACP analysed two scenarios both of which included the access to the service station site.</p> <p>A service station use requires a minimum of two street crossovers for an efficient and optimal flow of vehicles, and access for service vehicles. It is not practical or possible for fuel tankers to turn around within the constraints of the subject site. Main Roads WA acknowledge this design requirement in their driveway policy Document (D12#57413) which states:</p> <p><i>"Service stations on a corner lot may have one driveway up to 11.0 m wide to a State road and another to the minor road. Those not on a corner may have two driveways, each up to 11.0 m wide"</i></p> <p>In addition, West Coast Drive and Raleigh Road are not regional roads. Refer to the technical note provided by Porter Consulting Engineers in Appendix 2.</p> |
| f. | <i>Though meeting car parking requirements, the ACROD parking bay is not convenient to access the site, nor are the two parallel parking bays along the boundary of Lot 155.</i> | Rear parking bays have been reconfigured to have the shared access align directly with the pedestrian crossing to provide more direct access to the universal access bay. |
| g. | <i>The proposal does not permit for sufficient truncation on the eastern side of the development to allow safe interaction between the vehicles leaving Lot 2 and the pedestrians in front of the subject site.</i> | <p>The maximum height of the retaining wall at this aspect of the site is 2.1 metres, as depicted on the revised development plans. The pedestrian walkway is located 9.3m from the boundary of Lot 2. This area contains a 2.69m landscaping strip which provides suitable distance for vehicle sight lines. In addition, vehicles will be travelling at low speeds, as this in an internal accessway.</p> <p>Refer to the technical note provided by Porter Consulting Engineers in Appendix 2 for further information on the suitability of this access.</p> |
| h. | <i>The proposal does not include the retaining wall heights as proposed. Please include top of wall heights to ensure there is no detrimental impact on vehicle movements.</i> | The retaining walls are now depicted on the revised development plans contained in Appendix 1 . There will be no detrimental impact on vehicle movements or sightlines as a result of the retaining walls. |
| i. | <i>Through investigation into the site it does not appear that any formalised easement is on the property. Should the development be successful a condition requiring this to be undertaken will be required.</i> | The proposed formalised easement area is depicted on the site plan as the hatched area. We agree to an appropriately worded condition of approval requiring the formalised easement. |

| | | |
|----|---|---|
| j. | <i>The proposal appears to provide 3 bicycle bays in the verge area. This is in lieu of 4 (2 for the development, 2 for visitors).</i> | The revised development plans contained in Appendix 1 now depict 4 bicycle rails in the verge area fronting West Coast Drive, adjacent to the entrance of the retail building. A bicycle can be parked either side of the bike rail, essentially providing space for six bicycles in lieu of the required four. |
| k. | <i>The proposal includes signage which overhangs into public land. This matter is not supported by the City and signage is required to be located within private land. The exact height and size of the sign also needs to be identified as this is unclear through the report/plans.</i> | We confirm that a 6m sign is proposed, as reflected in revised plans. The sign has been relocated slightly to the east to be wholly contained within the boundaries of the subject site and doesn't overhang into public land. |
| l. | <i>No information has been provided on any equipment, external fixtures and associated screening.</i> | Further detailed information regarding the specifics of equipment, and external fixtures can be provided at the detailed design stage prior to obtaining a building permit, as an appropriately worded condition of approval. All plant will be provided within the service yard which is appropriately screened from view. |
| m. | <i>The plans identify that the services/refuse yard has a door that opens directly onto a landscaped area. This does not seem practical.</i> | The door that is depicted is an emergency evacuation door. The landscaping plan has been updated to provide a stone path from the emergency evacuation door to the forecourt. |
| n. | <i>Delivery and waste management will need to be coordinated to ensure there is no conflict.</i> | Service vehicles such as delivery trucks and fuel tankers can be managed to access the site during non-peak times and coordinated to ensure there is no conflict, as part of best practice service station operation. BP are an experienced operator who will appropriately coordinate all delivery and waste management. |
| o. | <i>No irrigation details have been provided. Stamped Certified Irrigation Design (CID) are required that complies with the Street Verge Guidelines including;</i> | All garden beds are to be irrigated. Irrigation details can be provided as a condition of Development Approval. The water schedule will be as per the Water Corporation's 'Water Efficiency Measures'. A Certified Irrigation Plan has been referred to in the Landscape Plan notes contained in Appendix 3 . This can be provided at the detailed design stage prior to construction and be a condition of Development Approval. |
| | <i>a. The City has the following requirements when an owner or occupier installs irrigation to street verges: Irrigation pipes should be laid beneath the verge at a depth between 150mm and 300mm. No fitting connected to the pipes shall protrude above the surface of the lawn or garden.</i> | |
| | <i>b. Irrigation pipes and connections should be at least 250mm away from the footpath or the kerb alignment. Half sprinklers should be used and should direct the flow of water away from the road or footpath surface. Only the pipes and sprinklers should be located on the verge; all valves, including solenoid valves, should be located within the abutting property.</i> | |
| p. | <i>Notwithstanding comments from JDRP the plant species appear too big and would potentially impact sightlines for the intersection of Raleigh Road and West Coast Drive.</i> | The plant varieties selected for the landscape area at the intersection of Raleigh Road and West Coast Drive are 50cm in height or less, as approved for verges and surrounding cross overs. Please refer to the plant schedule on the landscaping plan in Appendix 3 for the specific heights and widths of the proposed plant species at maturity. |

| | | |
|----|---|---|
| q. | <i>Hankea undulata</i> grows to 2m high – Needs to be substituted for something else more appropriate on the attached list. | Hankea undulata has been removed from the plant schedule. The plant varieties selected for the landscape area at the intersection of Raleigh Road and West Coast Drive are 50cm in height or less, as approved for verges and surrounding cross overs. Please refer to the plant schedule on the landscaping plan in Appendix 3 for the specific heights and widths of the proposed plant species at maturity. |
|----|---|---|

RESPONSE TO JDRP COMMENTS

Table 3 below provides a response to the general comments received by the JDRP at the meeting held on 17 July 2019.

Table 3 – Response to JDRP comments

| # | JDRP comment | Recommended applicant response |
|----|--|--|
| 1. | <i>More trees/canopy should be incorporated on site with landscaping being incorporated into the adjoining residential lot. Corner element could be a feature of the site.</i> | <p>Three medium sized trees (Coral Gum and Native Frangipani) are proposed in this area along with medium-sized shrubs, ground covers and grasses.</p> <p>The selected trees are narrow growing and from the City's approved plant material list, which are approved for carparks. Both varieties are low bark/litter varieties, required for a service station.</p> <p>All shrubs, grasses and ground covers specified on the plan are native, low maintenance and water wise varieties from the City's Approved Plant Material list. The planting density is typical of similar sites.</p> <p>Please refer to the plant schedule on the landscaping plan within Appendix 3 for the specific heights and widths of the proposed plant species at maturity.</p> |
| 2. | <i>Rear (north) of the building could be addressed through alternate treatment.</i> | Please refer to the revised north west elevation of the retail building as depicted on the revised development plans. The timber cladding and paint finish has been extended to the rear of the building, adding visual interest and reducing blank wall space. |
| 3. | <i>Signage should comply with the City's policy and be located within the site.</i> | <p>The height of the proposed pylon sign is 6m in accordance with the requirements of the City's signage policy.</p> <p>The sign has been relocated to the east to be wholly contained within the boundaries of the subject site and ensure it does not overhang into public land.</p> |
| 4. | <i>All contamination issues need to be resolved.</i> | <p>This is not considered to be a relevant matter for the JDRP.</p> <p>Contamination will be addressed in accordance with the requirements of the <i>Contaminated Sites Act 2003</i>. Routine environmental monitoring undertaken by BP and a pre-rebuild environmental assessment completed by GHD in April 2019 identified hydrocarbons in groundwater and soil beneath the site. As part of the redevelopment, BP's environmental consultant and an accredited contaminated sites auditor will review all environmental assessment and remediation works.</p> |

CONCLUSION

In summary, the above response thoroughly addresses the comments raised by the City in their RFI, sent via email on 23 July 2019 and the comments raised by the JDRP at its meeting held on 17 July 2019. A modified north west elevation of the retail building includes increased timber cladding for improved amenity, visual interest and a decrease in the area of blank wall space.

The development is largely compliant with the planning framework and results in a high-quality built form outcome for the subject site, which has been used exclusively as a service station for the past 45 years. Accordingly, we respectfully request the application for development approval be considered on its merits and the City makes a favourable recommendation to the Metro North West JDAP.

Should you have any queries or require further clarification in regard to the proposal, please do not hesitate to contact the undersigned on (08) 9227 7970.

Yours faithfully,



JOSH WATSON
ASSOCIATE

190806 6024 RFI Response Letter

TRAFFIC IMPACT
ASSESSMENT

BP SORRENTO
SERVICE STATION
REDEVELOPMENT

Porter



REPORT PREPARED FOR

BP Australia Pty Ltd

| | |
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| Job number | 19-03-034 |
| Date | 7 June 2019 |
| Our reference | R17.19 |
| Checked | |

HISTORY AND STATUS OF THE DOCUMENT

| Revision | Date issued | Author | Issued to | Revision type |
|----------|-------------|---------------|----------------------|---------------|
| Rev A | 07/06/2019 | J Hopfmueller | BP Australia Pty Ltd | First Issue |
| Rev B | 10/06/2019 | J Hopfmueller | BP Australia Pty Ltd | Second Issue |
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Appendix A – Site Plan

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1.0 INTRODUCTION

1.1 Background

Porter Consulting Engineers has been commissioned to prepare a Traffic Impact Assessment (TIA) for the development application for the redevelopment of the existing BP Service Station on the corner of West Coast Drive and Raleigh Road, Sorrento within the City of Joondalup.

The site is located approximately 20kms to the north of the Perth CBD and 15km to the south of the Joondalup City Centre. Key distributor roads within close proximity of the site include West Coast Drive (frontage road), Hepburn Avenue to the north, Marmion Avenue to the east and Warwick Road to the southeast.

The site location is shown in a regional context in **Figure 1** and in a local context in **Figure 2**.

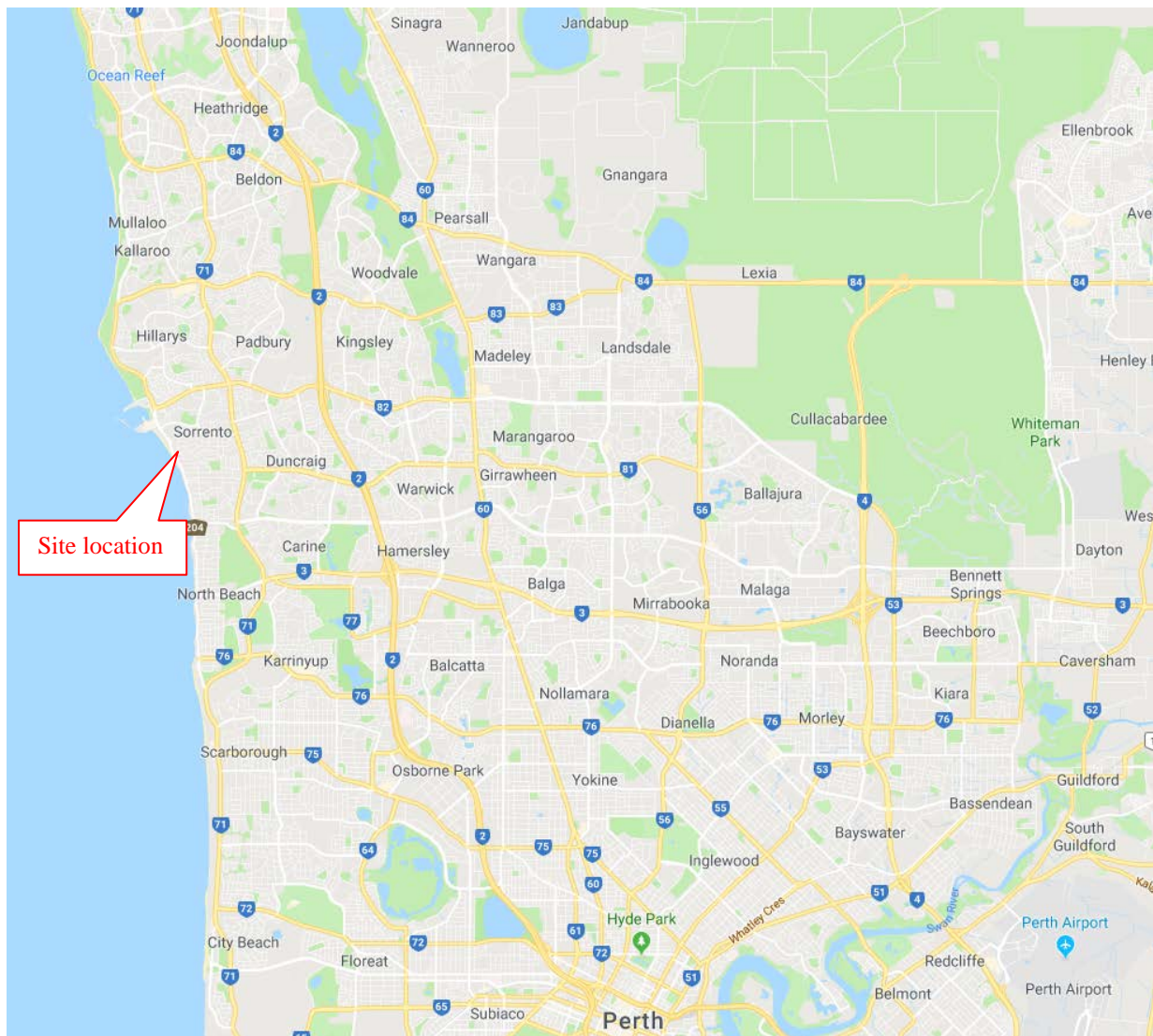


Figure 1: Site Location – Regional Context (GoogleMaps)

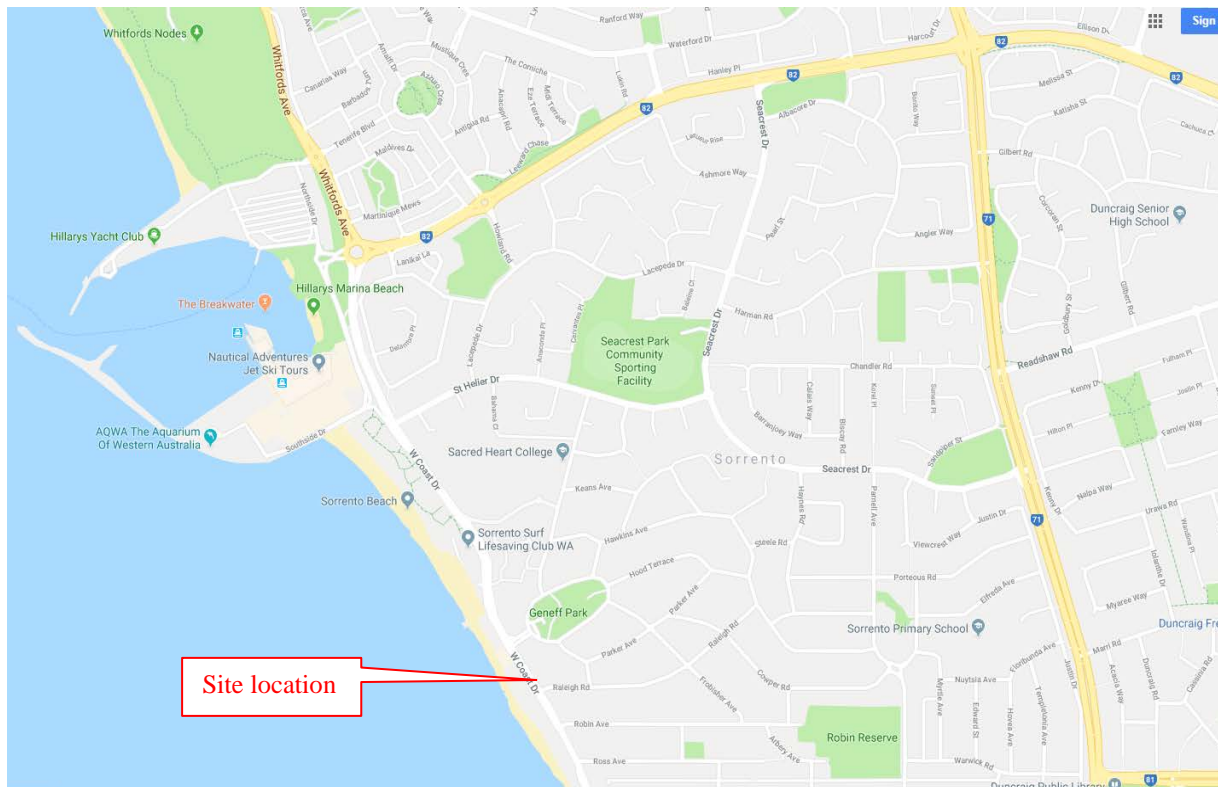


Figure 2: Site Location – Local Context (GoogleMaps)

1.2 Scope of Assessment

The intent of this report is to provide the approving authority with sufficient transport information to confirm that the proponent has adequately considered the transport aspects of the development. This TIA assesses the proposed redevelopment addressing road access, site circulation, parking and pedestrian access as well as traffic safety.

The level of transport assessment is considered to be that of a ‘high impact’ development. A “high impact” development is one that generates over 100 vehicle trips in the development’s peak hour. It is however noted that this is a redevelopment and as such the traffic is already on the existing road network.

2.0 DEVELOPMENT PROPOSAL

2.1 Proposed Land Uses

The proposed redevelopment is for a BP Service Station. Facilities to be included within the development are:

- 8 refueling positions;
- 253m² convenience store; and
- 5 parking bays

Two driveways (existing) are proposed to remain to service the redeveloped site. These are located on West Coast Drive and Raleigh Road. Indirect access is also available via the rear of the site from the adjoining lot.

Appendix A contains a copy of the development plan.

2.2 Context to the Surrounds

The development currently operates as a service station. The redevelopment seeks to improve the existing facilities and layout of the site in line with the Activity Centre Plan for the Sorrento Local Centre.

West Coast Drive in the vicinity of the site is subject to pedestrian activity due to the proximity to the beach and associated activities. It is understood that the City has a vision to improve pedestrian facilities along this section of West Coast Drive. The proposed layout of the redevelopment supports pedestrian access. Unlike typical service stations, the redevelopment proposes two entrances into the store. One entrance is to be located adjacent to the forecourt to service the refueling customers whilst another entrance is to be located directly from the West Coast Drive verge area to cater for “walk in trade” from the surrounds.

3.0 EXISTING SITUATION

3.1 Road Hierarchy and Road Infrastructure

Adjacent to the site, West Coast Drive is constructed to a two-way divided carriageway standard using a combination of painted and solid median treatments. On street parking embayments are provided on the western side of the road. A Principal Shared Path (PSP) is provided along the western side of the road. The existing verge width is paved directly adjacent to the site. Power poles (with street lighting) are located on the eastern side of the road adjacent to the site.

Raleigh Road is constructed to a two-way undivided single carriageway standard. Centreline marking are provided separating the opposing traffic lane flows. Power poles are located on the northern side of the road.

Raleigh Road forms a T-junction at West Coast Drive with Raleigh Road being the minor leg controlled by Give Way.

Figure 3 outlines the existing standard of West Coast Drive and Raleigh Road in the vicinity of the site.



Figure 3: Road Standard of West Coast Drive and Raleigh Road (NearMaps)

West Coast Drive is classified a District Distributor B road under Main Roads WA *Functional Road Hierarchy*. This classification is applied to roads which are to “*carry traffic between industrial, commercial and residential areas and generally connect to Primary Distributors.*” These roads typically have a reduced capacity compared to District Distributor A roads due to flow restrictions from access to and roadside parking alongside adjoining properties. This road is managed by the City of Joondalup.

Raleigh Road is classified as an Access Road under Main Roads WA *Functional Road Hierarchy*. Access roads “*provide access to abutting properties with amenity, safety and aesthetic aspects having priority over the vehicle movement function. These roads are bicycle and pedestrian friendly.*” This road is also managed by the City of Joondalup.

Figure 4 outlines the road hierarchy classification of the surrounding road network.

Both West Coast Drive and Raleigh Road are subject to the default urban speed limit of 50km/h.



Figure 4: Road Hierarchy of Surrounding Road Network (Main Roads WA website)

3.2 Existing Traffic Volumes

The most recent traffic counts available were sourced from MRWA's "Traffic Map" website and the City of Joondalup. A summary of these are outlined in **Table 1**.

Table 1: Existing Traffic Volumes of Existing Road Network

| Road | AWT | Peak | Heavy Vehicles | Date |
|---|------------------------------------|---|----------------|---------|
| Main Roads WA Counts | | | | |
| West Coast Drive (north of Beach Rd) | 13,519 (M-F) | 8.00am 1,430 vph (M-F) 5.00pm 1,245 vph (M-F) | 5.7% | 2018/19 |
| | 16,9003 (S-S) | 11.00am 1,542 vph (S-S) 12.00pm 1,684 vph (S-S) | 3.2% | |
| West Coast Drive (south of Hepburn Ave) | 16,965 (M-F) | 11.00am 1,185 vph (M-F) 5.00pm 1,432 vph (M-F) | - | 2014/15 |
| | 19,307 (S-S) | 11.00am 1,597 vph (S-S) 12.00pm 1,540 vph (S-S) | | |
| City of Joondalup Counts | | | | |
| West Coast Drive (north of Beach Rd) | 13,516 | 8.00am 1,348 vph 3.00pm 1,415 vph 11.00am 1,087 vph (Sat) | 52.5km/h | 05/2019 |
| West Coast Drive (south of Troy Ave) | 13,389 | 8.00am 1,353 vph 3.00pm 1,391 vph 11.00am 1,093 vph (Sat) | 56.0km/h | 05/2019 |
| West Coast Drive (south of Gull St) | 13,596 | 8.00am 1,366 vph 3.00pm 1,418 vph 11.00am 1,108 vph (Sat) | 55.6km/h | 05/2019 |
| West Coast Drive (south of High St) | 13,794 | 8.00am 1,396 vph 3.00pm 1,424 vph 11.00am 1,129 vph (Sat) | 54.6km/h | 05/2019 |
| West Coast Drive (south of Ross Ave) | 6819(S) | 7.00am 909 vph 3.00pm 586 vph 11.00am 582 vph (Sat) | 55.6km/h | 05/2019 |
| | 6915(N) | 11.00am 531 vph 4.00pm 925 vph 11.00am 559 vph (Sat) | 55.8km/h | |
| | 13,834(M-F) | | | |
| | 6768(S) 6380(N) 13,148 (M-F) | - | - | 06/2014 |
| West Coast Drive (north of The Plaza) | 6,854(S) | 7.00am 922 vph 3.00pm 578 vph 10.00am 720 vph (Sat) | 55.2km/h | 06/2015 |
| | 6,847(N) | 11.00am 524 vph 5.00pm 919 vph 12.00pm 826vph (Sat) | 55.3km/h | |
| | 13,701 (M-F) | | | |
| West Coast Drive (south of St Heliar Dr) | 7,126(S) | 7.00am 1,009 vph 3.00pm 549 vph 10.00am 571 vph (Sat) | 58.6km/h | 05/2019 |
| | 6,317(N) | 11.00am 471 vph 5.00pm 845 vph 11.00am 525 vph (Sat) | 59.4km/h | |
| | 13,443 (M-F) | | | |

| | | | | |
|--|--------------------------------------|---|--------------------------|---------|
| West Coast Drive (south of Hepburn Ave) | 5,936(S) | 11.00am 460vph 5.00pm 783 vph 11.00am 488 vph (Sat) 7.00am 914 vph 3.00pm 553 vph 1.00pm 540 vph (Sat) | 60.9km/h 60.6km/h | 05/2019 |
| | 6,676(N) | | | |
| | 12,612(M-F) | | | |
| | 6,884(S) 6,192(N) 13,076 (M-F) | | | 07/2015 |
| | 8,443(S) 7,698(N) 16,141(M-F) | | | 03/2012 |
| Raleigh Road (east of West Coast Dr) | 957 | 8.00am 108 vph 5.00pm 88 vph | 37.8km/h | 06/2015 |

Historical traffic counts indicate the following:

- West Coast Highway, south of Hepburn Avenue traffic volumes have decreased from 2015 to 2019 at approximately 1% per annum
- West Coast Highway, south of Hepburn Avenue traffic volumes have decreased from 2012 to 2015 at approximately 6.8% per annum. This does not take into consideration seasonal variation as the 2012 count was in March compared to the 2015 count undertaken in July.
- West Coast Highway, south of Ross Avenue traffic volumes have increased at an annual average growth of 1% per annum from 2014 to 2019 i.e. a total of 5% growth.

For the purpose of the assessment it has been assumed that a 1% per annum growth will occur over the next 10 years along West Coast Drive and the surrounding road network.

3.3 Existing Service Station Traffic

Data from the existing site suggests that Mondays and Saturdays are the busiest days based on transaction records. Mondays are known as a “cheap fuel” day and as such the vehicle generation is likely to be at its highest. Saturdays are also one of the stores busier days however fuel sales are lower than convenience store transactions. This is likely attributed to the store location near the beach with more “walk in” transactions than on a typical weekday resulting in lower vehicle generation on Saturdays than Mondays. Whilst BP does have a “cheap fuel” day BP are not a discount fuel retailer like other competitors.

Traffic counts were undertaken at the three existing crossovers servicing the existing service station on Saturday 18th May between 11.00am and 1.00pm and Monday 20th May, 2019 between 4.00pm and 6.00pm. These times typically represent the peak times for the adjoining road network on these days.

The Monday peak hour occurred between 5.00 to 6.00pm with a total of 202 vehicles using the three existing crossovers. The 15 minute peak during this peak hour suggests that approximately 15% of the crossover traffic is associated with the adjoining development. Accordingly the service station peak hour volume is estimated to be approximately 172 vehicles per hour.

The Saturday peak hour occurred between 11.45am and 12.45pm with a total of 142 vehicles using these three crossovers. The 15 minute peak during this peak hour suggests that approximately 30% of the crossover traffic is associated with the adjoining development. Accordingly, the service station peak hour volume is estimated to be approximately 99 vehicles per hour.

3.4 Crash History

A study of the recent crash history for West Coast Highway and Raleigh Road in the vicinity of the site has been conducted for the five year period to the end of December 2018 from the Main Roads Western Australia Integrated Road Information System (IRIS) crash database.

There were 4 crashes and the extracted data is summarised in **Table 2**. One (1) crash was recorded at the intersection of West Coast Drive and Raleigh Road and 3 midblock crashes occurred along West Coast Drive adjacent to or just north of the site. No crashes were recorded along Raleigh Road in the vicinity of the site.

Table 2: Summary of Recorded Crashes on West Swan Road and Park Street adjacent to the Site

| | West Coast Dr /Raleigh Rd | West Coast Dr (midblock) |
|-----------------------|--------------------------------------|-------------------------------------|
| Total | 1 | 3 |
| <i>Crash Type</i> | | |
| Rear End | 1 | 3 |
| Right Angle | | |
| Other | | |
| <i>Crash Severity</i> | | |
| Hospital | | |
| Medical | | 2 |
| Property Damage (Maj) | | 1 |
| Property Damage (Min) | 1 | |
| Wet | - | - |
| Dusk/Dawn | - | 1 |
| Dark – Lights On | - | 1 |

3.5 RAV Network

The Restricted Access Vehicles (RAV) Network documented by Main Roads WA was reviewed. West Coast Drive adjacent to the site does not form part of the existing RAV network. .

4.0 VEHICLE ACCESS AND PARKING

4.1 Vehicle Access

The existing site is serviced directly by two crossovers, one on West Coast Drive and one on Raleigh Road. A third crossover is available from West Coast Drive via the adjoining northern property acting as a shared crossover. A one way link in a northerly direction is provided from the adjoining property to Padbury Circle. This allows indirect access to Padbury Circle.

The existing redevelopment proposes the construction of the building structure (convenience store) adjacent to the northern property boundary of the site in line with the Activity Centre Plan for the Sorrento Local Centre. This effectively reduces direct vehicle access to the site to the two existing site crossovers on West Coast Drive and Raleigh Road. The indirect link at the rear of the site is maintained in accordance with the Sorrento Activity Centre Plan. Under this plan it is envisaged that this existing rear access way be maintained but upgraded to provide access and circulation through the “activity area” for vehicles, cyclists and pedestrians.

Figure 5 shows diagrammatically the existing and future access arrangement to and surrounding the Site.



Figure 5: Existing and Future Access Arrangements to the Site

4.2 Sight Distances

AS2890.1 Parking Facilities, Part 1: Off-street car parking, clause 3.2.4 outlines the required sight distance at access driveway exits. Both roads are subject to the 50km/h urban default speed limit. There is a speed bump with an advisory speed of 20km/h located 65m to the east of the Raleigh Road crossover which is likely to reduce the speed of approaching vehicles to below the default of 50km/h. The sight distance requirements for 50km/h are 45m minimum and 69m desirable.

Figure 6 shows the various sight lines based on 50km/hr. A stopped bus will momentarily restrict the sight lines from the desirable 69m (blue line) to the minimum 45m (red line). On Raleigh Road, a parked vehicle will restrict the sight lines to the east from the crossover. At present a no standing area is marked providing a sight distance of 25m (green line). It is suggested that parking be prohibited up to the first residential driveway to improve the sight lines from this crossover. This would assist in improving traffic flow exiting not only for the service station but in the future with the redevelopment of Sorrento Activity Centre.



Figure 6: Sight Lines from Crossovers



Figure 7: Looking east along Raleigh Road adjacent to the Site
(Google Maps)



Figure 8: Looking north along West Coast Drive adjacent to the Site
(GoogleMaps)



Figure 9: Looking south along West Coast Drive adjacent to the Site
(GoogleMaps)

4.3 Service Deliveries

Service deliveries to the site will include fuel for the service station and various goods to the convenience store, in addition to garbage collection.

Refuelling tankers proposed to access this site are 15m in length. It is understood that the fuel tankers will approach and depart to the north along West Coast Drive. On this basis the site has been designed for the tanker to enter via the West Coast Drive crossover and exit the site via the Raleigh Road crossover. Within the site the refuelling tanker will be able to stop along the southern side of the fuel canopy with no significant impact to the operation of the nearby crossovers or internal traffic circulation within the site.

The swept paths of various vehicles entering, circulating and exiting the site are included in **Appendix B**.

The various design vehicles are as follows:

- 15m Toll Tanker Refuelling Vehicle
- Convenience Service Area – Single Unit
- Car and Trailer/Boat/Caravan Combinations

4.4 Parking

The proposed site design will provide 5 car parking bays, including a disabled bay. All bays are to be located adjacent to the eastern boundary of the site. The location of the car parking bays limits the number of pedestrian movements through the forecourt.

The eight fuel bowsers positions provide 8 working bays on site to allow refuelling customers to enter the store and pay for the fuel and/or other convenience store items. There is also space for queuing vehicles behind the various bowsers.

The provided parking should be designed to comply with AS2890.1 Parking Facilities Part 1 -Off Street Car Parking.

5.0 TRAFFIC ANALYSIS

In order to assess the potential traffic impacts associated with the proposed development a traffic generation and distribution exercise was undertaken.

5.1 Assessment Period

The assessment periods selected are Monday afternoon peak 5.00pm-6.00pm and Saturday midday peak 11.45am-12.45pm which are considered to represent the combined peak of both the site and adjoining road network on these days.

5.2 Trip Generation

Generation rates were sourced from the ITE Trip Generation Manual 9th edition (Institute of Transportation Engineers) for a service station with convenience store. These rates are 162.78 daily trips per fuel position and 10.16 and 13.51 for am and pm peak hour trips per fuel position.

This equates to the following trip forecast estimates:

- Daily Trips = 1,302 trips/weekday
- AM Peak Hour Trips = 81 trips/hour
- PM Peak Hour Trips = 108 trips/hour

These ITE based trip generation forecasts are comparable to those estimated using specific BP data for the average weekday.

Due to “cheap fuel” days the pm peak hour on a Monday is typically higher. This was confirmed from on site surveys. Whilst BP does have a “cheap fuel” day, BP are not a discount fuel retailer like other competitors. It is estimated that the Monday pm peak hour may be in the order of 172 vehicles per hour which is approximately 60% higher. Surveys for a Saturday peak suggested 99 vehicles per hour which is comparable to the pm peak hour on a weekday.

Service stations typically attract a significant percentage of passing through trade. This traffic is already on the road network hence it is not considered as additional traffic. Data suggests that approximately 56% of service station trips are typically passing trade.

Based on the likelihood of passing trade, the additional trips generated by the development are expected to be considerably less, being:

- Daily Trips = 573 trips/weekday
- AM Peak Hour Trips = 36 trips/hour
- PM Peak Hour Trips = 48 trips/hour

5.3 Trip Distribution and Assignment

The traffic distribution considers the two trip types i.e. passing trade trips and additional trips. The traffic movements were distributed onto the site accesses and road network for these two trip types. The trip distribution patterns took into account varying factors including the existing traffic volumes along the adjacent road network during the peak hours, surrounding catchments areas and surrounding similar land uses.

The traffic distribution was undertaken for the Monday pm and Saturday midday peak scenario. **Figure 10** shows diagrammatically the distribution of traffic for these peak hour scenarios for the redevelopment. It is possible that vehicles also enter/exit via the indirect access in the northeast corner of the site. For the purpose of the analysis this access has been ignored which assumes a robust assessment i.e. all traffic on either West Coast Drive or Raleigh Road crossovers.

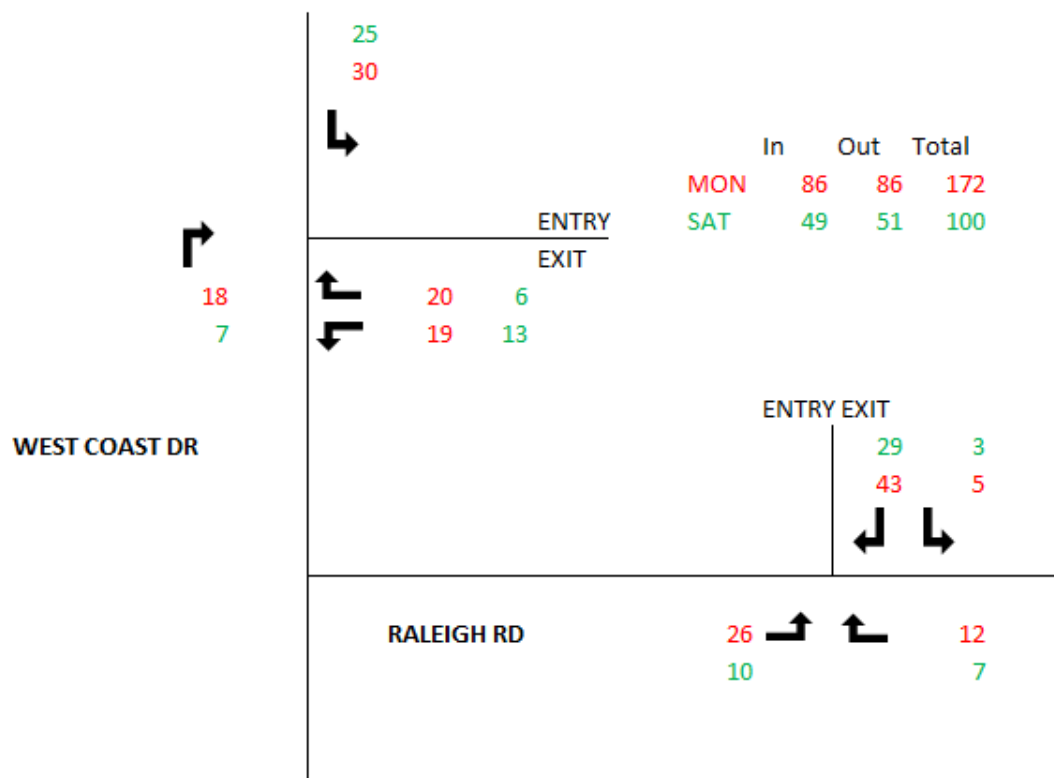


Figure 10: Traffic Distribution for Saturday (Midday Peak Hour and Daily Volumes)

5.4 Impact on Adjacent Road Network

West Coast Drive is classified as a *District Distributor B* road that currently carries in the order of 13,800 vehicles per weekday (May 2019) in the vicinity of the site. The highest hourly flows along West Coast Drive are in the order of 1,400 vehicles per hour during the pm peak hour typically on a Friday. The development's peak does not occur on a Friday. It occurs on a Monday associated with cheaper fuel.

Raleigh Road is classified as a Local Access road and carries in the order of 960 vehicles per weekday (July 2015). The weekday peak hourly flows are in the order of 72 vehicles per hour occurring at 5pm. On the weekend the peak hourly flows are slightly more at 110 vehicles per hour.

Peak hour development traffic on a Monday is in the order of 172 vehicles however on a typical weekday it is more in the order of 108 vehicles per hour. This volume of traffic is already being accommodated on West Coast Drive and Raleigh Road since the development already exists.

5.5 SIDRA Analysis

Intersection capacity analysis using the SIDRA computer package (*version 8*) has been undertaken to assess the operating conditions of the crossovers on West Coast Drive and Raleigh Road. SIDRA is an intersection modelling tool commonly used by traffic engineers for analysing all types of intersections. The key SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These characteristics are defined as follows:

Degree of Saturation (DOS): is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The Degree of Saturation ranges from close to zero for extremely low traffic flow up to one for saturated flow or capacity.

Level of Service (LOS): is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. In general, there are 6 levels of services, designated from A to F, with Level of Service A representing the best operating condition (i.e. free flow) and Level of Service F the worst (i.e. forced or breakdown flow).

Average Delay: is the average of all travel time delays for vehicles through the intersection.

95% Queue: is the queue length below which 95% of all observed queue lengths fall.

A SIDRA analysis of the intersection of West Coast Drive and Raleigh Road has not been undertaken in this assessment. Review of the “Sorrento Activity Centre, Transport Assessment” (Oct 2016) indicates that the intersection will operate satisfactorily with the proposed “Sorrento Activity Centre redevelopment which includes the service station” both at opening and 10 year timeframe. Accordingly, the assessment in this report includes only a SIDRA analysis of the site crossovers with respect to the service station development.

The crossover analysis was undertaken for the pm peak hour period on a Monday and midday peak on a Saturday as these are the development peak days. The development peak hour on these days also occurs during the peak hour of the road network on these days.

SIDRA analysis of the development crossovers indicate satisfactory conditions. Analysis has been undertaken both at opening and a 10 year time horizon. The 10 year time horizon allows for traffic growth on both the road network and development generated traffic to ensure a robust assessment. The average delay and queue lengths should not adversely impact the through traffic along either West Coast Drive or Raleigh Road.

West Coast Drive has a 2.0m painted median to allow a vehicle to queue while waiting to turn right without significantly impeding through traffic. The advantage of some traffic slowing to turn into the site is that it assists to create a “self-regulating street” i.e. the speed of the through traffic is naturally controlled creating a slow speed environment which is desirable within areas of pedestrian activity.

The analysis shows that there are sufficient gaps along both West Coast Highway and Raleigh Road to allow traffic to exit the site with acceptable delays and internal queues.

Detailed summary of the SIDRA results are included in **Appendix C**.

6.0 OTHER ISSUES

6.1 Pedestrian and Cyclist Facilities

West Coast Drive has a Principal Shared Path (PSP) located on its western side adjacent to the Site. **Figure 11** shows the PSP as well as other existing cycling facilities within the surrounding road network as documented within the Department of Transport “Perth Map Series”.

West Coast Drive in the vicinity of the site is subject to pedestrian activity due to the proximity to the beach and associated activities. It is understood that the City has a vision to improve pedestrian facilities along this section of West Coast Drive. The proposed layout of the redevelopment supports pedestrian access. Unlike typical service stations, the redevelopment proposes two entrances into the store. One entrance is to be located adjacent to the forecourt to service the refueling customers whilst another entrance is to be located directly from the West Coast Drive verge area to cater for “walk in trade” from the surrounds.

Whilst the nature of the development traditionally relies on private vehicle patronage the surrounding path facilities provide opportunities for both staff and patrons to use pedestrian and cycling facilities to/from the site if residing in the local area.



Figure 11: Existing Cycling Facilities Surrounding the Site (DoT Perth Bike Maps)

6.2 Public Transport

Due to the nature of the development the need or demand for public transport is considered to be low as the development tends to rely on private vehicle patronage. However there is the opportunity for staff and others to use public transport if this is the preferred mode of transport.

The site has good access to public transport with a bus stop located along West Coast Drive opposite the site (bus stop ID 18867) serviced by Route 423.

Figure 12 outlines the public transport routes surrounding the site.

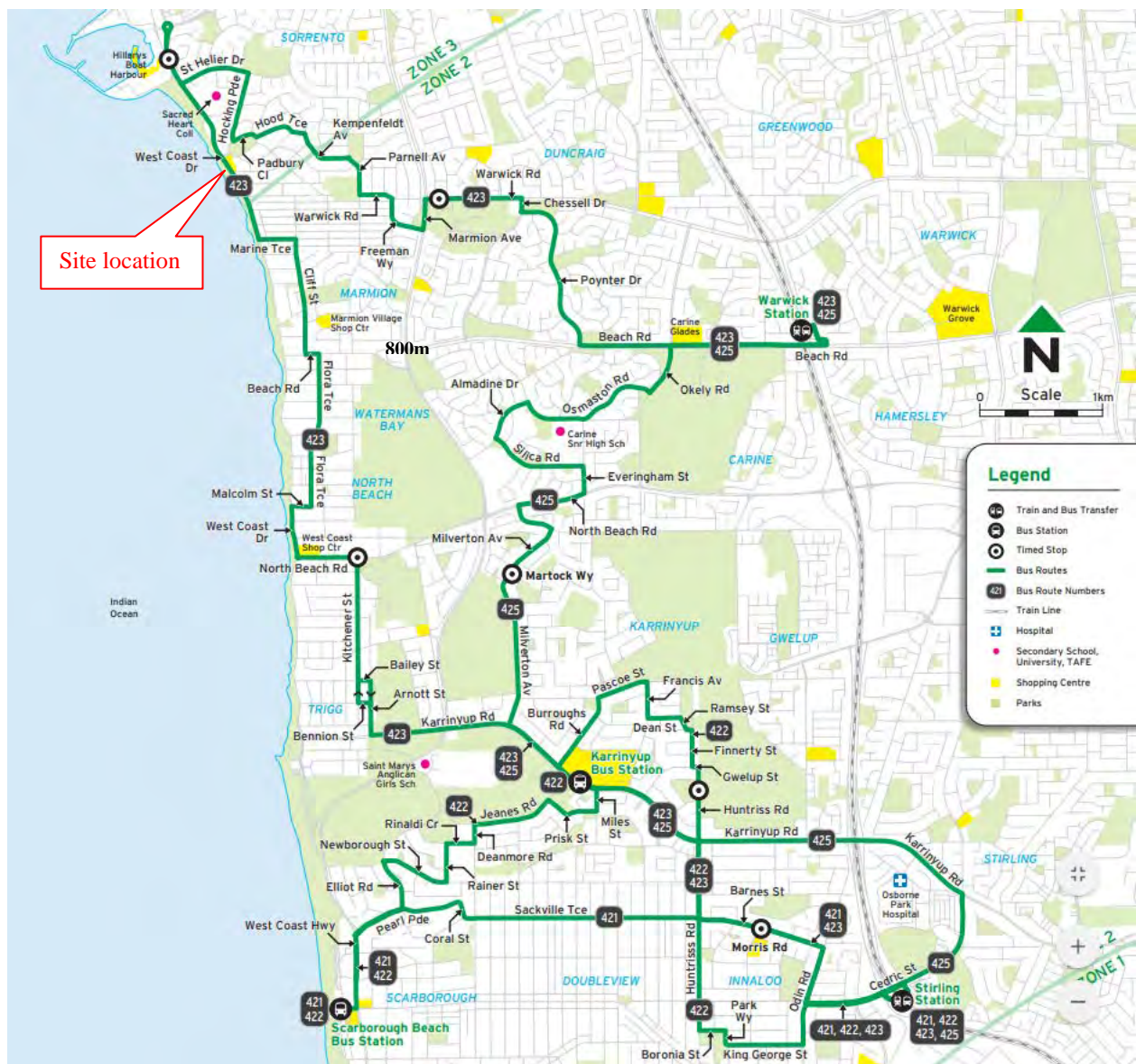


Figure 12: Public Transport routes

7.0 SUMMARY AND CONCLUSION

Porter Consulting Engineers has been commissioned to prepare a Traffic Impact Assessment (TIA) for the redevelopment of the existing BP Service Station located on the corner of West Coast Drive and Raleigh Road, Sorrento within the City of Joondalup. The development site is to comprise of 8 refuelling bowzers, a convenience store and parking facilities. The redevelopment seeks to improve the existing facilities and layout of the site in line with the Activity Centre Plan for the Sorrento Local Centre.

Two driveways (existing) are proposed to remain to service the redeveloped site. These are located on West Coast Drive and Raleigh Road. Indirect access is also available via the rear of the site from the adjoining lot.

Sight lines from the existing West Coast Drive crossover to be maintained are adequate. Sight lines from the Raleigh Road existing crossover are potentially restricted to the east by verge parking. Consideration should be given to extending the length of no standing area to the east of this crossover to improve sight lines.

The site is estimated to generate approximately 1,300 vehicle trips daily or 650 customers or 650 trips inbound and 650 trips outbound. Approximately 85 vehicle trips and 108 vehicle trips are forecast during the am and pm peak hours respectively on a typical weekday.

These existing volumes are currently accommodated on the existing road network and are in context of their current standards and function.

Due to “cheap fuel” days the pm peak hour on a Monday is typically higher than the average weekday peak. This was confirmed from transaction data from the store and on site surveys. It is estimated that the Monday pm peak hour may be in the order of 172 vehicles per hour which is approximately 60% higher than the average weekday. Surveys for a Saturday peak suggested 99 vehicles per hour which is comparable to the pm peak hour on a weekday. Whilst BP does have a “cheap fuel” day, BP are not a discount fuel retailer like other competitors.

The analysis was undertaken for the pm peak hour period on a Monday and midday peak on a Saturday as these are the development peak days. The peak hour on these days also occurs during the peak hour of the road network.

SIDRA analysis of the development crossovers indicate satisfactory conditions. Analysis has been undertaken both at opening and a 10 year time horizon. The 10 year time horizon allows for traffic growth on both the road network and service station traffic. The average delay and queue lengths should not adversely impact the through traffic along either West Coast Drive or Raleigh Road.

West Coast Drive has a 2.0m painted median to allow a vehicle to queue while waiting to turn right without significantly impeding through traffic. The advantage of some traffic slowing to turn into the site is that it assists to create a “self-regulating street”. That is the speed of the through traffic is naturally controlled creating a slow speed environment which is desirable

within areas of pedestrian activity.

The analysis shows that there are sufficient gaps along both West Coast Highway and Raleigh Road to allow the development traffic to exit the site with acceptable delays and internal queues.

A SIDRA analysis of the intersection of West Coast Drive and Raleigh Road has not been undertaken in this assessment. Review of the “Sorrento Activity Centre, Transport Assessment” (Oct 2016) indicates that the intersection will operate satisfactorily with the proposed “Sorrento Activity Centre redevelopment which includes the service station” at opening and 10 year timeframe.

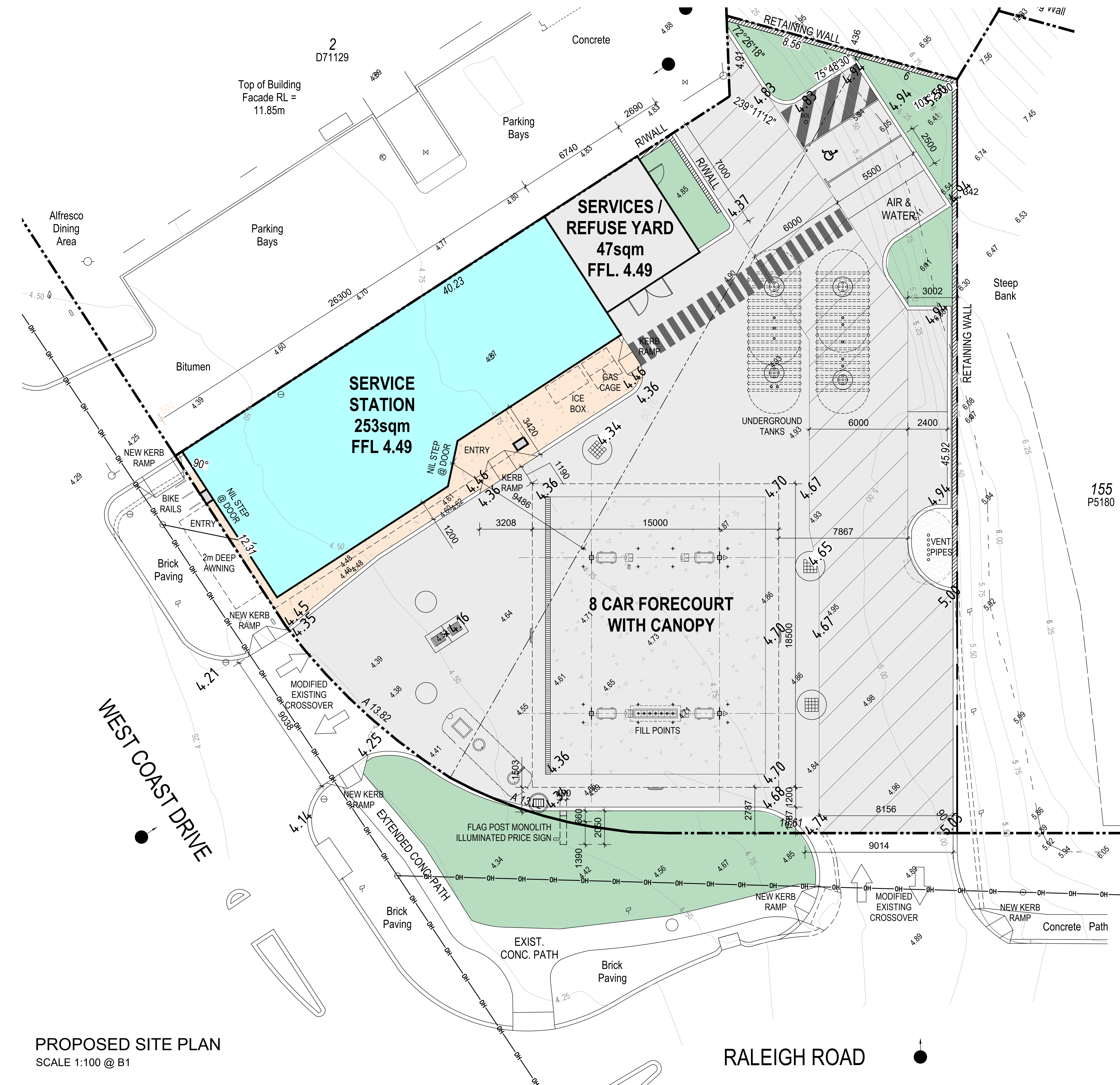
The site has good access to the path network for walking and cycling as well as public transport. Given the nature of the development the need or demand for alternative modes of transport such as public transport is considered to be low as the development tends to rely on private vehicle patronage. Regardless, there is the opportunity for staff and others to use other modes of transport if preferred.

It is understood that West Coast Drive in the vicinity of the site is to consider increased pedestrian activity due to the proximity to the beach and associated activities. The redevelopment proposes two entrances into the site store. One entrance is to be located adjacent to the forecourt to service the refueling customers whilst the other entrance is to be located directly from the West Coast Drive verge area to cater for “walk in trade” from the surrounds.

In conclusion, based on the analysis presented in this report with the recommendations made, the development proposal presents no significant traffic capacity or road safety issues, and is therefore supported.

APPENDIX A

Site Plan

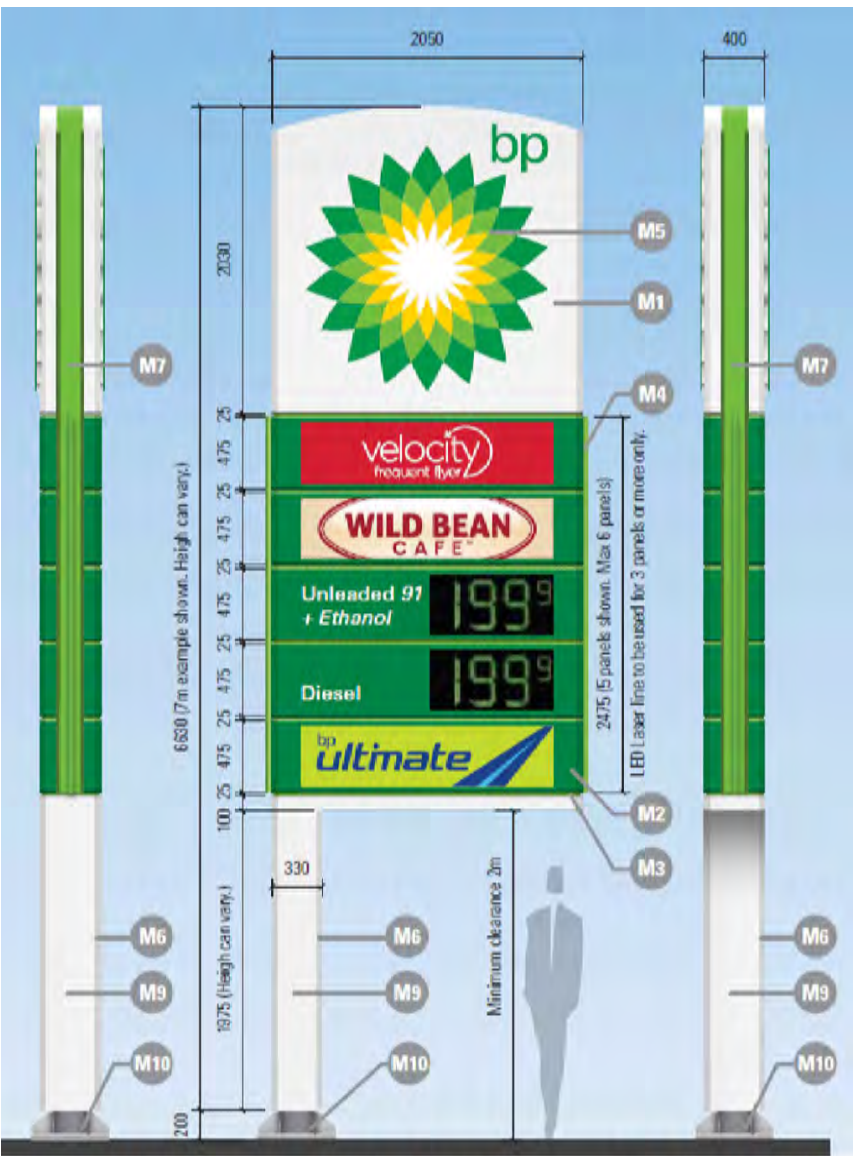


PROPOSED SITE PLAN
SCALE 1:100 @ B1

RALEIGH ROAD

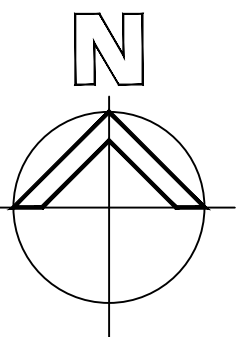
LEGEND:

- EXTENT OF LANDSCAPING - REFER TO LANDSCAPING PLAN FOR DETAILS
- EXTENT OF CONCRETE PAVING TO CANOPY FORECOURT
- EXTENT OF CONCRETE PAVING
- EXTENT OF BUILDING
- EXTENT OF HARDSTAND
- EXISTING RL
- PROPOSED FFL & RL



Flag Post Monolith
7m 5 panel option shown
Side Elevation
Scale 1:50

PROPOSED FLAG POST
MONOLITH ILLUMINATED PRICE SIGN
SCALE 1:100 @ B1

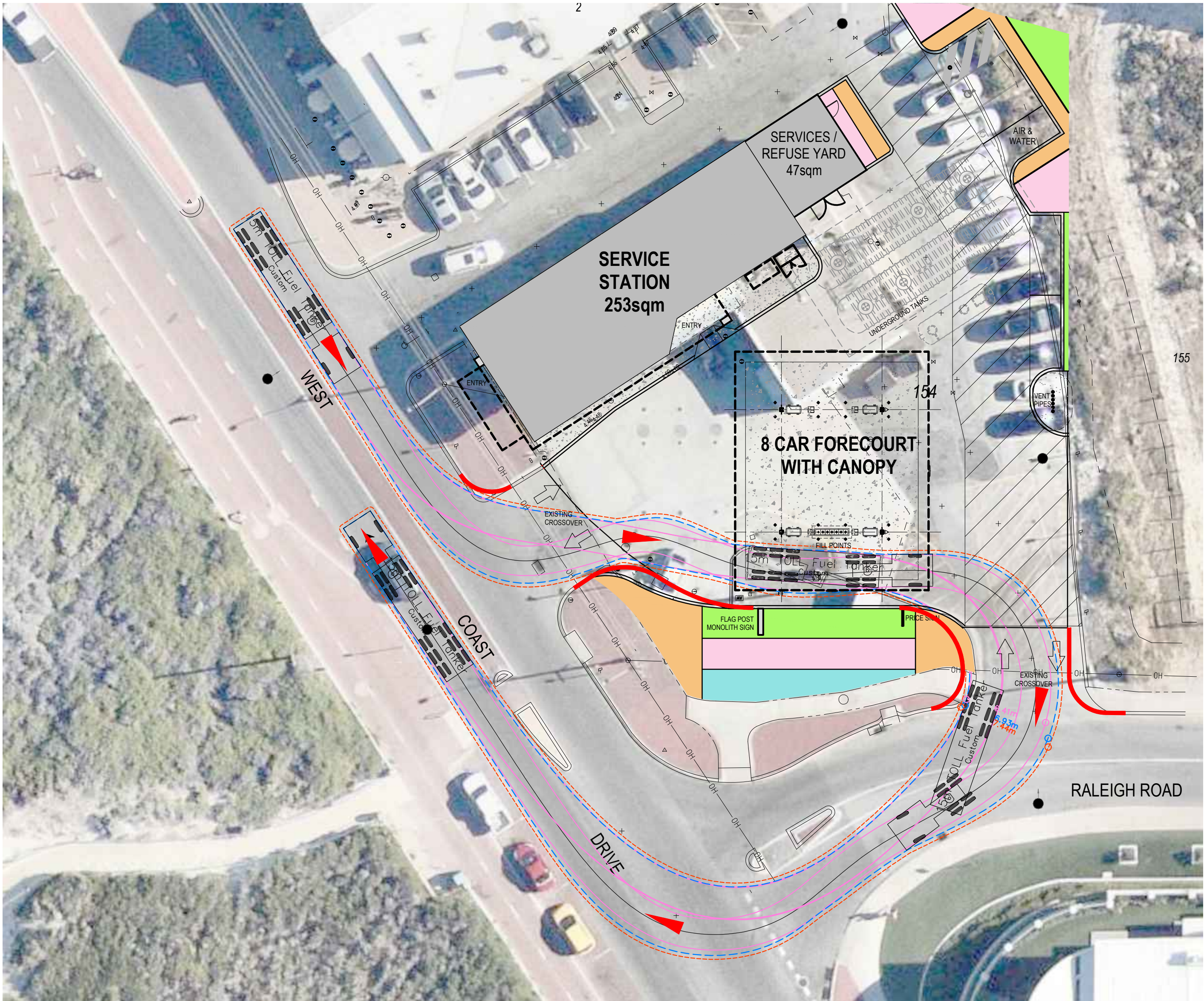


| | | | | |
|----------------|--|-------|--------------------|------------|
| B | ISSUED FOR DA | AC | AK | 29.05.2019 |
| A | ISSUED FOR CLIENT REVIEW | AC | AK | 08.05.2019 |
| revision/issue | description | drawn | checked | date |
| project | BP SORRENTO | drawn | description | scale |
| location | LOT 153 WEST COAST DRIVE & LOT 154 RALEIGH ROAD SORRENTO | AC | PROPOSED SITE PLAN | 1:100 |
| | | AK | | B1 |
| | | | | date |
| | | | | 07.05.2019 |
| | | | | project no |
| | | | | 18.19 |
| | | | | dwg no |
| | | | | S01 |
| | | | | REV |
| | | | | B |

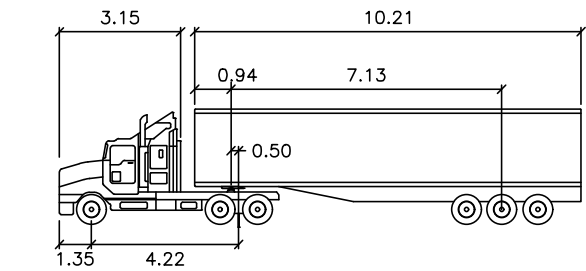
APPENDIX B

Swept Paths

Drawing 19-3-34/801 Rev D – 15m Toll Tanker Vehicle
Drawing 19-3-34/802 Rev B – Boat and Caravan Options
Drawing 19-3-34/803 Rev A – Single Unit Truck

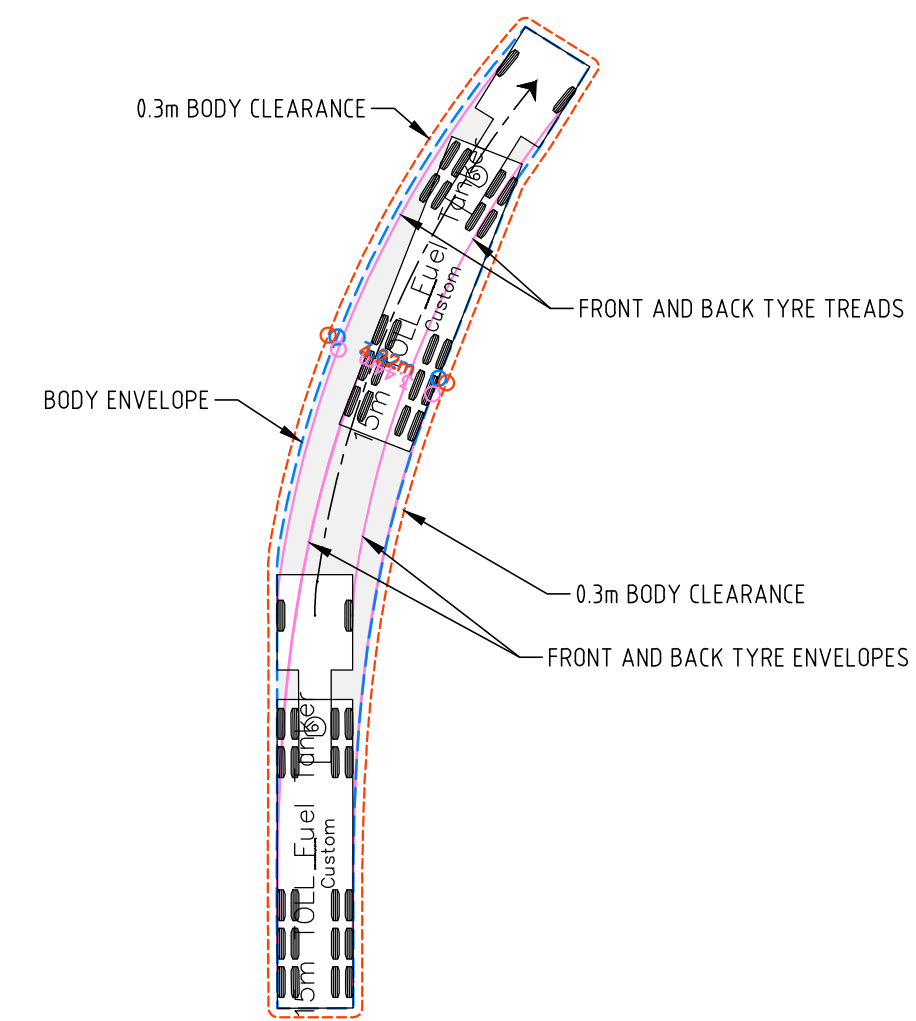


15m TOLL TANKER SWEPT PATH



| | | | |
|----------------------|------|--------------------|------|
| 15m TOLL Fuel Tanker | | | |
| Tractor Width | 2.50 | Lock to Lock Time | 6.0 |
| Trailer Width | 2.50 | Steering Angle | 27.7 |
| Tractor Track | 2.50 | Articulating Angle | 70.0 |
| Trailer Track | 2.50 | | |

15m TOLL TANKER DIMENSIONS



TURNING TEMPLATE DETAIL

PROJECT:
**WEST COAST HWY - RALEIGH RD
SORRENTO**

| No. | DATE | REVISION |
|-----|-----------|---|
| D | 15-5-2019 | SITE LAYOUT PLAN UPDATED |
| C | 14-5-2019 | CROSSOVERS REVISED TO SUIT CADASTRAL BOUNDARY. |
| B | 1-4-2019 | FUEL TANKER POSITION RELOCATED TO NEW POSITION. |
| A | 1-4-2019 | PRELIMINARY PLOT FOR APPROVAL. |

| | |
|-----|----|
| MJV | BY |
| MJV | |
| MJV | |
| MJV | |

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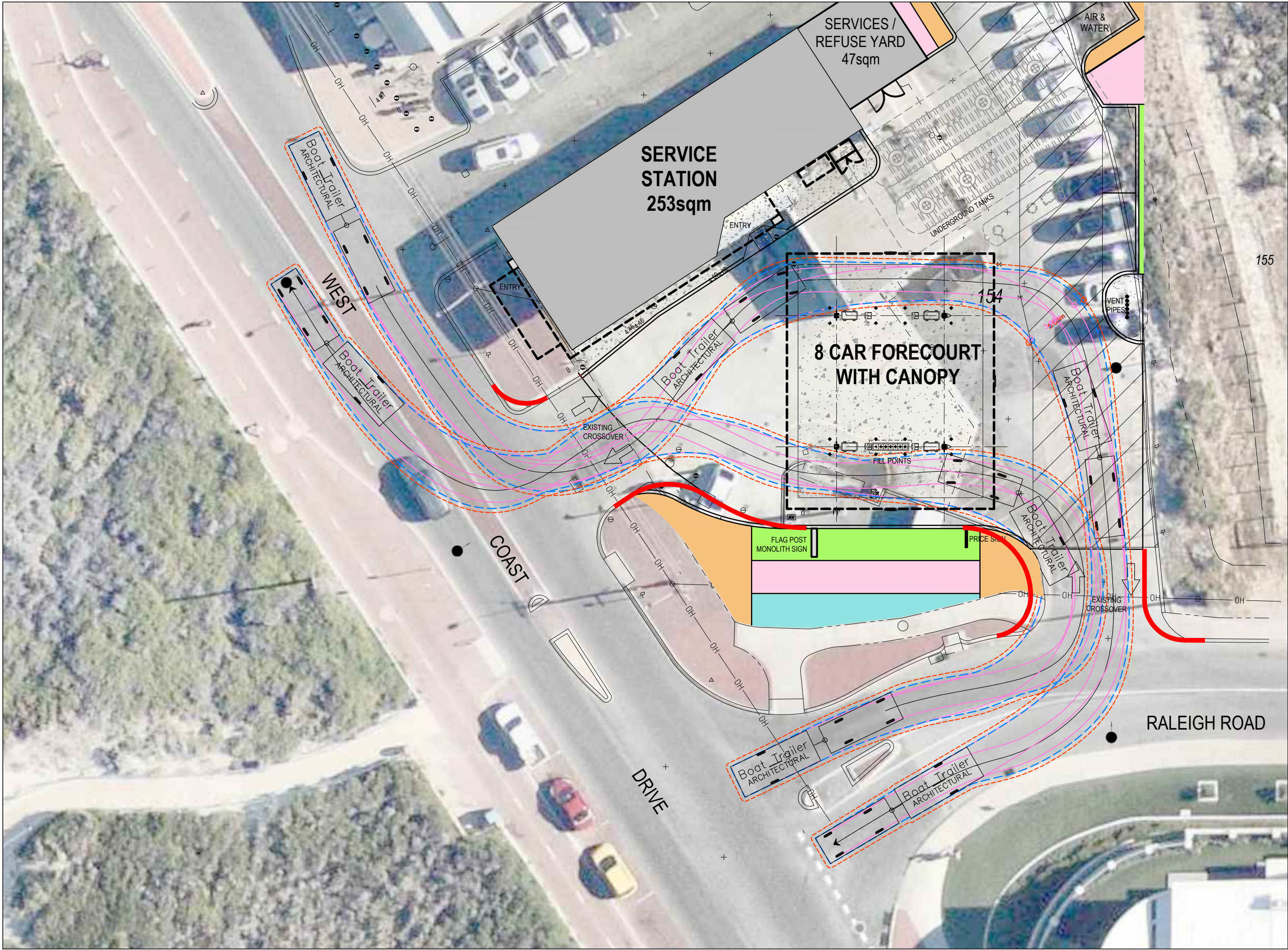
CLIENT:

**BP
AUSTRALIA**

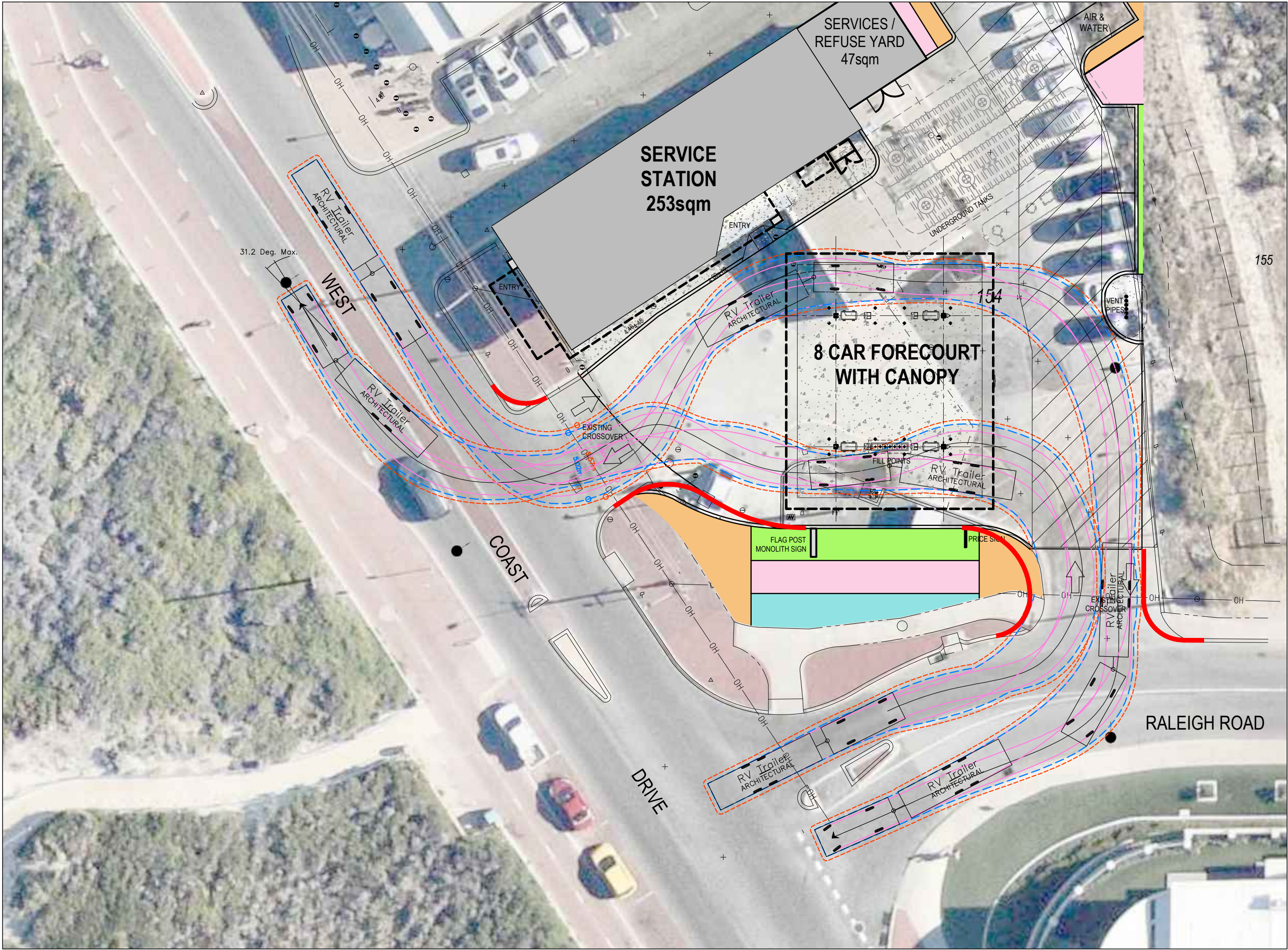
DRAWING:
15m TOLL TANKER SWEPT PATHS

STATUS: **FOR APPROVAL**

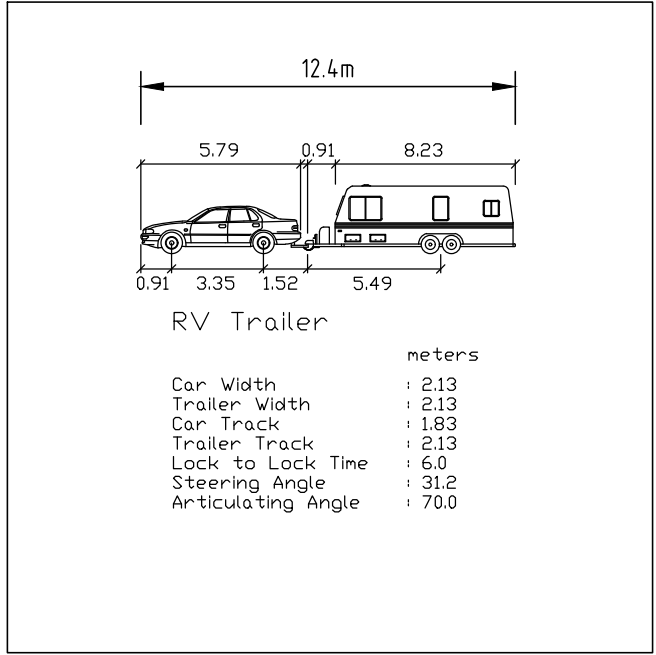
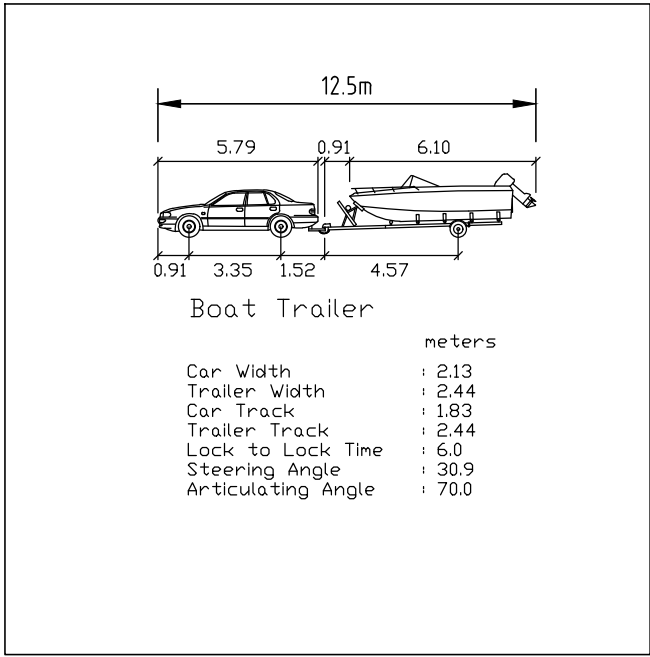
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| DATE: MAY 2019 | 19-3-34/801 | D | A1 |
| DESIGN: JH | FILE NAME S:\ACTIVE PROJECTS\19-03-034\ACAD\19334-800-802.dwg | | |
| DRAWN: MJV | APP'D: | | |
| CHECK: | | | |



CAR WITH BOAT TRAILER SWEEP PATH



CAR WITH RV TRAILER (CARAVAN) SWEEP PATH



PROJECT:
**WEST COAST HWY - RALEIGH RD
SORRENTO**

| REVISION | | DATE | BY |
|----------|--|-----------|-----|
| B | | 15-5-2019 | MJV |
| A | | 15-5-2019 | MJV |

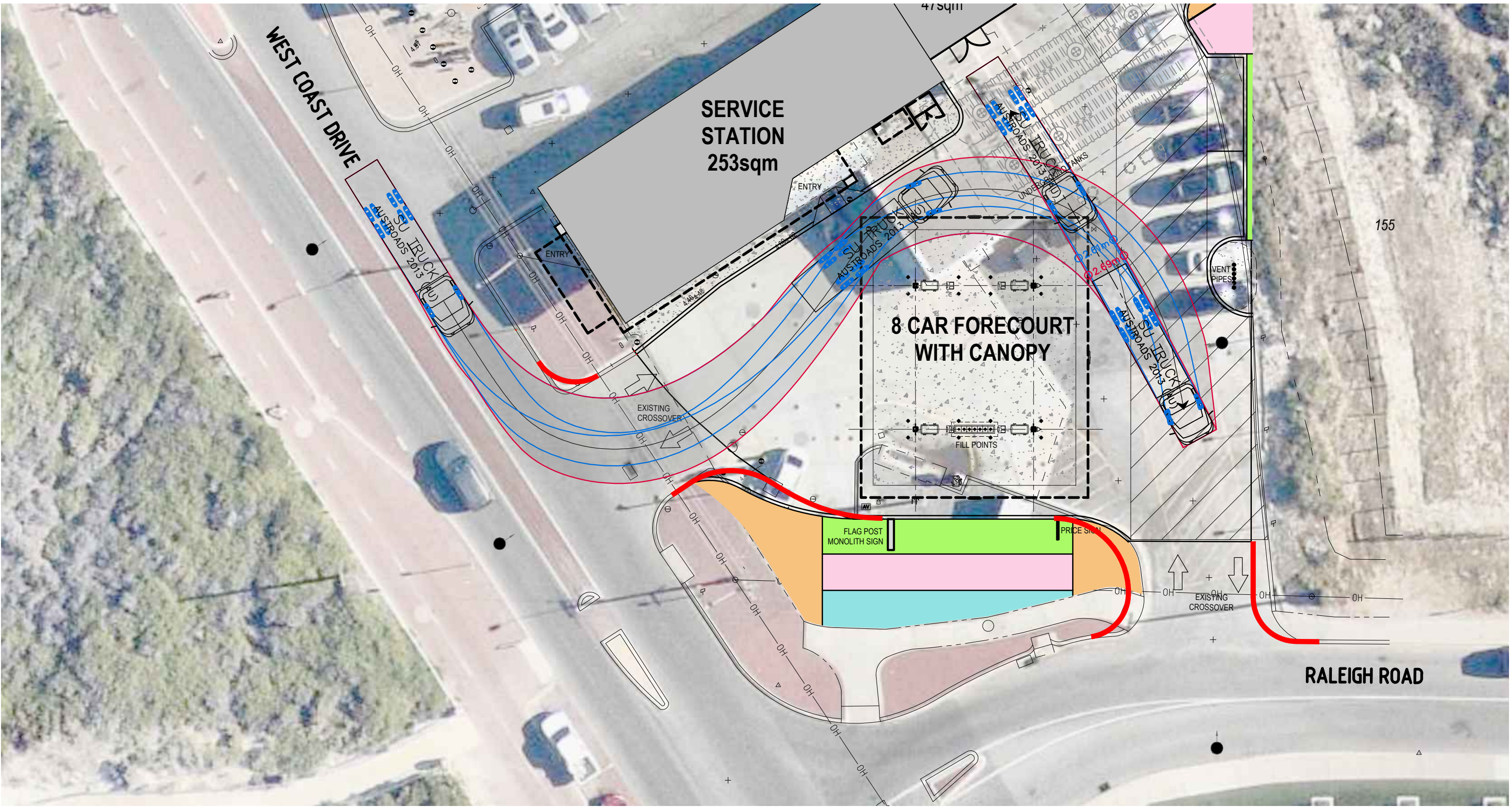
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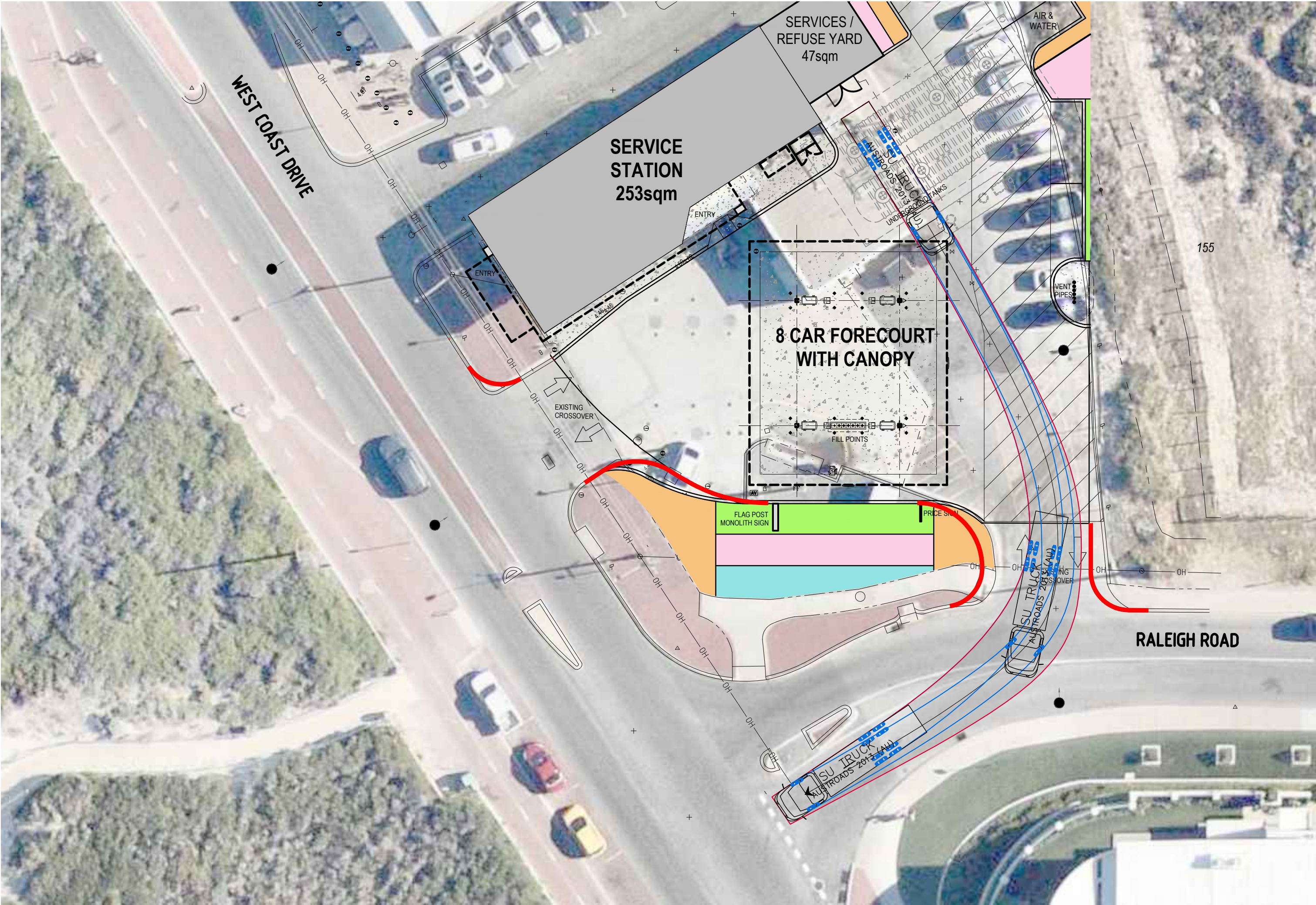
DRAWING:
BOAT AND CARAVAN OPTIONS
STATUS: **FOR APPROVAL**

| | | | |
|----------------|--|----------|-----------------------|
| SCALE: 1:250 | DRAWING No. | REV No. | ORIGINAL DRAWING SIZE |
| DATE: MAY 2019 | 19-3-34/802 | B | A1 |
| DESIGN: JH | FILE NAME S:\ACTIVE PROJECTS\19-03-034\ACAD\1934-800-802.dwg | | |
| DRAWN: MJV | APP'D: | | |
| CHECK: | | | |



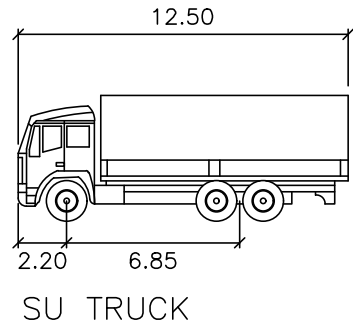
ENTER OFF WEST COAST DRIVE AND REVERSE TO SERVICE AREA

1:250



EXIT ONTO RALEIGH ROAD

1:250



SU TRUCK
Width : 2.50
Track : 2.50
Lock to Lock Time : 6.0
Steering Angle : 36.6

PROJECT:
**WEST COAST HWY - RALEIGH RD
SORRENTO**

| | | |
|----------|----------|-------------------------------|
| DATE | 5-6-2019 | PRELIMINARY PLOT FOR APPROVAL |
| REVISION | | |

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CLIENT:
**BP
AUSTRALIA**

DRAWING:
**SINGLE UNIT TRUCK SWEEP PATH
SERVICE AREA**

| | | | | | | | |
|-------|-----------|-------------|-------------|-----------|---|-----------------------------|----|
| SCALE | 1:250 | DRAWING No. | 19-3-34/803 | REV No. | A | ORIGINAL DRAWING SIZE | A1 |
| DATE | JUNE 2019 | DESIGN | JH | FILE NAME | S:\ACTIVE PROJECTS\19-03-03A\ACAD_drawings\19334-803.dwg | | |
| DRAWN | MJV | CHECK | | APPD | | | |

STATUS: **FOR APPROVAL**

APPENDIX C

SIDRA Analysis Results

West Coast Drive

West Coast Drive Access, Monday: PM Peak, At Opening

| Movement Performance - Vehicles | | | | | | | | | | | | |
|---------------------------------|------|--------------------|------------|---------------|-------------------|------------------|-----------------------|---------------------|--------------|---------------------|------------------|--------------------|
| Mov ID | Turn | Demand Total veh/h | Flows HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back Vehicles veh | of Queue Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
| South: West Coast Dr | | | | | | | | | | | | |
| 2 | T1 | 821 | 5.0 | 0.491 | 0.2 | LOS A | 0.4 | 3.2 | 0.05 | 0.01 | 0.06 | 48.9 |
| 3 | R2 | 19 | 0.0 | 0.491 | 8.3 | LOS A | 0.4 | 3.2 | 0.05 | 0.01 | 0.06 | 48.7 |
| Approach | | 840 | 4.9 | 0.491 | 0.4 | NA | 0.4 | 3.2 | 0.05 | 0.01 | 0.06 | 48.9 |
| East: Driveway | | | | | | | | | | | | |
| 4 | L2 | 21 | 0.0 | 0.103 | 1.6 | LOS A | 0.3 | 2.3 | 0.64 | 0.58 | 0.64 | 22.3 |
| 6 | R2 | 20 | 0.0 | 0.103 | 13.8 | LOS B | 0.3 | 2.3 | 0.64 | 0.58 | 0.64 | 21.9 |
| Approach | | 41 | 0.0 | 0.103 | 7.5 | LOS A | 0.3 | 2.3 | 0.64 | 0.58 | 0.64 | 22.1 |
| North: West Coast Dr | | | | | | | | | | | | |
| 7 | L2 | 32 | 0.0 | 0.266 | 4.6 | LOS A | 0.0 | 0.0 | 0.00 | 0.04 | 0.00 | 26.0 |
| 8 | T1 | 429 | 5.0 | 0.266 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.04 | 0.00 | 48.9 |
| Approach | | 461 | 4.7 | 0.266 | 0.3 | NA | 0.0 | 0.0 | 0.00 | 0.04 | 0.00 | 47.1 |
| All Vehicles | | 1342 | 4.7 | 0.491 | 0.6 | NA | 0.4 | 3.2 | 0.05 | 0.04 | 0.06 | 47.1 |

Raleigh Road Access, Monday: PM Peak, At Opening

| Movement Performance - Vehicles | | | | | | | | | | | | |
|---------------------------------|------|--------------------|------------|---------------|-------------------|------------------|-----------------------|---------------------|--------------|---------------------|------------------|--------------------|
| Mov ID | Turn | Demand Total veh/h | Flows HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back Vehicles veh | of Queue Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
| East: Raleigh Road | | | | | | | | | | | | |
| 5 | T1 | 23 | 5.0 | 0.021 | 0.1 | LOS A | 0.1 | 0.5 | 0.12 | 0.19 | 0.12 | 40.7 |
| 6 | R2 | 13 | 0.0 | 0.021 | 4.8 | LOS A | 0.1 | 0.5 | 0.12 | 0.19 | 0.12 | 39.5 |
| Approach | | 36 | 3.2 | 0.021 | 1.8 | NA | 0.1 | 0.5 | 0.12 | 0.19 | 0.12 | 40.3 |
| North: Driveway | | | | | | | | | | | | |
| 7 | L2 | 5 | 0.0 | 0.042 | 0.2 | LOS A | 0.1 | 1.0 | 0.17 | 0.18 | 0.17 | 32.2 |
| 9 | R2 | 45 | 0.0 | 0.042 | 1.0 | LOS A | 0.1 | 1.0 | 0.17 | 0.18 | 0.17 | 16.1 |
| Approach | | 51 | 0.0 | 0.042 | 0.9 | LOS A | 0.1 | 1.0 | 0.17 | 0.18 | 0.17 | 18.2 |
| West: Raleigh Road | | | | | | | | | | | | |
| 10 | L2 | 27 | 0.0 | 0.047 | 2.6 | LOS A | 0.0 | 0.0 | 0.00 | 0.17 | 0.00 | 14.3 |
| 11 | T1 | 55 | 5.0 | 0.047 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.17 | 0.00 | 45.7 |
| Approach | | 82 | 3.3 | 0.047 | 0.9 | NA | 0.0 | 0.0 | 0.00 | 0.17 | 0.00 | 33.6 |
| All Vehicles | | 168 | 2.3 | 0.047 | 1.1 | NA | 0.1 | 1.0 | 0.08 | 0.18 | 0.08 | 30.3 |

West Coast Drive Access, Saturday: Midday Peak, At Opening

| Movement Performance - Vehicles | | | | | | | | | | | | |
|---------------------------------|------|-----------------------|---------------|------------------|----------------------|------------------|--------------------------------------|--------------------------------|--------------|---------------------|------------------|-----------------------|
| Mov ID | Turn | Demand Total veh/h | Flows HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | Back of Queue Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
| South: West Coast Dr | | | | | | | | | | | | |
| 2 | T1 | 589 | 5.0 | 0.349 | 0.1 | LOS A | 0.2 | 1.2 | 0.03 | 0.01 | 0.03 | 49.3 |
| 3 | R2 | 7 | 0.0 | 0.349 | 9.3 | LOS A | 0.2 | 1.2 | 0.03 | 0.01 | 0.03 | 49.3 |
| Approach | | 597 | 4.9 | 0.349 | 0.2 | NA | 0.2 | 1.2 | 0.03 | 0.01 | 0.03 | 49.3 |
| East: Driveway | | | | | | | | | | | | |
| 4 | L2 | 14 | 0.0 | 0.037 | 2.6 | LOS A | 0.1 | 0.9 | 0.60 | 0.54 | 0.60 | 25.1 |
| 6 | R2 | 6 | 0.0 | 0.037 | 10.5 | LOS B | 0.1 | 0.9 | 0.60 | 0.54 | 0.60 | 24.6 |
| Approach | | 20 | 0.0 | 0.037 | 5.1 | LOS A | 0.1 | 0.9 | 0.60 | 0.54 | 0.60 | 25.0 |
| North: West Coast Dr | | | | | | | | | | | | |
| 7 | L2 | 26 | 0.0 | 0.368 | 4.6 | LOS A | 0.0 | 0.0 | 0.00 | 0.02 | 0.00 | 26.2 |
| 8 | T1 | 611 | 5.0 | 0.368 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.02 | 0.00 | 49.3 |
| Approach | | 637 | 4.8 | 0.368 | 0.2 | NA | 0.0 | 0.0 | 0.00 | 0.02 | 0.00 | 48.2 |
| All Vehicles | | 1254 | 4.8 | 0.368 | 0.3 | NA | 0.2 | 1.2 | 0.02 | 0.02 | 0.03 | 48.2 |

Raleigh Road Access, Saturday: Midday Peak, At Opening

| Movement Performance - Vehicles | | | | | | | | | | | | |
|---------------------------------|------|-----------------------|---------------|------------------|----------------------|------------------|--------------------------------------|--------------------------------|--------------|---------------------|------------------|-----------------------|
| Mov ID | Turn | Demand Total veh/h | Flows HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | Back of Queue Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
| East: Raleigh Road | | | | | | | | | | | | |
| 5 | T1 | 60 | 5.0 | 0.039 | 0.0 | LOS A | 0.0 | 0.3 | 0.04 | 0.06 | 0.04 | 46.6 |
| 6 | R2 | 7 | 0.0 | 0.039 | 4.8 | LOS A | 0.0 | 0.3 | 0.04 | 0.06 | 0.04 | 45.0 |
| Approach | | 67 | 4.5 | 0.039 | 0.5 | NA | 0.0 | 0.3 | 0.04 | 0.06 | 0.04 | 46.4 |
| North: Driveway | | | | | | | | | | | | |
| 7 | L2 | 3 | 0.0 | 0.029 | 0.2 | LOS A | 0.1 | 0.7 | 0.19 | 0.19 | 0.19 | 32.0 |
| 9 | R2 | 31 | 0.0 | 0.029 | 1.0 | LOS A | 0.1 | 0.7 | 0.19 | 0.19 | 0.19 | 16.0 |
| Approach | | 34 | 0.0 | 0.029 | 1.0 | LOS A | 0.1 | 0.7 | 0.19 | 0.19 | 0.19 | 17.9 |
| West: Raleigh Road | | | | | | | | | | | | |
| 10 | L2 | 11 | 0.0 | 0.041 | 2.6 | LOS A | 0.0 | 0.0 | 0.00 | 0.08 | 0.00 | 14.6 |
| 11 | T1 | 60 | 5.0 | 0.041 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.08 | 0.00 | 48.0 |
| Approach | | 71 | 4.3 | 0.041 | 0.4 | NA | 0.0 | 0.0 | 0.00 | 0.08 | 0.00 | 41.9 |
| All Vehicles | | 172 | 3.5 | 0.041 | 0.6 | NA | 0.1 | 0.7 | 0.05 | 0.09 | 0.05 | 38.3 |

West Coast Drive Access, Monday: PM Peak, +10 Years

| Movement Performance - Vehicles | | | | | | | | | | | | |
|---------------------------------|------|--------------------|------------|---------------|-------------------|------------------|-----------------------|---------------------|--------------|---------------------|------------------|--------------------|
| Mov ID | Turn | Demand Total veh/h | Flows HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back Vehicles veh | of Queue Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
| South: West Coast Dr | | | | | | | | | | | | |
| 2 | T1 | 907 | 5.0 | 0.544 | 0.2 | LOS A | 0.6 | 4.2 | 0.05 | 0.01 | 0.08 | 48.6 |
| 3 | R2 | 21 | 0.0 | 0.544 | 9.3 | LOS A | 0.6 | 4.2 | 0.05 | 0.01 | 0.08 | 48.3 |
| Approach | | 928 | 4.9 | 0.544 | 0.4 | NA | 0.6 | 4.2 | 0.05 | 0.01 | 0.08 | 48.6 |
| East: Driveway | | | | | | | | | | | | |
| 4 | L2 | 22 | 0.0 | 0.151 | 1.9 | LOS A | 0.4 | 3.3 | 0.72 | 0.68 | 0.72 | 19.6 |
| 6 | R2 | 23 | 0.0 | 0.151 | 18.9 | LOS C | 0.4 | 3.3 | 0.72 | 0.68 | 0.72 | 19.3 |
| Approach | | 45 | 0.0 | 0.151 | 10.6 | LOS B | 0.4 | 3.3 | 0.72 | 0.68 | 0.72 | 19.4 |
| North: West Coast Dr | | | | | | | | | | | | |
| 7 | L2 | 35 | 0.0 | 0.294 | 4.6 | LOS A | 0.0 | 0.0 | 0.00 | 0.04 | 0.00 | 26.0 |
| 8 | T1 | 475 | 5.0 | 0.294 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.04 | 0.00 | 48.9 |
| Approach | | 509 | 4.7 | 0.294 | 0.3 | NA | 0.0 | 0.0 | 0.00 | 0.04 | 0.00 | 47.1 |
| All Vehicles | | 1483 | 4.7 | 0.544 | 0.7 | NA | 0.6 | 4.2 | 0.06 | 0.04 | 0.07 | 46.7 |

Raleigh Road Access, Monday: PM Peak, +10 Years

| Movement Performance - Vehicles | | | | | | | | | | | | |
|---------------------------------|------|--------------------|------------|---------------|-------------------|------------------|-----------------------|---------------------|--------------|---------------------|------------------|--------------------|
| Mov ID | Turn | Demand Total veh/h | Flows HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back Vehicles veh | of Queue Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
| East: Raleigh Road | | | | | | | | | | | | |
| 5 | T1 | 26 | 5.0 | 0.024 | 0.1 | LOS A | 0.1 | 0.6 | 0.13 | 0.19 | 0.13 | 40.4 |
| 6 | R2 | 15 | 0.0 | 0.024 | 4.8 | LOS A | 0.1 | 0.6 | 0.13 | 0.19 | 0.13 | 39.3 |
| Approach | | 41 | 3.2 | 0.024 | 1.8 | NA | 0.1 | 0.6 | 0.13 | 0.19 | 0.13 | 40.0 |
| North: Driveway | | | | | | | | | | | | |
| 7 | L2 | 6 | 0.0 | 0.047 | 0.2 | LOS A | 0.2 | 1.1 | 0.18 | 0.19 | 0.18 | 32.1 |
| 9 | R2 | 49 | 0.0 | 0.047 | 1.0 | LOS A | 0.2 | 1.1 | 0.18 | 0.19 | 0.18 | 16.1 |
| Approach | | 56 | 0.0 | 0.047 | 0.9 | LOS A | 0.2 | 1.1 | 0.18 | 0.19 | 0.18 | 18.3 |
| West: Raleigh Road | | | | | | | | | | | | |
| 10 | L2 | 31 | 0.0 | 0.053 | 2.6 | LOS A | 0.0 | 0.0 | 0.00 | 0.17 | 0.00 | 14.3 |
| 11 | T1 | 61 | 5.0 | 0.053 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.17 | 0.00 | 45.7 |
| Approach | | 92 | 3.3 | 0.053 | 0.9 | NA | 0.0 | 0.0 | 0.00 | 0.17 | 0.00 | 33.6 |
| All Vehicles | | 188 | 2.3 | 0.053 | 1.1 | NA | 0.2 | 1.1 | 0.08 | 0.18 | 0.08 | 30.4 |

West Coast Drive Access: Saturday: Midday Peak, +10 Years

| Movement Performance - Vehicles | | | | | | | | | | | | |
|---------------------------------|------|-----------------------|---------------|------------------|----------------------|------------------|--------------------------------------|---------------|--------------|---------------------|------------------|-----------------------|
| Mov ID | Turn | Demand Total veh/h | Flows HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
| South: West Coast Dr | | | | | | | | | | | | |
| 2 | T1 | 652 | 5.0 | 0.387 | 0.2 | LOS A | 0.2 | 1.6 | 0.03 | 0.01 | 0.04 | 49.0 |
| 3 | R2 | 8 | 0.0 | 0.387 | 10.6 | LOS B | 0.2 | 1.6 | 0.03 | 0.01 | 0.04 | 49.0 |
| Approach | | 660 | 4.9 | 0.387 | 0.3 | NA | 0.2 | 1.6 | 0.03 | 0.01 | 0.04 | 49.0 |
| East: Driveway | | | | | | | | | | | | |
| 4 | L2 | 15 | 0.0 | 0.050 | 3.1 | LOS A | 0.2 | 1.1 | 0.67 | 0.63 | 0.67 | 23.3 |
| 6 | R2 | 7 | 0.0 | 0.050 | 13.5 | LOS B | 0.2 | 1.1 | 0.67 | 0.63 | 0.67 | 22.9 |
| Approach | | 22 | 0.0 | 0.050 | 6.6 | LOS A | 0.2 | 1.1 | 0.67 | 0.63 | 0.67 | 23.2 |
| North: West Coast Dr | | | | | | | | | | | | |
| 7 | L2 | 29 | 0.0 | 0.407 | 4.6 | LOS A | 0.0 | 0.0 | 0.00 | 0.02 | 0.00 | 26.1 |
| 8 | T1 | 675 | 5.0 | 0.407 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.02 | 0.00 | 49.3 |
| Approach | | 704 | 4.8 | 0.407 | 0.2 | NA | 0.0 | 0.0 | 0.00 | 0.02 | 0.00 | 48.1 |
| All Vehicles | | 1386 | 4.8 | 0.407 | 0.4 | NA | 0.2 | 1.6 | 0.03 | 0.03 | 0.03 | 48.0 |

Raleigh Road Access, Saturday: Midday Peak, +10 Years

| Movement Performance - Vehicles | | | | | | | | | | | | |
|---------------------------------|------|-----------------------|---------------|------------------|----------------------|------------------|--------------------------------------|---------------|--------------|---------------------|------------------|-----------------------|
| Mov ID | Turn | Demand Total veh/h | Flows HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
| East: Raleigh Road | | | | | | | | | | | | |
| 5 | T1 | 66 | 5.0 | 0.043 | 0.0 | LOS A | 0.0 | 0.4 | 0.04 | 0.06 | 0.04 | 46.4 |
| 6 | R2 | 8 | 0.0 | 0.043 | 4.8 | LOS A | 0.0 | 0.4 | 0.04 | 0.06 | 0.04 | 44.9 |
| Approach | | 75 | 4.4 | 0.043 | 0.6 | NA | 0.0 | 0.4 | 0.04 | 0.06 | 0.04 | 46.3 |
| North: Driveway | | | | | | | | | | | | |
| 7 | L2 | 3 | 0.0 | 0.032 | 0.2 | LOS A | 0.1 | 0.8 | 0.20 | 0.20 | 0.20 | 31.9 |
| 9 | R2 | 34 | 0.0 | 0.032 | 1.1 | LOS A | 0.1 | 0.8 | 0.20 | 0.20 | 0.20 | 15.9 |
| Approach | | 37 | 0.0 | 0.032 | 1.0 | LOS A | 0.1 | 0.8 | 0.20 | 0.20 | 0.20 | 17.6 |
| West: Raleigh Road | | | | | | | | | | | | |
| 10 | L2 | 12 | 0.0 | 0.045 | 2.6 | LOS A | 0.0 | 0.0 | 0.00 | 0.08 | 0.00 | 14.6 |
| 11 | T1 | 66 | 5.0 | 0.045 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.08 | 0.00 | 48.0 |
| Approach | | 78 | 4.3 | 0.045 | 0.4 | NA | 0.0 | 0.0 | 0.00 | 0.08 | 0.00 | 41.9 |
| All Vehicles | | 189 | 3.5 | 0.045 | 0.6 | NA | 0.1 | 0.8 | 0.06 | 0.10 | 0.06 | 38.3 |



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Appendix 2
Porter Consulting Engineers Technical Note and Swept Paths

TECHNICAL NOTE

Project: BP Sorrento

Date Issued: 1 August 2019

Issued to: BP Australia Pty Ltd

Job Number: 19-03-034

This Technical Note has been prepared to address the traffic issues raised by the City of Joondalup in their email dated 23 July, 2019 in relation to the proposed redevelopment of the existing BP Service Station located on the corner of West Coast Drive and Raleigh Road, Sorrento.

Item c – No landscaping strip is proposed on the eastern boundary of Lot 154 as required by SACP Plan 2 and element 5.4.4.

The existing Raleigh Road crossover has been maintained in its current location abutting the adjacent lot 155. The Sorrento Activity Centre Plan (SACP) envisaged a landscaping strip along the entire length of the boundary between lot 154 and lot 155. This would require moving the existing Raleigh Road crossover to the west and subsequently closer to the intersection of West Coast Drive and Raleigh Road. From a traffic perspective a greater separation distance between the intersection and the crossover is preferred to minimise points of conflict and confusion and to improve safety.

Item d – The transport report (specifically swept paths) show conflicts between vehicle movements and the fill points. The development also has a significant number of movements that cross to the wrong side of the road.

The swept paths for vehicles towing trailers (such as boats) were checked due to the nature of the surrounding environment (such as the nearby Hillary's Boat Harbour). The number of towing vehicles likely to use the site simultaneously is considered to be low. The possibility of towing vehicles entering and exiting simultaneously would be rare. In any instance the revised swept paths clearly demonstrate that two vehicles towing boats could enter and exit the site simultaneously and would be able to access all bowzers.

Vehicles towing larger items such as caravans will be restricted as to which bowzers are used with some constraints with entering and exiting on West Coast Drive. The number of vehicles likely to be towing larger items such as caravans is likely to be very low. In any instance, driver behaviour is such that drivers will give way to each other to allow respective vehicle movements when larger vehicles are involved.

It is common practice for service vehicles to use the full width of the crossover. Reference is made to MRWA standard drawing 200431-0200-1 Service vehicles such as single unit trucks and fuel tankers will be managed by the operator to access the site during non peak times such that the full width of crossover can be used for the turning manoeuvre. This is common practice not only at service stations but other sites requiring service deliveries. The number of deliveries to the site is minimal compared to the majority of traffic using the site. To design a crossover to cater for service vehicles to turn lane correct within the crossover would result in an excessive driveway width. Allowing larger vehicles to use the majority of the crossover width whilst turning ensures that the width of the crossover is not excessive. This is considered desirable in high pedestrian activity areas.

Item e - Noting the access points are existing, they are not in accordance with the SAPC.

The transport assessment for the SAPC analysed two scenarios both of which included the access to the service station site. Service stations by nature will require two crossovers for operational purposes. It is not practical or in deed possible for fuel tankers to turn around within the constraints of a site. Main Roads WA acknowledge this design requirement in their driveway policy Document (D12#57413) which states “Service stations on a corner lot may have one driveway up to 11 .0 m wide to a State road and another to the minor road. Those not on a corner may have two driveways, each up to 11.0 m wide”

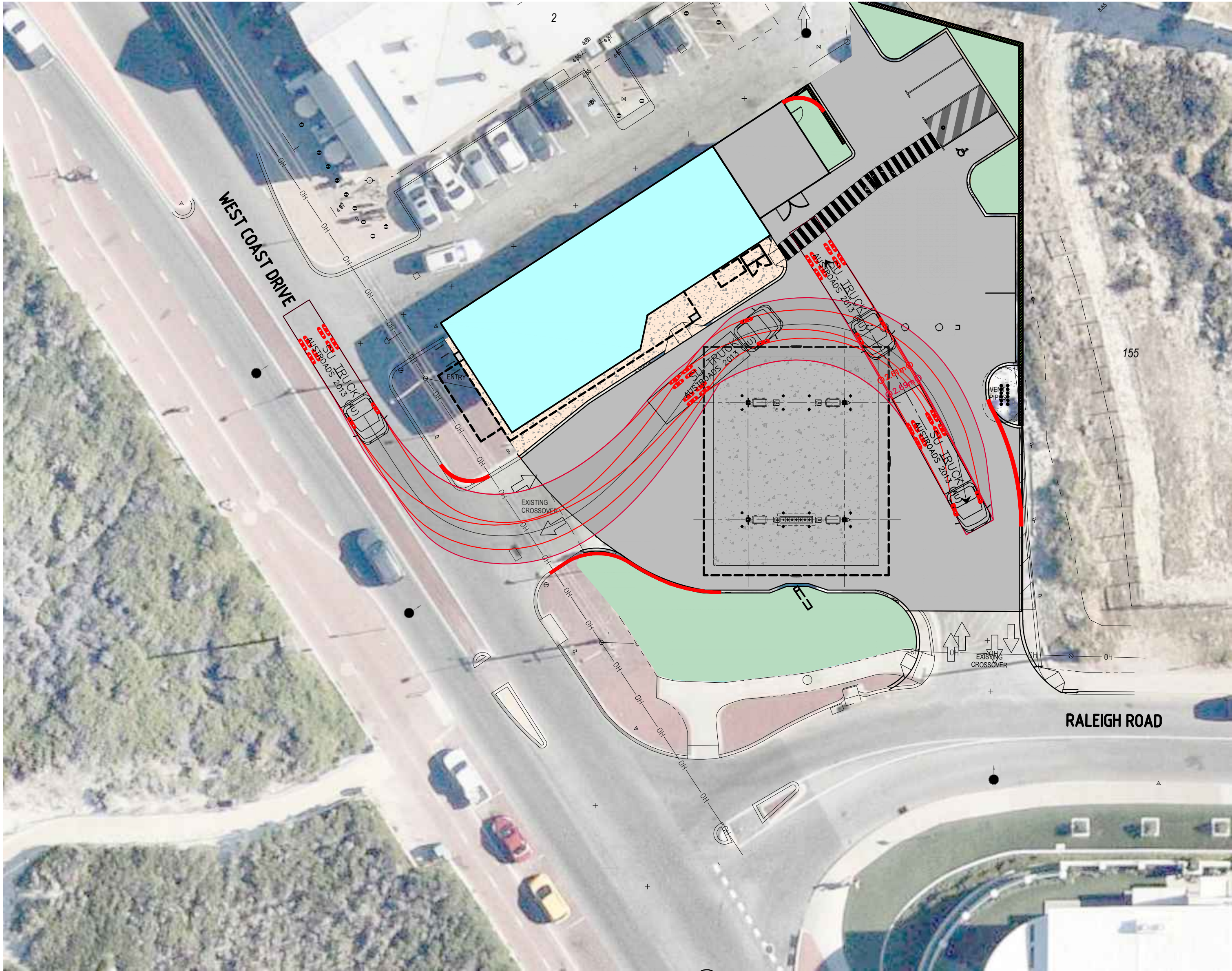
West Coast Drive is classified as a District Distributor B road which by definition carries traffic between industrial, commercial and residential areas. They have a reduced capacity compared to District Distributor A roads due to flow restrictions from access to and roadside parking alongside adjoining properties. Accesses at this location along with streetscaping and active roadside could assist to create a slower speed environment.

Item g – The proposal does not permit for sufficient truncation on the eastern side of the development to allow safe interaction between the vehicles leaving lot 2 and the pedestrians in front of the subject site.

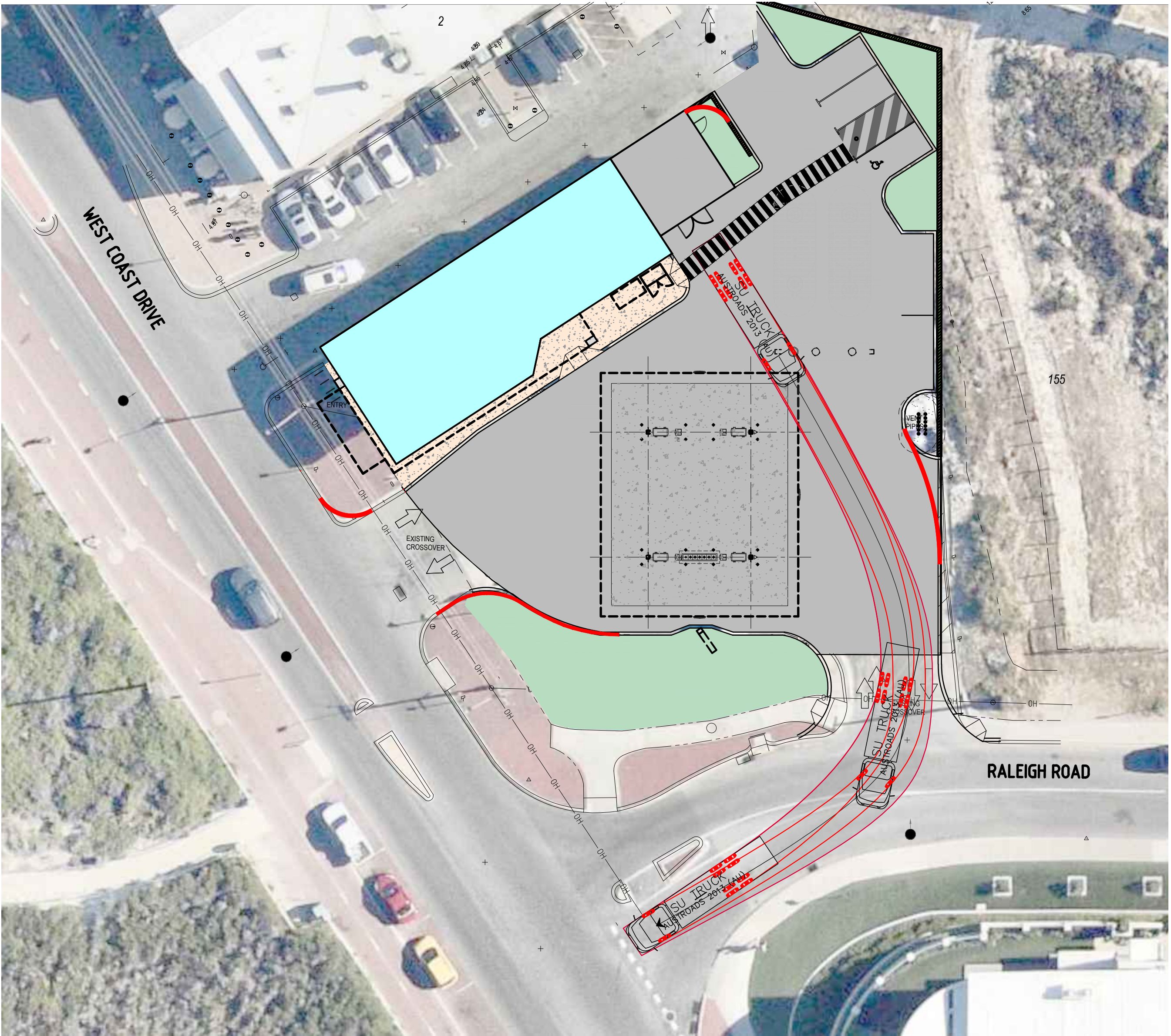
The rear access to/from Lot 2 is a slow speed environment. Vehicles travelling from Lot 2 into the site (lot 153/154) (i.e. southbound) have clear sight lines to pedestrians on the cross walk walking from the store to the parking spaces (with low level landscaping). The pedestrian cross walk has been aligned with the shared zone to improve sight lines to pedestrians waiting to cross the road. The carpark is a slow speed environment with the presence of pedestrians highlighted with the use of a cross walk alerting drivers to their presence. The severity of vehicle-pedestrian conflicts increases at speeds of 30km/h and higher. Typically, traffic speeds at this location within the carpark will be lower due to the constrained environment. The use of a speed hump immediately north of the cross walk would assist in further reducing vehicle speeds at this location if required.

Enc.

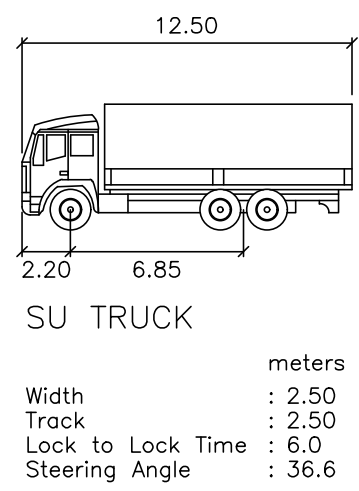
Drawing 19-3-34/801 Rev E – 15m Toll Tanker Vehicle
Drawing 19-3-34/802 Rev C – Boat and Caravan Options
Drawing 19-3-34/803 Rev B – Single Unit Truck



ENTER OFF WEST COAST DRIVE AND REVERSE TO SERVICE AREA
1:250



EXIT ONTO RALEIGH ROAD
1:250



PROJECT:
**WEST COAST HWY - RALEIGH RD
SORRENTO**

| REVISION | |
|----------|----------|
| NO. | DATE |
| B | 1-8-2019 |
| A | 5-6-2019 |

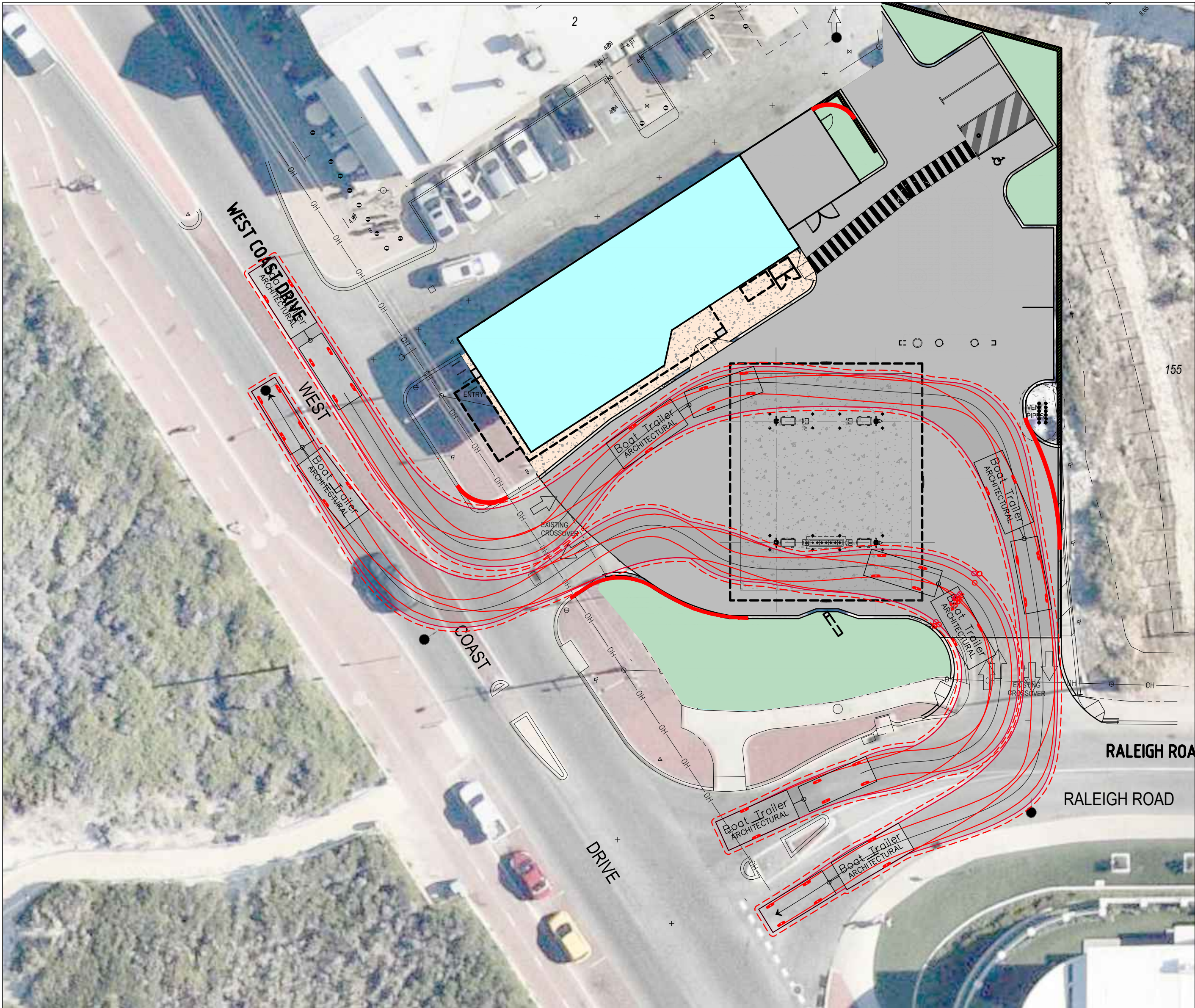
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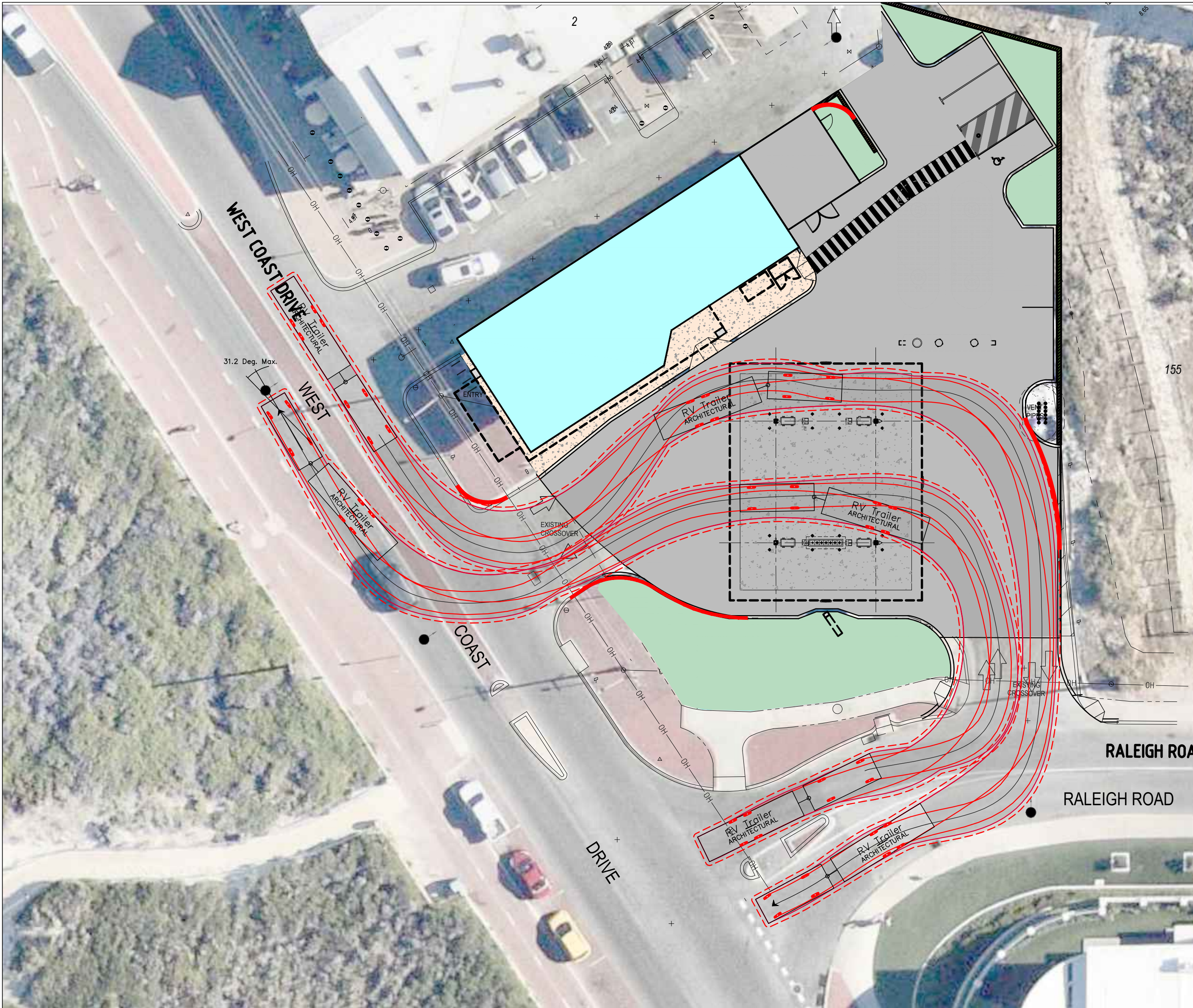
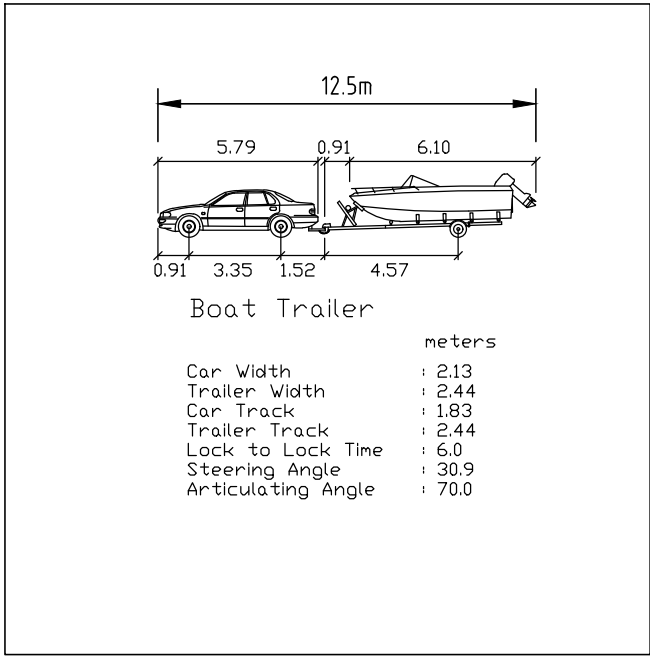
CLIENT:
**BP
AUSTRALIA**

DRAWING:
**SINGLE UNIT TRUCK SWEEP PATH
SERVICE AREA**
STATUS: **FOR APPROVAL**

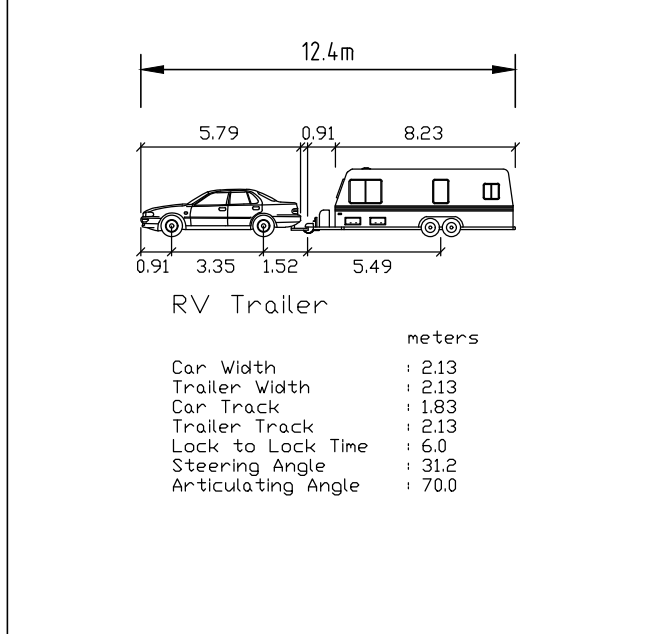
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| APP'D | | | | | FILE NAME S:\ACTIVE PROJECTS\19-03-034\ACAD_d\rev\19334-803.dwg | | |



CAR WITH BOAT TRAILER SWEEP PATH



CAR WITH RV TRAILER (CARAVAN) SWEEP PATH



PROJECT:
**WEST COAST HWY - RALEIGH RD
SORRENTO**

| | | |
|-----|-----------|---|
| C | 24-7-2019 | CAR AND BOAT SWEEP PATHS REVISED. REV C SITE PLAN UPDATED BASE FILE |
| B | 15-5-2019 | SITE LAYOUT PLAN UPDATED |
| A | 15-5-2019 | PRELIMINARY PLOT FOR APPROVAL. 17.5m TANKER SWEEP PATH |
| No. | DATE | REVISION |

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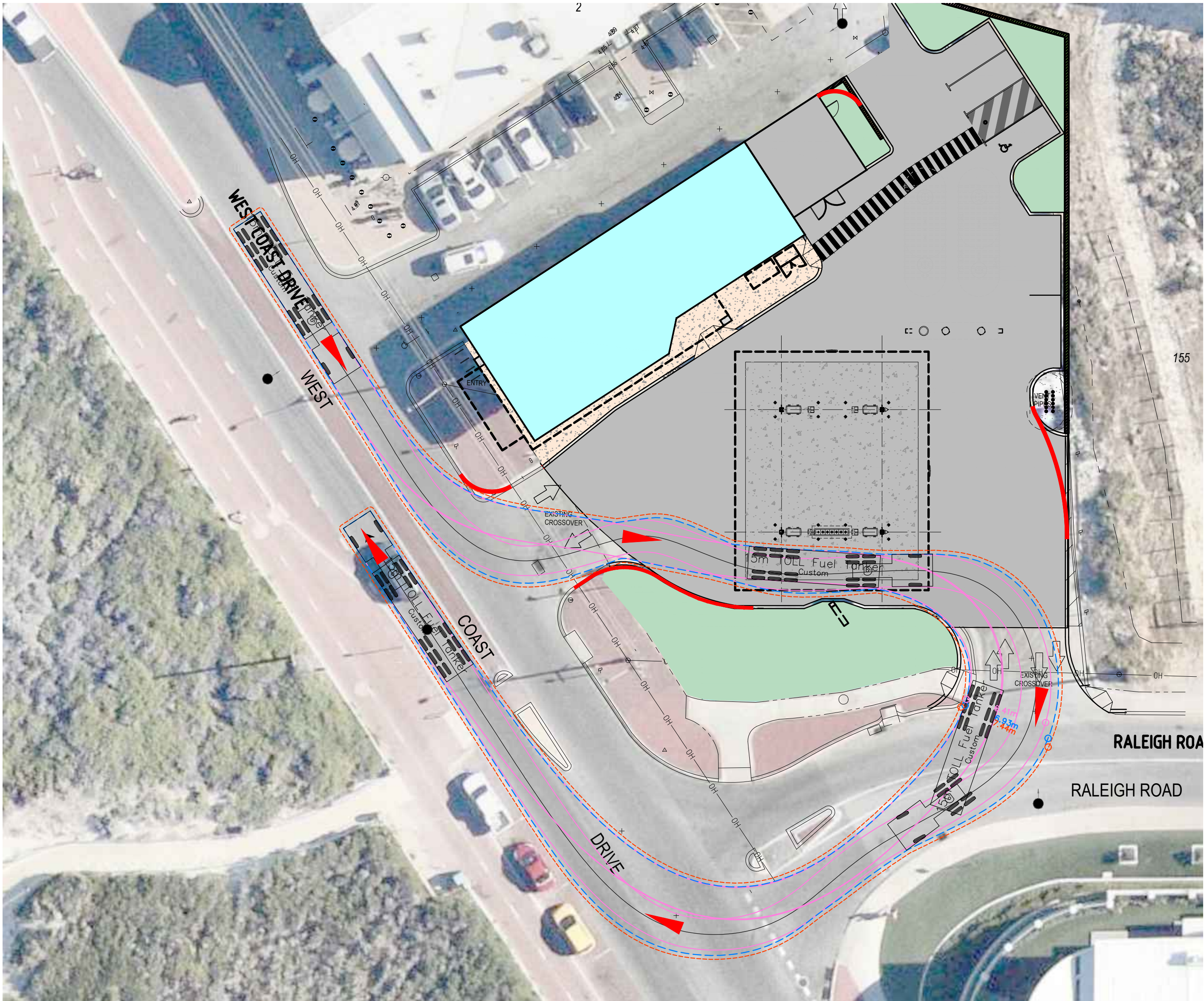
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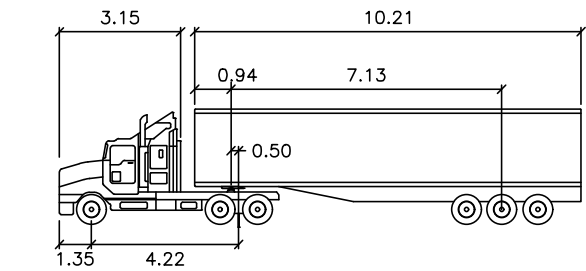
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DRAWING:
BOAT AND CARAVAN OPTIONS
STATUS: **FOR APPROVAL**

| | | | | |
|--------|-----------|---|----------|-----------------------------|
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| DATE | JULY 2019 | 19-3-34/802 | C | A1 |
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| DRAWN | MJV | | | |
| CHECK | | APP'D | | |

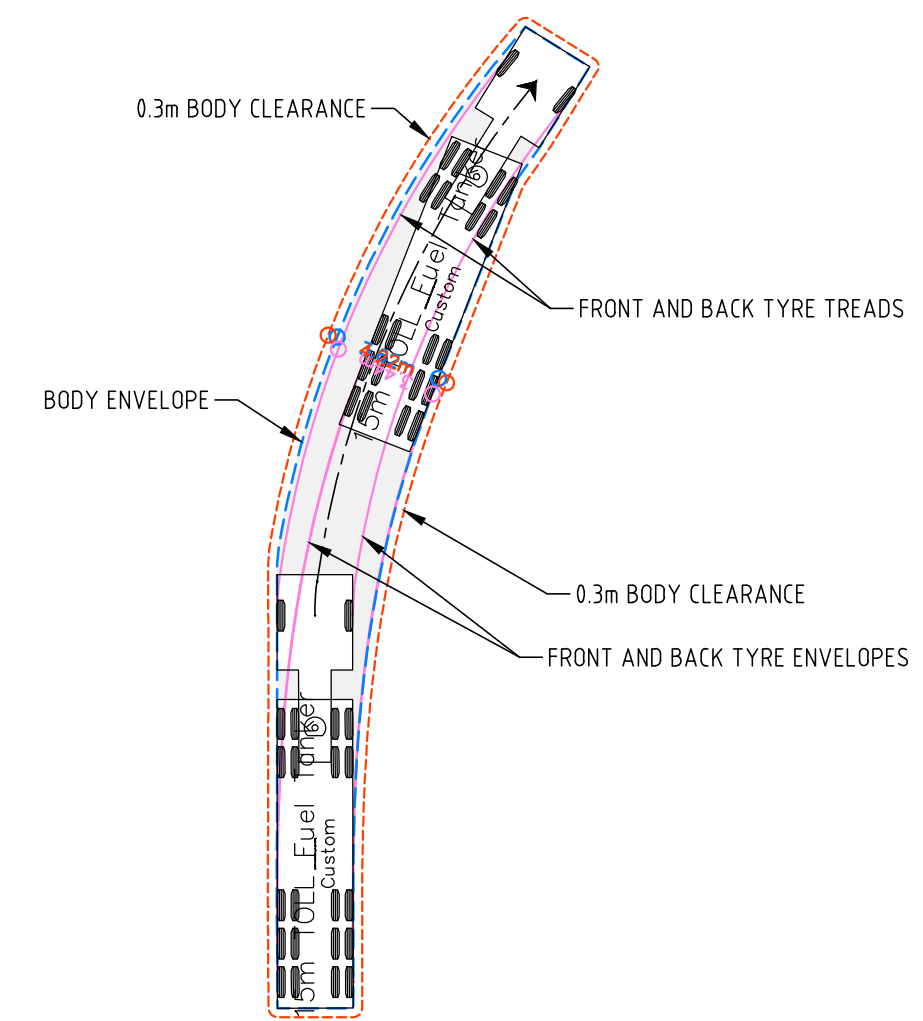


15m TOLL TANKER SWEEP PATH



| 15m TOLL Fuel Tanker | | | |
|----------------------|------|--------------------|------|
| Tractor Width | 2.50 | Lock to Lock Time | 6.0 |
| Trailer Width | 2.50 | Steering Angle | 27.7 |
| Tractor Track | 2.50 | Articulating Angle | 70.0 |
| Trailer Track | 2.50 | | |

15m TOLL TANKER DIMENSIONS



TURNING TEMPLATE DETAIL

PROJECT:
**WEST COAST HWY - RALEIGH RD
SORRENTO**

| REV | DATE | REVISION |
|-----|-----------|---|
| E | 1-8-2019 | REV C SITE PLAN UPDATED BASE FILE |
| D | 15-5-2019 | SITE LAYOUT PLAN UPDATED |
| C | 14-5-2019 | CROSSOVERS REVISED TO SUIT CADASTRAL BOUNDARY. |
| B | 1-4-2019 | FUEL TANKER POSITION RELOCATED TO NEW POSITION. |
| A | 1-4-2019 | PRELIMINARY PLOT FOR APPROVAL. |

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| SCALE | DATE | DESIGN | DRAWN | CHECK | DRAWING No. | REV No. | ORIGINAL DRAWING SIZE |
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Environmental Noise Assessment

Lot 153 West Coast Drive & Lot 154 Raleigh
Road, Sorrento

Service Station Development

Reference: 19024845-01A

Prepared for:

BP Australia Pty Ltd

Report: 19024845-01A

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| Date: | Rev | Description | Prepared By | Verified |
|-----------|-----|--|-------------|--------------|
| 5-Jun-19 | - | Issued to Client | Matt Moyle | Terry George |
| 13-Jun-19 | A | Updated to address future developments | Matt Moyle | Terry George |

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1 INTRODUCTION

A service station redevelopment is proposed at Lot 153 West Coast Drive & Lot 154 Raleigh Road, Sorrento (refer *Figure 1-1*). A service station currently exists on the site, which will be demolished to make way for the proposed new structures. The most critical premises identified in this assessment are to the northeast, east and south. The subject site is amongst commercial business use to the north.

Noise sources considered were those associated with the rooftop and service yard mechanical plant, service station equipment and car park use. Noise from these items was assessed against the prescribed standards of the *Environmental Protection (Noise) Regulations 1997* by way of noise modelling.

Included in the assessment is consideration for the Sorrento Plaza Activity Centre which is proposed and has built-form approvals at 130-136 West Coast Hwy. The centre is likely to have commercial uses on ground floor and residential uses on upper floors, ranging from 3 to 5 storeys.



Figure 1-1 Site Locality

The service station is proposed to operate 24 hours a day, 7-days a week. The existing service station also operates at these same hours. Site drawings used in this assessment are included in *Appendix A*.

Appendix C contains a description of some of the terminology used throughout this report.

2 CRITERIA

Environmental noise in Western Australia is governed by the *Environmental Protection Act 1986*, through the *Environmental Protection (Noise) Regulations 1997* (the Regulations).

Regulation 7 defines the prescribed standard for noise emissions as follows:

“7. (1) Noise emitted from any premises or public place when received at other premises –

- a) must not cause or significantly contribute to, a level of noise which exceeds the assigned level in respect of noise received at premises of that kind; and
- b) Must be free of:
 - i. Tonality;
 - ii. Impulsiveness; and
 - iii. Modulation”.

A “...noise emission is taken to *significantly contribute to* a level of noise if the noise emission exceeds a value which is 5 dB below the assigned level...”

Tonality, impulsiveness and modulation are defined in Regulation 9. Noise is to be taken to be free of these characteristics if:

- a) The characteristics cannot be reasonably and practicably removed by techniques other than attenuating the overall level of noise emission; and
- b) The noise emission complies with the standard after the adjustments of *Table 2-1* are made to the noise emission as measured at the point of reception.

Table 2-1 Adjustments for Intrusive Characteristics

| Tonality | Modulation | Impulsiveness |
|----------|------------|---------------|
| + 5 dB | + 5 dB | + 10 dB |

Note: The above are cumulative to a maximum of 15dB.

The baseline assigned levels (prescribed standards) are specified in Regulation 8 and are shown in *Table 2-2*.

Table 2-2 Baseline Assigned Noise Levels

| Premises Receiving Noise | Time of Day | Assigned Level (dB) | | |
|---|--|----------------------------|----------------------------|-------------------------------|
| | | L _{A10} | L _{A1} | L _{Amax} |
| Noise sensitive premises: highly sensitive area | 0700 to 1900 hours Monday to Saturday (Day) | 45 + influencing factor | 55 + influencing factor | 65 + influencing factor |
| | 0900 to 1900 hours Sunday and public holidays (Sunday) | 40 + influencing factor | 50 + influencing factor | 65 + influencing factor |
| | 1900 to 2200 hours all days (Evening) | 40 + influencing factor | 50 + influencing factor | 55 + influencing factor |
| | 2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night) | 35 + influencing factor | 45 + influencing factor | 55 + influencing factor |
| Noise sensitive premises: any area other than highly sensitive area | All hours | 60 | 75 | 80 |
| Commercial | All hours | 60 | 75 | 80 |

The influencing factor was calculated for the nearest noise sensitive premises, shown on *Figure 3-1*, being a recent aerial image of the subject area. As per the relevant Planning Scheme map, the subject site is amongst “Commercial” and “Residential” zoning (Refer *Appendix B*).

An influencing factor of 7 dB has been calculated for the nearby residential premises, based on a transport factor of 6 dB from West Coast Highway (16,935 vpd¹ for 2015), and 1 dB from commercial land uses – refer *Table 2-3*.

Table 2-3 Influencing Factor Calculation – All Residences

| Description | Within 100 metre Radius | Within 450 metre Radius | Total |
|-----------------|-------------------------|-------------------------|-------------|
| Commercial Land | 0.6-1.0 dB | 0.1 dB | 1 dB |
| Major Road | 6 dB | - | 6 dB |
| Total | | | 7 dB |

Table 2-4 shows the assigned levels (including the influencing factors for residential premises). The L_{A10} assigned level is applicable to the mechanical plant and fuel pump noise while the L_{Amax} is applicable to the air service alarm and car door closing noise.

¹ Based on Main Roads Traffic map sourced data from Site 554

Table 2-4 Assigned Noise Levels

| Premises Receiving Noise | Time of Day | Assigned Level (dB) | | |
|---|--|---------------------|-----------------|-------------------|
| | | L _{A10} | L _{A1} | L _{Amax} |
| All Residences | 0700 to 1900 hours Monday to Saturday (Day) | 52 | 62 | 72 |
| | 0900 to 1900 hours Sunday and public holidays (Sunday) | 47 | 57 | 72 |
| | 1900 to 2200 hours all days (Evening) | 47 | 57 | 62 |
| | 2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night) | 42 | 52 | 62 |
| Noise sensitive premises: any area other than highly sensitive area | All hours | 60 | 75 | 80 |
| Commercial | All hours | 60 | 75 | 80 |

It is noted the assigned noise levels are statistical levels and therefore the period over which they are determined is important. The Regulations define the Representative Assessment Period (RAP) as *a period of time of not less than 15 minutes, and not exceeding 4 hours*, which is determined by an *inspector or authorised person* to be appropriate for the assessment of a noise emission, having regard to the type and nature of the noise emission. An *inspector or authorised person* is a person appointed under Sections 87 & 88 of the *Environmental Protection Act 1986* and include Local Government Environmental Health Officers and Officers from the Department of Environment Regulation. Acoustic consultants or other environmental consultants are not appointed as an *inspector or authorised person*. Therefore, whilst this assessment is based on a 4 hours RAP, which is assumed to be appropriate given the nature of the operations, this is to be used for guidance only.

Under regulation 3, nothing in the Noise Regulations applies to the following relevant noise emissions –

- (a) noise emissions from the propulsion and braking systems of motor vehicles operating on a road;
- (b) noise emissions from a safety warning device, other than a reversing alarm, fitted to a motor vehicle operating on a road;
- (c) noise emissions –
 - (i) from a safety warning device fitted to a building as a requirement of the Building Code as defined in the *Building Regulations 2012* regulation 3; or
 if every reasonable and practicable measure has been taken to reduce the effect of the noise emission consistent with providing an audible warning to people;

Since the development is open to the public, the service station, car park and associated like areas are considered to be a road and therefore vehicle noise (propulsion and braking) is not strictly assessed. Vehicle door closing noise is assessable in any parts of the car park, as this does not form part of the 'propulsion or braking' systems.

Bulk refuelling/fuel delivery is understood to be gravity fed with the truck engine turned off and generally occurs during the day. As such, it does not represent a significant noise scenario warranting assessment.

Regulation 14A provides requirements for the collection of waste stating that this activity can also be exempt from having to comply with Regulation 7 prescribed standards provided it is undertaken between 7am and 7pm Mondays to Saturdays and undertaken in the quietest reasonable manner.

3 METHODOLOGY

Computer modelling was undertaken, using the software *SoundPLAN 8.1* with the ISO 9613 algorithms (ISO 17354 compliant) selected. These algorithms have been selected as they include the influence of wind. Input data required in the model are:

- Meteorological Information;
- Topographical data;
- Ground Absorption; and
- Source sound power levels.

3.1 Meteorological Information

Meteorological information utilised is provided in *Table 3-1* and is considered to represent worst-case conditions for noise propagation. At wind speeds greater than those shown, sound propagation may be further enhanced, however background noise from the wind itself and from local vegetation is likely to be elevated and dominate the ambient noise levels.

Table 3-1 Modelling Meteorological Conditions

| Parameter | Night (1900-0700) |
|------------------|-------------------|
| Temperature (°C) | 15 |
| Humidity (%) | 50 |
| Wind Speed (m/s) | Up to 5m/s |
| Wind Direction* | All |

* Note that the modelling package used allows for all wind directions to be modelled simultaneously.

It is generally considered that compliance with the assigned noise levels needs to be demonstrated for 98% of the time, during the day and night periods, for the month of the year in which the worst-case weather conditions prevail. In most cases, the above conditions occur for more than 2% of the time and therefore must be satisfied.

3.2 Topographical Data

Topographical data was adapted from *Google Earth*, site photographs and proposed plans. Existing and future buildings have also been included as these can provide barrier attenuation when located between a source and receiver, much the same as a hill. Parapets are assumed to be atop the service station building and at 1-metre higher than the roof.

3.3 Ground Absorption

Ground absorption varies from a value of 0 to 1, with 0 being for an acoustically reflective ground (e.g. water or bitumen) and 1 for acoustically absorbent ground (e.g. grass). In this instance, a value of 0.0 has been used for the carpark, road and service station areas, and 0.5 has been used for the remaining areas.

3.4 Source Sound Levels

The sound power levels used in the modelling are provided in *Table 3-2*.

Table 3-2 Source Sound Power Levels, dB

| Description | Octave Band Centre Frequency (Hz) | | | | | | | | Overall dB(A) |
|--|-----------------------------------|-----|-----|-----|----|----|----|----|------------------|
| | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | |
| Fuel Bowsers x 4 | - | 65 | 68 | 65 | 67 | 65 | 59 | 50 | 71 |
| Air Service Alarm - L _{max} | - | - | - | - | - | 91 | 96 | 92 | 99 |
| Toilet Exhaust Fan | | 61 | 67 | 61 | 64 | 60 | 52 | 46 | 67 |
| Exhaust Fan x2 | 79 | 77 | 73 | 70 | 61 | 63 | 62 | 52 | 72 |
| 4 x Actron 20kW Condensers (Service Yard) | - | 70 | 70 | 68 | 66 | 62 | 57 | 55 | 71 |
| Pulford Silenced Compressor | 73 | 72 | 75 | 71 | 67 | 63 | 59 | 51 | 73 |
| Ice Box Compressor | 51 | 61 | 61 | 63 | 63 | 59 | 56 | 47 | 69 |
| Car Door Closings – L _{Amax} | 71 | 74 | 77 | 81 | 80 | 78 | 72 | 61 | 84 |

With regards to the above noise sources, please note the following:

- Service station mechanical plant sound levels have been sourced from file data for previous similar projects.
- The ice box compressor source is 2.0m above ground level positioned as shown in site plans.
- A fully enclosed service/plant yard is shown on the plans (including a *Colorbond* roof). This has been represented in the noise model.
- An existing 1.8m fence is observed along the northern boundary and has been included in the noise model.
- The service station mechanical plant will operate at all times, due to the 24-hour nature of the store.
- The Sorrento Plaza Activity Centre has been considered by way of utilising upper floor receivers close to the BP site boundary. The receivers of note here are Receivers A and G.
- Two scenarios are considered as follows:
 1. Night L_{A10} Noise – All service station plant running including all bowsers simultaneously.
 2. Night L_{Amax} Noise – All plant from scenario 1 and with car door and air service alarm noise sources.
- An image of the noise model for Scenario 2 is shown in *Figure 3-1*. Note that the yellow receivers are existing noise sensitive and the green are potential multi-storey residential and ground floor commercial.

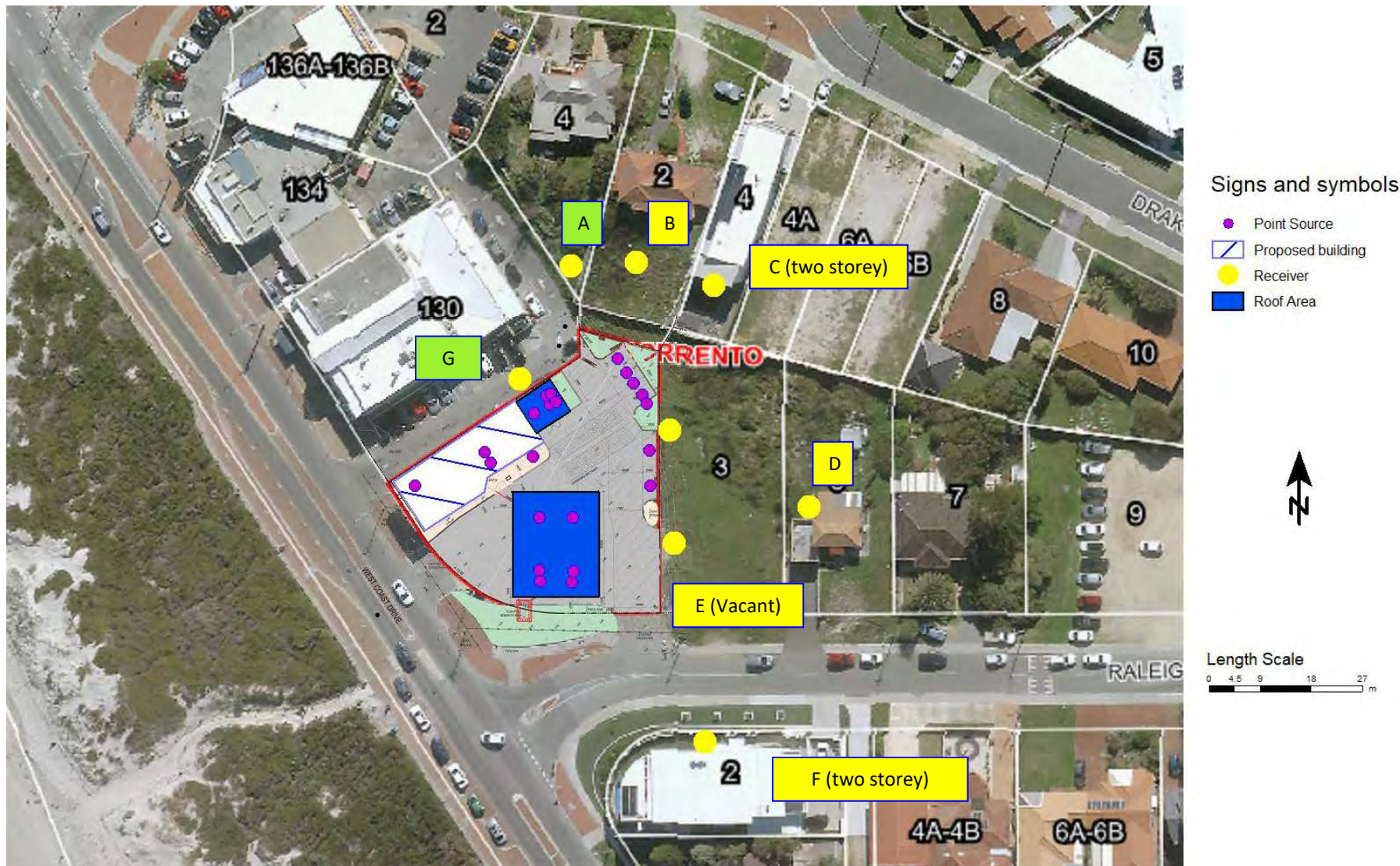


Figure 3-1 2D Image of Noise Model

4 RESULTS AND ASSESSMENT

4.1 Scenario 1 – Night L_{A10}

Table 4-1 provides the results for the night time L_{A10} scenario with all mechanical plant and all fuel bowzers in use. Figure 4-1 provides the noise contour plots for the Night L_{A10} Scenario.

Table 4-1 Predicted Noise Levels, Scenario 1: Night, L_{A10} dB

| Location | Predicted Noise Level Worst-Case Downwind | | | Critical Assigned Level | Calculated Exceedence |
|---|---|--------------|-----------------------|-------------------------|-----------------------|
| | Mechanical Plant | Fuel Bowzers | Combined ² | | |
| Residence A | 29 | 35 | 36 | 42 | Complies |
| Residence B | 28 | 34 | 35 | 42 | Complies |
| Residence C Ground Floors | 22 | 22 | 25 | 42 | Complies |
| Residence C Upper Floor | 27 | 31 | 33 | 42 | Complies |
| Residence D | 33 | 33 | 36 | 42 | Complies |
| Residence E (Vacant) ¹ | 34 | 39 | 40 | 60 (42) | Complies |
| Residence E Upper Floor (Vacant) ¹ | 35 | 42 | 41 | 60 (42) | Complies |
| Residence F Ground Floors | 27 | 36 | 37 | 42 | Complies |
| Residence F Upper Floors | 28 | 37 | 37 | 42 | Complies |
| Commercial G Ground floor | 40 | 25 | 40 | 60 | Complies |
| Residential G Upper Floor | 43 | 33 | 43 | 42 | +1 dB |

1. This location is currently vacant, however if developed to noise sensitive the assigned level is shown in brackets.
2. Includes + 5 dB adjustment for tonality.

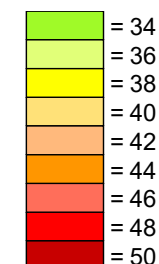
The most critical existing receiving premises is Receiver G which is the upper floor of the adjacent Lot 130 activity centre. The predicted level of is 43 dB L_{A10} . Note that this residence is part of the approved activity centre and will likely comprise multi storey residential. The Mechanical plant noise during the night period, when background noise is lowest, may be considered to have tonal characteristics, attracting a +5 dB adjustment. Therefore, the assigned level is exceeded by 6 dB at this location. Other existing residences would similarly be assessed as marginal exceedences with the tonality adjustment. The dominant noise sources are primarily due to rooftop mechanical plant, therefore suitable mitigation should be investigated – refer Section 5.

Residence E is currently a vacant residential block, which is not classified as highly noise sensitive and therefore, noise emissions will comply whilst vacant or when developed.

Figure 4-1



Predicted Noise level
L_{A10} dB



Signs and symbols

- * Point source
- Blue square Canopy Area

BP Service Station, Sorrento - Predicted Noise Levels
L_{A10} Noise Level Contours - Mechanical Plant - Ground Floor



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by Matt Moyle
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4.2 Scenario 2 – Night L_{Amax}

Table 4-2 provides the results for the night time L_{Amax} scenario.

Table 4-2 Predicted Noise Levels, Scenario 2: Night, L_{Amax} dB

| Location | Predicted Noise Level Worst-Case Downwind | | | Critical Assigned Level | Calculated Exceedence |
|----------------------------------|---|-----------|----------|-------------------------|-----------------------|
| | Air-Service Alarm | Car Doors | Maximum* | | |
| Residence A | 60 + 5 | 47 + 10 | 65 | 62 | +3 dB |
| Residence B | 56 + 5 | 44 + 10 | 61 | 62 | Complies |
| Residence C Ground Floors | 43 + 5 | 34 + 10 | 48 | 62 | Complies |
| Residence C Upper Floor | 52 + 5 | 42 + 10 | 57 | 62 | Complies |
| Residence D | 58 + 5 | 43 + 10 | 63 | 62 | +1 dB |
| Residence E (Vacant) | 72 + 5 | 59 + 10 | 77 | 80 (62) | Complies (+15) |
| Residence E Upper Floor (Vacant) | 72 + 5 | 59 + 10 | 77 | 80 (62) | Complies (+15) |
| Residence F Ground Floors | 52 + 5 | 45 + 10 | 57 | 62 | Complies |
| Residence F Upper Floors | 52 + 5 | 45 + 10 | 57 | 62 | Complies |
| Commercial G | 63 + 5 | 51 + 10 | 68 | 80 | Complies |
| G Upper Floor Residential | 65 + 5 | 51 + 10 | 70 | 62 | +8 dB |

* "+ 5" in the table has been assumed for potential tonal penalty and "+ 10" for impulsive penalty and included in the maximum.

Where the maximum level is a car door, a +10 dB adjustment is applied for impulsiveness. Where the maximum level is the air alarm, a +5 dB adjustment is applied for tonality. For a given receiver the maximum noise source is the air service alarm.

Noise levels exceed at Residence D and Residence E and upper residential floors of the proposed activity centre (when developed). It is recommended that a non-beeping unit be selected to ensure compliance. At Residence E, the car doors are also shown to exceed by 7 dB, therefore a solid fence should be constructed along this boundary to mitigate this noise source. With both of these mitigation options, the L_{Amax} assigned noise level will be complied with at all times. In the future if the residence is constructed as two storey, a carport/awning type structure may be required over the closest car bays. Note that all other noise sensitive and commercial boundaries comply with their respective assigned levels.

5 RECOMMENDATIONS

The two most critical scenarios for the proposed concept plan are predicted to exceed the assigned levels at Residence D and future Residences E and G. Noise controls are therefore required.

To ensure compliance, the following measures are to be applied in the design as a minimum:

- Mechanical plant to be located within a solid screened service yard of at least 2.0m wall height, an acoustic absorptive lining should be installed to the inside facades of this wall to reduce reflection noise. Any ventilation louvers required are to be acoustically rated;
- Roof top exhaust fans to be axial type with inline attenuators/silencers.
- Eastern boundary to be fenced with a minimum *colorbond*-type fence construction of minimum 1.8m height above retaining walls. In the future if the residence at 3 Raleigh Road is constructed as two storey, a carport type structure may be required over the closest car bays.
- Rooftop mechanical plant (exhaust fans) to be located behind local screening or as close to parapets as possible;
- Mechanical plant to be in line with those assumed in the modelling – refer *Table 3-2*;
- Air service alarm to be replaced with a non-audible unit or selected to be 8 dB quieter than the modelled unit.

Some best practice recommendations have been included below – to be implemented in the design and operation where practicable.

- Mechanical plant that will operate during the night (e.g. refrigeration condensers) to be selected having a low speed option;
- Mechanical plant to be maintained to ensure noise levels do not increase over time;
- Mechanical plant to be installed using anti-vibration isolation mounts;
- Any external music or the like shall be low level and completely inaudible at residences. Public address system may be used for emergency purposes and driver communication;
- Bin servicing shall occur between 7am and 7pm Mondays to Saturdays. The servicing of bins would fall under regulation 14A and provided it is carried out within the stipulated hours and undertaken as quietly as reasonably practicable, the 'normal' assigned levels do not apply. Where possible, bins shall be located in areas away from and/or screened from residences;
- Access grates shall be firmly seated in position and fitted with rubber gaskets to avoid excess banging.

6 CONCLUSION

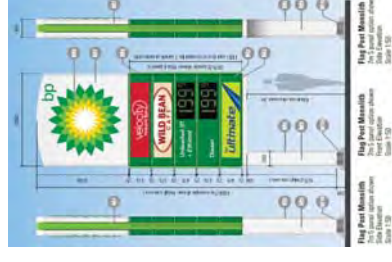
The potential noise impacts resulting from the proposed service station redevelopment at Lot 153 West Coast Drive & Lot 154 Raleigh Road, Sorrento have been assessed in accordance with the *Environmental Protection (Noise) Regulations 1997*. Compliance with the assigned levels is considered achievable with the implementation of mitigation measures detailed in *Section 5*.

Appendix A

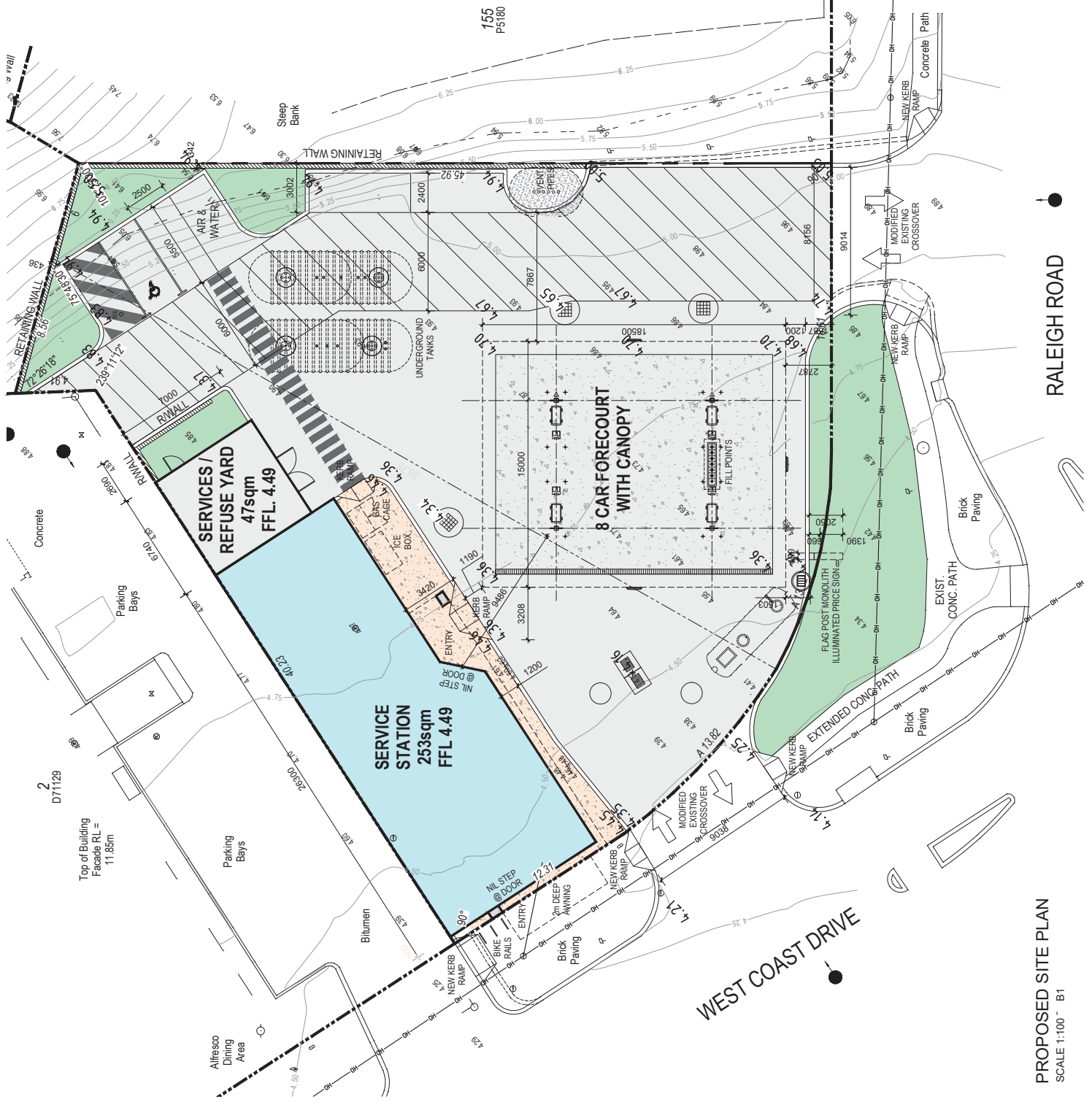
Site Plans

LEGEND:

- E 'TENT OF LANDSCAPING - REF
- E 'TENT OF CONCRETE PAVING
- E 'TENT OF CONCRETE PAVING
- E 'TENT OF BUILDING
- E 'TENT OF HARDSTAND
- E 'ISTING RL
- PROPOSED FFL " RL



PROPOSED FLAG POST
MONOLITH ILLUMINATED PRICE SIGN
SCALE 1:100 ~ B1

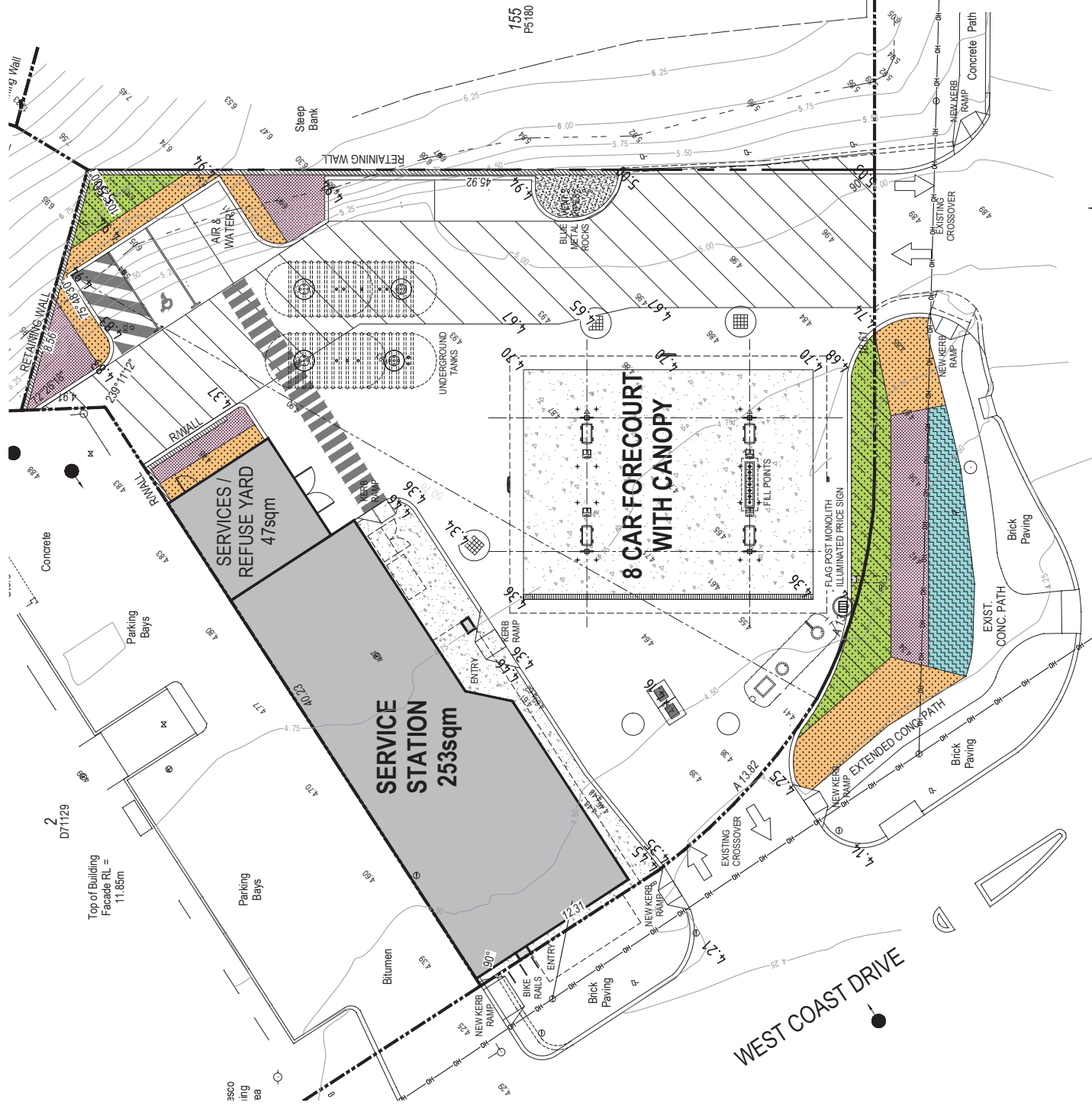


RALEIGH ROAD

PROPOSED SITE PLAN
SCALE 1:100 ~ B1



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SOFT LANDSCAPING LEGEND:

TOTAL SOFT LANDSCAPING AREA: 232' x 14' 48" OF THE TOTAL SITE AREA

| GROUND COVERS SPECIES | POT SIZE | SPACING | QUANTITY (EST) |
|-----------------------|----------|---------|----------------|
| LOBELIA ALATA | 140" - | 500" - | 300 |
| BAN' SIA NIVEA | 140" - | 500" - | 250 |
| HA' EA UNDLATA | 140" - | 400" - | 300 |
| LECHENALITA BILOBA | 140" - | 300" - | 370 |



LANDSCAPING NOTES:

1. PLANTED SPECIES, PLANTING LOCATIONS OF SHRUBS AND GROUND COVERS ARE TO BE CONFIRMED BY CONTRACTOR WITH THE SUPERINTENDENT PRIOR TO PLANTING.
2. PLANTING LOCATIONS AND ARE TO BE CONFIRMED ON SITE.
3. PLANTS TO BE OFFSET 1' FROM "ERLINE TO ALLOW FOR OVERHANGS IF ANY."
4. GROUND COVERS ARE TO BE PLANTED IN GROUPS OF 3 AND 5.
5. SQUARE SHOULDER CONCRETE - "ERBINS TO DEFINE GARDEN AREAS"
6. SQUARE SHOULDER CONCRETE - "ERBINS 3' AROUND VENT STAC'S WITH 20" BLUE METAL AT BASE OF STAC'S"
7. RECLUTATION CONTROLLER FI' ED IN SERVICES YARD WITH WATERPROOF
8. ALL GARDEN AREAS SUPPLIED WITH WOOD CHIP MULCH
9. IRRIGATION TO ALL GARDEN AREAS WITH 13" - COMMERCIAL BORE DRIP LINE
10. 1000' - SPACINGS BETWEEN PLANT VARIETIES"

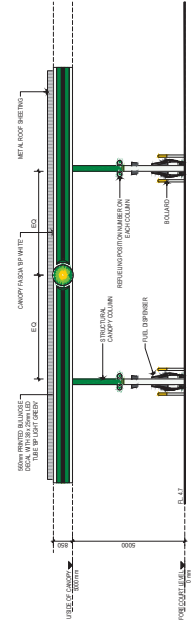
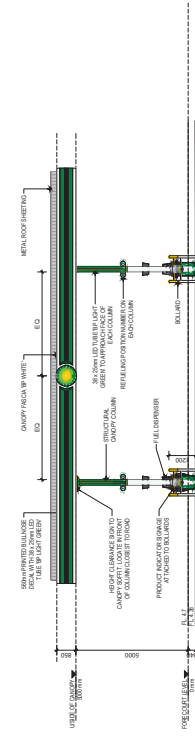
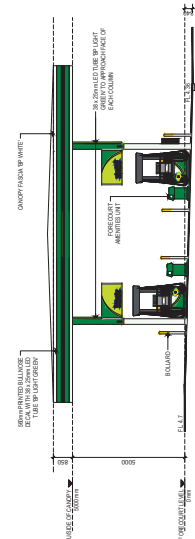
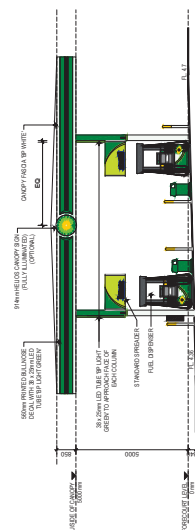
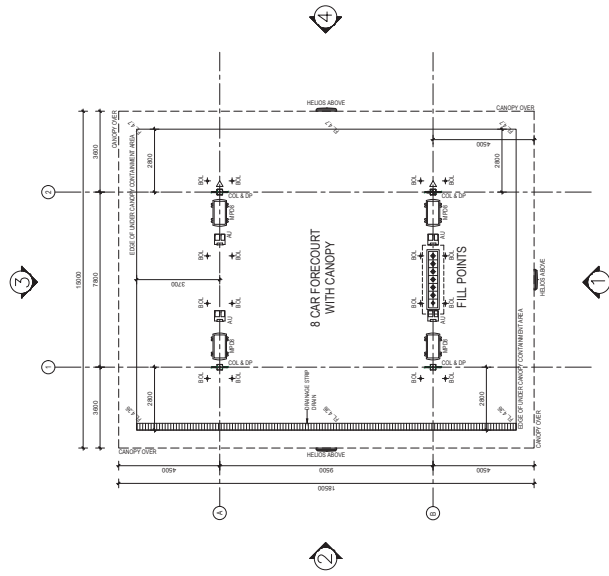


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| A | ISSUED FOR CLIENT REVIEW | AC | 06.05.2019 |
| Project | Description | Drawn | Checked |
| BP SORRENTO | PROPOSED LANDSCAPING PLAN | AC | AC |
| Location | LOT 153 WEST COAST DRIVE & LOT 154 RALEIGH ROAD SORRENTO | Scale | 1:100 |
| Client | BP SORRENTO | Date | 07.05.2019 |
| Author | Collard Preston Architects | Rev | 02 |

PROPOSED LANDSCAPING PLAN
SCALE 1:100' A1

RALEIGH ROAD

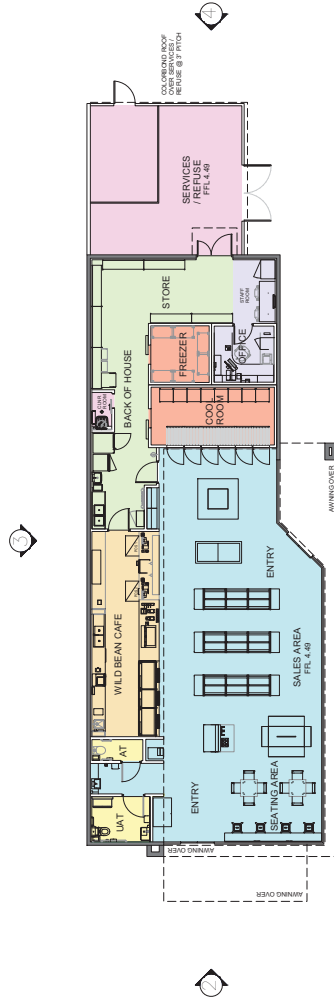
WEST COAST DRIVE



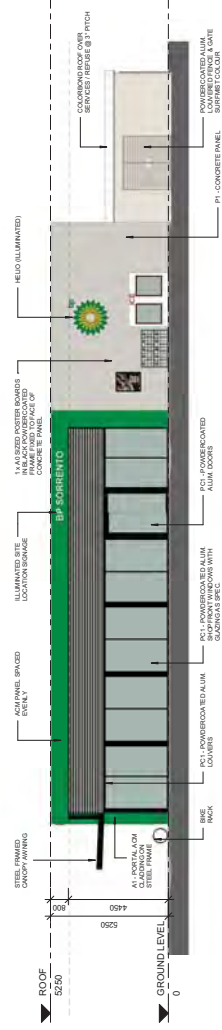
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|----|--------------------------|-------------------------|-------------|---------|-------|
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| 2 | ISSUED FOR CLIENT REVIEW | 06.05.2019 | drawn | checked | 18.19 |

153 WEST COAST DRIVE & LOT 154 RALEIGH ROAD SORBITO
 SORBITO, QLD 4806
 Tel: 08 9322 1244
 Fax: 08 9322 1246
 Email: enquiries@collardpreston.com.au

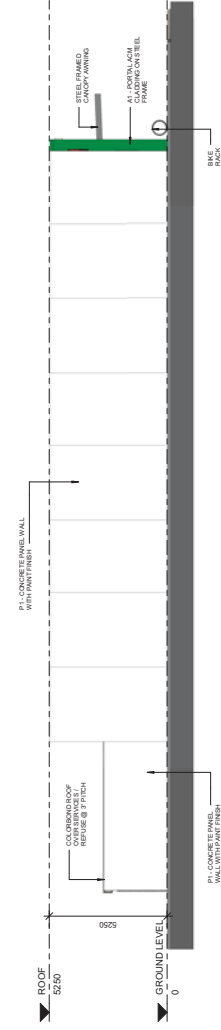
Collard Preston
 ARCHITECTS



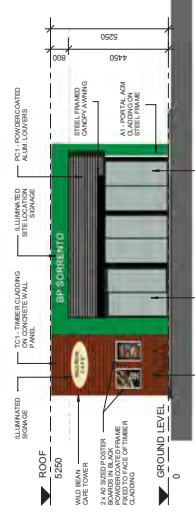
PROPOSED FLOOR PLAN
1 : 100



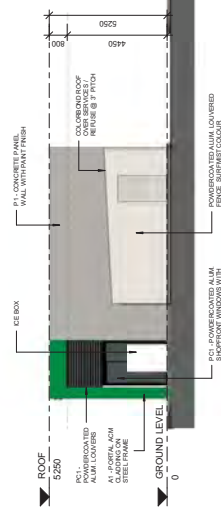
1 SOUTH-EAST
1:100



3 NORTH-WEST
1:100



2 SOUTH-WEST
1:100



4 NORTH-EAST
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|  | |  | |
| Hodge Collard Preston architects + engineers | | SOF structural office firm | |
| 10110 153rd Avenue SW, Suite 200 Kent, WA 98032-3100 Phone: 206.835.7600 Email: info@hodgecollard.com | | 10110 153rd Avenue SW, Suite 200 Kent, WA 98032-3100 Phone: 206.835.7600 Email: info@hodgecollard.com | |
| Project Name 153rd & Pacific Ave. Emergency | | Project No. 153-0001 | |
| Client City of Kent | | Architect Hodge Collard Preston | |
| Location 153rd & Pacific Ave. Kent, WA | | Project Type Emergency | |
| Project Description 153rd & Pacific Ave. Emergency | | Project Status Emergency | |
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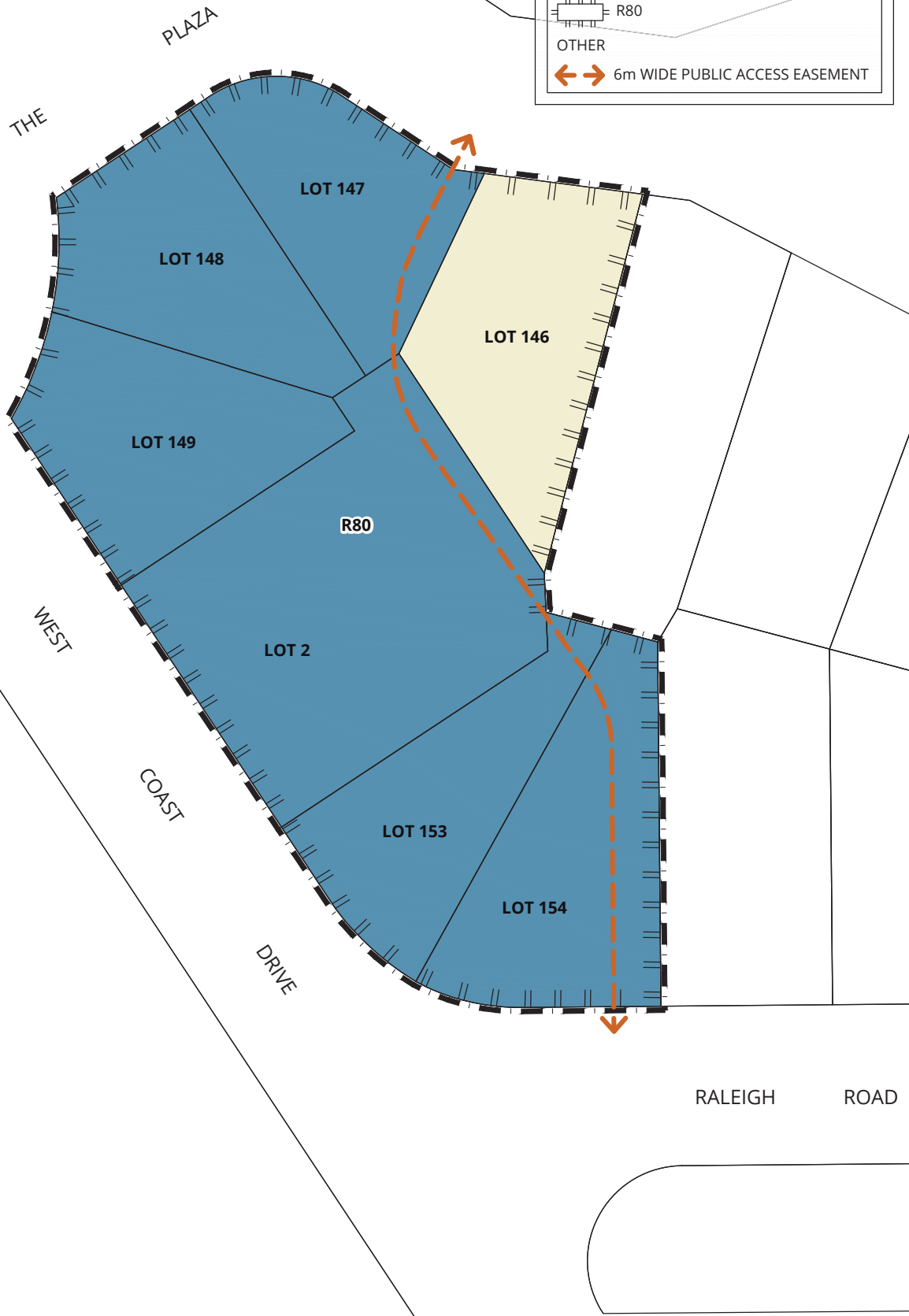
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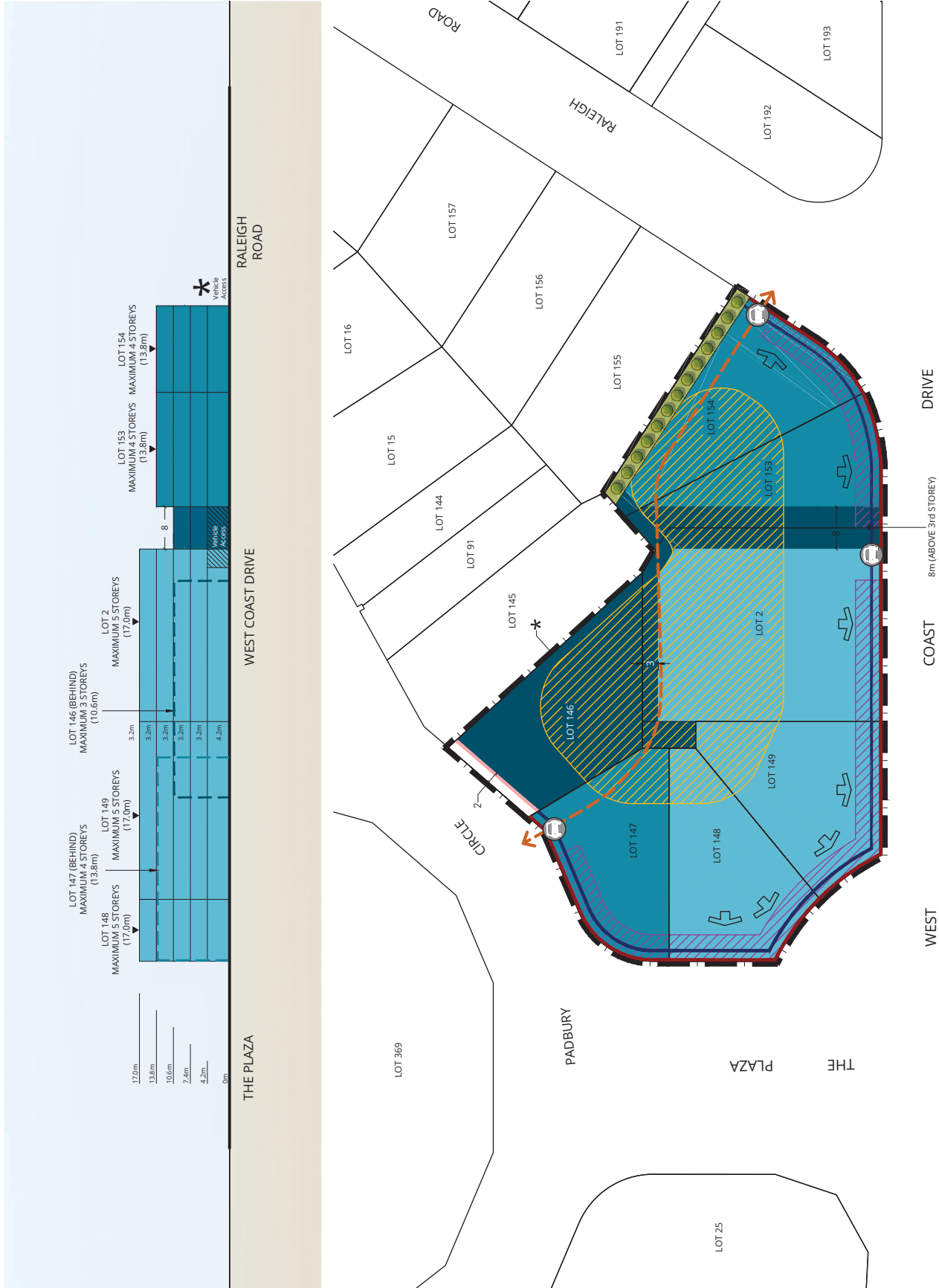
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0 18.75 m
SCALE @ A4: 1:750





Appendix B

Zoning Map









Appendix C

Terminology

The following is an explanation of the terminology used throughout this report.

Decibel (dB)

The decibel is the unit that describes the sound pressure and sound power levels of a noise source. It is a logarithmic scale referenced to the threshold of hearing.

A-Weighting

An A-weighted noise level has been filtered in such a way as to represent the way in which the human ear perceives sound. This weighting reflects the fact that the human ear is not as sensitive to lower frequencies as it is to higher frequencies. An A-weighted sound level is described as L_A dB.

Sound Power Level (L_w)

Under normal conditions, a given sound source will radiate the same amount of energy, irrespective of its surroundings, being the sound power level. This is similar to a 1kW electric heater always radiating 1kW of heat. The sound power level of a noise source cannot be directly measured using a sound level meter but is calculated based on measured sound pressure levels at known distances. Noise modelling incorporates source sound power levels as part of the input data.

Sound Pressure Level (L_p)

The sound pressure level of a noise source is dependent upon its surroundings, being influenced by distance, ground absorption, topography, meteorological conditions etc and is what the human ear actually hears. Using the electric heater analogy above, the heat will vary depending upon where the heater is located, just as the sound pressure level will vary depending on the surroundings. Noise modelling predicts the sound pressure level from the sound power levels taking into account ground absorption, barrier effects, distance etc.

L_{ASlow}

This is the noise level in decibels, obtained using the A frequency weighting and the S time weighting as specified in AS1259.1-1990. Unless assessing modulation, all measurements use the slow time weighting characteristic.

L_{AFast}

This is the noise level in decibels, obtained using the A frequency weighting and the F time weighting as specified in AS1259.1-1990. This is used when assessing the presence of modulation only.

L_{APeak}

This is the maximum reading in decibels using the A frequency weighting and P time weighting AS1259.1-1990.

L_{Amax}

An L_{Amax} level is the maximum A-weighted noise level during a particular measurement.

L_{A1}

An L_{A1} level is the A-weighted noise level which is exceeded for one percent of the measurement period and is considered to represent the average of the maximum noise levels measured.

L_{A10}

An L_{A10} level is the A-weighted noise level which is exceeded for 10 percent of the measurement period and is considered to represent the “intrusive” noise level.

L_{Aeq}

The equivalent steady state A-weighted sound level ("equal energy") in decibels which, in a specified time period, contains the same acoustic energy as the time-varying level during the same period. It is considered to represent the "average" noise level.

L_{A90}

An L_{A90} level is the A-weighted noise level which is exceeded for 90 percent of the measurement period and is considered to represent the "background" noise level.

One-Third-Octave Band

Means a band of frequencies spanning one-third of an octave and having a centre frequency between 25 Hz and 20 000 Hz inclusive.

L_{Amax} assigned level

Means an assigned level which, measured as a $L_{A\ Slow}$ value, is not to be exceeded at any time.

L_{A1} assigned level

Means an assigned level which, measured as a $L_{A\ Slow}$ value, is not to be exceeded for more than 1% of the representative assessment period.

L_{A10} assigned level

Means an assigned level which, measured as a $L_{A\ Slow}$ value, is not to be exceeded for more than 10% of the representative assessment period.

Tonal Noise

A tonal noise source can be described as a source that has a distinctive noise emission in one or more frequencies. An example would be whining or droning. The quantitative definition of tonality is:

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.

This is relatively common in most noise sources.

Modulating Noise

A modulating source is regular, cyclic and audible and is present for at least 10% of the measurement period. The quantitative definition of modulation is:

a variation in the emission of noise that —

- (a) is more than 3 dB $L_{A\ Fast}$ or is more than 3 dB $L_{A\ Fast}$ in any one-third octave band;
- (b) is present for at least 10% of the representative.

Impulsive Noise

An impulsive noise source has a short-term banging, clunking or explosive sound. The quantitative definition of impulsiveness is:

a variation in the emission of a noise where the difference between $L_{A \text{ peak}}$ and $L_{A \text{ Max slow}}$ is more than 15 dB when determined for a single representative event;

Major Road

Is a road with an estimated average daily traffic count of more than 15,000 vehicles.

Secondary / Minor Road

Is a road with an estimated average daily traffic count of between 6,000 and 15,000 vehicles.

Influencing Factor (IF)

$$= \frac{1}{10} (\% \text{ Type A}_{100} + \% \text{ Type A}_{450}) + \frac{1}{20} (\% \text{ Type B}_{100} + \% \text{ Type B}_{450})$$

where :

% Type A₁₀₀ = the percentage of industrial land within
a 100m radius of the premises receiving the noise

% Type A₄₅₀ = the percentage of industrial land within
a 450m radius of the premises receiving the noise

% Type B₁₀₀ = the percentage of commercial land within
a 100m radius of the premises receiving the noise

% Type B₄₅₀ = the percentage of commercial land within
a 450m radius of the premises receiving the noise

+ Traffic Factor (maximum of 6 dB)

= 2 for each secondary road within 100m

= 2 for each major road within 450m

= 6 for each major road within 100m

Representative Assessment Period

Means a period of time not less than 15 minutes, and not exceeding four hours, determined by an inspector or authorised person to be appropriate for the assessment of a noise emission, having regard to the type and nature of the noise emission.

Background Noise

Background noise or residual noise is the noise level from sources other than the source of concern. When measuring environmental noise, residual sound is often a problem. One reason is that regulations often require that the noise from different types of sources be dealt with separately. This separation, e.g. of traffic noise from industrial noise, is often difficult to accomplish in practice. Another reason is that the measurements are normally carried out outdoors. Wind-induced noise, directly on the microphone and indirectly on trees, buildings, etc., may also affect the result. The character of these noise sources can make it difficult or even impossible to carry out any corrections.

Ambient Noise

Means the level of noise from all sources, including background noise from near and far and the source of interest.

Specific Noise

Relates to the component of the ambient noise that is of interest. This can be referred to as the noise of concern or the noise of interest.

Peak Component Particle Velocity (PCPV)

The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and in one of the three orthogonal directions (x, y or z) measured as a peak response. Peak velocity is normally used for the assessment of structural damage from vibration.

Peak Particle Velocity (PPV)

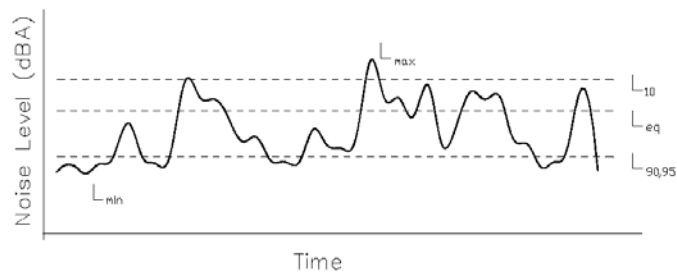
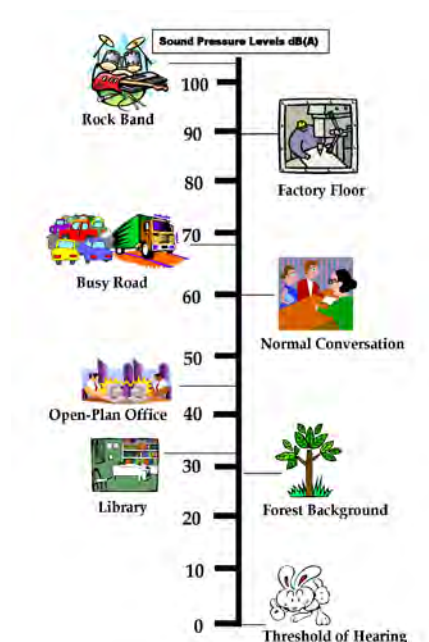
The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and is the vector sum of the PCPV for the x, y and z directions measured as a peak response. Peak velocity is normally used for the assessment of structural damage from vibration.

RMS Component Particle Velocity (PCPV)

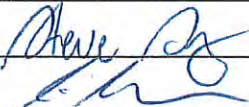

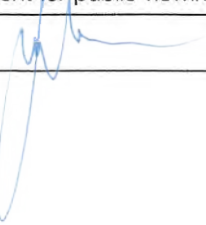
The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and in one of the three orthogonal directions (x, y or z) measured as a root mean square (rms) response. RMS velocity is normally used for the assessment of human annoyance from vibration.

Peak Particle Velocity (PPV)

The maximum instantaneous velocity in mm/s of a particle at a point during a given time interval and is the vector sum of the PCPV for the x, y and z directions measured as a root mean square (rms) response. RMS velocity is normally used for the assessment of human annoyance from vibration.

Chart of Noise Level Descriptors**Typical Noise Levels**

Application for Development Approval

| Owner details | | | |
|--|--|--------------------------------|---|
| Name: BP Australia Pty Ltd | | | |
| ABN (if applicable): | | | |
| Address: 717 Bourke St, Docklands, Victoria 3008 | | | |
| Home Telephone: | | Work Telephone: 6113 5920 X | |
| Fax: X | | Mobile: 0433392109 X | |
| Email Address: daniel.hazebroek@bp.com | | | |
| Contact person for correspondence: | | | |
| Signature:  X | | Date: 20/5/19 X | |
| Signature:  X | | Date: 23-5-19 X | |
| The signature of the owner(s) is required on all applications. This application will not proceed without that signature(s). For the purposes of signing this application, an 'owner' includes the persons referred to in the Planning and Development (Local Planning Schemes) Regulations 2015 Schedule 2 clause 62(2). | | | |
| Applicant details (if different from owner) | | | |
| Name: Planning Solutions | | | |
| Address: GPO Box 2709, Cloisters Square PO 6850 | | | |
| Home Telephone: N/A | | Work Telephone: (08) 9227 7970 | |
| Fax: N/A | | Mobile: N/A | |
| Email Address: admin@planningsolutions.com.au | | | |
| Contact person for correspondence: Josh Watson / Oliver Basson | | | |
| The information and plans provided with this application may be made available by the local government for public viewing in connection with the application. | | | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Signature:  | | Date: 18/06/19 | |

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SPEL

PURACEPTOR

Pollution Prevention
Stormwater Treatment & Hydrocarbon Capture

Petrol Stations
Australia

SPEL STORMWATER SOLUTIONS

Standards & Guidelines for Petrol Station Stormwater Pollution Control

There is no Australian Standard for oil/water separators.

There are only guidelines for hydrocarbon discharge limits for stormwater discharge.

All State and territory regulating environmental authorities (or EPA) have guidelines with varying terminology stating that hydrocarbons are not to be visual (10ppm) in stormwater and receiving waters.

European Standard (oil and petrol separators)

In the absence of an Australian Standard, the European British Standard 858.1 applies when compliance is the regulating issue.

It is the world's most stringent standard for hydrocarbons separation for the use of oil/petrol separators in surface water drainage systems. Prevents the emission of petrol odours.

Australian Runoff Quality

The Australian Runoff Quality A Guide to Water Sensitive Urban Design (Engineers Australia) ISBN 0 85825 852 8 Chapter 9 'Hydrocarbon Management' refers to The Standard and the European Agency UK Oil Separator Selection and Design' for petrol stations.



Picture shows an under-sized canopy with fuel pumps outside the canopy dripline



Non-Compliant Sites

Petrol stations with the following defects.

- Canopy drip line that does not allow for the 10 degree inset
- Fuel hose line that reaches outside the drip line
- Fuel bowsers that have no canopy
- Defective Oil/Water plate separator (Sewer connected)



Picture shows a common site at petrol stations - uncovered fuel pumps.



Picture shows a defective forecourt design with oils and fuels discharging directly to the street drain.



Unseemly & highly visible hydrocarbons polluting the stormwater. The concentration in the picture is in excess of 100ppm

Solution for Non-Compliant Petrol Stations

SPEL Puraceptor Class 1 stormwater treatment system is a solution for the treatment, capture and retention of hydrocarbons off petrol stations.

SPEL Puraceptor Class 1 can rationalize the existing use of service stations in conformity with the applicable environmental guidelines and put in place ongoing operational measures to prevent the likelihood of contamination in the case of an unforeseen future event.

SPEL's Puraceptor Class 1 oil/water separator is connected to the stormwater [provides the site with the highest degree of environmental protection; - a protection that complies with the councils, and the EPA's guidelines.]



Petrol forecourt and surrounds at a busy metropolitan petrol station rendered compliant. The catchment consists of a grated drain encompassing the complete perimeter of the under-sized canopy. Surface water and forecourt runoff drains to the Puraceptor located under the two trafficable covers in the foreground.

Puraceptor Benefits

- Full retention Class 1 treatment oil/water separator. It treats all liquid. There is no bypass.
- Complies with federal and state government regulating environmental guidelines for water quality.
- University tested and certified to independent European Standard EN BS 858.1 for the capture and retention of hydrocarbons with a discharge quality of no visible trace from a tested inflow concentration of 5,000ppm.
- Capture and contain oil/fuel spillages.
- Can be sized to capture and contain a spill from a refuelling tanker and prevent discharge to stormwater.
- Passive gravity function ensuring treatment is continuous.
- Equipped with an intrinsically safe oil alert probe providing regular detection for oil build-up. Set to alarm when oil hydrocarbons attain 10% of the chamber's volume.
- Oil alert probe enables 'self-monitoring', suitable for unmanned and remote locations.
- Equipped with a flame trap ensuring fire water is extinguished.
- Equipped with a vapour trap preventing vapours from discharging and preventing the emission of odours.
- Water tight structure
- Minimum 50 years life span.
- Low frequency and low cost maintenance
- Operations & Maintenance manual with a ledger for accurate recording of maintenance operations.
- Maintenance performed from ground level; no entering of tank is required, satisfying O.H. & S. requirements.

Puraceptor Certification

Australian Independent Tests

The Puraceptor has been independently tested at Australia's pre-eminent hydraulics research facility, the University of South Australia (UNISA), and at the UK's leading hydraulics research faculty HR Wallingford.

- NATA analysis of the tests shows a water quality of 'no visible trace' of hydrocarbons from an inflow concentration of 5,000ppm.

In-Situ Testing

NATA analysis of Puraceptors operating at similar applications in Australia reveal 'no detection' of hydrocarbons from a captured concentration of 8,000ppm.

Council Approvals

The increasing awareness by councils of the superior European Standard has prompted many to review their current procedures and in only the past eighteen months over sixty councils have approved SPEL for service stations and similar applications with units' already operational in excess of forty sites.

Independently tested for reducing the average annual loads:

- ✓ 97% total suspended solids (TSS)
- ✓ 100% > 5mm gross pollutant solids (GP)
- ✓ 99.9% light liquids (TPH)
(certified discharge quality of 5PPM or less, European standard BSEN 858.1 2006)
- ✓ >45% total phosphorous
- ✓ >45% total nitrogen
- ✓ >90% heavy metals



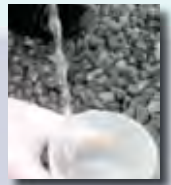
MAINTENANCE

- Designed for high performance and low maintenance over a long life span
- Visible oils (TPH) are skimmed from the surface of the water level
- Easy and safe to access and clean, with access shafts positioned on all chambers.
- No entering of the unit is required
- Not mandatory for the unit to be cleaned every 3 months.
- Only oils, sediment and gross pollutants need to be removed. All stormwater does not require removal.
- The cylindrical design ensures sediment collects easily on the floor of the chambers effecting easy, quick removal. There are no square corners or unreachable cavities and recesses.
- Waste is removed by a vacuum loading truck. (Suction truck)



Stormwater discharge quality is < 1.86 mg/l hydrocarbon content exceeding the Environmental Protection Agency (E.P.A.) requirements of 10mg/l hydrocarbon content.

Test sampling access: Field test discharged samples are taken from sampling point and analysed by NATA accredited laboratories.



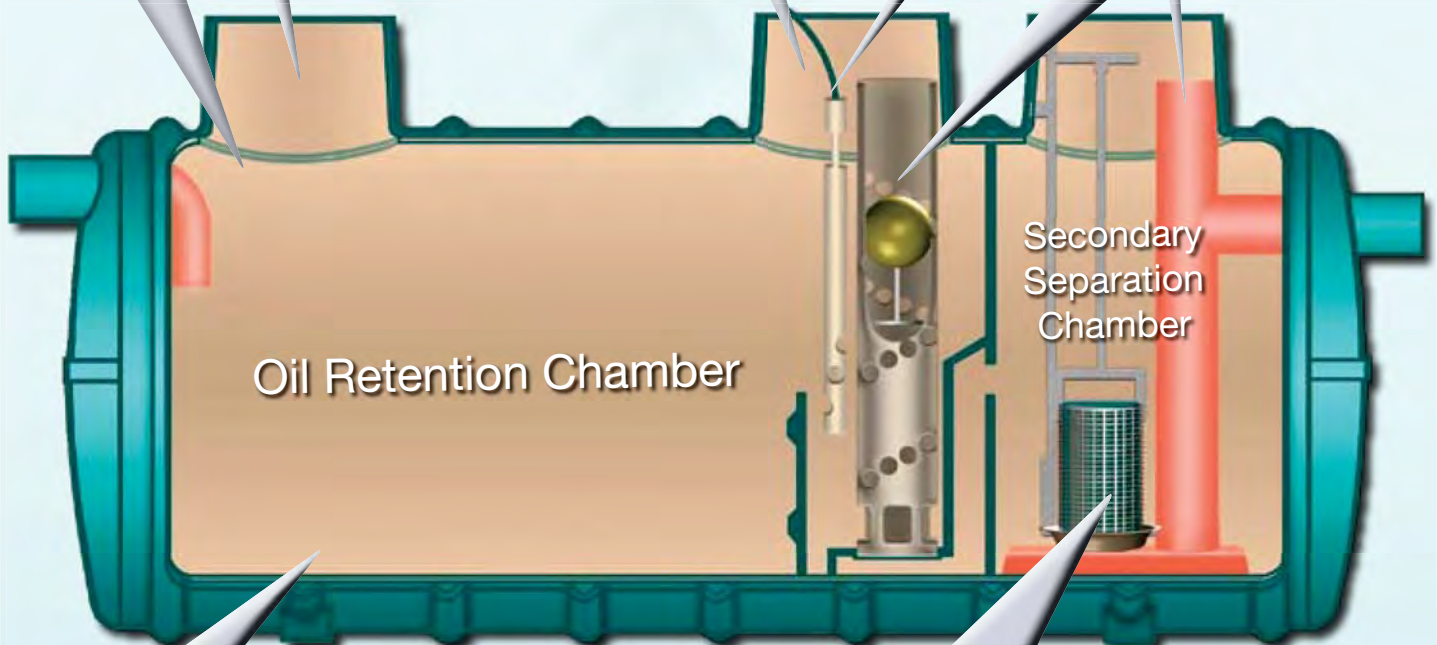
The probe is freely suspended in the probe protection tube in the separator at the correct level. When the oil-layer or depth of hydrocarbons reaches the predetermined level, the top of the probe will be immersed in the oil, breaking the circuit and activating the alarm. It is intrinsically 'fail-safe' system providing complete assurance that is operative. If a fault occurs it will be signaled immediately.



SPEL® PURACEPTOR tanks contain an immersed inlet dip pipe to extinguish flames and prevent inflammable vapours from passing through to the drainage system. Complies with Section 6.3.4 of BS EN 858.1.2006. SPEL PURACEPTOR can withstand temperatures of up to 140°C.



The AUTOMATIC CLOSURE DEVICE (A.C.D.) is a precisely engineered device comprising a water-buoyant ball that is sensitive to any change in the water density as a consequence of light liquids build up, thereby automatically activating a process of depressing the A.C.D. to SHUT OFF the separator, preventing pollutants from discharging to drains and waterways.



Oil Retention Chamber

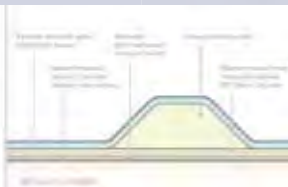
Secondary Separation Chamber

SPEL® PURACEPTOR units are glass reinforced plastic vessels made by the technical advanced chop hoop filament winding process (patented) producing circumferential and longitudinal strength complying with AS 2634-1983 for tank design.



Laminated construction

- Tank shell designed in accordance with AS2634-1983 (EN 1015)
- Fiberglass reinforced shells are lightweight, but have great strength and durability and carry a 25 year warranty.
- Life expectancy in excess of 50 years.
- Corrosion, high glass, corrosion resistant, smooth internal surface.
- External flow proof water penetration barrier.



SPEL PURACEPTOR Class 1 separators incorporate coalescer units. They consist of a quality stainless steel mesh container with an adjustable handle and high volume reticulated foam insert.

The coalescer unit is mounted in the second chamber, providing a coalescence process for the separation of smaller globules of light liquid pollutants before final discharge to stormwater.



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Form 1 – Responsible Authority Report (Regulation 12)

| | |
|-----------------------------------|--|
| Property Location: | Lot 153 (128) West Coast Drive and Lot 154 (1) Raleigh Road, Sorrento |
| Development Description: | Redevelopment of existing BP service station with associated access, signage, landscaping and parking |
| DAP Name: | Metro North-West JDAP |
| Applicant: | Mr Josh Watson, Planning Solutions |
| Owner: | BP Australia Pty Ltd |
| Value of Development: | \$2.6 Million |
| LG Reference: | DA19/0544 |
| Responsible Authority: | City of Joondalup |
| Authorising Officer: | Dale Page, Director Planning and Community Development |
| DAP File No: | DAP/19/01628 |
| Report Due Date: | 12 September 2019 |
| Application Received Date: | 20 June 2019 |
| Application Process Days: | 90 Days |
| Attachment(s): | <ol style="list-style-type: none">1. Location plan2. Development plans3. Building perspectives4. Landscape concept plan5. Applicant DA report and response to City's preliminary comments6. Traffic impact assessment7. Acoustic report8. Pollution prevention report |

Officer Recommendation:

That the Metro North-West JDAP resolves to:

Refuse DAP Application reference DAP/19/01628 and accompanying plans (Attachment 2) in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the City of Joondalup *Local Planning Scheme No. 3*, and pursuant to clause 24(1) and 26 of the *Metropolitan Region Scheme* for the following reasons:

1. In accordance with Schedule 2, clause 67 (h) of the *Planning and Development (Local Planning Scheme) Regulations 2015*, the proposed development does not meet the requirements of the *Sorrento Activity Centre Plan* as:
 - a. The proposed development does not meet the minimum development standards and therefore does not achieve the intent of providing a consistent built form outcome within the activity centre.

- b. The retention of the vehicle access point to West Coast Drive, lack of active building frontage to the street and visibility of car parking to the street does not enhance the public realm and pedestrian environment.
- c. The lack of landscaping along the northern boundary does not provide an appropriate buffer between the commercial development and adjoining residential property to the north.

Details: outline of development application

| | | |
|---------------------|------|---|
| Zoning | MRS: | Urban |
| | LPS: | Centre |
| Use Class: | | Service station |
| Strategy Policy: | | Not applicable |
| Development Scheme: | | City of Joondalup <i>Local Planning Scheme No. 3</i> |
| Lot Size: | | 1,601m ² combined (Lot 153 - 707m ² Lot 154 - 894m ²) |
| Existing Land Use: | | Service station |

The proposed development consists of the following:

- Demolition of the existing service station (retail building and canopy).
- A new retail building on the western portion of the site, with a gross lettable area of 253m².
- A fuel bowser canopy with a height of 6.2 metres.
- Vehicle access points retained from West Coast Drive and Raleigh Road.
- Four fuel bowsers with eight refuelling spaces (two per bowser).
- Four on-site car parking bays for customers and staff, and one air/water bay.
- Three bicycle spaces on the western side of the retail building, fronting West Coast Drive.
- Landscaping on-site and within the adjacent verge.
- Retaining and site works to accommodate the proposed development.
- Operating hours of 24 hours a day, seven days a week.
- One pylon sign and various wall signs.

The development plans, building perspectives and landscaping concept plans are provided at Attachments 2, 3 and 4 respectively.

Background:

The subject site (Lots 153 and 154) is currently a BP service station and has been operating as a service station since its initial approval in 1966. It is bound by a vacant residential lot to the east, two storey commercial development to the north west, West Coast Drive to the south west and Raleigh Road to the south (Attachment 1 refers).

The subject site is zoned 'Centre' under the City's *Local Planning Scheme No. 3* (LPS3) and is subject to the *Sorrento Activity Centre Plan* (SACP), approved by the Western Australian Planning Commission on 18 September 2018. Under the SACP the 'Commercial' zone is applied to the site. The land use 'service station' is a discretionary ("D") use within the 'Commercial' zone.

Legislation and Policy:

Legislation

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

State Government Policies

- *State Planning Policy 7.0 Design of the Built Environment.*

Activity Centre Plan

- *Sorrento Activity Centre Plan*

Local Policies

- *Signs Local Planning Policy*
- *Environmentally Sustainable Design Policy*

Consultation:

Public Consultation

The application was advertised for a period of 14 days, commencing on 21 August 2019 and concluding on 4 September 2019. Consultation was undertaken in the following manner:

- a letter was sent to owners and occupiers of 20 properties in the vicinity of the subject site;
- a sign was installed on the site on the corner of West Coast Drive and Raleigh Road; and
- development plans were made available for public viewing on the City's website and at the City's Administration building.

A total of seven submissions were received, being three objections, three non-objections and one submission supporting the development. The issues raised in the submissions are summarised in the table below:

| No. | Issue raised | Applicant's comments | Officer's comments |
|-----|--|---|--|
| 1 | The lighting/ illumination could impact surrounding residents. | The lighting / illumination of the fuel canopy and forecourt is designed in such a way that no external light spill is emitted from the site. Lighting is focussed internally, ensuring the forecourt and refuelling area are well lit, without adversely impacting upon nearby properties. | Should development be approved a condition would be recommended requiring a lighting plan to ensure reduced light spill and all illuminated signage uses low illumination that does not flash, pulsate or chase. |

| No. | Issue raised | Applicant's comments | Officer's comments |
|-----|---|--|---|
| 2 | There is currently no on-site large pylon sign and therefore any large sign should be located wholly on the West Coast Drive frontage. | The proposed pylon sign is appropriately located at the corner of the West Coast Drive / Raleigh Road and oriented towards West Coast Drive. The 6m high sign is not considered to be overly large and is consistent with the City's signage policy. | The location of the pylon sign has been assessed against the City's <i>Signs Local Planning Policy</i> and is considered to be in an appropriate location to provide visibility to traffic users using West Coast Drive without having significant impact on the amenity of surrounding residential properties. |
| 3 | The development has the potential to impact West Coast Drive and Raleigh Road when fuel prices are low. If cars bank out to West Coast Drive, there is no ability to overtake and this will cause an impact on the surrounding traffic. | <p>BP differs from most standard fuel providers, as it does not provide discounts or specific cheap fuel days. BP's loyalty system is not associated with a supermarket or insurance company to allow for discounts in fuel.</p> <p>No car queuing is expected to impact upon the local road network. The redevelopment is a like for like replacement to the existing service station that does not experience queuing/impact to the surrounding street network. This is further conveyed through the Traffic Impact Assessment prepared by Porter Consulting Engineers. The redevelopment and upgrade of the site actually enhances vehicle movements and the flow of vehicles through the site.</p> | The applicant's justification through the traffic report is considered sufficient to ensure the impact from vehicles would be minimal. |
| 4 | The venting pipes are located abutting residential zoned land and should not be supported in this location. | The vent pipes are appropriately located adjacent to the eastern lot boundary, in compliance with the requirements of the Dangerous Goods Licence. Modern technologies prevent unnecessary odour or fumes from being emitted | The applicant has identified the matter will comply with the relevant requirements regarding the location of the vent pipes. Notwithstanding, the vent pipes are located in an area which is |

| No. | Issue raised | Applicant's comments | Officer's comments |
|-----|---|---|--|
| | | out of the vents. The location of the vent pipes will have no adverse impacts on the amenity of the site or the locality. | designated for landscaping under the SACP as discussed in the planning assessment section of the report. |
| 5 | The SACP went through rigorous community consultation and did not consider the retention of the service station. Instead it is intended to be a user-friendly environment for cafes, restaurants and apartments. The requirements of the SACP should be upheld. | The requirements of the SACP were considered as part of the design and redevelopment of the existing service station facility. | It is considered that the proposed development does not satisfy the requirements of the SACP as discussed further in the planning assessment section of the report. |
| 6 | While the access locations are remaining the same, the configuration of the fuel bowzers and canopy would mean more vehicles would use Raleigh Road, including fuel tankers and boat trailers. | <p>The location of the fuel bowzers has been reconfigured to allow ease of access to the site for refuelling and ensure safe and efficient vehicle manoeuvring through the site.</p> <p>The proposed development will provide a better access arrangement to the subject site by allowing vehicles to better utilise Raleigh street for access. This will reduce the impact of vehicles entering/exiting from the West Coast Drive crossover.</p> | The traffic volumes can be accommodated in the surrounding traffic network. Further comment is included in the planning assessment section of the report. |
| 7 | Headlight from vehicles leaving the site will impact surrounding residential properties. | The light emitted from vehicle headlights is not expected to impact upon surrounding residential properties. The existing crossover locations are maintained as part of this upgrade of the site. | <p>The existing access points are being retained as part of this development, albeit slightly modified.</p> <p>The car park/canopy area is relatively flat and does not slope to angle headlights to</p> |

| No. | Issue raised | Applicant's comments | Officer's comments |
|-----|--|---|--|
| | | | enter in to adjoining properties. |
| 8 | The pedestrian movements on the road network are not safe and people will not walk to the restaurants/cafes for this reason. | New kerb ramps and upgrades are provided at the existing crossovers to improve the pedestrian movements. No changes are proposed to the location, alignment and vehicle crossovers. | It is considered that the development, including retaining the vehicle access point to West Coast Drive will impact on the pedestrian environment and is not consistent with the intent of the SACP. |
| 9 | The proposal will reduce the value of neighbouring properties. | This is not a valid planning consideration. | This is not a relevant planning consideration. |

Consultation with other Agencies or Consultants

A memorial on the Certificate of Title identifies the lots as '*possible contaminated – investigation required*'. As the site is not identified on the Department of Water and Environmental Regulation (DWER) database, the application was referred to DWER for comment.

DWER advised that through groundwater investigations there were hydrocarbons present in the soil beneath the site. However, as the development is not proposing a more sensitive land use, the site is suitable for proposed redevelopment. An advice note requiring a site management plan to address the potential exposure of impacted soil or groundwater during earthworks was requested should the application be supported.

The applicant has advised that, as standard practice, BP's environmental consultant will oversee the removal of the fuel system and other potential sources of contamination during the decommissioning. Potential contaminated soil will be excavated to the extent practicable to remove the source of hydrocarbons from the groundwater and dispose it in accordance with relevant guidelines.

A pollution prevention statement (Attachment 8 refers) was also included in the application that outlines stormwater treatment and hydrocarbon capture methods to address issues associated with the operation upon redevelopment.

Joondalup Design Reference Panel (JDRP)

The proposal was presented to the JDRP at its meeting held on 17 July 2019. A summary of the JDRP comments, as well as the applicant and the City's response to these items are included below:

| No. | JDRP comment | Summary of Applicant's comments | Officer's comments |
|-----|---|--|---|
| 1 | More trees and increased canopy should be provided on site with | Three medium sized trees along with medium-sized shrubs, ground covers and grasses are | The applicant has provided additional landscaping to both the |

| No. | JDRP comment | Summary of Applicant's comments | Officer's comments |
|-----|---|---|--|
| | <p>landscaping being incorporated abutting the adjoining residential lot.</p> <p>Landscaping on the verge corner element (Raleigh and West Coast Drive) could be a feature of the site.</p> | <p>proposed abutting the car park area to the north of the lot.</p> <p>The selected trees are narrow growing and from the City of Joondalup approved plant material list, which are approved for carparks. Both varieties are low bark/litter varieties, required for a service station.</p> <p>All shrubs, grasses and ground covers specified on the plan are native, low maintenance and water wise varieties. The planting density is typical of similar sites.</p> | <p>northern boundary and verge corner element.</p> <p>No additional landscaping was provided abutting the adjoining residential lot which is discussed in the planning assessment section below.</p> |
| 2 | <p>The rear (north) elevation of the building could be addressed through alternate treatment.</p> | <p>The timber cladding and paint finish has been extended to the rear of the building, adding visual interest and reducing blank wall space.</p> | <p>The additional timber cladding and paint finishes provide additional interest and is considered an appropriate treatment. The feedback from the JDRP has been addressed.</p> |
| 3 | <p>Signage should comply with the City's policy and be located within the site.</p> | <p>The height of the proposed pylon sign has been clarified to be six metres in accordance with the requirements of the City's policy.</p> | <p>The sign is located within the property boundaries.</p> <p>The proposed signage complies with the City's <i>Signs</i> Local Planning Policy, with the exception of the pylon sign being 0.05m wider.</p> <p>This is discussed further in the planning assessment section of the report.</p> |
| 4 | <p>All contamination issues need to be resolved.</p> | <p>This is not considered to be a relevant matter for the JDRP.</p> <p>Contamination will be addressed in accordance</p> | <p>The matter was referred to DWER for comment as discussed above.</p> |

| No. | JDRP comment | Summary of Applicant's comments | Officer's comments |
|-----|--------------|---|--------------------|
| | | with the requirements of the <i>Contaminated Sites Act 2003</i> . | |

Planning Assessment:

Local Planning Scheme

The City has completed an assessment of the proposal against the relevant provisions of the Regulations, LPS3, SACP and City policies. The proposal does not comply with the requirements listed below:

| Item | Requirement | Proposal | Compliance |
|--|---|---|--|
| Sorrento Activity Centre Plan | | | |
| 4.4.3 – Commercial Net Lettable Area (NLA) | Commercial NLA not to exceed: Lot 153 – 188m ² Lot 154 – 238m ² | Lot 153 – 230m² Lot 154 - no NLA | Does not comply. The proposal exceeds the commercial NLA for Lot 153 but is less than the permitted NLA for the combined sites and is therefore considered appropriate. |
| 5.2 and Plan 2 – Building Height | A minimum building height of three storeys and maximum height of four storeys. | The development is single storey. The maximum height is the fuel bowser canopy with a height of 6.2 | Does not comply. Refer to officer comments below. |
| 5.3.1 - Street Setback | Minimum – nil Maximum – two metres | Retail building - 0.5 metres Fuel bowser canopy - 1.5 metres to 17 metres to West Coast Drive. 1.5 metres to 2.787 metres to Raleigh Road. | Does not comply. The fuel bowser canopy exceeds the maximum setback, with only 0.7m ² set back less than two metres. Refer to officer comments below. |
| 5.4.5 – Lot Boundary Setbacks and Plan 2 | The side boundary setback to the eastern boundary (between Lot 154 and the adjoining | The fuel canopy is setback 10 metres from the adjoining residential site. | Does not comply. Refer to officer comments below. |

| Item | Requirement | Proposal | Compliance |
|----------------------------------|---|--|--|
| | residential site) shall be nine metres, comprising a six metre access easement and a three metre landscaping strip. | No landscaping strip has been provided between the properties. | |
| 5.5.1 – Building Design | A continuous awning shall be provided along the street frontage | Awning provided to a portion of the retail building (11% of total site frontage). | Does not comply. Refer to officer comments below. |
| 5.5.2 – Corner Buildings | Corner buildings are to be designed to address both street frontages with equal importance. | Development does not front both streets with equal importance with the retail building set back approximately 25 metres from Raleigh Road. | Does not comply. Refer to officer comments below. |
| 5.6.1 – Street Interface | 80% of the primary street and 50% of the secondary street shall have an Active Frontage. <i>Active Frontage is defined as ‘a ground floor space where there is visual engagement between those in the street and those on the ground floors of buildings.’</i> | Only 18% of street is ‘Active Frontage’ as defined under the SACP (being the retail building). | Does not comply. Refer to officer comments below. |
| 5.8.2 – General Parking Location | Car parking should generally be contained within the building envelope or sleeved behind the development and shall be screened from view from the public realm. | Car parking is not sleeved behind the development or screened from the public realm. | Does not comply. Refer to officer comments below. |
| 5.8.6 – Vehicular Access | Vehicular access shall be limited to the three access points as shown on Plan 2 (Raleigh Road, The Plaza | Access provided from Raleigh is in accordance with Plan 2. | Does not comply. Refer to officer comments below. |

| Item | Requirement | Proposal | Compliance |
|--|---|--|---|
| | and West Coast Drive into Lot 2). | Access from West Coast Drive is not shown on Plan 2. | |
| Plan 2 – Active Edge | Plan 2 identifies an 'Active Edge' to be provided along the frontage of the subject site. | Only the retail building provides an active edge to West Coast Drive, being 18% of the total street frontages. | Does not comply. Refer to officer comments below. |
| Plan 2 – Direction of Primary Building Orientation | The primary building orientation is to both Raleigh Road and West Coast Drive. | Development on Lot 154 is supplementary to the retail development and does not orientate towards Raleigh Road. | Does not comply. Refer to officer comments below. |
| Signs Local Planning Policy | | | |
| Pylon Sign - Width. | 2 metre width | 2.05 metre width | Does not comply. The proposal is marginally over the required width but is compliant with height and location requirements. It is considered the sign meets the design principles and objectives of the Signs Local Planning Policy, with the sign unlikely to impact the amenity of the surrounding residents or the view from the street. |

Officer Comments

Built form outcomes

The proposed development does not meet several requirements of Part One of the SACP relating to building height, street setbacks and the street interface. It is acknowledged that a service station has a specialised built form that means achieving strict compliance with the design elements is not possible. However, having regard to the intent of the SACP, it is considered that the redevelopment is not appropriate as:

- The proposed building form, including not achieving minimum building heights or street setbacks for the majority of the development, will maintain the disparate nature of buildings in the activity centre to which the SACP seeks to address.
- The retail building facing West Coast Drive provides the only active frontage and pedestrian shelter for the development, being 18% of the overall frontage. This is not considered sufficient to provide a strong street presence and a high level of activation to the public realm.
- By maintaining the vehicle access point to West Coast Drive, the visibility of car parking and limited street interface maintains an interface that is car dominated.

The proposal does not include any adaption detail or justification on how the development could evolve in future stages to better address the intent of the SACP. Given the regulations surrounding a service station land use, it is not clear that the site could be adapted in the future to better align with the intent of the SACP.

Landscaping

The proposal includes two areas of landscaping, being the verge on the corner of West Coast Drive and Raleigh Road, and the rear area abutting the proposed car parking. The development does not provide the three-metre landscaping strip adjacent to the adjoining residential lot, with the majority of this area comprising vehicle access, car parking and ventilation pipes. The applicant has explained that placing any landscaping strip along this boundary would significantly impact the accessibility of vehicles from Raleigh Road, and the development does not have any built form impacts on the adjoining residential lot.

Providing the landscaping strip along the residential boundary would equate to 137.76m² of landscaping on-site. The development currently includes 57.7m² of landscaping at the rear of the site, with 83.9m² across the whole site. Whilst the proposed building design is not to the scale intended by the SACP, landscaping along this boundary is considered important to improve the interface between the commercial development and residential properties.

It is considered that the proposed design and lack of landscaping treatment along the northern boundary is not appropriate and, given the lack of overall landscaping provided across the site, is inconsistent with the intent of the SACP.

Traffic, vehicular access and car parking

Traffic volumes

The applicant has provided a Traffic Impact Assessment (TIA), including updated swept paths, to support the proposal (Attachment 6 refers). The TIA has been reviewed by the City and it is considered that the assumptions and content included in this document are acceptable. The development is anticipated to generate 1,302 vehicle trips per day (vtpd) with a large portion (729 vtpd) based on passing trade. This results in an estimate of 573 vtpd generated from the development.

Vehicle access and public access easement

The two vehicle access points are proposed to remain from West Coast Drive and Raleigh Road. The SACP identifies the consolidation of existing access points to the activity centre. This would require the Raleigh Road access point to be retained and the West Coast Drive access point to be removed. It is noted that the SACP retains an access point from West Coast Drive, being the existing access point immediately to the north of the site. Given the close proximity of the crossovers and the intent of the SACP to provide a high level of amenity to the public realm, the redevelopment of the site which includes the retention of the existing access point from West Coast Drive is not considered appropriate.

There is currently informal access across the rear of the site and the adjoining commercial sites to the north, connecting Raleigh Road with Padbury Circle. This access is required to be maintained under the SACP. The proposed development includes a six-metre wide access from Raleigh Road to the rear of the adjoining site to the north that could be subject to a future public access easement, meeting the requirements of the SACP.

Car parking

The car parking configuration of the development provides eight car parking bays within the refuelling area and five bays for staff and users of the convenience store. While meeting the requirements of Australian Standards, the car parking is not sleeved by the building or otherwise screened from the public realm. It is considered that this does not meet the intent of the SACP as the visibility of car parking and limited building frontage to the street maintains an interface that is car dominated.

Land use

The land use 'service station' is a discretionary ("D") use in accordance with the Table 3 of LPS3.

The applicant has explained that the proposed use is appropriate given that the site is currently operating as a service station and that the departure from the design elements of the SACP are warranted as it is not practical for a service station development to meet the requirements. Whilst it is acknowledged that the development does not change the land use for the site it is considered that the built form outcomes of the redevelopment are not aligned with the intent of the SACP.

Options/Alternatives:

Not applicable.

Council Recommendation:

Not applicable.

Conclusion:

As detailed above, whilst it is acknowledged that a service station has unique built form requirements, the proposed development is not considered to meet the intent and objectives of the SACP.

It is therefore recommended that the application is refused.



State Administrative Tribunal Reconsideration

Responsible Authority Report

(Regulation 12)

| | |
|-----------------------------------|--|
| Property Location: | Lots 96 and 97 (9 and 11) Davallia Road, Duncraig |
| Development Description: | 13 Multiple Dwellings |
| DAP Name: | Metro North-West JDAP |
| Applicant: | Harden Jones Architects |
| Owner: | E Harwas, J Harwas, M Korycka M Grynglas |
| Value of Development: | \$2.727 million |
| LG Reference: | DA18/1276 |
| Responsible Authority: | City of Joondalup |
| Authorising Officer: | Dale Page Director Planning and Community Development |
| DAP No: | DAP/18/01536 |
| Report Date: | 8 November 2019 |
| Application Received Date: | 8 May 2019 |
| Application Process Days: | 115 days |
| Attachment(s): | 1: Location plan 2: Development plans and elevations 3: Building perspectives 4: Context plans 5: Shadow diagram 6: Landscape Plans 7: Solar access/cross ventilation diagrams 8: Waste Management Plan 9: Consultation summary of submissions 10: Transport Impact Statement 11: Environmentally Sustainable Design Checklist 12: Previous determination notice and refused plans 13: Summary SPP7.3 assessment |

Officer Recommendation:

That the Metro North-West Joint Development Assessment Panel, pursuant to section 31 of the *State Administrative Tribunal Act 2004* in respect of SAT application DR 80 of 2019, resolves to:

Reconsider its decision dated 2 April 2019 and **refuse** DAP Application reference DAP/18/01536 and amended plans (Attachment 2) in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015* and the provisions of the City of Joondalup *Local Planning Scheme No. 3*, and pursuant to clause 24(1) and 26 of the *Metropolitan Region Scheme* for the following reasons:

Reasons

1. The proposal does not satisfy the matters to be considered under clause 67(c), Schedule 2, Part 9 of the *Planning and Development (Local Planning Schemes) Regulations 2015*, as:
 - i. The proposal does not satisfy the element objectives of 3.2 Orientation of *State Planning Policy 7.3*, as the building form and orientation does not minimise overshadowing of habitable rooms of the neighbouring property to the south during mid-winter.
 - ii. The proposal does not satisfy the element objective of 3.3 Tree canopy and deep soil areas of *State Planning Policy 7.3*, as inadequate measures have been taken to improve tree canopy over the long term.
 - iii. The proposal does not satisfy the element objectives of 3.4 Communal open space of *State Planning Policy 7.3*, as the communal open space is not designed and oriented to minimise impact on adjoining habitable rooms and private open spaces.
 - iv. The proposal does not satisfy the element objective of 3.5 Visual privacy of *State Planning Policy 7.3*, as the orientation and design of the Unit 4 terrace does not minimise direct overlooking of neighbouring sites, and the design of the common area access passage does not minimise direct overlooking of habitable rooms within the site to Units 1 and 2.
 - v. The proposal does not satisfy the element objectives of 4.5 Circulation and common spaces of *State Planning Policy 7.3*, as the circulation spaces have inadequate size and capacity to provide safe and attractive access with good amenity for residents and visitors.
 - vi. The proposal does not satisfy the element objectives of 4.12 Landscape design of *State Planning Policy 7.3*, as the landscape design is not sufficiently integrated with communal open space to improve the visual appeal and comfort.
2. The proposal does not satisfy the matters to be considered under clause 67(m) of Schedule 2, Part 9 of the *Planning and Development (Local Planning Schemes) Regulations 2015*, as:
 - i. The orientation, tree canopy and visual privacy of the development is not compatible with its setting particularly the relationship of development to development on adjoining land.
3. The proposal does not satisfy the matters to be considered under clause 67(p) of Schedule 2, Part 9 of the *Planning and Development (Local Planning Schemes) Regulations 2015*, as:
 - i. There is inadequate provision made for the landscaping of the land to which the application relates.

Details: outline of development application

| | | |
|---------------------|------|---|
| Zoning | MRS: | Urban |
| | TPS: | Residential R20/40 |
| Use Class: | | Multiple Dwelling |
| Strategy Policy: | | Not applicable |
| Development Scheme: | | City of Joondalup Local Planning Scheme No. 3 |
| Lot Size: | | 1,376m ² |
| Existing Land Use: | | Single House |

The amended development proposal consists of the following:

- 13 multiple dwellings within a two-storey building and a basement car park, comprising of 12 two-bedroom dwellings and one single-bedroom dwelling.
- Six dwellings are located on the ground floor adjacent to Davallia Road to the east and the proposed communal open space to the west, with seven dwellings located on the upper floor.
- Basement car parking accessed via a single access point from Davallia Road, including 22 resident bays and four visitor bays located behind security gates.
- Separate pedestrian entry point located off Davallia Road, which provides access to the building via a lobby entrance.
- Bin storage located within the undercroft car park, accessed via a gate adjacent to Davallia Road. Waste pickup will be undertaken by the City, with the verge to be modified to accommodate an on-street verge embayment to facilitate a waste vehicle during collection.
- Building façade comprising a mix of red and grey face brickwork, white and grey render, slat screening, louvred roof balconies and pitched roofs.

The development plans are provided in Attachment 2, with the supporting plans and documentation provided in Attachments 3 – 10.

Background:

The applicant seeks development approval for a two-storey 13 multiple dwelling development at Lots 96 and 97 (9 and 11) Davallia Road, Duncraig (subject site).

The proposed development is a modification to a previous proposal refused by the Metro North-West JDAP at its meeting of 25 March 2019. The applicant has sought a review of JDAP's decision via the State Administrative Tribunal and, following mediation, now seeks approval for an amended proposal. The determination letter and development plans for the original proposal are provided at Attachment 11.

The original proposal considered by the JDAP on 25 March 2019 was determined under the previous *State Planning Policy 3.1 – Residential Design Codes* (Part 6), with due regard given to *State Planning Policy 7: Design of the Built Environment* (SPP7) and *State Planning Policy 7.3: Residential Design Codes Volume 2 – Apartments* (SPP7.3). Both SPP7 and SPP7.3 became operational on 24 May 2019 and the revised proposal has been assessed wholly under this current framework.

The key differences between the amended proposal and the original proposal refused by the JDAP are:

- Consolidation of vehicle access into one crossover located on the southern side of the development.
- Relocation of two on-street visitor parking bays on-site.
- Building setback to the rear (western) boundary increased from 6.04 metres to 7.5 metres.
- Reduction in the building height (in particular the ridge height and height of the centrally located lift) to a maximum of 8.7 metres (previously a maximum of 10.5 metres to the lift).
- Building setback from the southern boundary increased from 3.028 metres to 4.5 metres.
- Inclusion of 94.2m² of communal open space along the western side of the site and removal of a communal roof terrace.
- Reconfiguration of the private open space for the western oriented apartments to meet required privacy setbacks.
- Reconfiguration of the pedestrian entry from Davallia Road to reduce its width, improve surveillance and minimise opportunity for concealment and entrapment.
- Reduction in overshadowing of the adjoining southern lot from 28% to 26.67%.

Site context

The subject site is currently developed with single, detached houses, being a two-storey house at 9 Davallia Road and a single storey house at 11 Davallia Road. The site is bound by single residential properties to the north, south and west and Davallia Road to the east. A neighbourhood centre is located across Davallia Road, and the intersection with Beach Road is approximately 100 metres to the south (Attachment 1 refers). Davallia Road is classified as a local distributor road under the City's road hierarchy and notionally classified as a 'neighbourhood connector' road as defined by Liveable Neighbourhoods.

The existing neighbourhood character is a mix of single and two storey detached dwellings. Some redevelopment is currently occurring with the original housing stock being replaced with predominantly one and two-storey grouped dwellings. The setting is landscaped, with trees within the median strip of Davallia Road and on private properties. The west side of Davallia Road, in which the development site is located, is elevated from the carriageway and therefore retaining walls in the front yards are commonplace.

The subject site and surrounding properties are zoned 'Residential' under the City's *Local Planning Scheme No. 3* (LPS3), with a density coding of R20/40 and is located in Housing Opportunity Area 1. The land use 'Multiple Dwelling' is a discretionary ("D") use within the 'Residential' zone under LPS3.

Legislation and Policy:

- *State Administrative Tribunal Act 2004.*
- *Planning and Development Act 2005.*
- *Metropolitan Region Scheme (MRS).*
- *Planning and Development (Local Planning Schemes) Regulations 2015 (Regulations).*
- *City of Joondalup Local Planning Scheme No. 3 (LPS3).*

State Government Policies

- *State Planning Policy 7.0: Design of the Built Environment (SPP7)*
- *State Planning Policy 7.3 Residential Design Codes Volume 2 – Apartments (SPP7.3).*

Local Policies

- *Residential Development Local Planning Policy (RDLPP).*
- *Environmentally Sustainable Design Policy.*

Consultation:

Public Consultation

Previous proposal

The previous proposal refused by the North-West JDAP on 25 March 2019 was advertised for 14 days, commencing on 6 February 2019 and concluding on 20 February 2019. Consultation was undertaken in the following manner:

- a letter was sent to owners and occupiers of eleven properties in the vicinity of the subject site;
- two signs were installed on site, one on the frontage of 9 Davallia Road and another on the frontage of 11 Davallia Road; and
- development plans and information provided by the applicant were made available for public viewing on the City's website and at the City's Administration Building.

A total of 230 submissions were received during the advertising period for the previous proposal, with all submissions objecting to the development. A summary of these submissions is outlined in the City's previous responsible authority report.

Revised proposal

The revised proposal, which is the subject of this report was advertised for 14 days, commencing on 26 September 2019 and concluding on 10 October 2019. Consultation was undertaken in the following manner:

- letters sent to all adjoining owners and occupiers;
- correspondence sent to all residents who provided a submission on the previous proposal; and
- development plans and information provided by the applicant were made available for public viewing on the City's website and at the City's Administration Building.

A total of 57 submissions were received, all objecting to the development.

A detailed summary of the submissions against the specific design elements of SPP7.3 and general comments on the development is provided at Attachment 9. The key concerns raised in the submissions include:

- density and zoning;
- building height;
- street setbacks;
- built form and scale;
- character and context;
- overshadowing;
- landscaping;
- visual privacy;
- traffic;
- parking;
- noise and waste;
- road network and pedestrian safety;
- number of dwellings; and
- solar access and ventilation.

Joondalup Design Reference Panel (JDRP)

The proposal the subject of this report was referred to the JDRP on 25 September 2019.

The following table summarises comments made by the JDRP and the applicant's response.

| JDRP comments | Summary of applicant's response |
|--|--|
| Communal open space | |
| <p>The positioning of communal open space conflicts with the adjacent ground floor units.</p> <p>The dwelling yield has resulted in communal open space being pushed to the back of the site and does not appear to serve a communal purpose.</p> <p>Review of the communal open space corridor access, to improve amenity with consideration also given to BCA fire requirements.</p> | <p>The communal open space meets the provisions of SPP7.3. In turn, the ground floor middle apartment has a larger courtyard/private open space.</p> <p>The private open space to Apartments 1 and 3 is still functional at three metres wide, even though it abuts the communal open space. It is considered that the landscaping changes are positive for the development.</p> <p>The direction of the door swing has been modified, with further input to be provided by the building certifier and fire engineer at building permit stage.</p> |
| Landscaping | |
| <p>Landscaping plans are to include:</p> <ul style="list-style-type: none"> • root zone requirements and number of trees are to be detailed in accordance with SPP7.3 clause 3.3 • the roof terrace should be deleted from the Landscape Plan. | <p>Landscaping plan has been updated with number of trees and species provided.</p> <p>Roof terrace section has been removed.</p> |
| Façade design | |
| <p>Concern of reduced privacy for the four central bedroom windows that front Davallia Road.</p> | <p>Noted. As discussed at the JDRP session, architecturally full height windows add a dynamic quality to an internal space.</p> |

| JDRP comments | Summary of applicant's response |
|---|---|
| | Privacy measures can be added via one-way blinds or other such devices at the discretion of the occupier. |
| Parking | |
| <p>There are more bays in the basement level than required. It is acknowledged that this is due to demand for two bays per dwelling.</p> <p>Review of the two western visitor bays to include a 1 metre backing space.</p> <p>Recommended that the car park columns within the central group of bays be relocated to the far west side of the car bays.</p> <p>Confirm bicycle parking being located in store rooms.</p> <p>Further consideration of car park to include charging bays.</p> | <p>Noted.</p> <p>Plans have been updated to provide blind aisle, car park columns and bicycle rack in each store.</p> <p>More research is to be included at building permit stage for charging bays. Ideally, a separate circuit from each apartment to the basement needs to be provided (i.e. it is metered to the apartment with the apartment owner paying for the power). The most efficient method would be a capped service for future use to be provided. This also becomes a strata management question and would need to be included into the strata management documents. Suggest this is an advice note and should be generally included in all DA conditions for multiple dwellings.</p> |
| Private open space | |
| Unit 4 terrace access from Bed 1 is to be reviewed for opportunities to extend the front balcony in front of Bed 1. | <p>The City's RDLPP requires no more than 50% balcony beyond setback, therefore cannot be enlarged unless the City will support the enlargement of the balcony.</p> <p>Changes have been made to Unit 4 with access to the southern terrace from the laundry.</p> |
| Solar access and ventilation | |
| <p>Review of east facing units to include shading from morning sun.</p> <p>The inclusion of white glass on the northern façade of Units 7 and 13 limits the ability of those units to receive direct sunlight.</p> <p>Single aspect apartments do not have access to prevailing winds.</p> | <p>Shade devices added to windows on the eastern elevation.</p> <p>Single aspect apartments by nature of the description, are 'single aspect' therefore will not meet the natural cross ventilation requirements as per SPP7.3.</p> <p>77% of apartments meet the ventilation requirements, 60% required under the acceptable outcomes.</p> |

Planning Assessment:

The City has completed an assessment of the proposal against the relevant provisions of the Regulations, LPS3, SPP7, SPP7.3, and the City's RDLPP.

A summary of the City's assessment against SPP7.3 (including relevant elements of the RDLPP) is included in Attachment 12.

The key design elements of SPP7.3 and the design elements related to the primary concerns raised during consultation are discussed in more detail below.

Officer Comments

Local Planning Scheme No. 3

Minimum lot frontage requirement:

Clause 26 (5) of LPS3 requires multiple dwelling sites to have a minimum site width of 20 metres at the street boundary.

The application proposes development across 9 and 11 Davallia Road which have an aggregate site width of 40.24 metres at the street boundary, and therefore meets this scheme requirement.

Land use:

The subject site is zoned 'Residential' under LPS3 with a residential density coding of R20/R40. The land use of 'Multiple Dwelling' is a discretionary or 'D' land use in the Residential zone.

The discretionary land use permissibility for multiple dwellings applies to every lot in the entire Residential zone, across all suburbs of the City. Multiple dwellings are not appropriate to be built on every residential lot in the City and that is why the land use permissibility in the City's scheme requires the exercise of discretion in deciding which lots are appropriate for multiple dwelling development and which are not. The City, as part of Amendment No. 73 to District Planning Scheme No. 2, recoded certain properties, including the subject site, to allow for the provision of higher density development in certain areas. It was through this action that the City exercised its discretion and decided that multiple dwellings were considered acceptable on certain lots by virtue of the higher density code allocated to them.

One of the objectives of the Residential zone is to provide for a range of housing and a choice of residential densities to meet the needs of the community, which the proposed development, and the Housing Opportunity Areas more broadly, does in a Local Government area that is characterised primarily by detached, single houses.

State Planning Policy 7.3 (Residential Design Codes Volume 2 – Apartments)

Street setbacks

Element 2.3 Street setbacks objectives state:

O 2.3.1 The setback of the development from the street reinforces and/or complements the existing or proposed landscape character of the street.

O 2.3.2 The street setback provides a clear transition between the public and private realm.

O 2.3.3 The street setback assists in achieving visual privacy to apartments from the street.

O 2.3.4 The setback of the development enables passive surveillance and outlook to the street.

The acceptable outcomes suggest a street setback of four metres, which may be reduced by up to 50 per cent provided that the area of any building, excluding minor incursions (porches and balconies) occupying no more than 50 per cent of the lot frontage, intruding into the setback area are compensated for by an equal area of open space behind the street setback area.

The average setback of the proposed development is 4.18 metres. Whilst the balconies occupy 52.1% of the frontage, they are compensated by an equal area of open space within the common area located in the north eastern corner of the site. Therefore, the street setbacks proposed are in accordance with the acceptable outcomes.

The existing character of the street generally consists of open gardens to single houses, with a number of grouped dwellings incorporating terraces within the front setback area. A key feature of Davallia Road are the existing mature trees located within the median strip. The proposed landscaping plan (Attachment 7 refers) includes six 100L trees ('small' trees as defined by SPP7.3) and raised planter beds within the front setback area, which reinforces the existing character of the street.

There are seven balconies addressing Davallia Road, with glass balustrading to the front, allowing surveillance to the street, and screening between each apartment. The level difference between the street and apartment floor levels provides adequate separation to achieve visual privacy for future residents.

Given the above, the development is achieving the element objectives pertaining to street setbacks.

Plot ratio

Element 2.5 Plot ratio objective states:

O 2.5.1 The overall bulk and scale of development is appropriate for the existing or planned character of the area.

The acceptable outcome suggests a plot ratio of 0.6 (825.6m²) for an R40 coded site (A2.5.1), whereas a plot ratio of 0.79 (1,088.9m²) is proposed.

Appendix 2 – streetscape and character types (A2) of SPP7.3 outlines the character typical to an R40 suburban area, which is characterised as ‘low-rise’ residential which is *“predominantly 1-2 storeys but may include 3-storey development on neighbourhood connector streets, adjacent to open space and/or on key sites”*.

It is noted that the subject site is located facing Davallia Road which is a local distributor (notionally a ‘neighbourhood connector’ as defined by Liveable Neighbourhoods) between the suburbs of Duncraig and Carine and is located directly opposite a neighbourhood centre, which includes Carine Glades Shopping Centre and other commercial buildings. Whilst the development is considered to be a two-storey building as a result of the car parking area meeting the definition of a ‘basement’ level under SPP 7.3, it is acknowledged that from Davallia Road, a total of two residential floors plus the basement parking area are visible. In determining the appropriateness of the bulk and scale of the development, it is noted that the related elements that determine a development’s building footprint, being height, street setbacks and side/rear setbacks meet the relevant element objectives of SPP7.3.

When considering the proposal against the element objective, given that the development’s frontage is to Davallia Road, the site is located opposite a neighbourhood centre and that the development meets related element objectives that also determine the building footprint, the plot ratio is considered appropriate for the planned character of the area.

Building depth

Element 2.6 Building depth objective states:

O 2.6.1 Building depth supports apartment layouts that optimise daylight and solar access and natural ventilation.

O 2.6.2 Articulation of building form to allow adequate access to daylight and natural ventilation where greater building depths are proposed.

O 2.6.3 Room depths and/or ceiling heights optimise daylight and solar access and natural ventilation.

The acceptable outcomes suggest that developments which comprise single aspect apartments on each side of a central circulation corridor, have a maximum building depth of 20 metres, with the remaining development to be considered on its merits, with particular consideration to *4.1 Solar and daylight access* and *4.2 Natural ventilation*. The proposed building depth is a maximum of 23.9 metres where single aspect apartments are proposed.

The majority of apartments within the development are dual aspect which achieve adequate natural ventilation in accordance with the requirements of clause *4.2 Natural ventilation*.

The single aspect apartments are such that direct sunlight is able to penetrate living areas and habitable rooms with morning sun to the east facing apartments and afternoon sun to the west facing apartments, which is in accordance with the requirements of clauses *4.1 Solar and daylight access* and *4.3 Size and layout of dwellings*.

It is therefore considered that the element objectives have been achieved.

Orientation

Element 3.2 Orientation objective states:

O 3.2.1 Building layouts respond to the streetscape, topography and site attributes while optimising solar and daylight access within the development.

O 3.2.2 Building form and orientation minimises overshadowing of the habitable rooms, open space and solar collectors of neighbouring properties during mid-winter.

The acceptable outcomes suggest:

- the building to be oriented to the street and incorporate direct access from the street;
- for shadow cast at midday on 21st June not to exceed 25% of the adjoining property; and
- to protect solar panels.

The building is oriented to Davallia Road for the eastern aspect apartments and to the communal open space located on site for the western aspect apartments. The adjoining property to the south does not have solar collectors but does have a skylight installed on the northern side of its rooftop. The proposed building overshadows 26.67% of the adjoining property, noting the adjoining property is dual coded R20/40 and is currently developed at the R20 coding.

The applicant has provided an overshadowing diagram (Attachment 6 refers).

The design guidance states that the impact of development on solar access to properties located to the south must be considered and, in considering overshadowing of neighbouring properties, priority should be given to achieving acceptable solar access to habitable rooms, outdoor living spaces and solar collectors.

In considering the impact of overshadowing on the adjoining southern lot:

- The adjoining property does not have solar panels, with the sky light in the northern roof space not located within the area impacted by overshadowing.
- Overshadowing of the outdoor living area occurs from the dividing fence and not the apartment building.
- A major opening to a living room is located on the northern side of the adjoining dwelling, orientated to face east, which will be directly impacted by the overshadowing from the apartment building.

Given the impact of the overshadowing from the apartment building on the major opening to the living room on the adjoining property, it is considered that the development does not sufficiently protect the impact on the adjoining property and therefore does not achieve element objective O3.2.2.

Tree canopy and deep soil areas and landscape design

Element 3.3 Tree canopy and deep soil areas objectives state:

O 3.3.1 Site planning maximises retention of existing healthy and appropriate and protects the viability of adjoining trees.

O 3.3.2 Adequate measures are taken to improve tree canopy (long term) or to offset reduction of tree canopy from pre-development condition.

O 3.3.3 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.

Element 4.12 Landscape design objectives state:

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.

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.

4.12.4 Landscape design is integrated with the design intent of the architecture including its built form, materiality, key functional areas and sustainability strategies.

The acceptable outcomes suggest:

- the retention of appropriate trees;
- minimise canopy loss;
- provision of 137.9m² deep soil area;
- provision of one large tree and one medium tree to be co-located with existing trees for retention or alternatively provided in a location conducive to tree growth and communal open space;
- the extent of permeable paving or decking not to exceed 20% of the site's deep soil area or inhibit the planting or growth of trees;
- a landscaping plan to be provided with landscaping areas designed to support trees to open space and the public realm, and to improve the outlook and amenity to habitable rooms and open space areas; and
- building services to be integrated in the design of landscaping (where applicable) and not visually obtrusive.

The proposal results in the loss of one tree with a height of four metres, 0.2 metre trunk width and a five metre canopy within the north eastern corner of the site. Such a tree would be categorised as a 'small tree' under SPP7.3. It is noted that a replacement 'small tree' (Tuckeroo) is proposed within the north eastern corner of the site which can reach a height of eight metres. A total of 12 small trees are proposed as part of the development's overall landscaping. It is noted that the deep soil areas

and rootable zone sizes proposed are capable of accommodating the small trees proposed; however, overall the trees proposed do not achieve the acceptable outcome provision of one medium tree and one large tree in accordance with Table 3.3b of SPP7.3.

The landscaping plans are provided in Attachment 7.

The design guidance suggests that the landscape design should maximise the tree canopy and the effectiveness of deep soils areas, featuring a mix of shade trees, hardy shrubs, ground covers and native and endemic species. Whilst the development is meeting the minimum deep soil area required in SPP7.3, given the building footprint, the size of these areas is insufficient to provide adequate space for a large and medium tree. Beyond the street setback, the deep soil areas are proposed to the periphery of the site and have not been integrated as part of the overall design intent or within the communal open space. Whilst providing small trees as part of the overall landscape response may be appropriate, the lack of a medium and large tree diminishes the contribution of the on-site landscaping to the broader local amenity, does not result in landscaping being provided that is consistent with the scale of development and does not contribute to the long-term improvement in tree canopy.

It is therefore considered that the development does not satisfy the element objectives of clause 3.3 and 4.12.

Communal open space

Element 3.4 Communal open space objectives state:

O 3.4.1 Provision of quality communal open space that enhances resident amenity and provides opportunities for landscaping, tree retention and deep soil areas.

O 3.4.2 Communal open space is safe, universally accessible and provides a high level of amenity for residents.

O 3.4.3 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.

The acceptable outcomes suggest communal open space should:

- have an area of 78m² with a hardscape area of 26m²;
- have an open space dimension of 4 metres;
- be accessible;
- have a minimum of 50% of the area with access to direct sunlight; be co-located with deep soil areas and/or planting structures and/or indoor communal spaces;
- be provided with separation or screening between private open spaces to reduce amenity impacts; and
- be well-lit and designed and oriented to minimise amenity impacts.

The proposed communal open space generally meets the acceptable outcomes, with the exception of adequate separation between adjoining private open spaces. The location of the communal open space is adjacent to courtyards of the adjoining

ground floor apartments. Given separation between these spaces is proposed to be achieved through a one metre high planter bed only, it is anticipated that impacts relating to noise and privacy will impact on the adjoining private courtyards.

The design guidance further states that consideration should be given to the potential impacts generated by communal open space, such as locating children's play areas or sports areas away from bedrooms to minimise noise and orienting BBQs to reduce the impact of odour and smoke.

Considering the above, the proposed interface between the communal open space and the private courtyards of the adjacent ground floor apartments does not provide adequate separation to ensure that visual privacy and noise to the private open spaces is not impacted by the location of the communal open space.

Whilst deep soil areas have been included at the periphery of the communal open space, these areas are not considered to be integrated within the overall function of the communal open space and therefore do not provide a high level of amenity for residents. The tree canopy and landscaping within the communal open space also does not satisfy the element objectives of clause 3.3 and 4.12 as outlined above. The development is therefore not considered to achieve the element objectives applicable to communal open space.

Visual privacy

Element 3.5 Visual privacy objective states:

O 3.5.1 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.

The acceptable outcomes suggest:

- visual privacy setbacks to side and rear boundaries to be 4.5 metres for bedrooms and open access walkways, and 7.5 metres for balconies (where the adjoining sites are developed at the R20 density);
- balconies to be unscreened for at least 25%;
- living rooms to have an external outlook from at least one major opening that is not obscured; and
- windows and balconies to be located to restrict overlooking without reliance on high sills or permanent screening.

Northern lot boundary

The development includes eight windows at the upper floor level facing north as well as two balconies. The development includes screening devices to each of these openings, including highlight windows to a height of 1.8 metres above finished floor level, white glass (obscure) to a height of 1.65 metres above floor level and floor to ceiling height louvred screening to the balconies. The lobby passage includes a window facing north which is set back 5.425 metres from the northern boundary in accordance with the acceptable outcomes listed above.

Southern lot boundary

The southern elevation includes a total of eight windows and two balconies at the upper floor level. The ground floor includes a number of openings which will be screened by a standard dividing fence between properties, however also includes a side terrace associated with Unit 4 which is raised more than 0.5 metres above the existing natural ground level. The proposal has sought to address any associated overlooking from this terrace through a dividing fence which is indicated on the southern elevation plan (Attachment 2 refers). However this is 0.9 metres short of meeting the screening requirement of 1.6 metres in height from the finished floor level. If a 1.6 metre high screen was to be placed on top of the terrace to provide adequate privacy, the resultant height from natural ground level would be 3.2 metres at the side boundary and street setback line, which would have a detrimental visual impact on both the streetscape and adjoining property.

Western lot boundary

The development includes a total of three apartments with balconies oriented to the western aspect of the site. Each is set back 7.51 metres from the western boundary with floor to ceiling height screening applied to 44% of the total balcony length across the three apartments. The balconies therefore achieve the acceptable outcomes in relation to visual privacy to the western boundary.

Within the site

Units 1, 2 and 3 are located on the ground floor and have private courtyards that directly interface with the communal open space. To assist in providing privacy to these apartments and their private courtyards the applicant proposes a one metre high planter box accommodating 'snow maiden' shrubs which can reach a mature height of 0.75 metres.

Units 1 and 2 include major openings to living areas that face directly onto the common area access passage that is 1.6 metres wide and provides access to the communal open space. The windows provide passive surveillance to the access passage; however, this is achieved at the expense of privacy to the units themselves, particularly given the narrow width of the passage. Whilst the windows to each of the units are not directly opposite each other, they are not offset to an extent that would prevent occupants of the units from seeing directly into the respective living areas.

The design guidance lists a number of design solutions which may be appropriate in achieving adequate visual separation including:

- increased setbacks;
- solid or partially-solid balustrades to balconies at lower levels;
- use of fencing and/or trees and vegetation to separate spaces;
- screening devices;
- changes of level;
- bay windows or pop out windows to direct outlook away from other dwellings;
- planter boxes incorporated into walls and balustrades;
- pergolas or shading devices to limit overlooking of lower dwellings or private open space;
- portions of fixed louvres or screen panels to windows and balconies.

In considering the development against the element objectives, it is considered that the development does not satisfy these objectives as:

- the privacy of the adjoining property to the south is impacted by way of the Unit 4 terrace not being adequately screened. Providing a screen to the southern boundary will result in a screen wall to a maximum height of 3.2 metres, which is not considered appropriate.
- there is inadequate separation between the private courtyards of Units 1, 2 and 3 and the communal open space. It is noted that this also does not meet the element objectives in relation to clause 3.4 Communal open space.
- the location of openings to Units 1 and 2 are not offset to prevent overlooking between both living areas. This aspect of the design also does not meet the element objectives in relation to clause 4.5 *Circulation and common spaces* as outlined below.
- the visual privacy afforded to adjoining properties and within the site is therefore not considered to satisfy the element objectives.

Public domain interface

Element 3.6 Public domain interface objectives state:

O 3.6.1 The transition between the private and public domain enhances the privacy and safety of residents.

O 3.6.2 Street facing development and landscape design retains and enhances the amenity and safety of the adjoining public domain, including the provision of shade.

The acceptable outcomes suggest:

- ground floor dwellings fronting onto the street or public open space have direct access via a private terrace, balcony or a courtyard;
- car parking not located within the street setback area and integrated with landscaping and the building façade;
- upper level balconies and/or windows to overlook the street and public domain;
- balustrading that provides residents with privacy while maintaining casual surveillance;
- level changes between private terraces, front gardens and building and the street level average 1m and not exceed 1.2m;
- front fencing to be visually permeable above 1.2m;
- bins not located within the primary street setback or visible from the primary street; and
- services and utilities located within the street setback area to be integrated into the design and not detract from the amenity or visual appearance of the dwelling.

The proposed development generally satisfies the acceptable outcomes, with the exception of direct access not being proposed to be provided from the street to the ground floor apartments.

When considering the location of the dwelling entries, the design guidance sets out that direct street access to terrace and balcony apartments is desirable where it can be achieved. Given the street setback of four metres to the apartments and the level difference between the verge and ground floor apartments of 2.3 metres, direct street frontage in this instance would be impractical, with the street setback area better

utilised with the use of planter beds to enhance the landscape design and provision of shade.

In considering the location of the entry against the element objectives, the consolidated entry located on the northern side of the site is capable of passive surveillance from adjoining major openings and the internal lobby. The consolidated entry point for the development results in a street setback area that can be better utilised for landscape design that softens the transition between the development and the street through landscape design that increases the provision of shade. The proposed public domain interface is therefore considered acceptable.

Car and bicycle parking

Element 3.9 Car and bicycle parking objectives state:

O 3.9.1 Parking and facilities are provided for cyclists and other modes of transport

O.3.9.2 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.

O 3.9.4 The design and location of car parking minimises negative visual and environmental impacts on amenity and the streetscape.

The acceptable outcomes suggest:

- 13 vehicle parking bays and seven secure, undercover bicycle parking spaces (as per Table 3.9). This is to include four visitor vehicle parking bays and four visitor bicycle parking spaces.
- maximum parking provision does not exceed double the minimum number of bays (34 bays) and vehicle circulation areas are designed in accordance with AS2890.1
- car parking areas are not visually prominent from the street nor located within the street setback and integrated with and complement the overall building design. Furthermore, the portion of basement parking protruding more than one metre above ground level is designed or screened to prevent negative visual impact on the streetscape.
- visitor parking is to be clearly visible from the driveway with signage and is accessible from primary entry or entries.

The development includes:

- 22 resident bays and four visitor parking bays within the basement.
- 10 wall hanging bicycle racks located at the end of the driveway, within a reversing area for vehicles.
- four wall-mounted visitor bicycle racks adjacent the visitor car park and a bicycle rack being proposed within each of the individually-allocated storerooms.
- all car parking is directly accessible and visible from the single driveway via Davallia Road providing a continuous path of travel from the entry point to the parking bay.

- circulation of the car parking area in accordance with AS2890.1.
- basement level parking is screened from the street by way of raised planters and slat screen fencing and gates.

The location of the 10 bicycle racks on the wall within the reversing area for vehicles is not considered to provide a convenient or well-integrated storage area. Notwithstanding this, each apartment is provided with a bike rack within each of the storerooms. While each store room is located adjacent to a car parking bay, the parking allocation is such that access to each storeroom would only be restricted by a car belonging to the resident of the corresponding apartment and therefore the placement of bicycle racks within storerooms is considered to be functional.

When considering the development against the element objectives the proposal does provide vehicle parking in an appropriate location, which is safe and accessible, is setback in accordance street setbacks and does not detract from the streetscape. Parking facilities have been provided for bicycles which are generally considered to be adequate with exception to the hanging bicycle racks located at the end of the driveway which conflict with vehicle turning areas and are therefore not considered functional. It is noted that as each unit has a bicycle rack within their store, these additional bicycle racks are not required to satisfy the requirements of SPP7.3.

Solar and daylight access

Element 4.1 Solar and daylight access objectives state:

O 4.1.1 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.

O 4.1.2 Windows are designed and positioned to optimise daylight access for habitable rooms.

O 4.1.3 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.*

The acceptable outcomes suggest:

- the maximisation of dwellings with a northern aspect, with a minimum of 70% of dwellings having living rooms and private open space obtaining at least 2 hours direct sunlight between 9am and 3pm on 21 June, and a maximum 15% of dwellings receiving no direct sunlight between 9am and 3pm on 21 June;
- 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% of the floor area and comprising a minimum 50% clear glazing;
- lightwells and/or skylights do not form the primary source of daylight to any habitable room; and
- the building is orientated and incorporates external shading devices to minimise direct sunlight to habitable rooms between late September and early March, and permit winter sun in accordance with A4.1.1.

The proposed apartment layout allows dwellings to receive at least two hours of direct sunlight on 21 June. Direct sunlight is provided to all living areas, with dwellings with a northern façade also receiving direct sunlight via north facing highlight openings. It was a recommendation of the JDRP that the major openings from bedrooms facing Davallia Road include shading devices to minimise heat to those rooms from morning sun, which has been addressed on the amended development plans. It has been identified that the north facing openings to Units 1, 6, 7 and 13 do not include shading devices which is required in accordance with the acceptable outcomes.

When considering the windows on the northern façade, the design guidance outlines that a suitable alternative to highlight windows is the use of obscure glazing to 1.6 metres with clear glazing above which optimises light to habitable rooms whilst achieving a dual purpose of visual privacy to neighbouring properties and reduction of heat during summer months. The development includes low sill height windows to all habitable rooms with a northern aspect with obscure glazing to 1.6 metres from floor level to balance the need between direct sunlight and shading. It is noted that additional shading to these north-facing non-major openings did not form part of the JDRP recommendations, however could form a condition of approval, if granted.

The development is considered to allow for an acceptable level of direct sunlight to apartments, whilst also balancing this with the need for passive shading to habitable rooms which is achieved via awnings to east facing major openings and obscure glazing to north facing non-major openings. The proposed development is therefore considered to meet the objectives applicable to solar and daylight access.

Size and layout of dwellings

Element 4.3 Size and layout of dwellings objectives state:

O 4.3.1 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.

O 4.3.2 Ceiling heights and room dimensions provide for well-proportioned spaces that facilitate good natural ventilation and daylight access.

The acceptable outcomes suggest:

- dwellings to have minimum floor areas in accordance with Table 4.3a;
- habitable rooms to have minimum floor areas and dimensions in accordance with Table 4.3b;
- minimum floor to ceiling heights of 2.7m to habitable rooms and 2.4m to non-habitable rooms; and
- open plan living areas to have a maximum length of 8.229m without a kitchen or 9m with a kitchen.

The development generally meets the acceptable outcomes with exception of the living area dimensions of three apartments (Units 2, 8 and 13). Both Units 2 and 8 have a minimum dimension of 3.99 metres, whereas a dimension of four metres would meet the acceptable outcome. The Unit 13 living room has a minimum dimension of 2.88 metres, whereas a dimension of 3.6 metres would meet the acceptable outcome.

The design guidance highlights the following as important aspects in achieving suitable size and layout of dwellings:

- rooms sizes and layouts that are functional and can accommodate a variety of furniture arrangements;
- location of living areas and bedrooms to maximise daylight and available views; and
- allocation of spaces within bedrooms for accommodation of robes with a minimum width of 1.8 metres for main bedrooms and 1.5 metres for other bedrooms.

All apartments within the development are open plan and include rectangular living spaces and bedrooms therefore facilitating layouts that can be furnished and accommodate functional furniture layouts as demonstrated by the indicative layouts shown on the development plans. Living rooms for all apartments are oriented to maximise outlook, which is further enhanced through the integration between living spaces and balconies/terraces.

The scale of the individual apartments is considered to accommodate furniture in a functional layout relative to the household size. In particular, the indicative furniture layout shown for the single bedroom dwelling (Unit 13) demonstrates a useable living space comfortably accommodating the needs of a single person or a couple. The size and layout of dwellings are therefore considered to meet the element objectives.

Circulation and common spaces

Element 4.5 Circulation and common spaces objectives state:

O 4.5.1 Circulation spaces have adequate size and capacity to provide safe and convenient access for all residents and visitors.

O 4.5.2 Circulation and common spaces are attractive, have good amenity and support opportunities for social interaction between residents.

The acceptable outcomes suggest:

- circulation corridors to a maximum of 1.5 metres in width;
- circulation and common spaces designed for universal access;
- circulation and common spaces are capable of passive surveillance;
- illumination to circulation and common spaces that do not create light spill into habitable rooms of adjacent dwellings;
- bedroom windows and major openings to living rooms do not open directly into circulation or common spaces and are designed to ensure visual privacy and manage noise intrusion.

The development generally satisfies the acceptable outcomes with exception of Unit 1 and Unit 2 which have living rooms that include openings onto the common area access passage that provides access to the communal open space. It is noted that the width of the access passage at 1.6 metres meets universal access requirements.

The design guidance sets out that windows of dwellings should not open directly onto circulation spaces, to ensure that adequate privacy to dwellings is maintained. In considering the adjoining access passage itself, the design guidance highlights that safe circulation spaces should be designed with minimised length of corridors to assist with reducing opportunity for concealment and maximising passive surveillance to these spaces.

It is noted that as part of its review the JDRP recommended that the communal open space corridor be reviewed to improve amenity. No changes were made to the corridor access in response to the JDRP's recommendation, and the passageway retains a length of 11.8 metres and is bound by two-storey development for the majority of this length. Whilst the windows to Units 1 and 2 are included to assist with ventilation to those apartments and provide some surveillance to the access passage, the location of the living room windows facing into the accessway reduces the privacy to the adjoining living areas and overall, still results in areas of the common passage being without the provision of adequate passive surveillance.

When considering the proposal against the element objectives, the corridor access between the entry lobby and communal open space has inadequate separation between the openings to the Unit 1 and Unit 2 living areas to ensure privacy to those units. Additionally, the corridor access does not maximise the amenity for residents. It is therefore considered that the element objectives have not been met.

Storage

Element 4.6 Storage objective states:

O 4.6.1 Well-designed, functional and conveniently located storage is provided for each dwelling.

The acceptable outcomes suggest:

- exclusive bulky goods storage areas for each dwelling with a minimum area of 4m² and internal dimension of at least 1.5 metres;
- storerooms that are not located within dwellings are located in areas that are convenient, safe, well-lit, secure and subject to passive surveillance; and
- storage areas that are integrated into the design of the building and are not readily visible from the street.

The proposed storerooms associated with the development generally meet the acceptable outcomes with exception to three store rooms located on the eastern side of the undercroft car park, which each have a minimum internal dimension of 1.3 metres.

The design guidance sets out that where storerooms are located within a basement car park, these storage spaces are to be positioned so as not to obstruct access to car bays, and vice-versa when car bays are occupied. The layout of the basement parking level is such that each storeroom is adjacent to corresponding car bay belonging to that apartment, which ensures that access to the storerooms remains functional and convenient. It is considered that the internal dimension of 1.3 metres achieves the intended purpose for housing bulky goods.

It is therefore considered that the proposed storage areas meet the element objective of clause 4.6 *Storage*.

Dwelling mix

Element 4.8 Dwelling mix objective states:

O 4.8.1 A range of dwelling types, sizes and configurations is provided that caters for diverse household types and changing community demographics.

The acceptable outcomes suggest:

- dwelling mix is provided in accordance with the objectives, proportions or targets specified in a local housing strategy or local planning instrument; or
- 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.

The design guidance suggests that development should consider:

- dwelling mix to include dwellings designed to suit singles, couples, unrelated adult sharers, families, multi-generation households, seniors ageing in place and people with disabilities;
- objectives and demographic trends identified in a local housing strategy or other relevant local planning instrument;
- current and projected community demographics, the profile of existing housing stock and market data;
- employment, education and community services in the locality and the housing demand associated with those services;
- unmet housing need in the locality including a demand for affordable or accessible housing; and
- flexible configurations of space that can respond to changes in household composition and work/life arrangements.

The City of Joondalup *Local Housing Strategy* identifies that the City of Joondalup's housing stock at 2011 was characterised by the dominance of separate houses (over 90%) and relatively low proportion of medium and high density housing options compared to the Greater Perth Metropolitan Area. A key finding highlighted in the strategy is that the City's future housing supply will need to "accommodate an increasing share of smaller households comprising singles, families and couples without children", which was identified as being crucial in ensuring the City's future housing stock achieves the right mix of housing to avoid divergence in supply and demand. The strategy also outlines the importance of providing housing choices that cater to over 55s to allow existing residents to downsize and remain within their suburb as they age.

The proposed development provides additional housing choice for the Duncraig suburb which is currently characterised predominantly single, detached houses.

The proposed development includes a mix of 12 two-bedroom dwellings and one one-bedroom dwelling which results in 7.69% of the apartments offering differing bedroom numbers. Whilst there is limited variation in the number of bedrooms per apartment proposed, the development incorporates four (30%) apartments which are

designed to a Silver level standard in accordance with the *Liveable Housing Design Guidelines* which satisfies the acceptable outcomes of *Universal access* and due to the orientation of the development, provides for varying price points with dwellings oriented to face either the communal open space to the west of the building or Davallia Road, with a total of 10 (76.9%) apartments being dual aspect.

When considering the dwelling mix proposed against the element objectives, the proposed development is considered to provide a suitable dwelling mix in relation to orientation, universal access and achieves the intended type of housing stock outlined in the City's *Local Housing Strategy* providing smaller housing types to cater for ageing in place, singles, families and couples without children. The development is therefore considered to achieve an acceptable dwelling mix.

Waste management

Element 4.17 Waste management objectives state:

O 4.17.1 Waste storage facilities minimise negative impacts on the streetscape, building entries and the amenity of residents.

O 4.17.2 Waste to landfill is minimised by providing safe and convenient bins and information for the separation and recycling of waste.

The acceptable outcomes outline that waste storage facilities are to be provided in accordance with the *WALGA Multiple Dwelling Waste Management Plan Guidelines* and are to be screened from view from the street.

The plans show a bin enclosure located on the eastern side of the basement car park and a bin collection point within the verge, to the northern side of the entry crossover. The bin storage area is located behind an access gate, which is screened with planter boxes and timber style panels which match those used in the vehicle entry gate.

The Waste Management Plan prepared by the applicant (Attachment 9) proposes a shared bin system which can be accessed via the gate facing Davallia Road to allow for City collection of bins from the proposed 2.5 metre-wide embayment within the verge, which will need to be widened to three metres in order to accommodate a waste truck. Given the proximity of the embayment to an existing power pole at its southern end, the embayment would need to be moved north in order to accommodate a three metre width, which the City has reviewed to confirm this can be accommodated.

Traffic

During consultation a number of concerns were raised in relation to traffic:

- the proximity of the site to perceived traffic hazards relating to the intersection of Beach Road and Davallia Road;
- the subsequent merge point from two to one lane;
- queuing of vehicles;
- the T-intersection of the shopping centre access point with Davallia Road;
- street parking on Davallia Road.

A Transport Impact Statement provided by the applicant (Attachment 10) as part of the original proposal, demonstrates that:

- *“The surrounding roads and intersections can accommodate the predicted increase in traffic from the proposed development;*
- *The supply of car parking spaces and operation of the facility is considered adequate to accommodate the parking demand;*
- *The parking layout is compliant with AS2890.1 and AS2890.6;*
- *The site is well serviced by public transport with bus stops accessible within walking distance from the site;*
- *The existing pedestrian/cyclist infrastructure in the vicinity of the site is considered to be adequate to facilitate the safe movement of pedestrians and cyclists around the proposed development; and*
- *The location and dimension of the proposed access is considered acceptable and no adverse impacts and safety issues associated with the access are identified”.*

The original plans showed two vehicular access points onto Davallia Road which have since been consolidated into one as part of the amended design. Whilst an updated Transport Impact Statement has not been provided for the revised proposal, the City has reviewed the statement in conjunction with the plans and agrees with the findings in the report.

A street embayment is proposed to accommodate a City waste vehicle on bin collection days without impacting on adjacent traffic on Davallia Road. If approved, signage will need to be installed to restrict visitor parking within the embayment on collection days. Further detail is required in relation to construction of the embayment to the City's specifications, which could form a condition of approval, if granted.

Options/Alternatives:

Not applicable.

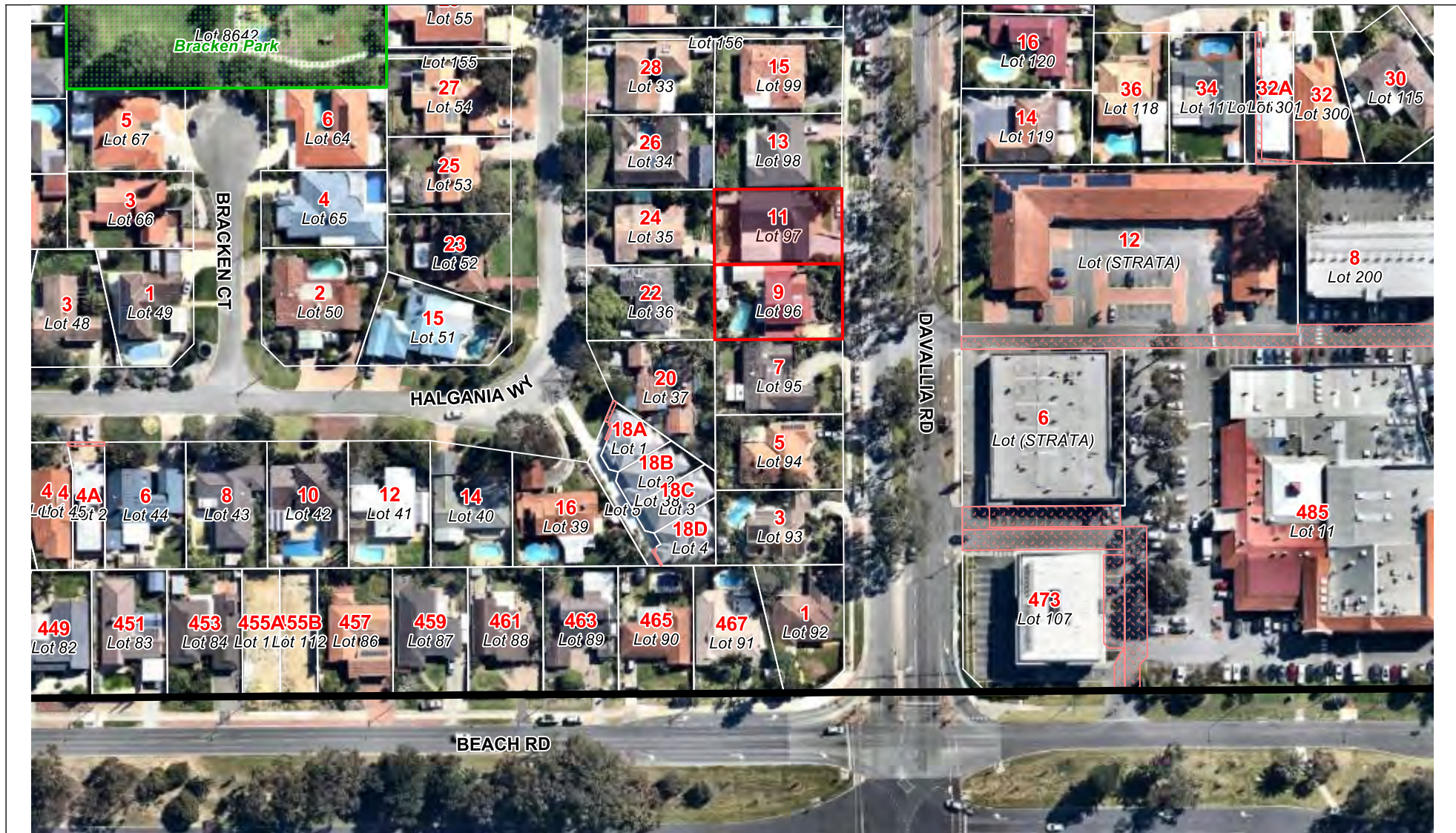
Council Recommendation:

Not applicable.

Conclusion:

The amended proposal has addressed a number of the reasons for refusal of the original application, however a number of issues still remain. Specifically, the communal open space, orientation, tree canopy and deep soil areas, visual privacy and circulation and common spaces do not achieve the relevant element objectives and will not provide a high level of amenity to the future occupants of the site or adjoining residents and does not enhance the public realm.

The application is therefore recommended for refusal for the reasons set out in the recommendation.



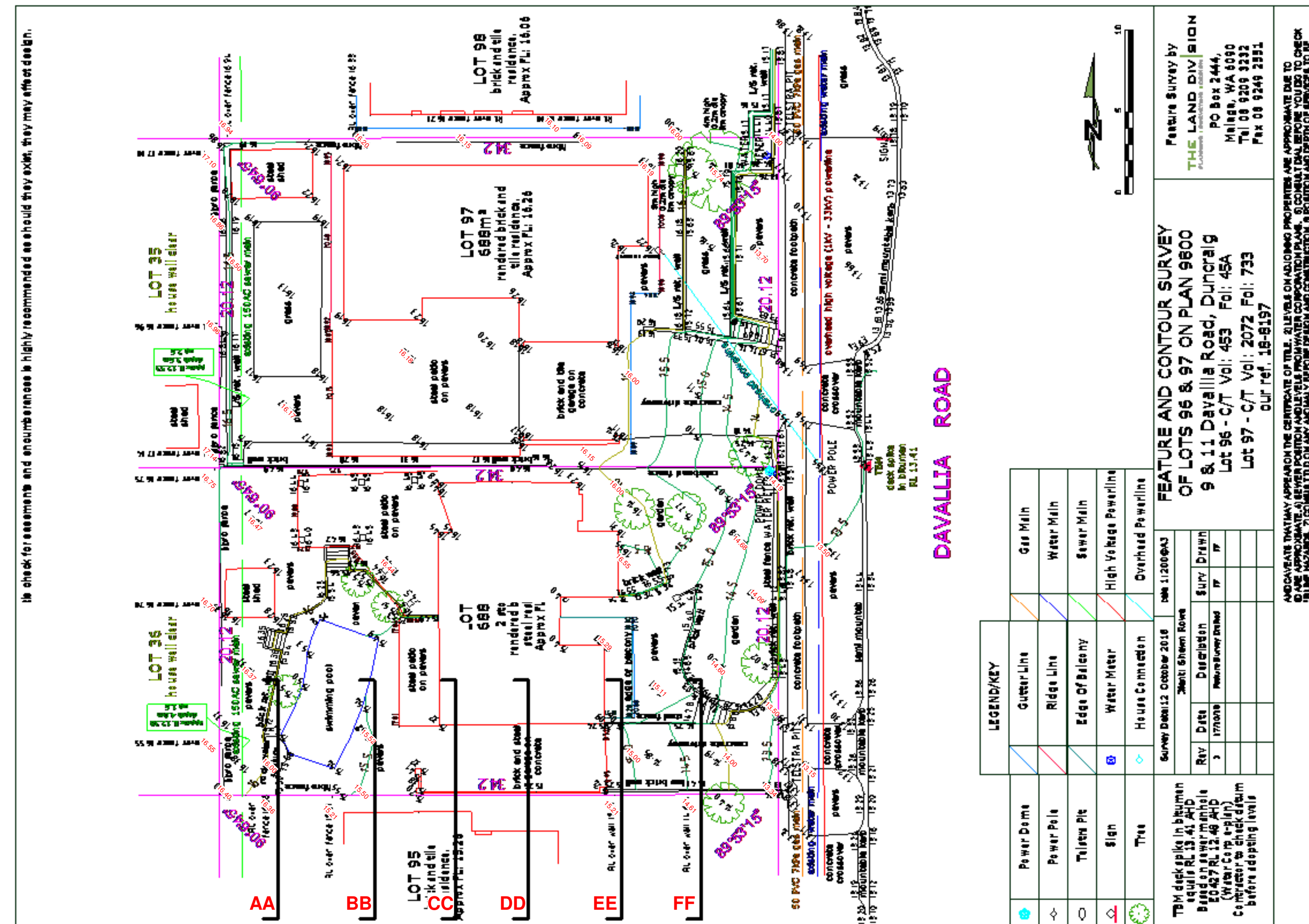
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Lots 96 (9) and 97 (11)
Davallia Road, Duncraig

11/12/2018

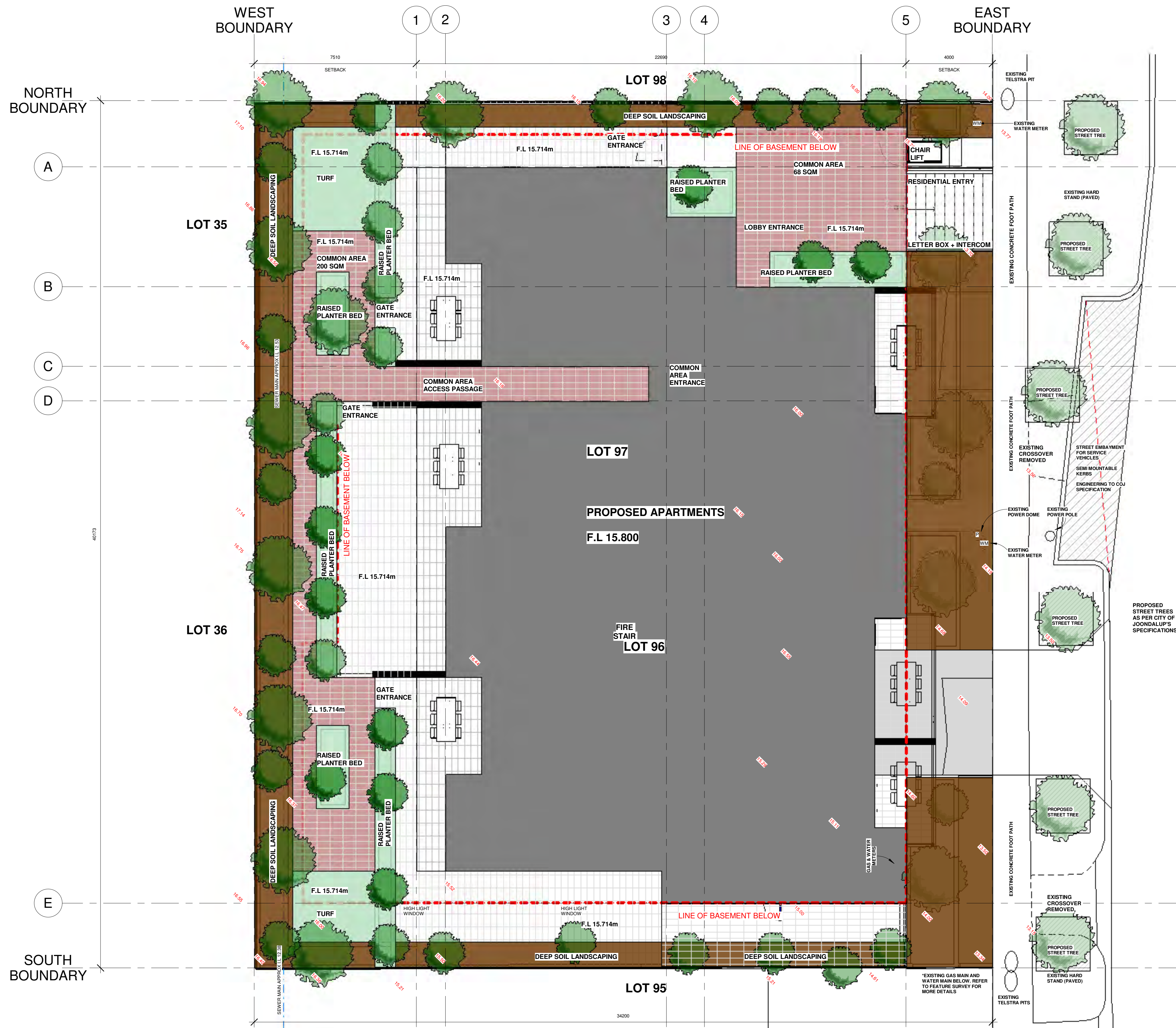
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1 FEATURE SURVEY

1 : 200

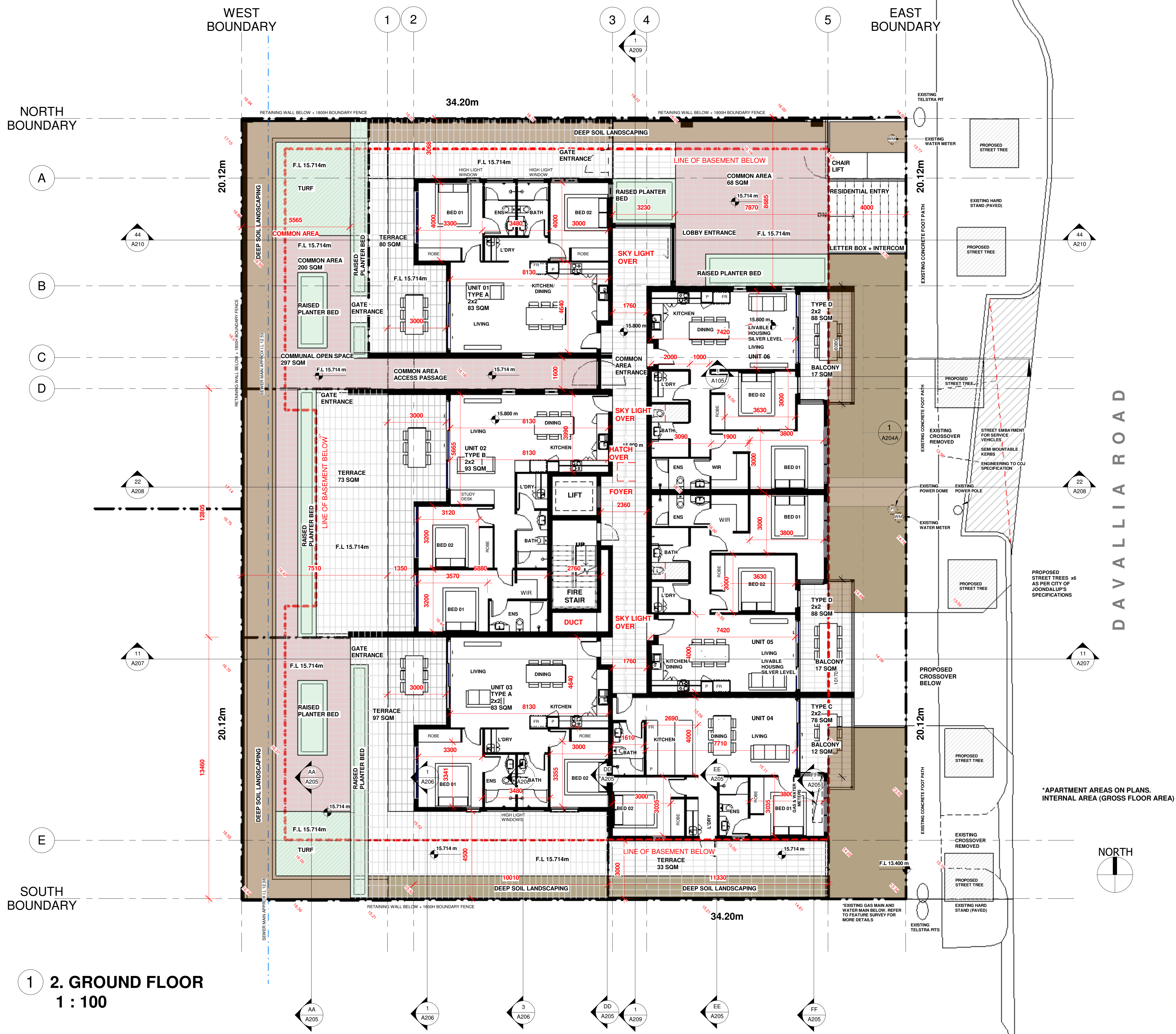


- DEEP SOIL ZONE = 250 SQM
- RAISED PLANTER BED = 68 SQM
- COMMON AREA = PROVIDED 250 SQM
REQUIRED 78 SQM
- HARD LANDSCAPING = PROVIDED 120 SQM
REQUIRED 26 SQM

| LANDSCAPING/DEEP SOIL AREAS | |
|--|-------------------------------------|
| SITE AREA (COMBINED) | 1376 sqm |
| DEEP SOIL AREAS REQUIRED SOFT LANDSCAPING: (10% OF SITE AREA REQUIRED) | 137.6 sqm (10%) |
| DEEP SOIL AREA PROVIDED: | 250 sqm (18%) PROVIDED |
| PLANTER BEDS : | 68 sqm |
| | TOTAL LANDSCAPING = 23% (318SQM) |

1 SITE PLAN / LANDSCAPING
1 : 100





RAISED PLANTER BED / COURTYARD AREA



DEEP SOIL ZONE =
250 SQM



RAISED PLANTER
BED = 68 SQM



COMMON AREA =
PROVIDED 250 SQM
REQUIRED 78 SQM

HARD LANDSCAPING
= PROVIDED 120 SQM

REQUIRED 26 SQM

REFER TO LANDSCAPE
PLAN A104/105 FOR
MORE DETAIL

| | |
|------------------|----------------------------------|
| TOTAL SQM = | 1080 SQM |
| SITE = | 1376 SQM |
| PLOT RATIO = | 0.78 SQM |
| TOTAL APARTMENTS | x 13 |
| TOTAL BAYS | x 23 RESIDENTIAL x 04 VISITOR |



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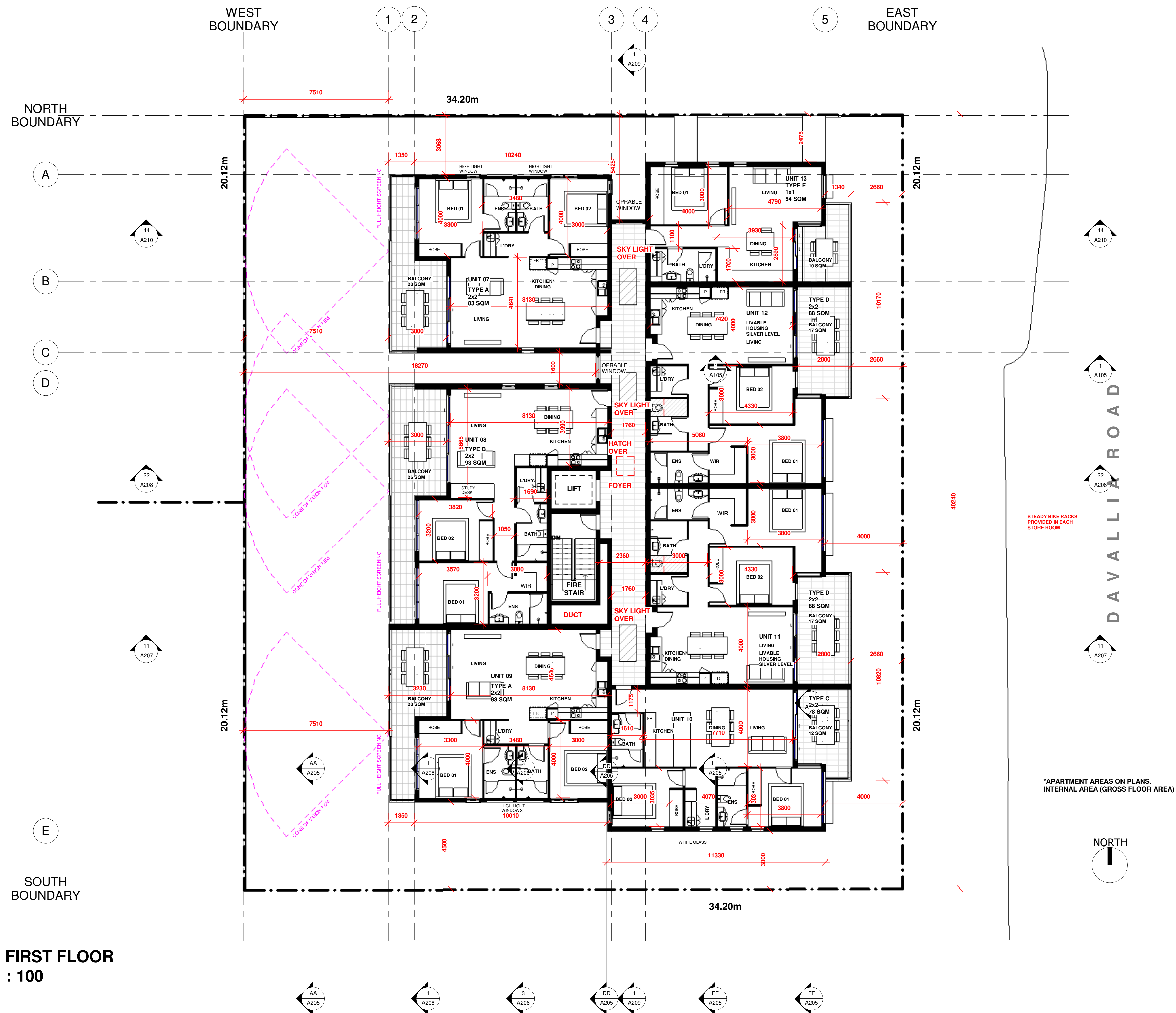
11 & 9 DAVALLIA ROAD_DUNCRAIG
DEVELOPMENT APPLICATION -DA009

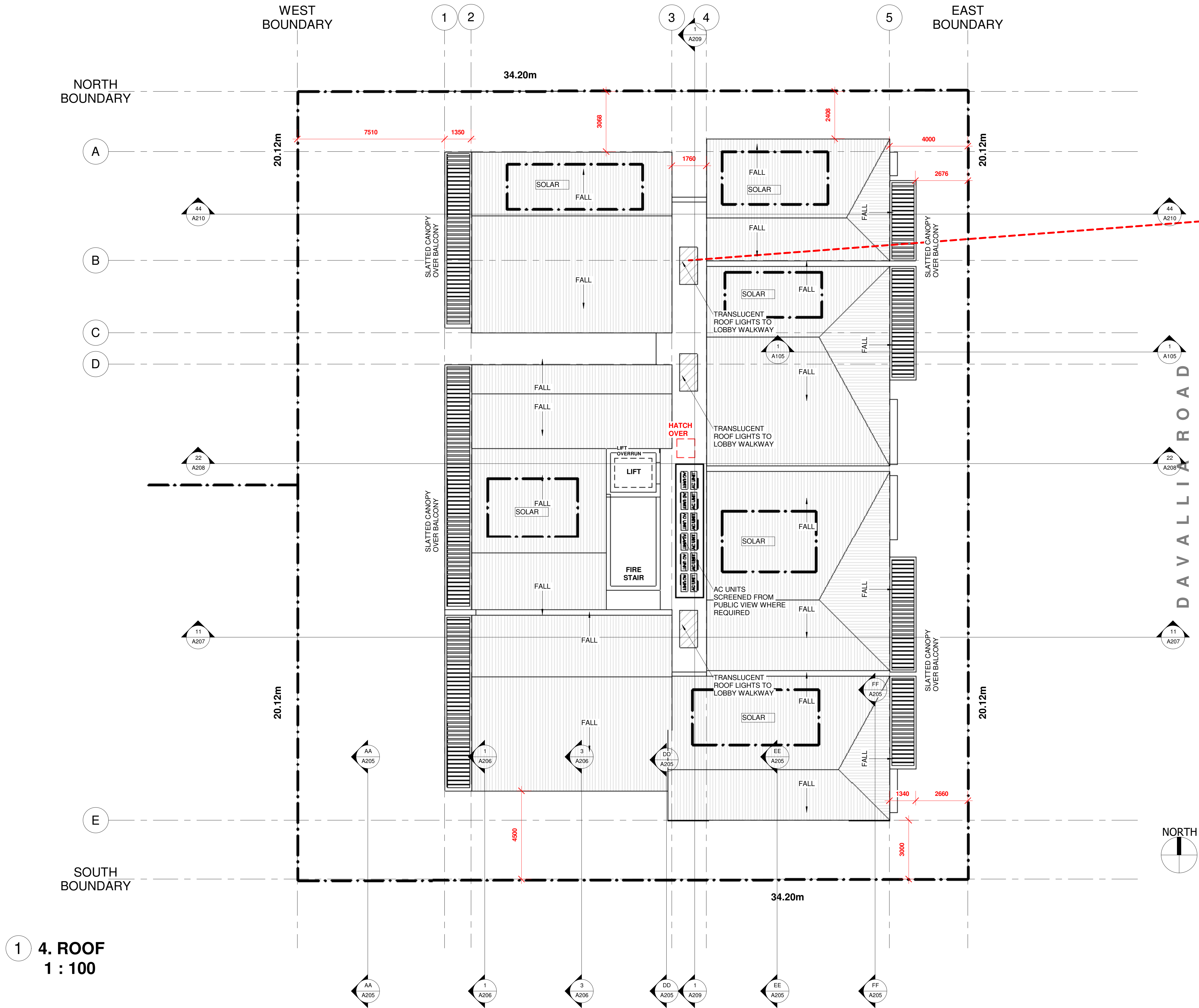
A202

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1 2. GROUND FLOOR
1 : 100

1:100 @ A1
1:200 @ A3

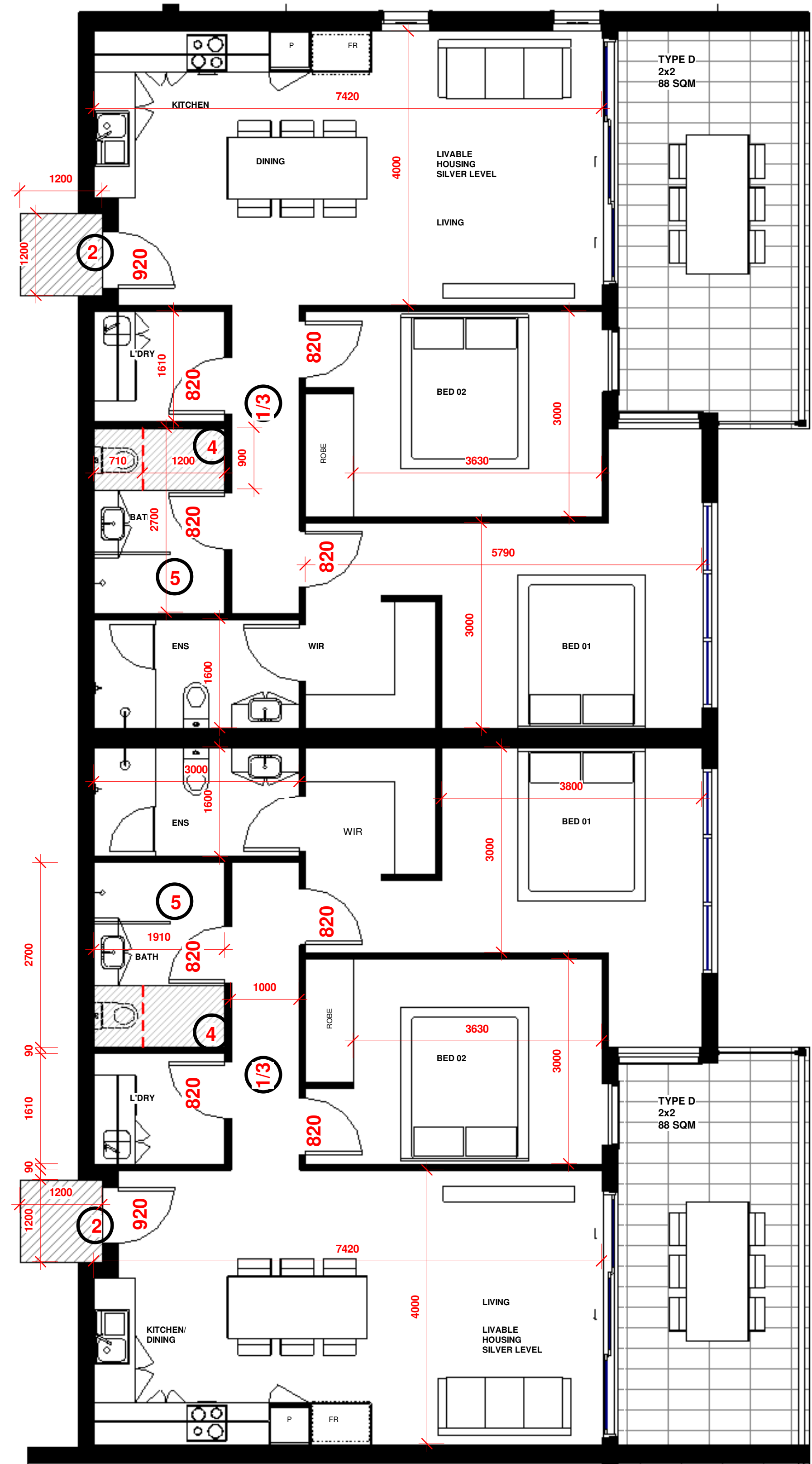


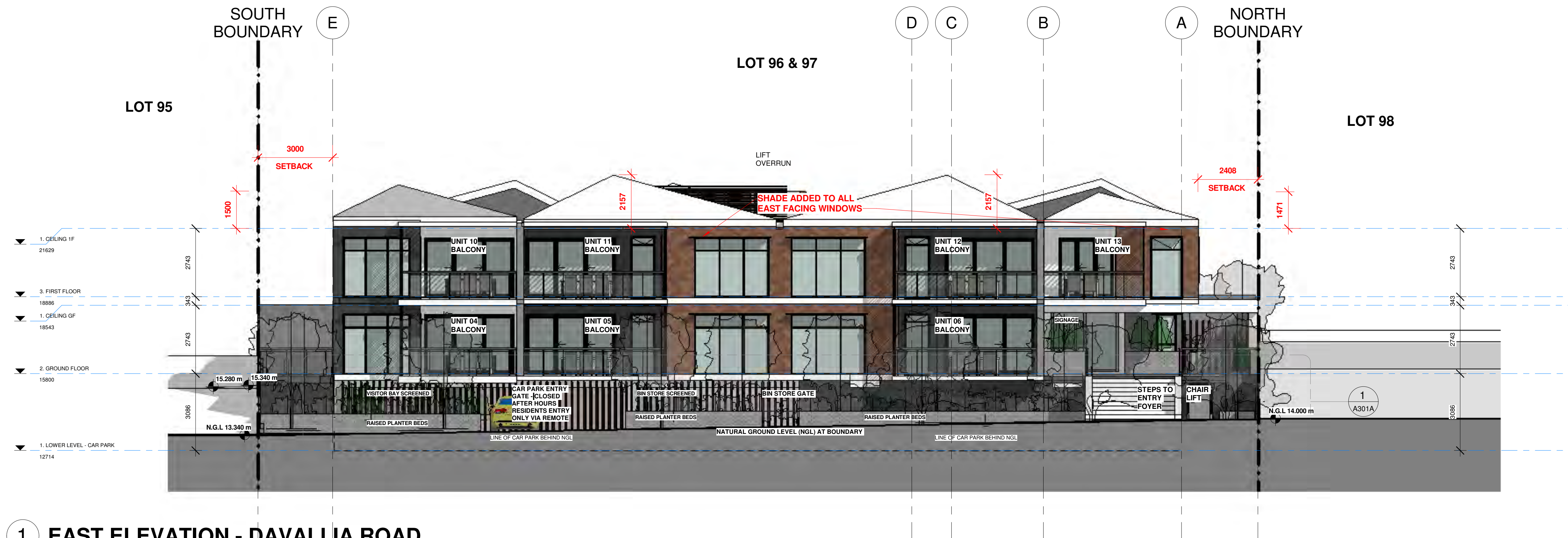


1 4. ROOF
1 : 100

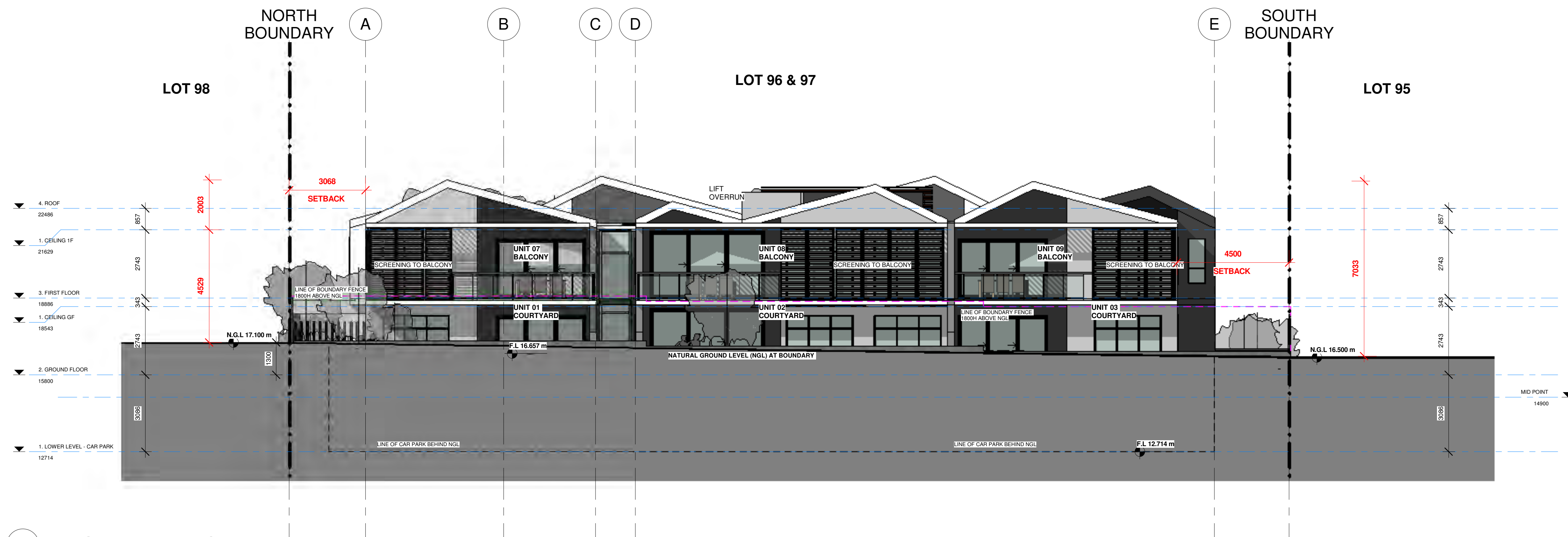
LIVABLE HOUSING DESIGN - SILVER LEVEL

| | |
|---|--|
| 1. Dwelling Access. 1000mm Corridor Width. Clear Path of Travel and No Steps | 8. Kitchen Space No requirement for Silver level |
| 2. Dwelling Entry. Minimum 820 Door Clear Opening 1200x1200 Entry Zone | 9. Laundry Space No requirement for Silver level |
| 3. Internal Doors and Circulation 1000mm Corridor Width. Minimum 820 Door Clear Opening | 10. Ground/Bedroom Space No requirement for Silver level |
| 4. WC. 900 Width to WC 1200 forward of the WC Pan | 11. Switches & GPO's No requirement for Silver level |
| 5. Shower Hobless Showers Shower Recess located in the Corner | 12. Door and Tapware. No requirement for Silver level |
| 6. Bathroom Walls – Reinforcement & Strength Construction will be brick/block | 13. Family Room/Living Spaces No requirement for Silver level |
| 7. Stairways – Handrails Continuous Handrails to Stairwells Provided | 14. Window Sills. No requirement for Silver level |
| | 15. Flooring No requirement for Silver level |





1 EAST ELEVATION - DAVALLIA ROAD
1 : 100



2 WEST ELEVATION
1 : 100



1 NORTH ELEVATION
1 : 100



2 SOUTH ELEVATION
1 : 100



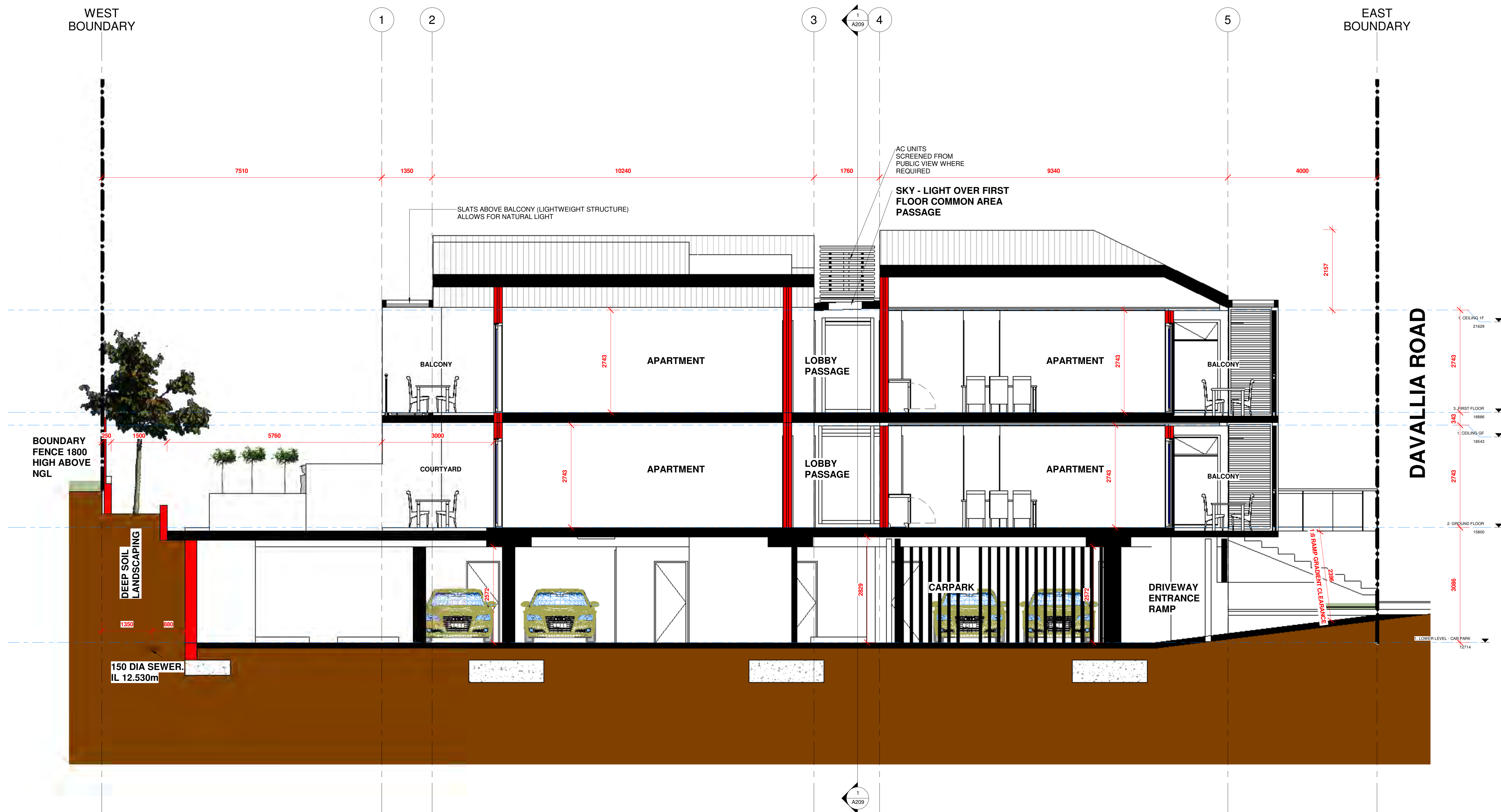
1 EAST ELEVATION - DAVALLIA ROAD - DRIVEWAY GATE / BIN STORE GATE
1 : 50



2 DRIVEWAY ENTRANCE



NOT TO SCALE



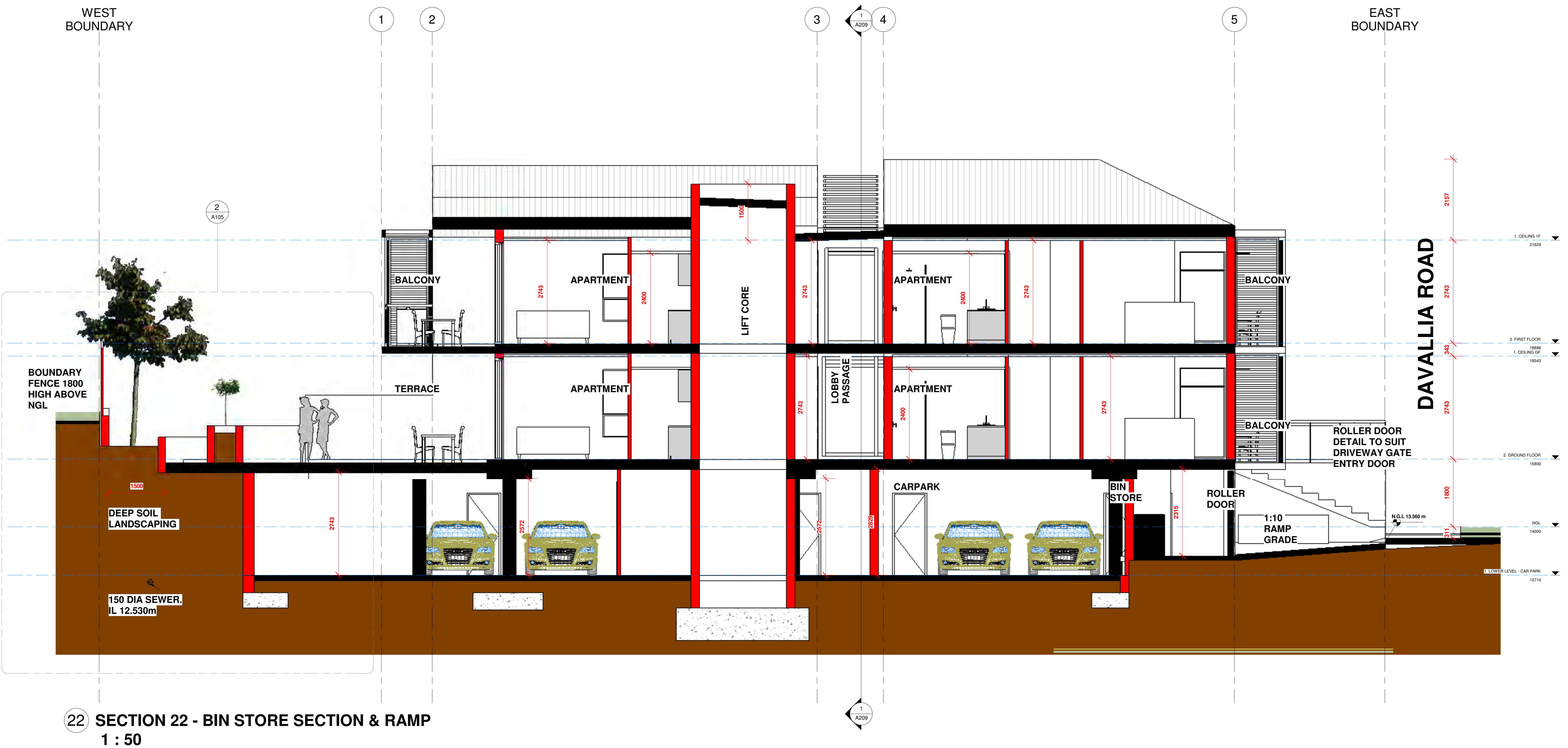
11 SECTION 11
1 : 50

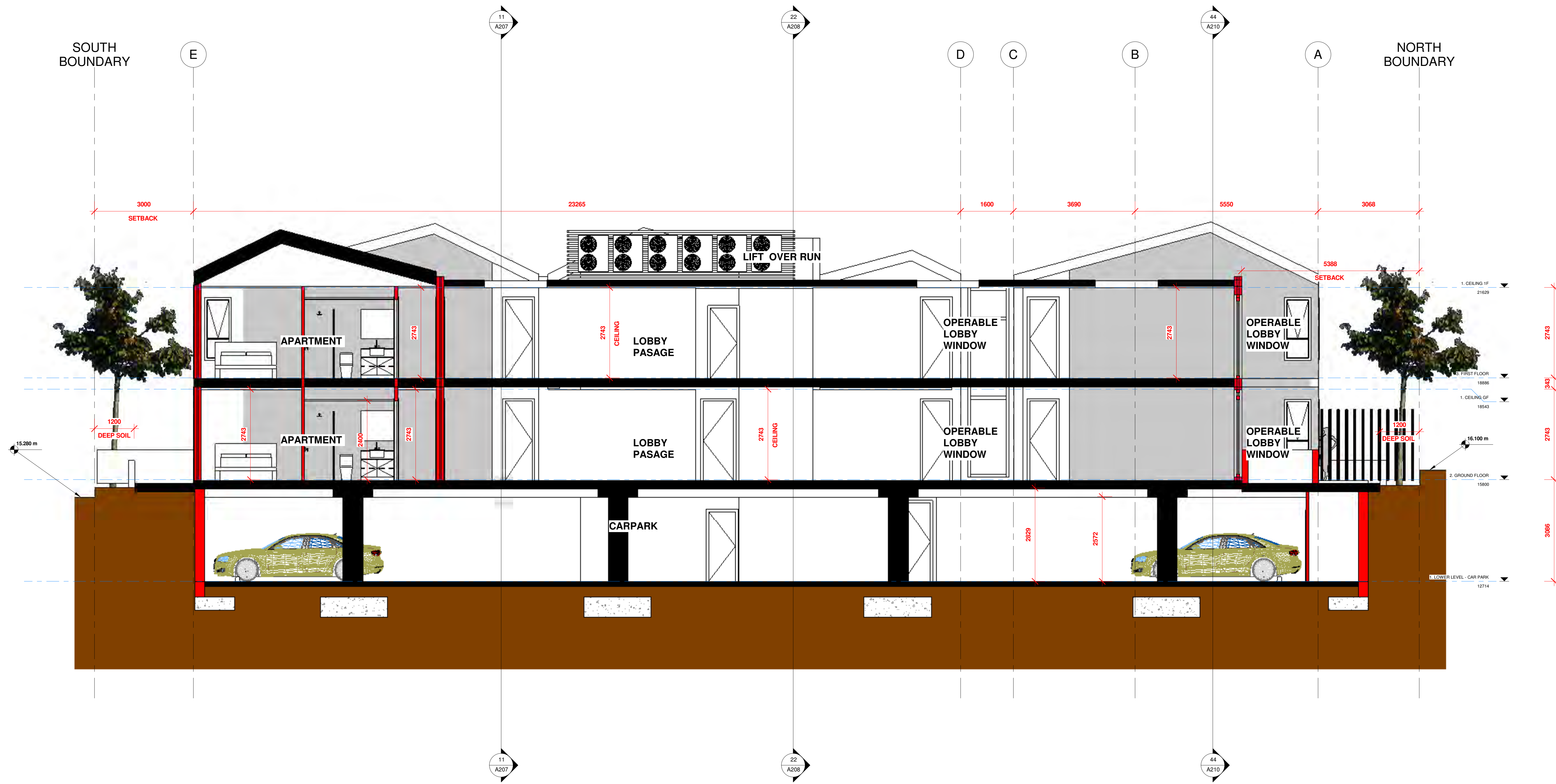
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1:100 @ A1
1:200 @ A3

11 & 9 DAVALLIA ROAD_DUNCRAIG
DEVELOPMENT APPLICATION -DA009
A207

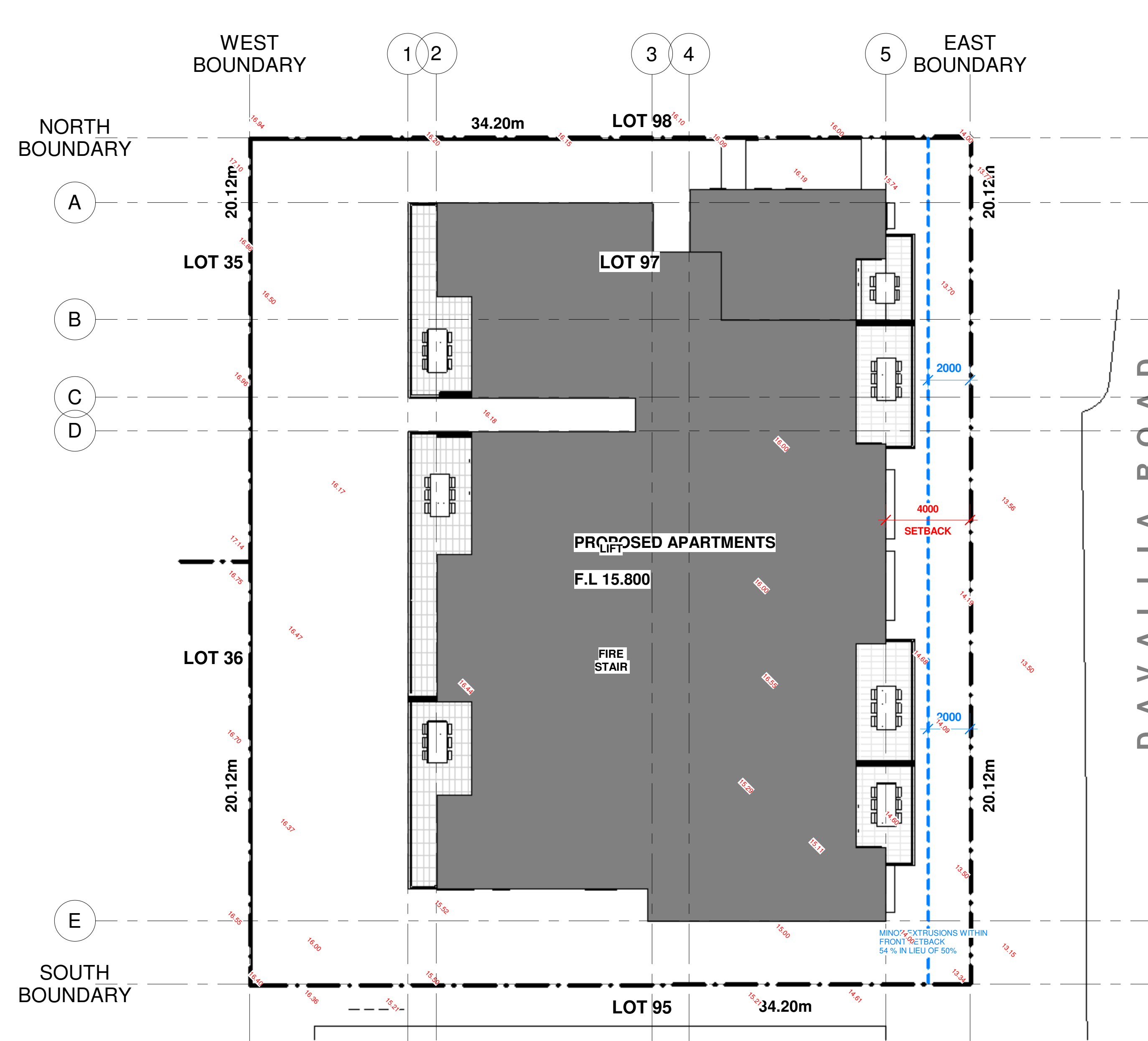
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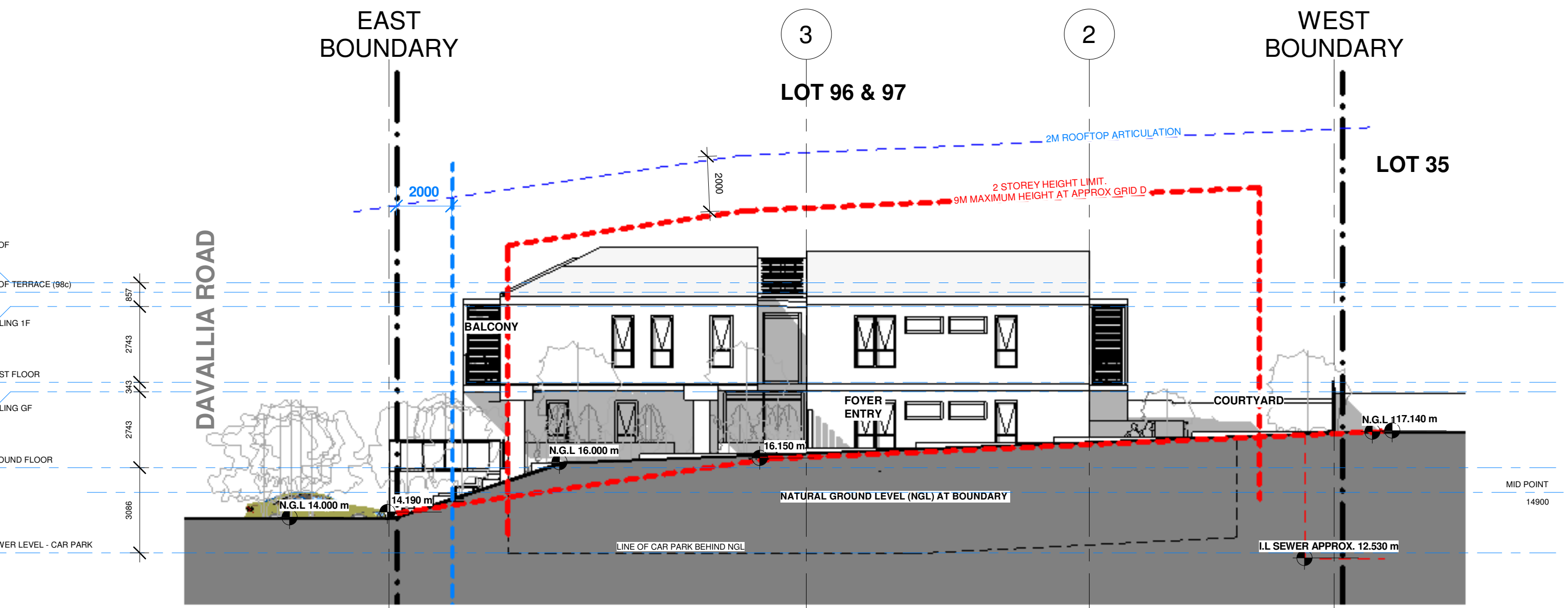




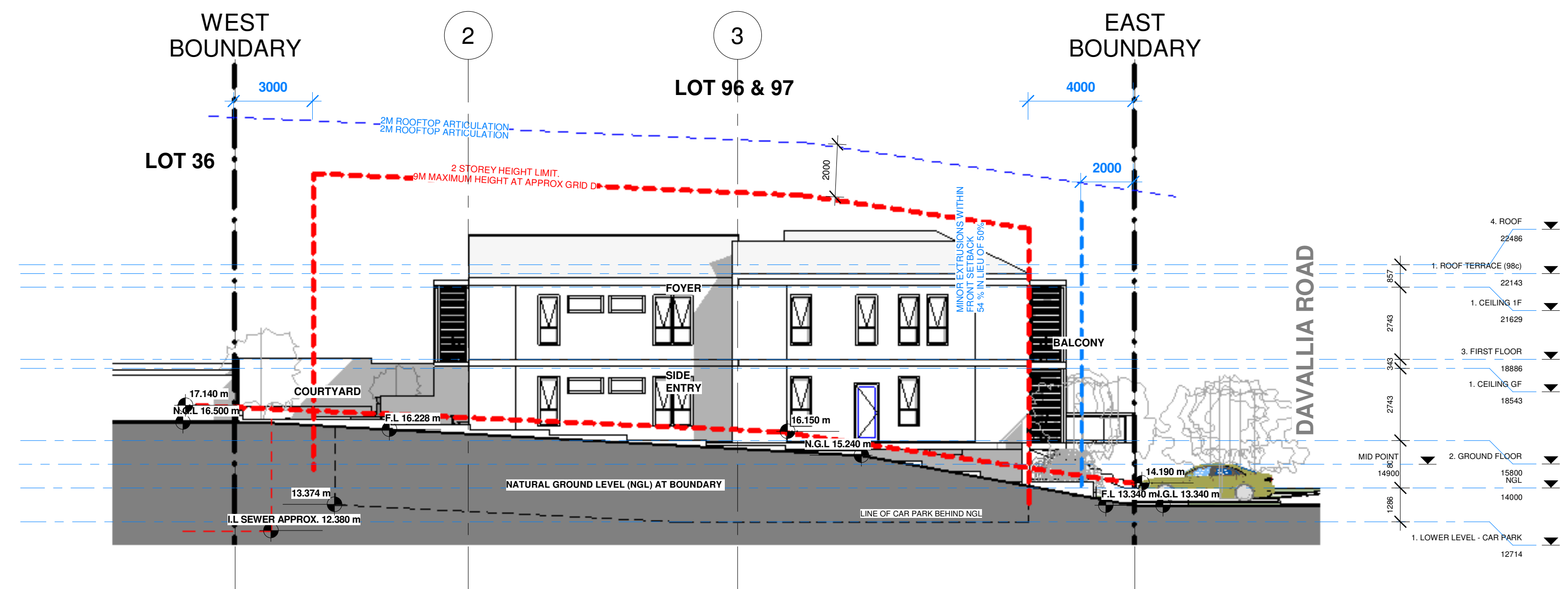
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BUILDING ENVELOPES - FIRST FLOOR PLAN



BUILDING ENVELOPES - NORTH ELEVATION



BUILDING ENVELOPES - SOUTH ELEVATION

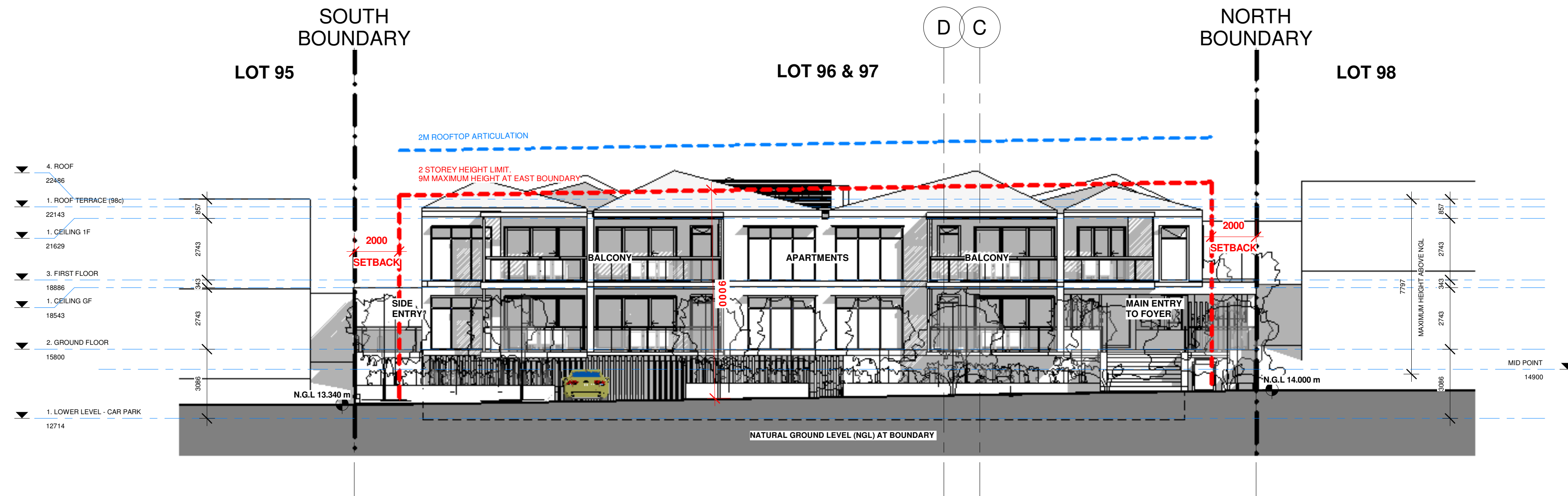
BUILDING ENVELOPE DIAGRAMS

NOT TO SCALE

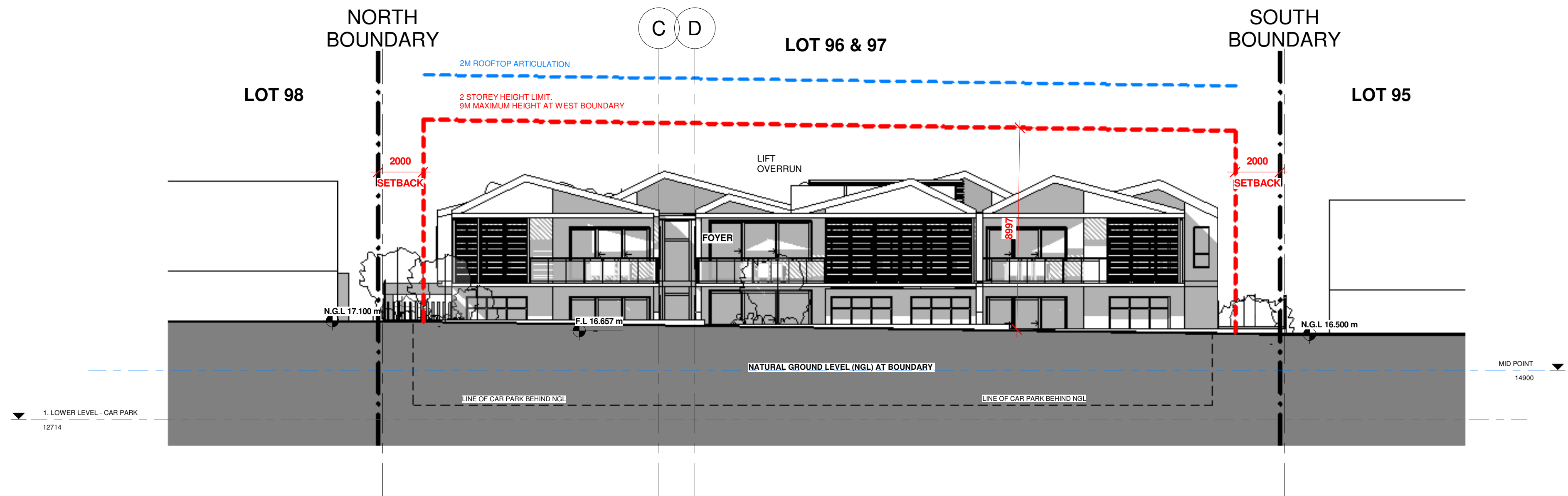
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11 & 9 DAVALLIA ROAD_DUNCRAIG
DEVELOPMENT APPLICATION -DA009
A601

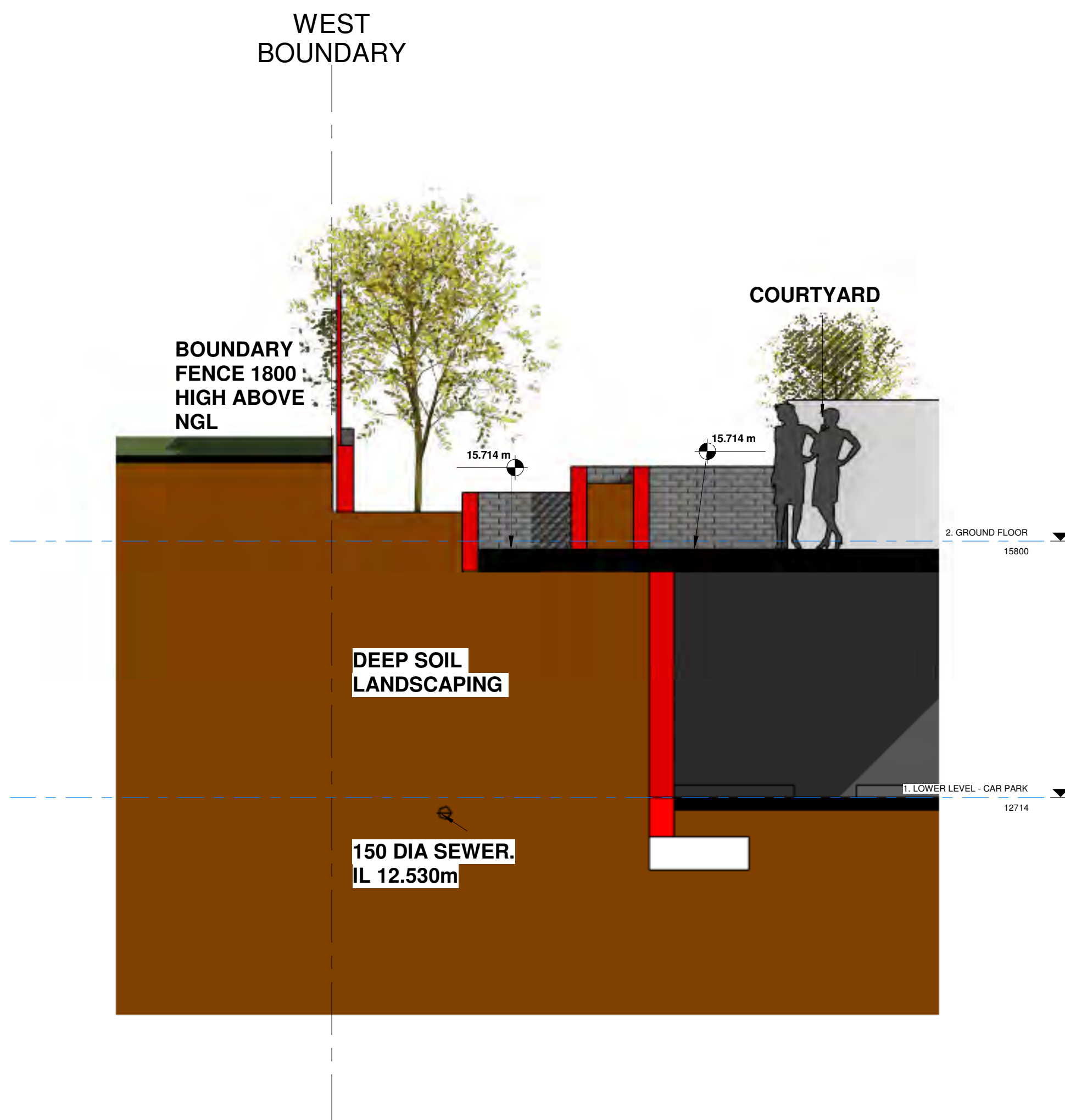
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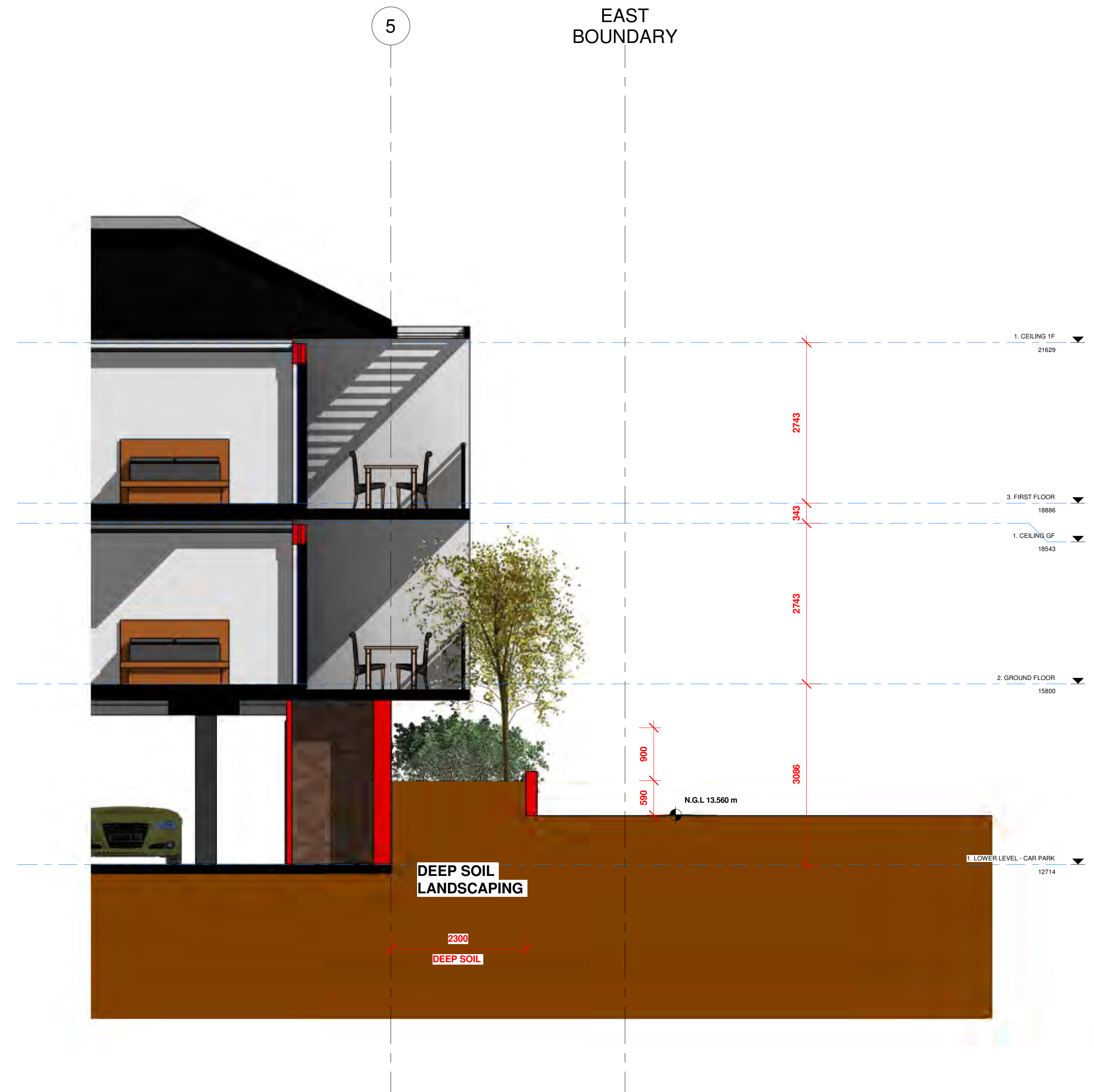
BUILDING ENVELOPES - EAST ELEVATION



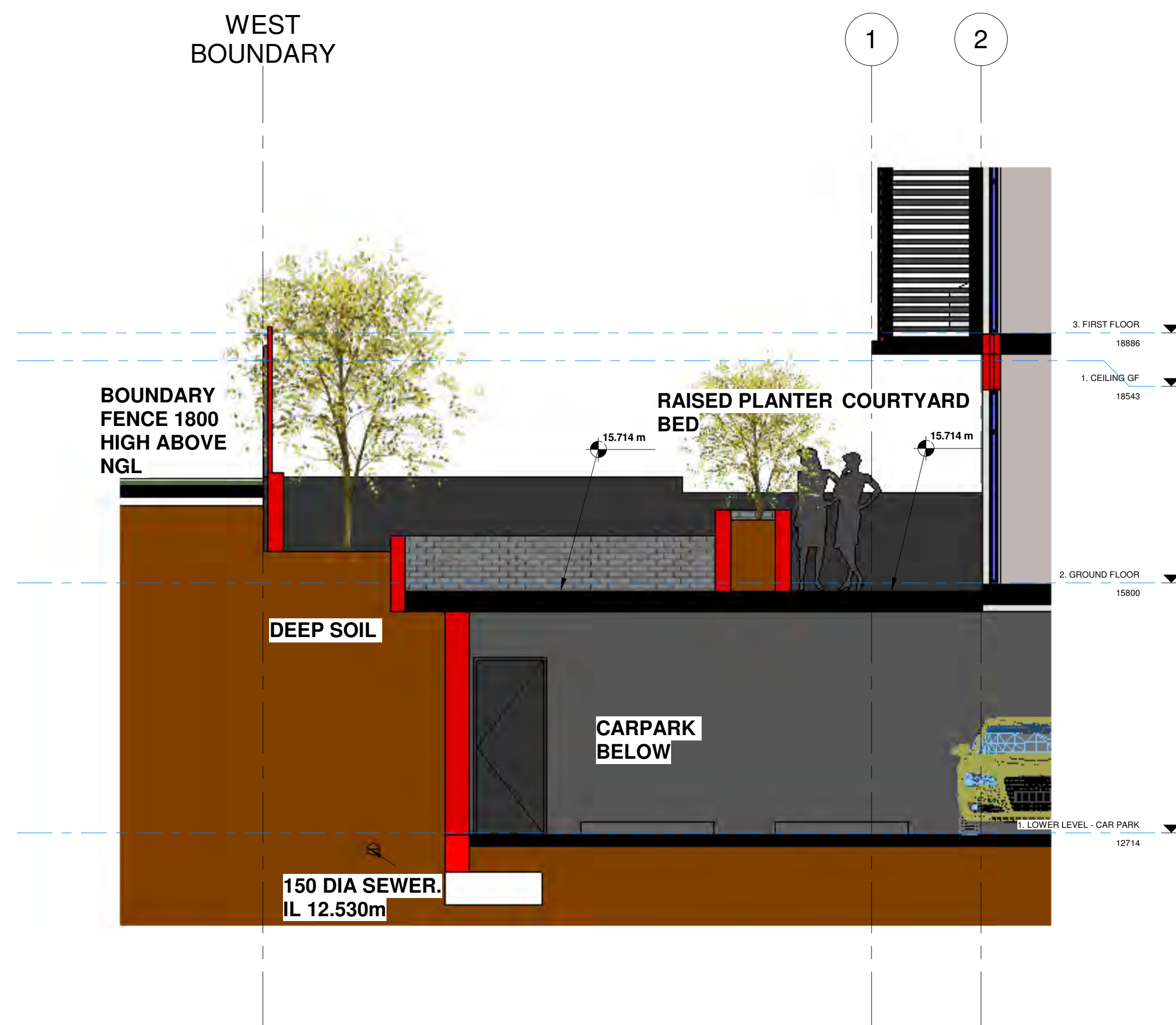
BUILDING ENVELOPES - WEST ELEVATION



2 SECTION 22 - DEEP SOIL
1 : 50

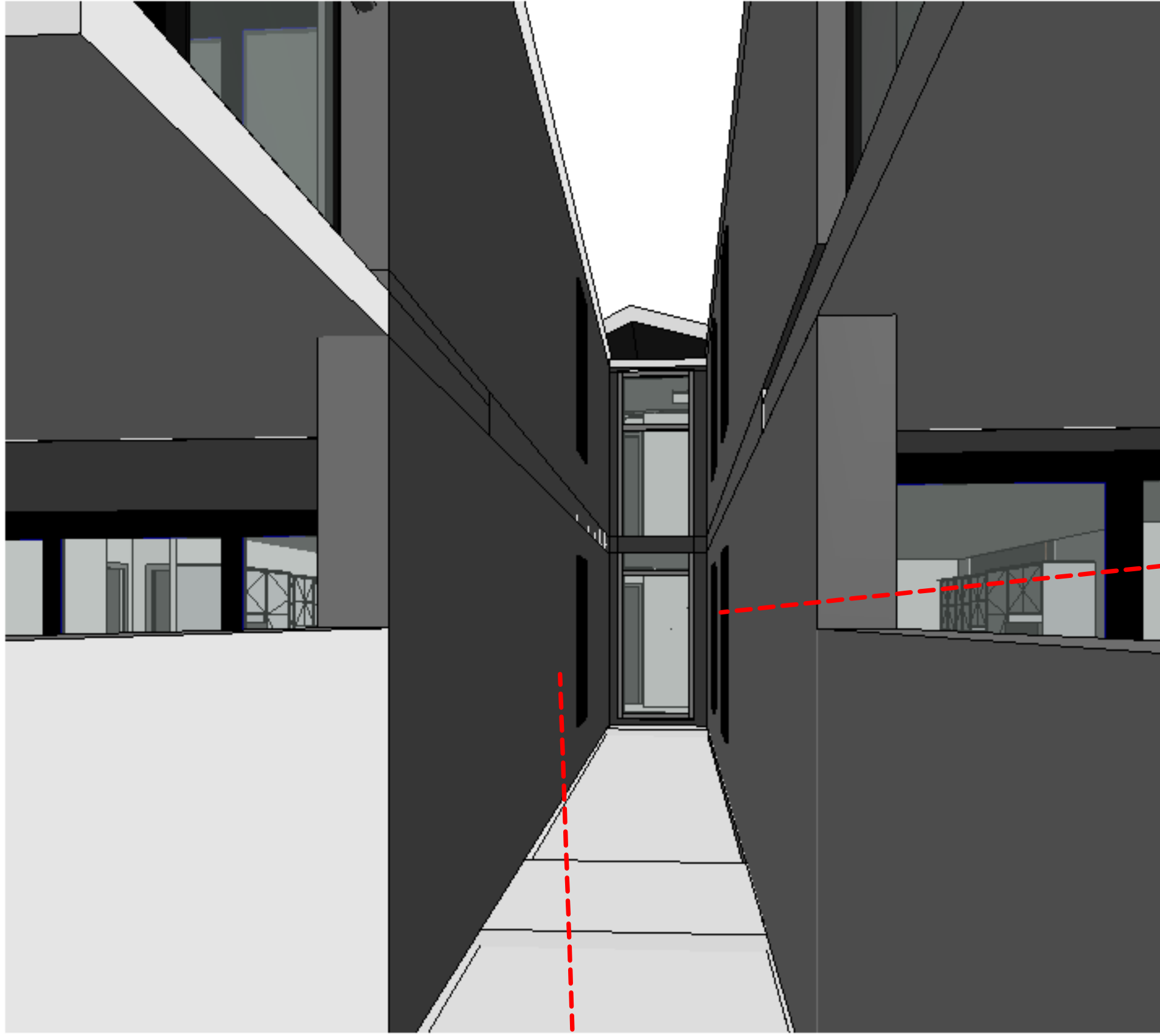


1 BASEMENT WALL STREET LANDSCAPING
1 : 50

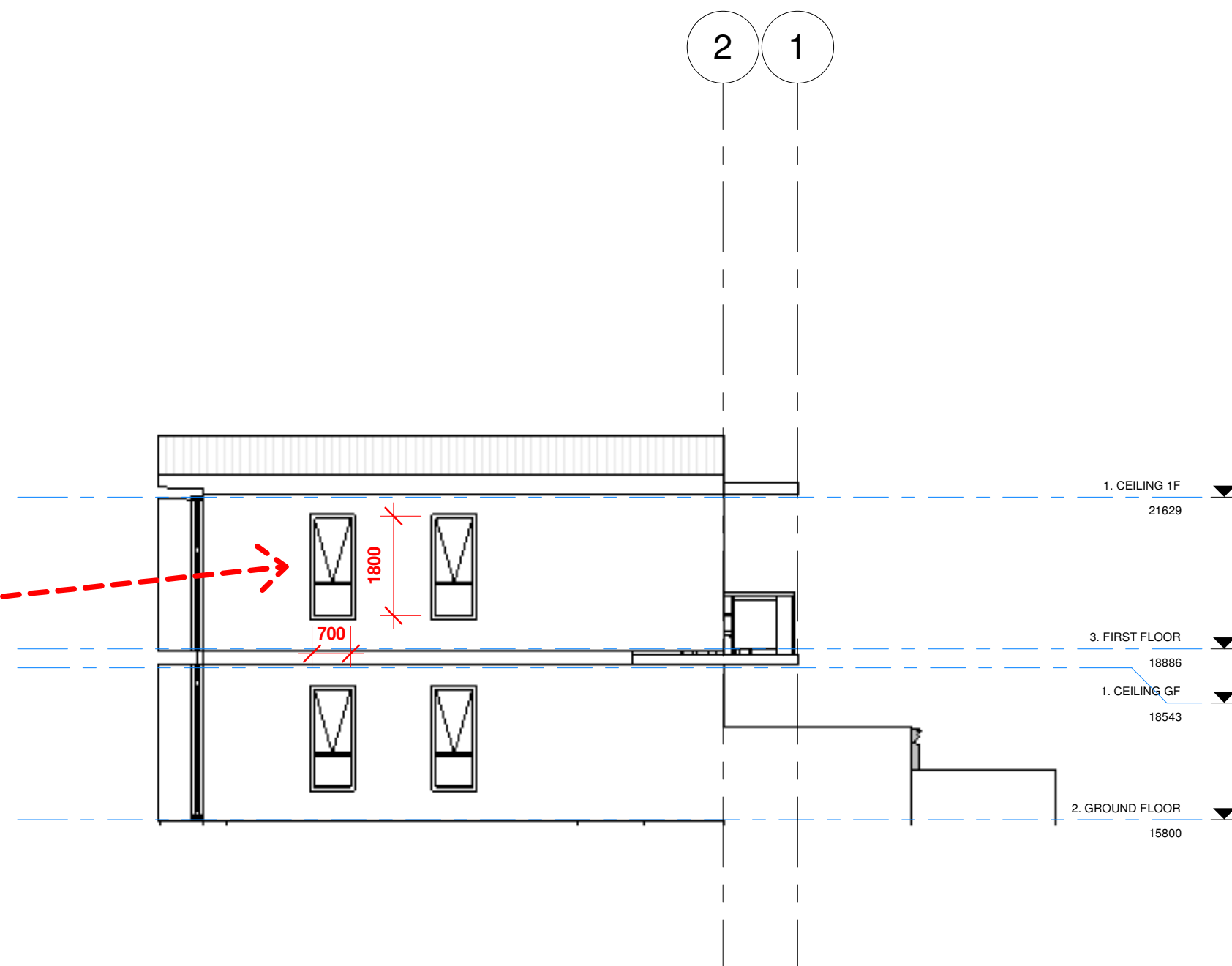


1 SECTION 44 - DEEP SOIL
1 : 50

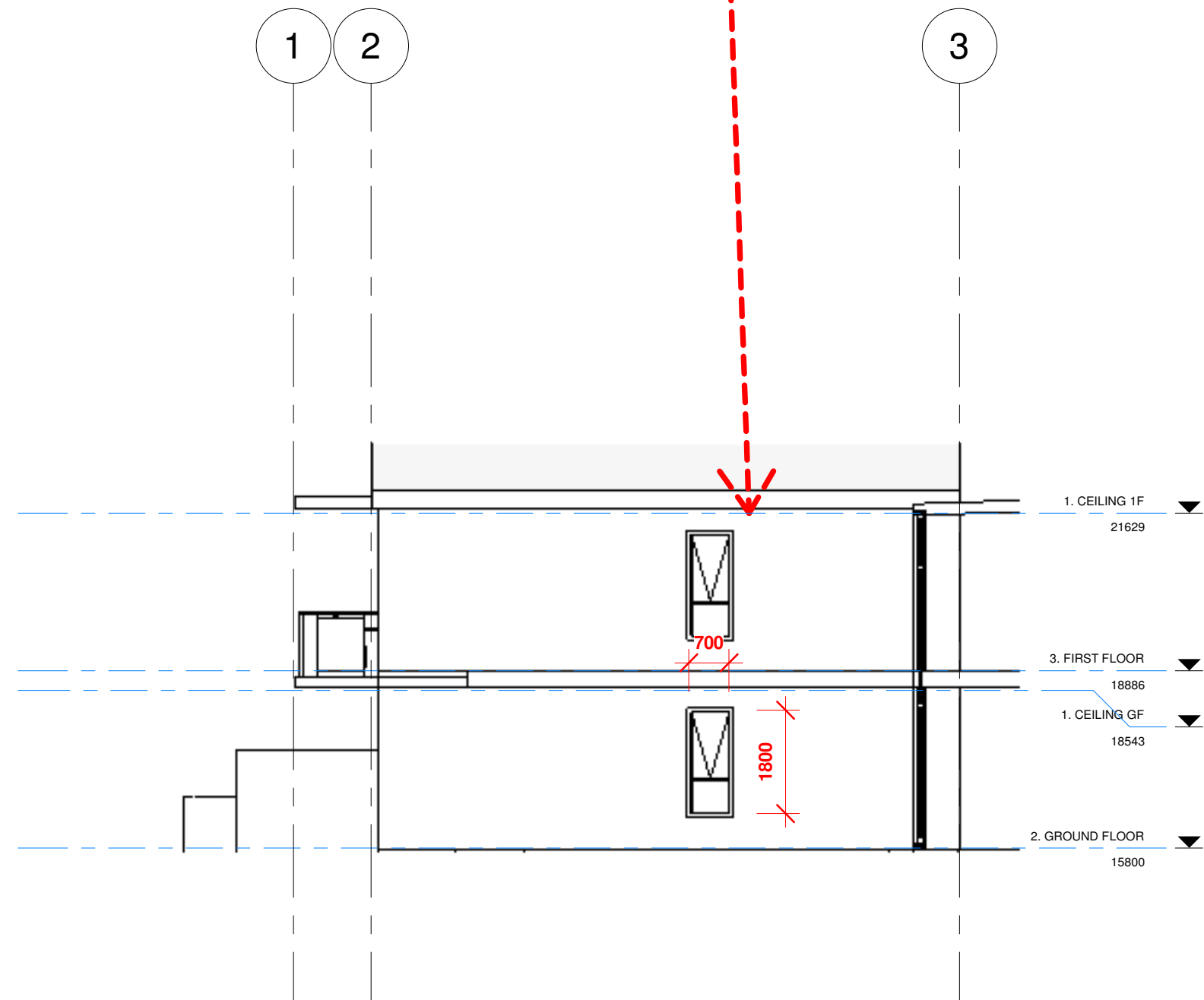
NOT TO SCALE



1 COMMON AREA PASSAGE



3 Elevation 1 - c
1 : 100



2 Elevation 1 - a
1 : 100

11 & 9 DAVALLIA ROAD, DUNCRAIG

PLANNING SET

| DWG No | TITLE |
|--------|--------------------------------------|
| A.000 | COVER |
| A.101 | FEATURE SURVEY |
| A.102 | SITE CONTEXT |
| A.103 | WMP |
| A.104 | SITE PLAN / LANDSCAPING PLAN |
| A.105 | LANDSCAPE SECTIONS |
| A.106 | LANDSCAPE SECTIONS |
| A.201 | LOWER LEVEL FLOOR (CAR PARK) |
| A.202 | GROUND FLOOR PLAN |
| A.202A | COMMON ACCESS PASSAGE - UNIT WINDOWS |
| A.203 | FIRST FLOOR PLAN |
| A.204 | ROOF PLAN |
| A.204A | LIVABLE UNITS |
| A.205 | SHADOW PLAN |
| A.206 | SHADOW PLAN |
| A.207 | SECTION |
| A.208 | SECTION |
| A.209 | SECTION |
| A.210 | SECTION |
| A.301 | ELEVATION |
| A.301A | ELEVATION |
| A.302 | ELEVATION |
| A.303 | ELEVATION |
| A.304 | ELEVATION |
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|------------------|----------------------------------|
| TOTAL SQM = | 1080 SQM |
| SITE = | 1376 SQM |
| PLOT RATIO = | 0.78 SQM |
| TOTAL APARTMENTS | x 13 |
| TOTAL BAYS | x 23 RESIDENTIAL x 04 VISITOR |



1 RESIDENTAIL ENTRY



DAVALLIA RD PERSPECTIVE - MAIN ENTRY

EXTERNAL FINISHES:

- 1 BASE COLOUR - WHITE RENDER
- 2 RENDERED/TEXTURED - GREY
- 3 ALUMINIUM GLASS BALUSTRADE
- 4 FACE BRICK - LIGHT GREY
- 5 FACE BRICK - RED
- 6 PLANTER BEDS
- 7 SLATTED SCREENING
- 8 FIXED SLATTED BALCONY CANOPY
- 9 AL SECTION BASEMENT SCREENING / DRIVEWAY GATE / BIN STORE GATE



DAVALLIA RD PERSPECTIVE - SIDE ENTRY

EXTERNAL FINISHES:

- 1 BASE COLOUR - WHITE RENDER
- 2 RENDERED/TEXTURED - GREY
- 3 ALUMINIUM GLASS BALUSTRADE
- 4 FACE BRICK - LIGHT GREY
- 5 FACE BRICK - RED
- 6 PLANTER BEDS
- 7 SLATTED SCREENING
- 8 FIXED SLATTED BALCONY CANOPY
- 9 AL SECTION BASEMENT SCREENING / DRIVEWAY GATE / BIN STORE GATE



DAVALLIA RD PERSPECTIVE



DAVALLIA RD PERSPECTIVE - MAIN ENTRY



SITE CONTEXT

NOT TO SCALE

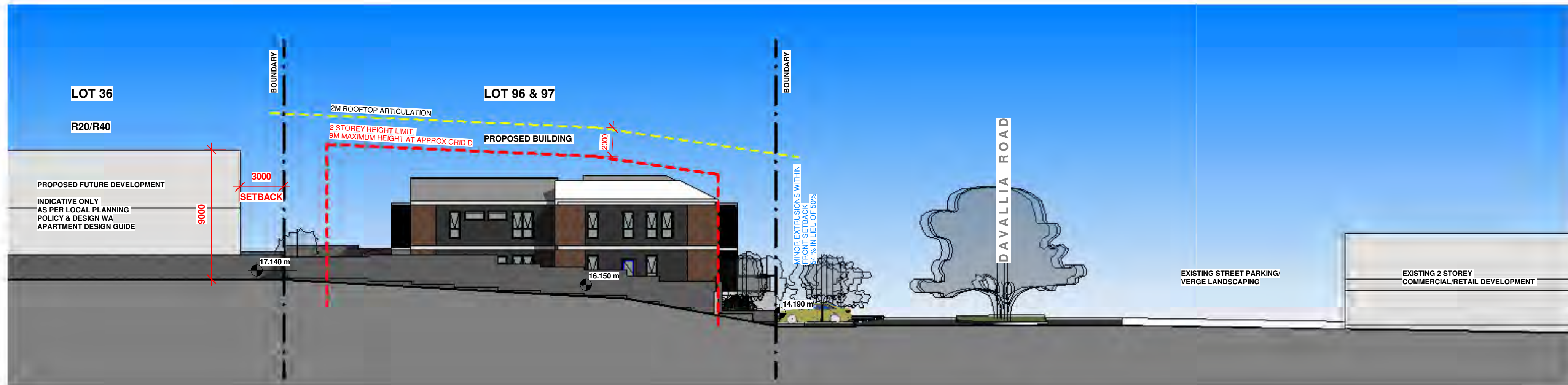
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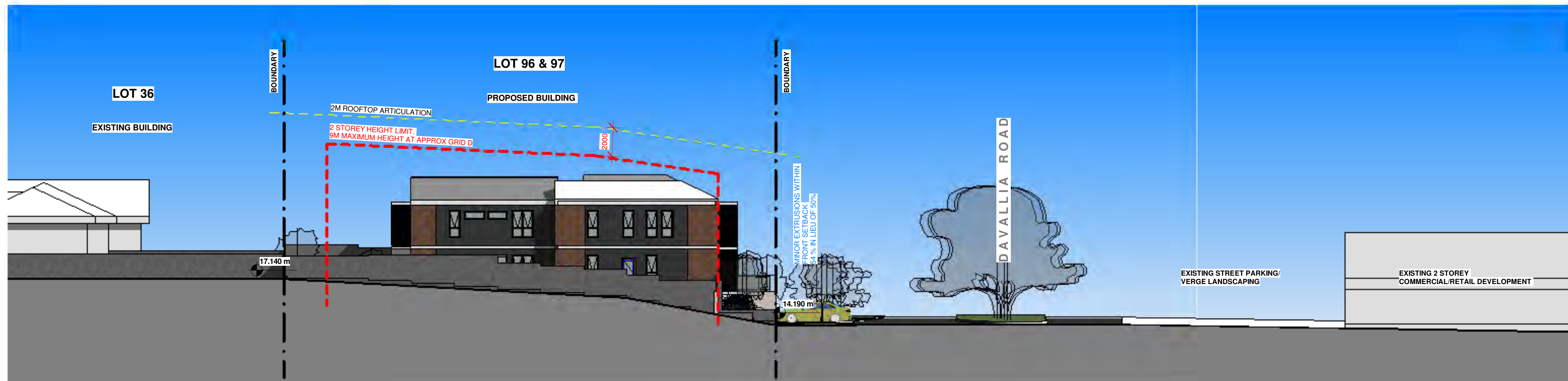
11 & 9 DAVALLIA ROAD_DUNCRAIG
DEVELOPMENT APPLICATION -DA009

A102

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1 CONTEXT (FUTURE DEVELOPMENT ADDED)
1 : 200



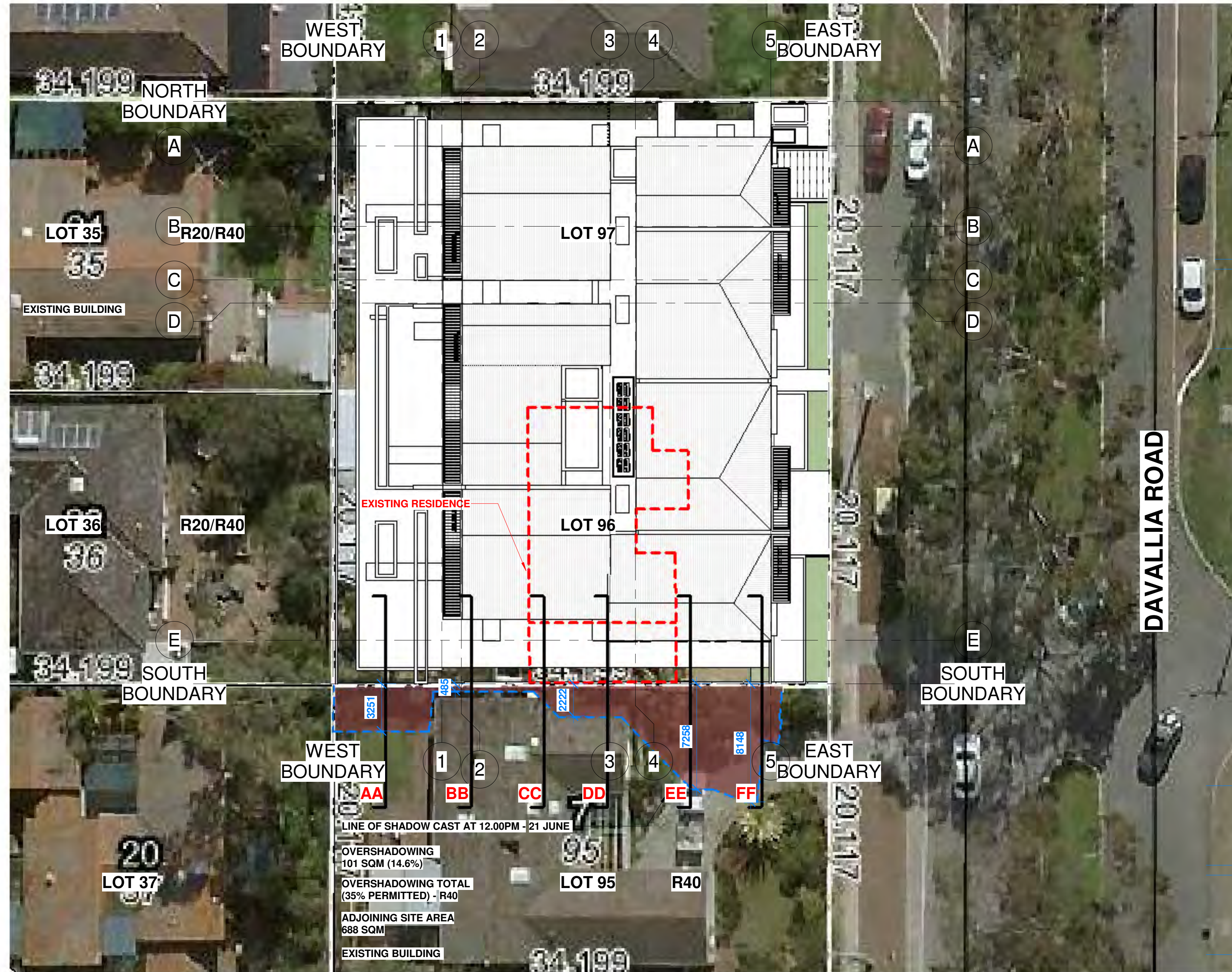
2 CONTEXT (EXISTING)
1 : 200



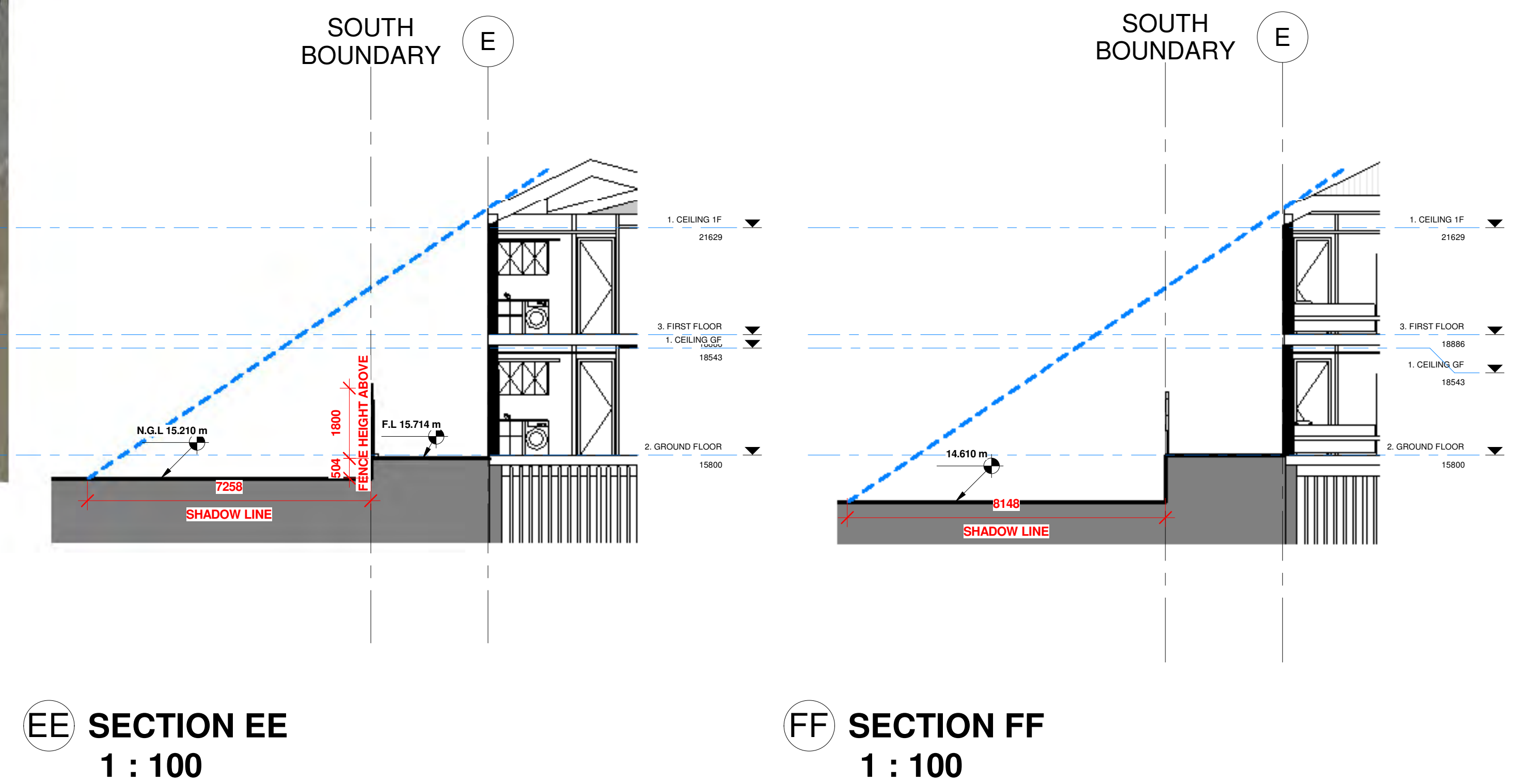
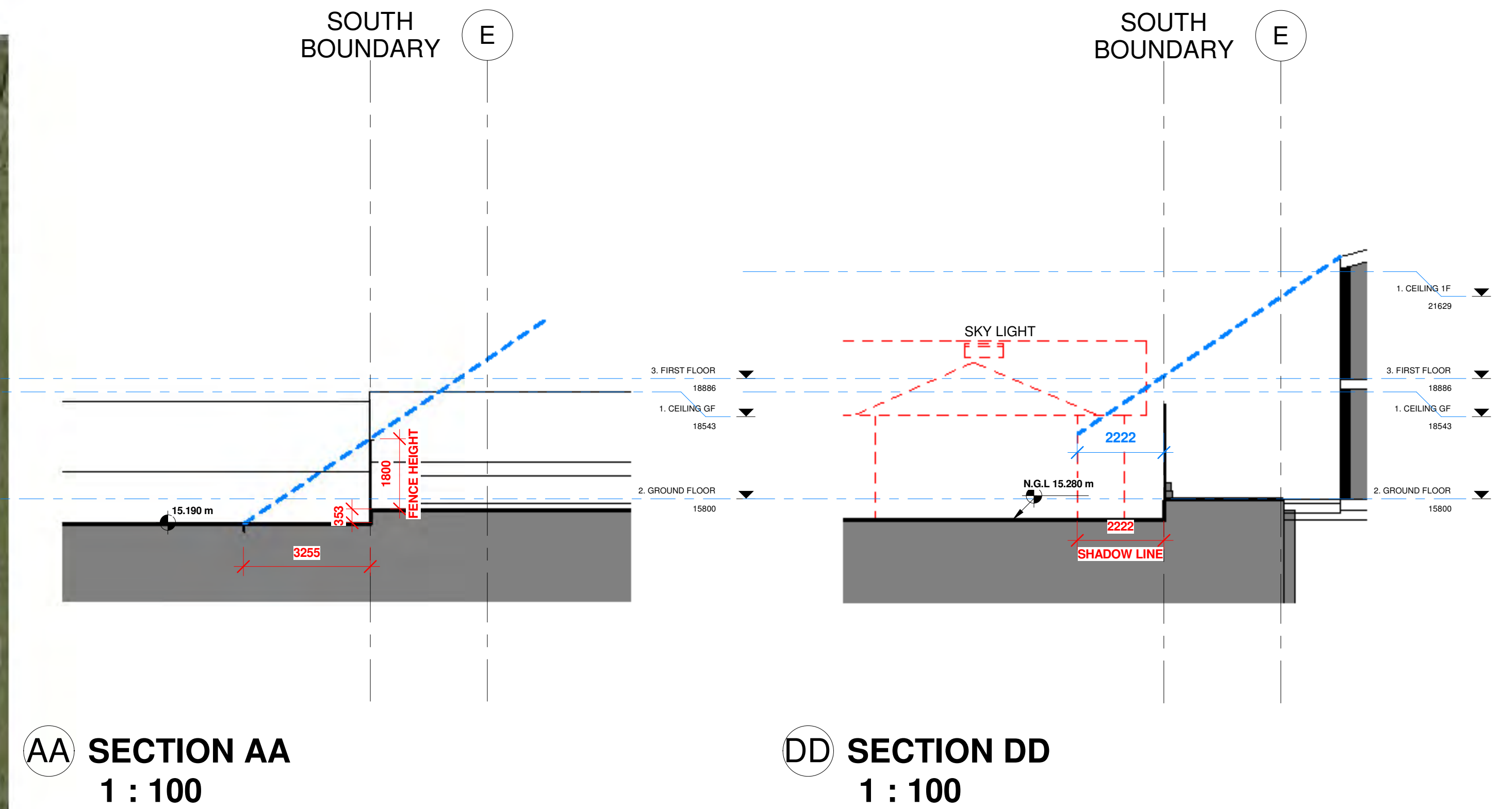
1 STREET ELEVATION - DAVALLIA ROAD ((FUTURE DEVELOPMENT ADDED)
1 : 200

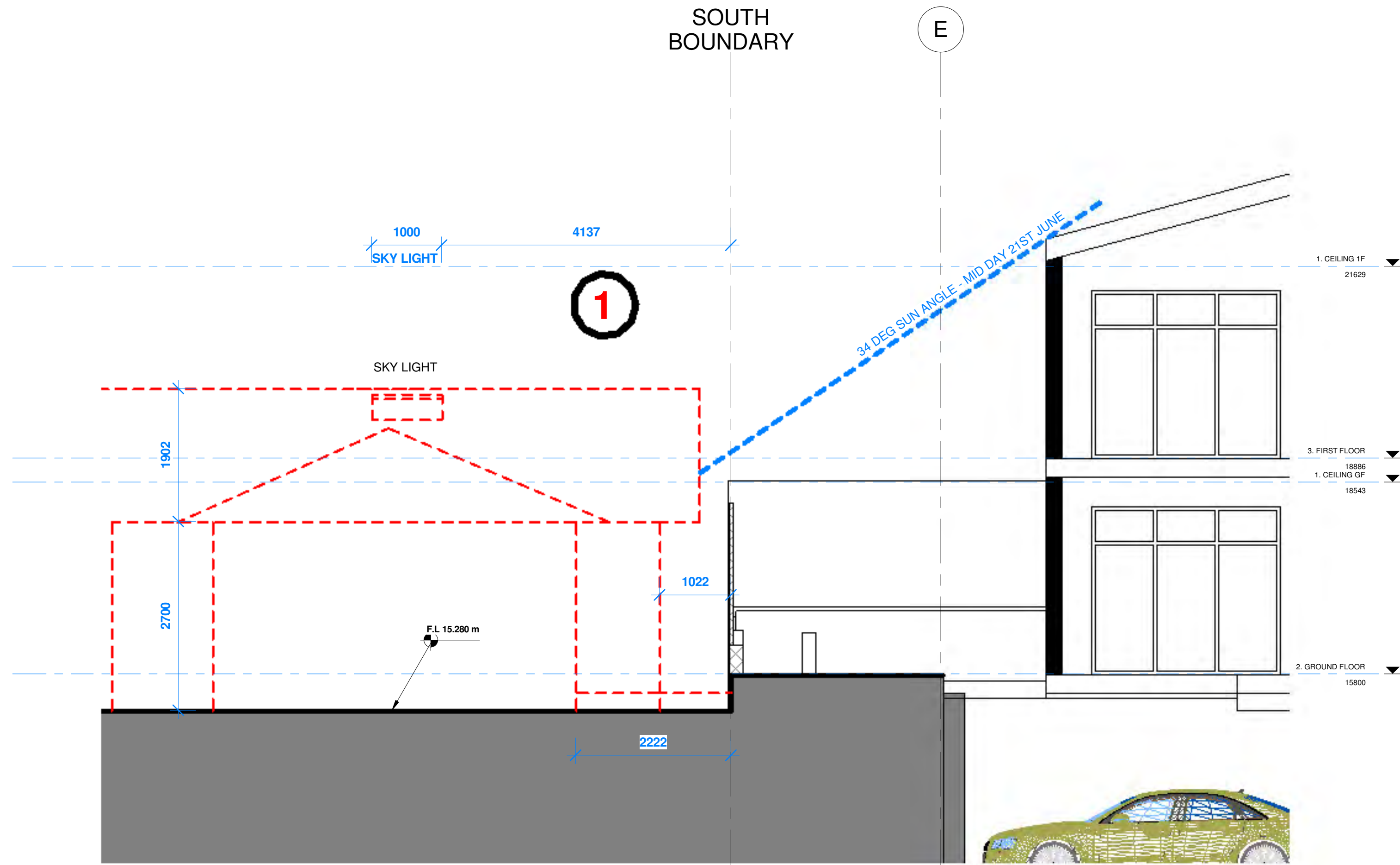


2 STREET ELEVATION - DAVALLIA ROAD (EXISTING)
1 : 200

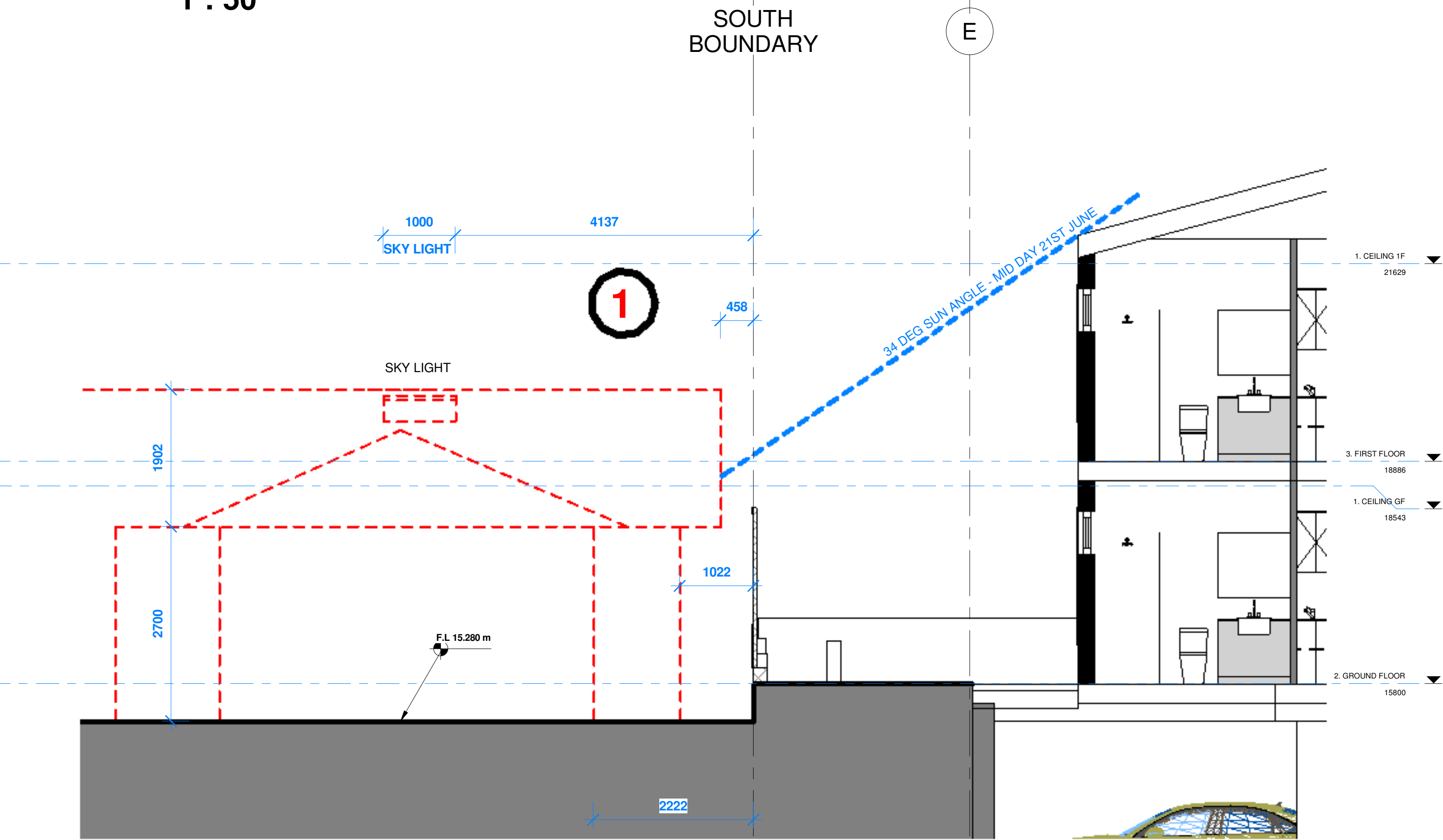


1 **SHADOW DIAGRAM 12 PM**
1 : 200

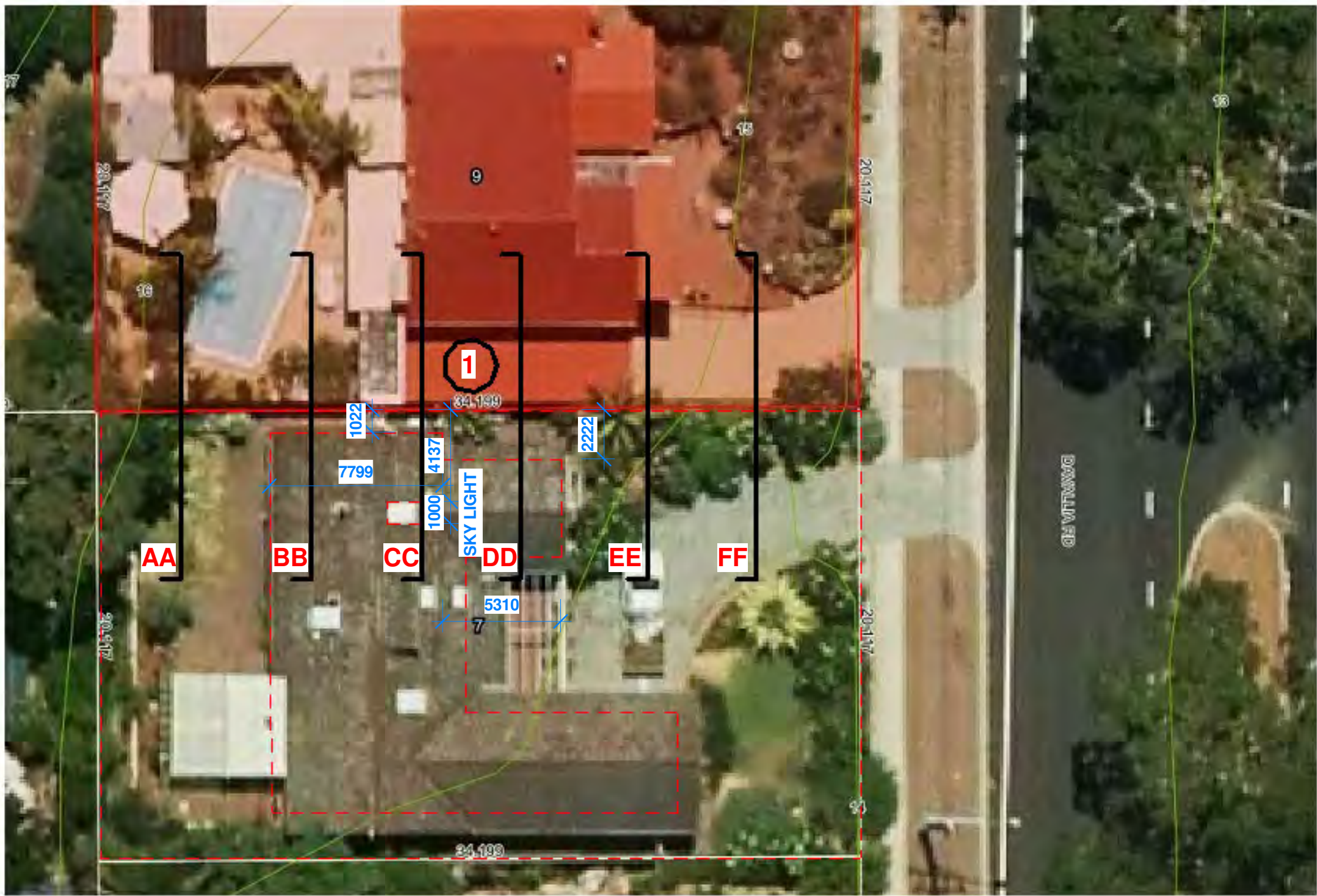




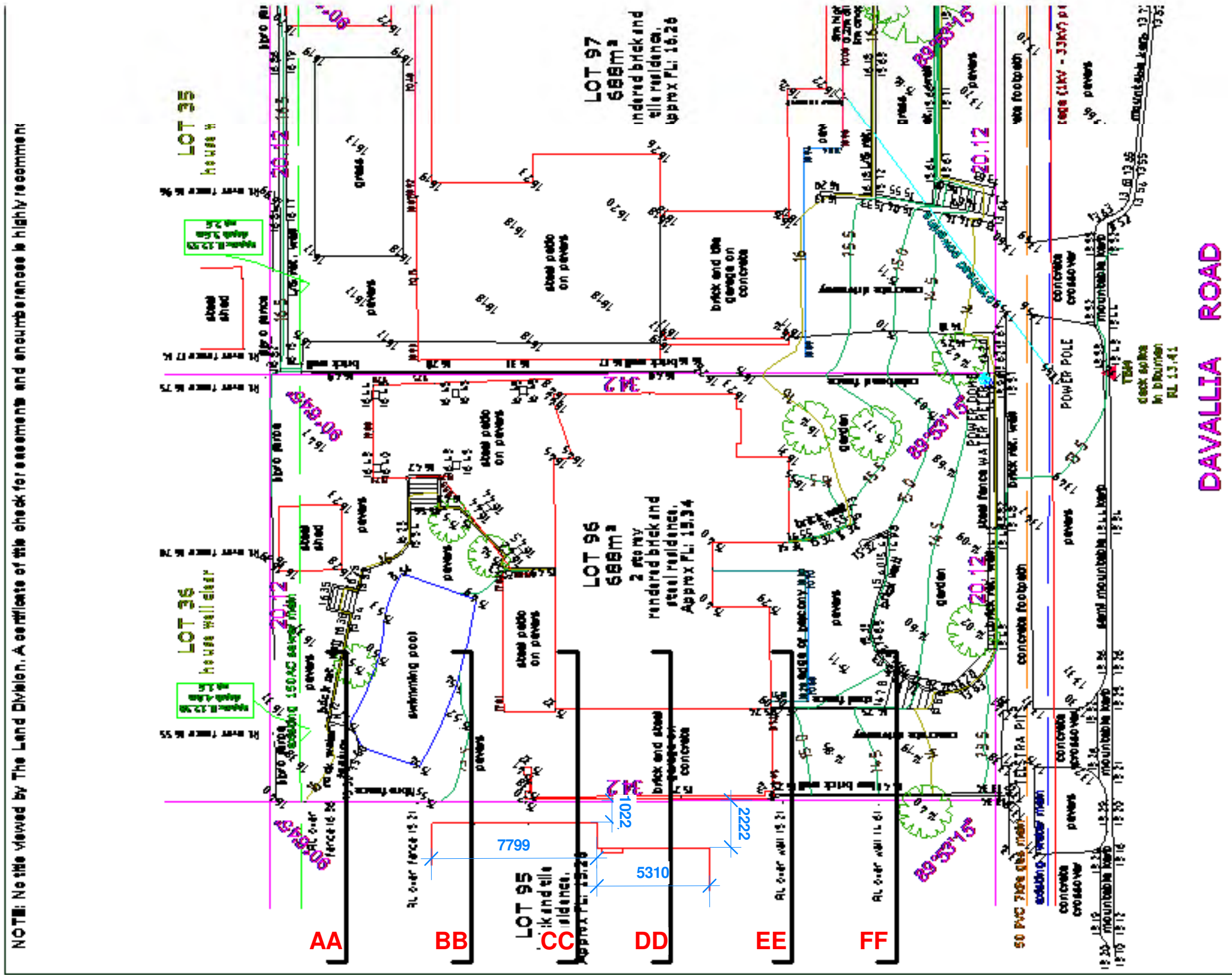
1 SECTION BB
1 : 50



3 SECTION CC
1 : 50



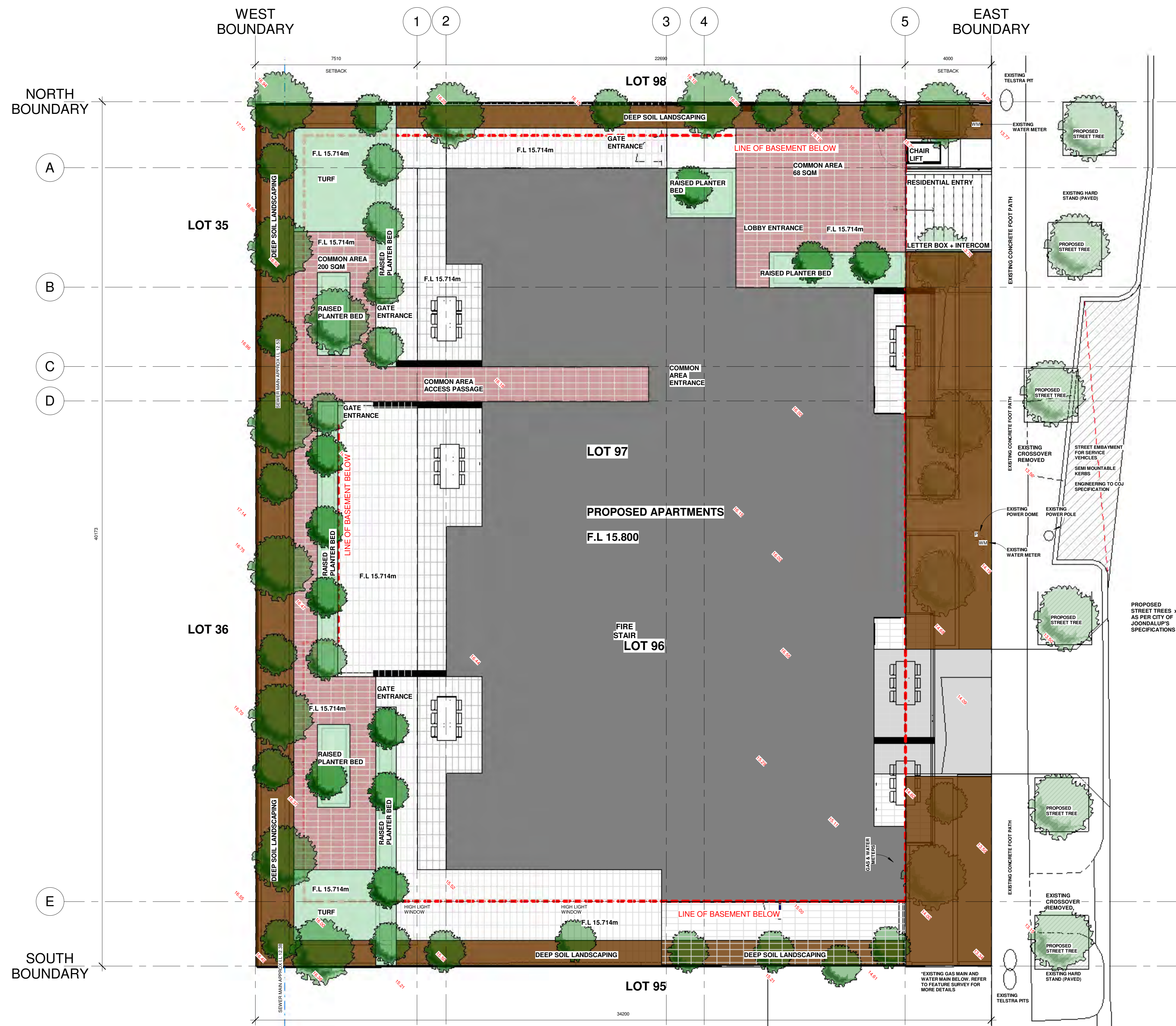
2 SHADOWING SECTION DIAGRAM
1 : 200



4 FEATURE SURVEY -
1 : 200

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11 & 9 DAVALLIA ROAD_DUNCRAIG
DEVELOPMENT APPLICATION -DA009
A206



- DEEP SOIL ZONE = 250 SQM
- RAISED PLANTER BED = 68 SQM
- COMMON AREA = PROVIDED 250 SQM
REQUIRED 78 SQM
- HARD LANDSCAPING = PROVIDED 120 SQM
REQUIRED 26 SQM

| LANDSCAPING/DEEP SOIL AREAS | |
|--|-------------------------------------|
| SITE AREA (COMBINED) | 1376 sqm |
| DEEP SOIL AREAS REQUIRED SOFT LANDSCAPING: (10% OF SITE AREA REQUIRED) | 137.6 sqm (10%) |
| DEEP SOIL AREA PROVIDED: | 250 sqm (18%) PROVIDED |
| PLANTER BEDS : | 68 sqm |
| | TOTAL LANDSCAPING = 23% (318SQM) |

1 SITE PLAN / LANDSCAPING
1 : 100

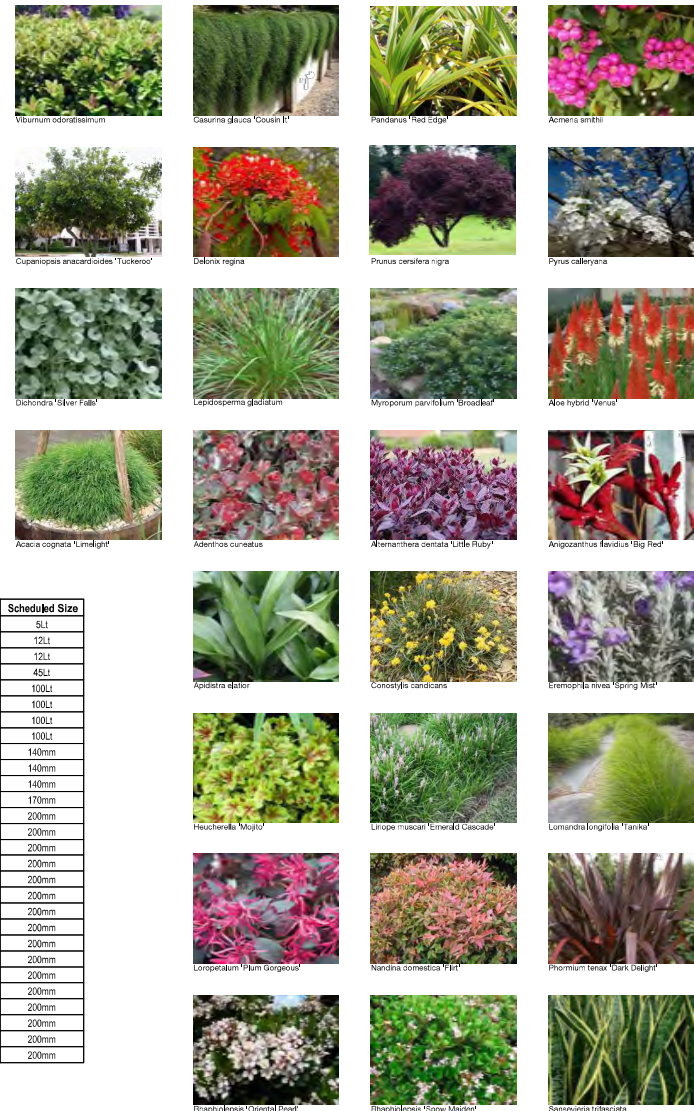
1:100 @ A1
1:200 @ A3



1 Landscape Plan - Ground & First Floor
Scale: 1:100

DAVALLIA ROAD

| ID | Latin Name | Quantity | Scheduled Size |
|-----------|---|----------|----------------|
| VIB OD | Viburnum odoratissimum 'Emerald Lustre' | 36 | 5L |
| CAS GL | Casuarina glauca 'Cousin It' | 35 | 12L |
| PAN UT-1 | Pandanus Red Edge | 5 | 12L |
| ACM SM | Acmena smithii | 25 | 45L |
| CUP AN | Cupanopsis anacardioides 'Tucker' | 1 | 100L |
| DEL RE | Delonix regia | 1 | 100L |
| PRU CE | Prunus cerasifera 'Nigra' | 6 | 100L |
| PYR CA | Pyrus calleryana | 4 | 100L |
| DIC SF | Dichondra 'Silver Falls' | 18 | 140mm |
| LEP GL | Lepidosperma gladiatum | 24 | 140mm |
| MYR PA-BL | Myoporum parvifolium 'Broadleaf' | 26 | 140mm |
| ALO VE | Aloe Hybrid 'Venus' | 28 | 170mm |
| ACA CO | Acacia cognata 'LimeLight' | 22 | 200mm |
| ADE CU | Adenanthos cuneatus | 23 | 200mm |
| ALT DE | Alternanthera dentata 'Little Ruby' | 40 | 200mm |
| ANI BR | Anigozanthus 'Big Red' | 31 | 200mm |
| ASP EL | Aspidistra elatior | 6 | 200mm |
| CON CC | Conostylis candidans | 51 | 200mm |
| ERE SM | Eremophila nivea 'Spring Mist' | 3 | 200mm |
| HEU MOJ | Heuchera 'Mojito' | 8 | 200mm |
| LIR EC | Liriodendron muscari 'Emerald Cascade' | 26 | 200mm |
| LOM TA | Lomandra longifolia 'Frankie' | 127 | 200mm |
| LOR PG | Loropetalum Plum Gorgoneus | 2 | 200mm |
| NAN FL | Nandina domestica 'Fert' | 21 | 200mm |
| PHO DD | Phormium tenax 'Dark Delight' | 8 | 200mm |
| RHA SM | Raghiolipsea 'Oriental Pearl' | 11 | 200mm |
| RHA SM | Raghiolipsea indica 'Snow Maiden' | 47 | 200mm |
| SAN TR | Sansevieria trifasciata | 18 | 200mm |



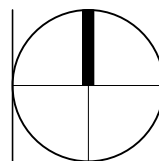
4 Planting Reference

Note: Contractors shall verify all dimensions onsite and refer discrepancies to this office prior to commencement of construction. If you have any queries please contact **Newforms Landscape Architecture** at Unit 4, 11 Milson Place O'Connor Western Australia 6163. Tel. +61 8 9337 6985 Fax. +61 8 9337 6680

Client Name: ROCORP Signature: _____

Project:
9 & 11 Davillia Road Duncraig

Revisions:
REV. B - DA Approval



L01

Scale: As Shown @A1

Title:
Landscape Plan

Job No: D117

Designed: MH

Date: 06/09/2019

Drawn: MH

newforms

Attachment 7 - Solar access and cross ventilation diagrams

DESIGN WA - APARTMENT DESIGN
VOLUME TWO OF STATE PLANNING POLICY NO. 7.3 RESIDENTIAL DESIGN CODES
GUIDANCE FOR MULTIPLE-DWELLING AND MIXED-USE DEVELOPMENTS

4.1 SOLAR AND DAYLIGHT ACCESS
(ILLUSTRATED ON PROPOSED DESIGN) - CLIMATE ZONE 5

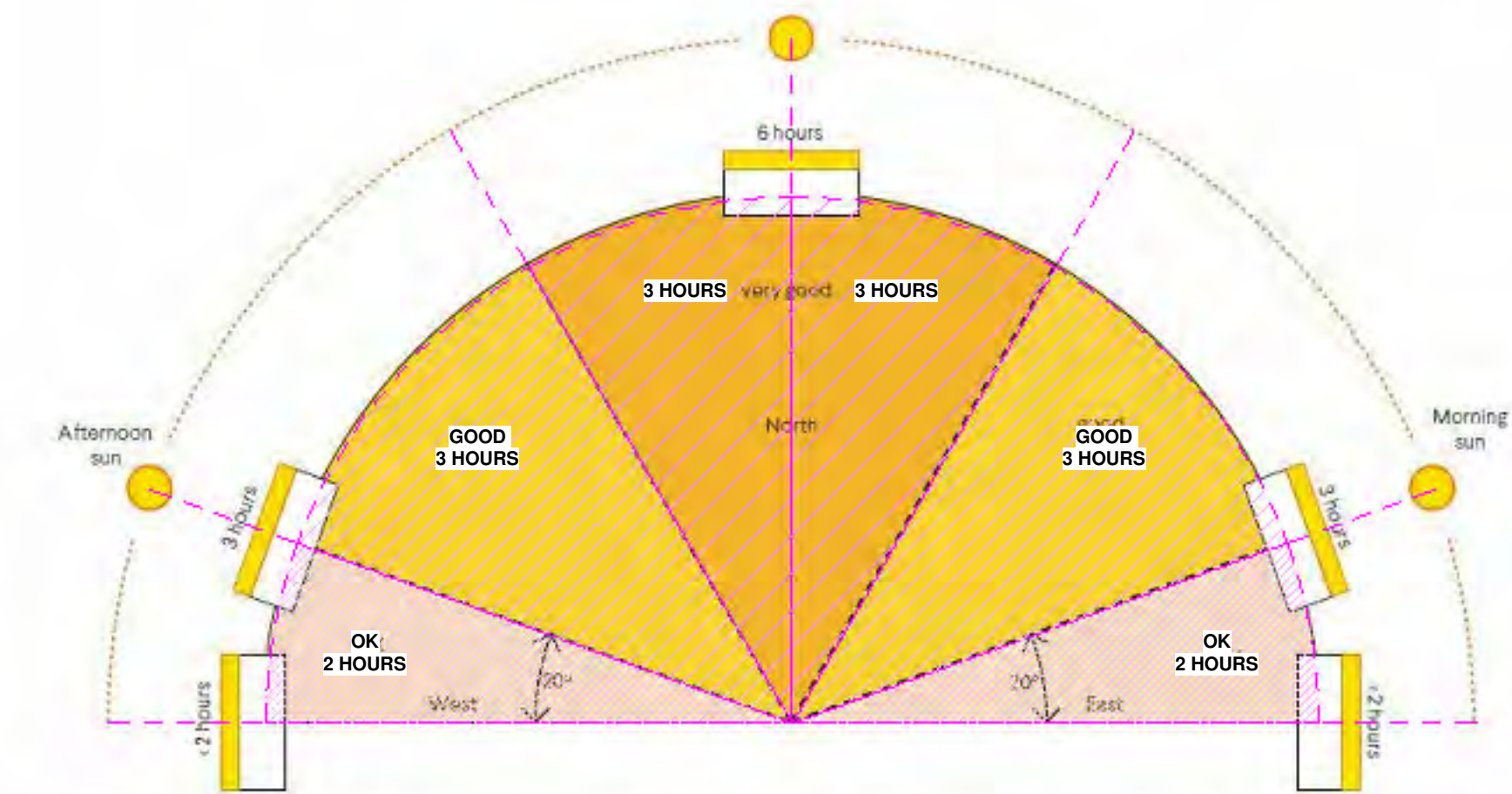
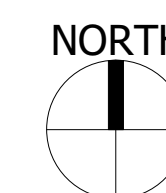
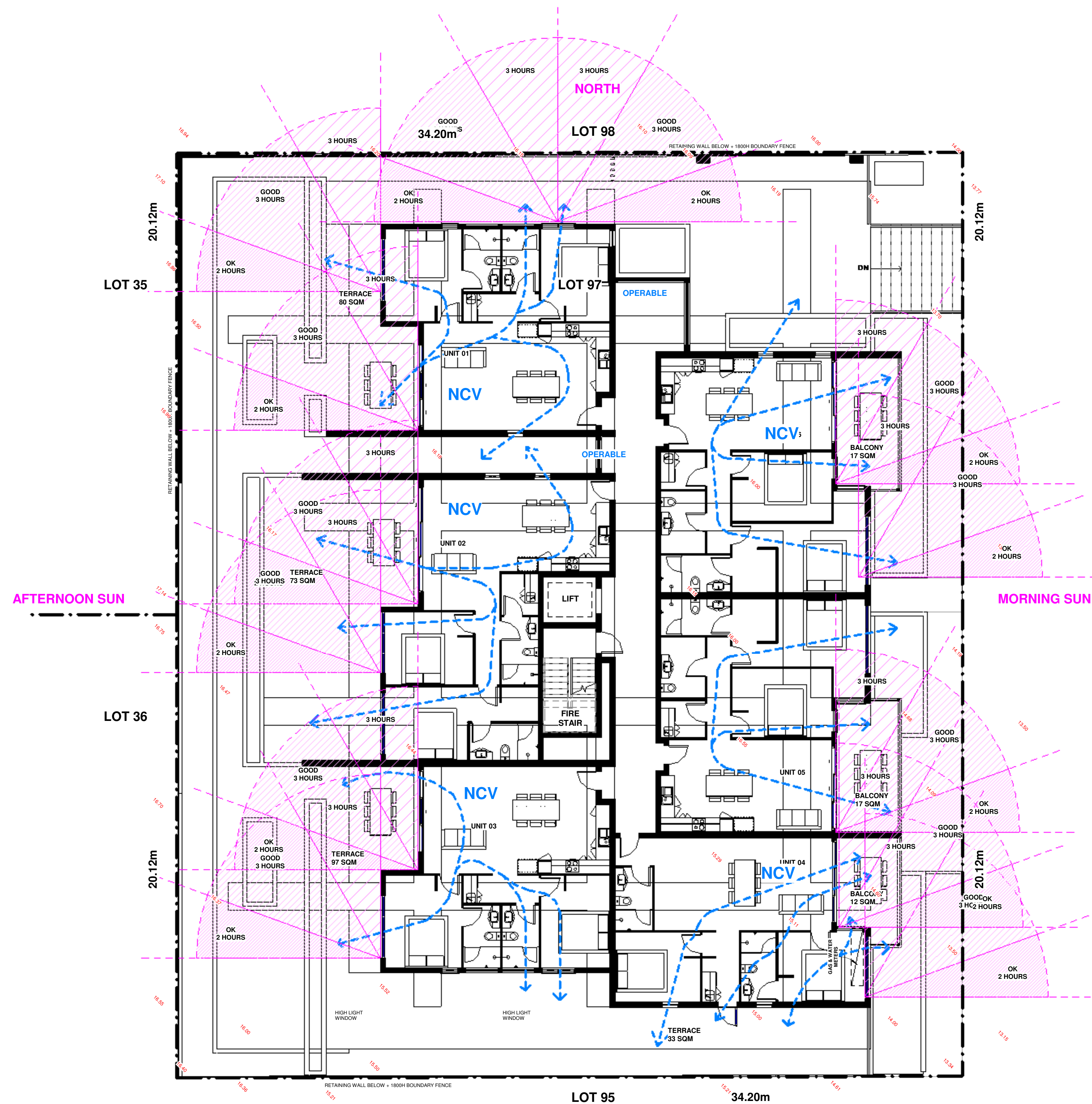


Figure 4.1a The hour of sunlight that can be expected in midwinter are directly related to the orientation of the facade. This diagram shows the optimal orientation for habitable rooms and balconies.

4.2 NATURAL VENTILATION/CROSS VENTILATION NCV
(ILLUSTRATED ON PROPOSED DESIGN) - IN BLUE DOTTED LINES

77% OF UNITS ACHIEVE NCV



1 SOLAR ACCESS & CROSS VENTILATION DIAGRAM - GROUND FLOOR
1 : 100

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11 & 9 DAVALLIA ROAD_DUNCRAIG
DEVELOPMENT APPLICATION -DA009
A401

1:100 @ A1
1:200 @ A3

4.1 SOLAR AND DAYLIGHT ACCESS
(ILLUSTRATED ON PROPOSED DESIGN) - CLIMATE ZONE 5

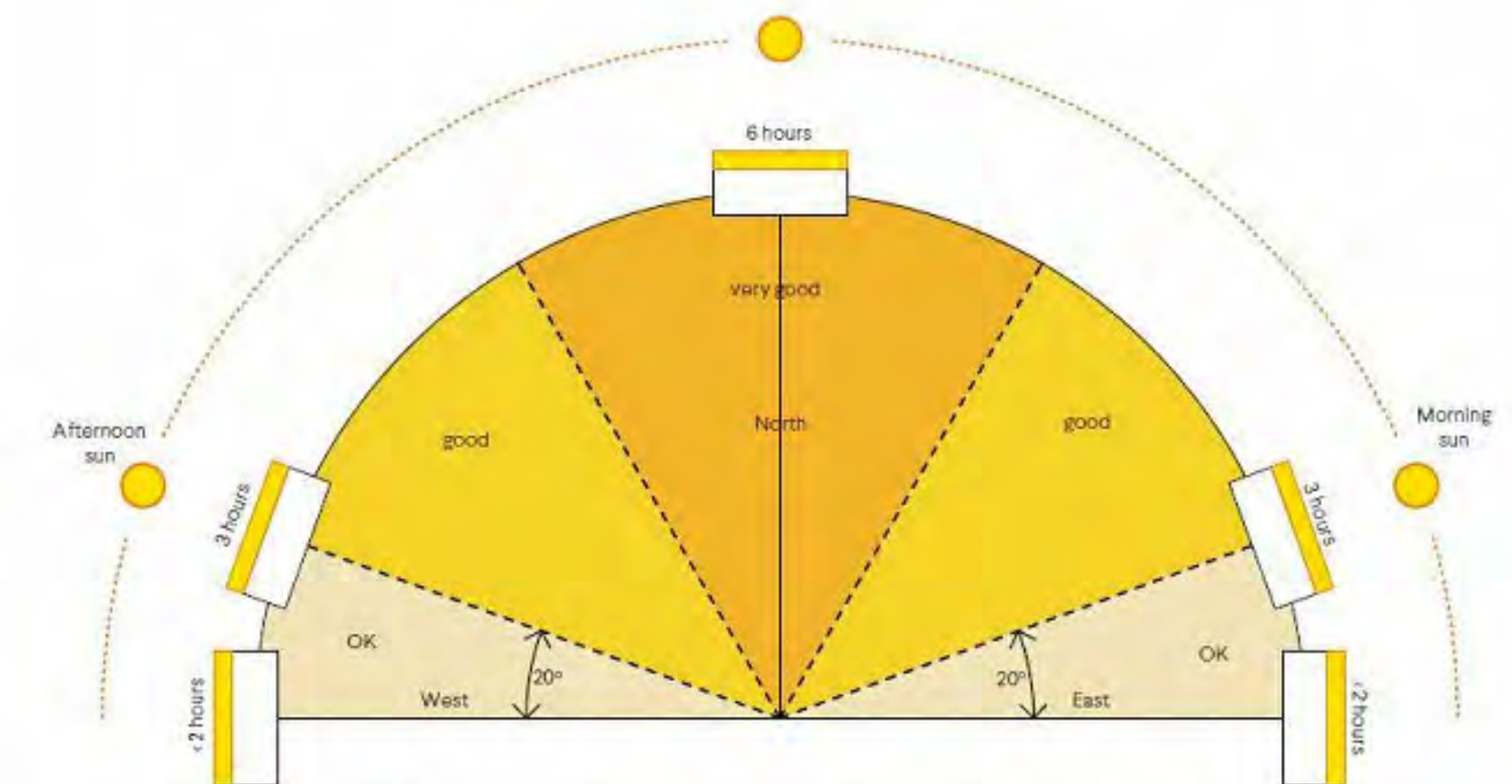
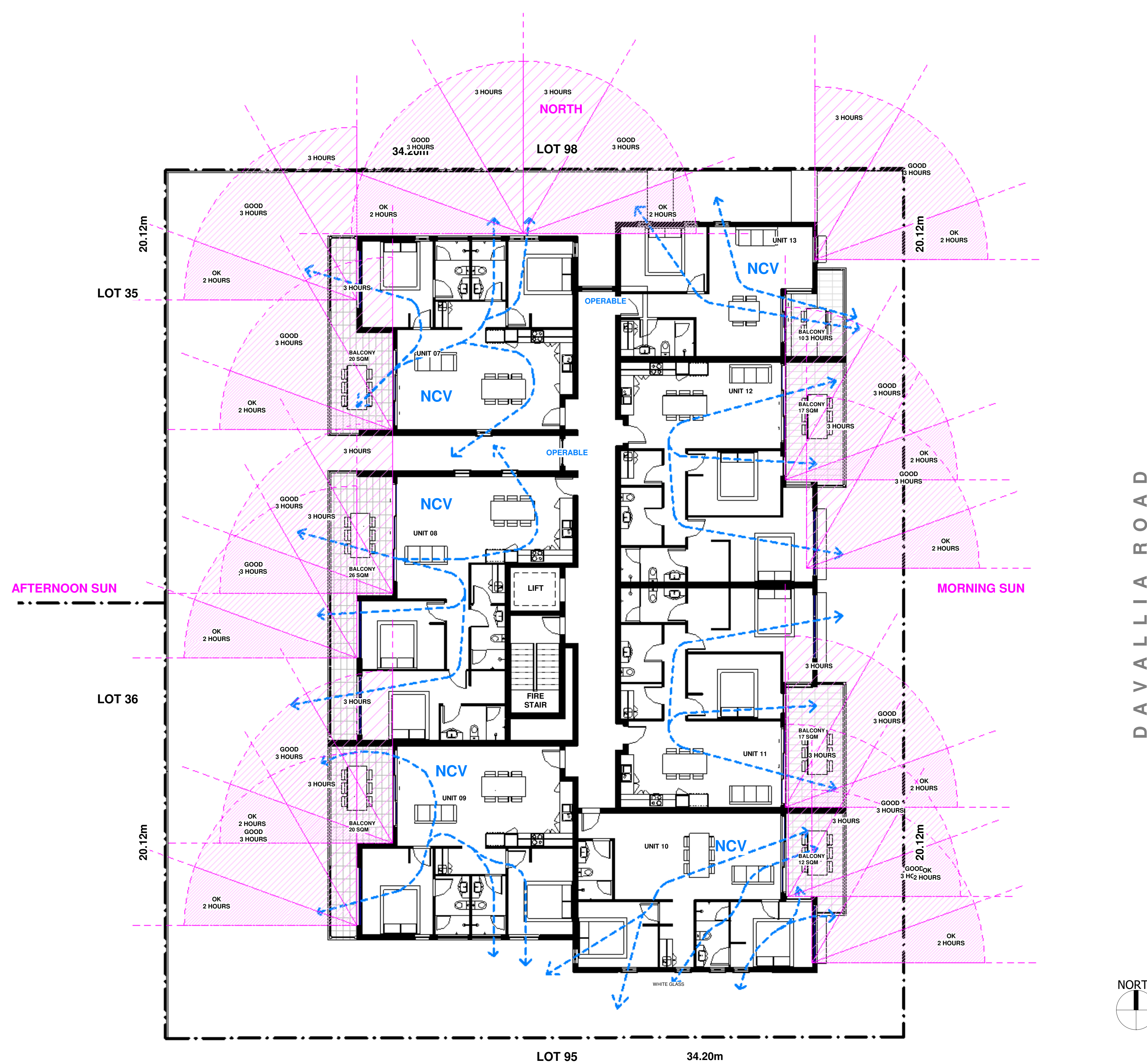


Figure 4.1a The hour of sunlight that can be expected in mid winter are directly related to the orientation of the facade. This diagram shows the optimal orientation for habitable rooms and balconies.

4.2 NATURAL VENTILATION/CROSS VENTILATION NCV
(ILLUSTRATED ON PROPOSED DESIGN) - IN BLUE DOTTED LINES

77% OF UNITS ACHIEVE NCV



1 SOLAR ACCESS & CROSS VENTILATION DIAGRAM - FIRST FLOOR
1 : 100

1:100 @ A1
1:200 @ A3

1:100 @ A1
1:200 @ A3

Consultation summary of submissions

| Issue Raised | Applicant Response | Officer Response |
|---|------------------------------|---|
| Density and zoning | | |
| <p>Are multiple dwellings allowed in the area, and was the community invited to provide comment on this change?</p> | <p>No response received.</p> | <p>The City started developing its Local Housing Strategy (LHS) in 2010 by identifying suitable areas for increased density and identified ten areas (known as Housing Opportunity Areas (HOAs)). The final LHS was endorsed by the Western Australian Planning Commission on 12 November 2013.</p> <p>The LHS was subject to significant public consultation. This included consultation with all residents, with feedback during consultation considered in the finalisation of the Strategy.</p> <p>Since early 2016, residents in HOAs have been able to redevelop their properties in line with the higher densities allocated to these areas, including for multiple dwellings.</p> |
| <p>Consideration should be given to the interim infill local planning policy in the assessment of the application.</p> | <p>No response received.</p> | <p>A draft new planning framework for infill development has been prepared but is yet to have any formal status that would allow it to be considered in decision-making for planning applications.</p> |
| <p>At Council meeting CJ177-11/17 the City of Joondalup provided comment in relation to Housing Opportunity Areas: "It was never the City's intention to allow larger multiple dwelling developments to be developed in the HOAs, except on a handful of lots coded R20/R60 close to railway stations, on small sections of Beach Road and next to larger shopping centres."</p> <p>Concerns that the subject site is not suitable to accommodate</p> | <p>No response received.</p> | <p>The current planning framework allows for multiple dwellings, subject to an assessment against the relevant standards.</p> |

| Issue Raised | Applicant Response | Officer Response |
|---|--|---|
| a larger multiple dwelling development. | | |
| Building height | | |
| The proposal is three storeys and therefore exceeds the permitted height limit for an R40 coded area. | Noted. | <p>The proposal is in accordance with the acceptable outcomes and element objectives of 2.2 <i>Building height</i>.</p> <p>The car parking area meets the definition of “basement” in SPP7.3 and is therefore not classified as an additional storey.</p> <p>Building height of two storeys is an acceptable outcome within the current framework for the density coding of R40 and it is also noted that the development is within the indicative height limit of nine metres.</p> |
| Street setbacks | | |
| Incursions into the front setback area are not compensated for through an area of equal or greater open space, which is required as the balconies occupy more than 50% (52%) of the frontage as set out in the RDLPP. | Noted. | <p>The lobby entrance common area is able to be used as a compensating area of open space behind the street setback area in accordance with the definition of open space outlined in SPP7.3.</p> <p>The proposed street setbacks are therefore in accordance with the City’s street setback requirements of the RDLPP and is considered to meet the element objectives of 2.3 <i>Street setbacks</i>.</p> |
| Built form and scale | | |
| The built form does not meet SPP7 Design principle 3 – Built form and scale. | <p>Noted.</p> <p>Plot ratio is not an essential element of assessment if the prescribed height/setback/amenity</p> | <p>This site is dual coded R20/40. The plot ratio acceptable outcome under SPP7.3 is 0.6.</p> <p>The proposed plot ratio is 0.79, which is 32% over the</p> |

| Issue Raised | Applicant Response | Officer Response |
|--|------------------------------------|---|
| <p>The proposal exceeds the required plot ratio of 0.6 by 30%.</p> <p>The appearance of the development is not compatible with development on adjoining land and in the locality, in relation to height, bulk and scale.</p> | <p>requirements are addressed.</p> | <p>acceptable outcome requirement.</p> <p>The proposed plot ratio achieves the element objectives of <i>2.5 Plot ratio</i>. Refer to officer comments contained in the report.</p> |
| Character and context | | |
| <p>The proposal is inconsistent with the leafy quiet nature of the surrounding areas. The development does not meet SPP7 – Context and character.</p> <p>Duncraig is a leafy, open, suburban area favoured by families for its quiet atmosphere. The development of multi-level apartments is not in keeping with the vibe of the community.</p> <p>The building looks like a professional building – not homes.</p> | <p>No response received.</p> | <p>It is considered that the development does not meet a number of element objectives that result in the proposal being inconsistent with the context and character of the area.</p> <p>Refer to officer comments contained in the report.</p> |
| <p>There is a natural slope of two metres from Davallia Road down to Beach Road which adds to the perceived height as viewed from the intersection, being the entrance to the suburb.</p> | <p>No response received.</p> | |
| <p>The plans depict the adjoining dwellings incorrectly as being higher than actual size which misrepresents the impact the development will have on the streetscape.</p> | <p>No response received.</p> | <p>The City notes that the plans make reference to ‘future development’ to highlight a potential streetscape in accordance with SPP7.3.</p> <p>It is acknowledged that the eave heights shown for the adjoining dwellings measure between 3m and 3.5m, whereas the current adjoining dwellings generally have eave heights between 2.4m and 2.7m.</p> |
| Infrastructure | | |
| <p>The development will impact on communication infrastructure lines.</p> <p>Concern that local services and road system will be</p> | <p>No response received.</p> | <p>There is sufficient infrastructure available to support the development.</p> <p>The development is setback from Western Power lines in</p> |

| Issue Raised | Applicant Response | Officer Response |
|---|--|--|
| <p>inadequate to accommodate increased density.</p> <p>There is a bus stop next to the development.</p> | | <p>accordance with required minimum setback requirements under clause 5.1.2 of the City's RDLPP which is based on guidelines provided by Western Power.</p> <p>There is no bus stop directly adjacent the subject site.</p> |
| Overshadowing | | |
| <p>Concern that overshadowing diagram is incorrect as the shadow is shown taking the existing dwelling into account which is not the intent of SPP7.3.</p> <p>Believed that overshadowing therefore exceeds the permitted 25%.</p> | <p>Diagram has been subsequently amended.</p> <p>Note: Overshadowing at Section AA is caused by a boundary fence and not by the proposed built form.</p> | <p>The proposal results in undue overshadowing to the adjoining property to the south and is not considered to meet the element objectives of clause 3.2 <i>Orientation</i>.</p> <p>Refer to officer comments contained in the report.</p> |
| Landscaping | | |
| <p>The development process destroys the green canopy of the current area.</p> <p>The proposed landscaping is a poor response to climate change.</p> <p>The deep soil areas are insufficient for the size of trees indicated. The trees in the N/E and S/E corners do not meet minimum required deep soil areas and widths.</p> <p>Concern that plant species proposed under balconies will not survive and that the variant of the <i>Pyrus Calleryana</i> should be specified.</p> | <p>No response received.</p> | <p>The proposed landscaping and tree sizes proposed does not meet the element objectives of clause 3.3 <i>Tree canopy and deep soil areas</i>.</p> <p>Refer to officer comments contained in the report.</p> |
| <p>Front landscaping allocation conflicts with required Western Power statutory clearances.</p> <p>The old building footprint and landscaping to the deleted roof terrace area shown on the landscaping plan.</p> | <p>Landscape Plan can be updated with the acceptance of DA008, or this can represent a DA condition.</p> | <p>An appropriate street tree species can be selected so as to not conflict with the existing overhead powerlines.</p> <p>The roof terrace which formed part of a previous proposal was on the landscaping plan advertised and has subsequently been amended to remove the roof terrace.</p> |
| Social impact | | |
| <p>Size of the units will not be appropriate for families so will likely attract a transient</p> | <p>No response received.</p> | <p>The perceived community values of future occupants is</p> |

| Issue Raised | Applicant Response | Officer Response |
|--|--|---|
| population that may not hold the same community values. | | not a valid planning consideration. |
| Number of discretions | | |
| The cumulative impact of the discretions sought in relation to building size, building height, street setbacks, lot boundary setbacks and solar access for adjoining sights result in a development which is considered greater than the site should accommodate. | No response received. | SPP7.3 is a performance based policy, with developments required to meet the overall policy objectives and specific element objectives. The acceptable outcomes are not used as a deemed-to-comply pathway and therefore any deviations from these are not considered as discretions. |
| Excavation | | |
| Concern that the basement parking level has moved 1.5m closer to the western boundary with additional excavation of 0.66m in the absence of a geotechnical report , and the impact this may have on existing limestone bedrock and adjoining properties. | No response received. | The applicant will be responsible for ensuring the structural integrity of surrounding properties as part of construction. The applicant will also need to obtain separate approval from the Water Corporation regarding construction in proximity to the sewer line. |
| The carpark's western wall (including the footing) will be within 0.8m from an existing sewer line. This contravenes the Water Corporation's setback requirement of 1m from a sewer line. Approval from the Water Corporation is required for ground disturbing works within 2m of a sewer line. | A HYD engineer will confirm all Water Corp details and protection of asset requirements. General practice is to be a minimum 600mm in a horizontal direction of a sewer line. The nearest point of the basement retaining wall is 800mm. | |
| Visual privacy | | |
| <u>Northern elevation</u> Concern regarding overlooking from the foyer area and impact on the neighbour. | No response received. | The overlooking from the Unit 4 terrace on the southern side of the development is not considered to meet the element objectives of clause 3.5 <i>Visual privacy</i> . Refer to officer comments contained in the report. |
| <u>Southern elevation</u> Concern regarding setback and overlooking from the Unit 4 terrace which is more than 0.5m above NGL. Concern regarding overlooking from Unit 10 Bed 2 window as Plan A203 does not show a cone of vision. | Has been amended to indicate a dividing fence at 1800 above the highest point. | |
| <u>Western elevation</u> Concern regarding overlooking from west facing balconies and habitable room windows to adjoining properties. | The western setback is 7.5m, being the required setback to an R20 property. | |

| Issue Raised | Applicant Response | Officer Response |
|---|---|---|
| <p>Concern that retaining and replacement fencing on the western boundary will disturb and cause removal of screening vegetation on neighbouring properties.</p> | <p>Where possible, existing trees will be retained as a matter of course.</p> <p>Dilapidation reports will be undertaken to ensure that boundary vegetation will be preserved, especially when not on the subject property.</p> | |
| Utilities and facilities | | |
| <p>The following utilities and facilities are not indicated:</p> <ul style="list-style-type: none"> • Location of drying areas • Location of A/C units • Rainwater harvesting • Bicycle parking • Washing lines (which could be placed on balconies) • Safe access to roof for maintenance of solar panels | <p>Gas and water meters have been relocated to the undercroft area.</p> <p>Air conditioning units are roof mounted and screened.</p> <p>Hot water units will be local to each apartment.</p> | <p>Utilities associated with the development have been provided in accordance with the acceptable outcomes applicable to <i>clause 4.18 Utilities</i> of SPP7.3 and the element objectives have been met.</p> |
| Traffic | | |
| <p>Concern regarding increased traffic on Davallia Road resulting in greater risk of hazard in relation to:</p> <ul style="list-style-type: none"> • Safety of children travelling to Davallia Primary School • Conflict with the existing tee junction located opposite providing entry to Carine Glades Shopping Centre • Banking up of vehicles along Davallia Road • Placement of the crossover means vehicles can access the site from both north and south directions putting pressure on the tee junction. <p>Outdated traffic flow figure of 8,756 vehicles has been used. 2014/2015 figure was 9,854 vehicles.</p> | <p>No response received.</p> | <p>There is adequate capacity within the road network to support the development. Refer to officer comments contained in the report.</p> |
| Parking | | |
| <p><u>Number of bays</u></p> | <p>Visitor parking has been added to the undercroft.</p> | <p>The car parking provision for the development satisfies the acceptable outcomes under</p> |

| Issue Raised | Applicant Response | Officer Response |
|---|---|---|
| <p>Provision of parking is inadequate. Concern that lack of parking will result in on-street parking.</p> <p>No bicycle parking provision on the plans.</p> | <p>Bike rack will be wall mounted 'steady rack' type.</p> | <p>SPP7.3 and is considered to meet the element objectives.</p> <p>Bicycle parking on the basement plan is indicated with each of the store rooms ("1x steady bike rack to all stores").</p> |
| <p><u>Visitor parking</u></p> <p>Concern that visitor parking is not visible and accessible being located behind a gate which is not open 'after hours'.</p> <p>Concern that service vehicles will have to compete with visitor parking in the verge.</p> | | <p>The parking provided for the development is considered to meet the element objectives of clause 3.9 <i>Car parking and bicycle parking</i>. Refer to officer comments contained in the report.</p> <p>Any unauthorised parking within the road reserve is governed by the <i>City of Joondalup Parking Local Law 2014</i>.</p> |
| <p>Basement parking should allow for two way traffic flow.</p> <p>The shared space for visitor parking is unusable for parking. At least 0.3m of the width would be taken up by the sliding entry gate which will need to be two panels.</p> <p>The entry point is compromised by the entry ramp, at 0.3m from the wall the ramp would be 0.17m above the adjacent floor level. The site main switchboard also needs access clearance in front of it.</p> | | <p>The layout of the car parking area has been reviewed by the City and it is considered to meet the Australian Standards for off road car parking.</p> |
| Amenity | | |
| <p>The visual amenity will not improve the amenity of neighbours. The impact of the development is not in keeping with the local amenity.</p> | <p>No response received.</p> | <p>Refer to officer comments in relation to SPP7.3 element objectives.</p> |
| Noise and waste | | |
| <p>The waste management plan is inadequate and on-street bin collection will cause too great an impost to the community.</p> <p>Concern of conflict between visitors and service vehicles parking in the verge.</p> | <p>The street embayment will be sign posted as a clear way space during the anticipated waste collection times to the effect of 'No Parking from 6.00am to 9.00am on *** days'.</p> | <p>The waste management methods for the proposed development are appropriate and meet the element objectives of 4.17 <i>Waste management</i> and City requirements.</p> |

| Issue Raised | Applicant Response | Officer Response |
|---|-----------------------|---|
| The bin ramp is 1 in 10 which will be impractical to manoeuvre with the larger bins. There is no way to get the large rubbish bins across the landscaped strip to the pick up point. | | Refer to officer comments contained in the report. |
| Concerns relating to noise from exhaust fans from the underground car park and A/Cs to the under ventilated dwellings. | | <p>The development satisfies the relative design guidance and achieves the element objectives of <i>4.7 Managing the impact of noise</i>.</p> <p>The management of noise and impacts to adjoining properties is to be in accordance with the <i>Environmental Protection Act 1986</i> and the <i>Environmental Protection (Noise) Regulations 1997</i>.</p> |
| Plan errors | | |
| A number of errors are shown on the advertised plans. The number and significance of these errors could lead others drawing incorrect conclusions and therefore a corrected set of plans should be readvertised for a further 2 weeks. | No response received. | The applicant has subsequently amended the plans to remove these errors. |
| Road network and pedestrian safety | | |
| <p>Concern regarding safety of the vehicle access point given:</p> <ul style="list-style-type: none"> • Proximity to the Beach Road intersection • Existing high traffic area with poor sight lines • Location opposite a tee junction access to Carine Glades shops • Close proximity to Davallia Primary School • Potential for cars to back up along Davallia Road if the driveway is busy. | No response received. | If the development was approved and constructed, there will be increased traffic within Davallia Road and the surrounding streets, however the existing road network has the capacity to accommodate the additional traffic volumes. Refer to officer comments contained in the report. |
| Number of dwellings | | |
| We believe that the area would better serve four to six one storey dwellings with appropriate space to plant | No response received. | SPP7.3 does not specify a maximum number of dwellings that can be provided. Rather the number |

| Issue Raised | Applicant Response | Officer Response |
|--|---|---|
| <p>large trees and have garden space and appropriate space to store items like rubbish bins and outdoor equipment.</p> <p>The apartment size is lacking as evidenced by the limited space to accommodate furniture within living areas. Reducing the number of dwellings would allow more living and outdoor space so local people would be prepared to remain in their favoured area.</p> | | <p>of dwellings is controlled through achieving built form requirements, including setback, building height, landscaping and minimum dwelling sizes.</p> |
| Disability access | | |
| <p>The pedestrian entry point does not accommodate people with disabilities in relation to:</p> <ul style="list-style-type: none"> Letterbox location on the entry stairs Location of the door bell/ intercom on the stair entry. | <p>Four Silver Level Apartments in accordance with the <i>Liveable Housing Design Guidelines</i> have been provided.</p> <p>Prior to the issue of a building permit, the project will be assessed and certified by a qualified Building Surveyor, who will confirm and certify all liveable housing requirements have been met.</p> | <p>The development achieves the acceptable outcomes in relation to <i>clause 4.9 Universal design</i> outlined in SPP7.3 and is considered to satisfy the element objectives.</p> |
| Solar access and ventilation | | |
| <p>Concern that development does not have adequate solar access. Four bedrooms have no direct sunlight which exceeds the requirement of maximum of 15% (two rooms).</p> | | <p>The development meets the element objectives of <i>clause 4.1 Solar and daylight access</i>. Refer to officer comments contained in the report.</p> |
| <p>Poor cross ventilation of apartments and no ventilation in the communal corridors, which only has a recessed north facing window which is unlikely to be opened. Concern that apartments will rely on A/C rather than natural cooling.</p> <p>The basement car park has no cross ventilation so will need a carpark exhaust system. No provision for that is shown.</p> | <p>Solar access meets the requirements of SPP7.3.</p> | <p>The development meets the element objectives of <i>clause 4.2 Natural ventilation</i>.</p> |
| Dwelling mix | | |
| <p>The requirement is for 20% or 2.6 dwellings. But, the proposal has only one variant from the other 12 apartments.</p> | <p>No response received.</p> | <p>The proposed dwelling mix is considered to satisfy the relevant element objectives. Refer to officer comments contained in the report.</p> |

| Issue Raised | Applicant Response | Officer Response |
|--|-----------------------|---|
| Property market | | |
| Development will lower property values. | No response received. | The impact on property values is not a valid planning consideration. |
| Communal open space | | |
| Concern regarding inadequate provision of communal open space. | No response received. | The communal open space proposed is not considered to meet the element objectives of clause 3.4 <i>Communal open space</i> . Refer to officer comments contained in the report. |
| Precedent | | |
| Development will set a precedent for similar developments in Duncraig and surrounding suburbs. | | Each application is assessed on its individual merits against the relevant planning framework. |



Transport Impact Statement

| | |
|------------|---|
| Project: | 9-11 Davallia Road, Duncraig Proposed Residential Apartments |
| Client: | Rocorp Enterprises Pty Ltd c/o: Harden Jones Architects |
| Author: | Keli Li |
| Version: | 1 |
| Document # | 1811006-TIS-001 |

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Document Status

| Version | Document Status | Prepared By | Reviewed By | Approved By | Date |
|---------|-----------------|-------------|-------------|-------------|------------|
| 1 | Client Review | K Li | L Dawson | L Dawson | 06/11/2018 |
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1. Summary

Shawmac was commissioned to assess the traffic impacts associated with parking, access and traffic generation from the proposed residential apartments located at 9-11 Davallia Road, Duncraig.

This Transport Impact Statement has been prepared in accordance with the WAPC Transport Impact Assessment Guidelines for Developments: Volume 4 – Individual Developments (2016), for lodgement with the Development Application to the City of Joondalup.

The following conclusions have been made in regards to the proposed development:

- The surrounding roads and intersections can accommodate the predict increase in traffic from the proposed development;
- The supply of car parking spaces and operation of the facility is considered adequate to accommodate the parking demand;
- The parking layout is compliant with AS2890.1 and AS 2890.6;
- The site is well serviced by public transport with bus stops accessible within walking distance from the site;
- The existing pedestrian/cyclist infrastructure in the vicinity of the site is considered to be adequate to facilitate the safe movement of pedestrians and cyclists around the proposed development; and
- The location and dimension of the proposed access is considered acceptable and no adverse impacts and safety issues associated with the access are identified.

2. Introduction

2.1. Background

Shawmac has been commissioned to prepare a Transport Impact Statement to assess the potential traffic impacts, car parking and access issues associated with the proposed residential apartment building to be located at 9-11 Davallia Road, Duncraig, in the City of Joondalup.

The proposed development is a two-storey residential apartment building including a basement carpark. The proposed site plan is shown in Appendix A.

2.2. Site Location

The site is located as shown in Figure 1.

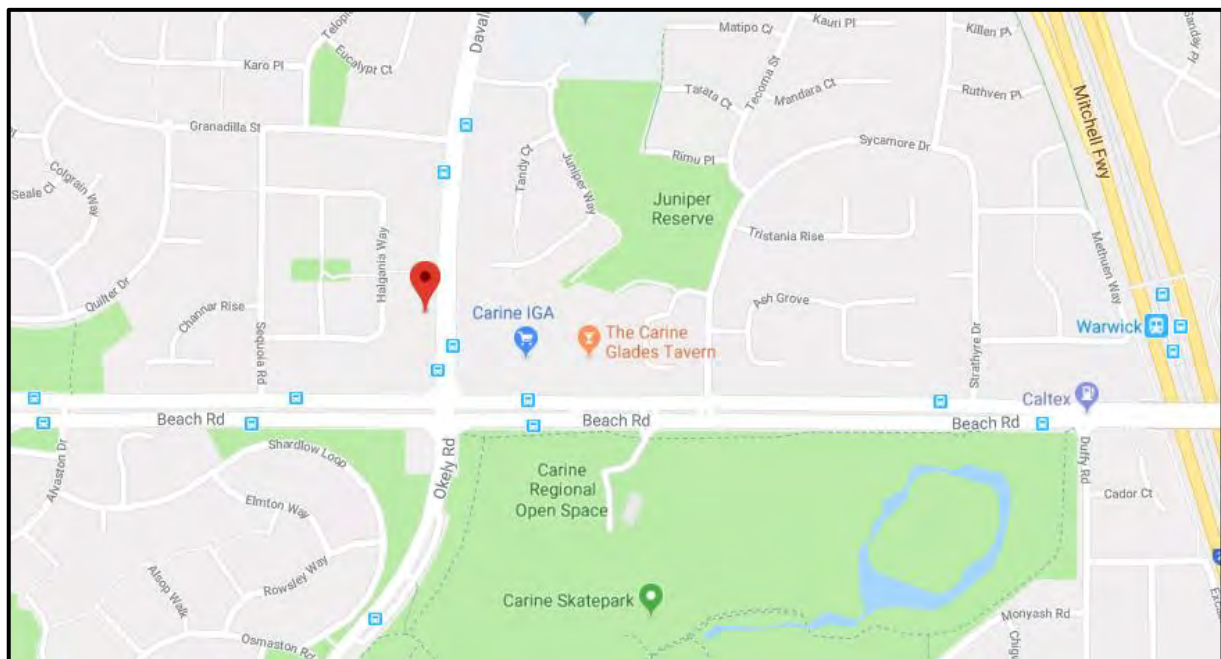


Figure 1 - Site Location

The subject site currently developed as two detached residential houses as shown in the aerial view in Figure 2.

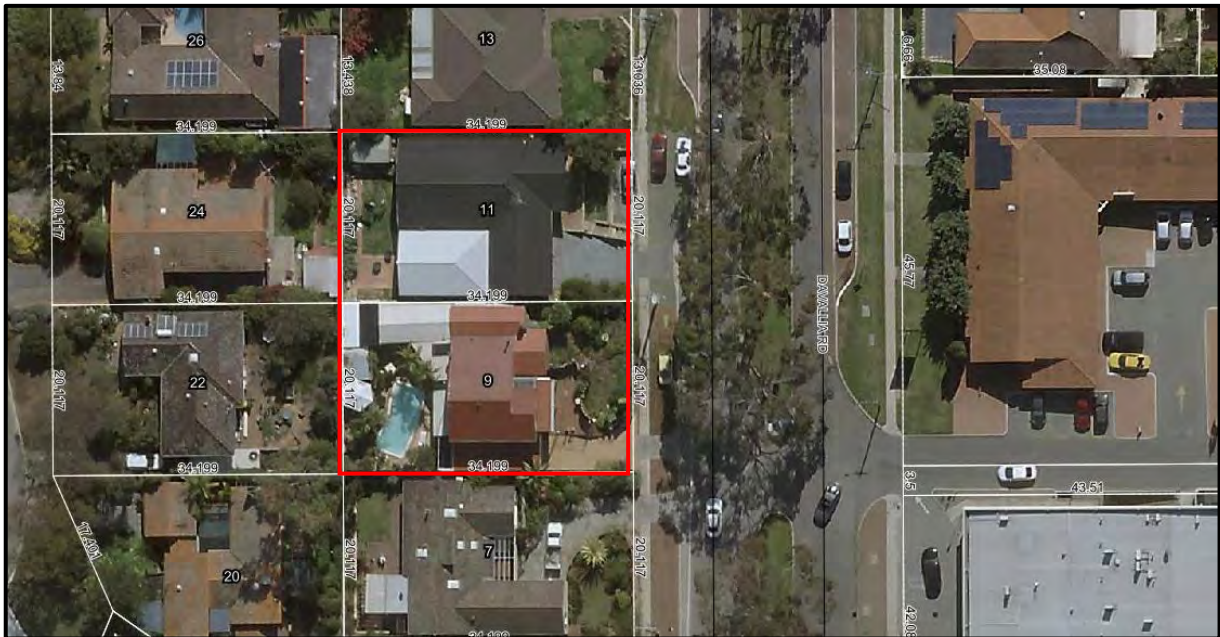


Figure 2 - Aerial View

2.3. Reference Information

In undertaking the study, the information listed below was referenced.

- WAPC Transport Impact Assessment Guidelines for Developments: Volume 5 – Individual Developments
- MRWA Functional Hierarchy Criteria;
- Livable Neighbourhoods Guidelines 2009;
- Australia Standard AS 2890.1-2004 Parking Facilities - Off-street Car Parking
- Trip Generation 9th edition, 2003 - Institute of Transportation Engineers, Washington, USA;
- Guide to Traffic Generating Developments Version 2.2, October 2002 – Roads and Traffic Authority, New South Wales;
- City of Joondalup Town Planning Scheme No.3

3. Site Proposal

3.1. Land Use

It is proposed to develop the site as a 13-unit residential apartment building with a 25-bay basement carpark. The proposal will also modify the existing kerb line along Davallia Road with relocated crossovers and addition of 3 indented parking bays.

3.2. Planning Framework

The subject site is zoned for “Residential” R20/40 as per City of Joondalup zoning scheme.

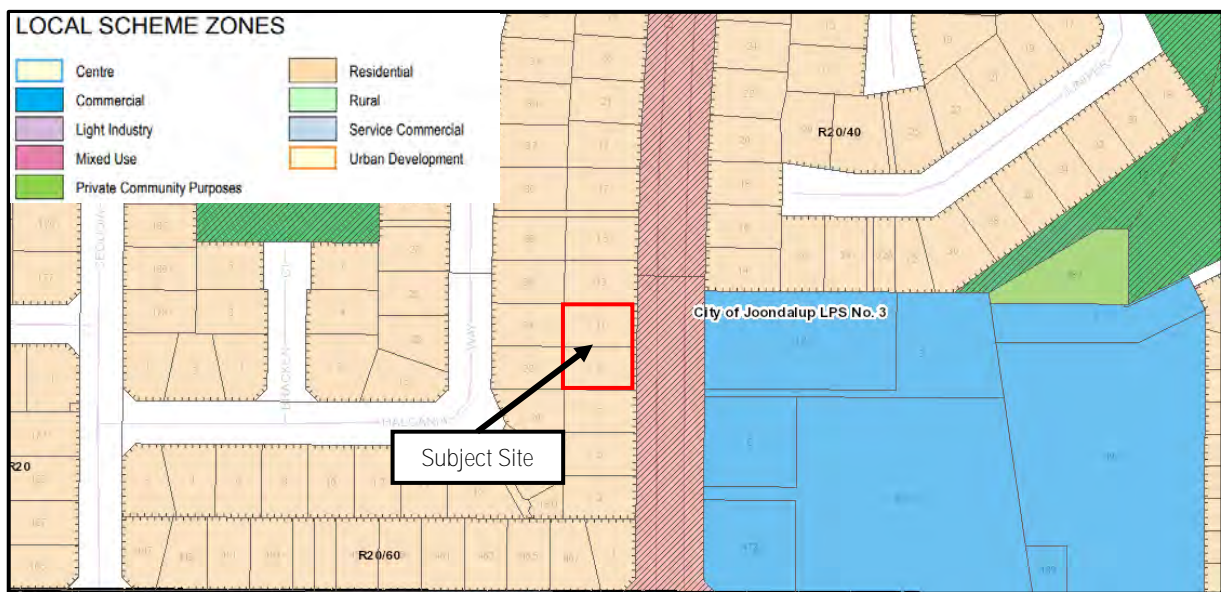


Figure 3 - Zoning Map - Extract from City of Joondalup LPS3

3.3. Major Attractors and Generators of Traffic

The development site is mainly a traffic generator. The main generator expected to influence traffic flows are likely to be to and from local centres and primary distributor roads.

4. Existing Situation

4.1. Existing Roads

An extract of the Main Roads *Road Information Mapping* web tool is shown in Figure 4 and shows the road hierarchy surrounding the site.



Figure 4 - Road Hierarchy

Davallia Road

Davallia Road is the eastern boundary of the site. It is a two-way, two-lane, dual-carriageway with on-road bicycle lanes and indented parking available along both sides (Note: indented parking is not available in front of the proposed site). Davallia Road is classified as a Local Distributor road under the MRWA Functional Road Hierarchy. Davallia Road provides connection to District Distributor roads (Beach Road and Warwick Road) to the south and north. Davallia Road operates with a 50km/h speed limit in the vicinity of the site.

Beach Road

Beach Road is a District Distributor A Road located approximately 150m south of the site and provides access to the southern suburbs. Beach Road operates with a 70km/h speed limit.

Warwick Road

Warwick Road is a District Distributor A Road located approximately 850m south of the site and provides access to Mitchell Freeway and the northern suburbs. Warwick Road operates with a 70km/h speed limit.

4.2. Road Hierarchy vs Actual Flows

The latest traffic volumes of surrounding roads were derived from the latest MRWA SCATS data (October 2018). Detailed traffic count data is included in Appendix B.

Table 1 compares existing traffic volumes with MRWA and Liveable Neighbourhood Guideline indicative traffic volumes based on road classifications.

Table 1 - Road Classification and Indicative Traffic Volumes

| Road Name | Road Features | MRWA Classification / Indicative Daily Volume (vpd) | Liveable Neighbourhood Classification / Indicative Daily Volume (vpd) | Traffic Volume | Source |
|---------------|-------------------------|---|---|----------------|-------------------|
| Davallia Road | 2-lane dual carriageway | Local Distributor / <6,000 | Neighborhood Connector A / <7,000 | 8,756 | MRWA SCATS (2018) |
| Beach Road | 4-lane dual carriageway | District Distributor A / >8,000 | Integrator Arterial A / <25,000 | 14,938 | |
| Warwick Road | 4-lane dual carriageway | District Distributor A / >8,000 | Integrator Arterial A / <25,000 | 21,816 | |

As shown, all roads are operating near their indicative traffic flow ranges for their respective classifications with Davallia Road operating just above the limit.

4.3. Changes to the Surrounding Network

There are no known changes to the adjacent network that have the potential to affect the assessment.

5. Transport Assessment

5.1. Assessment Years

The development is assessed based on current network conditions. A comparison of Davallia Road traffic data between 2018 SCATS traffic count and the 2014 MRWA trafficmap data indicates a decline in traffic volume. Also given the surrounding road network being predominantly established, the current network conditions should be representative of 10 year after full opening.

5.2. Time Periods for Assessment

The time periods adopted for assessment are the peak hours on the adjacent road network (8:00-9:00 and 17:00-18:00), as these represent the worst-case conditions on the wider road network.

5.3. Development Generation

In order to estimate the impact of traffic generated by the proposed development reference was made to the Institute of Transportation Engineers "Trip Generation" 9th edition and WAPC Transport Impact Assessment Guideline. The trip generation has been determined for both daily and peak hour. Predicted trip generation are summarised in Table 2.

Table 2 - Predicted Weekday Trip Generation

| Land Use | Units | Quantum | Trip Generation Rate | | | Estimated Generation | | | Source |
|------------------|------------------|---------|----------------------|---------|---------|----------------------|---------|---------|----------|
| | | | ADT | AM Peak | PM Peak | ADT | AM Peak | PM Peak | |
| Residential | No. of Dwellings | 13 | 6.59 | 0.8 | 0.8 | 86 | 10 | 10 | ITE/WAPC |
| Total (round-up) | | | | | | 86 | 10 | 10 | |

It is estimated that the proposed development will generate an additional 86 vehicle movements per day with 10 during weekday AM and PM peak hours.

5.4. Distribution

Based upon the existing traffic patterns in the area and spatial distribution of adjacent land uses, traffic generated from the site are likely to be distributed 60% south to Beach Road and 40% north to Warwick Road. As the egress crossover is restricted to left-turn movement, it is assumed that vehicles distributed to Beach Road will turn left at Grandilla Street and following the Grandilla Street-Quiter Drive-Poynter Drive route to access Beach Road. Vehicle access to the site from the southbound lane of Davallia Street will be able to turn right into the site access.

The pre and post development daily and peak hour traffic volumes on Davalia Road is shown in Table 3. The additional traffic volumes distributed to the network are shown in Figure 5.

Table 3 - With-development Traffic Volumes

| Road | Time Period | Pre-development Traffic | Increase | Post-development Traffic |
|---------------------------------------|---------------|-------------------------|----------|--------------------------|
| Davallia Road North of site Access | Daily (vpd) | 8,756 | 65 | 8,821 |
| | AM Peak (vph) | 823 | 8 | 831 |
| | PM Peak (vph) | 895 | 8 | 903 |

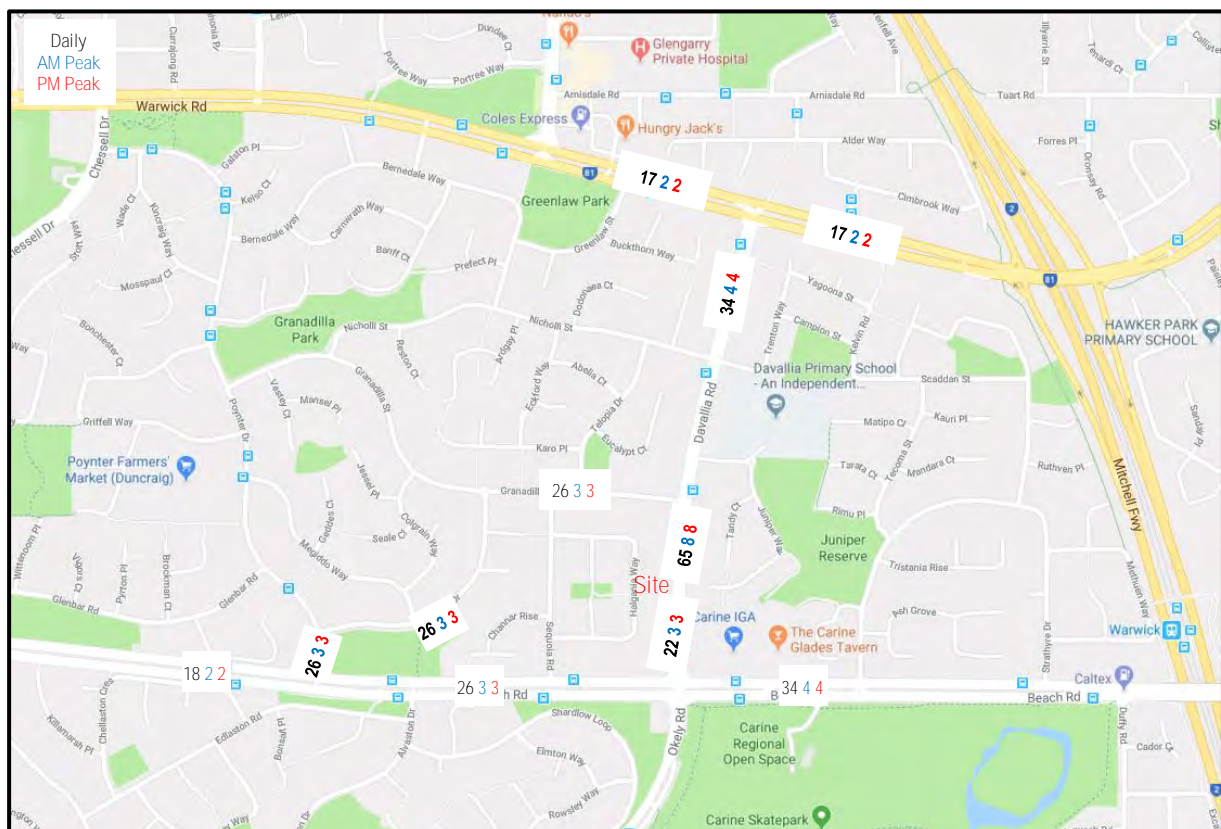


Figure 5 - Traffic Distribution for Site Traffic

5.5. Impact on Roads

The site generated traffic is considered low (maximum 10 vehicles movement during peak hours) and the road network is considered to have sufficient capacity to accommodate the generated traffic to from the proposed development.

5.6. Impact on Intersections

A general guide from WAPC Transport Impact Assessment Guideline indicates the following:

- An increase in traffic of less than 10% of capacity would not normally be likely to have a material impact on any particular section of road; and
- An intersection would generally be considered to be materially affected if flows on any leg increase by more than 10% or any individual movement by more than 20%.

Based on the predicted traffic distribution, additional traffic volume distributed to the most affected intersection (Warwick Road / Davallia Road intersection) will be around 1 vehicle per hour for each turning movement. This is within the standard deviation of traffic volumes turning at the intersection and therefore does not warrant capacity assessment. Therefore, intersections in the vicinity are considered to have sufficient capacity to cater for the projected increase in traffic.

7. Pedestrian and Cycle Networks

7.1. Existing Cycle and Pedestrian Networks and Facilities

Existing pedestrian and cycle facilities in the general vicinity of the site are shown in Figure 7. There are pedestrian footpaths and on-road bicycle lanes along both sides of Davallia Road, and they provide good connectivity to the greater pedestrian and bicycle network. Figure 7 also shows that the site is located just outside of 1.0 km radius of Warwick Bus and Train Station.

It can be concluded that the existing facilities are sufficient to service the proposed development.

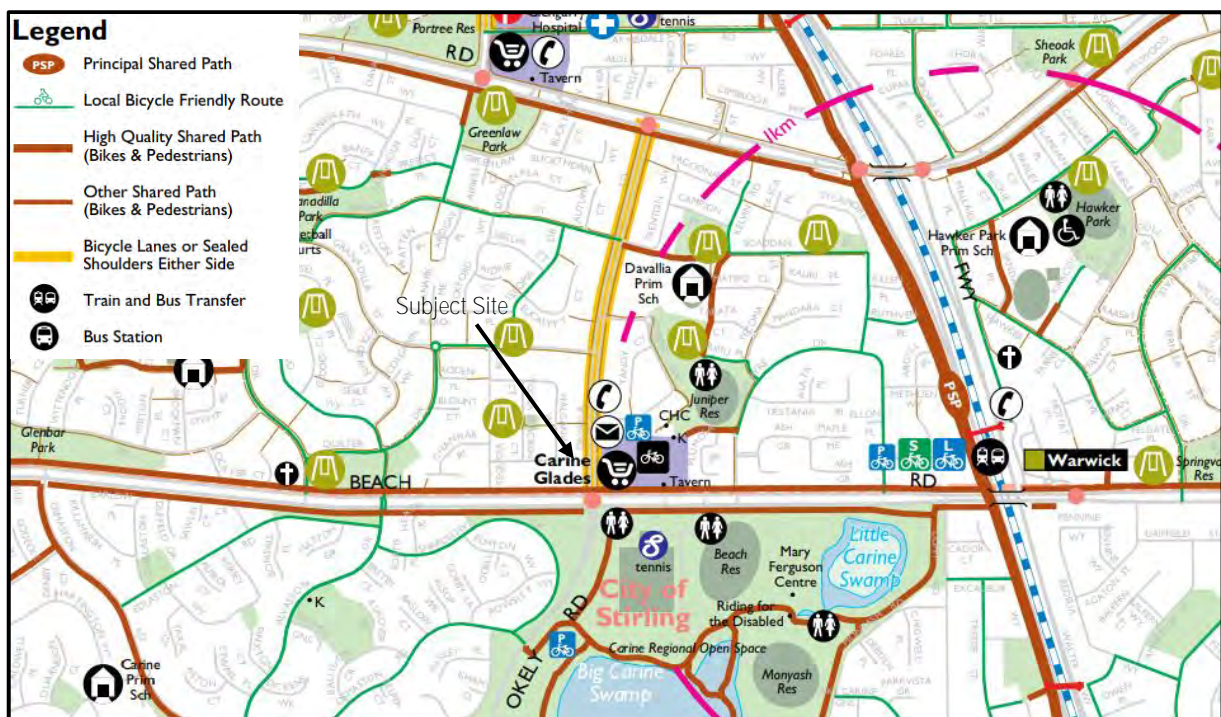


Figure 7 - Existing Pedestrian and Cyclist Facilities

8. Parking

8.1. Parking Provision

The City of Joondalup Local Planning Scheme No. 3 refers to the WAPC Residential Design Codes (R-Codes) for parking requirements for residential development. Under the R-Codes, the proposed apartment development requires a minimum of 13 bays for residents and 3 bays for visitors. The parking requirements and provision are compared in Table 4

Table 4 - Car Parking Requirements

| Land Use | Parking Rate | Quantum | Parking Requirement | Parking Provision |
|---------------------|--|----------------------------|---------------------|-------------------|
| Residential | 1 bay per 1-2 bedrooms dwelling 1.25 bay per 3+ bedrooms dwelling | 13 x 1-2-bedroom dwellings | 13 | 25 |
| Residential Visitor | 1 bay per 4 dwelling required | 13 dwellings | 3 | 5 |
| | | Total | 16 | 30 |
| Bike Storage | | | | |
| Residential | 1 per 3 dwellings | 13 dwellings | 4 | 8 |
| Residential Visitor | 1 per 10 dwellings | 13 dwellings | 1 | |
| | | Total | 5 | 8 |

The development satisfies the requirements for car parking and bike storage. Three of the visitor bays are provided as indented street bays along Davallia Road.

8.2. Parking Layout

The standard bay dimensions for a Class 1A car parking facility according to AS2890.1 (Residential, domestic and employee parking) is shown in Table 5.

Table 5 - AS 2890.1 Standard Parking Bay Dimensions

| Category | Clause | Bay Dimension Required | Bay Dimension Provided | Compliant |
|---|-----------------------|--------------------------|---|-----------|
| Ninety Degree Bays | AS2890.1 - Figure 2.2 | 5.4 x 2.4 x 5.8m aisles. | 5.4 x 2.4x 5.8 aisles. (Minimum dimension) | Yes |
| Parallel Parking Bays | AS2890.1 - Figure 2.5 | 6.2 x 2.1 (3.6m aisle) | 6.2 x 2.3 (3.6m aisle) (Minimum dimension) | Yes |
| Blind Aisle Extension | AS2890.1 - 2.4.2c | 1.0m | 1.0 | Yes |
| Additional space for bays against a wall of fence | AS2890.1 - 2.4.2d | 0.3m | 0.3m | Yes |

Based on the site plan provided, the dimensions of the proposed standard bays comply with the Australian Standards requirements. It is noted that although residential development does not require disabled parking bays, the 2 visitor bays in the basement carpark are in the form of disabled parking and their dimensions are compliant with AS2890.6.

9. Site Access

9.1. Vehicle Accesses

The City of Joondalup Crossover Specification sets out the requirements for crossovers. For multiple dwelling driveways, the specification requires:

- Only one single driveway servicing multiple dwelling development is provided per street or right-of-way frontage; and
- No driveway is wider than 6m at the street boundary.

The development proposes a one-way-in crossover and a one-way-out crossover off Davallia Road, both crossovers are 4.5m wide. The purpose of the two-crossover access arrangement is to ensure a one-way traffic flow within the basement carpark to minimise parking congestion. From a traffic engineer perspective this variation is considered acceptable and will not compromise vehicular safety or road functionality.

9.2. Service Vehicles

Waste collection will be managed similar to residential dwellings fronting Davalia Road via verge collection. It is recommended that rubbish collection takes place outside of peak hours to reduce conflict. General deliveries can use visitor car bays in the carpark. It is noted that although Davallia Road has only one lane northbound, the lane width is sufficient for cars to pass on the right side of waste collection vehicle.

9.3. Ramp Access

The ramps to access the basement carpark are straight ramps. AS2890.1-2004 Clause 2.5.3 outlines the requirements for ramps and access driveways, and a comparison of these requirements and the proposed ramp design are provided in Table 6.

Table 6 - Ramp Requirements

| Ramp Details | Ramp Dimension Required | Dimension Provided | Compliant |
|---|--|---------------------------------------|-----------|
| Residential carpark less than 20m in length | 1 in 4 (25%) | 1 in 8 (12.5%) | Yes |
| Change of grade | 1 in 8 (12.5%) summit 1 in 6.7 (15%) sag | 1 in 8 (12.5%) at both summit and sag | Yes |
| One-way Straight Ramp | Minimum 3.0m wide with 0.3m clearance on each side | 4.5m in Total | Yes |
| Grade transitions | Minimum 2m length for transitions up to 18% | N/A | N/A |

As shown, the proposed ramp dimensions are compliant with the AS2890.1.

9.4. Access Vehicle Sight Distance

Sight distance from the car park egress along the street is defined in Figure 3.2 of AS2890.1 which is reproduced in Figure 8. A desktop review concluded that the minimum sight distance is achieved for the crossover.

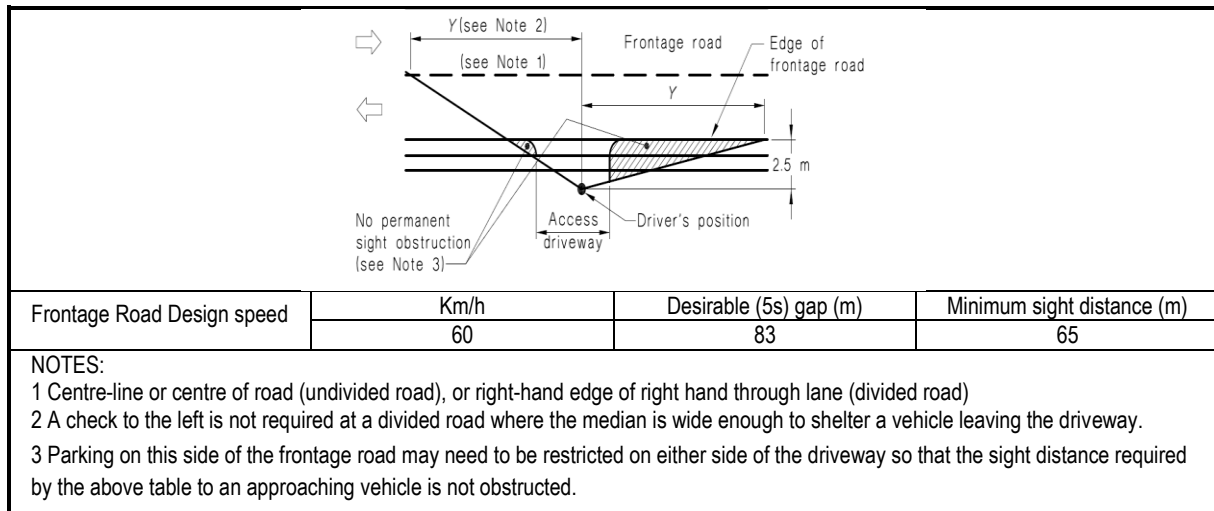


Figure 8 - Sight Distance Requirements

9.5. Access Pedestrian Sight Distance

The Australian Standard AS2890.1:2004 also provides details for sight lines and distances for pedestrian movements across an access to a car park. Those details are shown in the AS2890.1 Figure 3.3 extract on Figure 9.

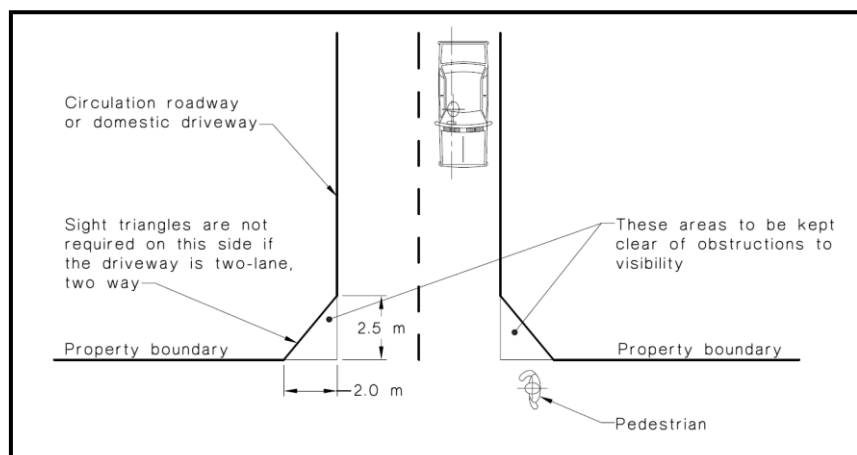


Figure 9 - AS 2890.1 Requirements for Pedestrian Sight Lines

The site plan does not indicate any sight line obstructions at the vehicle access. It is concluded that minimum required pedestrian sight distance is achievable.



10. Site Specific or Safety Issues

10.1. Crash History

Crash data for midblock Davallia Road from Grandilla Street (SLK 0.61) to Beach Road (SLK 0.97) were sourced from MRWA Crash Analysis Reporting System (CARS) for the 5-year period ending 31/12/2017 and the report indicated no crashes over the 5-year period.

As the proposed development is only predicted to generate a small number of vehicle movements on Davallia Road, traffic generated from the site is unlikely to alter the existing crash pattern.

11. Conclusion

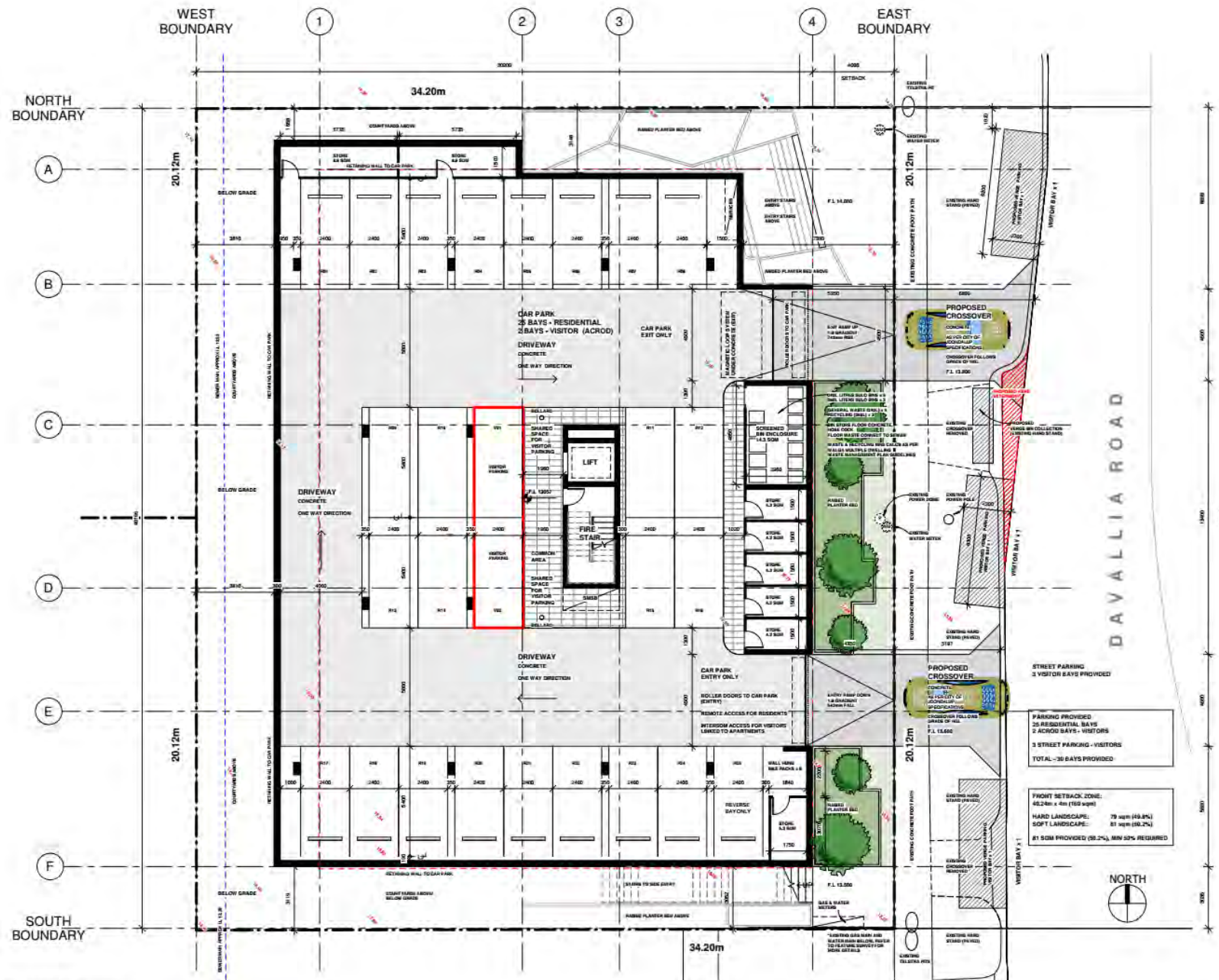
Based on the assessment of traffic generation it is predicted that there will be no unacceptable impact on the adjacent road segments.

With respect to the proposed residential apartment, the following is concluded;

- The surrounding roads and intersections can accommodate the predict increase in traffic from the proposed development;
- The supply of car parking spaces and operation of the facility is considered adequate to accommodate the parking demand;
- The parking layout is compliant with AS2890.1 and AS 2890.6;
- The site is well serviced by public transport with bus stops accessible within walking distance from the site;
- The existing pedestrian/cyclist infrastructure in the vicinity of the site is considered to be adequate to facilitate the safe movement of pedestrians and cyclists around the proposed development; and
- The location and dimension of the proposed access is considered acceptable and no adverse impacts and safety issues associated with the access are identified.



Appendix A - Site Layout



1 0. LOWER LEVEL - CAR PARK (-11c)
1 : 100



1. GROUND FLOOR (25c)
1 : 100

1:100 @ A1
1:200 @ A3



HARDENJONESARCHITECTS
www.hjarchitect.com.au

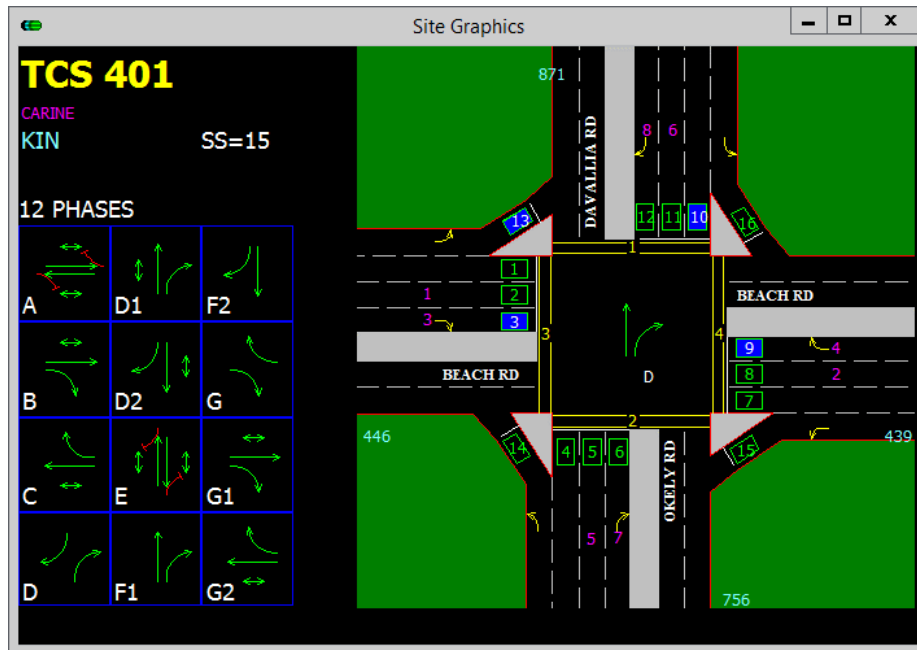
11 & 9 DAVALLIA ROAD_DUNCRAIG
JDAP SUBMISSION - DA001
A202
5/1/2018 3:42:04 PM



1 2. FIRST FLOOR (61c)
1:100



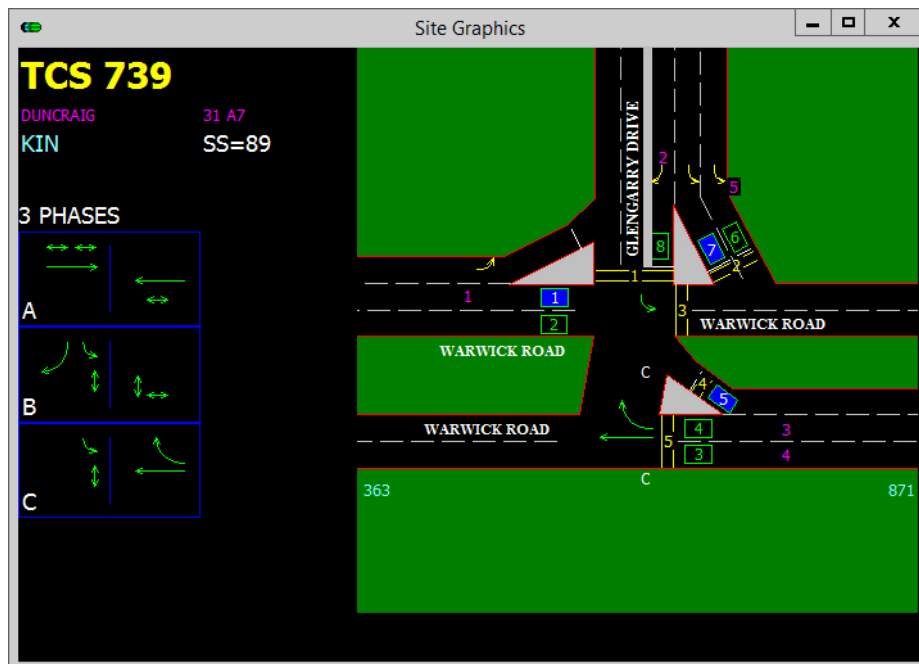
Appendix B - Traffic Count



Average Hourly Volume from (Monday 22nd October to Friday 26th October 2018)

fe

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
|----------|------|------|-----|------|-----|------|------|------|------|-----|------|-----|-----|-----|------|------|------|
| 1:00 | 6 | 4 | 1 | 1 | 0 | 4 | 6 | 4 | 2 | 0 | 0 | 0 | 0 | 3 | 4 | 3 | 40 |
| 2:00 | 2 | 1 | 0 | 1 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 0 | 2 | 2 | 2 | 18 |
| 3:00 | 1 | 1 | 0 | 1 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 13 |
| 4:00 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 4 | 2 | 20 |
| 5:00 | 6 | 3 | 6 | 2 | 2 | 4 | 8 | 2 | 5 | 2 | 4 | 1 | 0 | 1 | 8 | 7 | 61 |
| 6:00 | 58 | 24 | 15 | 5 | 6 | 20 | 25 | 12 | 10 | 10 | 15 | 2 | 0 | 2 | 30 | 24 | 260 |
| 7:00 | 129 | 73 | 49 | 20 | 9 | 38 | 70 | 37 | 26 | 30 | 39 | 10 | 0 | 10 | 118 | 63 | 720 |
| 8:00 | 228 | 211 | 111 | 45 | 22 | 77 | 103 | 73 | 52 | 94 | 125 | 29 | 0 | 21 | 181 | 151 | 1522 |
| 9:00 | 240 | 231 | 89 | 83 | 51 | 156 | 157 | 132 | 80 | 111 | 162 | 59 | 0 | 41 | 280 | 168 | 2039 |
| 10:00 | 192 | 132 | 58 | 50 | 33 | 109 | 129 | 93 | 66 | 60 | 66 | 49 | 0 | 35 | 122 | 127 | 1321 |
| 11:00 | 180 | 106 | 40 | 54 | 30 | 96 | 140 | 93 | 78 | 51 | 52 | 59 | 0 | 34 | 117 | 111 | 1242 |
| 12:00 | 178 | 93 | 34 | 54 | 32 | 105 | 152 | 119 | 78 | 48 | 49 | 69 | 0 | 43 | 109 | 102 | 1266 |
| 13:00 | 162 | 79 | 28 | 58 | 30 | 111 | 151 | 103 | 79 | 46 | 51 | 65 | 0 | 49 | 113 | 103 | 1228 |
| 14:00 | 159 | 86 | 26 | 57 | 32 | 103 | 140 | 96 | 77 | 38 | 43 | 62 | 0 | 39 | 116 | 92 | 1166 |
| 15:00 | 184 | 105 | 35 | 79 | 40 | 122 | 180 | 139 | 96 | 47 | 67 | 78 | 0 | 60 | 165 | 103 | 1501 |
| 16:00 | 227 | 183 | 45 | 159 | 78 | 215 | 207 | 169 | 113 | 69 | 102 | 107 | 0 | 82 | 181 | 168 | 2107 |
| 17:00 | 199 | 159 | 46 | 174 | 94 | 189 | 238 | 233 | 140 | 68 | 69 | 95 | 0 | 94 | 212 | 164 | 2173 |
| 18:00 | 179 | 132 | 37 | 179 | 91 | 188 | 238 | 246 | 166 | 69 | 80 | 110 | 0 | 119 | 200 | 141 | 2175 |
| 19:00 | 153 | 100 | 28 | 84 | 39 | 145 | 178 | 164 | 103 | 45 | 58 | 77 | 0 | 75 | 156 | 102 | 1508 |
| 20:00 | 107 | 54 | 18 | 42 | 17 | 68 | 97 | 69 | 60 | 27 | 34 | 45 | 0 | 36 | 87 | 59 | 822 |
| 21:00 | 72 | 39 | 11 | 26 | 7 | 37 | 75 | 41 | 41 | 12 | 21 | 23 | 0 | 23 | 47 | 36 | 512 |
| 22:00 | 49 | 23 | 7 | 20 | 5 | 32 | 46 | 22 | 23 | 7 | 12 | 13 | 0 | 21 | 32 | 22 | 335 |
| 23:00 | 30 | 15 | 3 | 10 | 2 | 16 | 33 | 21 | 14 | 4 | 7 | 6 | 0 | 13 | 23 | 13 | 212 |
| 24:00:00 | 15 | 7 | 2 | 4 | 2 | 9 | 17 | 9 | 7 | 2 | 3 | 4 | 0 | 6 | 13 | 7 | 106 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
| Daily | 2758 | 1864 | 691 | 1210 | 623 | 1846 | 2397 | 1882 | 1321 | 843 | 1062 | 964 | 964 | 814 | 2324 | 1770 | |
| AM | 240 | 231 | 89 | 83 | 51 | 156 | 157 | 132 | 80 | 111 | 162 | 59 | 110 | 41 | 280 | 168 | |
| PM | 179 | 132 | 37 | 179 | 91 | 188 | 238 | 246 | 166 | 69 | 80 | 110 | 59 | 119 | 200 | 141 | |



Average Hourly Volume from (Monday 29th October to Friday 2nd November 2018)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|----------|------|------|------|------|------|------|------|------|------|
| 1:00 | 7 | 6 | 12 | 10 | 9 | 2 | 1 | 1 | 48 |
| 2:00 | 4 | 5 | 7 | 5 | 6 | 0 | 3 | 0 | 31 |
| 3:00 | 6 | 4 | 6 | 3 | 3 | 0 | 2 | 0 | 24 |
| 4:00 | 6 | 10 | 6 | 3 | 6 | 1 | 3 | 1 | 36 |
| 5:00 | 23 | 23 | 14 | 12 | 11 | 6 | 11 | 2 | 102 |
| 6:00 | 108 | 114 | 41 | 25 | 19 | 20 | 48 | 12 | 386 |
| 7:00 | 217 | 287 | 115 | 67 | 57 | 42 | 108 | 31 | 923 |
| 8:00 | 352 | 480 | 177 | 129 | 113 | 82 | 206 | 64 | 1603 |
| 9:00 | 437 | 482 | 280 | 178 | 209 | 116 | 224 | 124 | 2050 |
| 10:00 | 276 | 295 | 234 | 153 | 160 | 88 | 131 | 84 | 1420 |
| 11:00 | 246 | 241 | 235 | 164 | 172 | 84 | 111 | 84 | 1337 |
| 12:00 | 242 | 223 | 265 | 172 | 193 | 94 | 105 | 76 | 1369 |
| 13:00 | 246 | 209 | 276 | 182 | 189 | 88 | 95 | 86 | 1371 |
| 14:00 | 225 | 193 | 266 | 167 | 185 | 85 | 89 | 81 | 1292 |
| 15:00 | 255 | 218 | 320 | 229 | 232 | 82 | 95 | 89 | 1520 |
| 16:00 | 306 | 279 | 409 | 314 | 304 | 121 | 169 | 134 | 2037 |
| 17:00 | 271 | 254 | 400 | 336 | 306 | 90 | 112 | 114 | 1883 |
| 18:00 | 259 | 234 | 416 | 369 | 331 | 70 | 112 | 98 | 1889 |
| 19:00 | 212 | 179 | 347 | 265 | 210 | 65 | 89 | 82 | 1450 |
| 20:00 | 152 | 118 | 209 | 149 | 128 | 42 | 55 | 57 | 909 |
| 21:00 | 111 | 73 | 157 | 97 | 85 | 29 | 32 | 34 | 620 |
| 22:00 | 82 | 50 | 118 | 74 | 62 | 17 | 16 | 19 | 439 |
| 23:00 | 43 | 30 | 72 | 43 | 33 | 10 | 11 | 6 | 248 |
| 24:00:00 | 22 | 14 | 31 | 20 | 16 | 4 | 4 | 4 | 114 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| Total | 4108 | 4021 | 4411 | 3167 | 3038 | 1237 | 1833 | 1284 | |
| AM | 437 | 482 | 280 | 178 | 209 | 116 | 224 | 124 | |
| PM | 306 | 279 | 409 | 314 | 304 | 121 | 169 | 134 | |

Two-way Daily and Peak Hour Volume

| | Daily | AM PEAK | PM PEAK |
|-------------------|-------|---------|---------|
| Warwick Road East | 21816 | 1926 | 1903 |

9 & 11 DAVALLIA ROAD, DUNCRAIG
DA SUBMISSION

23.09.2019



Environmentally Sustainable Design – Checklist

Under the City's planning policy, *Environmentally Sustainable Design in the City of Joondalup*, the City encourages the integration of environmentally sustainable design principles into the construction of all new residential, commercial and mixed-use buildings and redevelopments (excluding single and grouped dwellings, internal fit outs and minor extensions) in the City of Joondalup.

Environmentally sustainable design is an approach that considers each building project from a 'whole-of-life' perspective, from the initial planning to eventual decommissioning. There are five fundamental principles of environmentally sustainable design, including: siting and structure design efficiency; energy efficiency; water efficiency; materials efficiency; and indoor air quality enhancement.

For detailed information on each of the items below, please refer to the *Your Home Technical Manual* at: www.yourhome.gov.au, and *Energy Smart Homes* at: www.clean.energy.wa.gov.au.

This checklist must be submitted with the planning application for all new residential, commercial and mixed-use buildings and redevelopments (excluding single and grouped dwellings, internal fit outs and minor extensions) in the City of Joondalup.

The City will seek to prioritise the assessment of your planning application and the associated building application if you can demonstrate that the development has been designed and assessed against a national recognised rating tool.

Please tick the boxes below that are applicable to your development.

Siting and structure design efficiency

Environmentally sustainable design seeks to affect siting and structure design efficiency through site selection, and passive solar design.

Does your development retain:

- ☐ existing vegetation; and/or
- ☒ natural landforms and topography

Does your development include:

- ☒ northerly orientation of daytime living/working areas with large windows, and minimal windows to the east and west
- ☒ passive shading of glass
- ☒ sufficient thermal mass in building materials for storing heat
- ☒ insulation and draught sealing
- ☒ floor plan zoning based on water and heating needs and the supply of hot water; and/or
- ☐ advanced glazing solutions

Energy efficiency

Environmentally sustainable design aims to reduce energy use through energy efficiency measures that can include the use of renewable energy and low energy technologies.

Do you intend to incorporate into your development:

- ☐ renewable energy technologies (e.g. photo-voltaic cells, wind generator system, etc); and/or
- ☒ low energy technologies (e.g. energy efficient lighting, energy efficient heating and cooling, etc); and/or
- ☒ natural and/or fan forced ventilation

Water efficiency

Environmentally sustainable design aims to reduce water use through effective water conservation measures and water recycling. This can include stormwater management, water reuse, rainwater tanks, and water efficient technologies.

Does your development include:

- ☐ water reuse system(s) (e.g. greywater reuse system); and/or
- ☐ rainwater tank(s)

Do you intend to incorporate into your development:

- ☒ water efficient technologies (e.g. dual-flush toilets, water efficient showerheads, etc)

Materials efficiency

Environmentally sustainable design aims to use materials efficiently in the construction of a building. Consideration is given to the lifecycle of materials and the processes adopted to extract, process and transport them to the site. Wherever possible, materials should be locally sourced and reused on-site.

Does your development make use of:

- ☐ recycled materials (e.g. recycled timber, recycled metal, etc)
- ☒ rapidly renewable materials (e.g. bamboo, cork, linoleum, etc); and/or
- ☐ recyclable materials (e.g. timber, glass, cork, etc)
- ☐ natural/living materials such as roof gardens and "green" or planted walls

Indoor air quality enhancement

Environmentally sustainable design aims to enhance the quality of air in buildings, by reducing volatile organic compounds (VOCs) and other air impurities such as microbial contaminants.

Do you intend to incorporate into your development:

- ☒ low-VOC products (e.g. paints, adhesives, carpet, etc)

'Green' Rating

Has your proposed development been designed and assessed against a nationally recognised "green" rating tool?

- ☐ Yes
- ☒ No

If yes, please indicate which tool was used and what rating your building will achieve:

As part of project design development, the design will be assessed in accordance with energy rating software by a qualified and certified energy consultant.

If yes, please attach appropriate documentation to demonstrate this assessment.

If you have not incorporated or do not intend to incorporate any of the principles of environmentally sustainable design into your development, can you tell us why:


Is there anything else you wish to tell us about how you will be incorporating the principles of environmentally sustainable design into your development:

Landscape Plans in accordance with Desing WA, susbstantail Deep Soil Zones to the Western Boundaries over abd above Design WA.

When you have checked off your checklist, sign below to verify you have included all the information necessary to determine your application.

Thank you for completing this checklist to ensure your application is processed as quickly as possible.

Applicant's Full Name: GILES HARDEN JONES Contact Number: 0412 002 618

Applicant's Signature:  Date Submitted: 23.07.2019

Accepting Officer's Signature: _____

Checklist Issued: March 2011



Government of **Western Australia**
Development Assessment Panels

LG Ref: DA18/1276
DAP Ref: DAP/18/01536
Enquiries: (08) 6551 9919

Mr Giles Harden Jones
Harden Jones Architects
8/300 Rokeby Road
Subiaco WA 6008

Dear Mr Harden Jones

**METRO NORTH-WEST JDAP - CITY OF JOONDALUP - DAP APPLICATION -
DA18/1276 - DETERMINATION**

| | |
|----------------------|--|
| Property Location: | Lot 96 & 97 (9 & 11) Davallia Road, Duncraig |
| Application Details: | 13 Multiple Dwellings |

Thank you for your Form 1 Development Assessment Panel (DAP) application and plans submitted to the City of Joondalup on 27 November 2018 for the above-mentioned development.

This application was considered by the Metro North-West JDAP at its meeting held on 25 March 2019, where in accordance with the provisions of the City of Joondalup Local Planning Scheme No.3, it was resolved to **refuse** the application as per the attached notice of determination.

Please be advised that there is a right of review by the State Administrative Tribunal in accordance with Part 14 of the *Planning and Development Act 2005*. Such an application must be made within 28 days of the determination, in accordance with the *State Administrative Tribunal Act 2004*.

Should you have any queries with respect to the reasons for refusal, please contact Ms Sonya Hayes on behalf of the City of Joondalup on 9400 4296.

Yours sincerely,

DAP Secretariat

2 April 2019

Encl. DAP Determination Notice
Refused Plans

Cc: Ms Sonya Hayes
City of Joondalup



Planning and Development Act 2005

City of Joondalup Local Planning Scheme No.3

Metro North-West Joint Development Assessment Panel

Determination on Development Assessment Panel Application for Planning Approval

Property Location: Lot 96 & 97 (9 & 11) Davallia Road, Duncraig
Application Details: 13 Multiple Dwellings

In accordance with regulation 8 of the *Planning and Development (Development Assessment Panels) Regulations 2011*, the above application for planning approval was **refused** on 25 March 2019, subject to the following:

Refuse DAP Application reference DAP/18/01536 and accompanying plans (Attachment 2) in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, the *Metropolitan Region Scheme* and the provisions of the *City of Joondalup Local Planning Scheme No. 3*, for the following reasons:

1. The proposal is not considered to meet the design principles of part 6.1.1 (Building size) of the Residential Design Codes of WA, resulting in an undue impact of bulk which is inconsistent with the existing and future desired built form of the locality.
2. The proposal is not considered to meet the design principles of part 6.1.2 (Building height) of the Residential Design Codes of WA, resulting in an adverse impact on the amenity of the adjoining properties and streetscape.
3. The proposal is not considered to meet the design principles of part 6.1.3 (Street setbacks) of the Residential Design Codes of WA, resulting in undue bulk that does not contribute to the desired streetscape.
4. The proposal is not considered to meet the design principles of part 6.1.4 (Lot boundary setbacks) of the Residential Design Codes of WA, resulting in undue bulk as viewed from the adjoining properties.
5. The proposal is not considered to meet the design principles of part 6.4.2 (Solar access for adjoining sites) of the Residential Design Codes of WA, resulting in undue overshadowing of the adjoining property's indoor and outdoor living areas.
6. The proposal is not considered to meet the design principles of part 6.3.4 (Design of car parking spaces) of the Residential Design Codes of WA, resulting in visitor parking that is not conveniently located.



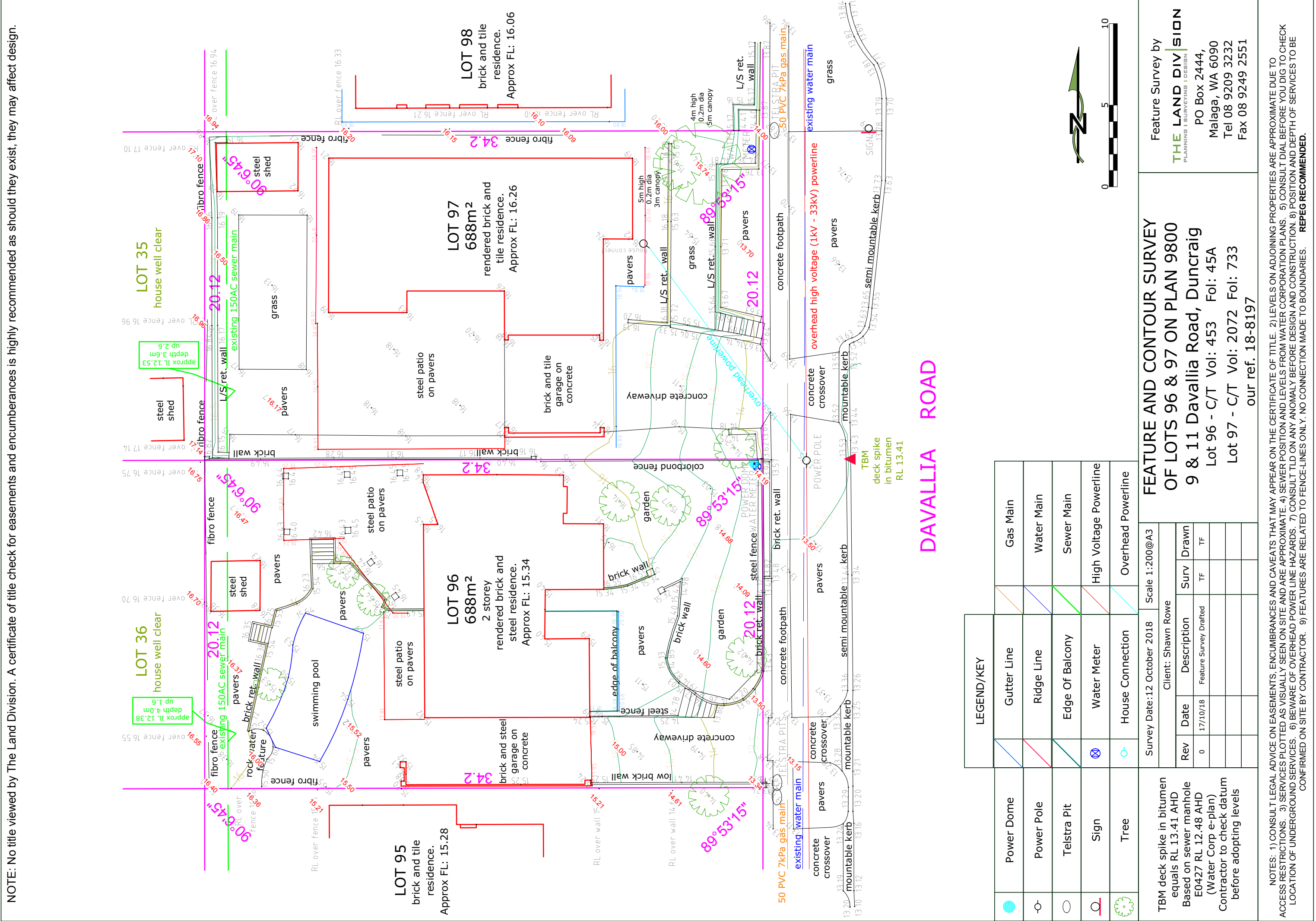
7. The proposal does not satisfy the matters to be considered under clause 67(c), clause 67(m), clause 67(n) and clause (u)(iii) of Schedule 2, Part 9 of the Planning and Development (Local Planning Schemes) Regulations 2015, as:
- i. the proposal is not consistent with Schedule 1 – Design Principles of State Planning Policy 7: Design of the Built Environment as the massing and height of the development is not appropriate to its setting and does not successfully provide an appropriate transition between existing built form and the intended future character of the local area;
 - ii. the appearance of the development is not compatible with development on adjoining land and on other land in the locality from the perspective of height, bulk, scale and form;
 - iii. the development has a detrimental impact on the character of the locality due to its height, bulk and scale;
 - iv. the cumulative impact of the discretions sought in relation to building size, building height, street setback lot boundary setbacks and solar access for adjoining sites result in a development which is considered greater than the site should accommodate;
 - v. the collection of waste is unsatisfactory and poses an increased traffic risk.



11 & 9 DAVALLIA ROAD, DUNCRAIG

[illegible]

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SITE CONTEXT

NOT TO SCALE



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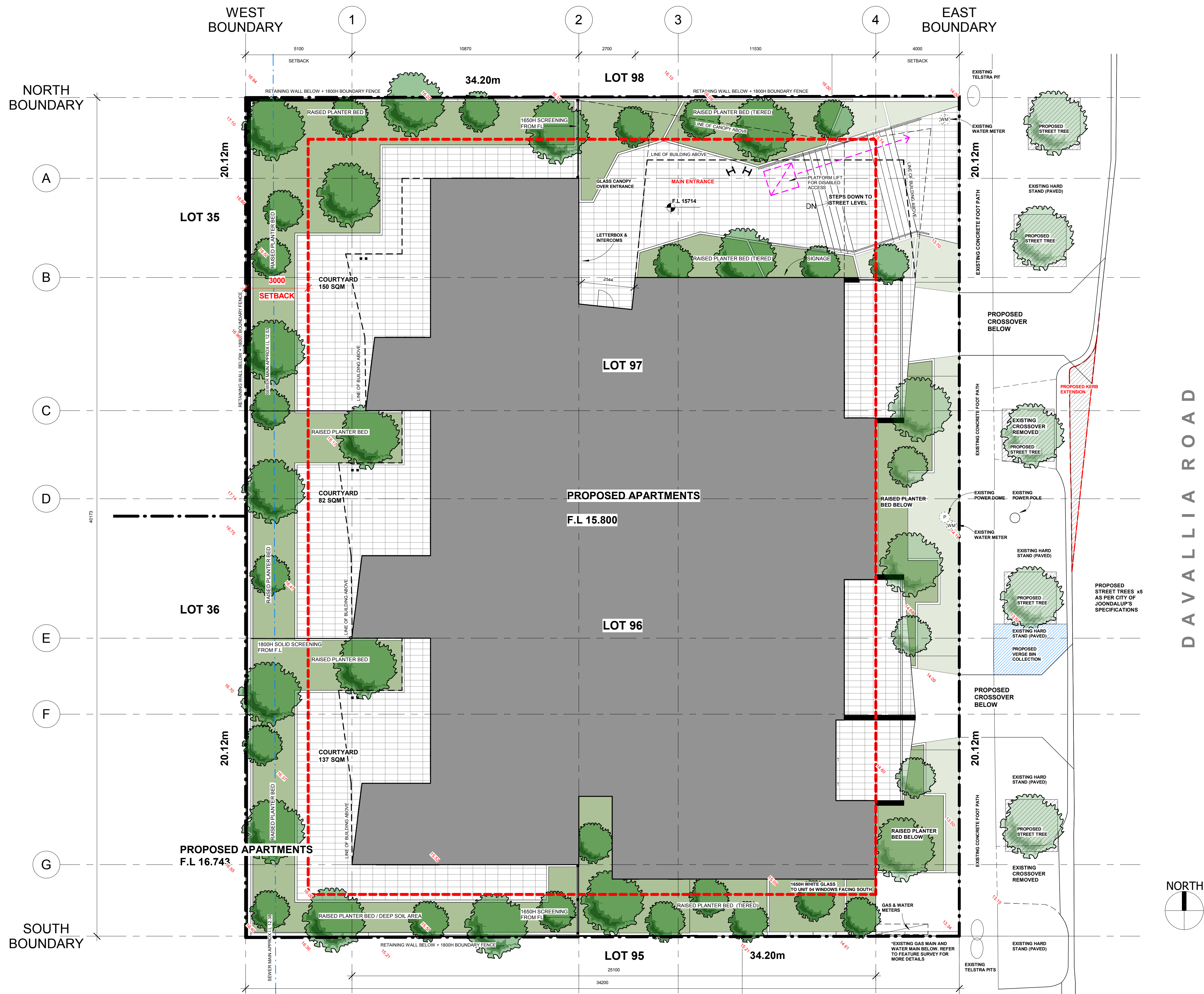
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11 & 9 DAVALLIA ROAD_DUNCRAIG

JDAP SUBMISSION - DA003

A102

5/03/2019 10:47:11 AM



DAVALLIA ROAD

DEVELOPMENT
ASSESSMENT PANEL

REFUSED

25-Mar-2019



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11 & 9 DAVALLIA ROAD_DUNCRAIG

JDAP SUBMISSION - DA003

A103

5/03/2019 10:47:15 AM

1 SITE PLAN

1 : 100

1:100 @ A1

1:200 @ A3



1. GROUND FLOOR
1 : 100

DEVELOPMENT
ASSESSMENT PANEL
REFUSED
25-Mar-2019



CHAIR LIFT (MAIN ENTRY)
UNIVERSAL ACCESS

| APARTMENT AREAS | | | |
|---|-----------------------------------|---------------------------------------|----------------------------|
| 13 APARTMENTS. | 12x (2x2) 1x (1x1) | SITE AREA: 1376 sqm | |
| | INTERNAL AREA (PAINT TO PAINT) | GROSS FLOOR AREA (INCLUDING WALLS) | COURTYARD/ BALCONY AREA |
| GROUND FLOOR | | | |
| UNIT 1 | 78 | 85 | 150 |
| UNIT 2 | 82 | 88 | 82 |
| UNIT 3 | 82 | 90 | 137 |
| UNIT 4 | 82 | 89 | 12 |
| UNIT 5 | 86 | 92 | 17 |
| UNIT 6 | 84 | 90 | 17 |
| FIRST FLOOR | | | |
| UNIT 7 | 78 | 85 | 16 |
| UNIT 8 | 82 | 88 | 18 |
| UNIT 9 | 82 | 90 | 18 |
| UNIT 10 | 82 | 89 | 12 |
| UNIT 11 | 86 | 92 | 17 |
| UNIT 12 | 84 | 90 | 17 |
| UNIT 13 | 50 | 55 | 14 |
| TOTAL: | 1038 SQM | 1123 SQM | 527 SQM |
| PLOT RATIO PROPOSED: (GROSS FLOOR AREA USED) | | 0.81 (1123) | |

CAR PARKING (LOCATION B)
25 RESIDENTIAL BAYS + 2 ACROD VISITOR BAYS
1 BAY PER 1x1 APARTMENT
2 BAYS PER 2x2 APARTMENT
(1 RESIDENTIAL & 1 VISITOR BAY EXCLUSIVE USE ONLY)
VISITOR PARKING TO BE LED ILLUMINATED.
BIKE PARKING
WALL HUNG BIKES RACKS (CAR PARK LEVEL)
3 x VISITOR
RESIDENTIAL BIKE RACKS
1 PER APT. WITHIN STORE

BIN ENCLOSURE & HARD WASTE STAND
GENERAL
240L LITRES SULO BINS x 9
RECYCLING
360L LITRES SULO BINS x 3
GARDEN WASTE
240L LITRES SULO BIN x 1
CONC FLOOR & FW
DRAINED TO SEWER SYSTEM. TAP FOR
WASH DOWN. H & C WATER REQUIRED.
WASTE & RECYCLING BINS CALCS AS PER WALGA MULTIPLE
DWELLING
WASTE MANAGEMENT PLAN GUIDELINES
BIN DOOR TRACKS TO BE INSET INTO SLAB FLUSH MOUNTED
FOR BIN ACCESS



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11 & 9 DAVALLIA ROAD_DUNCRAIG
JDAP SUBMISSION - DA003
A202



1 1. FIRST FLOOR
1 : 100

DEVELOPMENT
ASSESSMENT PANEL
REFUSED
25-Mar-2019



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1:100 @ A1
1:200 @ A3

11 & 9 DAVALLIA ROAD_DUNCRAIG
JDAP SUBMISSION - DA003
A203
5/03/2019 10:47:50 AM



1 SHADOW DIAGRAM
1 : 200



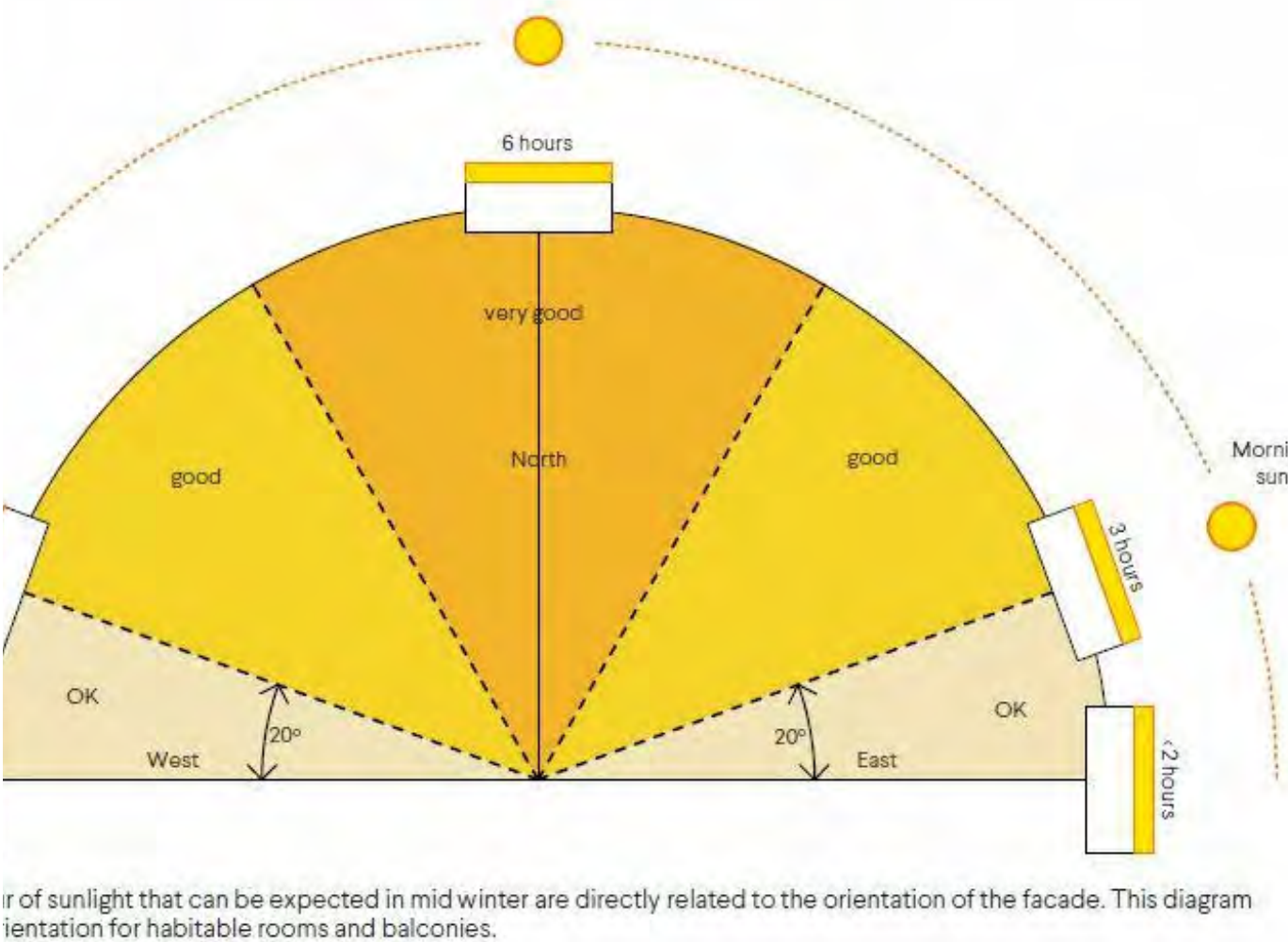
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1 SOLAR ACCESS & CROSS VENTILATION DIAGRAM - FIRST FLOOR
1 : 100

DESIGN WA - APARTMENT DESIGN
VOLUME TWO OF STATE PLANNING POLICY NO. 7.3 RESIDENTIAL DESIGN CODES
GUIDANCE FOR MULTIPLE-DWELLING AND MIXED-USE DEVELOPMENTS

4.1 SOLAR AND DAYLIGHT ACCESS
(ILLUSTRATED ON PROPOSED DESIGN) - CLIMATE ZONE 5

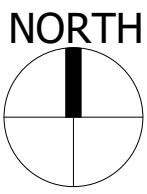


4.2 NATURAL VENTILATION/CROSS VENTILATION
(ILLUSTRATED ON PROPOSED DESIGN) - IN BLUE DOTTED LINES



WINDOWS ABOVE ENTRY DOORS

- VENTILATION SOLUTIONS:**
- WINDOWS ABOVE ENTRY DOORS
 - LOUVERS/AWNING WINDOWS TO FOYER



**DEVELOPMENT
ASSESSMENT PANEL**

REFUSED

25-Mar-2019



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1:100 @ A1
1:200 @ A3

11 & 9 DAVALLIA ROAD_DUNCRAIG
JDAP SUBMISSION - DA003
A209



| LANDSCAPING/DEEP SOIL AREAS | |
|--|--------------------------|
| SITE AREA (COMBINED) | 1376 sqm |
| DEEP SOIL AREAS REQUIRED SOFT LANDSCAPING: (10% OF SITE AREA REQUIRED) | 137.6 sqm (10%) |
| STREET LEVEL DEEP SOIL AREAS | 91 sqm (6.6%) |
| GROUND FLOOR DEEP SOIL AREAS | 311 sqm (22.6%) |
| ROOF TERRACE DEEP SOIL AREAS | 30 sqm (2.1%) |
| TOTAL DEEP SOIL AREA PROVIDED: | 432 sqm (31.3%) PROVIDED |

DEVELOPMENT
ASSESSMENT PANEL

REFUSED

25-Mar-2019



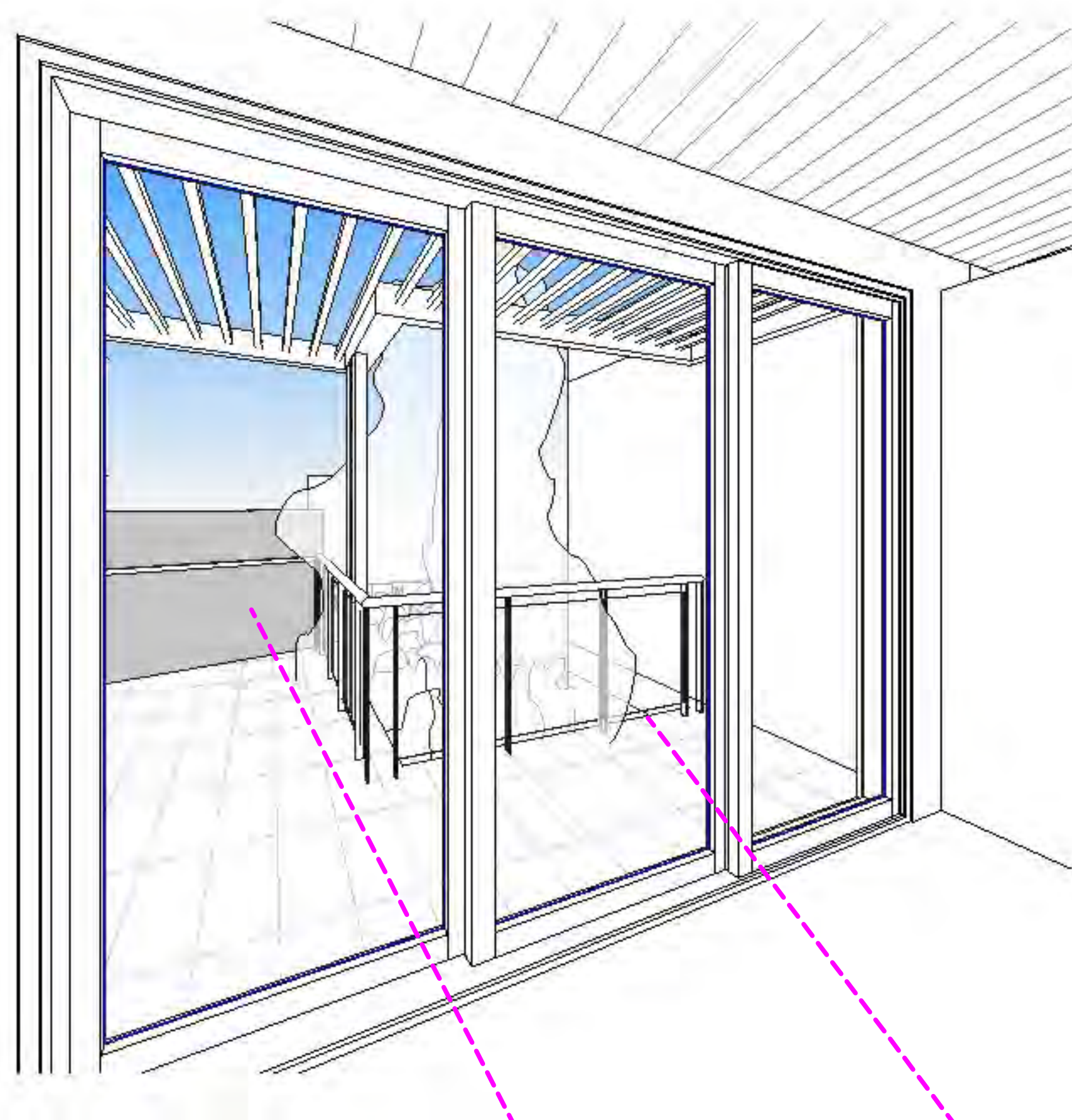
HARDENJONESARCHITECTS

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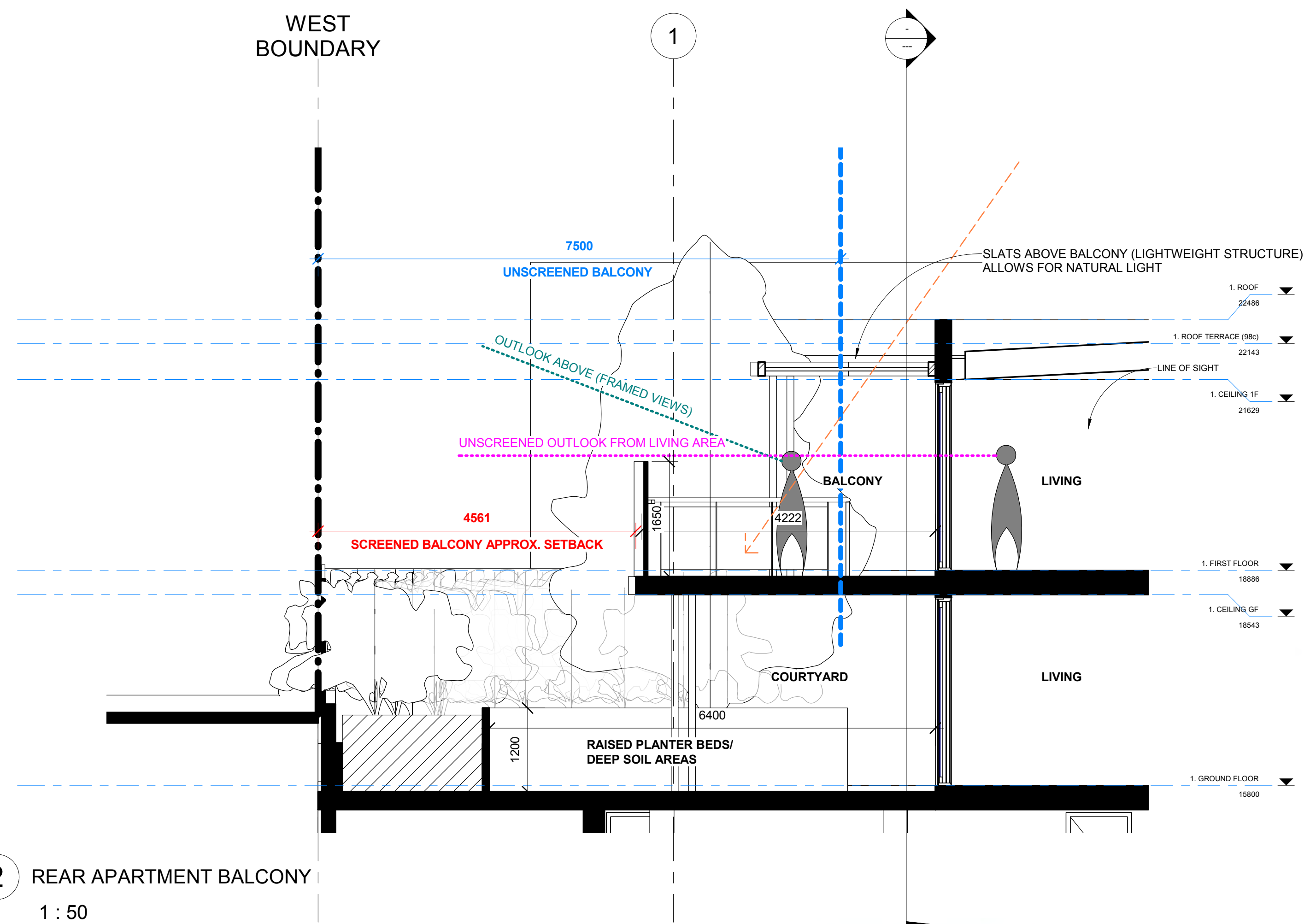
1 LANDSCAPE PLAN - GROUND FLOOR
1 : 100

1:100 @ A1
1:200 @ A3

11 & 9 DAVALLIA ROAD_DUNCRAIG
JDAP SUBMISSION - DA003
A210



1 REAR APARTMENTS - LIVING ROOM VIEW



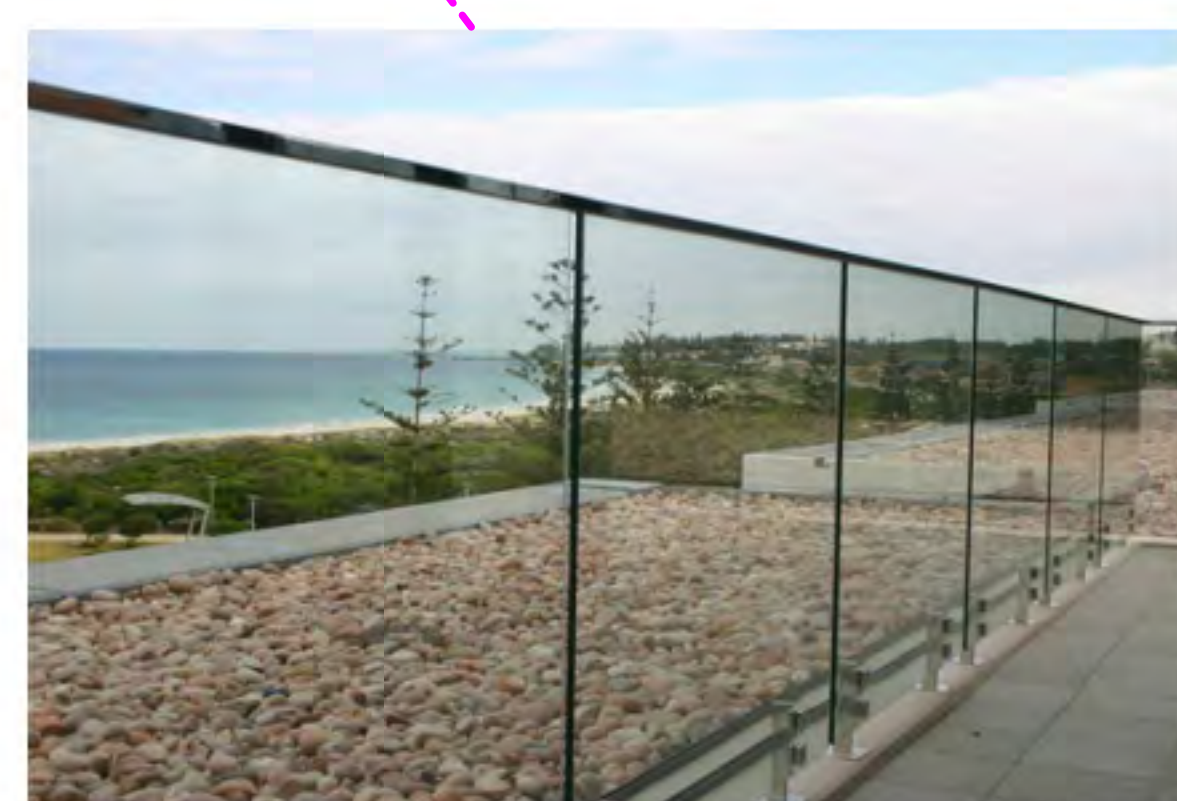
2 REAR APARTMENT BALCONY
1:50



PRIVATE OPEN SPACE CONCEPT



PERFORATED SCREENING TO BALCONY
SCREENING PERMEABILITY AS PER DESIGN GUIDELINES



GLASS BALUSTRADING



OUTLOOK ABOVE (FRAMED VIEWS)

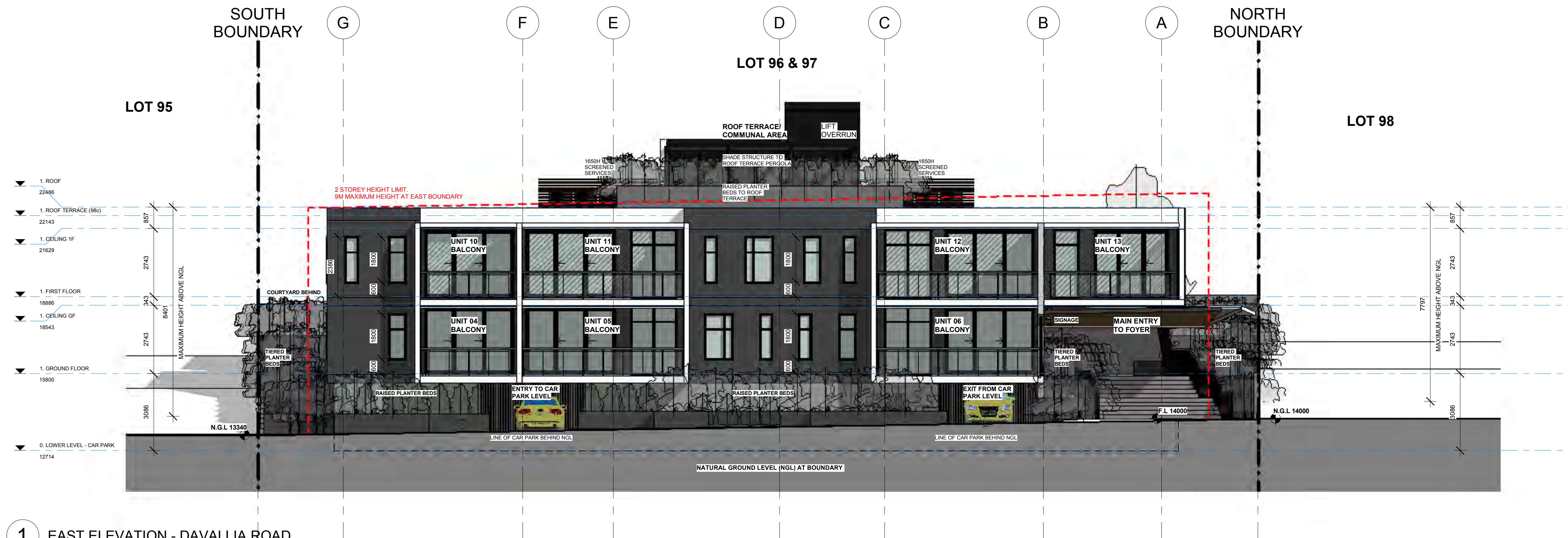


PERFORATED SCREENING & NATURAL LIGHT

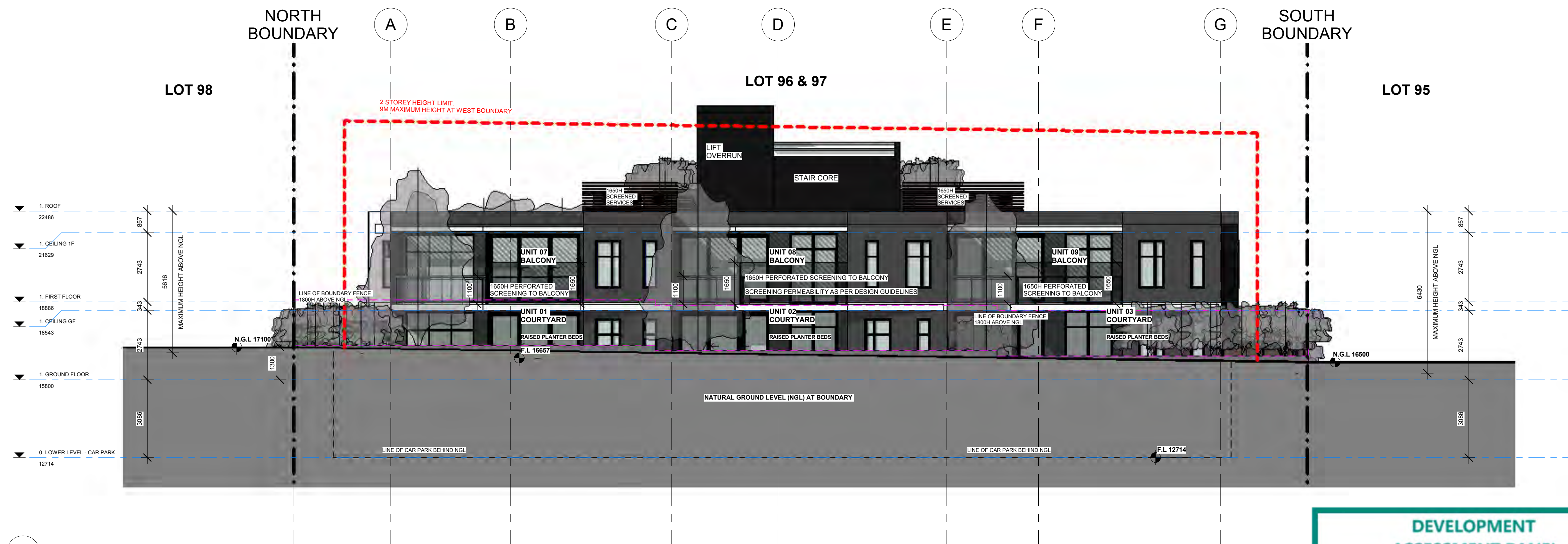
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NOT TO SCALE

11 & 9 DAVALLIA ROAD_DUNCRAIG
JDAP SUBMISSION - DA003
A211
5/03/2019 10:51:17 AM



1 EAST ELEVATION - DAVALLIA ROAD
1 : 100

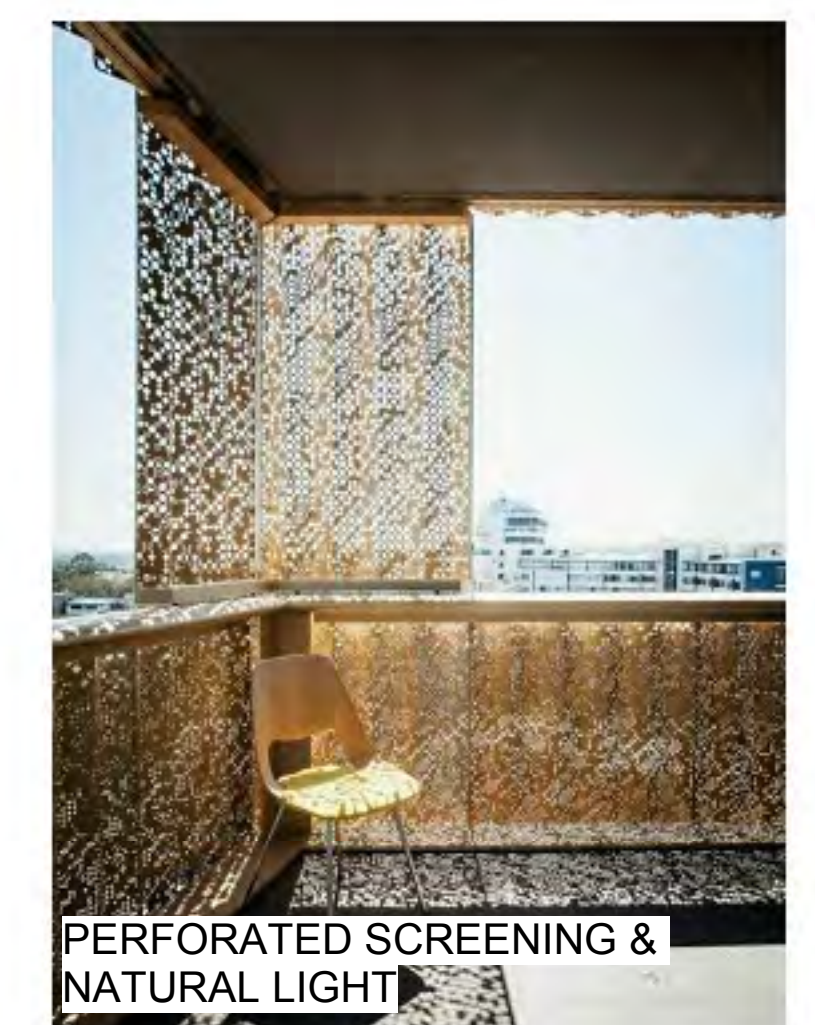


2 WEST ELEVATION
1 : 100

DEVELOPMENT
ASSESSMENT PANEL

REFUSED

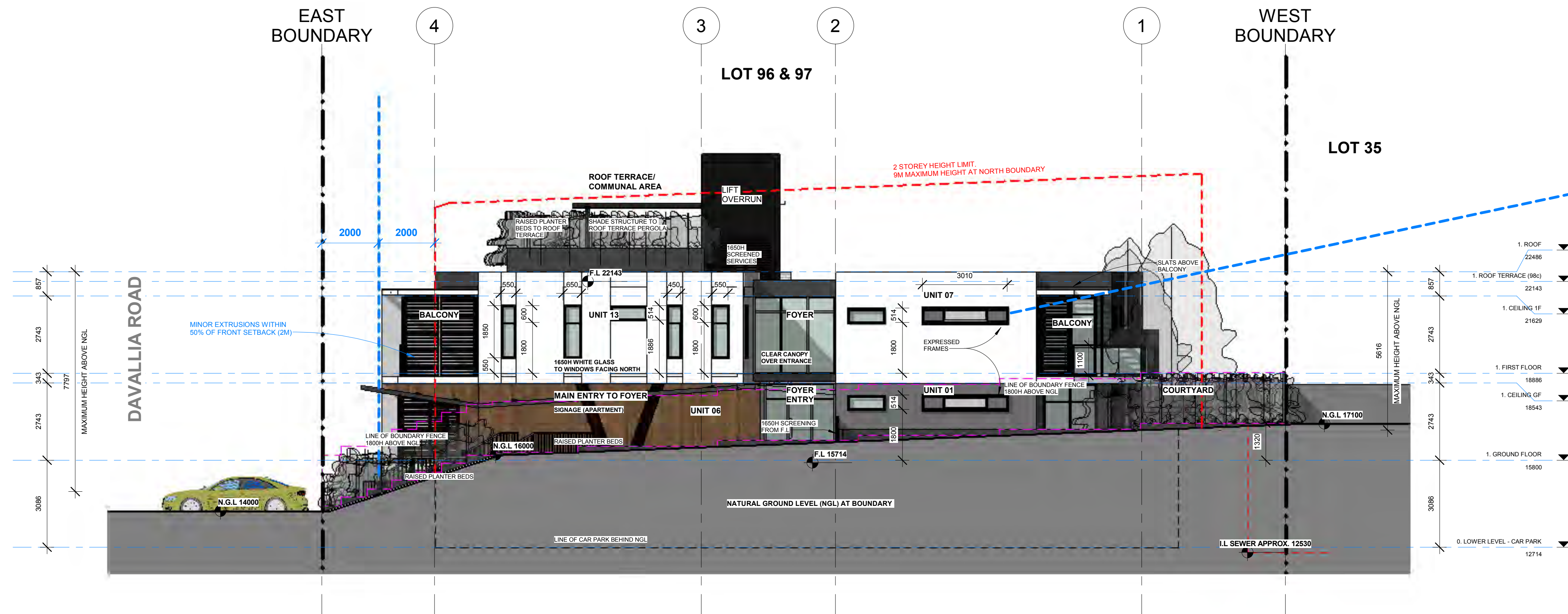
25-Mar-2019



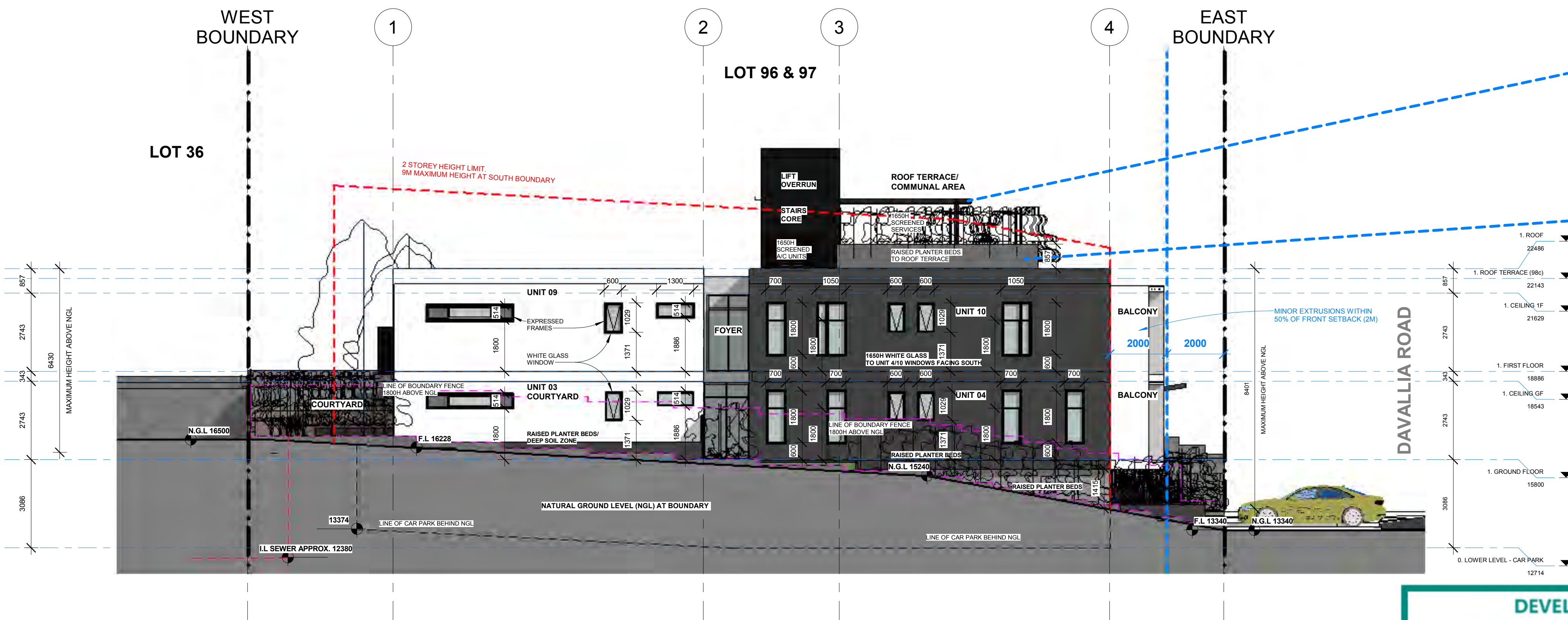
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1:100 @ A1
1:200 @ A3

11 & 9 DAVALLIA ROAD_DUNCRAIG
JDAP SUBMISSION - DA003
A301
5/03/2019 10:51:22 AM



1 NORTH ELEVATION
1:100



2 SOUTH ELEVATION
1:100

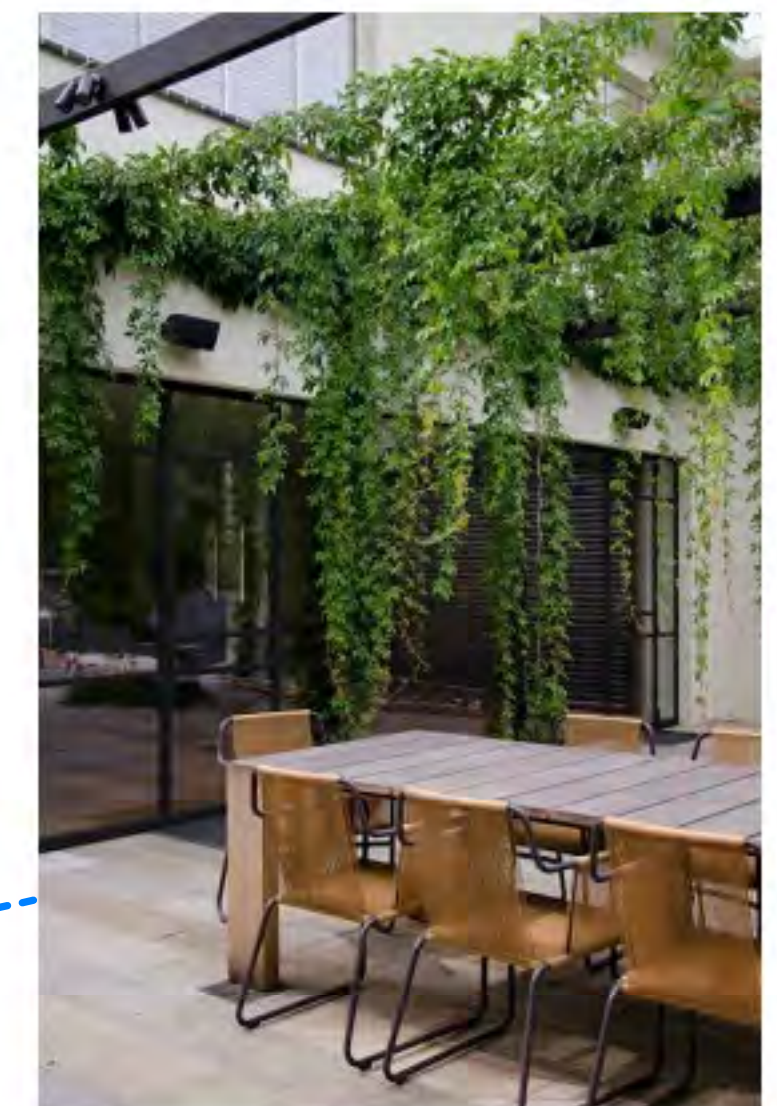
DEVELOPMENT
ASSESSMENT PANEL

REFUSED

25-Mar-2019



EXPRESSED FRAMES



VERTICAL LANDSCAPING TO ARBOURS



PLANTER BEDS



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1:100 @ A1
1:200 @ A3

11 & 9 DAVALLIA ROAD_DUNCRAIG
JDAP SUBMISSION - DA003
A302

5/03/2019 10:51:27 AM



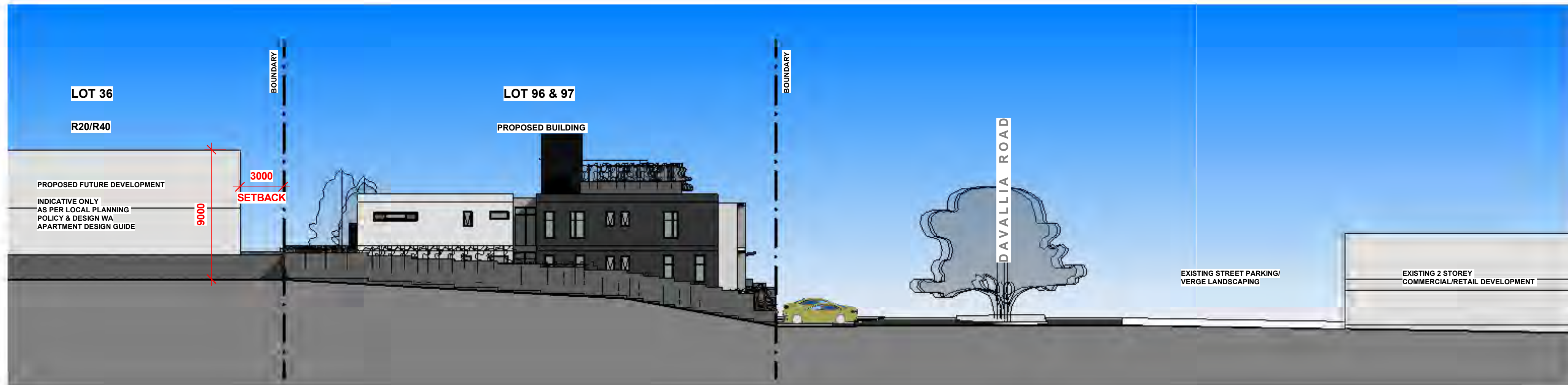
1 STREET ELEVATION - DAVALLIA ROAD ((FUTURE DEVELOPMENT ADDED))
1 : 200



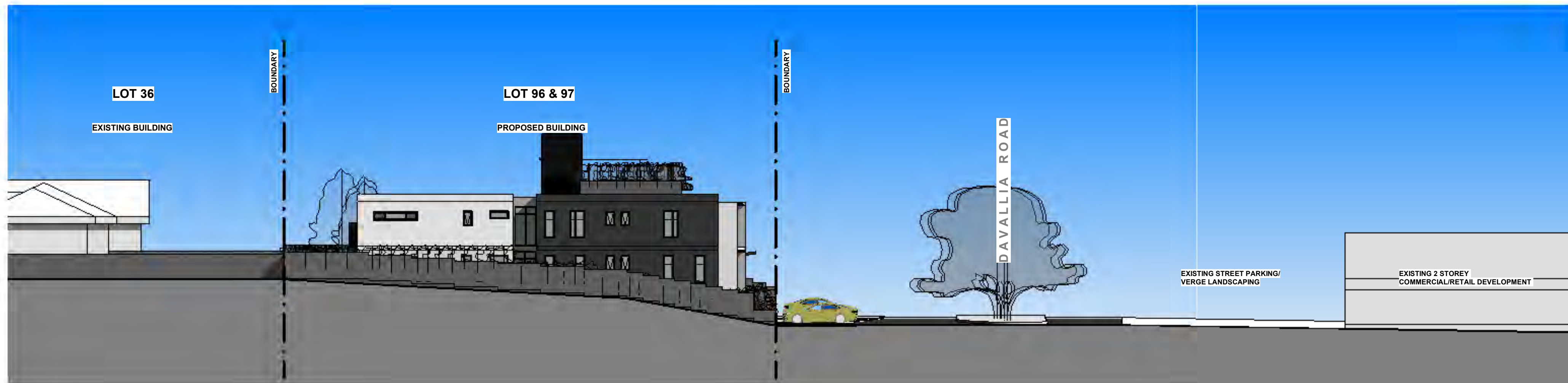
2 STREET ELEVATION - DAVALLIA ROAD (EXISTING)
1 : 200



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1 CONTEXT (FUTURE DEVELOPMENT ADDED)
1 : 200



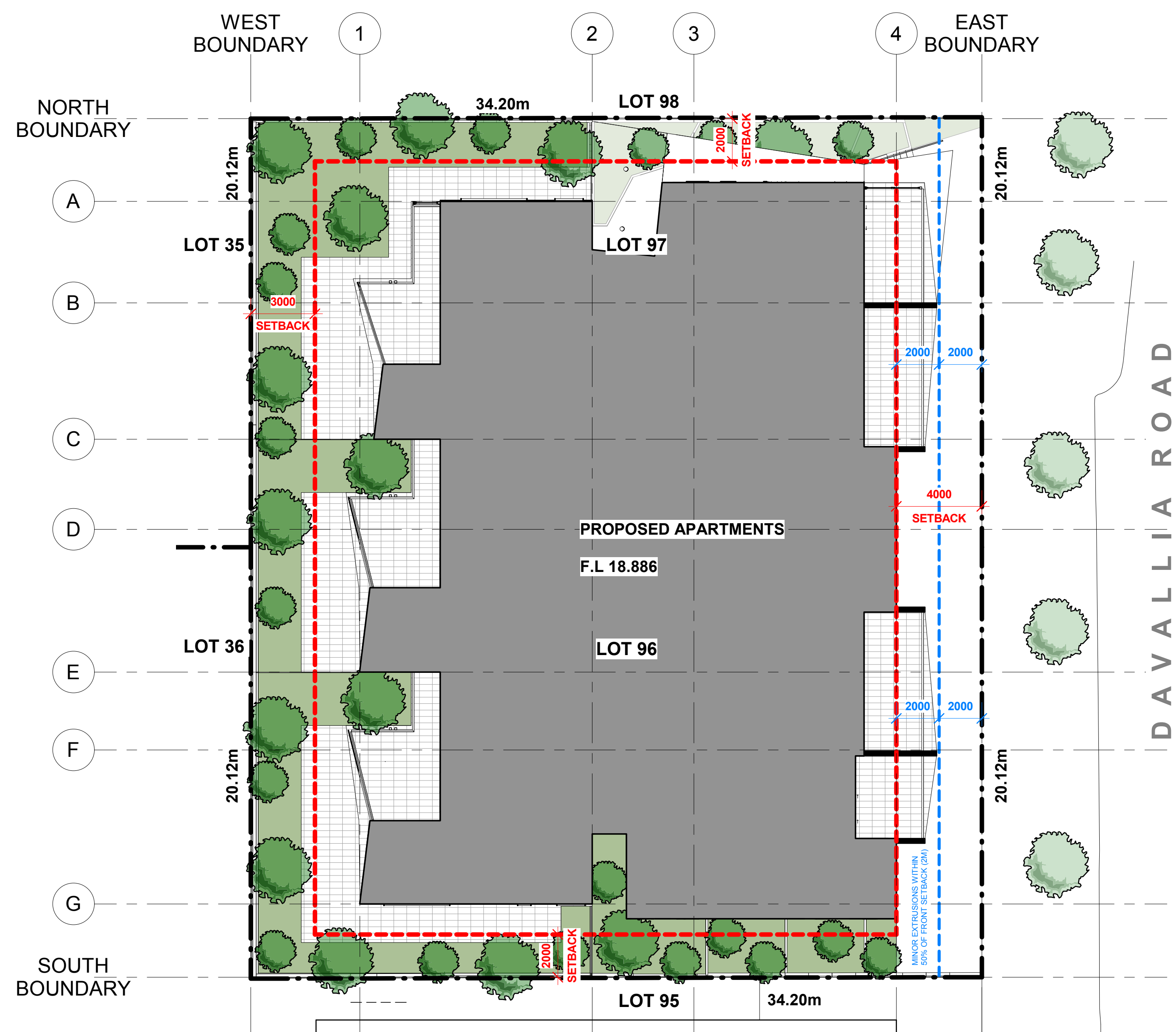
2 CONTEXT (EXISTING)
1 : 200

DEVELOPMENT
ASSESSMENT PANEL

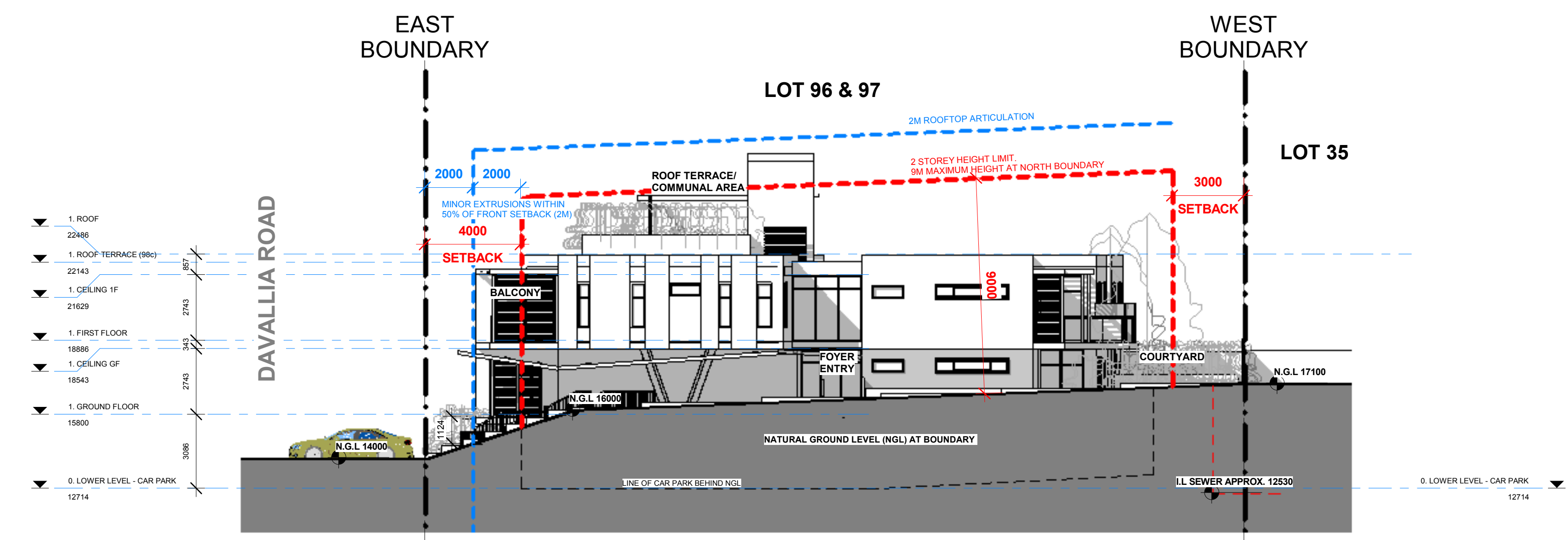
REFUSED
25-Mar-2019



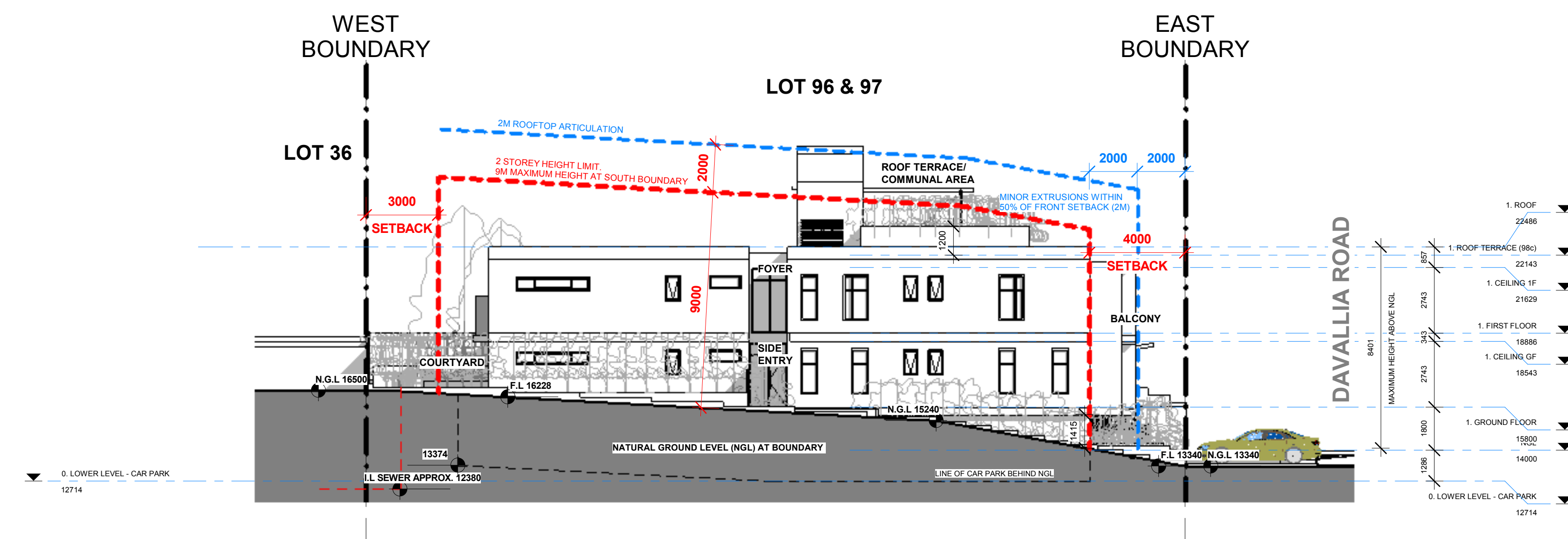
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BUILDING ENVELOPES - FIRST FLOOR PLAN



BUILDING ENVELOPES - NORTH ELEVATION



BUILDING ENVELOPES - SOUTH ELEVATION

**DEVELOPMENT
ASSESSMENT PANEL**

REFUSED
25-Mar-2019

BUILDING ENVELOPE DIAGRAMS

NOT TO SCALE

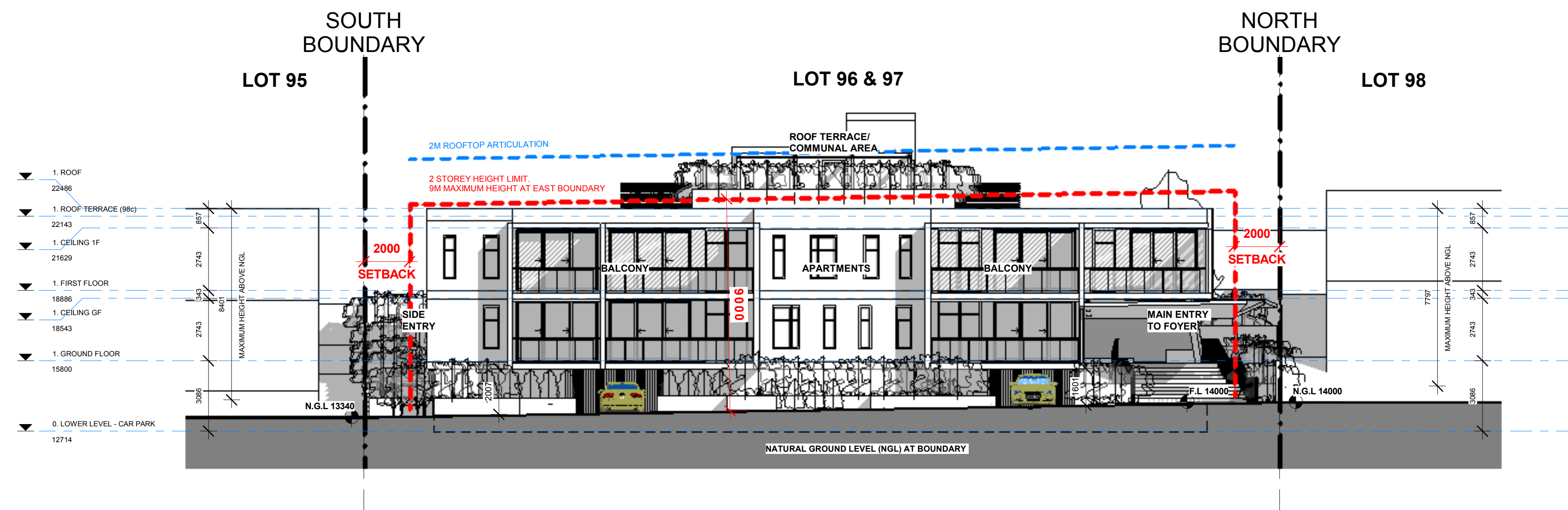
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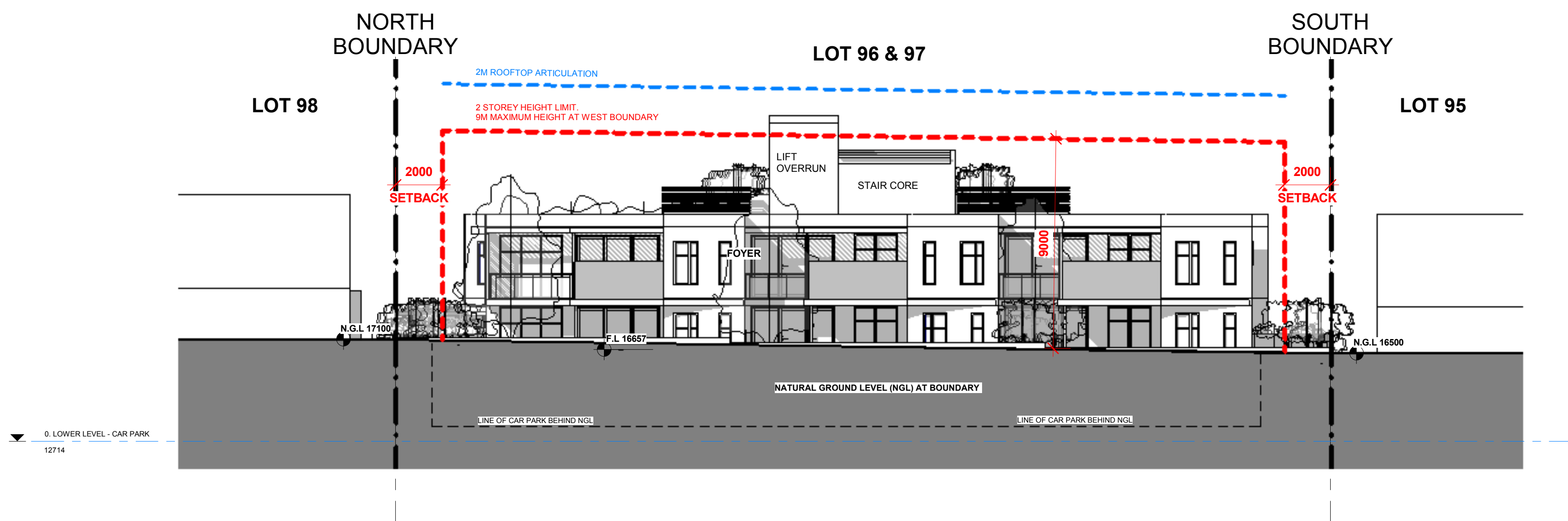
11 & 9 DAVALLIA ROAD_DUNCRAIG
JDAP SUBMISSION - DA003

A601

5/03/2019 10:51:39 AM



BUILDING ENVELOPES - EAST ELEVATION



BUILDING ENVELOPES - WEST ELEVATION

DEVELOPMENT
ASSESSMENT PANEL

REFUSED

25-Mar-2019

City of Joondalup SPP 7.3 assessment summary

| Element | Objectives | Acceptable Outcome | Proposed | Design guidance |
|-----------------------------------|--------------|---|---|-----------------|
| 2.2 Building height | Achieved | 2 storeys (9m) | 2 storeys (8.7m) | Not applicable |
| 2.3 Street setbacks | Achieved | Replaced by CoJ RDLPP: 2m min. 4m avg. Minor incursions can occupy 50% of the frontage | 2.66m min. 4.18m avg. Balconies occupy 52.1% of the frontage but are compensated by open space. | Not applicable |
| 2.4 Side and rear setbacks | Achieved | Side 2m min Rear 3m min 2.4m avg required for walls greater than 16m And/or Greater setback required for visual privacy. (A2.4.1) | Southern side 3m min and 3.7m average Northern side 2.475m min and 2.83m average Rear >3m (7.5m) average Greater setback not provided for visual privacy from Unit 4 ground floor terrace. | Not applicable |
| 2.5 Plot ratio | Achieved | 0.6 (825.6m ²) (A2.5.1) | 0.79 (1088.9m ²) | Not applicable |
| 2.6 Building depth | Achieved | 20m (A2.6.1) Other proposals assessed on merits. | 23.9m (U12/13 to U7 & U10/11 to U8/9) | Not applicable |
| 2.7 Building separation | Achieved | Refer to 2.4 <i>Side and rear setbacks</i> (Table 2.1) and 3.5 <i>Visual privacy</i> (Table 3.5) (A2.7.1). | 2.4 <i>Side and rear setbacks</i> (Table 2.1) and 3.5 <i>Visual privacy</i> (Table 3.5) met. | Not applicable |
| 3.2 Orientation | Not achieved | Buildings on street orientated to face public realm and incorporate direct access from the street (A3.2.1). 25% (A3.2.3) Buildings orientated to maintain 4 hours per day for existing solar collectors on neighbouring site. | Building is orientated to the public realm and incorporates direct street access. 26.67% Solar collectors on adjoining site not shadowed as indicated in the overshadowing diagram. | Not satisfied |
| 3.3 Tree canopy and | Not achieved | Retention of trees (A3.3.1/A3.3.2). | Removal of tree 4m height, 0.2m trunk | Not satisfied |

| Element | Objectives | Acceptable Outcome | Proposed | Design guidance |
|-------------------------|--------------|---|---|-----------------|
| deep soil areas | | <p>No detrimental impacts on canopy of adjoining trees (A3.3.3).</p> <p>Deep soil area 137.9sqm and provided conducive to tree growth and suitable for communal open space (A3.3.4)</p> <p>1 large tree and 1 medium tree (A3.3.5).</p> <p>Permeable paving or decking within deep soil not exceed 20% of its area and not inhibit trees (A3.3.6).</p> | <p>and 5m canopy in north-eastern corner.</p> <p>Adjoining trees not indicated on the survey plan.</p> <p>Deep soil area 250sqm and provided conducive to tree growth and suitable for communal open space.</p> <p>12 small trees.</p> <p>Paving <20% and does not inhibit trees.</p> | |
| 3.4 Communal open space | Not achieved | <p>78m² communal open space (A3.4.1).</p> <p>Communal open space accessible from primary street entry (A3.4.2).</p> <p>50% direct sun (A3.4.3).</p> <p>Co-located with deep soil areas (A3.4.4).</p> <p>Separated or screened from adverse amenity impacts (A3.4.5).</p> <p>Well lit, minimises concealment and open passive surveillance (A3.4.6).</p> <p>Separation between communal/ private open spaces in relation to noise, odour, light and privacy (A3.4.7).</p> | <p>94.5m² communal open space</p> <p>Accessed via lobby entrance.</p> <p>>50% direct sun</p> <p>Co-located with deep soil areas.</p> <p>No adjoining adverse amenity sources.</p> <p>Located adjacent to Unit 1 alfresco/courtyard.</p> <p>Unit 1 courtyard and open space separated by 1m high planter only.</p> | Not satisfied |
| 3.5 Visual privacy | Not achieved | <p>Visual privacy setbacks: 4.5m to bedroom</p> | <p>Bedrooms facing north and south screened.</p> | Not satisfied |

| Element | Objectives | Acceptable Outcome | Proposed | Design guidance |
|------------------------------------|------------|--|---|-----------------|
| | | <p>7.5m to balcony (A3.5.1)</p> <p>Balconies unscreened at least 25% (A3.5.2).</p> <p>Living rooms have external outlook (A3.5.3).</p> <p>Windows and balconies restrict direct overlooking. (A3.5.4)</p> | <p>7.51m to balconies & nil to Unit 4 terrace.</p> <p>Balconies unscreened >25%</p> <p>All living rooms have major opening with external outlook.</p> <p>All windows and balconies meet requirements of A3.5.1 & A3.5.2).</p> <p>Direct overlooking into Unit 1 and Unit 2 living areas from the communal open space access passage.</p> | |
| 3.6 Public domain interface | Achieved | <p>Ground floor dwellings direct access from street. (A3.6.1)</p> <p>Car-parking not located within primary street setback area (A3.6.2).</p> <p>Balconies and/or windows overlook public domain (A3.6.3)</p> <p>Balustrading provides privacy for residents and achieves surveillance of adjoining public domain (A3.6.4).</p> <p>Level changes to the street: 1m avg. 1.2m max (A3.6.5).</p> <p>Front fencing visually permeable above 1.2m (A3.6.6)</p> | <p>Direct access to ground floor units is from the foyer area. No direct access from the street.</p> <p>Car-parking located behind primary street area.</p> <p>Balconies and/or windows overlook public domain.</p> <p>Balustrading does not achieve privacy for residents (Units 4, 5, 6, 10, 11, 12 and 13).</p> <p>2m avg 2.3m max</p> <p>All balustrading to balconies are glazed and visually permeable above 1.1m</p> | Satisfied |

| Element | Objectives | Acceptable Outcome | Proposed | Design guidance |
|--|------------|---|--|-----------------|
| | | <p>Elements on frontage eliminate opportunities for concealment (A3.6.7).</p> <p>Bins not located within primary street setback area (A3.6.7).</p> <p>Services and utilities located within primary street setback area integrated into the development (A3.6.8).</p> | <p>Elements on frontage eliminate opportunities for concealment.</p> <p>Bins located outside primary street setback area and screened by gate.</p> <p>Gas and water metres located within street setback area (located in the southern corner portion of the site).</p> | |
| 3.7 Pedestrian access and entries | Achieved | <p>Pedestrian entries connected (A3.7.1)</p> <p>Pedestrian entries protected from weather (A3.7.2).</p> <p>Pedestrian entries well-lit, visible from public domain and enable casual surveillance (A3.7.3).</p> <p>Pedestrian access via shared zone, path is clearly delineated and/or incorporated to prioritise pedestrian and constrain vehicle speed (A3.7.4).</p> <p>Services and utilities located at pedestrian entry (A3.7.5).</p> <p>Bins not located at primary pedestrian entry (A3.7.6).</p> | <p>Entry point is well defined from the street and connects to the main lobby.</p> <p>Pedestrian entry is covered by the first floor.</p> <p>Pedestrian entry is visible from public domain and casual surveillance from the lobby.</p> <p>Pedestrian vehicle access is separated.</p> <p>Chair lift is located at the pedestrian entry.</p> <p>Bins not located to the main pedestrian entry.</p> | Satisfied |
| 3.8 Vehicle access | Achieved | <p>Vehicle access one opening per 20m (A3.8.1).</p> <p>Vehicle entries identifiable from the street, integrated with faced and/or</p> | <p>One vehicle access point.</p> <p>Vehicle entry is identifiable and suitably integrated with the overall</p> | Satisfied |

| Element | Objectives | Acceptable Outcome | Proposed | Design guidance |
|------------------------------------|------------|--|--|-----------------|
| | | <p>located behind primary building line (A3.8.2).</p> <p>Vehicle entries have adequate separation from street intersection (A3.8.3).</p> <p>Vehicle circulation areas avoid headlights shining into habitable rooms within the development and adjoining properties (A3.8.4).</p> <p>Driveway width minimum for functionality (A3.8.5).</p> <p>Driveway designed for 2 way access (A3.8.6).</p> <p>Replaced by City's RDLPP clause 6.2.3 (A3.8.7).</p> | <p>façade. Access point is located behind the primary building line.</p> <p>Vehicle entry has adequate separation from the Davallia Road/Beach Road intersection.</p> <p>Vehicle circulation areas located within the basement level and therefore appropriate.</p> <p>Driveway minimum of 5.8m provided allowing turning out of adjacent visitor bays.</p> <p>Driveway permits two way access.</p> <p>Planter beds located 1.5m from the front boundary and not located within truncation areas. No front fencing adjacent.</p> | |
| 3.9 Car and bicycle parking | Achieved | <p>6.5 (7) secure, undercover bicycle parking and accessed via a continuous path of travel from the entry (A3.9.1).</p> <p>12.75 (13) resident car parking bays; and 3.125 (4) visitor car-parking bays (A3.9.2).</p> <p>Maximum parking provision does not exceed double the minimum (34 bays) (A3.9.3).</p> | <p>'10x steady bicycle racks' located on the wall within the reversing area at the end of the driveway are at risk of being hit by vehicles.</p> <p>22 resident bays; and 4 visitor parking bays.</p> <p>26 car parking bays.</p> | Satisfied |

| Element | Objectives | Acceptable Outcome | Proposed | Design guidance |
|--------------------------------------|------------|---|--|-----------------|
| | | <p>Car parking areas and vehicle circulation areas designed in accordance with AS2890.1 (A3.9.4).</p> <p>Carparking areas not located within street setback and not visually prominent from the street (A3.9.5).</p> <p>Car parking designed, landscaped or screened to mitigate visual impacts when viewed from the dwellings and private outdoor spaces (A3.9.6).</p> <p>Visitor parking clearly visible from driveway, signed and accessible (A3.9.7).</p> <p>Parking shade structures integrate with and complement the building (A3.9.8).</p> <p>Uncovered at-grade parking provided with a shade tree per 4 bays (A3.9.9).</p> <p>Basement parking is designed/screened to prevent negative visual impact on the street where raised more than 1m above ground level (A3.9.10).</p> | <p>Car parking and circulation as per AS2890.1.</p> <p>Bays are located behind the street setback and are screened by raised planters facing the street.</p> <p>Basement level parking is screened from the street by way of raised planters and slat screen fencing and gates.</p> <p>Visitor parking is visible and accessible.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Basement level parking is screened from the street by way of raised planters and slat screen fencing and gates.</p> | |
| 4.1 Solar and daylight access | Achieved | Minimum 70% dwellings having living rooms and private open space obtaining at least 2 hours direct sunlight; and maximum 15% receiving no direct sunlight (A4.1.1). | All living rooms to dwellings receive at least 2 hours direct sunlight. | Satisfied |

| Element | Objectives | Acceptable Outcome | Proposed | Design guidance |
|---|------------|--|--|-----------------|
| | | <p>Habitable rooms one window in external wall, visible from all parts of room, glazed area not less than 10% of floor area and minimum 50% clear glazing (A4.1.2).</p> <p>Light wells and/or skylights not primary source of daylight to any habitable room (A4.1.3).</p> <p>Building orientated and incorporates external shading devices (A4.1.4).</p> | <p>One window in external wall of each habitable room with glazed area >10% floor area and minimum 50% of the required area clear glazing.</p> <p>Not primary source except to internal access corridor.</p> <p>North facing windows and Unit 10 Bed 2 not provided with shading devices.</p> | |
| 4.2 Natural ventilation | Achieved | <p>Habitable rooms have openings on at least two walls with straight line distance not less than 2.1m (A4.2.1).</p> <p>Minimum 60% of dwellings are naturally cross ventilated; and single aspect apartments included must have ventilation openings oriented to prevailing cooling winds; and room depth no greater than 3*ceiling height (A4.2.2).</p> <p>Depth of cross-over and cross-through apartments with openings either side not exceed 20m (A4.2.3).</p> <p>No habitable room relies on light wells (A4.2.4).</p> | <p>Provided.</p> <p>61.54% naturally cross ventilated units (from the prevailing cooling wind direction; single aspect not included in 61.54%. Room depth does not exceed 3x ceiling height.</p> <p><20m.</p> <p>No reliance solely on lightwells.</p> | Satisfied |
| 4.3 Size and layout of dwellings | Achieved | Dwellings' internal floor areas as per Table 4.3a (A4.3.1). | <p>Adequate internal floor spaces provided.</p> <p>Minimum room floor areas provided. Unit</p> | Satisfied |

| Element | Objectives | Acceptable Outcome | Proposed | Design guidance |
|---|--------------|--|---|-----------------|
| | | <p>Habitable room floor areas as per Table 4.3b (A4.3.2).</p> <p>Floor to ceiling height 2.7m for habitable rooms, 2.4m for non-habitable rooms, and other as per NCC (A4.3.3).</p> <p>Maximum length of single aspect open plan living area 9m (A4.3.4).</p> | <p>13 living area dimension of 2.88m. Units 2 and 8 living area dimensions of 3.99m.</p> <p>Ceiling height 2.743m provided.</p> <p>Open plan living areas do not exceed 9m.</p> | |
| 4.4 Private open space and balconies | Achieved | <p>Private open space to each dwelling as per Table 4.4 (A4.4.1).</p> <p>Entire open space not screened, and screening does not obscure outlook (A4.4.2).</p> <p>Design detailing, materiality and landscaping of the private open space integrate with/compliments building (A4.4.3).</p> <p>Services and fixtures located within private open space not visible from street/integrated into building design.</p> | <p>>15m² to ground floor units. >10m² to upper floor units.</p> <p>Minimal screening provided and does not obscure outlook from adjacent living rooms.</p> <p>Design complements building.</p> <p>Achieved.</p> | Satisfied |
| 4.5 Circulation and common spaces | Not achieved | <p>Circulation corridor 1.5m min (A4.5.1).</p> <p>Circulation and common spaces designed for universal access (A4.5.2).</p> <p>Circulation and common space capable of passive surveillance (A4.5.3).</p> | <p>1.6m provided.</p> <p>Technically achievable however internal floor level is 1c above communal spaces.</p> <p>Front entry allows for surveillance of the front common area. Private terraces provide a level of surveillance</p> | Not satisfied |

| Element | Objectives | Acceptable Outcome | Proposed | Design guidance |
|---|------------|---|---|-----------------|
| | | <p>Circulation and common spaces lit without light spill to habitable rooms (A4.5.4).</p> <p>Windows to bedrooms and major openings don't open onto circulation/or common spaces (A4.5.5).</p> | <p>to the communal open space.</p> <p>Conflict between private/communal open spaces at ground floor.</p> <p>Unit 1 living and Unit 2 living rooms open onto circulating/common spaces.</p> <p><i>Note: Unit 6 living and Unit 1 bed 2 have 1.5m wide planters separating private /common areas.</i></p> | |
| 4.6 Storage | Achieved | <p>Store sizes as per Table 4.6. 4m² for a 2 bedroom dwelling, min dimension of 1.5m, height of 2.1m (A4.6.1).</p> <p>Stores conveniently located, safe, well-lit, secure and subject to passive surveillance (A4.6.2).</p> <p>Stores provided separately from dwellings or within or adjacent to private open spaces (A4.6.3).</p> | <p>Store sizes acceptable with exception of: 5m². 3 store rooms with min dimension of 1.3m and height of 2.7m.</p> <p>Stores located within basement area incorporated within frequently trafficked parking area & accessible to all residents.</p> <p>Stores provided external to dwellings and within basement level, separated from the public domain.</p> | Satisfied |
| 4.7 Managing the impact of noise | Achieved | <p>Exceed NCC requirements (A4.7.1).</p> <p>Potential noise sources not adjacent external wall habitable room or within 3m of bedroom (A4.7.2).</p> | <p>Lift/fire stairs not located adjacent any bedrooms. Lift shaft is adjacent to Unit 2 and Unit 8 kitchens however would need to achieve applicable NCC acoustic ratings. Common area access passage (not considered active communal open space) adjoins living</p> | Satisfied |

| Element | Objectives | Acceptable Outcome | Proposed | Design guidance |
|-----------------------------|------------|--|--|-----------------|
| | | Major openings oriented away/shielded from external noise sources (A4.7.3). | rooms. 3m buffer provided between communal space and adjoining living areas. Lobby entrance adjoins Unit 6 living. Davallia Road not considered a major road. | |
| 4.8 Dwelling mix | Achieved | At least 20% of apartments with differing number of bedrooms (A4.8.1). Mix of dwelling types on each floor (A4.8.2). | 1 * 1 bed = 7.69% 12 * 2 bed = 92.31% Homogenous dwelling types at ground floor. | Satisfied |
| 4.9 Universal design | Achieved | 20% of dwellings meet Silver level requirements; or 5% of dwellings designed to Platinum Level (A4.9.1). | Applicant has indicated that 4 of the 13 dwellings (30%) are designed to a Silver level standard in accordance with the Liveable Housing Design Guidelines. | Satisfied |
| 4.10 Façade design | Achieved | Façade design (A4.10.1, A4.10.2, A4.10.3). Building services fixtures integrated in design and not visually intrusive from public realm (A4.10.4). Weather protection for setbacks 1m or less (A4.10.5) Signage integrated in the façade (A4.10.6). | Façade design appropriate. Building services integrated. Not applicable as setbacks >1m. Not applicable – no signage. | Satisfied |
| 4.11 Roof design | Achieved | Roof form or top of building complements façade design and desired streetscape character (A4.11.1). Building services located on room not | Pitched roofs complement existing streetscape. Air conditioning units located on the | Satisfied |

| Element | Objectives | Acceptable Outcome | Proposed | Design guidance |
|---|--------------|---|--|-----------------|
| | | visually obtrusive from street (A4.11.2). (A4.11.3 N/A) | roof, screened from view. Solar panels on the northern side of the roof pitch and therefore have minimal visibility from the street. | |
| 4.12 Landscape design | Not achieved | Submission landscape plan by competent landscape designer. Landscaped areas are located and designed to support mature, shade producing trees to open space and the public realm, and to improve outlook and amenity to habitable rooms and open space areas (A4.12.2). Planting on structures as per Table 4.12. Building services integrated in design of landscaping. | Landscape plan provided and prepared by landscape designer. Landscaped areas are not capable of accommodating a medium and large tree as required under clause 3.3. Planting in planter boxes suitable to accommodate shrubs and ground cover. Achieved. Achieved. | Not satisfied |
| 4.13 Adaptive reuse | N/A | Not applicable as development not heritage. | N/A | N/A |
| 4.14 Mixed use | N/A | Not applicable as development not mixed use. | N/A | N/A |
| 4.15 Energy efficiency | Achieved | Incorporate at least one significant energy efficiency initiative; or all dwellings exceed minimum NATHERS requirements for apartments by 0.5 stars (A4.15.1). | Solar panels provided. | Satisfied |
| 4.16 Water management and conservation | Achieved | Dwellings are individually metered for water usage (A4.16.1). | Stormwater able to be managed on-site. | Satisfied |

| Element | Objectives | Acceptable Outcome | Proposed | Design guidance |
|------------------------------|------------|--|--|-----------------|
| | | <p>Storm water runoff is managed on-site (A4.16.2).</p> <p>Provision of an overland flow path for safe conveyance of runoff from major rainfall events to the local stormwater drainage system (A4.16.3).</p> | | |
| 4.17 Waste management | Achieved | <p>Waste storage facilities.</p> <p>Waste Management Plan.</p> <p>Sufficient area for storage of green waste, recycling and general waste (separate)</p> <p>Communal waste storage sited and designed to be screened from view from the street, open space and private dwellings.</p> | <p>Waste management plan provided and acceptable to the City for this stage of the development process.</p> <p>Sufficient area provided.</p> <p>Waste storage area located to rear of Unit 2 and screened from view.</p> | Satisfied |
| 4.18 Utilities | Achieved | <p>Utilities located within front setback or on visible parts of room are integrated into design (A4.18.1).</p> <p>Developments fibre-to-premises ready (A4.18.2).</p> <p>Hot water units, AC condenser units and clotheslines not visually obtrusive (A4.18.3).</p> <p>Laundries are designed and located to be convenient, weather protected and well ventilated and size appropriate (A4.18.4).</p> | <p>Gas and water meters located within the undercroft area adjacent to visitor bays. A/Cs are located on the rooftop.</p> <p>Laundries conveniently located, weather protected and size appropriate.</p> | Satisfied |

Please note that the acceptable outcomes stated above is a summary only and when considering compliance with these requirements, please refer to the full requirement as detailed in *State Planning Policy 7.3 Residential Design Codes Volume 2 – Apartments*.