



Metro Outer Development Assessment Panel Agenda

Meeting Date and Time: Wednesday, 12 June 2024; 1.00pm
Meeting Number: MODAP/18
Meeting Venue: 140 William Street, Perth
Public Observing: Online

A live stream will be available at the time of the meeting, via the following link:
[MODAP/18 - 12 June 2024 - Shire of Mundaring](#)

PART A – INTRODUCTION

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

PART B – SHIRE OF MUNDARING

1. Declarations of Due Consideration
2. Disclosure of Interests
3. Form 1 DAP Applications
 - 3.1 Lot 95 (323) Great Eastern Highway, Midvale – Service Station – DAP/23/02563
4. Form 2 DAP Applications
5. Section 31 SAT Reconsiderations

PART C – OTHER BUSINESS

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

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



ATTENDANCE

DAP Members

Ian Birch (Presiding Member)
Neema Premji (Deputy Presiding Member)
Diana Goldswain (Specialist Member)

Part B – Shire of Mundaring

Cr Luke Ellery (Local Government Member, Shire of Mundaring)
Cr Prapti Mehta (Local Government Member, Shire of Mundaring)

Minute Secretary

Claire Ortlepp (DAP Secretariat)

Officers in Attendance

Ashlee Kelly (DAP Secretariat)



PART A – INTRODUCTION

1. Opening of Meeting, Welcome and Acknowledgement

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

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

2. Apologies

Nil

3. Members on Leave of Absence

Nil

4. Noting of Minutes

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



PART B – SHIRE OF MUNDARING

1. Declarations of Due Consideration

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

2. Disclosure of Interests

Nil

3. Form 1 DAP Applications

3.1 Lot 95 (323) Great Eastern Highway, Midvale – Service Station –
DAP/23/02563

4. Form 2 DAP Applications

Nil

5. Section 31 SAT Reconsiderations

Nil

ITEM 3.1 - LOT 95 (#323) GREAT EASTERN HIGHWAY, MIDVALE – SERVICE STATION

Form 1 – Responsible Authority Report (Regulation 12)

DAP Name:	Metro Outer JDAP	
Local Government Area:	Shire of Mundaring	
Applicant:	Hidding Urban Planning	
Owner:	OTR 375 Pty Ltd	
Value of Development:	\$2.5 million ☐ Mandatory (Regulation 5) ☒ Opt In (Regulation 6)	
Responsible Authority:	Shire of Mundaring	
Authorising Officer:	Mark Luzi	
LG Reference:	Gr 1.323	
DAP File No:	DAP/23/02563	
Application Received Date:	3 August 2023	
Report Due Date:	31 May 2024	
Application Statutory Process Timeframe:	90 Days	
Attachment(s):	1. Plans for approval 2. Applicant's planning report 3. Development plans 4. Traffic Impact Assessment 5. Acoustic Report	
Is the Responsible Authority Recommendation the same as the Officer Recommendation?	☐ Yes	Complete Responsible Authority Recommendation section
	☒ N/A	
	☐ No	Complete Responsible Authority and Officer Recommendation sections

Responsible Authority Recommendation

That the Metro Outer JDAP resolves to:

1. **Accept** that the DAP Application reference DAP/23/02563 is appropriate for consideration as a Service Station land use and compatible with the objectives of the zoning table in accordance with Clause 4.3 Shire of Mundaring Local Planning Scheme No. 4

2. **Approve** DAP Application reference DAP/23/02563 and accompanying plans (Attachment 1) 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 Shire of Mundaring Local Planning Scheme No 4, for the proposed Service Station at Lot 95 (323) Great Eastern Highway, Midvale, subject to:

Conditions

1. Pursuant to clause 26 of the Metropolitan Region Scheme, this approval is deemed to be an approval under clause 24(1) of the Metropolitan Region Scheme.
2. This decision constitutes planning approval only and is valid for a period of four years from the date of approval. If the subject development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.
3. Prior to the lodgement of a Building Permit, the applicant shall provide a schedule of external materials, finishes and colours to the satisfaction of the Shire and the building must thereafter be completed in accordance with the approved colours and materials.
4. Prior to the lodgement of a Building Permit, a drainage plan shall be submitted for approval of the Shire. This plan must provide for stormwater to be disposed of into the Shire's drainage system via an internal system that incorporates a silt trap. Drainage infrastructure shall then be installed and maintained in accordance with the approved drainage plans to the satisfaction of the Shire.
5. Before commencement of use, all crossovers shall be located, installed and/or upgraded to the specifications and satisfaction of the Shire.
6. The surface of the boundary wall/s shall be finished to a high standard (i.e. painted or an even render finish) to the satisfaction of the Shire.
7. Engineering drawings and specifications are to be submitted and approved and works undertaken in accordance with the approved plans and specifications to construct and drain the accessway car parking areas and crossover to the satisfaction of the Shire.
8. Engineering drawings and specifications are to be submitted and approved and works undertaken in accordance with the approved plans and specifications to construct a footpath that connects to existing footpaths to the satisfaction of the Shire, on the advice of Main Roads WA.
9. The service station landowner must maintain and allow reciprocal access of rights over the adjoining Lots 1 & 8 Great Eastern Highway.
10. Prior to the lodgement of a Building Permit, a revised landscaping plan shall be submitted to the Shire detailing the landscaping of a strip along both street frontages. The approved revised landscaping plan shall be established prior to occupancy and thereafter maintained to the satisfaction of the Shire.

11. A floor plan and internal elevations of the food premises showing the design construction layout and finishes of fixtures fittings and equipment shall be submitted to and approved by the Shire's Health Services prior to fitting out the food premises.
12. An enclosure for the storage and cleaning of rubbish bins shall be provided constructed of materials and colours consistent with adjacent buildings to the satisfaction of the Shire. The enclosure shall be accessible by service vehicles and of sufficient size to accommodate all waste prior to collection.
13. Signs and on-site advertising shall not include flashing chasing or pulsating lights. If in the opinion of the Shire, on the advice of Main Roads WA, a sign or advertisement is offensive misleading or dangerous to vehicular or pedestrian traffic then the Shire may direct that the sign be removed or modified within seven working days. The sign labelled S5 shall be reduced in area to less than 4m².
14. Floodlights shall be located and angled to minimise light spill onto adjoining land.
15. The proposed pylon sign shall not exceed 6m in height.
16. Buildings and structures that are indicated on the site plan to be removed shall be demolished and materials removed to the satisfaction of the Shire.
17. Prior to the commencement of the use or obtaining an occupancy permit, the parking bays are to be line marked and thereafter maintained in accordance with the approved plans and to the satisfaction of the Shire.
18. Prior to the occupation of the development or obtaining an occupancy permit, vehicular access must be line marked (using directional arrows) to the satisfaction of the Shire of Mundaring. Line marking is to be maintained at all times.
19. All service vehicles including fuel tankers must enter and exit via Victoria Parade.
20. Any proposed illumination of the sign must not exceed 300cd.m² (candela per square metre) between sunset and sunrise. The sign must not flash, pulsate or chase. The device must not contain fluorescent, reflective or retro reflective colours or materials.
21. Stormwater discharge is not permitted to the Great Eastern Highway Road Reserve
22. The landowner(s) shall either:
 - i) Provide public art on the subject site, with a minimum value of \$25,000 [Option 1]; OR
 - ii) Pay \$25,000, which equates to 1% of the construction cost for the overall development, in lieu of providing public art on the subject site [Option 2].

If Option 1 is elected, the public art design shall be submitted to, and approved by the Shire prior to lodgement of the Building Permit application.

The public art shall be installed prior to commencement of use/occupation of any part of the development and thereafter maintained for the life of the development to the satisfaction of the Shire.

If Option 2 is elected, the cash-in-lieu amount shall be paid in full to the Shire prior to lodgement of the Building Permit application.

Advice Notes

1. Shire recommends no earthworks encroach and no stormwater be discharged into Great Eastern Highway road reserve. Main Roads may require the applicant/landowner make good any damage to existing vegetation in the road reserve.
2. The condition relating to the surface of the subject walls relates to the northern side of the wall abutting Lot 206 Victoria Parade, the walls facing Victoria Parade and the parapet wall (post demolition) abutting Lot 8 Great Eastern Highway.
3. In respect to Lot 206 Victoria Parade, the landowner has expressed an interest in providing comment on the colours and textures proposed.
4. In respect to reciprocal access, it is acknowledged that general reciprocal access arrangements are already in place between the landowners, however this agreement requires review relative to the revised building footprint / access over the subject site and for the Shire to become a party to the agreement.
5. Establishing reciprocal access is consistent with a previous approval for a Service Station (DAP/20/01927) and with the requirements associated with the amalgamation approval granted by the WA Planning Commission on 11 March 2021 (WAPC: 160244).
6. The Shire will require legal documents to be reviewed and/or lodged by our solicitors if they have been prepared by any other legal practitioner.
7. No works are permitted within the Great Eastern Highway Road reservation unless Main Roads has issued a working on Roads Permit.
8. Main Roads understands that at the time of assessment the access arrangements with the neighbouring lots remain uncertain.
9. The applicant is required to submit an application to undertake works within the road reserve prior to undertaking any works within the road reserve. Application forms and supporting information about the procedure can be found on the Main Roads website > Technical & Commercial > Working on Roads.
10. In respect to condition 13 the applicant is advised that the area of the sign is to be reduced so as not to be considered a Large Format Digital Sign which would require further technical reports to the satisfaction of Main Roads WA.

Reasons for Responsible Authority Recommendation

NA

Details: outline of development application

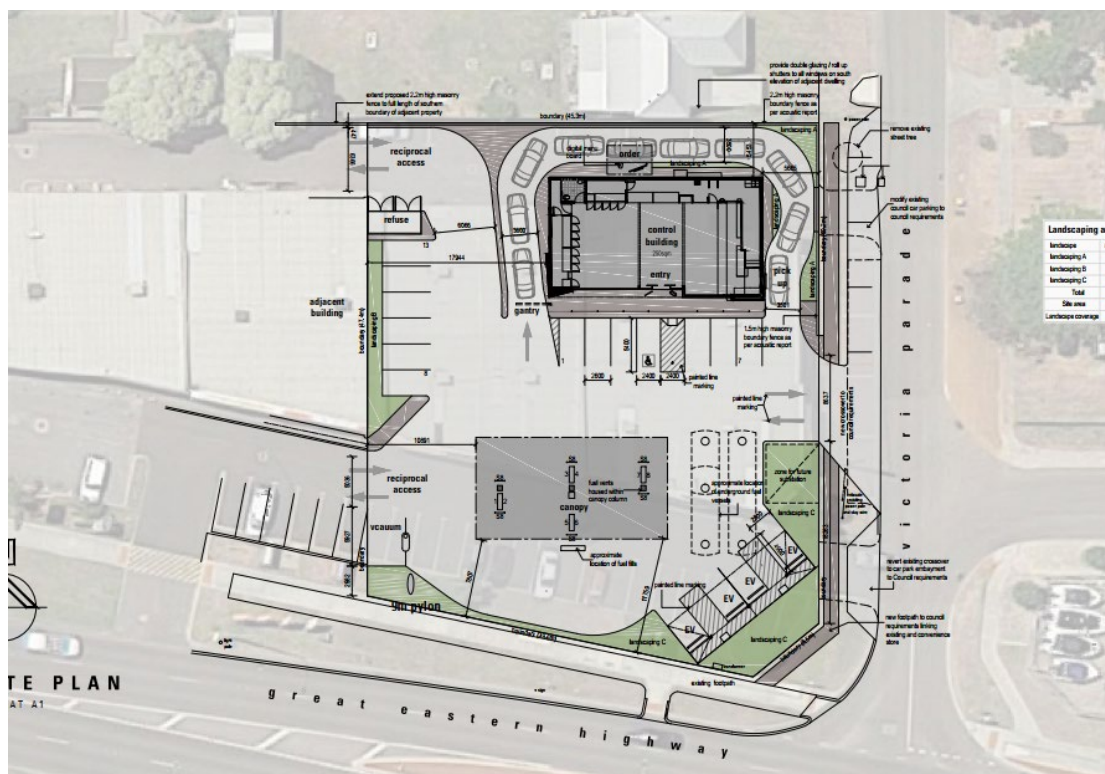
Region Scheme	Metropolitan Region Scheme
Region Scheme - Zone/Reserve	Urban Great Eastern Highway is Reserved as "Primary Regional Road"
Local Planning Scheme	Local Planning Scheme No. 4.
Local Planning Scheme - Zone/Reserve	Service Commercial
Structure Plan/Precinct Plan	NA
Structure Plan/Precinct Plan - Land Use Designation	NA
Use Class and permissibility:	Service Station "D" use.
Lot Size:	2,338m ²
Existing Land Use:	Showrooms (unoccupied)
State Heritage Register	No
Local Heritage	☒ N/A ☐ Heritage List ☐ Heritage Area
Design Review	☒ N/A ☐ Local Design Review Panel ☐ State Design Review Panel ☐ Other
Bushfire Prone Area	No
Swan River Trust Area	No

Proposal:

Approval is sought for:

- A 250m² GLA Service Station/Convenience Store;
- Drive-through facility accommodating ten vehicles in a queuing lane
- A covered refuelling area with four double sided bowsters
- 13 parking bays
- Four bays for EV charging
- One vacuum bay
- A 9m high pylon sign

Image 1: Proposed Service Station



Proposed Land Use	Service Station
Proposed Net Lettable Area	250m2 GLA
Proposed No. Storeys	One
Proposed No. Dwellings	NA

Background:

The site forms part of series of attached showrooms approved in 1988 along with 319 and 32 Great Eastern Highway. The three lots form part of an integrated ribbon commercial development.

The site forms part of broader development abutting both sides of Great Eastern Highway, characterised by typical service commercial development, such as showrooms and motor vehicle sales. Land to the north and north-east is zoned for medium density residential development, but in the main has not been developed for this purpose and is predominated by Single Houses.

The subject site contains two vacant showrooms (vacant).

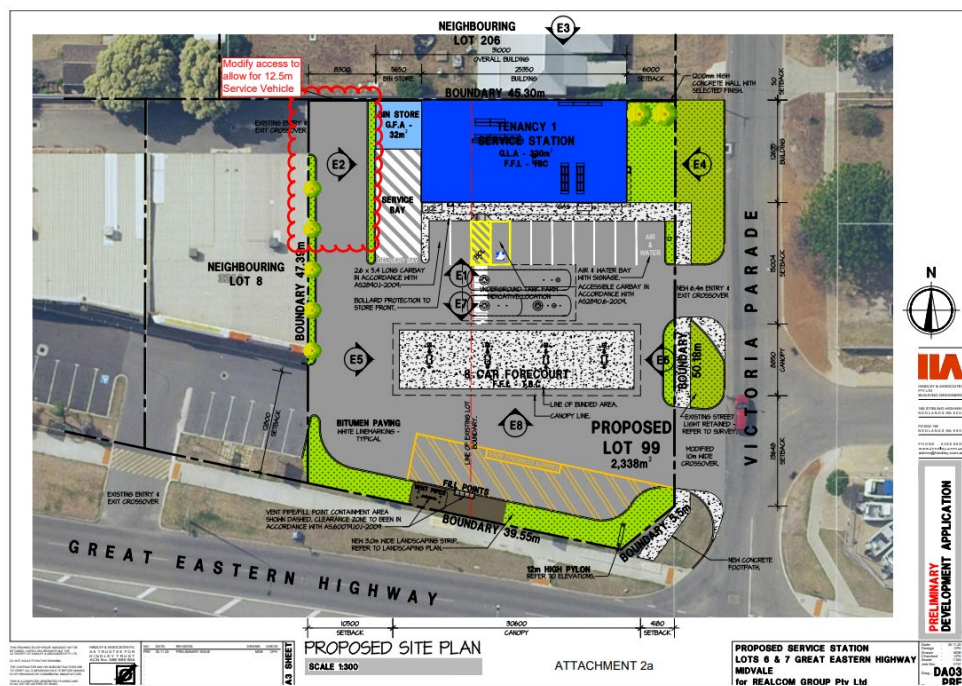
Image 2: Locality Plan



Previous Approvals

Approval for a Service Station on the site (previously over two lots, since amalgamated) was granted by a JDAP on 21 July 2021 (reference DAP/20/01927). This approval is valid until 21 July 2025.

Image 3: Previously approved Service Station



The principal differences between the previous application and the current proposal are:

- The previous application did not include a drive through service
- The previous application had two vehicle access points onto Victoria Parade, whereas the current application only has one;
- The previous application had a nil setback to the adjoining site to the north (Lot 206 Victoria) whereas the proposal is setback from the boundary due to the drive through component

Additionally, there are matters relating to the existing access arrangements between the subject site and the sites to the west forming the balance of the ribbon style showroom development. Whilst there is physical connectivity for vehicles between the sites, there was, and remains uncertainty regarding legally binding reciprocal access rights. This will be further discussed in the report.

Legislation and Policy:

Legislation

Planning and Development Act 2005 (the Act)

Shire of Mundaring Local Planning Scheme No.4 (the Scheme)

Planning and Development (Local Planning Schemes) Regulations 2015 (the Regulations)

Specific clauses under the Regulations being considered are:

CI 66 - Consultation with other authorities

CI 67 - Matters to be considered by local government

Under CI 67, the decision maker must have due regard to:

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

(s) the adequacy of —

- (i) the proposed means of access to and egress from the site; and*
- (ii) arrangements for the loading, unloading, manoeuvring and parking of vehicles;*

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

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

(y) any submissions received on the application;

State Government Policies

Perth and Peel @ 2050

WA Planning Commission SPP 7.0 – *Design of the Built Environment*

Environmental Protection Authority Guidance Statement No. 3 – *Separation Distances Between Industrial & Sensitive Land Uses*

Structure Plans/Activity Centre Plans

Not applicable.

Local Policies

PS - 01 *Advertising Planning Proposals*

The proposal was advertised in accordance with this policy.

PS -3.1 *Public Art*

As the proposal is above \$2 million, it attracts a public art contribution of 1%, which has been recommended as a condition of approval.

Shire of Mundaring Signs Local Law 2009

Refer to comments under **Planning Assessment** below.

Consultation:

Public Consultation

The application was advertised in accordance with the Shire's advertising Policy PS-01 – *Advertising Planning Proposals*. The proposal was considered a “standard development application” under the policy and advertised in the following ways:

- A public notice on the Shire's web site.
- Letters sent to nearby and affected landowners and occupants.
- A notice sent to the Bellevue Residents and Ratepayers Association.

At the end of the submission period, the Shire received five submissions, from nearby landowners.

The matters raised in the submissions are summarised below:

Issue Raised	Officer comments
There is not a need for another service station given the number in the near vicinity. Increase in traffic in the local area at all hours of the night and day.	It is a market driven exercise as to the need for any particular land use. The need for a use is not a matter that is to be considered under cl 67 of the Regulations. The proposal is subject to a Traffic Impact Assessment. Traffic will be limited to the Great Eastern Highway and a small portion of Victoria Parade. The access/egress points on Victoria Parade face onto commercial activities and very little traffic generated by the use will use local streets.
Increase in hours of operation will cause disturbances, especially at night.	The site is commercially zoned and located on a major arterial road. There is an expectation that some land uses, particularly services stations, will have extended trading hours. Any anti-social matters would be the responsibility of the tenant or police. Any environmental disturbances would be dealt with by the relevant authority.
Health concerns in relation to fumes, exhaust and other substances.	If these matters arose, they would be referred to the relevant authority
The closure of a laneway which has existed for over 20 years which provides access and egress for many residents in the area as we cannot turn onto Bushby Street from Great Eastern Highway (a modification that was made in the 90s).	Bushby Street is located to the west of the showroom development and runs parallel with Victoria Parade. There is no right turn from Great Eastern Highway onto Bushby Street for vehicles heading in a westerly direction. It would appear from the submission that some residents may use the current rear access lane to gain access onto Bushby Street as a 'rat run'. It is not possible to maintain or formalise this by virtue of this proposal.

Concern with the validity of access through adjoining sites via a crossover onto Great Eastern Highway and at the rear of the adjoining lots.	The owner of the adjoining site to the west, 321 Great Eastern Highway, previously objected to the proposal and reiterated their objection to the current proposal. Key concerns are noted as follows: <i>“There should be no misunderstanding that there is <u>no reciprocal right of carriageway</u> along the front and rear of each of these lots”</i> (emphasis by submitter). <i>“The primary reason for my objection to this current application remains as valid today as it was previously. There is inadequate ingress and to Lot 95 from Great Eastern Hwy to provide for the type and nature of the proposed business, which lends itself to a high volume of traffic to the site.”</i> <i>“The crossover from Great Eastern Hwy into the carpark in front of my showrooms is highly likely to be used as a carriageway for those motorists entering for fuel and fast food and the likelihood of lengthy queues of vehicles in front of my showrooms is very real. This poses a worrisome potential for the safety and security of my tenants and their customers.”</i> <i>“The car park along the front and rear of the adjoining lots is not a gazetted roadway and is private property. Even with signage, as was proposed previously, the behaviour of patrons to the proposed use would most likely still see the crossover used for access to Lot 95 and for that reason, the boundary between my carpark and the adjoining lot would need to be delineated with kerbing or the like, to protect the safety of my tenants and their customers.”</i> Refer to comments under Planning Assessment. Access arrangements
Concern that vehicles accessing the subject site via the crossover on Great Eastern Highway may bank up on adjoining sites and affect parking and access.	Refer to comments under Planning Assessment (Access arrangements)

Concern regarding impact on amenity of the occupant of the dwelling on the adjoining site to the north (7 Victoria Parade)	Refer to comments below under Planning Assessment Wall on boundary
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Referrals/consultation with Government/Service Agencies

- City of Swan
- Main Roads WA (MRWA)
- Department of Mines, Industry Regulation and Safety
- Bellevue Ratepayers Association

Submissions were not received from government agencies (with the exception of Main Roads WA) or the Bellevue Residents and Ratepayers Association. The City of Swan provided comment of no objection to the proposal.

Design Review Panel Advice

Not applicable

Swan Valley Planning

Not applicable

Planning Assessment:

In accordance with the Regulations, regard must be given to the potential impact the proposal may have in terms of the area's amenity and character, traffic, car parking, noise, and its relationship to development on adjoining land in the locality

An assessment against general Scheme standards is included in Attachment 2 – Applicants Planning report. Key issues are addressed below:

Drive through facility

The drive-through will not sell branded fast food product. The main items sold from the drive-through will predominantly be coffee, juice and other non-alcoholic beverages, and pre-prepared food such as salads, sandwiches, pies and hot dogs. The drive-through will also offer customers who are not purchasing fuel and who don't wish to park and walk into the shop the ability to purchase anything that is available from the in-store convenience range, for example bread, milk or personal care items. It is expected that increasingly customers will use the OTR app to place an order before arriving at the site, and then drive straight to the pick-up point, thereby avoiding the need to use the order point.

Noise Management

Herring Storer Acoustics was engaged to prepare an Environmental Noise Assessment for the proposed development

To assist with acoustic compliance, a range of boundary walls have been recommended to be included in the new development to shield the service station and drive thru activities from nearby sensitive land uses.

From the analysis undertaken, noise emissions from the proposed development (with management measures) have been assessed to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* and no other major noise mitigation is required.

Wall on northern boundary

The application proposes a 25.3m long wall on the northern boundary. The wall height will be 2.2m and will be constructed of concrete with a selected finish.

Development on the adjoining site consists of a Single House in close proximity to the common boundary. On the subject site, and the balance of adjoining development currently there is a service lane between the buildings and land to the north.

The owner of the abutting site has advised that they do not object to the development subject to being able to comment on the finish of the parapet wall and construction of a wall of a minimum height of 2.4m along the boundary.

During the advertising process, the owner of the adjoining property to the north (7 Victoria Parade) raised concerns with potential noise impacts. The applicant discussed these matters directly with the applicant and the following was agreed to in principle:

- a. Double glazing and/or roller shutters to all windows of their dwelling along the boundary with the drive-through
- b. Increase wall height from 2.2m – 2.4m
- c. Extend wall to full length of boundary

In respect to the above the following comments are made:

- a) As this is a matter between the applicant and the adjacent land owner it cannot be formally imposed by the Shire. However, there is no objection to this if it is agreed between the parties.
- b) Whilst there is no objection to this in principle, the provided plans and acoustic reporting is based on a 2.2m. As such, it is recommended that the wall remain at the original 2.2m
- c) Extending the wall to the rear of 7 Victoria Parade would encroach onto the common boundary between 7 Victoria Parade and 321 Great Eastern Highway (approximately 10m). As the owner of 321 has not been party to the proposed extension, it is recommended that it not be included at this stage and left as a matter between the developer and respective land owners

Canopy setback

The fuel canopy proposes a setback of 7.8m to Great Eastern Highway whereas the Local Planning Scheme requires a 15m setback to the Highway. Having due regard to clause 67 m) of the *Planning and Development (Local Planning Schemes) Regulations 2015* there is no objection to the reduced setback.

Signs

Amongst others, the application proposes a 9m high pylon sign. The applicant has stated that the sign “... *is consistent with many other service station developments, including the existing service station approval which included a condition limiting the size of the pylon sign to 9m in height.*”.

Whilst a pylon sign was approved for the previous proposal, it was subject to the following condition:

18. The proposed pylon sign shall not exceed 6m in height.

This condition was imposed due to a requirement under the *Shire of Mundaring Signs Local Law 2009* which in respect to pylon signs states in part:

(1) Unless otherwise approved by the local government, a pylon sign shall:

(c) be constructed so that no part of the sign is more than 6m above the level of the ground immediately under the sign;

It is considered that a condition should be imposed to reduce the height of the pylon site from 9m to 6m so as to be consistent with the previous determination and the requirements of the Signs Local Law. It is noted that the taller signs in the locality are predominantly in the City of Swan

Proposed sign S5 is considered a Large Format Digital Sign (over 4m²) and is located within Device Restriction Area of the Highway. An assessment against MRWA criteria has not been undertaken. The applicant has advised that they would accept a condition restricting the sign to an area of less than 4m².

Landscaping

Landscaping has been provided, however the Shire would request a plan with some alternative species. A condition is recommended requiring the submission and approval of a landscaping plan.

Environmental Protection Authority Guidance Statement No. 3 – Separation Distances Between Industrial & Sensitive Land Uses

Refer to applicant's statement in Planning Report.

Access arrangements

The commercial strip or cell between Bushby Street to Victoria Parade (Refer Image 2), was subject to two related planning approvals issued in 1988. Separate planning consents were granted concurrently with similar conditions (the subject site and Lot 8 adjoining). So, whilst these were granted individually, conditions were imposed to require an agreement between landowners for the reciprocal rights of parking and access.

The condition stated:

An agreement being made between the property owner and the neighbouring property owners, to the satisfaction of Council for the registration of grants on the respective Certificate of Title to provide reciprocal rights of carriageway and reciprocal parking rights over adjoining lots.

Another relevant condition was imposed requiring 'No stormwater to be discharged onto Great Eastern Highway'.

The landowners entered into an agreement as the conditional approval required. The agreement states that they "...agree to the following items which will be registered as grants or covenants on the respective Certificates of Title:

1. reciprocal right of carriageway at the front and rear of rear property,
2. reciprocal parking rights,
3. access crossover to GEH common to Lots 8&9 shall be maintained as an unrestricted entrance for the use of all properties;
4. and Lot 8 has stormwater rights over Lots 6 and 7."

When the previous application for a Service Station was determined by JDAP in 2021, the following condition and advice was imposed:

Condition

12. Prior to commencement of the use, the landowner/applicant shall enter into a binding agreement with the Shire which provides for the establishment of reciprocal rights of access (for vehicular and pedestrian movement, parking and stormwater) for an easement in gross with 319 & 321 (Lots 1 & 8) Great Eastern Highway. The legal agreement shall be prepared, at the cost of the proponent/applicant and to the satisfaction of the Shire, and include terms which give effect to the reciprocal rights of access at the time when either agreement between relevant landowners can be achieved or when development occurs on each of the adjoining properties

Advice notes:

d. In respect to reciprocal access, it is acknowledged that general reciprocal access arrangements are already in place between the landowners, however this agreement requires review relative to the revised building footprint / access over the subject site and for the Shire to become a party to the agreement.

e. Establishing reciprocal access is also consistent with the requirements associated with the amalgamation approval granted by the WA Planning Commission on 11 March 2021 (WAPC: 160244)

The JDAP subsequently amended the approval and condition 12 was modified to read:

12. The service station landowner must maintain and allow reciprocal access of rights over the adjoining Lots 1 & 8 Great Eastern Highway.

Key observations are that:

- The written agreement between the three landowners is dated 19/9/1988; one month after the planning approval/s were issued. There is no diagram associated with the written agreement.
- The Shire did not form a party to the agreement;
- The agreement was not reflected on the respective titles nor contained on any spatial plan.
- The fact that the agreement is not reflected on the titles does not necessarily constitute a breach of the previous conditions; because it could be argued that the conditions only required that an agreement be made 'for the registration' not that these actually be registered;
- There is no record of the Shire stating that the landowners' agreement was unsatisfactory or satisfactory;
- Since 1988 (36 years) the landowners have respected and operated in accordance with the planning approval and their agreement. The Shire has not initiated any enforcement or compliance actions;
- Conditions did not require stormwater form part of the agreement. The landowners therefore must have recognised the inter-dependency between the sites, and decided to go above and beyond resolving the shared access arrangements and added stormwater management as part of their own agreement.
- Registering these agreements on the Certificates of Title with a diagram would have secured these rights/interests and avoided complications if land ownership changes overtime.

From an ownership perspective, the lot immediately to the west (321 [Lot 8] GEH) continues to be owned by the same landowner that formed party to the agreement.

It is noted that the previous approval for the Service Station was granted to different owners and applicant. The previous applicant prepared legal documents for access based on the previous decision, however this was not finalised.

Main Roads WA advice

As the proposal abuts Great Eastern Highway it was referred to Main Roads WA for comment. Advice was provided regarding signage, which has been incorporated into this report.

In respect to access, MRWA have advised:

In response to your correspondence received on 23 October 2023, Main Roads has reviewed the information and is unable to provide a recommendation at this point in time, based on the information currently provided. Please provide the following items:

- *Development Application forms, including evidence of landowner's consent.*
- *The application documentation sent to the Shire has not been supplied with this application.*
- *The development shows that access will be gained through the lots to the west (Lots 8 and 600) from the crossover to Great Eastern Highway. There is no advice in the application that the neighbouring lots approve of this access arrangement or any evidence that a right of carriageway (easement) benefiting Lot 95 over Lots 8 and 600.*

In respect to the above, neither the Shire nor the applicant can compel the adjoining landowners to be party to the application and has considered that issue based on the points set out above under **Access Arrangements**.

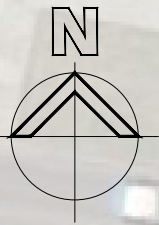
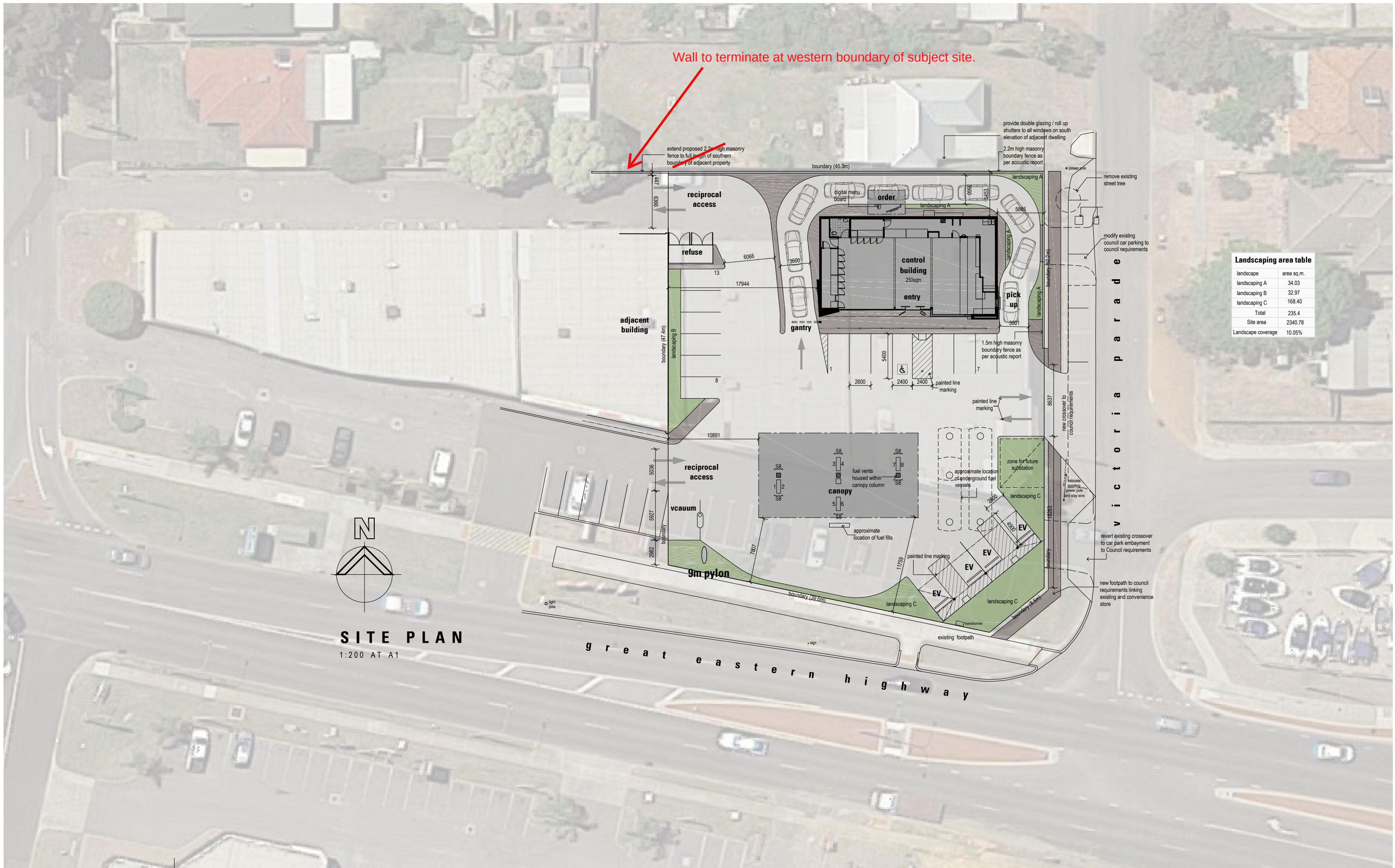
Main Roads WA also stated that the crossovers on Bushby Street are mentioned as access and egress, however no traffic modelling is provided for these crossovers.

Conclusion:

The proposal is generally consistent with the Shire's Local Planning Scheme No.4. The site forms part of a commercial cell with interdependencies with other commercial lots to the west. Clause 67 requires a decision maker to give due regard to the relationship of the development to development on adjoining land and the history of the site where the development is to be located. The proposal is considered generally consistent with the intent of the historical planning approvals and the landowner agreement.

The proposal is reflective of a current approval and is considered to be keeping with the principles of good and orderly planning.

Approval with conditions is therefore recommended.



SITE PLAN
1:200 AT A1

Landscaping area table	
landscape	area sq.m.
landscaping A	34.03
landscaping B	32.97
landscaping C	168.40
Total	235.4
Site area	2340.78
Landscape coverage	10.05%

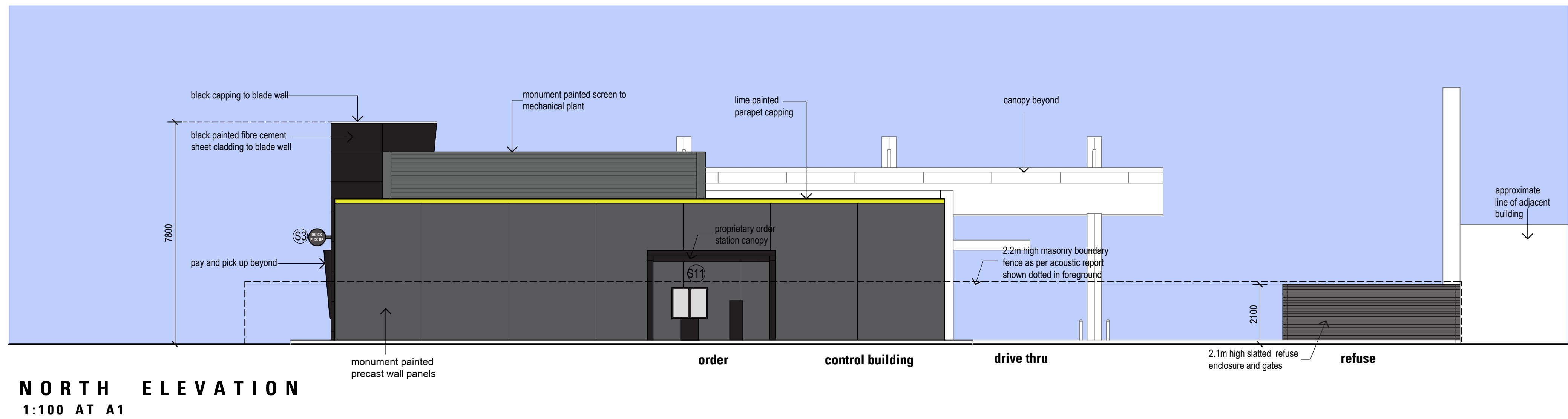
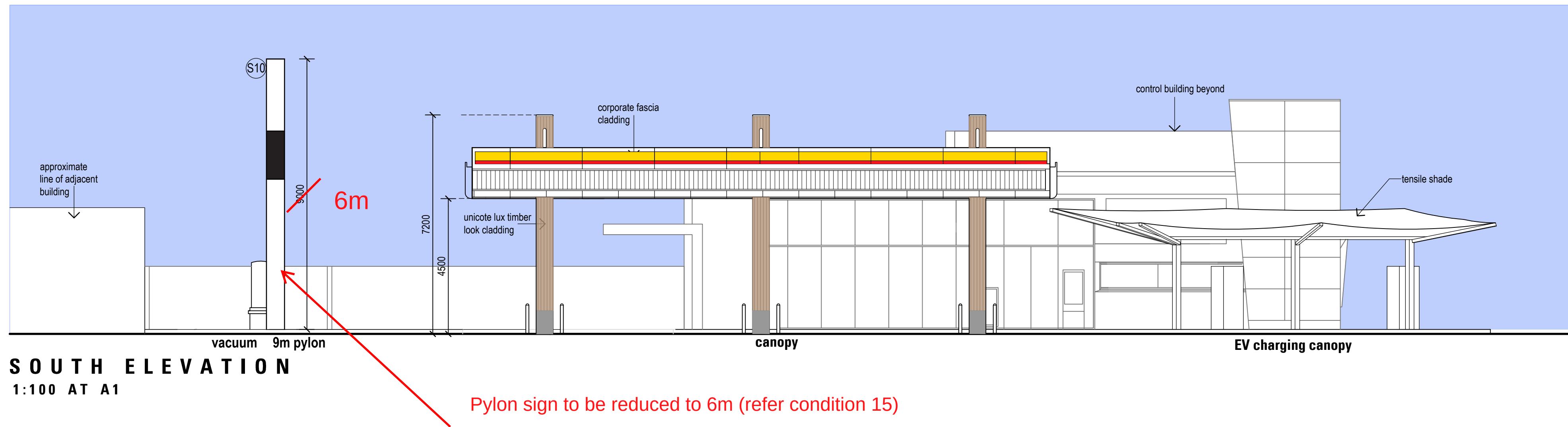
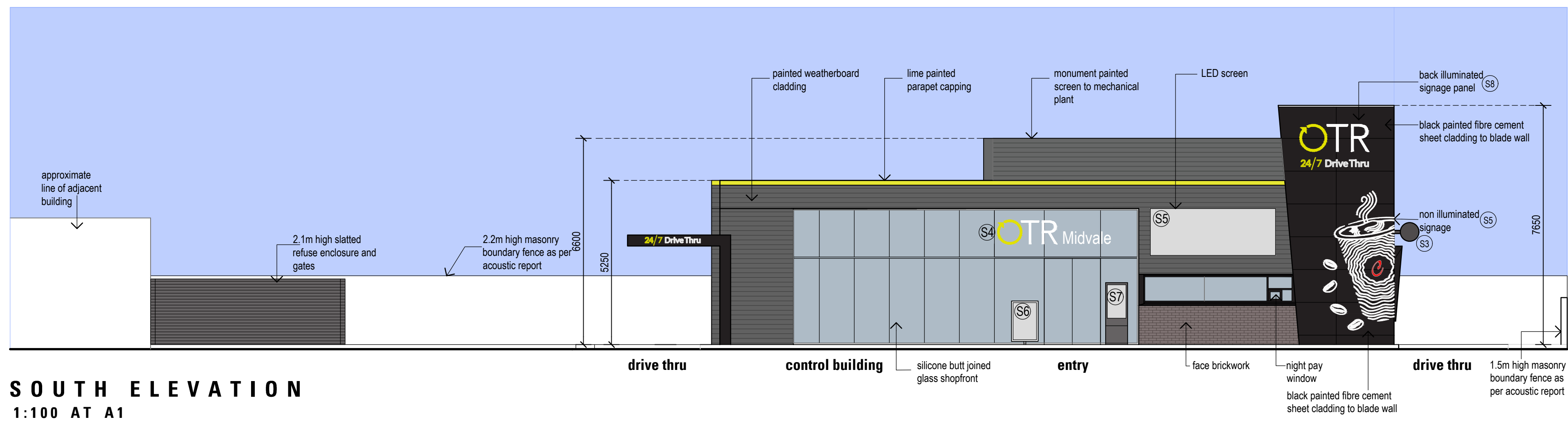
NEW SERVICE STATION COMPLEX
323-325 GREAT EASTERN HIGHWAY MIDVALE WA

DEVELOPMENT APPLICATION

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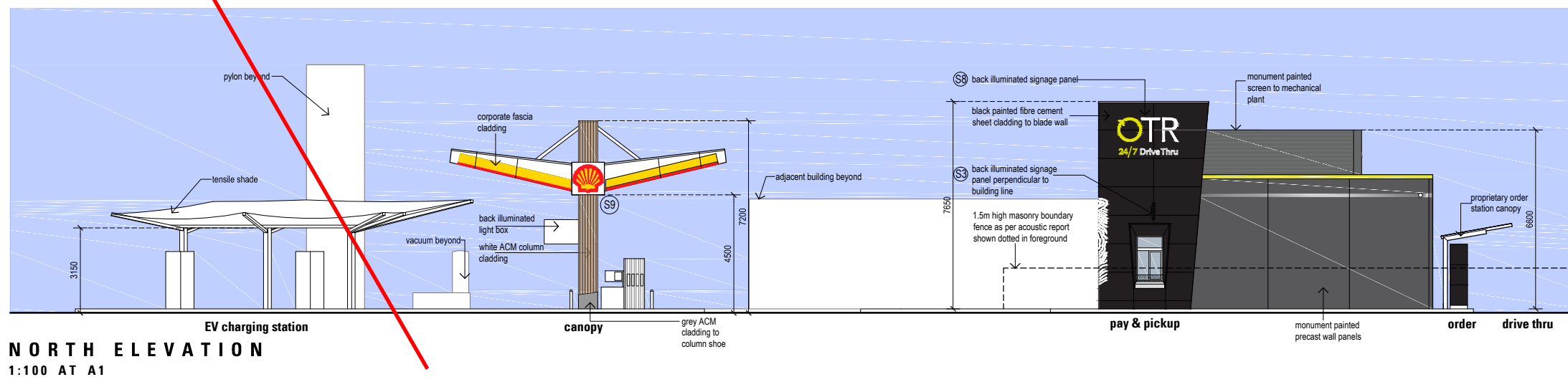
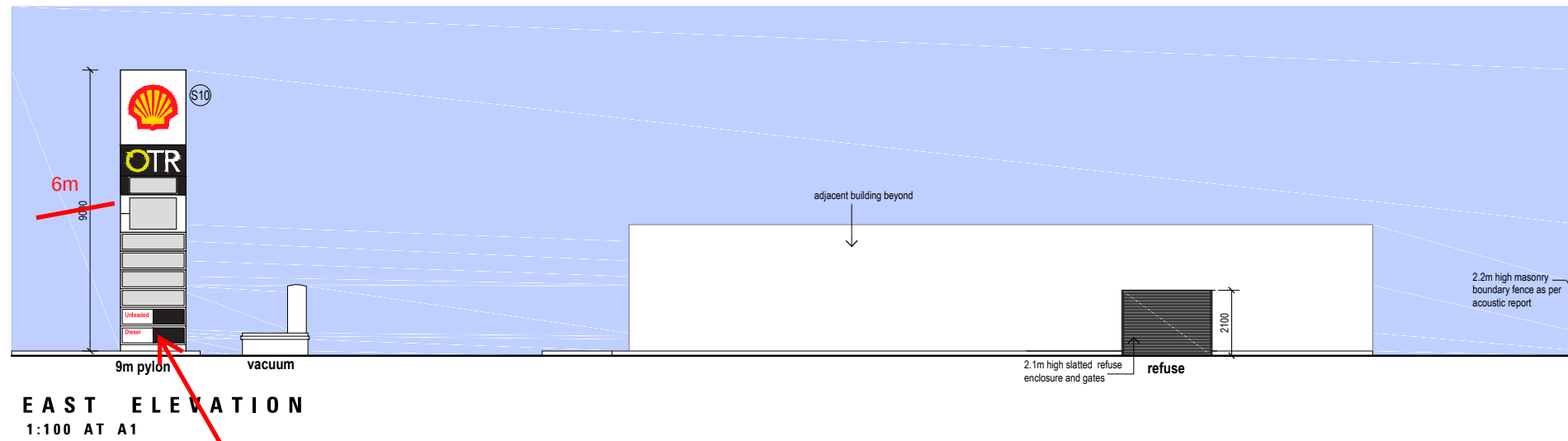
ADS Architects
93 Gilles Street Adelaide 5000 T:82232244



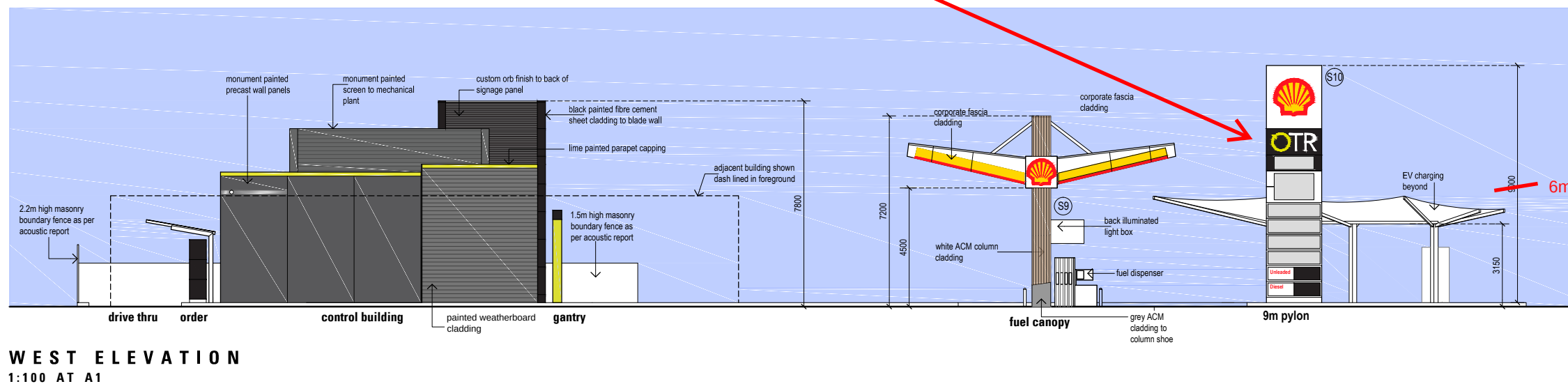
NEW SERVICE STATION COMPLEX

323-325 GREAT EASTERN HIGHWAY MIDVALE WA

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Scale 1:100 at A1



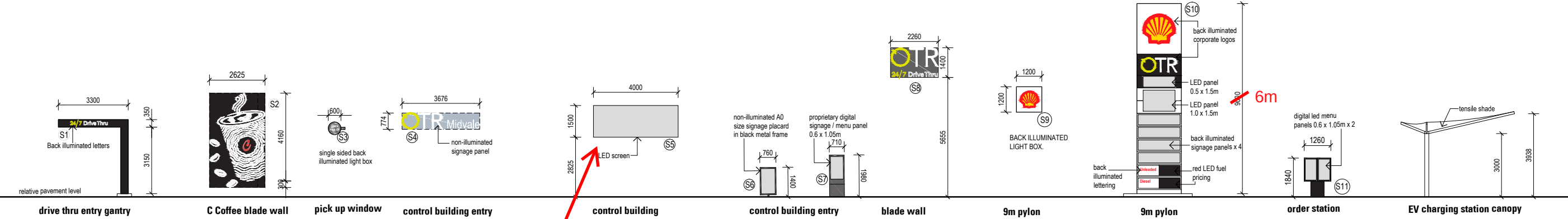
Pylon sign to be reduced to 6m (refer condition 15)



NEW SERVICE STATION COMPLEX

323-325 GREAT EASTERN HIGHWAY MIDVALE WA

0 1 2 5 10m
Scale 1:100 at A1



SIGNAGE ELEVATIONS 1:100 AT A1

Reduce to less than 4m2 (refer condition 13)

Pylon sign to be reduced to 6m (refer condition 15)

NEW SERVICE STATION COMPLEX
323-325 GREAT EASTERN HIGHWAY MIDVALE WA



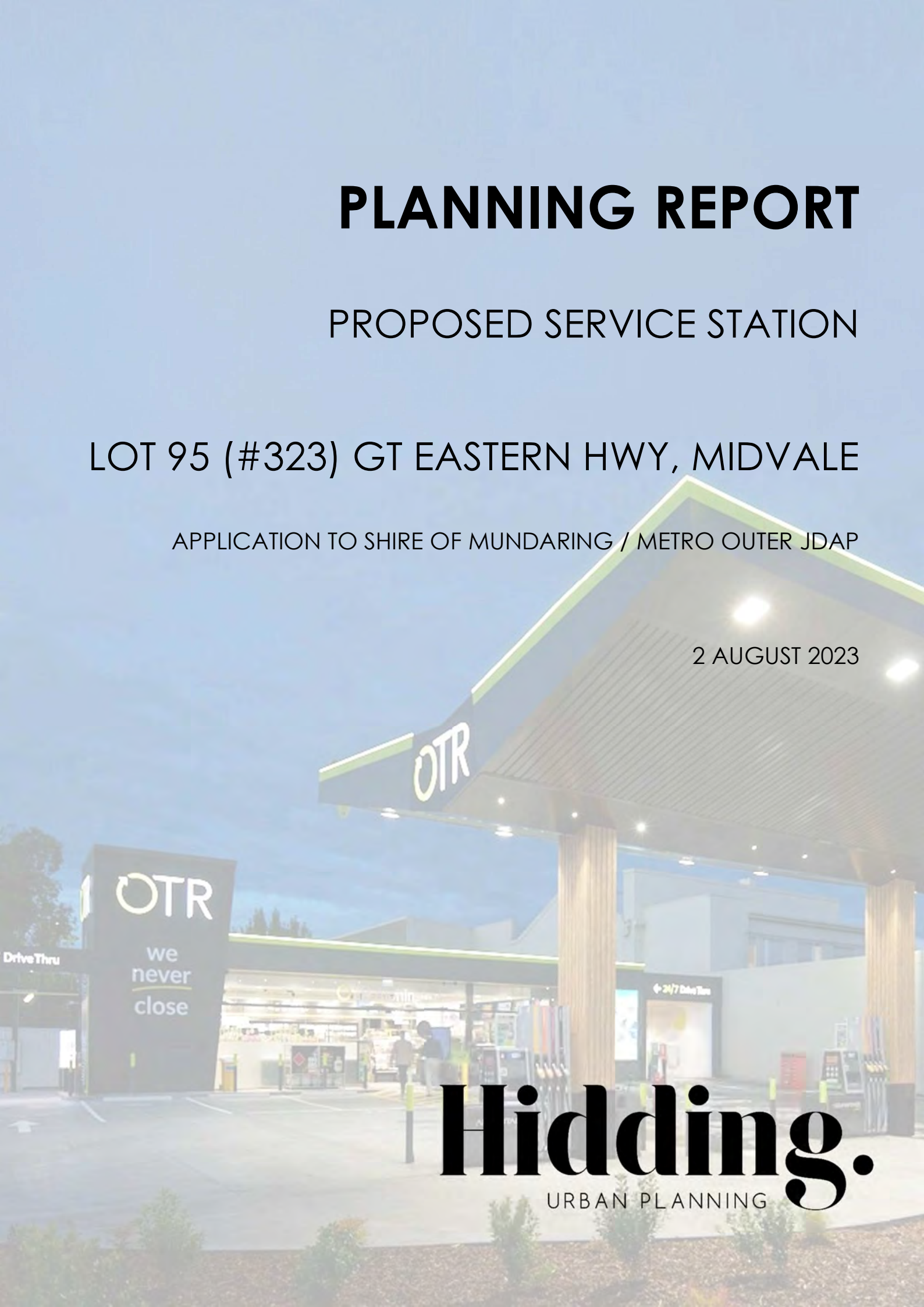
PLANNING REPORT

PROPOSED SERVICE STATION

LOT 95 (#323) GT EASTERN HWY, MIDVALE

APPLICATION TO SHIRE OF MUNDARING / METRO OUTER JDAP

2 AUGUST 2023

An architectural rendering of a proposed OTR service station at dusk. The station features a large, illuminated canopy with the OTR logo. Below the canopy is a convenience store with large glass windows and a drive-thru window. To the left, a tall sign displays the OTR logo and the slogan 'we never close'. The foreground shows a paved parking area with some landscaping. The background is a clear night sky.

Hidding.
URBAN PLANNING

This Planning Report has been prepared by **Hidding Urban Planning** for an Application for Development Approval for a Proposed Service Station at Lot 95 (#323) Great Eastern Highway, Midvale

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ANNEXURES:

- Annexure 1:** Certificate of Title
 - Annexure 2:** Development Plans
 - Annexure 3:** Landscaping Plan
 - Annexure 4:** Traffic Impact Assessment
 - Annexure 5:** Environmental Noise Assessment
 - Annexure 6:** Stormwater Management Plan
-

APPLICATION DETAILS

Table 1: Application Details

Property Location	Lot 95 (#323) Great Eastern Highway, Midvale
Applicant	Hidding Urban Planning
Landowner	OTR 375 Pty Ltd
Local Government	Shire of Mundaring
Determining Authority	Metro Outer Development Assessment Panel (JDAP) Optional (Opt-in) Application
Shire of Mundaring LPS4 Zoning	Service Commercial
Proposed Use	Service Station ("D" Discretionary Use)
Existing Use	Showrooms
Total Site Area	2338m ²
Estimated Construction Value	\$2.5 million

1.0 INTRODUCTION

Hidding Urban Planning has prepared this Planning Report on behalf of PC Infrastructure Pty Ltd as part of an Application for Development Approval for the development and use of Lot 95 (#323) Great Eastern Highway, Midvale (**Subject Site**) for a proposed OTR Service Station Development.

This report provides a detailed Town Planning assessment of the proposed development against the relevant State and local Planning framework. The information contained in this report confirms that the proposed Service Station Development is appropriate for the site and reflects the applicable planning framework.

1.1 DEVELOPMENT ASSESSMENT PANEL (DAP) DETERMINATION

As the anticipated construction cost of the project is **\$2.5 million**, the Applicant has “opted in” to the Development Assessment Panel (**DAP**) process and therefore, this Development Application will be required to be determined by the Metro Outer Development Assessment Panel (**JDAP**).

Accordingly, please find **attached** our completed Shire of Mundaring Application for Development Approval Form, MRS Form 1 and DAP Form 1, all signed and authorised by the landowner (OTR 375 Pty Ltd).

1.2 PREVIOUS DEVELOPMENT APPROVAL

The Metro Outer JDAP granted Development Approval for a Service Station development for the site on 27 July 2021 (DAP/20/01927). That approval remains valid until 27 July 2025.

As the proposed development varies the built form arrangement, a completely new application is required.

2.0 SITE DETAILS

2.1 LEGAL DESCRIPTION OF LAND

This development application is made in respect of Lot 95 (#323) Great Eastern Highway, Midvale the details of which are provided in **Table 2** below.

Table 2: Legal Description of Land

Lot	Plan	Vol/Folio	Area	Address	Proprietors
95	DP424638	4027/86	2338m ²	323 Great Eastern Highway, Midvale	OTR 375 Pty Ltd

The Certificate of Title for the subject land is attached at **Annexure 1**.

2.2 SITE DETAILS

The subject land has a total land area of 2338m² and currently comprises showrooms and car parking areas. The site forms part of a series of attached showrooms approved in 1988, linked with 319-322 Great Eastern Highway. The existing showrooms form part of an integrated ribbon commercial development with shared access and parking.

As detailed previously in this report, a Service Station development has already been approved on the subject land which entails the demolition of the existing improvements on the site.

The site has a frontage of approximately 39.55m to Great Eastern Highway with a truncation of 8.50m to Great Eastern Highway and a frontage of approximately 49.18m to Victoria Parade.

An Aerial Photograph of the subject site is included at **Figure 1** below.



Figure 1: Aerial Photograph (source: Landgate)

3.0 THE PROPOSAL

The proposal is to develop an OTR Service Station on the subject land.

Development Plans prepared by ADS Architects are included at **Annexure 2**.

3.1 SUPPORTING PLANS & REPORTS

Plans, consultant reports and other supporting information have been prepared to assist in the assessment of this application.

The plans, reports and documentation which are provided in support of this application are detailed in **Table 3** below and are attached as **Annexures** to this Report.

Table 3: Supporting Plans & Reports

Consultant	Plan/Document	Annexure
ADS Architects	Development Plans	2
Oxygen	Landscaping Plan	3
Transcore	Transport Impact Assessment	4
Herring Storer Acoustics	Environmental Acoustic Assessment	5
JCCE	Stormwater Management Plan	6

3.2 DEVELOPMENT DETAILS

3.2.1 Landscaping & Fencing

The proposed landscaping of the site is intended to ensure that the entire development provides an attractive and high-quality presentation to external streets and site boundaries.

A total of 235.4m² (or 10.05% of the site area) will be landscaped.

A Landscaping Plan is included at **Annexure 3**.

Boundary fencing is proposed in certain areas, as identified on the site plan, and includes:

- 2200mm high masonry fence on northern boundary; and
- 1500mm high masonry fence along Victoria Parade along the drive thru area.

3.2.2 Access & Movement

The site currently has two crossovers to Victoria Parade which will be removed, and in their place, one new consolidated crossover to Victoria Parade is proposed for movements associated with the proposed development.

A Transport Impact Assessment (**Annexure 4**) has been prepared by Transcore to address the traffic movements associated with the proposed development. The design has demonstrated that

access and traffic movements for both cars and heavy vehicles (including fuel tankers) can be accommodated on the site. The TIA provides swept paths for the key design vehicles and demonstrates acceptable movements across the site.

3.2.3 Car Parking & Drive Thru

The site has been provided with the following car parking facilities:

- 13 marked car parking bays (including one (1) accessible parking bay);
- 8 fuel bowser parking bays located under the fuel canopy;
- Four (4) EV charging station bays;
- One (1) vacuum bay;
- A drive thru facility that can accommodate 10 cars in the drive thru queue lane.

The Drive Thru is primarily for ordering and collection of coffee and other pre-packaged goods from the convenience store building.

There are four (4) on-street car parking bays in the verge of Victoria Parade that will be slightly modified and re-instated as part of this proposal.

3.2.4 Signage

The proposed development involves a 9.00m high x 2.359m wide pylon sign located at the south-western corner of the site adjacent to Great Eastern Highway for the purpose of displaying fuel pricing and relevant signage for the proposed development.

A range of other signage on buildings and the fuel canopy is proposed as shown on the Signage Elevations.

LED signage elements will be used to display text and images relating to goods and services provided on the site. There will be no third-party advertising displayed using the LED elements (or otherwise). LED elements will display static, but changeable, images, which will have a dwell time of no less than 30 seconds per image and will change over rapidly, i.e. no more than 0.1 second. Luminance of the LED panels will be controlled in accordance with prevailing ambient light to avoid illumination or glare which may distract drivers or other road users, ranging from a maximum of 6,000 Cd/m² (maximum average) on a sunny day, to no more than 300 Cd/m² (maximum average) at night. These standards are in accordance with Main Roads WA (MRWA) advertising policy and are appropriate guidelines to follow.

The LED signage elements will allow the full range of goods and services offered at the site (including fuel sales and promotions, convenience retail including the retail drive-through, coffee and food offers) to be brought to the attention of customers in a contemporary, engaging way, reducing the need to seek approval for a larger number of static signage elements which would present the same information in a manner that might be more likely to contribute to visual clutter and over-proliferation of signage.

In relation to the 9.00m high Pylon Sign, this will be a double-sided sign that will display the same information on both faces. The LED signage panels on the upper part of the sign will display content of the kind referred to above, with dwell time, changeover time and luminance as described above. The lower part of the sign will be back-illuminated signage panels providing signage for the range of facilities and offers available on the site.

3.2.5 Building & Design

The design of the proposed Station development is typically commercial in appearance and will adopt the corporate branding normally associated with an OTR Service Station.

The proposed convenience store building will be set back 5.665m from the Victoria Parade boundary and approximately 5.453m from the side (northern) boundary. The fuel canopy will be set back approximately 7.807m from the Great Eastern Highway boundary.

The convenience store is appropriately located and will include a pedestrian access link to a proposed new footpath in Victoria Parade, linking with the existing footpath in Great Eastern Highway for those that wish to walk to the store.

The convenience store building is proposed at a height of 5.25m extending up to 6.60m, and extending up to 7.650m at the blade wall at the eastern end of the building adjacent to Victoria Parade, giving the building a larger presence to the street. Extensive glazing is proposed along the main building facade of the convenience store, and feature brickwork and cladding panelling is also proposed as shown in the Elevations. A range of signage (some of which are illuminated) is proposed on the building.

The convenience store building will incorporate an internal sales area of 250m² GLA, which will include a point-of-sale and offer for sale of goods generally expected of an OTR facility, for the convenience of customers. The Service Station use will also include a four-bowser fuel canopy with the capability to service 8 light vehicles simultaneously. A drive-thru facility is also proposed around the rear and sides of the convenience store building and involves separate order and pick-up locations. The drive thru facility can accommodate 10 vehicles in the drive thru queue lane.

The fuel canopy will feature OTR branding and livery. The fuel canopy will have a total height of 7.24m and will feature a butterfly design that is an OTR signature design feature. The fuel canopy will have a minimum 4.65m clearance.

The Service Station will also offer four (4) Electric Vehicle (EV) charging stations located under a covered tensile shade canopy.

3.2.6 Hours of Operation & Staff

The proposed Service Station use is intended to be operated 24 hours a day, 7 days a week consistent with many service station and convenience store developments across Western Australia.

The proposed Service Station will normally have up to 3 staff on site at peak times; 1-2 at non-peak times; and 1 overnight. During the overnight hours, a single staff member will attend to all fuel and other internal sales.

3.2.7 Fuel Types, Dispensing & Fuel Delivery

The proposed Service Station development will offer five (5) different fuel types (E10, ULP, ULP95, ULP98, Diesel) under the fuel canopy. The dispensing arrangements will be through standard bowsers drawing from 2 x 90,000L underground storage tanks.

All fuel storage and delivery activities will be undertaken in a manner which complies with Australian Standard 1940 – *The Storage and Handling of Combustible Liquids*.

The largest service vehicle which is expected to use the site is a 16.50m fuel tanker for fuel deliveries. Fuel delivery will occur at a rate of two to three deliveries per week, as required.

The fuel will be stored in underground horizontal cylindrical tanks positioned in proximity to the fill point.

Transcore has undertaken a fuel tanker turn path assessment using Main Roads WA guidelines and the TIA includes the turn paths for a 16.50m fuel tanker. The fuel tanker will enter and exit the site from Victoria Parade (refer to Appendix B of the Transcore Transport Impact Assessment at **Annexure 4**).

3.2.8 Environmental Considerations

The risk of contamination and pollution of the local environment is considered minimal. Service Station uses are highly regulated, and designers use industry best practices to minimise any fuel or other contaminant access to stormwater drains. Design, operational and management measures will include:

- The use of double-contained fuel storage tank systems with a leak monitoring space;
- Fuel tanks will be established in stable compacted soils;
- On-site retention and treatment of stormwater using a SPEL Puraceptor Stormwater Treatment and Hydrocarbon Capture system;
- Stage 1 Vapour Recovery Systems compliant with the *Protection of the Environment Operation (Clean Air) Regulation 2002* (NSW Guidance Document);
- Fuel spill kit compliant with the latest Australian Standards and Federal National Occupational Health and Safety Council (NOHSC Codes) or Practice that pertains to the handling, storage, clean-up and disposal of Dangerous Goods and Hazardous Substances: NOHSC: 2007(1994), 1005(1994), & 1015(2001) and AS/NZS 3816:1998, AS1940-2004, AS3780-1994, & AS2507-1998;
- Fuel distribution and leak detection infrastructure compliant with all the relevant Australian Standards, Regulations and Industry Best Practices;

- Site operators will be trained personnel to effectively handle incidents such as fuel and oil spills; and
- Equipment will be installed on site to use in the clean up of any fuel, oil or chemical spills.

3.2.9 Noise Management

Herring Storer Acoustics was engaged to prepare an Environmental Noise Assessment for the proposed development (see **Annexure 5**).

To assist with acoustic compliance, a range of boundary walls have been recommended to be included in the new development to shield the service station and drive thru activities from nearby sensitive land uses.

From the analysis undertaken, noise emissions from the proposed development (with management measures) have been assessed to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* and no other major noise mitigation is required.

3.2.10 Stormwater Management

JCCE was engaged to prepare a Stormwater Management Plan for the development site – refer **Annexure 6**.

4.0 PLANNING ASSESSMENT

4.1 METROPOLITAN REGION SCHEME

The subject land is zoned “Urban” under the Metropolitan Region Scheme (**MRS**) and fronts Great Eastern Highway which is a “Primary Regional Roads” Reserve.

4.2 SHIRE OF MUNDARING LOCAL PLANNING SCHEME 4

4.2.1 Zoning & Land Use

The subject land is zoned “Service Commercial” in the Shire of Mundaring Local Planning Scheme No.4 (LPS4) as shown in **Figure 2** below. Land to the north and north-east is zoned “Residential R40”.

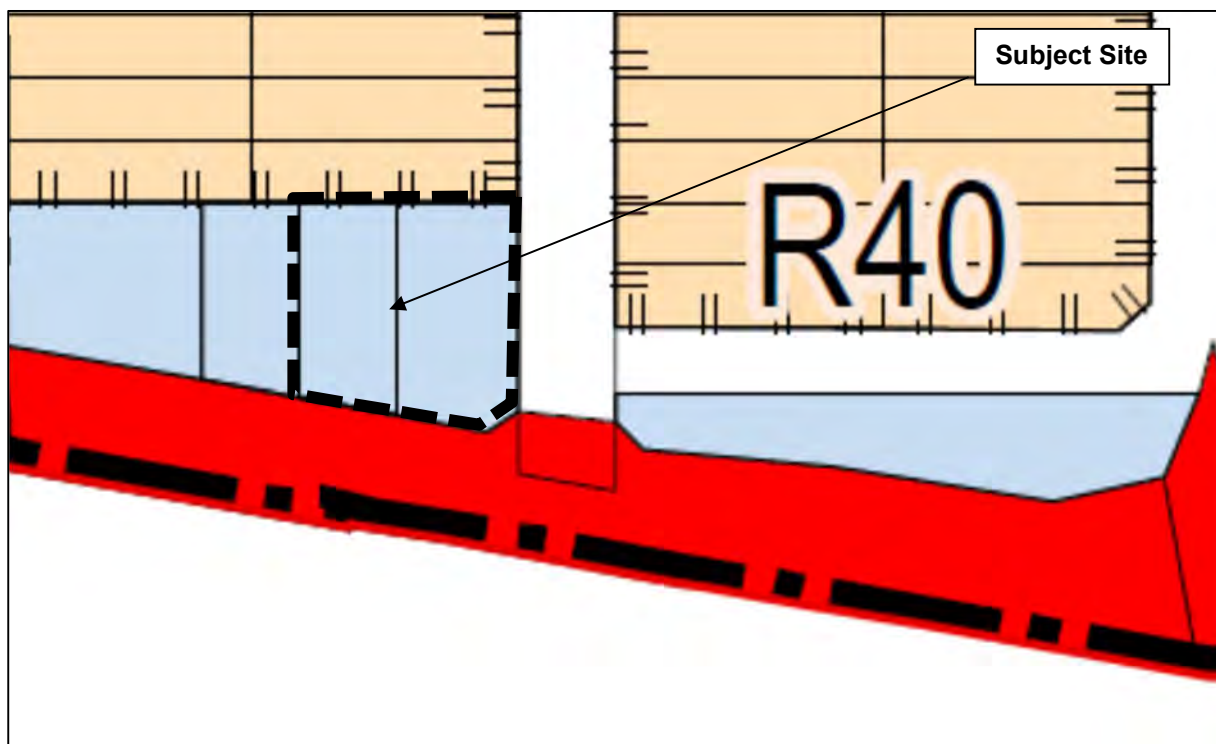


Figure 2: LPS4 Zoning Map

Clause 4.2.7 of LPS4 sets out the objectives for the “Service Commercial” zone, as follows:

- (a) *To provide for a range of commercial activities which, by reason of the scale or the nature of the business require good visibility and vehicular access and/or larger sites, and are not generally appropriate within the Town Centre or Local Centre zones.*
- (b) *To ensure a high standard of development and to maintain the visual amenity of the area as seen from public roads, particularly important local roads or highways.*

The proposed development accords with the objectives of the “Service Commercial” zone.

Under LPS4, a “Service Station” use is defined as:

“service station” means premises used for the retail sale of petroleum products and motor vehicle accessories and may include:

(a) the retail sale of convenience goods commonly sold in supermarkets, delicatessens or newsagents; and/or

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

but does not include premises used for a transport depot, panel beating, spray painting, major repairs or wrecking.

A “Service Station” use is a “D” (Discretionary) use in the “Service Commercial” zone, as set out in Table 1 (Zoning Table) of LPS4. Accordingly, the proposed development is capable of approval.

4.2.2 Development Requirements for All Zones

Clause 5.7 of LPS4 sets out a range of development requirements for various zones.

It should be noted that Clause 5.5 of LPS4 provides discretion to vary the site and development standards prescribed in LPS4.

Table 4 below provides an assessment of the relevant development requirements under LPS4.

Table 4: Development Requirements

Development Requirements of LPS4	Response
5.7.6 Stormwater Drainage <i>5.7.6.1 Subdivision and development shall employ water sensitive urban design approaches to stormwater drainage. Any subdivision or development which increases the area of impermeable surfaces or which otherwise reduces stormwater recharge of groundwater systems, is to utilise best management practices to effect the retention of stormwater within the development area so as to:</i> <i>(a) minimise as far as practicable changes to both the rate and quantity of direct stormwater discharge from the site; and</i> <i>(b) prevent the export of water borne pollutants (including sediment load and nutrients).</i>	A Stormwater Management Plan has been prepared by JCCE for the proposed development – refer Annexure 6.
<i>5.7.6.2 Subdivision and development shall be consistent with the relevant recommendations of Better Urban Water Management, published by the Commission, as applicable, and with any subsequent guideline or policy of the Commission relating to urban water management. Subdivision and development shall also be consistent</i>	A Stormwater Management Plan has been prepared by JCCE for the proposed development – refer Annexure 6.

Development Requirements of LPS4	Response
<i>with any guidelines and/or policy regarding stormwater drainage adopted by the Shire.</i>	
5.7.7 Effluent Disposal <i>5.7.7.1 Where access to a reticulated sewerage system is not available, on-site effluent disposal facilities are to be provided to treat and dispose of any effluent generated on the site. Soil permeability, nutrient retention characteristics, soil microbial purification ability, slope and distance to groundwater and surface water must be demonstrated to be appropriate for the proposed system.</i>	The proposed development will be connected to a reticulated sewer service.
5.7.8 Landscaping Requirements <i>5.7.8.1 Unless otherwise approved by the Shire, landscaping shall be provided as a component of all commercial and industrial development.</i>	10% of the site area is provided as landscaping. A Landscaping Plan is provided – refer Annexure 3 .
<i>5.7.8.2 The area, distribution and type of landscaping of individual sites required by this Scheme shall be determined in the context of each proposed development, but shall be generally in accordance with the following principles:</i> <i>(a) except where used for driveways or pedestrian pathways, or where a building has a lesser setback, a 3 m wide strip of land abutting all street frontages shall be landscaped;</i> <i>(b) landscaping shall consist primarily of local indigenous and low water-use species (with the exception of environmental weeds);</i> <i>(c) the required landscaping shall be visible from the adjacent street(s) or public places;</i> <i>(d) landscaping should complement the design of building facades;</i> <i>(e) consideration should be given to the desirability of integrating landscape planting with stormwater management in order to achieve best practice water sensitive design outcomes;</i> <i>(f) consideration should be given to the desirability of providing shade trees within or adjacent to the development so as to improve the microclimate for users of the site; and</i> <i>(g) safe and convenient pedestrian access to and within the development site shall be provided or maintained.</i>	Landscaped areas are provided for on the site. • Landscaping areas will be visible from the adjacent streets. • Landscaping areas will include shade trees. • Pedestrian access has been provided.
5.7.11 Preservation of Amenity <i>5.7.11.1 A development requiring planning approval under this Scheme shall not be approved if, in the opinion of the Shire, the proposed materials, design, colour(s), texture(s) or reflectivity of such development would unreasonably adversely impact on the visual amenity of the locality.</i>	The proposed materials, design, colour and texture of the proposed development are not anticipated to unreasonably adversely impact on the visual amenity of the locality.
5.7.15 Land abutting Great Eastern Highway <i>Notwithstanding other provisions in the Scheme relating to development setbacks, the minimum setback for all buildings to Great Eastern Highway shall be:</i>	The proposed fuel canopy associated with the Service Station is set back a minimum of 7.807m to Great Eastern

Development Requirements of LPS4	Response
(a) 15 m; or (b) as otherwise specified in this scheme, whichever is the greater. However, within the Town Centre and Local Centre zones, the Shire may vary the requirements of this provision, having regard to clauses 5.12.2 and 5.13.3.	Highway at its closest point, extending out to a setback of 11.759m. This is less than the 15m setback prescribed by Cl 5.7.15 of LPS4, however, the Shire/JDAP has discretion to approve a reduced setback (provided for in Clause 5.5 of LPS4). The existing approval for a Service Station (approved in July 2021) also involved a reduced setback to the fuel canopy (12.8m setback).
5.7.16 Building Height The maximum height of any building within the Scheme area shall be 10 m, unless otherwise specified in the Scheme, an adopted Structure Plan or adopted Precinct Plan.	The tallest component of the proposed development is the blade wall of the convenience store building which is 7.65m high, below the 10m height limit.
5.7.20 Vehicle Parking 5.7.20.1 The car parking requirements for various land uses are set out in Table 2 below. Unless otherwise approved by the Shire, car parking spaces shall be provided for a use in accordance with the requirements of Table 2.	Table 2 of LPS4 does not set out a specific car parking requirement for a "Service Station" land use and accordingly, the requirement will be at the Shire's discretion (see Cl 5.7.20.5).
5.7.20.5 Where a particular use of land is proposed that is not specified in Table 2, the car parking requirement for the use shall be at the Shire's discretion.	The proposed development will provide 13 marked bays, 4 EV charging bays, plus opportunity for cars to remain parked at the bowser, plus drive thru queue space, which reduces pressure on ordinary marked car parking bays. In addition, there are four (4) on-street car parking bays that already exist the verge of Victoria Parade that will be slightly modified (given the proposed new consolidated crossover). Accordingly, it is considered that the proposed "Service Station" use is adequately provided with car parking opportunities.
5.7.22 Vehicular Access to Major Roads 5.7.22.1 Vehicular access points to and from Great Eastern Highway from any development shall be limited as far as practicable. The Shire shall encourage shared access arrangements between properties, and access to and from secondary streets, as appropriate, to avoid or minimise vehicular access points to and from Great Eastern Highway.	No direct access to Great Eastern Highway is proposed to the development site. A consolidated crossover is proposed to Victoria Parade (secondary street), together with shared access arrangements to the neighbouring property to the west, which will be retained and likely imposed under a planning approval condition (as was enforced under the previous Service Station approval (Condition 12), and under the Amalgamation Approval granted by the WAPC in March 2021 (WAPC: 160244)).

Development Requirements of LPS4	Response
5.7.23 Loading areas <i>5.7.23.1 Any commercial, industrial or other use which requires separate access for service vehicles shall be provided with an adequate area, separate from car parking areas, for loading and unloading of vehicles. Any such loading areas shall be located so as to allow vehicles to enter and leave the site from/to a public road in forward gear, with vehicular entrances and exits located so as to avoid or minimise traffic hazards.</i>	The proposed development has a refuse store accessible from the rear of the site away from car parking areas. The TIA (Annexure 4) provides a swept path for a 12.50m service vehicle, demonstrating entry and exit movement in forward gear.
5.7.25 Drive-through businesses <i>5.7.25.1 A drive-through business shall require provision of adequate queuing spaces for vehicles on the site of that use. A minimum of four queuing spaces shall be provided or as otherwise specified by the Shire.</i>	The proposed drive-thru component of the Service Station is an ancillary use and not a separate, standalone use. The purpose of the drive-thru is for coffee and other pre-packaged goods available in the store. The drive-thru facility provides adequate queue spaces well in excess of the minimum of four queue spaces prescribed by this clause. There is the possibility to accommodate 10 cars in the drive thru queue lane.
5.7.26 Service Stations <i>Any Service Station shall comply with the following requirements:</i> <i>(a) any vehicular crossover from a road reserve shall be:</i> <i>i) a maximum of 11 m wide; and</i> <i>ii) a minimum of 15 m from a road intersection;</i> <i>(b) inlets to bulk fuel storage tanks shall be situated so as to ensure that fuel tankers, while discharging fuel into those tanks, stand wholly within the Service Station site; and</i> <i>(c) fuel pumps shall be set back a minimum of 3 m from any lot boundary abutting a road reserve.</i>	The proposed Service Station will involve a 8.637m wide crossover to Victoria Parade located 18.263m from the truncation of the site with Great Eastern Highway, in accordance with this clause. Fuel tankers, when delivering fuel to the service station, will be wholly situated within the site during filling activities, as shown in the swept path drawings (Appendix B of the TIA at Annexure 4). The fuel bowsers are set well back from road reserve boundaries (approx 9m from Great Eastern Highway boundary).
5.7.30 Light overspill <i>Floodlights, spotlights and all other forms of lighting shall be constructed, oriented and controlled so as not to:</i> <i>(a) adversely impact on the amenity of any adjacent residents; or</i> <i>(b) cause a traffic hazard in the adjacent road network.</i>	Potential sources of light spill from the proposed development are primarily from the lighting of the fuel canopy, the retail building, and any external lights in the forecourt or perimeter of the development site. Lighting proposed within the canopies will be inset and orientated internally to ensure light spill is contained within the site. It is not anticipated that light sources from the proposed development will affect residential dwellings, due to the orientation of the proposed development. A service station development has already been approved on the land with

Development Requirements of LPS4	Response
	a condition imposed requiring floodlights to be located and angled to minimise light spill onto adjoining land. Further, it is a requirement to comply generally with Australian Standard AS4282 – Control of Obtrusive Effects of Outdoor Lighting, and the final design of lighting (and ultimate operation) will be regulated by AS4282.
5.7.28 Primary and secondary streets <i>Where development is proposed on a corner lot, the Shire shall determine which street is the primary street and which is the secondary street.</i>	The proposed development is proposed on a corner lot. The development has been designed with Great Eastern Highway being the primary street and Victoria Parade being the secondary street.
5.7.33 Advertising <i>Advertising, not otherwise exempt under Schedule 5, must:</i> <i>(a) not detract from or erode the visual qualities and character of a particular locality and/or transport corridor; and</i> <i>(b) be associated with the operation or business on the subject site; and</i> <i>(c) not be misleading or dangerous; and</i> <i>(d) be of a size and scale that is proportionate to the realistic needs of local commerce in the locality; and</i> <i>(e) be designed to minimise visual clutter.</i>	The proposed signage is consistent with many other service station developments, including the existing service station approval which included a condition limiting the size of the pylon sign to 9m in height. The proposed Service Station involves a 9m high pylon sign, together with normal wall signage on the building and the fuel canopy.

4.2.3 Development Requirements for the Service Commercial Zone

Clause 5.14 of LPS4 sets out a range of development requirements specifically for development in the “Service Commercial” zone.

Table 5 below provides an assessment of the relevant development requirements under LPS4.

Table 5: Development Requirements for the Service Commercial Zone

Development Requirements of LPS4	Response
5.14.2 Site coverage and plot ratio <i>Development within the Service Commercial zone shall have a maximum site coverage of 50% and a maximum plot ratio of 0.5.</i>	The proposed development has a site coverage less than 50% and a plot ratio less than 0.5, and therefore, complies.
5.14.3 Development setbacks <i>The following minimum setbacks apply to development within the Service Commercial zone:</i> <i>Primary street: 3 m (5 m on corner lots)</i> <i>Secondary street: 3 m</i> <i>Side: Nil</i>	The proposed development has a setback to Great Eastern Highway of 7.807m to the fuel canopy (open structure), with the convenience store building set well back from Great Eastern Highway.

Development Requirements of LPS4	Response
<i>Rear: Nil</i> <i>Great Eastern Highway: 15 m</i>	The reduced setback to Great Eastern Highway is considered acceptable given the fuel canopy is an open structure which can be parked under for the purpose of refuelling. The reduced setback is capable of approval under the discretion afforded by Clause 5.5 of LPS4. The convenience store building is set back 5.665m from Victoria Parade (secondary street) and is compliant.
5.14.4 Building Materials <i>5.14.4.1 Each facade or wall of a building facing any street or public place shall be constructed of, or finished so as to appear to be constructed of, brick, stone, concrete or glass, or a combination of these materials, or similar material as approved by the Shire, to a minimum height of 3 m above finished ground level.</i>	The proposed materials associated with the Service Station including brick, cladded panelling, glass and concrete tilt-up panels, achieving a minimum height of 3m above finished ground level.
5.14.5 Use of setback areas from streets <i>The building setback area from any street alignment shall only be used for one or more of the following:</i> <i>(a) vehicular and pedestrian access;</i> <i>(b) car parking for employees, customers or visitors;</i> <i>(c) landscaping; and</i> <i>(d) advertising signage approved by the Shire or exempted from requiring approval of the Shire by this Scheme or the Shire's Signs Local Law.</i> <i>The building setback area shall not be used for repair or dismantling of vehicles, nor for storage purposes.</i>	Setback areas will be used for vehicular and pedestrian access, car parking, landscaping, signage.
5.14.6 Bin storage areas <i>Bin storage areas shall be provided for all development. Such areas shall be:</i> <i>(a) located so as to be readily accessible by service vehicles;</i> <i>(b) of sufficient size to accommodate rubbish generated by the use(s) on each property in the interval between rubbish collections; and</i> <i>(c) effectively screened from view from any street, public place and any adjacent residence.</i>	The proposed bin store area will be enclosed and gated is located at the rear of the site, accessible from the rear laneway. This area is readily accessible by service vehicles (as demonstrated in swept paths) and is away from streets, out of view.

4.2.4 Matters to be Considered

Clause 67 - Part 2 - Schedule 2 (**Deemed Provisions**) of the *Planning and Development (Local Planning Schemes) Regulations 2015* (Regulations) outlines matters to be given due regard by local government when assessing development applications.

Table 6 below provides an assessment against matters relevant to this proposal.

Table 6: Matters to be Considered

Relevant Matters to be Considered	Response
(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 Shire's LPS4 for the following reasons: • The proposal seeks approval for a land use which is capable of approval in the "Service Commercial" zone as a "D" Discretionary use. • The proposed development is in general compliance with the provisions of LPS4. • The proposed development will improve the amenity of the site. • There is an existing approval for a "Service Station" development on the land.
(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 in general compliance with the local planning framework applicable to the subject site.
(c) <i>Any approved State Planning Policy</i>	This report demonstrates the proposed development is in compliance with the relevant State Planning Policies.
(d) <i>Any environmental protection policy approved under the Environmental Protection Act 1986 section 31 (d);</i>	This report demonstrates compliance with relevant Environmental policies.
(e) <i>Any policy of the Commission</i>	This matter is not relevant to this proposal.
(f) <i>Any policy of the State</i>	This matter is not relevant to this proposal.
(fa) <i>Any local planning strategy for this Scheme endorsed by the Commission</i>	The Shire of Mundaring Local Planning Strategy (2013) formulated the preparation of LPS4 (gazetted in 2014). Accordingly, it is considered that the proposed development aligns with the objectives of the Shire's Local Planning Strategy.
(g) <i>Any local planning policy for the Scheme area;</i>	This report demonstrates the proposed development is in general compliance with the relevant local planning policies applicable.
(h) <i>Any structure plan or local development plan that relates to the development.</i>	This matter is not relevant to this proposal.
(i) <i>Any report of the review of the local planning scheme that has been published under the Planning and Development (Local Planning Schemes) Regulations 2015.</i>	This matter is not relevant to this proposal.

Relevant Matters to be Considered	Response
(j) <i>In the case of land reserved under this Scheme, the objectives for the reserve and the additional and permitted uses identified in this Scheme for the reserve.</i>	This matter is not relevant to this proposal as the subject land is not reserved under the Scheme.
(k) <i>The built heritage conservation of any place that is of cultural significance.</i>	This matter is not relevant to this proposal.
(l) <i>The effect of the proposal on the cultural heritage significance of the area in which the development is located.</i>	This matter is not relevant to this proposal.
(m) <i>The compatibility of the development with its setting, including -</i> (i) <i>the compatibility of the development with the desired future character of its setting; and</i> (ii) <i>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>	The proposed development is entirely compatible with its setting for the following reasons: • The proposed development is suitably located within a service commercial locality. • The scale of the development does not impact any adjacent properties. • There is an existing Service Station approval for the subject land indicating that such a use is appropriate for the site. Having regard to the above, the nature of the proposed development is entirely compatible with its surroundings.
(n) <i>The amenity of the locality including the following –</i> (i) <i>Environmental impacts of the development;</i> (ii) <i>The character of the locality;</i> (iii) <i>Social impact of the development;</i>	<u>Environmental Impacts:</u> The proposed development is not anticipated to result in any adverse environmental impacts. <u>Character of the Locality:</u> The proposed development will not affect the character of the locality. <u>Social Impacts:</u> The proposed development will not have any adverse social impacts on the surrounding locality, but will provide a positive social impact through the creation of jobs through construction and operation of the facility.
(o) <i>The likely effect of the development on the natural environment or water resources and any means that are proposed to protect or to mitigate impacts on the natural environment or the water resource.</i>	The proposal is supported with a Stormwater Management Plan (Annexure 6) to demonstrate how stormwater is collected and treated.
(p) <i>whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved.</i>	Adequate areas of landscaping will be provided on the site, comprising 10% of the site area (refer Landscaping Plan at Annexure 3). No vegetation or trees that are worthy of protection exist on the land currently.
(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>	A Stormwater Management Plan has been prepared for the development (Annexure 6).

Relevant Matters to be Considered	Response
(r) <i>The suitability of the land for the development taking into account the possible risk to human health or safety.</i>	This matter is not relevant to this proposal.
(s) <i>The adequacy of – (i) the proposed means of access to and egress from the site; and (ii) arrangements for the loading, unloading, manoeuvring and parking of vehicles;</i>	As outlined in this Report and the supporting Transport Impact Assessment (TIA) prepared by Transcore (Annexure 4), the proposed access arrangements to and from the site are satisfactory. The development has been appropriately designed, including appropriate arrangements for loading, unloading, manoeuvring and parking of vehicles, as well as fuel tanker movements.
(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 Transport Impact Assessment (Annexure 4) addresses this matter.
(u) <i>the availability and adequacy for the development of the following – (i) public transport services; (ii) public utility services; (iii) storage, management and collection of waste; (iv) access for pedestrians and cyclists (including end of trip storage, toilet and shower facilities); (v) access by older people and people with disability;</i>	The Transport Impact Assessment (Annexure 4) addresses these matters.
(v) <i>The potential loss of any community service or benefit resulting from the development other than potential loss that may result from economic competition between new and existing businesses.</i>	No loss of any community service or benefit is expected to occur as a result of the proposed development.
(w) <i>The history of the site where the development is to be located.</i>	The only relevant historical consideration of the site is that there is an existing Service Station approval granted (2021).
(x) <i>The impact of the development on the community as a whole notwithstanding the impact of the development on particular individuals.</i>	Given that a service station has been approved before, it is considered that there is no impact of the development on the community.
(y) <i>Any submissions received on the application.</i>	The Shire can advertise the application for public comment and assess any relevant submission made.
(za) <i>The comments or submissions received from any authority consulted under clause 66.</i>	The Shire can refer the application to any authority it considers appropriate, and to assess any relevant submissions/comments made.
(zb) <i>Any other planning consideration the local government considers appropriate.</i>	The Shire can determine whether there are any other planning considerations that are relevant. The existing Service Station approval for the subject land is a relevant planning consideration.

Having regard to **Table 6** above, the proposal appropriately addresses the relevant matters to be given due regard as set out in the Deemed Provisions.

4.3 LOCAL PLANNING POLICIES

4.3.1 Local Planning Policy 3.1 - Public Art

The Shire's LPP3.1 – Public Art applies to the proposed development, as it involves a cost of development of \$2.5 million.

Accordingly, it is anticipated that a standard condition of development approval will be imposed requiring the developer to provide public art or provide a cash contribution, to the value of 1% of the development cost.

4.4 STATE PLANNING POLICIES

4.4.1 WAPC SPP 7.0 – Design of the Built Environment

Table 7 below provides a response to the Design Principles of State Planning Policy 7.0 Design of the Built Environment (**SPP7.0**).

Table 7: Assessment of Design Principles of SPP7.0

SPP 7.0 Design Principles	Response
1. Context and character <i>Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.</i>	The proposed development/use is consistent with the existing highway commercial context and is comparable with the existing approved development. The development of the site will improve the amenity of the locality, by incorporating well-designed built form (together with landscaped setting).
2. Landscape quality <i>Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.</i>	Service Station developments are often harsh environments for landscaping, however the development incorporates landscaping areas where possible, including the planting of shade trees.
3. Built form and scale <i>Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.</i>	The form and scale of the proposed development is appropriate for the use and location. The built form includes a range of building materials which provide a high quality outcome.
4. Functionality and build quality <i>Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life-cycle.</i>	The development has been designed to be highly functional, with a range of car-based uses such as a convenience store, drive thru facility, fuel sales, EV charging, and vacuum facilities. The design of the development is aimed at providing user efficiency.

SPP 7.0 Design Principles	Response
5. Sustainability <i>Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.</i>	The proposed buildings and canopies are designed to support PV (Solar) Panels, and the development also provides EV charging stations. The proponent is investigating opportunity for utilising recycled asphalt/concrete for the hardstand areas.
6. Amenity <i>Good design provides successful places that offer a variety of uses and activities while optimising internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.</i>	The development will improve the amenity of the locality and provides an environment that is universally accessible. The convenience function of the development itself is considered to provide a new amenity to the locality.
7. Legibility <i>Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.</i>	The proposed vehicle access arrangements from Victoria Parade as well as utilising existing cross access arrangements with the property to the west provide for easily legible entry and exit movements. Similarly, access to the drive thru is easily identifiable. A footpath is proposed along the frontage of the convenience store and will connect with a new proposed footpath in the verge of Victoria Parade which is intended to link with the existing footpath in Great Eastern Highway. This will provide a clear connection and identifiable link to assist people to find their way around.
8. Safety <i>Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.</i>	The building design maximises opportunities for casual surveillance over the forecourt area through large windows and the main entrance to the convenience store building. The car park and forecourt is in full view of the adjacent road ways, which optimises the safety and security of the facility. The entire facility will be appropriately lit and will operate 24/7.
9. Community <i>Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.</i>	The development is specifically designed for convenience of the local community, enabling a venue which provides goods and services 24/7 and responds to a growing need in the area. It is a well-placed addition which will add to the diversity and choice of convenience stores / service stations in the locality and puts less pressure on other facilities in the area.
10. Aesthetics <i>Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.</i>	The proposed building and fuel canopy have been architecturally designed with a range of materials and colours.

As a result, it is considered that the proposed development complies with the Design Principles of SPP7.0.

4.5 ENVIRONMENTAL PROTECTION AUTHORITY GUIDANCE STATEMENT NO. 3 – SEPARATION DISTANCES BETWEEN INDUSTRIAL & SENSITIVE LAND USES

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

With respect to fuel facilities that are intended for 24-hour operation, the EPA Guidance Statement identifies potential impacts as gaseous, noise, odour and risk, and recommends a generic buffer distance of 200m to sensitive land uses. These recommended buffer distances are not absolute separation distances, but are instead default provisions in the absence of site specific technical assessment.

Residential areas exist to the north and north-east of the site, along Victoria Parade.

Table 8 below provides an assessment of the potential impacts from the operation of the proposed Service Station and provides justification to demonstrate the appropriateness of the development on the subject site.

It should also be noted that a Service Station development has already been approved on the subject land, demonstrating that such a proposal meets the EPA Guidance Statement.

Table 8: Mitigation of Potential Amenity or Environmental Impacts

Issue	Response
Noise	It is common for Service Stations to be located either opposite or directly adjoining residential properties. Transmission of noise in these circumstances is not an issue, and noise generated from a fuel facility is generally consistent with other similar commercial uses. A comprehensive Environmental Noise Assessment has been prepared to address noise issues, and it has been concluded that the site will comply with the Environmental Protection (Noise) Regulations (refer Annexure 5).
Risk	As the proposed Service Station provides for the retail sale of fuel, the operator must obtain a Dangerous Goods Storage and Handling Licence to store and sell fuel on the site. The Licence application is made post planning approval. Accordingly, Risk can be appropriately managed through the Dangerous Goods Storage and Handling licence requirements.
Odour / Gaseous	The underground fuel storage tanks will be equipped with a vapour recovery system which ensures that all petrol vapours from the underground tanks are drawn back into the fuel tanker at the time of fuel delivery. This enables the returned vapours to be recondensed into liquid. The Dangerous Goods Licencing process also assesses the likely impact of vapours/odours. Accordingly, the assessment of odour/gaseous issues is appropriately addressed and managed through the Dangerous Goods Licencing process.
Lighting	Potential sources of light spill from the proposed development will primarily be from the lighting of the fuel canopy, the retail building, and any external lights in the forecourt or perimeter of the development site.

Issue	Response
	Lighting proposed within the fuel canopy will be inset and orientated internally to ensure light spill is contained within the site. It is not anticipated that light sources from the proposed development will affect residential dwellings. A service station development has already been approved on the land with a condition imposed requiring lighting to be located and angled away to avoid light spill. Further, it is a requirement to comply generally with Australian Standard AS4282 – Control of Obtrusive Effects of Outdoor Lighting, and the final design of lighting (and ultimate operation) will be regulated by AS4282.

As demonstrated in Table 8 above, the proposed Service Station has been appropriately designed and sited to mitigate any potential amenity and environmental impacts on nearby sensitive (residential) land uses. Accordingly, a lesser separation distance has been demonstrated to be acceptable.

Further, it should be recognised that a similar Service Station development has already been approved on the land, and these issues would have been considered previously.

5.0 CONCLUSION

Hidding Urban Planning seeks Development Approval for a proposed OTR Service Station Development at Lot 95 (#323) Great Eastern Highway, Midvale.

In summary, the proposed development warrants approval for the following reasons:

- The proposed development is generally compliant with the development standards and requirements of the Shire of Mundaring Local Planning Scheme No. 4;
- The proposed “Service Station” use capable of approval in the “Service Commercial” zone as a “D” Discretionary use and is appropriate for the site and location;
- The proposed development is an appropriate use and development form on Great Eastern Highway;
- The proposed development will provide increased services to the Midvale locality;
- The proposed development provides for the redevelopment of the existing site, which is currently an underutilised showroom site;
- The proposed development is supported by a range of expert technical reports, demonstrating that all relevant technical issues have been considered and addressed; and
- There is an existing Development Approval for the land for the purpose of a similar Service Station development, which recognises the site as being generally suitable for the proposed new development being sought.

Having regard to the above, the proposed OTR Service Station Development should be supported and approved.

For these reasons, and in light of the assessment contained within this report, we respectfully request that the Shire of Mundaring have regard to the merits and broader benefits of the proposal when undertaking its assessment of the application, and to recommend approval to the Metro Outer JDAP, subject to reasonable conditions.

Hidding.
URBAN PLANNING

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ANNEXURES

ANNEXURE 1

CERTIFICATE OF TITLE

ANNEXURE 2

DEVELOPMENT PLANS

ANNEXURE 3

LANDSCAPING PLAN

ANNEXURE 4

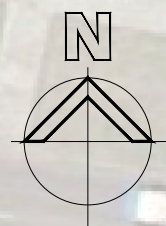
TRANSPORT IMPACT ASSESSMENT

ANNEXURE 5

ENVIRONMENTAL NOISE ASSESSMENT

ANNEXURE 6

STORMWATER MANAGEMENT PLAN

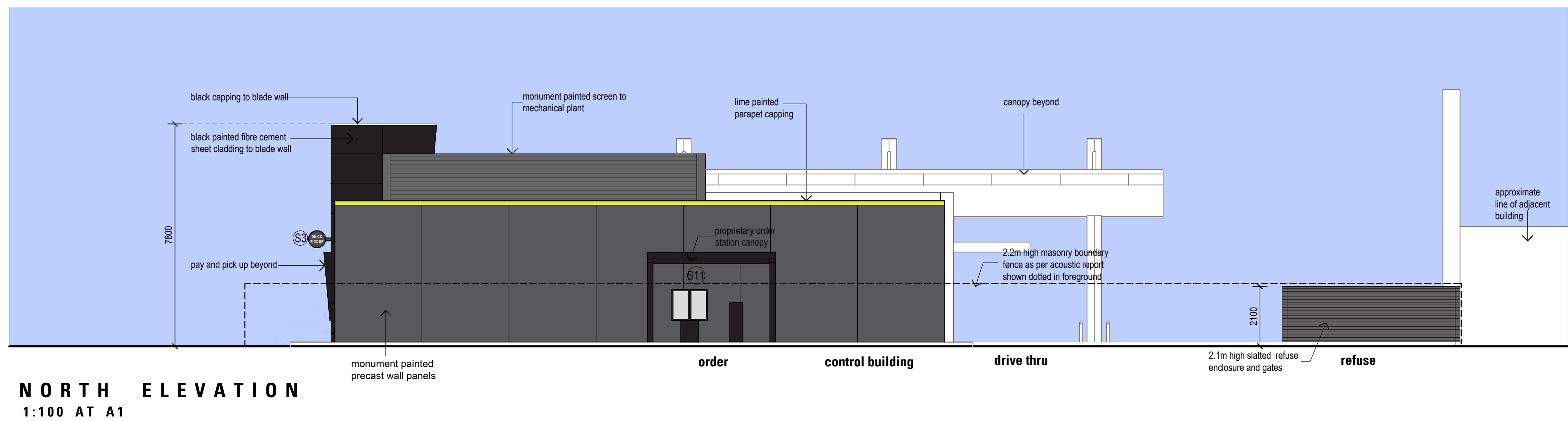
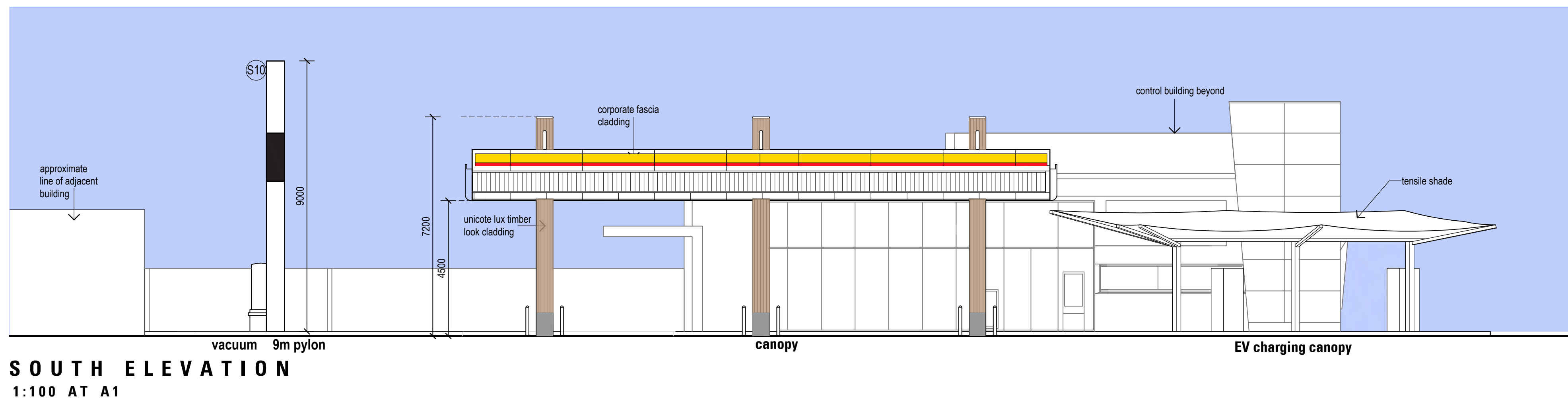
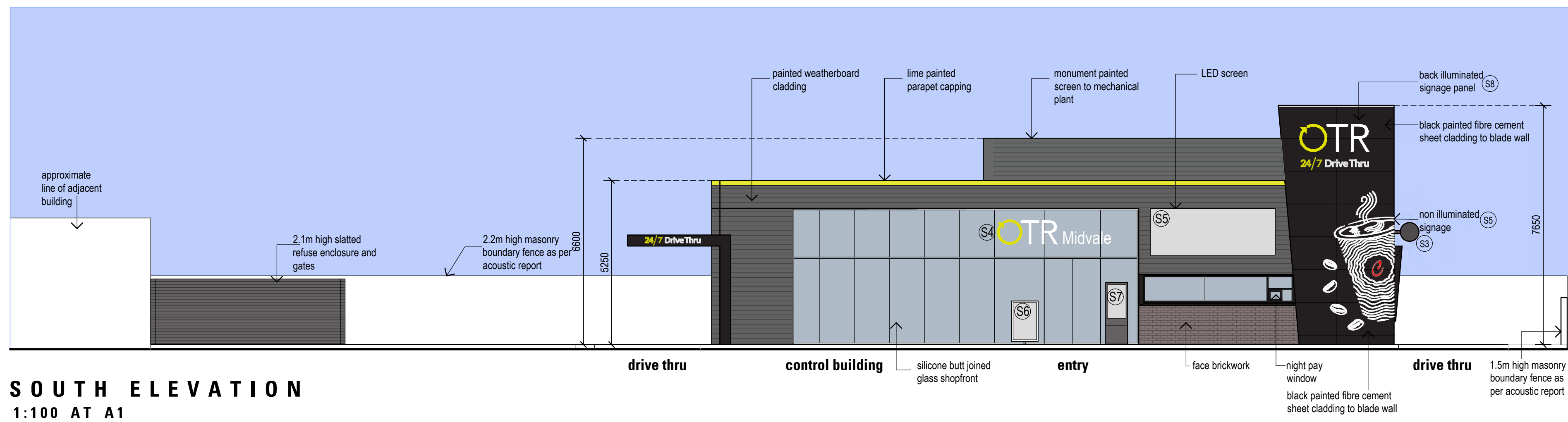


S I T E P L A N

1:200 AT A1

landscape	area sq.m.
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landscaping B	32.97
landscaping C	168.40
Total	235.4
Site area	2340.78
Landscape coverage	10.05%

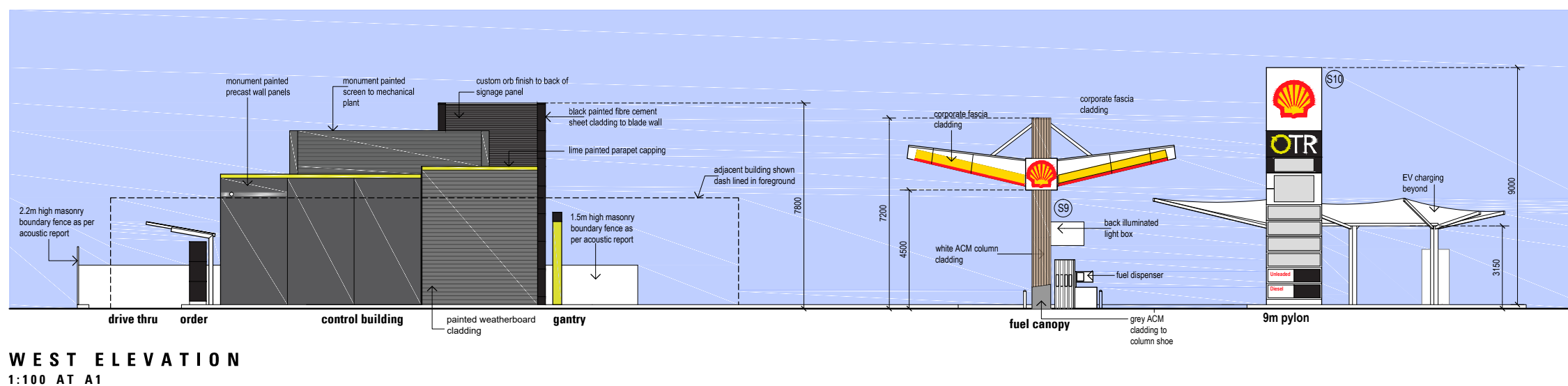
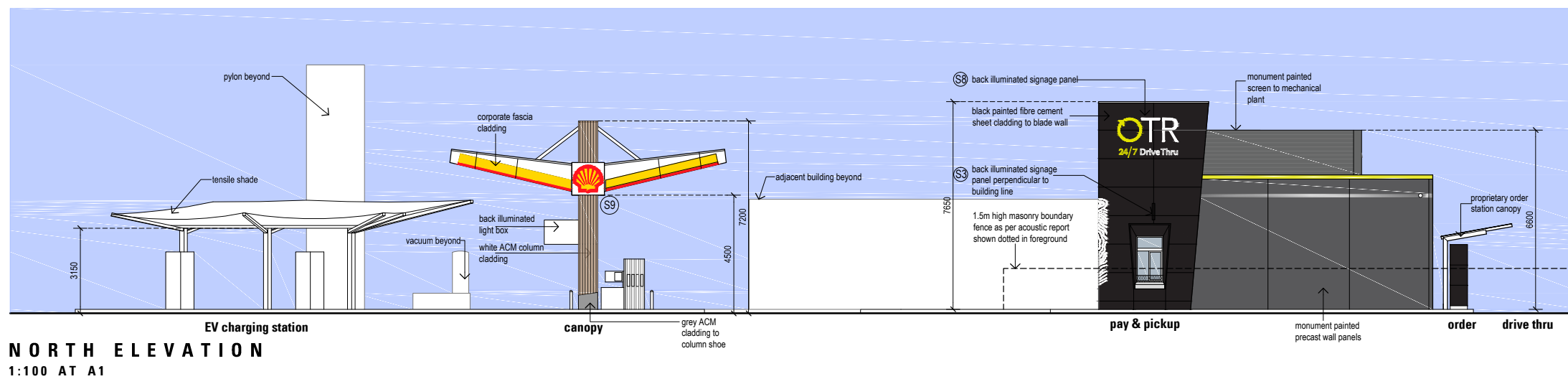
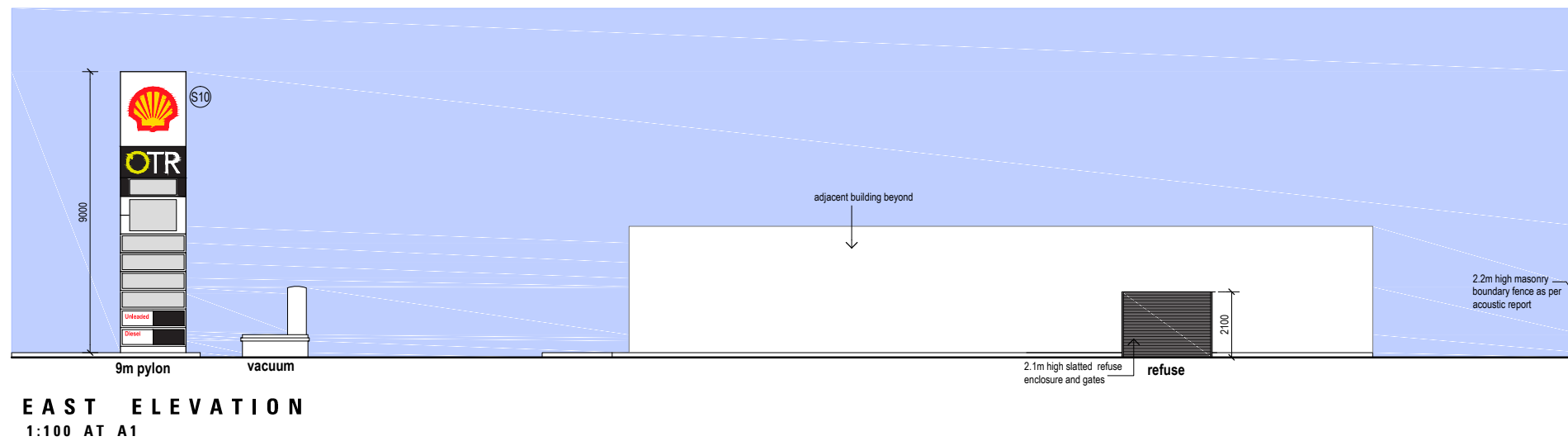




NEW SERVICE STATION COMPLEX

323-325 GREAT EASTERN HIGHWAY MIDVALE WA

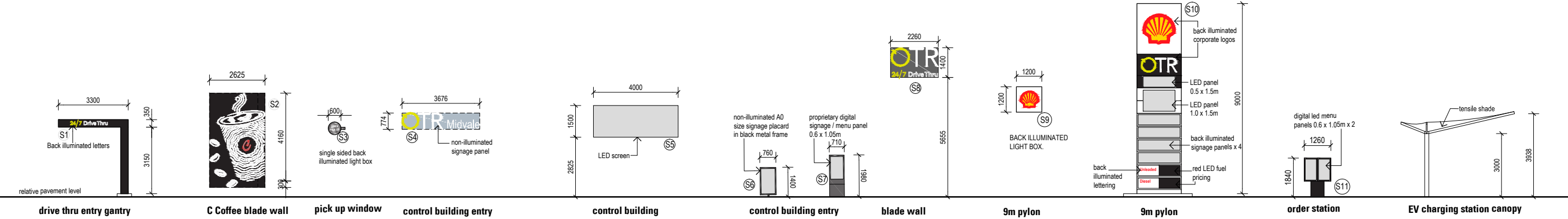
0 1 2 5 10m
Scale 1:100 at A1



NEW SERVICE STATION COMPLEX

323-325 GREAT EASTERN HIGHWAY MIDVALE WA

0 1 2 5 10m
Scale 1:100 at A1



SIGNAGE ELEVATIONS 1:100 AT A1

NEW SERVICE STATION COMPLEX
323-325 GREAT EASTERN HIGHWAY MIDVALE WA





Engineering a better future for over 20 years!

Proposed Service Station

323 -325 Great Eastern Highway,
Midvale

Transport Impact Assessment

PREPARED FOR:
Peregrine Corporation

June 2023

Document history and status

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1 Introduction

This Transport Impact Assessment (TIA) has been prepared by Transcore on behalf of Peregrine Corporation with regards to the proposed service station with an associated order-taking drive-through facility to be located at 323-325 Great Eastern Highway, Midvale in the City of Swan. The subject site is located at the northwest corner of Great Eastern Highway and Victoria Parade's priority-controlled 'T' intersection.

The subject site for the proposed service station is located within an existing retail/commercial facility which is bound by Victoria Parade to the east, Great Eastern Highway to the south, Bushby Street to the west and existing residential properties to the immediate north as illustrated in **Figure 1**. The subject site is currently occupied by an existing vacant building located at the easternmost portion of the facility.



Figure 1: Location of the subject site

Vehicle accesses to the commercial/retail facility are currently available via two full-movement crossovers on Victoria Parade, one full-movement crossover on Great

Eastern Highway and one full-movement crossover on Bushby Street. As part of the proposed development, both existing crossovers on Victoria Parade are proposed to be removed and replaced by a new crossover creating greater separation between Great Eastern Highway.

The subject site is illustrated in **Figure 2** within the context of the zones and reservations of the Metropolitan Region Scheme, which shows that Great Eastern Highway is classified as a Primary Regional Road (Red Road).

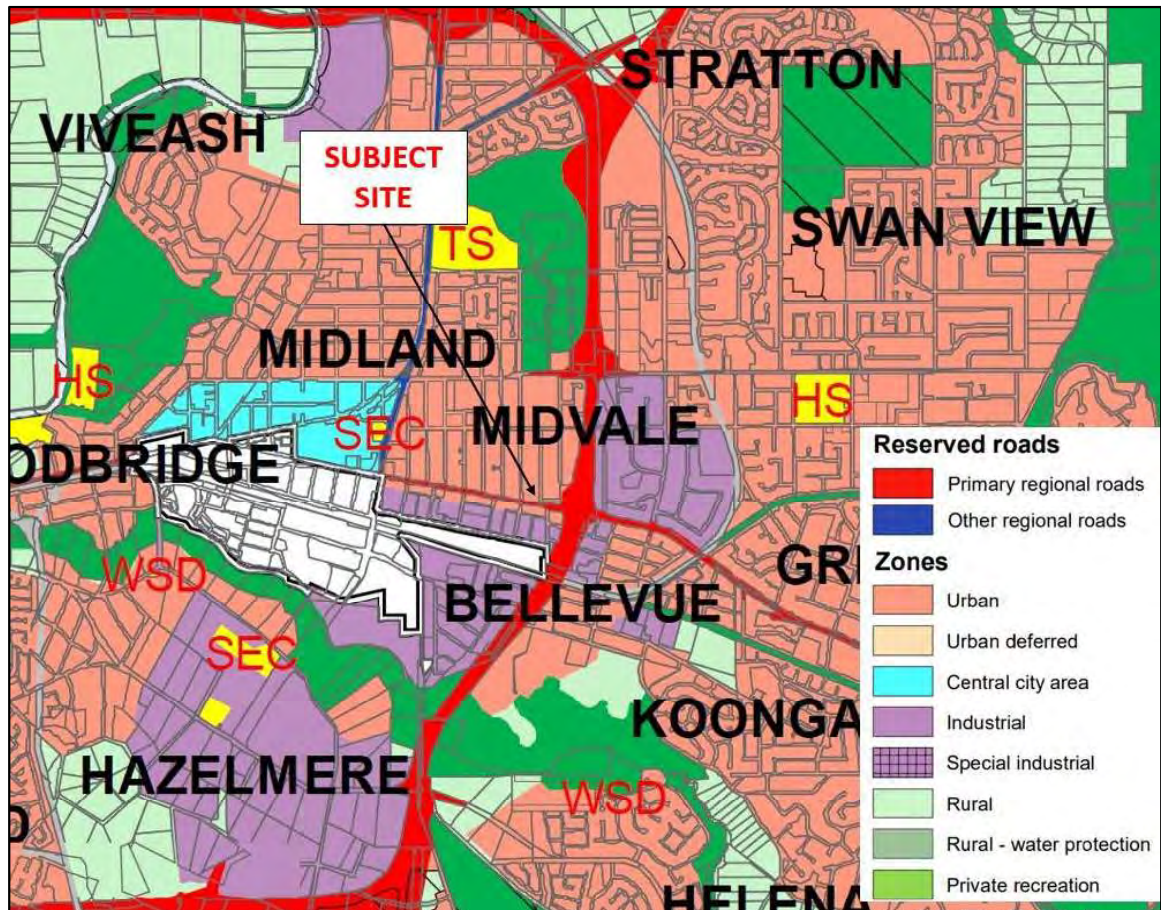


Figure 2. MRS Map

The key issues that will be addressed in this report include establishing the net traffic generation and distribution of the proposed development, operations and capacity analysis of the proposed development crossovers, and the priority-controlled 'T' intersection of Great Eastern Highway and Victoria Parade. The internal site circulation system for fuel tankers and service vehicles is also addressed in this report.

2 Development Proposal

According to the proposed development plan in **Appendix A** of this report, the proposal includes a service station comprising the following elements:

- A control building convenience retail store with GFA of 250m²;
- An order-taking drive-through facility for the control building with a stacking capacity of 10 cars;
- Fuel canopy with 8 vehicle fuelling positions; and,
- A total of 13 car parking bays inclusive of one ACROD bay plus 4 EV charging bays.

The layout of the proposed development is shown in the site plan included in **Appendix A**.

2.1 Proposed Access for all Modes

The proposed access system for the development comprises one full-movement crossover on Victoria Parade. Additional access will also be available through the existing access system for the commercial/retail facility on Great Eastern Highway and Bushby Street.

As part of the proposed development, both existing crossovers on Victoria Parade are proposed to be removed and replaced by a new crossover creating greater separation between Great Eastern Highway.

Furthermore, the proposed development entails two reciprocal connection points with the existing facility at the western side of the subject site to maintain effective circulation. The locations of the site crossovers and shared accesses are shown in **Figure 3**.

The delivery of fuel will be undertaken by using fuel tankers up to 16.5m in length which will enter the site via the Victoria Parade crossover, access the fill point and exit the site via the same crossover. Appropriate turn path assessment for the tanker is presented in **Appendix B**.

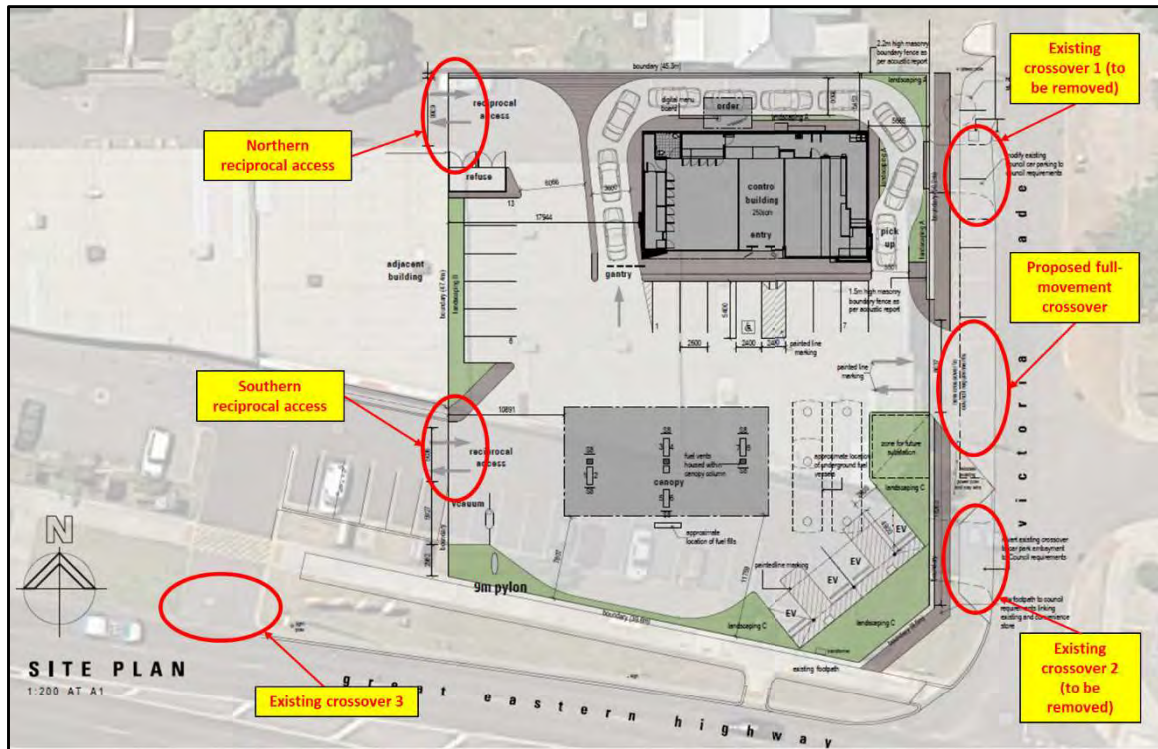


Figure 3. Proposed Access Arrangements

3 Existing Situation

3.1 Existing Site Use, Access and Parking

The subject site is located at the northwest corner of Great Eastern Highway/ Victoria Parade's priority-controlled 'T' intersection. The subject site has two road frontages: Great Eastern Highway to the south and Victoria Parade to the east. Bushby Street is fronting the commercial/retail facility to the west.

3.2 Existing Site Traffic Generation

The subject site currently accommodates two vacant commercial tenancies.

3.3 Existing Road Network

Great Eastern Highway, in the vicinity of the subject site, is a dual divided-carriageway with four lanes and raised median. Pedestrian footpaths are available on both sides of Great Eastern Highway in the vicinity of the subject site. Please refer to **Figure 4** for more details.

Great Eastern Highway is classified as a *Primary Distributor* in the Main Roads WA Functional Road Hierarchy and operates under the sign posted speed limit of 60km/h in the vicinity of the subject site. Great Eastern Highway is classified as a Primary Regional Road (Red Road) in the MRS.

According to the latest available SCATS data sourced from Main Roads WA, Great Eastern Highway (west of Roe Highway) carried approximately 27,438vpd on a typical weekday in 2021/22. The morning traffic volume peak of 2,015vph was recorded at this location between 08:00AM to 09:00AM while the afternoon traffic volume peak of 2,378vph was recorded between 4:00PM to 5:00PM. Heavy vehicle participation in the overall traffic is recorded to be about 7.5%.

Victoria Parade, in the vicinity of the subject site, is constructed as a single-carriageway, two-lane undivided road with a pedestrian footpath on the eastern side of the road. Refer to **Figure 5** for more details.

Victoria Parade is classified as a *Local Distributor* in the Main Roads WA Functional Road Hierarchy and operates under the default built-up area speed limit of 50km/h.

Victoria Parade forms a give-way sign-controlled 'T' intersection with Great Eastern Highway.



Figure 4. Eastbound view along Great Eastern Highway



Figure 5. Southbound view along Victoria Parade



3.4 Existing Traffic Volumes on Roads

Transcore undertook manual traffic counts for the turn movements at existing site crossovers and the intersections of Great Eastern Highway and Victoria Parade on Friday 02nd March 2023 between 08:00AM to 09:00AM and 4:00PM to 5:00PM. The existing traffic peak hour turn counts at the intersections and site crossovers are shown in **Figure 6**.

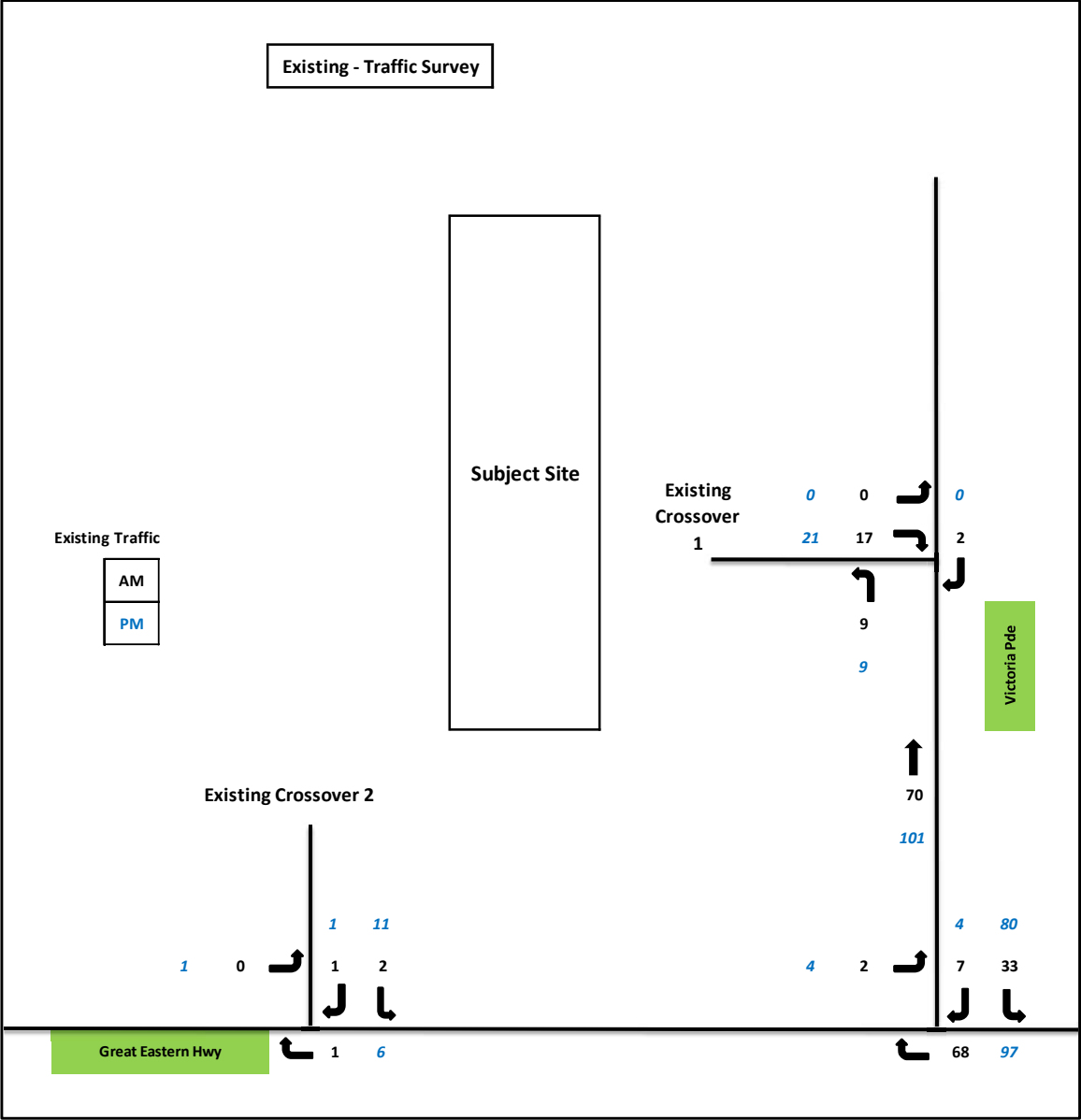


Figure 6: Existing peak hour traffic turn counts



3.5 Heavy Vehicles

Restricted Access Vehicle (RAV) Network routes are designated for access by large heavy vehicle combinations and are managed by Main Roads WA. Great Eastern Highway to the south of the subject site is classified as RAV Network 4 as shown in **Figure 7**.

RAV Network 4 roads are classified to carry heavy vehicle compositions of up to 27.5m in length.

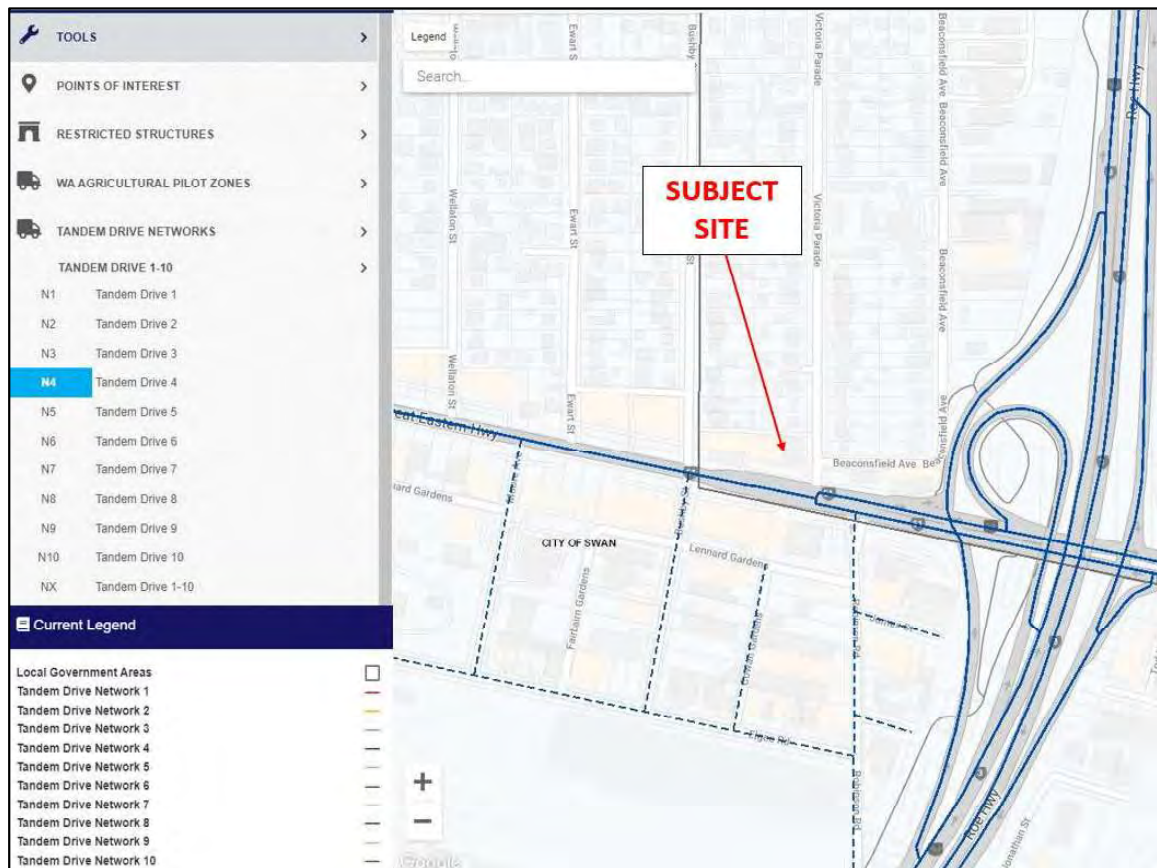


Figure 7. Existing heavy vehicle road network classification (RAV)

3.6 Public Transport Access

As shown in **Figure 8**, the subject site has access to Transperth bus routes 320, 321, 322, 326 and 328 that operate along Great Eastern Highway, south of the subject site. The nearest bus stop on Great Eastern Highway is located approximately 35m walking distance west of the subject site and the nearest bus stop on Victoria Parade is located approximately 10m walking distance north of the subject site. The nearest bus stops are accessible from the subject site via the existing path system at this locality. The bus routes provide links to Midland train station and Midland Gate shopping centre.

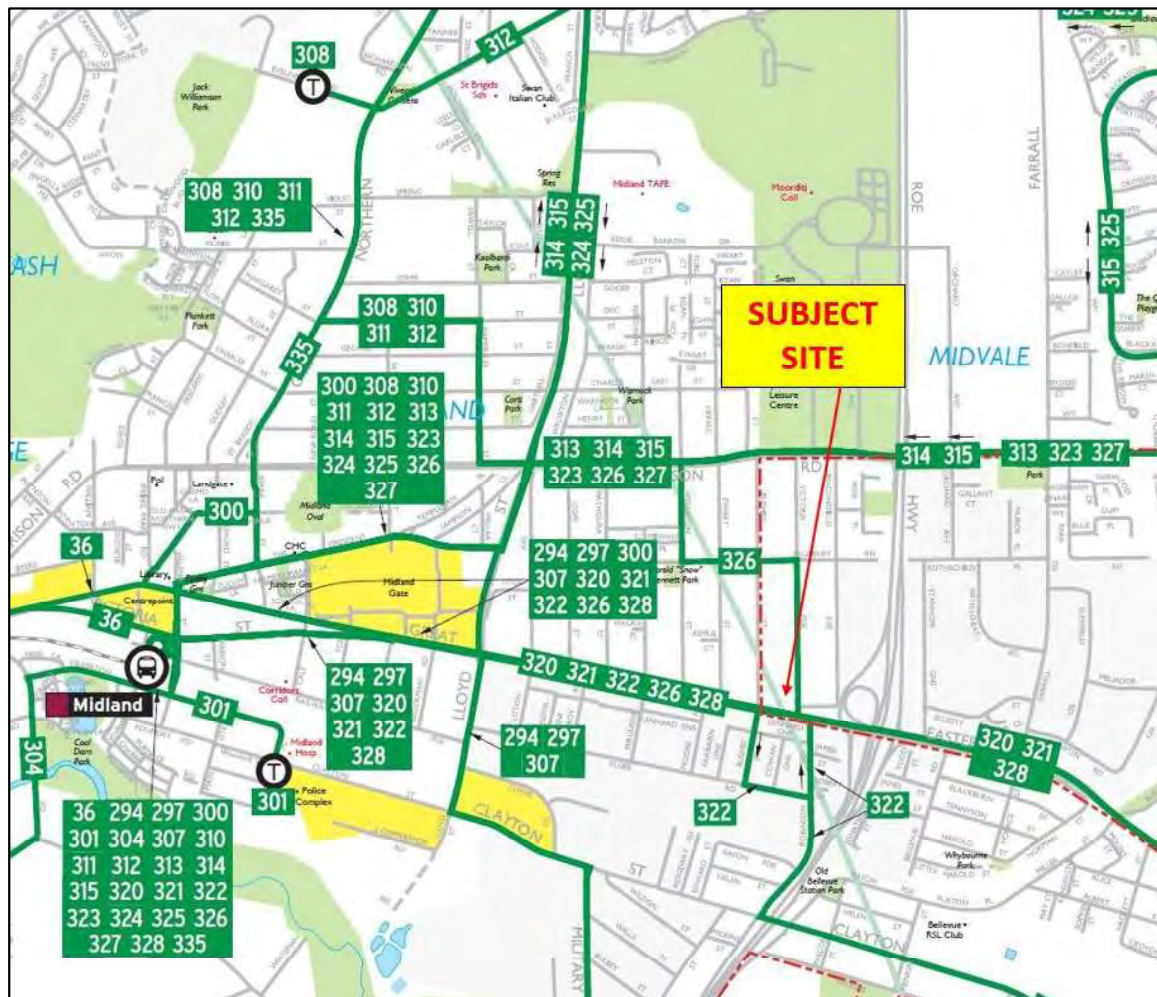


Figure 8. Existing bus routes (source: Transperth)

3.7 Pedestrian and Cyclist Facilities

Pedestrian footpaths in the vicinity of the subject site are provided on both sides of Great Eastern Highway and the eastern side of Victoria Parade. Pedestrian crossing facility with refuge island is available near the 'T' intersection of Great Eastern Highway and Victoria Parade.

The Department of Transport's *Perth Bike Map* series within the vicinity of the subject site shows good cyclist connectivity near the subject site as illustrated in **Figure 9**. Great Eastern Highway has shared paths as shown and Beaconsfield Avenue is classified as a good road riding environment.

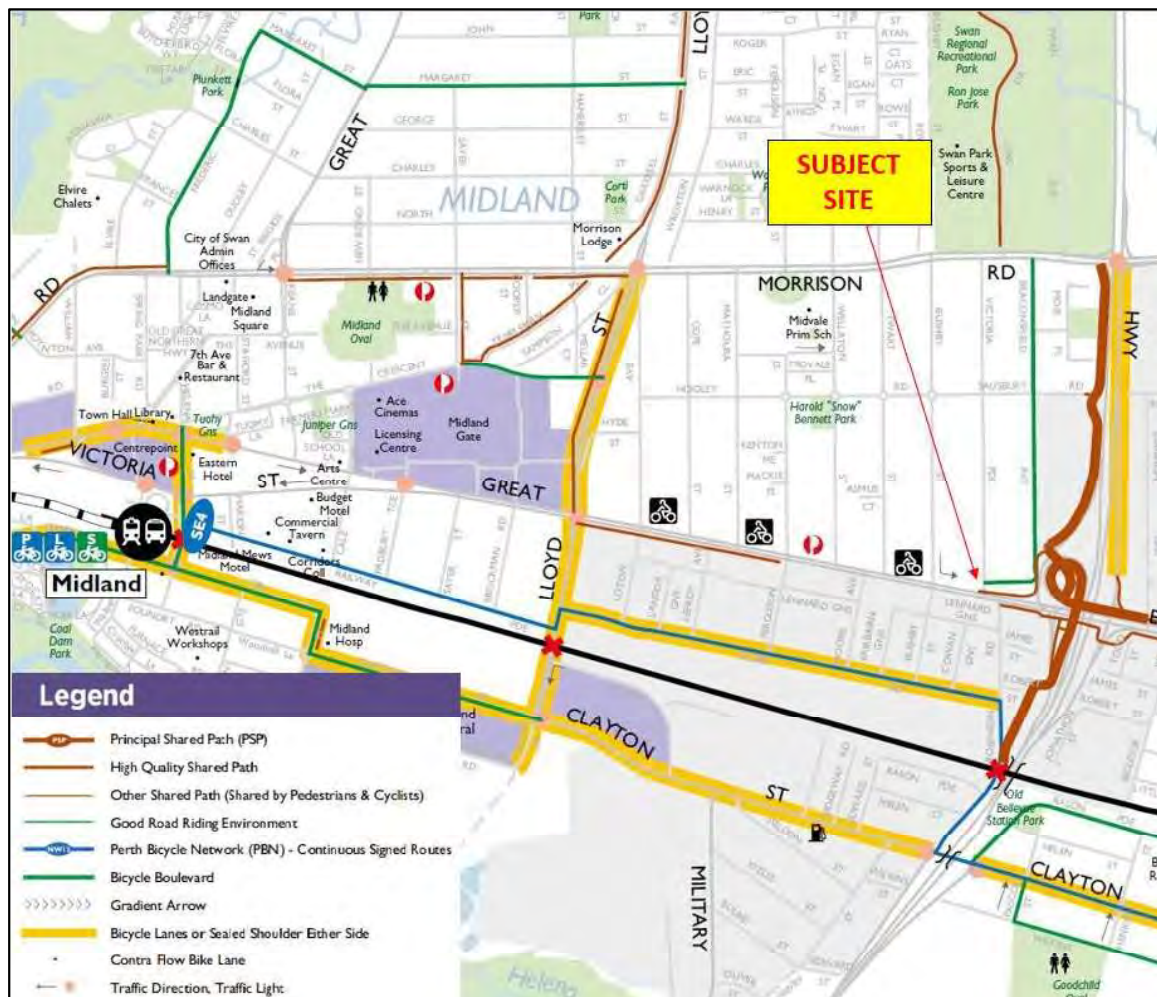


Figure 9. Bike map (source: Transperth)

3.8 Crash Data

The information available on the Main Roads WA website provides crash statistics for Great Eastern Highway/ Victoria Parade 'T' intersection during the five-year period ending in December 2022.

The crash records indicate that Great Eastern Highway/ Victoria Parade intersection recorded a total of seven crashes, three crashes classified as property damage only (PDO) minor and three PDO major crash in the last five-year period and one crash required medical attention. More details on the crash records are provided in **Table 1**.

Table 1. Crash history for the Great Eastern Highway/ Victoria Parade Intersection

Intersection				Total Crashes	Casualty
Great Eastern Highway/ Victoria Parade (T-intersection)				7	0
Right Angle	Reversing	Rt Angle thru	U-turn	Wet	Dry
3	1	2	1	1	6

4 Changes to Surrounding Transport Networks

The proposed local changes to the surrounding road network include the removal of both existing crossovers on Victoria Parade and replacement by a new crossover creating greater separation of crossover from Great Eastern Highway.

Due to the location of the proposed crossover, four existing on-street parking bays on Victoria Parade will be removed and reinstated as part of this development. Three of these bays will be reinstated to the north of the proposed crossover and one bay will be reinstated south of the proposed crossover.

5 Integration with Surrounding Area

The layout of the proposed development and the location of the crossovers are considered appropriate for the area. Access and egress for the proposed development can be facilitated via the existing crossovers on Great Eastern Highway and Bushby Street via reciprocal arrangement and the new proposed crossover on Victoria Parade.

The proposed development facilitates connectivity with Victoria Parade, Great Eastern Highway and Bushby Street, which provides an essential service to passing vehicles and is consistent with the current zoning for the subject site.

6 Traffic Assessment

6.1 Assessment Period

Due to the nature of the proposed development, it is expected that distinct peak activity periods will be experienced during weekday morning and afternoon peak road network periods.

It is therefore anticipated that the combination of the traffic to be generated by the proposed development and the peak road network traffic periods is likely to result in the greatest demand on the road network during the typical weekday morning and afternoon peak hours between 08:00AM-09:00AM and 04:00PM-05:00PM. As such, trip generation is estimated and traffic analysis is undertaken for these periods.

It is assumed that the proposed development would be fully constructed and activated by the end of 2023, so post-development analysis has been undertaken for 2023.

6.2 Trip Generation and Distribution

Based on the feedback received from a number of Western Australia service station operators that the trip rates published in the *Institute of Transportation Engineers 11th Edition Trip Generation Guidelines* (a US trip generation source) significantly overestimate the actual patronage numbers, Transcore undertook extensive traffic surveys during 2022. As part of this survey, a total of 15 service stations were surveyed, in order to establish more accurate local traffic generation rates for this type of land use in Western Australia. All of the sites selected entailed different operators in order to ensure robust data with a high level of confidence. The surveys were undertaken on Mondays, Tuesdays and Wednesdays in order to include trade activity during the discounted fuel days as well and to ensure a conservative approach.

The following sites were surveyed for the purpose of the study:

- 7-Eleven, 194 Great Eastern Hwy, Ascot WA
- Ampol, 204 Great Eastern Hwy, Ascot WA
- BP, 1 Canham Way, Greenwood WA
- BP, 88 Gilbertson Road, Kardinya WA
- BP, 848 Canning Hwy, Applecross WA
- Coles Express, 73A Frobisher Street, Osborne Park WA
- Puma, 58 Montana Crescent, Alkimos WA
- Ampol 3, Morwell Street, Yanchep WA
- Liberty, 2341 Albany Highway, Gosnells WA
- 7-Eleven, 931 Wanneroo Road, Wanneroo WA
- 7-Eleven, 13 Lakes Road, Greenfield WA
- Shell, 582 Stirling Highway, Mosman WA

- Puma, Cnr Johnson Street & Helena Street, Guildford WA
- United, 2 Feilman Drive, Leda WA
- United, 101 Terrier Place, Southern River WA

Based on the result from above surveys, the trip rates used to estimate traffic generation for the service station components of the proposed development are as follows:

Service Station with Convenience Store – Regular Fuelling Points:

- Weekday daily: 162.20vpd per filling point;
- Weekday AM peak hour: 9.49vph per filling point; and,
- Weekday PM peak hour: 11.27vph per filling point.

Accordingly, it is estimated that the traffic generations for the service station facility of the proposed development are:

- Weekday daily: $162.20 \times 8 = 1298$ vehicles;
- Weekday AM peak hour: $9.49 \times 8 = 76$ vph; and,
- Weekday PM peak hour: $11.27 \times 8 = 90$ vph.

Drive-Through Component:

This service station entails a drive-through facility for the convenience store/control building. This drive-through facility is proposed to provide additional convenience to customers of the convenience store. No traffic generation rates are available for a such drive-through facility.

For the purpose of this project, Transcore has identified and undertaken a manual traffic survey at a similar service station with a drive-through facility in Halls Head on Thursday 2nd September 2021 between 8:00AM to 9:00AM as the drive through facility at surveyed service station only operates till 2:00PM every day. This drive-through facility closes at 2pm every day. This is because the drive-through sales do not generate enough during the afternoons because of the strong coffee demand during the morning period. The surveyed results are shown in **Table 2**.

Table 2. Morning peak hour surveyed results at the service station with a drive-through facility

Time	Movement	Drive-Thru	Service Station	Total
8:00AM – 9:00AM	Entry	31	22	53
	Exit	55		55
Total (inbound and outbound)				108

It should be noted that this service station in Halls Head is the only available existing service station currently operating with a drive-through facility in the Perth metropolitan area and Mandurah Peel region.

For the purpose of this project, Transcore also sourced additional information for OTR service stations with drive-through facilities in South Australia. The surveyed results with respective locations are provided in **Table 3**.

Table 3. Traffic survey results at the service stations with drive-through facilities in South Australia

Location	Daily	Peak Periods	
		AM peak	PM peak
OTR Croydon Park	-	4	-
OTR Para Hills	170	17	-
OTR Trinity Gardens	126	-	8
OTR Marion South	80	6	-
Average	125 vehicles	9 vehicles	8 vehicles

Combining the results of the Halls Head survey and South Australian survey results in the following daily and peak hour number of vehicles:

- Weekday daily: 250 vehicles equivalent to 125 in and 125 out trips
- Weekday AM: 30 vehicles equivalent to 15 in and 15 out trips
- Weekday PM: 16 vehicles equivalent to 8 in and 8 out trips.

Accordingly, it is estimated that the traffic generations for the order-taking drive-through facility of the proposed development are:

- Weekday daily: $125 \times 1 = 125$ vehicles;
- Weekday AM peak hour: $30 \times 1 = 30$ vph; and,
- Weekday PM peak hour: $16 \times 1 = 16$ vph.

Due to the mix of the proposed land uses, incidences of multi-purpose trips (i.e., cross-trade) are anticipated. Accordingly, a cross-trade factor of 20% was deemed appropriate and applicable in this case. As such, the 20% cross-trade adjustment was applied for the order-taking drive-through facility only i.e. 20 percent of the people using drive-through facility are assumed to buy fuel as well.



Therefore, the proposed development would generate approximately **1,498** vehicular trips per day (combined total of inbound and outbound trips) with approximately **100** and **104** trips during the weekday AM and PM peak hours respectively.

60% passing trade was assumed for the analysis of the service station facility and 90% passing trade was assumed for the analysis of the order-taking drive-through facility based on information sourced from the ITE manual.

Therefore, the net additional traffic when accounting for passing trade is **+539vpd (daily)**, **+32vph (AM peak hour)** and **+38vph (PM peak hour)** on the surrounding road network as shown in **Table 4** and **Table 5**.

It should be noted that the reported net traffic increase as a result of the proposed development is conservative as it does not allow for trip generation of the retail land uses that were operating from the existing buildings. Therefore, the actual net traffic increase would be less than that reported.

Table 4. Estimated proposed development traffic generation

		Rate				Trips			In/Out Trips			
Land use	Quantity	Daily	AM Peak Hour	PM Peak Hour	Crosstrade	Daily	AM Peak Hour	PM Peak Hour	AM		PM	
									IN	OUT	IN	OUT
Fuel Station regular bowser - fuelling position + Convenience store	8	162.2	9.49	11.27	-	1298	76	91	38	38	46	45
Control building drive through facility	1	250	30	16	20%	200	24	13	12	12	6	7
Total						1498	100	104	50	50	52	52

Table 5. Passing and non-passing trade components of the proposed development traffic generation

		Passing Traffic						Non-Passing Traffic				
Land use	Passing Trade	Daily Trips	AM		PM		Non-Passing Trade	Daily Trips	AM		PM	
			IN	OUT	IN	OUT			IN	OUT	IN	OUT
Fuel Station regular bowser - fuelling position + Convenience store	60%	779	23	23	28	27	40%	519	15	15	18	18
Control building drive through facility	90%	180	11	11	5	6	10%	20	1	1	1	1
Total		959	34	34	33	33		539	16	16	19	19

The directional split of inbound/outbound trips for the proposed development is assumed to be about 50/50 for inbound/outbound trips during peak hours.

Traffic distributions for the weekday AM and PM peak hours are detailed in **Figure 10**.

With respect to the assumed distribution and assignment of the development-generated traffic, consideration was given to the location of the site, the predominantly passing trade nature of the proposed land uses and the access and egress routes to and from the site (distribution is based on the current road network and its layout).

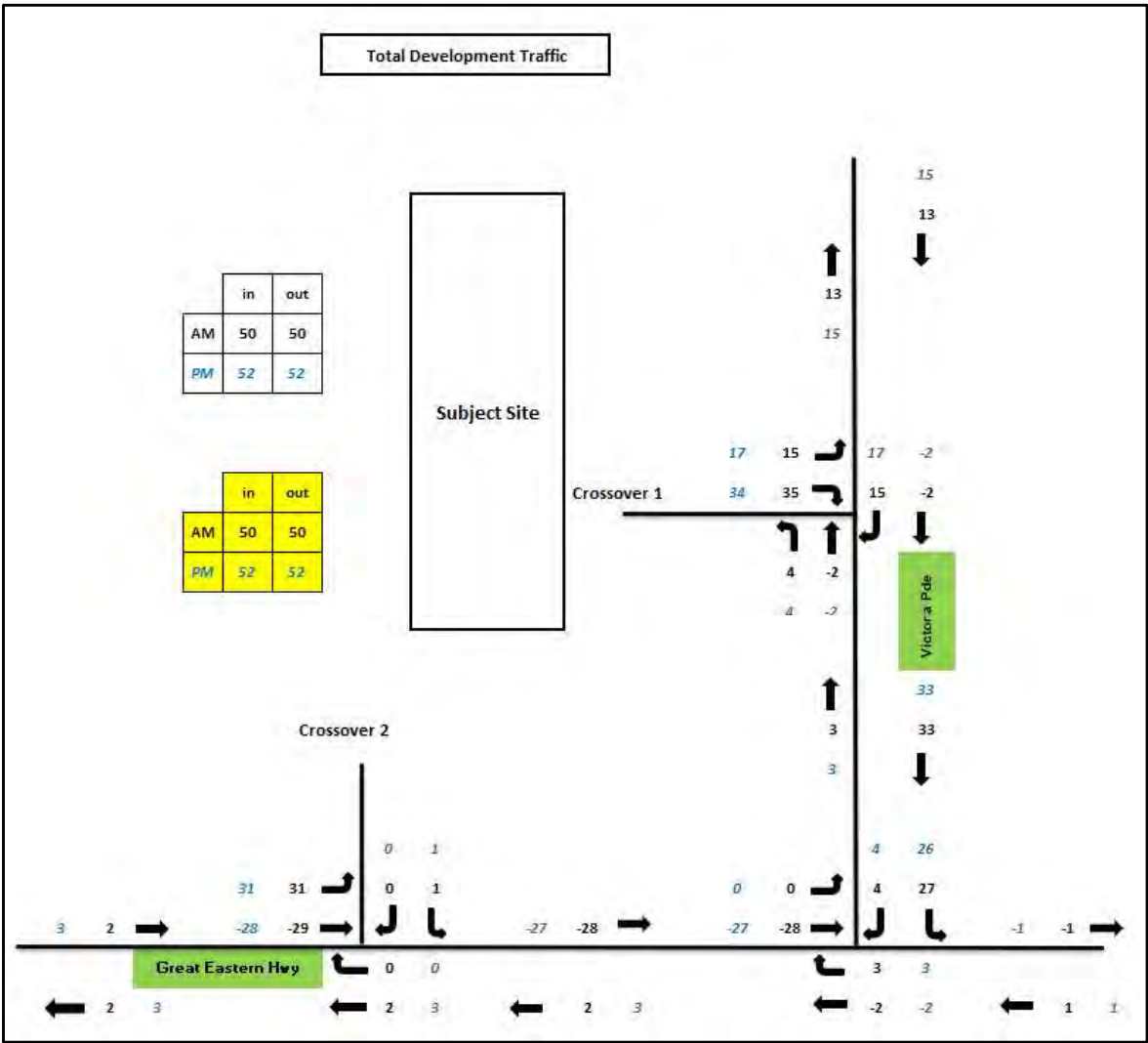


Figure 10. Total peak hour development traffic – Weekday AM and PM peak hours



6.3 Traffic Flows

The existing traffic flows used as the base for traffic assessment are presented in **Figure 11** which is the outcome of the traffic survey undertaken by Transcore on 2nd March 2023.

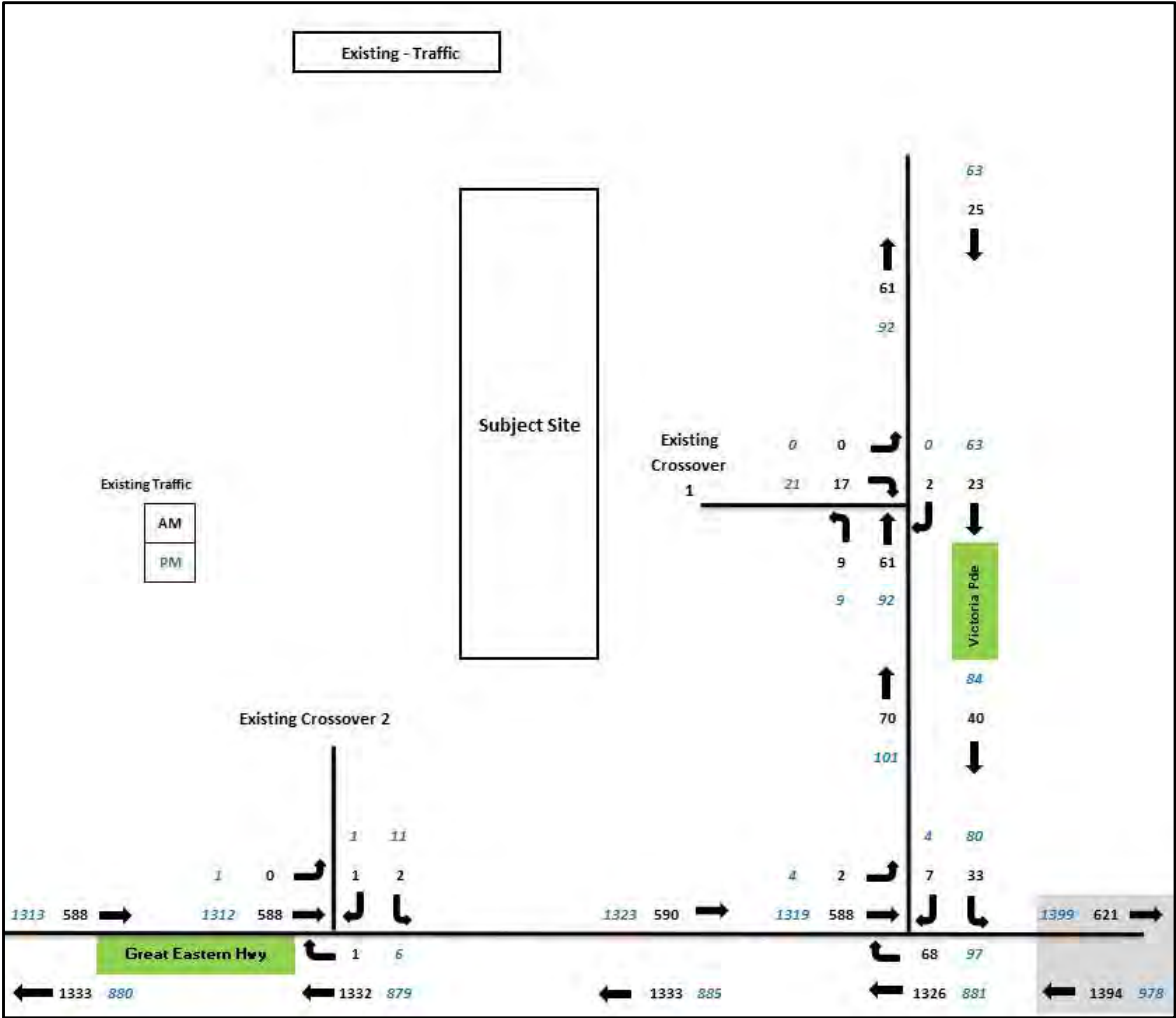


Figure 11. Existing traffic flows at the intersection of Great Eastern Highway/ Victoria Parade and subject site crossovers – Weekday AM & PM peak hours



In order to undertake the post-development traffic assessment for the proposed development, the existing traffic volumes of the existing development were added to the proposed development traffic. The post-development traffic flows are shown in **Figure 12**.

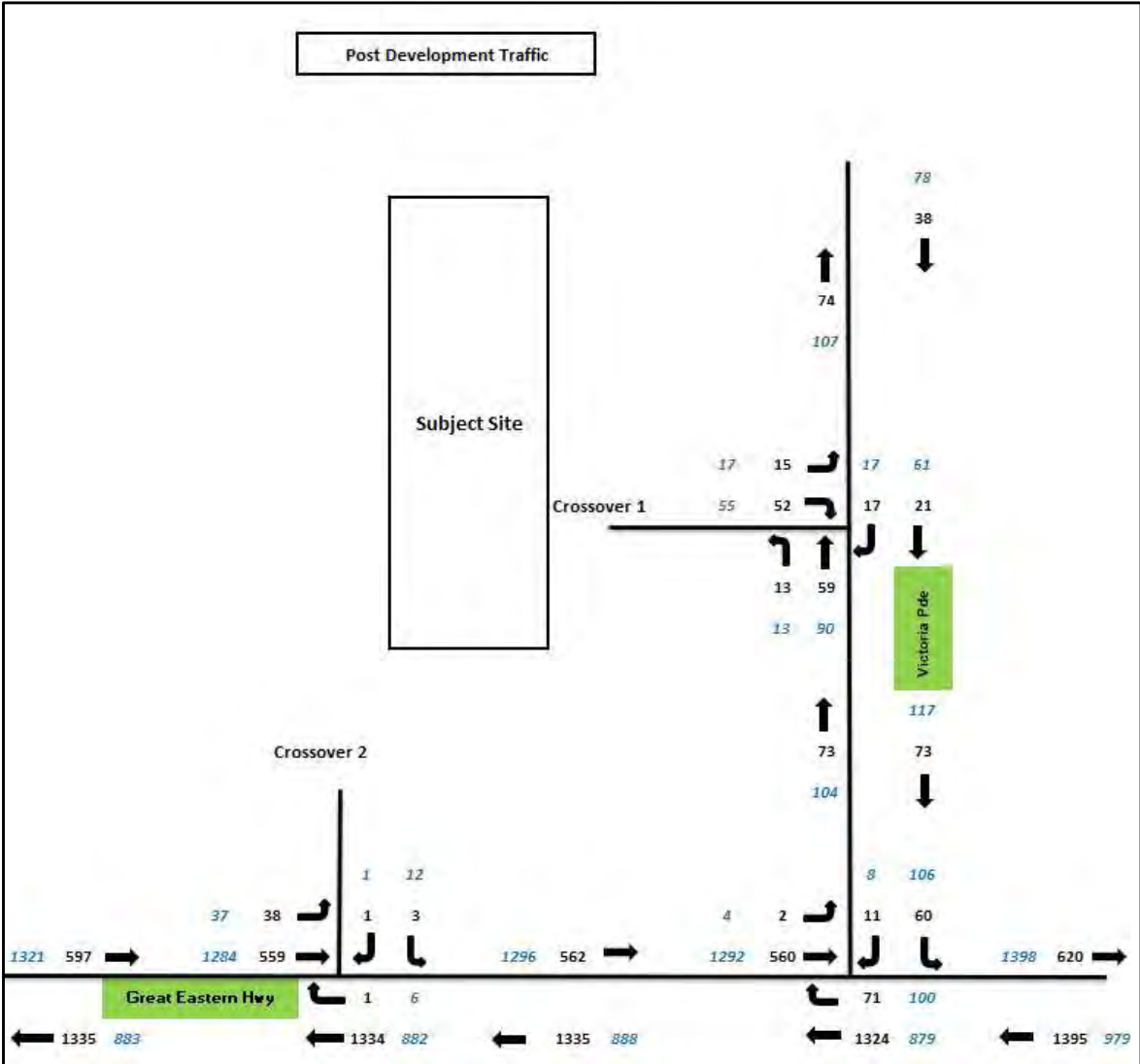


Figure 12. Post development traffic flows – Weekday AM and PM peak hours



6.4 Analysis of Local Intersections & Development's Crossovers

SIDRA network intersection analysis has been undertaken for the subject site crossovers on Victoria Parade and Great Eastern Highway and the intersection of Great Eastern Highway/ Victoria Parade in order to assess their operations in the existing and post-development scenarios for AM and PM peak hours.

Relevant heavy vehicle settings and parameters in the SIDRA analysis were updated in accordance with Main Roads WA's latest requirements.

The SIDRA package is a commonly used intersection-modelling tool by traffic engineers for all types of intersections. SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These items are defined as follows:

- ✚ **Degree of Saturation:** 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 varied traffic flow up to one for saturated flow or capacity.
- ✚ **Level of Service:** 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 service, 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.

The SIDRA network model layout is illustrated in **Figure 13**. The results of SIDRA analysis are reported in **Table 6** to **Table 17** in **Appendix C** and discussed in the following paragraphs.

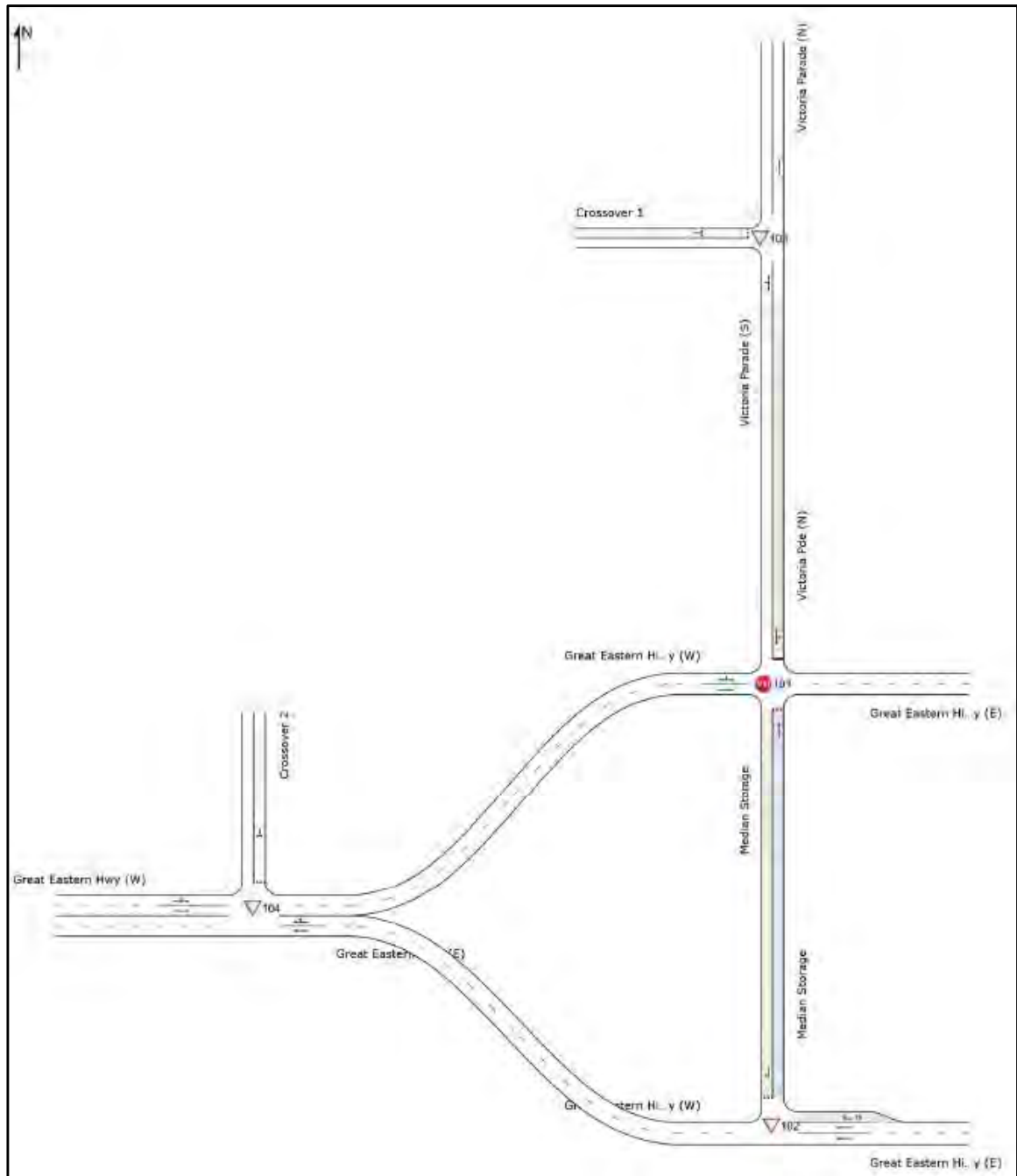


Figure 13. Network model – SIDRA network model layout (two stage right turns at Great Eastern Highway/ Victoria Parade intersection)

Victoria Parade Crossover (Crossover 1)

The SIDRA results for full-movement crossover on Victoria Parade indicate that this crossover would operate with overall Level of Service (LoS) A with minimal delays and queuing during typical AM and PM peak hours in the post-development scenarios (both 2023 and 2033).

Great Eastern Highway Crossover (Crossover 2)

Existing

The SIDRA results for full-movement crossover on Great Eastern Highway indicate that this crossover is currently working with a Level of Service (LoS) A during typical AM and PM peak hours except for the right out movement which operates with at Level of Service (LoS) F.

Post-development scenario

The SIDRA results for full-movement crossover on Great Eastern Highway indicate that this crossover would also operate with overall Level of Service (LoS) A with minimal delays and queuing during typical AM and PM peak hours except for the right out movement which will operate with at Level of Service (LoS) F in the post-development scenarios (both 2023 and 2033).

Thus, the SIDRA results for the post-development scenario confirm that the addition of traffic generated by the proposed developments will not have a material impact on the operation of this crossover, which retains the current levels of service and will not have any significant increase in queues and delays in the post-development scenarios.

Intersection of Great Eastern Highway/ Victoria Parade

Existing

SIDRA results indicate that all the legs of this intersection are currently operating with a Level of Service (LoS) A except for right-turn from Victoria Parade which operates with a Level of Service (LoS) B during typical AM peak hour. In the PM peak hour, all the legs of this signalised intersection are currently operating with Level of Service (LoS) A to C except for right-turns from Victoria Parade which operates with a Level of Service (LoS) E.

Post-development scenario

In the post-development 2023 scenario, the intersection will operate with a Level of Service (LoS) A except for right-turns from Victoria Parade which will operate with a Level of Service (LoS) B during typical AM peak hour. In the PM peak hour, all the legs of this intersection will operate with Level of Service (LoS) A to C except for right-turns from Victoria Parade which will operate with a Level of Service (LoS) E.

Thus, the SIDRA results for the post-development scenario confirm that the addition of traffic generated by the proposed developments will not have a material impact on the operation of this intersection, which retains the current levels of service and will not have any significant increases in queues and delays.



Year 2033 – 10 Year post-development scenario

Analysis of historic traffic volumes on Great Eastern Highway shows that the traffic volumes on this road have decreased significantly from the year 2017/18. However, to be conservative, 2033 background traffic was established by applying a nominal growth factor of 2% per annum.

In the ten-year post-development 2033 scenario, the intersection will operate with a Level of Service (LoS) A with the exception of right-turns from Victoria Parade which will operate with a Level of Service (LoS) C during typical AM peak hour. In the PM peak hour all the legs of this intersection will operate with a Level of Service (LoS) A to C with the exception of right-turns from Victoria Parade which will operate with a Level of Service (LoS) F. The change in LoS is due to growth in background traffic on Great Eastern Highway and not the development traffic.

Even though SIDRA report LoS F for the right turns, the level of queues and delays are acceptable for peak hour in the year 2033.

Therefore, it is considered that the impact of the development traffic on this intersection is not significant, and the traffic operations are satisfactory for both post-development and 10-year post-development scenarios.

6.5 Impact on Surrounding Roads

The WAPC Transport Impact Assessment Guidelines (2016) provides guidance on the assessment of traffic impacts:

“As a general guide, an increase in traffic of less than 10 per cent of capacity would not normally be likely to have a material impact on any particular section of road, but increases over 10 per cent may. All sections of road with an increase greater than 10 per cent of capacity should therefore be included in the analysis. For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 per cent of capacity. Therefore, any section of road where the structure plan traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis.”

The proposed development will not increase traffic flows anywhere near the quoted WAPC threshold to warrant further detailed analysis. As detailed in **Section 6**, the proposed development will not increase traffic on any lanes on the surrounding road network by more than 100 vph and therefore any further detailed analysis is not warranted.

6.6 Impact on Neighbouring Areas

The traffic generated by the proposed development will have an insignificant impact on the surrounding areas.

6.7 Traffic Noise and Vibration

It generally requires a doubling of traffic volumes on a road to produce a perceptible 3dB increase in road noise. The proposed development will not increase traffic volumes or noise on surrounding roads to this level.



7 Parking

The proposed development will provide a total of 13 car parking spaces inclusive of an ACROD. Additionally, the drive through component will have a stacking capacity of 10 cars.

It is Transcore's understanding that sufficient parking supply is provided to address the parking requirements of the proposed development, particularly considering the drive-through facility for the control building/shop.

8 Provisions for Heavy Vehicles

The largest service vehicle which is expected to use the subject site is a 16.5m fuel tanker for fuel deliveries. The fuel tanker will enter the site via the Victoria Parade crossover, access the fill point and exit the site via the same crossover.

It is anticipated that delivery and service trucks will enter the site outside peak operating hours of the service station and the road network to minimise any impacts. Turn path analysis undertaken for 12.5m service vehicle and 16.5m fuel tanker confirm satisfactory access, egress and circulation.

The turn path analysis plans are presented in **Appendix B**.

9 Public Transport Access

The existing public transport services in the area are described in **Section 3.6** of this report.

10 Pedestrian and Cyclist Access

Pedestrian and cyclists' facilities are described in **Section 3.7** of this report.

11 Conclusions

This TIA has been prepared by Transcore on behalf of Peregrine Corporation with regards to the proposed service station with an order-taking drive-through facility to be located at 323-325 Great Eastern Highway, Midvale in the City of Swan.

As part of the proposed development, both existing crossovers on Victoria Parade are proposed to be removed and replaced by a new crossover creating greater separation between Great Eastern Highway.

Furthermore, the proposed development entails two reciprocal connection points with the existing facility at the western side of the subject site to maintain effective circulation. The internal site layout of the proposed development facilitates efficient and convenient vehicular entry and egress to and from the subject site.

It is Transcore's understanding that sufficient parking is provided to address the parking requirement for the proposed development.

Turn path analysis undertaken for a 12.5m service vehicle and a 16.5m fuel-tanker confirms satisfactory access, egress and circulation to/from and within the site.

The net traffic generation of the proposed development is estimated to be approximately 100vph and 104vph during the AM and PM peak hours respectively including both primary and non-primary trips. The net additional trips (non-primary trips) due to the proposed development are estimated to be approximately 32vph and 38vph during the AM and PM peak hours respectively. This level of traffic generation would not have any significant impact on the abutting road network.

The reported net traffic increase as a result of the proposed development is conservative as it does not allow for trip generation of the retail land uses that were operating from the existing buildings. Therefore, the actual net traffic increase would be less than that reported.

Traffic modelling and analysis undertaken demonstrates that the subject site crossovers will operate satisfactorily and the priority-controlled 'T' intersection of Great Eastern Highway/ Victoria Parade would continue to operate at the current levels of service with minimal increases in queues and delays for the post-development scenarios. Accordingly, it is concluded that the development traffic does not have a significant impact on the operations of the surrounding road network.

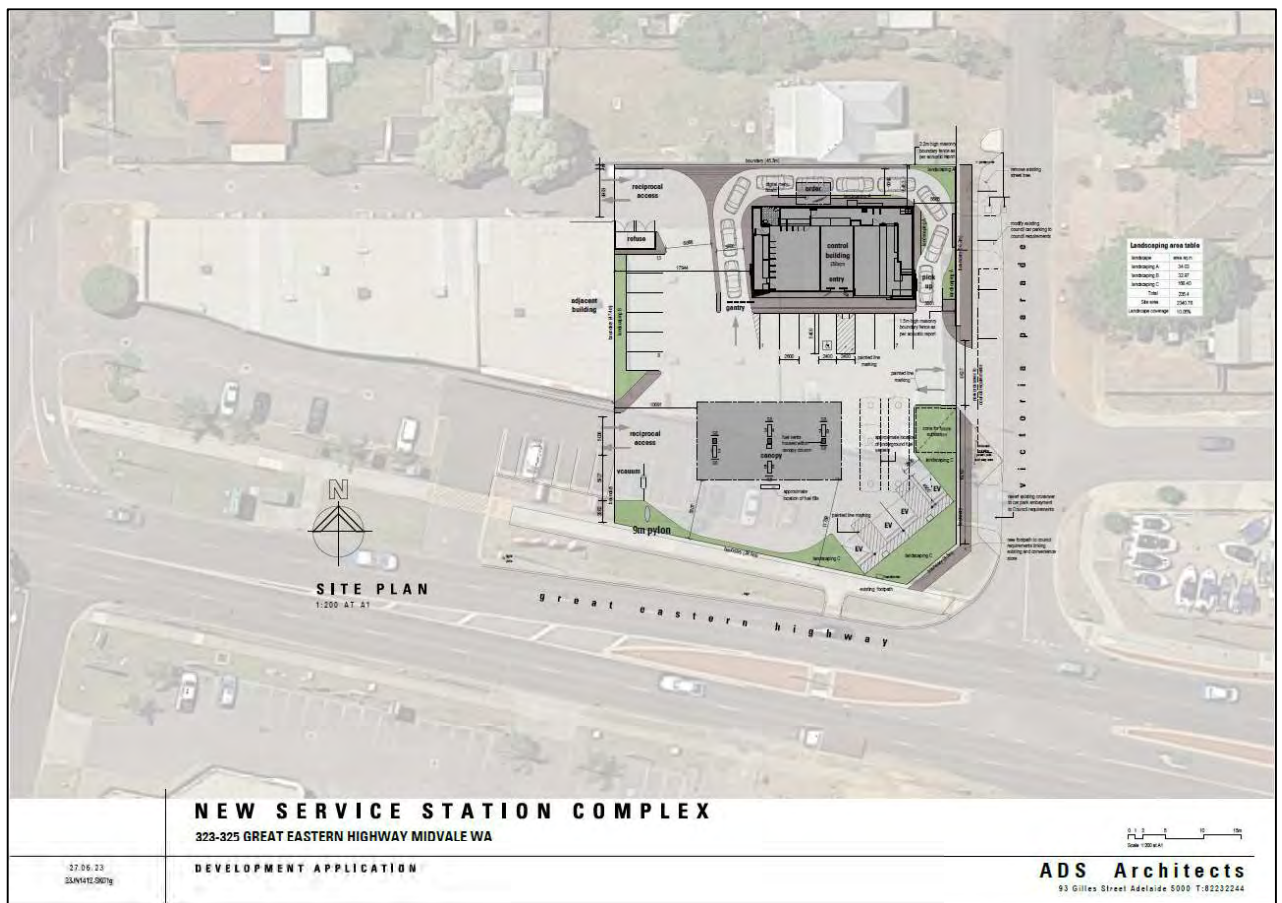
In conclusion, the findings of this Transport Impact Assessment are supportive of the proposed development.

Appendix A

PROPOSED DEVELOPMENT PLANS



Engineering a better future for over 20 years!

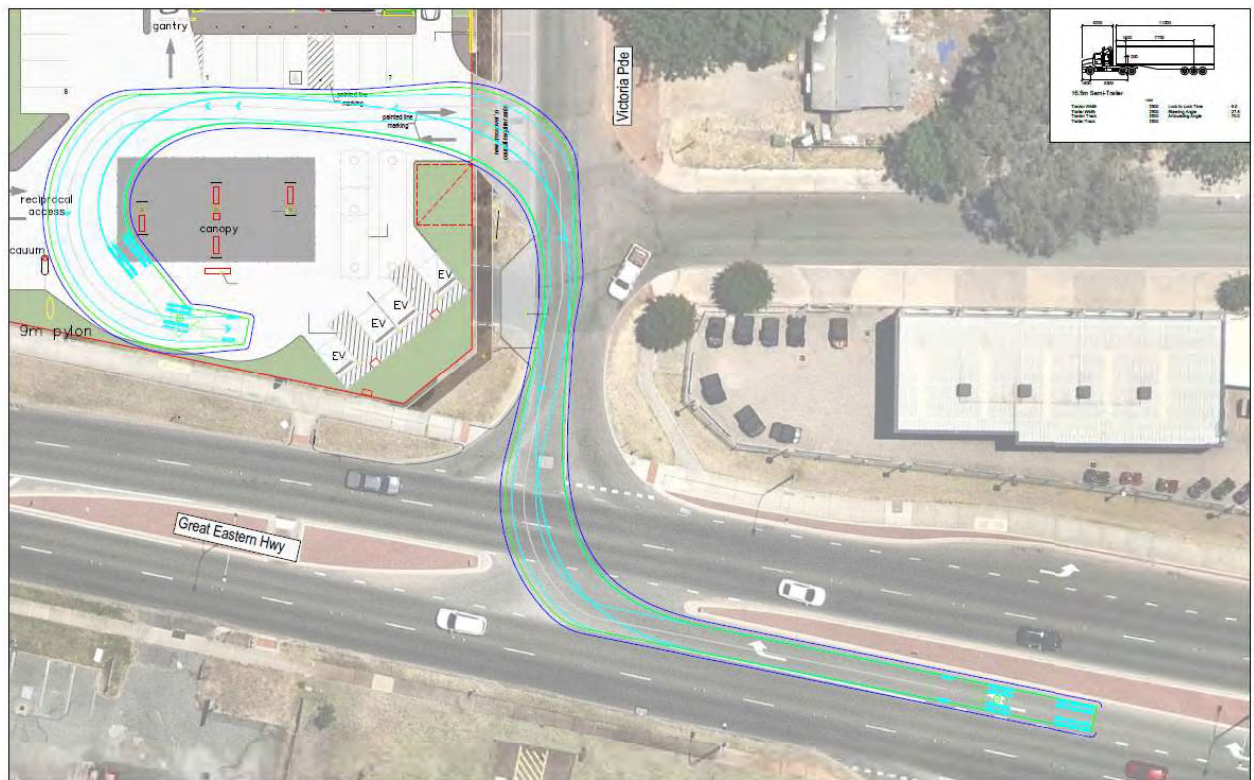


Appendix B

TURN PATH PLANS



Engineering a better future for over 20 years!



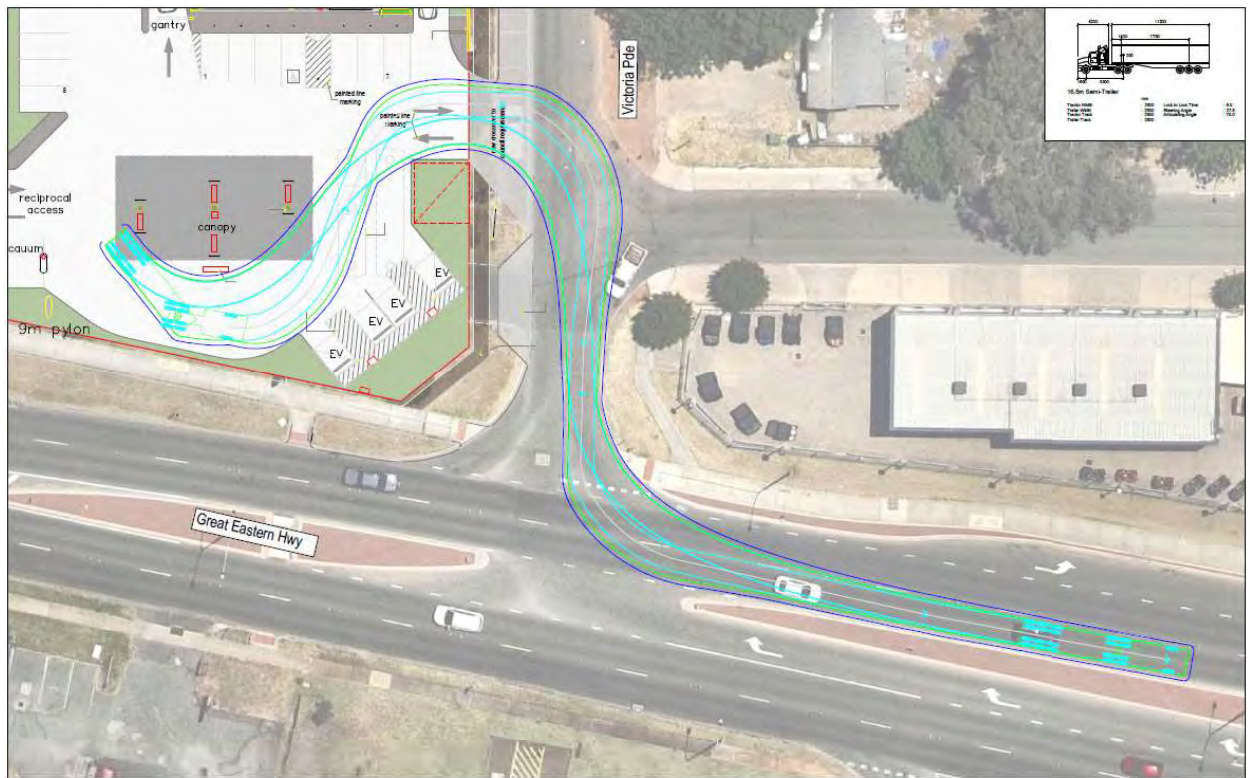
323 - 325 Great Eastern Highway, Midvale
 16.5m Fuel Tanker (Austroads 12.5m R & MRWA 15m R)
 Fuel Tanker Entry

LEGEND
 Vehicle Body
 Wheel Path
 500mm Clearance



t23.033.sk03b
 29/6/2023
 Scale: 1:300 @ A3





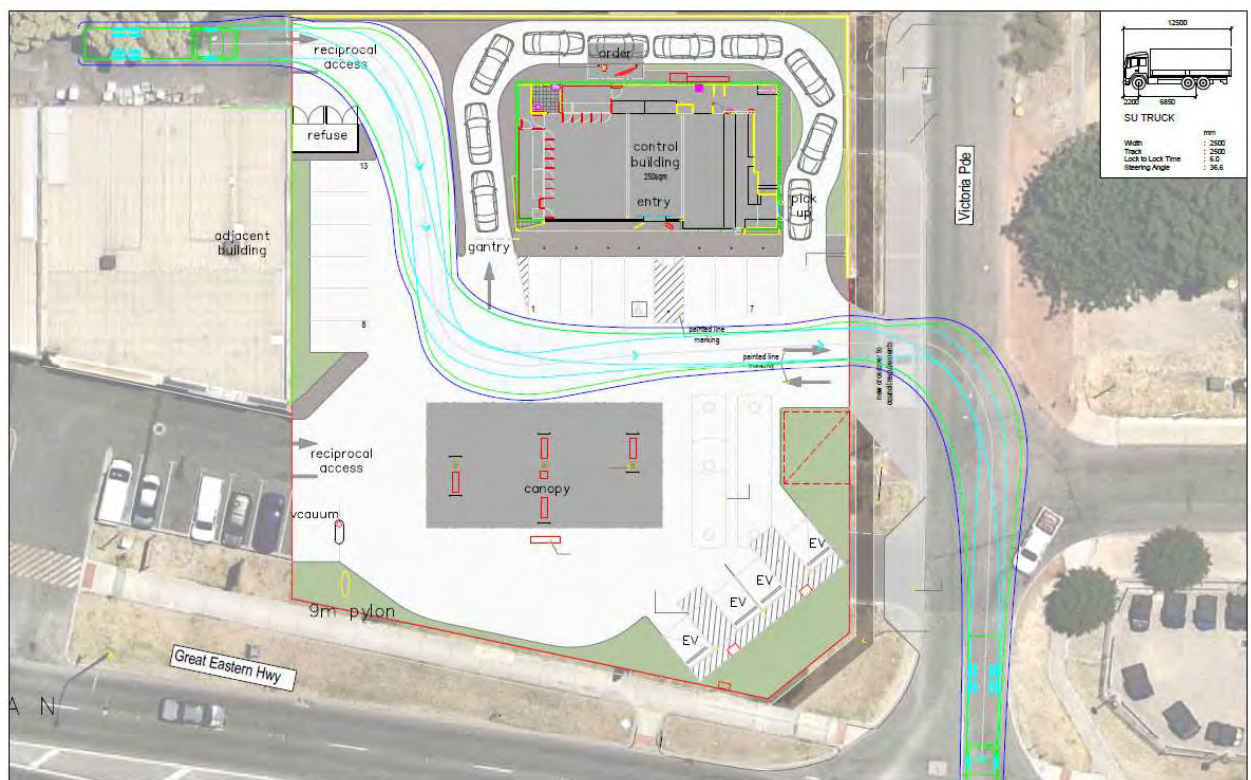
323 - 325 Great Eastern Highway, Midvale
 16.5m Fuel Tanker (Austroads 12.5m R & MRWA 15m R)
 Fuel Tanker Exit

LEGEND
 Vehicle Body
 Wheel Path
 500mm Clearance



t23.033.sk04b
 29/6/2023
 Scale: 1:300 @ A3





323 - 325 Great Eastern Highway, Midvale
Austroads 2013: 12.5m Service Vehicle
Service Vehicle Circulation

LEGEND
Vehicle Body
Wheel Path
500mm Clearance



t23.033.sk05b
29/6/2023
Scale: 1:250 @ A3



Appendix C

SIDRA RESULTS



Engineering a better future for over 20 years!

Table 6. SIDRA results for Great Eastern Highway/ Victoria Parade (Stage 1 and 2)
– Weekday AM peak period (Existing)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Median Storage															
5	T1	All MCs	72	3.0	72	3.0	0.089	2.8	LOS A	0.3	2.4	0.51	0.46	0.51	10.1
Approach			72	3.0	72	3.0	0.089	2.8	LOS A	0.3	2.4	0.51	0.46	0.51	10.1
North: Victoria Pde (N)															
1	L2	All MCs	35	3.0	35	3.0	0.050	6.2	LOS A	0.2	1.4	0.45	0.90	0.45	30.7
2	T1	All MCs	7	3.0	7	3.0	0.050	10.4	LOS B	0.2	1.4	0.45	0.90	0.45	13.4
Approach			42	3.0	42	3.0	0.050	7.0	LOS A	0.2	1.4	0.45	0.90	0.45	29.3
West: Great Eastern Highway (W)															
3	L2	All MCs	2	3.0	2	3.0	0.172	4.7	LOS A	0.0	0.0	0.00	0.00	0.00	59.5
4	T1	All MCs	619	8.5	619	8.5	0.172	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			621	8.5	621	8.5	0.172	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
All Vehicles			735	7.6	735	7.6	0.172	0.7	NA	0.3	2.4	0.08	0.10	0.08	55.2

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
East: Great Eastern Highway (E)															
2	T1	All MCs	1396	8.5	1396	8.5	0.386	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
3	R2	All MCs	72	3.0	72	3.0	0.039	5.7	LOS A	0.0	0.0	0.00	0.63	0.00	35.8
Approach			1467	8.2	1467	8.2	0.386	0.3	NA	0.0	0.0	0.00	0.03	0.00	57.8
North: Median Storage															
1	R2	All MCs	7	3.0	7	3.0	0.027	11.5	LOS B	0.1	0.6	0.80	0.84	0.80	3.9
Approach			7	3.0	7	3.0	0.027	11.5	LOS B	0.1	0.6	0.80	0.84	0.80	3.9
All Vehicles			1475	8.2	1475	8.2	0.386	0.4	NA	0.1	0.6	0.00	0.03	0.00	57.4

Table 7. SIDRA results for Great Eastern Highway/ Victoria Parade (Stage 1 and 2)
– Weekday PM peak period (Existing)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Median Storage															
5	T1	All MCs	102	3.0	102	3.0	0.404	17.4	LOS C	1.4	10.7	0.89	1.04	1.13	2.8
Approach			102	3.0	102	3.0	0.404	17.4	LOS C	1.4	10.7	0.89	1.04	1.13	2.8
North: Victoria Pde (N)															
1	L2	All MCs	84	3.0	84	3.0	0.195	10.1	LOS B	0.7	5.2	0.69	1.02	0.70	24.8
2	T1	All MCs	4	3.0	4	3.0	0.195	48.6	LOS E	0.7	5.2	0.69	1.02	0.70	8.7
Approach			88	3.0	88	3.0	0.195	12.0	LOS B	0.7	5.2	0.69	1.02	0.70	24.4
West: Great Eastern Highway (W)															
3	L2	All MCs	4	3.0	4	3.0	0.385	4.8	LOS A	0.0	0.0	0.00	0.00	0.00	59.4
4	T1	All MCs	1388	8.5	1388	8.5	0.385	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			1393	8.5	1393	8.5	0.385	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.7
All Vehicles			1583	7.8	1583	7.8	0.404	1.8	NA	1.4	10.7	0.10	0.13	0.11	51.0

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist]				km/h
East: Great Eastern Highway (E)															
2	T1	All MCs	927	8.5	927	8.5	0.257	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
3	R2	All MCs	102	3.0	102	3.0	0.081	5.7	LOS A	0.0	0.0	0.00	0.63	0.00	35.8
Approach			1029	8.0	1029	8.0	0.257	0.6	NA	0.0	0.0	0.00	0.06	0.00	56.1
North: Median Storage															
1	R2	All MCs	4	3.0	4	3.0	0.007	4.9	LOS A	0.0	0.2	0.60	0.57	0.60	7.3
Approach			4	3.0	4	3.0	0.007	4.9	LOS A	0.0	0.2	0.60	0.57	0.60	7.3
All Vehicles			1034	7.9	1034	7.9	0.257	0.6	NA	0.0	0.2	0.00	0.06	0.00	56.0

Table 8. SIDRA results for the crossover 1 on Victoria Parade - Weekday AM peak period (Existing)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Victoria Parade (S)															
1	L2	All MCs	9	2.0	9	2.0	0.039	2.4	LOS A	0.0	0.0	0.00	0.07	0.00	23.4
2	T1	All MCs	64	3.0	64	3.0	0.039	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	46.5
Approach			74	2.9	74	2.9	0.039	0.3	NA	0.0	0.0	0.00	0.07	0.00	42.0
North: Victoria Parade (N)															
8	T1	All MCs	24	3.0	24	3.0	0.014	0.0	LOS A	0.0	0.1	0.03	0.05	0.03	45.2
9	R2	All MCs	2	2.0	2	2.0	0.014	3.1	LOS A	0.0	0.1	0.03	0.05	0.03	31.6
Approach			26	2.9	26	2.9	0.014	0.3	NA	0.0	0.1	0.03	0.05	0.03	43.1
West: Crossover 1															
10	L2	All MCs	1	2.0	1	2.0	0.016	0.2	LOS A	0.1	0.4	0.17	0.18	0.17	20.9
12	R2	All MCs	18	2.0	18	2.0	0.016	0.9	LOS A	0.1	0.4	0.17	0.18	0.17	16.5
Approach			19	2.0	19	2.0	0.016	0.9	LOS A	0.1	0.4	0.17	0.18	0.17	16.8
All Vehicles			119	2.7	119	2.7	0.039	0.4	NA	0.1	0.4	0.03	0.08	0.03	36.4

Table 9. SIDRA results for the crossover 1 on Victoria Parade - Weekday PM peak period (Existing)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Victoria Parade (S)															
1	L2	All MCs	9	2.0	9	2.0	0.056	2.4	LOS A	0.0	0.0	0.00	0.05	0.00	23.6
2	T1	All MCs	97	3.0	97	3.0	0.056	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	47.5
Approach			106	2.9	106	2.9	0.056	0.2	NA	0.0	0.0	0.00	0.05	0.00	44.2
North: Victoria Parade (N)															
8	T1	All MCs	66	3.0	66	3.0	0.035	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	48.9
9	R2	All MCs	1	2.0	1	2.0	0.035	3.0	LOS A	0.0	0.1	0.01	0.01	0.01	32.7
Approach			67	3.0	67	3.0	0.035	0.0	NA	0.0	0.1	0.01	0.01	0.01	48.4
West: Crossover 1															
10	L2	All MCs	1	2.0	1	2.0	0.021	0.3	LOS A	0.1	0.5	0.23	0.22	0.23	20.4
12	R2	All MCs	22	2.0	22	2.0	0.021	1.2	LOS A	0.1	0.5	0.23	0.22	0.23	15.9
Approach			23	2.0	23	2.0	0.021	1.2	LOS A	0.1	0.5	0.23	0.22	0.23	16.2
All Vehicles			197	2.8	197	2.8	0.056	0.3	NA	0.1	0.5	0.03	0.05	0.03	39.7

**Table 10. SIDRA results for the crossover 2 on Great Eastern Highway - Weekday
AM peak period (Existing)**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
East: Great Eastern Hwy (E)															
5	T1	All MCs	1402	8.5	1402	8.5	0.393	0.0	LOS A	0.0	0.2	0.00	0.00	0.00	59.8
6	R2	All MCs	1	2.0	1	2.0	0.393	6.3	LOS A	0.0	0.2	0.00	0.00	0.00	42.8
Approach			1403	8.5	1403	8.5	0.393	0.0	NA	0.0	0.2	0.00	0.00	0.00	59.8
North: Crossover 2															
7	L2	All MCs	2	2.0	2	2.0	0.064	1.3	LOS A	0.1	1.1	1.00	0.82	1.00	2.2
9	R2	All MCs	1	2.0	1	2.0	0.064	152.3	LOS F	0.1	1.1	1.00	0.82	1.00	4.3
Approach			3	2.0	3	2.0	0.064	51.6	LOS F	0.1	1.1	1.00	0.82	1.00	2.9
West: Great Eastern Hwy (W)															
10	L2	All MCs	1	2.0	1	2.0	0.173	3.5	LOS A	0.0	0.0	0.00	0.00	0.00	25.5
11	T1	All MCs	619	8.5	619	8.5	0.173	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			620	8.5	620	8.5	0.173	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.6
All Vehicles			2026	8.5	2026	8.5	0.393	0.1	NA	0.1	1.1	0.00	0.00	0.00	58.9

**Table 11. SIDRA results for the crossover 2 on Great Eastern Highway - Weekday
PM peak period (Existing)**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
East: Great Eastern Hwy (E)															
5	T1	All MCs	925	8.5	925	8.5	0.275	0.0	LOS A	0.6	4.6	0.04	0.04	0.04	53.6
6	R2	All MCs	6	2.0	6	2.0	0.275	125.7	LOS F	0.6	4.6	0.08	0.08	0.08	35.4
Approach			932	8.5	932	8.5	0.275	0.9	NA	0.6	4.6	0.04	0.04	0.04	53.5
North: Crossover 2															
7	L2	All MCs	12	2.0	12	2.0	0.150	5.1	LOS A	0.3	2.5	0.88	0.89	0.90	3.5
9	R2	All MCs	1	2.0	1	2.0	0.150	304.4	LOS F	0.3	2.5	0.88	0.89	0.90	6.6
Approach			13	2.0	13	2.0	0.150	30.0	LOS D	0.3	2.5	0.88	0.89	0.90	3.8
West: Great Eastern Hwy (W)															
10	L2	All MCs	1	2.0	1	2.0	0.386	3.5	LOS A	0.0	0.0	0.00	0.00	0.00	25.5
11	T1	All MCs	1381	8.5	1381	8.5	0.386	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			1382	8.5	1382	8.5	0.386	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.6
All Vehicles			2326	8.4	2326	8.4	0.386	0.5	NA	0.6	4.6	0.02	0.02	0.02	53.7

**Table 12. SIDRA results for Great Eastern Highway/ Victoria Parade (Stage 1 and 2)
– Weekday AM peak period (Post development – 2023)**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Median Storage															
5	T1	All MCs	75	3.0	75	3.0	0.090	2.6	LOS A	0.3	2.4	0.50	0.44	0.50	10.4
Approach			75	3.0	75	3.0	0.090	2.6	LOS A	0.3	2.4	0.50	0.44	0.50	10.4
North: Victoria Pde (N)															
1	L2	All MCs	63	3.0	63	3.0	0.084	7.1	LOS A	0.3	2.5	0.44	0.91	0.44	30.6
2	T1	All MCs	12	3.0	12	3.0	0.084	11.0	LOS B	0.3	2.5	0.44	0.91	0.44	16.4
Approach			75	3.0	75	3.0	0.084	7.7	LOS A	0.3	2.5	0.44	0.91	0.44	29.5
West: Great Eastern Highway (W)															
3	L2	All MCs	2	3.0	2	3.0	0.164	4.7	LOS A	0.0	0.0	0.00	0.00	0.00	59.5
4	T1	All MCs	589	8.5	589	8.5	0.164	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			592	8.5	592	8.5	0.164	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
All Vehicles			741	7.4	741	7.4	0.164	1.1	NA	0.3	2.5	0.09	0.14	0.09	53.0

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
East: Great Eastern Highway (E)															
2	T1	All MCs	1394	8.5	1394	8.5	0.386	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
3	R2	All MCs	75	3.0	75	3.0	0.041	5.7	LOS A	0.0	0.0	0.00	0.63	0.00	35.8
Approach			1468	8.2	1468	8.2	0.386	0.3	NA	0.0	0.0	0.00	0.03	0.00	57.8
North: Median Storage															
1	R2	All MCs	12	3.0	12	3.0	0.042	11.6	LOS B	0.1	0.9	0.80	0.84	0.80	3.9
Approach			12	3.0	12	3.0	0.042	11.6	LOS B	0.1	0.9	0.80	0.84	0.80	3.9
All Vehicles			1480	8.2	1480	8.2	0.386	0.4	NA	0.1	0.9	0.01	0.04	0.01	57.1

**Table 13. SIDRA results for Great Eastern Highway/ Victoria Parade (Stage 1 and 2)
– Weekday PM peak period (Post development – 2023)**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist]	m			km/h
South: Median Storage															
5	T1	All MCs	105	3.0	105	3.0	0.395	16.3	LOS C	1.4	10.6	0.88	1.03	1.12	3.0
Approach			105	3.0	105	3.0	0.395	16.3	LOS C	1.4	10.6	0.88	1.03	1.12	3.0
North: Victoria Pde (N)															
1	L2	All MCs	112	3.0	112	3.0	0.279	11.6	LOS B	1.1	8.2	0.72	1.05	0.83	23.8
2	T1	All MCs	8	3.0	8	3.0	0.279	48.5	LOS E	1.1	8.2	0.72	1.05	0.83	10.3
Approach			120	3.0	120	3.0	0.279	14.2	LOS B	1.1	8.2	0.72	1.05	0.83	23.2
West: Great Eastern Highway (W)															
3	L2	All MCs	4	3.0	4	3.0	0.377	4.8	LOS A	0.0	0.0	0.00	0.00	0.00	59.4
4	T1	All MCs	1360	8.5	1360	8.5	0.377	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			1364	8.5	1364	8.5	0.377	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.7
All Vehicles			1589	7.7	1589	7.7	0.395	2.2	NA	1.4	10.6	0.11	0.15	0.14	49.5

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh.	Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
East: Great Eastern Highway (E)															
2	T1	All MCs	925	8.5	925	8.5	0.256	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
3	R2	All MCs	105	3.0	105	3.0	0.083	5.7	LOS A	0.0	0.0	0.00	0.63	0.00	35.8
Approach			1031	7.9	1031	7.9	0.256	0.6	NA	0.0	0.0	0.00	0.06	0.00	56.0
North: Median Storage															
1	R2	All MCs	8	3.0	8	3.0	0.015	4.9	LOS A	0.0	0.3	0.60	0.61	0.60	7.2
Approach			8	3.0	8	3.0	0.015	4.9	LOS A	0.0	0.3	0.60	0.61	0.60	7.2
All Vehicles			1039	7.9	1039	7.9	0.256	0.6	NA	0.0	0.3	0.00	0.07	0.00	55.7

Table 14. SIDRA results for the crossover 1 on Victoria Parade - Weekday AM peak period (Post development – 2023)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist]				km/h
			veh/h		veh/h					veh	m				
South: Victoria Parade (S)															
1	L2	All MCs	14	2.0	14	2.0	0.040	3.0	LOS A	0.0	0.0	0.00	0.10	0.00	26.2
2	T1	All MCs	62	3.0	62	3.0	0.040	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	45.1
Approach			76	2.8	76	2.8	0.040	0.5	NA	0.0	0.0	0.00	0.10	0.00	40.5
North: Victoria Parade (N)															
8	T1	All MCs	22	3.0	22	3.0	0.023	0.0	LOS A	0.1	0.7	0.14	0.25	0.14	31.9
9	R2	All MCs	18	2.0	18	2.0	0.023	3.3	LOS A	0.1	0.7	0.14	0.25	0.14	26.5
Approach			40	2.6	40	2.6	0.023	1.5	NA	0.1	0.7	0.14	0.25	0.14	28.7
West: Crossover 1															
10	L2	All MCs	16	2.0	16	2.0	0.057	0.2	LOS A	0.2	1.5	0.17	0.17	0.17	21.0
12	R2	All MCs	55	2.0	55	2.0	0.057	1.0	LOS A	0.2	1.5	0.17	0.17	0.17	16.7
Approach			71	2.0	71	2.0	0.057	0.8	LOS A	0.2	1.5	0.17	0.17	0.17	18.0
All Vehicles			186	2.5	186	2.5	0.057	0.8	NA	0.2	1.5	0.10	0.16	0.10	28.5

Table 15. SIDRA results for the crossover 1 on Victoria Parade - Weekday PM peak period (Post development – 2023)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist]				km/h
			veh/h		veh/h					veh	m				
South: Victoria Parade (S)															
1	L2	All MCs	14	2.0	14	2.0	0.057	3.0	LOS A	0.0	0.0	0.00	0.07	0.00	26.6
2	T1	All MCs	95	3.0	95	3.0	0.057	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	46.5
Approach			108	2.9	108	2.9	0.057	0.4	NA	0.0	0.0	0.00	0.07	0.00	43.0
North: Victoria Parade (N)															
8	T1	All MCs	64	3.0	64	3.0	0.045	0.0	LOS A	0.1	0.8	0.10	0.15	0.10	38.4
9	R2	All MCs	18	2.0	18	2.0	0.045	3.6	LOS A	0.1	0.8	0.10	0.15	0.10	29.2
Approach			82	2.8	82	2.8	0.045	0.8	NA	0.1	0.8	0.10	0.15	0.10	35.1
West: Crossover 1															
10	L2	All MCs	18	2.0	18	2.0	0.065	0.3	LOS A	0.2	1.7	0.23	0.21	0.23	20.6
12	R2	All MCs	58	2.0	58	2.0	0.065	1.3	LOS A	0.2	1.7	0.23	0.21	0.23	16.2
Approach			76	2.0	76	2.0	0.065	1.1	LOS A	0.2	1.7	0.23	0.21	0.23	17.6
All Vehicles			266	2.6	266	2.6	0.065	0.7	NA	0.2	1.7	0.10	0.13	0.10	31.7

**Table 16. SIDRA results for the crossover 2 on Great Eastern Highway - Weekday
AM peak period (Post development – 2023)**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back	Of Queue	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec			m				km/h
East: Great Eastern Hwy (E)															
5	T1	All MCs	1404	8.5	1404	8.5	0.393	0.0	LOS A	0.0	0.2	0.00	0.00	0.00	59.8
6	R2	All MCs	1	2.0	1	2.0	0.393	6.4	LOS A	0.0	0.2	0.00	0.00	0.00	42.8
Approach			1405	8.5	1405	8.5	0.393	0.0	NA	0.0	0.2	0.00	0.00	0.00	59.8
North: Crossover 2															
7	L2	All MCs	3	2.0	3	2.0	0.063	1.1	LOS A	0.1	1.1	1.00	0.76	1.00	2.8
9	R2	All MCs	1	2.0	1	2.0	0.063	149.2	LOS F	0.1	1.1	1.00	0.76	1.00	5.5
Approach			4	2.0	4	2.0	0.063	38.2	LOS E	0.1	1.1	1.00	0.76	1.00	3.6
West: Great Eastern Hwy (W)															
10	L2	All MCs	40	2.0	40	2.0	0.175	3.5	LOS A	0.0	0.0	0.00	0.07	0.00	24.5
11	T1	All MCs	588	8.5	588	8.5	0.175	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	55.8
Approach			628	8.1	628	8.1	0.175	0.2	NA	0.0	0.0	0.00	0.04	0.00	50.3
All Vehicles			2038	8.4	2038	8.4	0.393	0.2	NA	0.1	1.1	0.00	0.01	0.00	57.2

**Table 17. SIDRA results for the crossover 2 on Great Eastern Highway - Weekday
PM peak period (Post development – 2023)**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
East: Great Eastern Hwy (E)															
5	T1	All MCs	928	8.5	928	8.5	0.276	0.0	LOS A	0.6	4.7	0.04	0.04	0.04	53.5
6	R2	All MCs	6	2.0	6	2.0	0.276	128.9	LOS F	0.6	4.7	0.08	0.08	0.08	35.2
Approach			935	8.5	935	8.5	0.276	0.9	NA	0.6	4.7	0.04	0.04	0.04	53.4
North: Crossover 2															
7	L2	All MCs	13	2.0	13	2.0	0.149	4.6	LOS A	0.3	2.5	0.87	0.88	0.88	3.8
9	R2	All MCs	1	2.0	1	2.0	0.149	300.6	LOS F	0.3	2.5	0.87	0.88	0.88	7.1
Approach			14	2.0	14	2.0	0.149	27.4	LOS D	0.3	2.5	0.87	0.88	0.88	4.1
West: Great Eastern Hwy (W)															
10	L2	All MCs	39	2.0	39	2.0	0.388	3.5	LOS A	0.0	0.0	0.00	0.03	0.00	25.0
11	T1	All MCs	1352	8.5	1352	8.5	0.388	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	57.8
Approach			1391	8.3	1391	8.3	0.388	0.1	NA	0.0	0.0	0.00	0.02	0.00	55.0
All Vehicles			2339	8.3	2339	8.3	0.388	0.6	NA	0.6	4.7	0.02	0.03	0.02	52.2

**Table 18. SIDRA results for Great Eastern Highway/ Victoria Parade (Stage 1 and 2)
– Weekday AM peak period (10-year post development – 2033)**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Sati	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh.	Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Median Storage															
5	T1	All MCs	88	3.0	88	3.0	0.124	3.5	LOS A	0.4	3.3	0.55	0.54	0.55	8.9
Approach			88	3.0	88	3.0	0.124	3.5	LOS A	0.4	3.3	0.55	0.54	0.55	8.9
North: Victoria Pde (N)															
1	L2	All MCs	69	3.0	69	3.0	0.104	7.5	LOS A	0.4	3.0	0.49	0.93	0.49	29.8
2	T1	All MCs	13	3.0	13	3.0	0.104	13.3	LOS B	0.4	3.0	0.49	0.93	0.49	15.5
Approach			82	3.0	82	3.0	0.104	8.4	LOS A	0.4	3.0	0.49	0.93	0.49	28.6
West: Great Eastern Highway (W)															
3	L2	All MCs	2	3.0	2	3.0	0.198	4.7	LOS A	0.0	0.0	0.00	0.00	0.00	59.5
4	T1	All MCs	713	8.5	713	8.5	0.198	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			715	8.5	715	8.5	0.198	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
All Vehicles			885	7.4	885	7.4	0.198	1.1	NA	0.4	3.3	0.10	0.14	0.10	52.8

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh.	Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
East: Great Eastern Highway (E)															
2	T1	All MCs	1674	8.5	1674	8.5	0.463	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
3	R2	All MCs	88	3.0	88	3.0	0.049	5.7	LOS A	0.0	0.0	0.00	0.63	0.00	35.8
Approach			1762	8.2	1762	8.2	0.463	0.3	NA	0.0	0.0	0.00	0.03	0.00	57.7
North: Median Storage															
1	R2	All MCs	13	3.0	13	3.0	0.079	20.5	LOS C	0.2	1.5	0.89	0.91	0.89	2.4
Approach			13	3.0	13	3.0	0.079	20.5	LOS C	0.2	1.5	0.89	0.91	0.89	2.4
All Vehicles			1775	8.2	1775	8.2	0.463	0.5	NA	0.2	1.5	0.01	0.04	0.01	56.7

**Table 19. SIDRA results for Great Eastern Highway/ Victoria Parade (Stage 1 and 2)
– Weekday PM peak period (10-year post development – 2033)**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Median Storage															
5	T1	All MCs	125	3.0	125	3.0	0.825	52.8	LOS F	1.8	13.7	0.98	1.63	2.07	1.0
Approach			125	3.0	125	3.0	0.825	52.8	LOS F	1.8	13.7	0.98	1.63	2.07	1.0
North: Victoria Pde (N)															
1	L2	All MCs	128	3.0	128	3.0	0.515	17.6	LOS C	2.1	15.6	0.87	1.14	1.27	18.0
2	T1	All MCs	9	3.0	9	3.0	0.515	96.5	LOS F	2.1	15.6	0.87	1.14	1.27	6.7
Approach			138	3.0	138	3.0	0.515	23.0	LOS C	2.1	15.6	0.87	1.14	1.27	17.5
West: Great Eastern Highway (W)															
3	L2	All MCs	2	3.0	2	3.0	0.453	4.8	LOS A	0.0	0.0	0.00	0.00	0.00	59.5
4	T1	All MCs	1635	8.5	1635	8.5	0.453	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
Approach			1637	8.5	1637	8.5	0.453	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.6
All Vehicles			1900	7.7	1900	7.7	0.825	5.2	NA	2.1	15.6	0.13	0.19	0.23	40.9

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist]				km/h
			veh/h	%	veh/h	%	v/c	sec			m				
East: Great Eastern Highway (E)															
2	T1	All MCs	1112	8.5	1112	8.5	0.307	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
3	R2	All MCs	125	3.0	125	3.0	0.069	5.7	LOS A	1.8	13.8	0.00	0.63	0.00	35.8
Approach			1237	7.9	1237	7.9	0.307	0.6	NA	1.8	13.8	0.00	0.06	0.00	56.0
North: Median Storage															
1	R2	All MCs	9	3.0	9	3.0	0.022	6.9	LOS A	0.1	0.5	0.69	0.73	0.69	5.8
Approach			9	3.0	9	3.0	0.022	6.9	LOS A	0.1	0.5	0.69	0.73	0.69	5.8
All Vehicles			1246	7.9	1246	7.9	0.307	0.7	NA	1.8	13.8	0.01	0.07	0.01	55.6

Table 20. SIDRA results for the crossover 1 on Victoria Parade - Weekday AM peak period (10-year post development – 2033)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist]	m			km/h
South: Victoria Parade (S)															
1	L2	All MCs	14	2.0	14	2.0	0.048	3.0	LOS A	0.0	0.0	0.00	0.08	0.00	26.4
2	T1	All MCs	77	3.0	77	3.0	0.048	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	45.9
Approach			91	2.8	91	2.8	0.048	0.5	NA	0.0	0.0	0.00	0.08	0.00	41.8
North: Victoria Parade (N)															
8	T1	All MCs	28	3.0	28	3.0	0.026	0.0	LOS A	0.1	0.7	0.14	0.23	0.14	33.2
9	R2	All MCs	18	2.0	18	2.0	0.026	3.4	LOS A	0.1	0.7	0.14	0.23	0.14	27.0
Approach			46	2.6	46	2.6	0.026	1.3	NA	0.1	0.7	0.14	0.23	0.14	29.9
West: Crossover 1															
10	L2	All MCs	16	2.0	16	2.0	0.059	0.2	LOS A	0.2	1.5	0.20	0.18	0.20	20.8
12	R2	All MCs	55	2.0	55	2.0	0.059	1.1	LOS A	0.2	1.5	0.20	0.18	0.20	16.5
Approach			71	2.0	71	2.0	0.059	0.9	LOS A	0.2	1.5	0.20	0.18	0.20	17.8
All Vehicles			207	2.5	207	2.5	0.059	0.8	NA	0.2	1.5	0.10	0.15	0.10	29.8

Table 21. SIDRA results for the crossover 1 on Victoria Parade - Weekday PM peak period (10-year post development – 2033)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist]				km/h
South: Victoria Parade (S)															
1	L2	All MCs	14	2.0	14	2.0	0.069	3.0	LOS A	0.0	0.0	0.00	0.06	0.00	26.8
2	T1	All MCs	117	3.0	117	3.0	0.069	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	47.0
Approach			131	2.9	131	2.9	0.069	0.3	NA	0.0	0.0	0.00	0.06	0.00	44.0
North: Victoria Parade (N)															
8	T1	All MCs	82	3.0	82	3.0	0.055	0.0	LOS A	0.1	0.9	0.10	0.13	0.10	39.7
9	R2	All MCs	18	2.0	18	2.0	0.055	3.8	LOS A	0.1	0.9	0.10	0.13	0.10	29.7
Approach			100	2.8	100	2.8	0.055	0.7	NA	0.1	0.9	0.10	0.13	0.10	36.7
West: Crossover 1															
10	L2	All MCs	18	2.0	18	2.0	0.065	0.4	LOS A	0.2	1.7	0.26	0.23	0.26	20.4
12	R2	All MCs	55	2.0	55	2.0	0.065	1.5	LOS A	0.2	1.7	0.26	0.23	0.26	16.0
Approach			73	2.0	73	2.0	0.065	1.2	LOS A	0.2	1.7	0.26	0.23	0.26	17.4
All Vehicles			303	2.7	303	2.7	0.069	0.6	NA	0.2	1.7	0.10	0.12	0.10	33.4

**Table 22. SIDRA results for the crossover 2 on Great Eastern Highway - Weekday
AM peak period (10-year post development – 2033)**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist]	m			km/h
East: Great Eastern Hwy (E)															
5	T1	All MCs	1685	8.5	1685	8.5	0.472	0.0	LOS A	0.0	0.3	0.00	0.00	0.00	59.7
6	R2	All MCs	1	2.0	1	2.0	0.472	7.2	LOS A	0.0	0.3	0.00	0.00	0.00	42.8
Approach			1686	8.5	1686	8.5	0.472	0.0	NA	0.0	0.3	0.00	0.00	0.00	59.7
North: Crossover 2															
7	L2	All MCs	3	2.0	3	2.0	0.211	5.1	LOS A	0.5	3.5	1.00	0.97	1.02	1.8
9	R2	All MCs	1	2.0	1	2.0	0.211	247.4	LOS F	0.5	3.5	1.00	0.97	1.02	3.5
Approach			4	2.0	4	2.0	0.211	65.7	LOS F	0.5	3.5	1.00	0.97	1.02	2.2
West: Great Eastern Hwy (W)															
10	L2	All MCs	40	2.0	40	2.0	0.210	3.5	LOS A	0.0	0.0	0.00	0.06	0.00	24.7
11	T1	All MCs	713	8.5	713	8.5	0.210	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	56.4
Approach			753	8.2	753	8.2	0.210	0.2	NA	0.0	0.0	0.00	0.03	0.00	51.6
All Vehicles			2443	8.4	2443	8.4	0.472	0.2	NA	0.5	3.5	0.00	0.01	0.00	57.1

**Table 23. SIDRA results for the crossover 2 on Great Eastern Highway - Weekday
PM peak period (10-year post development – 2033)**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist]				km/h
East: Great Eastern Hwy (E)															
5	T1	All MCs	1115	8.5	1115	8.5	0.343	0.0	LOS A	1.5	12.4	0.05	0.05	0.05	46.6
6	R2	All MCs	6	2.0	6	2.0	0.343	370.9	LOS F	1.5	12.4	0.11	0.12	0.11	27.7
Approach			1121	8.5	1121	8.5	0.343	2.1	NA	1.5	12.4	0.05	0.05	0.05	46.4
North: Crossover 2															
7	L2	All MCs	13	2.0	13	2.0	0.518	33.6	LOS D	1.2	9.2	0.98	0.99	1.00	2.0
9	R2	All MCs	1	2.0	1	2.0	0.518	326.2	LOS F	1.2	9.2	0.98	0.99	1.00	4.0
Approach			14	2.0	14	2.0	0.518	56.1	LOS F	1.2	9.2	0.98	0.99	1.00	2.2
West: Great Eastern Hwy (W)															
10	L2	All MCs	39	2.0	39	2.0	0.466	3.6	LOS A	0.0	0.0	0.00	0.03	0.00	25.1
11	T1	All MCs	1627	8.5	1627	8.5	0.466	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	58.0
Approach			1666	8.3	1666	8.3	0.466	0.1	NA	0.0	0.0	0.00	0.01	0.00	55.6
All Vehicles			2801	8.4	2801	8.4	0.518	1.2	NA	1.5	12.4	0.02	0.03	0.02	47.2



PROPOSED COMMERCIAL DEVELOPMENT

**323 – 325 GREAT EASTERN HIGHWAY
MIDVALE**

ENVIRONMENTAL ACOUSTIC ASSESSMENT

JUNE 2023

OUR REFERENCE: 31165-4-23175



DOCUMENT CONTROL PAGE

ENVIRONMENTAL ACOUSTIC ASSESSMENT
323 – 325 GREAT EASTERN HIGHWAY
MIDVALE

Job No: 23175

Document Reference: 31165-4-23175

FOR

PEREGRINE CORPORATION

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This report has been prepared in accordance with the scope of services and on the basis of information and documents provided to Herring Storer Acoustics by the client. To the extent that this report relies on data and measurements taken at or under the times and conditions specified within the report and any findings, conclusions or recommendations only apply to those circumstances and no greater reliance should be assumed. The client acknowledges and agrees that the reports or presentations are provided by Herring Storer Acoustics to assist the client to conduct its own independent assessment.

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APPENDICIES

A	Site Plan
B	Wall/Screening Location Plan

1. INTRODUCTION

Herring Storer Acoustics were commissioned by Peregrine Corporation to undertake an acoustic assessment of noise emissions associated with the development of 323 – 325 Great Eastern Highway, Midvale.

This report assesses noise emissions from the premises with regards to compliance with the requirements of the *Environmental Protection (Noise) Regulations 1997*. The proposed development is a Service Station including:

- Sales of unleaded fuel, diesel fuel and EV charging facilities; and
- A control building with integrated convenience retail sales and a convenience retail drive-through facility.

Therefore, noise sources considered as part of this assessment include:

- Plant by way of the air conditioning, exhaust systems and refrigeration;
- Car movements on site;
- Car and Truck engine starts and doors closing;
- Truck movements on site using the service station and the refuelling truck; and
- Truck mounted refrigeration units.

We note that from information received from DWER, the bitumised area would be considered as a road, thus noise relating to motor vehicles is exempt from the *Environmental Protection (Noise) Regulations 1997*. We note that these noise sources are rarely critical in the determination of compliance. However, as requested by council and for completeness, they have been included in the assessment, for information purposes only.

For information, the site plan for the proposed development is attached in Appendix A.

2. SUMMARY

The closest neighbouring residences to this development are located to the north and east, on Victoria Parade. As the service station would be open 24 hours per day, noise received at the neighbouring noise (highly) sensitive premises from these noise sources needs to comply with the appropriate assigned noise levels for the night period.

The mechanical service would be located on the roof and with appropriate screening, noise received at the neighbouring premises would, comply with the assigned noise levels at all times. However, as the mechanical services would only be design as part of the next design phase, it is recommended that an acoustic review of the mechanical services be undertaken once the design has been finalised, to ensure compliance is achieved.

The noise associated with car and truck movements on site would be of a short term duration and compliance with the assigned L_{A1} noise levels, are required. Noise from the mechanical services would occur for more than 10% of the time, hence noise received at the neighbouring premises needs to comply with the assigned L_{A10} noise levels. Noise emissions from car and truck doors closing and engines starting, need to comply with the assigned L_{Amax} noise levels.

It is noted that as the development would be considered as a public place, noise emissions associated with the vehicles on site need to be considered individually.

The assessment indicates that noise emissions from cars and trucks on site would comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* at all times with the inclusion of a 2.2 metre wall at the north east boundary of the development.

Based on the design provided, noise received at the neighbouring premises from the development would be deemed to comply with the Regulatory requirements at all times with noise mitigation further outlined in this report. However, as noted above, as the mechanical services would only be design as part of the next design phase, it is recommended that an acoustic review of the mechanical services be undertaken once the design has been finalised, to ensure compliance is achieved.

3. CRITERIA

The allowable noise level at the surrounding locales is prescribed by the *Environmental Protection (Noise) Regulations 1997*. Regulations 7 & 8 stipulate maximum allowable external noise levels determined by the calculation of an influencing factor, which is then added to the base levels shown below. The influencing factor is calculated for the usage of land within two circles, having radii of 100m and 450m from the premises of concern.

TABLE 3.1 - BASELINE ASSIGNED OUTDOOR NOISE LEVEL

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

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

It is a requirement that received noise be free of annoying characteristics (tonality, modulation and impulsiveness), defined below as per Regulation 9.

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

“modulation” means a variation in the emission of noise that –

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

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

- (a) the A-weighted sound pressure level in any one-third octave band; and

(b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands,

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

Where the noise emission is not music, if the above characteristics exist and cannot be practicably removed, then any measured level is adjusted according to Table 3.2 below.

TABLE 3.2 - ADJUSTMENTS TO MEASURED LEVELS

Where tonality is present	Where modulation is present	Where impulsiveness is present
+5 dB(A)	+5 dB(A)	+10 dB(A)

Note: These adjustments are cumulative to a maximum of 15 dB.

For this development, the closest residential premises of concern are located:

- To the north and east of the development, with the closest residence being 7 Victoria Parade (as indicated on Figure 3.1) the zoning map from City of Mundaring and City of Swan Intramaps site.

As noted on the aerial photograph, the other adjacent premises on are commercial. For information, an aerial photograph of the area is shown below as Figure 3.2.

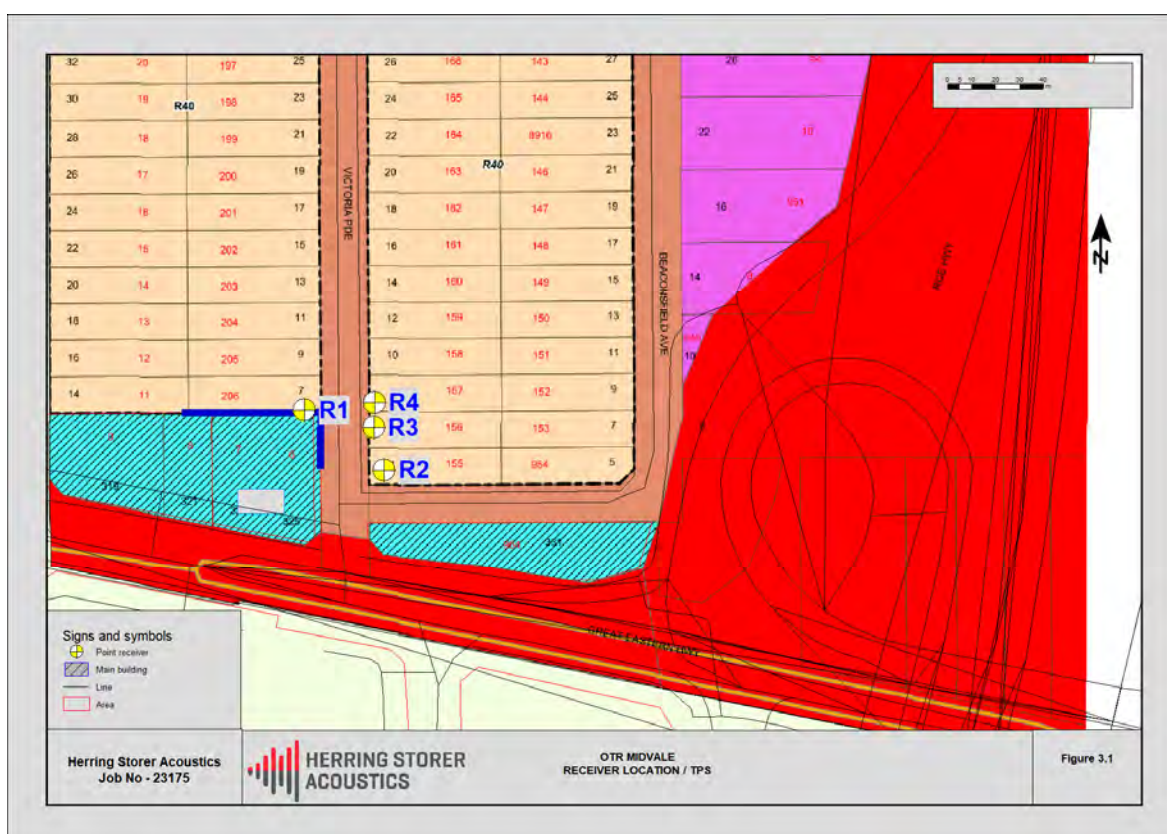


FIGURE 3.1 – AREA AROUND PROPOSED FACILITY

Based on the results of the noise modelling, the influencing factor (IF) at the worst case locations, as indicated on Figure 3.1 (with regards to noise received from the proposed facility) neighbouring residential premises has been conservatively estimated as listed in Table 3.3.

TABLE 3.3 – INFLUENCING FACTORS

Influencing Factor Parameter	Influencing Factor (dB)
Major Road within inner circle	Great Eastern Highway +6
Major Road within outer circle	-
Secondary Road within inner circle	-
Commercial Premises within inner circle	40% +2
Commercial Premises within outer circle	20% +1
Industrial Premises within inner circle	-
Industrial Premises within outer circle	30% +3
TOTAL IF	+12

Based on the above influencing factor, the assigned outdoor noise levels for the neighbouring residential locations are listed in Table 3.4.

TABLE 3.4 - ASSIGNED OUTDOOR NOISE LEVEL

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		L _A 10	L _A 1	L _A max
Noise sensitive premises: Highly sensitive area	0700 - 1900 hours Monday to Saturday	57	67	77
	0900 - 1900 hours Sunday and Public Holidays	52	62	77
	1900 - 2200 hours all days	52	62	67
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	47	57	67
Commercial Premises	All times	60	75	80

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

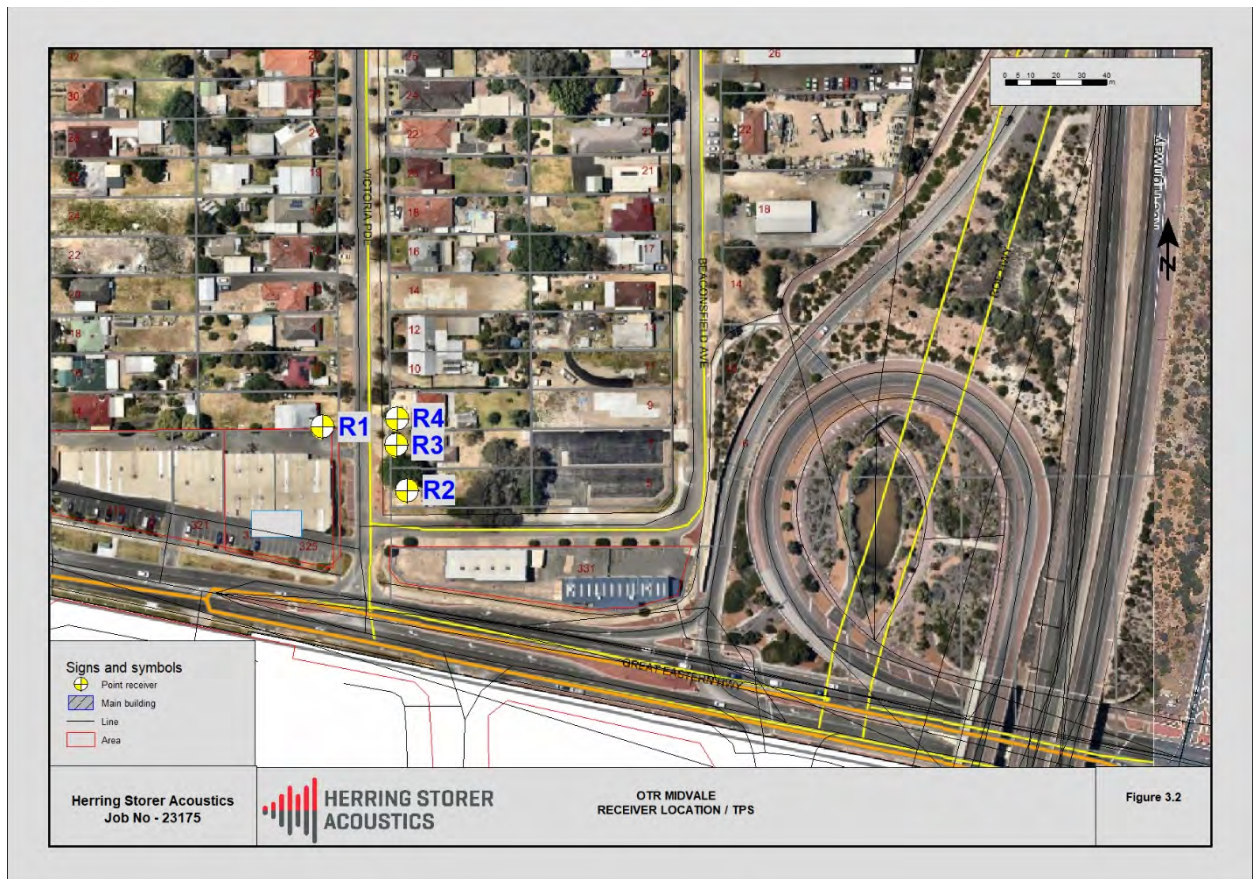


FIGURE 3.3 – AERIAL VIEW AROUND PROPOSED FACILITY

The assigned noise levels at the neighbouring commercial premises would be as listed in Table 3.3.

Additional to the above, with regards to vehicles accessing the site, we note that as anyone can access the site and the operators of the premises have no control on who can enter the car park these areas would be designated as public places. Regulation 6 of the *Environmental Protection (Noise) Regulations 1997* relates to noise emissions from public places and under this Regulation, "*the person who is causing or permitting that noise to be emitted is to be treated as the occupier...*". Therefore, noise emissions from each individual vehicle using the car park needs to comply with the assigned noise levels.

4. MODELLING

Modelling of the noise propagation from the proposed development was carried out using an environmental noise modelling computer program, "SoundPlan". Calculations were carried out using the EPA standard weather conditions as stated in the Environmental Protection Authority's "*Draft Guidance for Assessment of Environmental Factors No.8 - Environmental Noise*".

Noise emissions from the development include:

- Plant by way of the air conditioning, exhaust systems and refrigeration plant;
- Car movements on site;
- Drive-thru ordering speaker;
- Cars starting and doors closing;
- Truck movements on site, including refuelling tanker; and
- Trucks starting and doors closing.

To determine the noise received at the neighbouring premises, noise modelling was undertaken for the following scenarios:

- 1 Plant; air conditioning, exhaust systems, drive -thru speaker and refrigeration plant (including truck mounted refrigeration units).
- 2 Car movements on site.
- 3 Cars starting and doors closing.
- 4 Truck movements on site, including the refuelling tanker.
- 5 Trucks starting and doors closing.

With regards to noise emissions, the following are noted:

- 1 For the modelling of cars, the noise sources (ie cars) were located not only at the petrol bowzers, parking bays, but also at the entry crossover point to the development. Thus, ensuring noise modelling was undertaken for the worst-case locations.
- 2 The trucks have been located at the petrol bowzers, entry and exit routes and at the crossovers. Additionally, the truck mounted refrigeration unit has been located at the truck bowser area. Thus, ensuring noise modelling was undertaken for the worst-case locations.

- 3 Noise associated with the mechanical services does not take into account any diversity of operation. Such diversity would occur during the night period. Thus, this is a conservative assessment. At this stage of the project, the mechanical service has not been design. Therefore, the noise sources have been based on designs used for the same or similar tenancies.
- 4 The mechanical services would be located on the roof, which would be around 5.7 metres above ground. The mechanical services would be screened from the neighbouring premises, hence has been included in the assessment.
- 5 The refrigeration condensing units to be “Quiet” series / type condensing units.
- 6 The noise model assumes the boundary fence to the north of the development is 2.2 metres high and has a surface density of 15kg/m² or greater as shown in Appendix B.

The calculations were based in the sound power levels listed in Tables 4.1 to 4.2.

TABLE 4.1 – GENERAL SOUND POWER LEVELS

Item of Equipment	Sound Power Level, (dB(A))
Cars moving	79
Truck moving	89
Car Start	85
Car Door	87
Truck Start	94
Truck Door	95
Truck Mounted Refrigeration Unit	86

TABLE 4.2 – MECHANICAL SERVICES NOISE LEVELS

Tenancy	Plant Item	Noise Level dB(A)
Petrol Station Convenience Store	Air Conditioning Condensing Units	2 at 52 dB(A) @ 1m
	Refrigeration Condenser	1 at 61 dB(A) @ 1m
Tenancy 2 (Drive Thru))	Air Conditioning Condensing Units	2 at 57 dB(A) @ 1m
	Exhaust Fan	2 at 60 dB(A) @ 1m
	Ordering Speaker	1 at 76 dB(A) @1m

The above noise sources need to comply with the following criteria :

- L_{A10} - Mechanical services and truck mounted refrigeration unit.
- L_{A1} - Car and truck movements.
- L_{AMax} - Car and truck engine starts and doors closing.

Based on the above noise sources, Figure 4.1 details the locations assumed in the modelling, which have been chosen based on a worst-case location in terms of distance and barriers to receivers.



5. RESULTS

Calculations were undertaken to all the premises located around the development, however, to simplify the analysis, the assessments have only been undertaken for the following worst case locations :

- R1. Residence to the north of the site on Victoria Parade.
- R2 to R4. Residence to the east of the site, on Victoria Parade.
- C1. Commercial to west.

The resultant noise levels listed in Table 5.1 for the residential locations are for the worst case operating conditions.

TABLE 5.1 – WORST CASE CALCULATED NOISE LEVELS

Item	Calculated Noise Levels (dB(A))				
	Residential			Commercial	
	R1	R2	R3	R4	C1
Mechanical services (including truck mounted refrigeration unit)	37	46	43	43	50
Cars (Movement)	36	32	29	30	34
Trucks (Movement)	35	52	51	47	63
Car Start	24	41	37	35	47
Car Door Slam	26	43	39	37	49
Truck Start	33	51	49	45	49
Truck Door Slam	35	53	51	47	51

6. ASSESSMENT

Given the above possible noise sources, we believe that assessments of the following scenarios are required.

6.1 L_{A10} NOISE EMISSIONS

Noise emissions from the mechanical services and truck mounted refrigeration units would be steady state and would operate for the majority of time. Hence noise received from these items need to comply with the assigned L_{A10} noise level.

With the location of the development on Great Eastern Highway, noise received at the neighbouring residences would not be considered tonal and no penalties would be applicable. Thus, the calculated noise levels, as listed in Table 5.1 would be the assessable noise levels.

Table 6.1 summarises the applicable Assigned Noise Levels, and assessable noise level emissions for the mechanical services and truck mounted refrigeration unit.

**TABLE 6.1 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS
MECHANICAL SERVICES AND TRUCK MOUNTED REFRIGERATION**

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L _{A10} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
R1	37	Night Period	47	Complies
R2	46	Night Period	47	Complies
R3	43	Night Period	47	Complies
R4	43	Night Period	47	Complies
C1	50	All Hours	60	Complies

6.2 L_{A1} NOISE EMISSIONS

Noise emissions from car and truck movements on site need to comply with the assigned L_{A1} noise level. As the critical period for compliance for this source is the night period, this scenario includes noise emissions from the sources associated with L_{A1} noise levels. However, as under the Regulations, each of these sources needs to be considered individually, it is the highest calculated noise levels used for assessment, rather than the cumulative overall noise levels.

Based on the definitions of tonality, noise emissions from car and truck movements, being an L_{A1}, being present for less than 10% of the time, would not be considered tonal. Thus, no penalties would be applicable, and the assessment would be as listed in Table 5.1.

Tables 6.2 to 6.3 summarise the applicable Assigned Noise Levels, and assessable noise level emissions for each identified noise.

TABLE 6.2 – ASSESSMENT OF L_{A1} NOISE LEVEL EMISSIONS FROM CARS

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L _{A1} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
R1	36	Night Period	57	Complies
R2	32	Night Period	57	Complies
R3	29	Night Period	57	Complies
R4	30	Night Period	57	Complies
C1	34	All Hours	75	Complies

TABLE 6.3 – ASSESSMENT OF L_{A1} NOISE LEVEL EMISSIONS FROM TRUCKS

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{A1} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
R1	35	Night Period	57	Complies
R2	52	Night Period	57	Complies
R3	51	Night Period	57	Complies
R4	47	Night Period	57	Complies
C1	63	All Hours	75	Complies

6.3 $L_{A\text{MAX}}$ NOISE EMISSIONS

Noise emissions from car and truck engine starts and doors closing on site need to comply with the assigned $L_{A\text{Max}}$ noise level. As the critical period for compliance for this source is the night period, this scenario includes noise emissions from the sources associated with $L_{A\text{Max}}$ noise levels. However, as under the Regulations, each of these sources needs to be considered individually, it is the highest calculated noise levels used for assessment, rather than the cumulative overall noise levels.

Based on the definitions of tonality, noise emissions from a car and truck starting, being an $L_{A\text{Max}}$, being present for less than 10% of the time, would not be considered tonal. Thus, no penalties would be applicable, and the assessment would be as listed in Table 5.1. However, noise associated with the closing of car and truck doors could be impulsive and to be conservative, a +10 dB(A) penalty for impulsiveness would be applied.

Tables 6.4 to 6.8 list the characteristics that should be included and the assessable noise levels and the assessable noise level.

**TABLE 6.4 – APPLICABLE ADJUSTMENTS AND ASSESSABLE $L_{A\text{MAX}}$ NOISE LEVELS
WORST CASE LOCATION TO RESIDENCE R1**

Item	Calculated Noise Level, dB(A)	Applicable Adjustments to Measured Noise Levels, dB(A)			Assessable Noise Level, dB(A)
		Where Noise Emission is NOT music			
		Tonality	Modulation	Impulsiveness	
Car Door	26	-	-	+10	36
Truck Door	35	-	-	+10	45

**TABLE 6.5 – APPLICABLE ADJUSTMENTS AND ASSESSABLE $L_{A\text{MAX}}$ NOISE LEVELS
WORST CASE LOCATION TO RESIDENCE R2**

Item	Calculated Noise Level, dB(A)	Applicable Adjustments to Measured Noise Levels, dB(A)			Assessable Noise Level, dB(A)
		Where Noise Emission is NOT music			
		Tonality	Modulation	Impulsiveness	
Car Door	43	-	-	+10	53
Truck Door	53	-	-	+10	63

**TABLE 6.6 – APPLICABLE ADJUSTMENTS AND ASSESSABLE $L_{A\text{MAX}}$ NOISE LEVELS
WORST CASE LOCATION TO RESIDENCE R3**

Item	Calculated Noise Level, dB(A)	Applicable Adjustments to Measured Noise Levels, dB(A)			Assessable Noise Level, dB(A)
		Where Noise Emission is NOT music			
		Tonality	Modulation	Impulsiveness	
Car Door	39	-	-	+10	49

Truck Door	52	-	-	+10	62
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**TABLE 6.7 – APPLICABLE ADJUSTMENTS AND ASSESSABLE L_{AMAX} NOISE LEVELS
WORST CASE LOCATION TO RESIDENCE R4**

Item	Calculated Noise Level, dB(A)	Applicable Adjustments to Measured Noise Levels, dB(A)			Assessable Noise Level, dB(A)
		Where Noise Emission is NOT music			
		Tonality	Modulation	Impulsiveness	
Car Door	37	-	-	+10	47
Truck Door	47	-	-	+10	57

**TABLE 6.8 – APPLICABLE ADJUSTMENTS AND ASSESSABLE L_{AMAX} NOISE LEVELS
WORST CASE LOCATION TO COMMERCIAL PREMISES**

Item	Calculated Noise Level, dB(A)	Applicable Adjustments to Measured Noise Levels, dB(A)			Assessable Noise Level, dB(A)
		Where Noise Emission is NOT music			
		Tonality	Modulation	Impulsiveness	
Car Door	49	-	-	+10	59
Truck Door	51	-	-	+10	61

Tables 6.9 to 6.12 summarise the applicable Assigned Noise Levels, and assessable noise level emissions for each identified noise.

TABLE 6.9 – ASSESSMENT OF L_{AMAX} NOISE LEVEL EMISSIONS FROM CAR STARTS

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{Amax} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
R1	34	Night Period	67	Complies
R2	51	Night Period	67	Complies
R3	47	Night Period	67	Complies
R4	45	Night Period	67	Complies
C1	57	All Hours	80	Complies

TABLE 6.10 – ASSESSMENT OF L_{AMAX} NOISE LEVEL EMISSIONS FROM CAR DOORS

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{Amax} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
R1	36	Night Period	67	Complies
R2	53	Night Period	67	Complies
R3	49	Night Period	67	Complies
R4	47	Night Period	67	Complies
C1	59	All Hours	80	Complies

TABLE 6.11 – ASSESSMENT OF L_{AMAX} NOISE LEVEL EMISSIONS FROM TRUCK STARTS

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{Amax} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
R1	43	Night Period	67	Complies
R2	61	Night Period	67	Complies
R3	59	Night Period	67	Complies

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{Amax} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
R4	55	Night Period	67	Complies
C1	59	All Hours	80	Complies

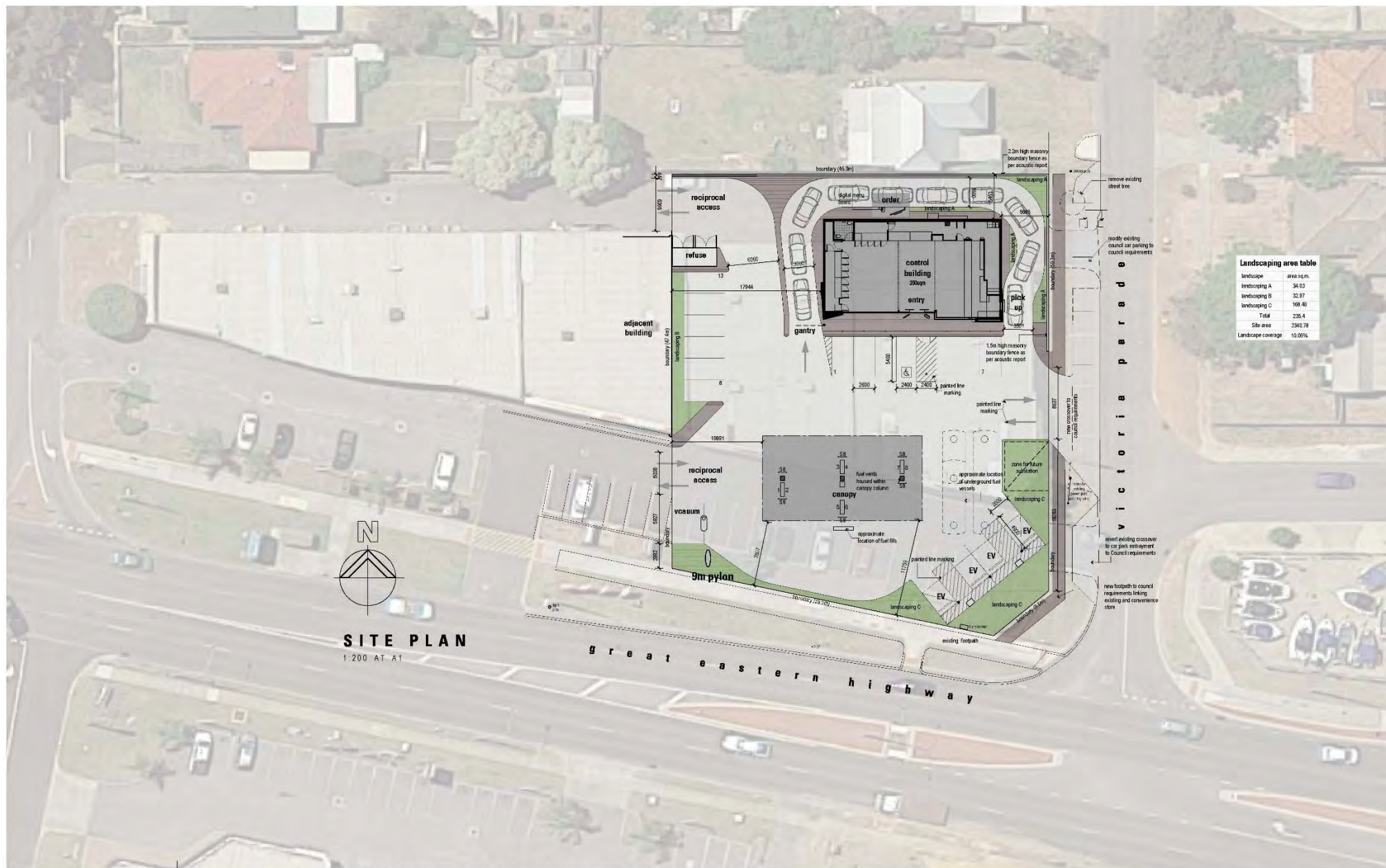
TABLE 6.12 – ASSESSMENT OF L_{Amax} NOISE LEVEL EMISSIONS FROM TRUCK DOORS

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{Amax} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
R1	45	Night Period	67	Complies
R2	63	Night Period	67	Complies
R3	61	Night Period	67	Complies
R4	57	Night Period	67	Complies
C1	61	All Hours	80	Complies

From the above assessments, it can be seen that noise received at the neighbouring residence, even using a conservative analysis, complies with the requirements of the *Environmental Protection (Noise) Regulations 1997* at all times. However, as the mechanical services would only be design as part of the next design phase, it is recommended that an acoustic review of the mechanical services be undertaken once the design has been finalised, to ensure compliance is achieved.

APPENDIX A

PLANS



NEW SERVICE STATION COMPLEX

323-325 GREAT EASTERN HIGHWAY MIDVALE WA

27.06.23
23JUN1412 SK01g

DEVELOPMENT APPLICATION

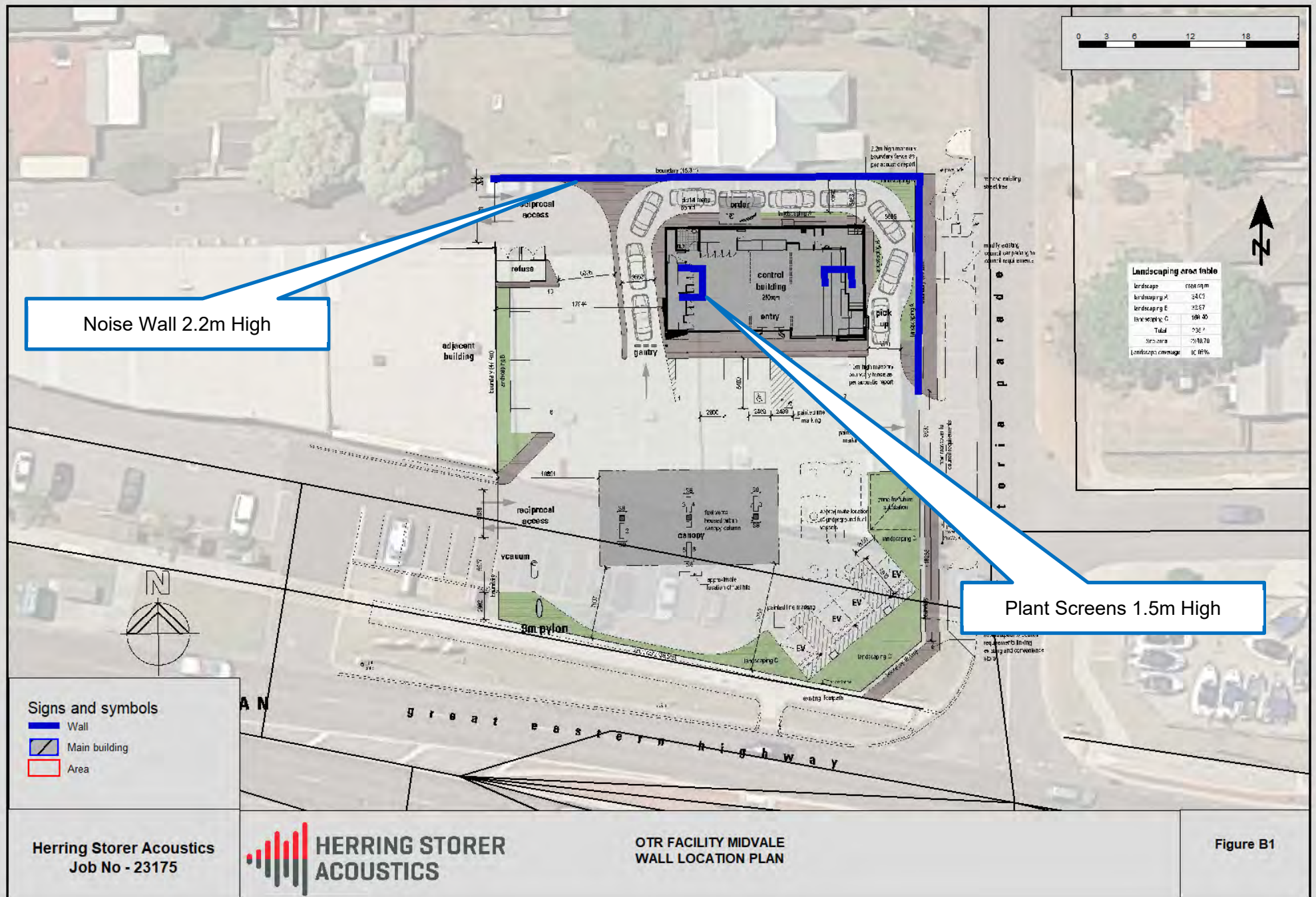
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ADS Architects

93 Gilles Street Adelaide 5000 T:82232244

APPENDIX B

WALL / SCREENING LOCATION PLAN



Herring Storer Acoustics
Job No - 23175

**HERRING STORER
ACOUSTICS**

OTR FACILITY MIDVALE
WALL LOCATION PLAN



PART C – OTHER BUSINESS

1. State Administrative Tribunal Applications and Supreme Court Appeals

The DAP notes the status of the following State Administrative Tribunal Applications and Supreme Court Appeals:

Current SAT Applications				
File No. & SAT DR No.	LG Name	Property Location	Application Description	Date Lodged
DR169/2023 DAP/23/02486	City of Swan	Lot 1 (No.9) Waterhall Road, South Guildford	Child Care Premises	13/11/2023
DR179/2023 DAP/22/02358	Shire of Serpentine Jarrahdale	Lot 806 South Western Highway, Byford	Proposed Showroom and Fast Food/Takeaway Development	4/12/2023
DAP/23/02545 PA23/588	Shire of Serpentine Jarrahdale	Lot 218 (No.575) Abernethy Road, Oakford	Proposed Educational Establishment	19/12/2023

Current Supreme Court Appeals				
File No.	LG Name	Property Location	Application Description	Date Lodged
DAP/23/02496 CIV 2251 of 2023	City of Swan	Lot 2 & 67 (No.163) and Lot 18 (No.159) James Street, Guildford	Proposed redevelopment of Vaudeville Theatre	03/11/2023

2. General Business

3. Meeting Closure

In accordance with Section 7.3 of the DAP Standing Orders 2024 a DAP member must not publicly comment on any action or determination of a DAP.