Government of **Western Australia**
Development Assessment Panels

Metro South-West Joint Development Assessment Panel
Agenda

Meeting Date and Time: 8 July 2019, 10:00am
Meeting Number: MSWJDAP/185
Meeting Venue: City of Rockingham Boardroom
Civic Boulevard
Rockingham

Attendance

DAP Members

Mr Tony Arias (Presiding Member)
Ms Lee O'Donohue (Deputy Presiding Member)
Mr Andrew Macliver (Specialist Member)
Cr Chris Elliott (Local Government Member, City of Rockingham)
Cr Deb Hamblin (Local Government Member, City of Rockingham)

Officers in attendance

Mr Greg Delahunty (City of Rockingham)
Mr David Banovic (City of Rockingham)

Minute Secretary

Ms Nicole D'Alessandro (City of Rockingham)

Applicants and Submitters

Mr Josh Watson (Planning Solutions)
Mr Oliver Basson (Planning Solutions)
Mr Alessandro Stagno (Planning Solutions)

Members of the Public / Media

Nil

1. Declaration of Opening

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

2. Apologies

Nil

3. Members on Leave of Absence

Nil

4. Noting of Minutes

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

5. Declarations of Due Consideration

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

6. Disclosure of Interests

Nil

7. Deputations and Presentations

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

8. Form 1 – Responsible Authority Reports – DAP Applications

8.1

Property Location:	Lot 36 (No.137) Dixon Road, East Rockingham
Development Description:	Proposed service station including fuel retailing and minor vehicle repairs
Applicant:	Planning Solutions
Owner:	Dawnmark Holdings Pty Ltd
Responsible Authority:	City of Rockingham
DAP File No:	DAP/19/01585

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

Nil

10. Appeals to the State Administrative Tribunal

Current Applications		
LG Name	**Property Location**	**Application Description**
City of Fremantle	Lot 1 (193) South Terrace, South Fremantle	Mixed Use Development
City of Rockingham	Lot 301 (2-6) Council Avenue, Rockingham	Proposed health studio, restaurant, showrooms and convenience store

11. General Business / Meeting Closure

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

Government of **Western Australia**
Development Assessment Panels

Form 1 – Responsible Authority Report

(Regulation 12)

Property Location:	Lot 36 (No.137) Dixon Road, East Rockingham
Development Description:	Proposed service station including fuel retailing and minor vehicle repairs
DAP Name:	Metro South-West JDAP
Applicant:	Planning Solutions
Owner:	Dawnmark Holdings Pty Ltd
Value of Development:	$2.5 million
LG Reference:	DD020.2019.00000059.001
Responsible Authority:	City of Rockingham
Authorising Officer:	Bob Jeans, Director Planning & Development Services
DAP File No:	DAP/19/01585
Report Due Date:	26 June 2019
Application Received Date:	12 March 2019
Application Process Days:	90 Days
Attachment(s):	**Attachment 1** Development Application Plans **Attachment 2** Development Application Submission **Attachment 3** Additional Information **Attachment 4** Schedule of Submissions

Officer Recommendation:

That the Metro South-West Joint Development Assessment Panel resolves to:

Approve DAP Application reference DAP/19/01585 and accompanying plans:'

- Perspectives, Drawing No. 1, dated Feb 2019;
- Site Plan and Survey Plan, Drawing No. 3, dated May 2019;
- Elevations, Drawing No. 4, dated May 2019;
- Elevation Perspectives, Drawing No. 5, dated Feb 2019;
- Landscape Plan, Drawing No. 6, dated May 2019; and
- Signage, Drawing No. 7 dated Feb 2019;

in accordance with Clause 68 of the Planning and Development (Local Planning Schemes) Regulations 2015 and the provisions of clause 68(2)(b) of the deemed provisions of the City of Rockingham Town Planning Scheme No. 2, subject to the following conditions as follows:

Conditions

1. This decision constitutes development approval only and is valid for a period of 2 years from the date of approval. If the subject development is not substantially commenced within the 2 year period, the approval shall lapse and be of no further effect.

2. Prior to applying for a Building Permit, revised drawings shall be provided illustrating only one (1) pylon sign for the approved development, to the satisfaction of the City of Rockingham.

3. Prior to applying for a Building Permit, the applicant/owner is to demonstrate that development shall incorporate Water Management and Rainwater Harvesting System measures, in accordance with the City of Rockingham Planning Policy 3.3.8 - *East Rockingham Design Guidelines (Appendix 3)* and be maintained for duration of the development.

4. Stormwater from all roofed and paved areas shall be collected and contained on site. Stormwater must not affect or be allowed to flow onto or into any property or road reserve.

   All stormwater generated by the development must be managed in accordance with Planning Policy 3.4.3 - Urban Water Management to the satisfaction of the City of Rockingham.

   The approved plans must be implemented and all works must be maintained for the duration of the development.

5. The carrying out of motor vehicle servicing must occur in conjunction with the sale of fuel for the duration of the development.

6. Prior to applying for a Building Permit, an acoustic report that demonstrates all mechanical services associated with the development and any other noise source will comply with the Environmental Protection (Noise) Regulations 1997, must be submitted to and approved by the City of Rockingham.

7. Prior to occupation of the development, a final acoustic assessment must be prepared and provided to the City of Rockingham which demonstrates to the City's satisfaction that the development complies with the Environmental Protection (Noise) Regulations 1997.

8. Prior to applying for a Building Permit, a Waste Management Plan must be prepared and include the following detail to the satisfaction of the City of Rockingham:

   i. the location of bin storage areas and bin collection areas;
   ii. the number, volume and type of bins, and the type of waste to be placed in the bins;
   iii. management of the bins and the bin storage areas, including cleaning, rotation and moving bins to and from the bin collection areas; and
   iv. frequency of bin collections.

   All works must be carried out in accordance with the Waste Management Plan and maintained at all times, for the duration of development.

9. Prior to applying for a Building Permit, an external lighting plan is to be submitted and approved by the City of Rockingham, demonstrating compliance with AS 4282 - Control of Obtrusive Effects of Outdoor Lighting.

   External lighting is to be implemented in accordance with the lighting plan for the duration of the development, to the satisfaction of the City of Rockingham.

10. A landscaping plan must be prepared and include the following detail, to the satisfaction of the City, prior to issue of a Building Permit:

    i. The Location, number and type of existing and proposes trees (including shade trees) and shrubs, indicating calculations for the landscaping area;
    ii. Any lawns to be established;
    iii. Those areas to be reticulated or irrigated;
    iv. Garden edge treatment to all sections where garden areas adjoin turf to provide separation and maintenance;
    v. Verge areas; and
    vi. Shade trees for car parking bays at a rate of one tree per four car parking bays.

    The landscaping must be completed prior to the occupation of the development, and must be maintained at all times to the satisfaction of the City of Rockingham.

11. Trees, shrubs taller than 2m and grasstree plants (XANTHORRHOEACEAE family) must be retained (unless specifically identified for removal on the approved plans) and, during the construction period, measures for their retention must be taken in accordance with Australian Standard AS 4970—2009, Protection of trees on development sites. These measures are to be detailed in a vegetation retention management plan to the satisfaction of the City of Rockingham.

    Prior to applying for a Building Permit, arrangements must be made to the satisfaction of the City of Rockingham for the relocation of all grasstree plants that are specifically identified for removal.

12. Prior to occupation of the development, the Asset Protection Zone (APZ), as depicted in the Bushfire Management Plan prepared by Entire Fire Management, dated 13 May 2019, must be provided in accordance with the WAPC's Guidelines for Planning in Bushfire Prone Areas.

    The APZ must be maintained for the duration of the development.

13. Prior to occupation of the development, the Bushfire Management Plan prepared by Entire Fire Management, dated 13 May 2019 shall be updated to address comments made by the City of Rockingham with regard to maintenance responsibilities of Dixon Road verge.

14. Prior to the occupation of the development, any damage to existing City infrastructure within the road reservation including kerb, road pavement, turf, irrigation, bollards and footpaths is to be repaired to the satisfaction of the City of Rockingham at the cost of the applicant.

15. Earthworks over the site associated with the development must be stabilised to prevent sand or dust blowing off the site, and appropriate measures shall be implemented within the time and in the manner directed by the City of Rockingham in the event that sand or dust is blown from the site.

16. The carpark must:

    i. provide a minimum of 35 car parking spaces;

ii. be designed, constructed, sealed, kerbed, drained and marked in accordance with User Class 3 of Australian/New Zealand Standard AS/NZS 2890.1:2004, Parking facilities, Part 1: Off-street car parking unless otherwise specified by this approval, prior to applying for a Building Permit;
iii. provide one car parking space dedicated to people with disabilities, which are designed, constructed, sealed, kerbed, drained and marked in accordance with Australian/New Zealand Standard AS/NZS 2890.6:2009, Parking facilities, Part 6: Off-street parking for people with disabilities and which are linked to the main entrance of the development by a continuous accessible path of travel designed and constructed in accordance with Australian Standard AS 1428.1—2009, Design for access and mobility, Part 1: General Requirements for access—New building work;
iv. be constructed, sealed, kerbed, drained and marked prior to the development being occupied and maintained thereafter;
v. the width of the car parking bay (located adjacent to the compressor) to be at least 2.9m wide (i.e 2.6m plus 0.3m); and
vi. comply with the above requirements for the duration of the development.

17. One (1) long-term and two (2) short-term bicycle parking spaces must be designed in accordance with AS2890.3-1993, *Parking facilities, Part 3: Bicycle parking facilities,* prior to commencement of development.

    The bicycle parking scapes must be constructed prior to occupation of the development.

18. Access of delivery vehicles is only permitted between the hours of 7:00am and 7:00pm from Monday to Saturday (inclusive) and between 9:00am and 7:00pm on Saturday and public holidays, for the duration of the development.

19. Entries and window frontages facing the street must not be covered, closed or screened off (including by means of dark tinting, shutters, curtains, blinds, roller doors or similar), to ensure that a commercial, interactive frontage is available to the development from Dixon Road and Evinrude Bend, for the duration of the development.

20. All plant and roof equipment and other external fixtures are to be screened from view.

21. Materials, sea containers, goods or bins must not be stored within the car park at any time.

22. The proponent must remove all approved signage within the Metropolitan Region Scheme Other Regional Road road reservation without seeking compensation from either the City of Rockingham or the WAPC for any loss, damage or expense should the reserved land be required for road upgrading purposes in the future.

23. The pylon signs within Metropolitan Region Scheme Other Regional Road road reservation shall not interfere with sightlines, distract drivers, or have the potential to hinder the intersection of or become confused with traffic signals or road signs.

Advice Notes

1. A Building Permit must be obtained for the proposed works prior to commencement of site works. The applicant and owner should liaise with the City's Building Services in this regard.

2. The development must comply with the *Environmental Protection (Noise) Regulations 1997;* contact the City's Health Services for information on confirming requirements.

3. The development must comply with the *Food Act 2008*, the *Food Safety Standards* and Chapter 3 of the *Australian New Zealand Food Standards Code (Australia Only)*; the applicant and owner should liaise with the City's Health Services in this regard.

4. All works in the road reserve, including construction of a crossover, planting of street trees, and other streetscape works and works to the road carriageway must be to the specifications of the City of Rockingham; the applicant should liaise with the City of Rockingham's Engineering Services in this regard.

5. With respect to the Landscape Plan condition, the Dixon Road existing portion of turf on the verge is irrigated and maintained by the City of Rockingham. For clarify of maintenance responsibilities, it is recommended to extend the planting to the existing footpath on Dixon Road which must be maintained by the applicant. The applicant is to contact the City's Park Services Irrigation Supervisor, prior to works commencing on site to discuss terminating the existing irrigation to Evinrude Bend portion of turf verge, which must be irrigated and maintained by the applicant.

6. With respect to the car park condition, the City's Traffic Engineer advises that the design for the proposed kerb ramp in front of the fuel retailing building is to be changed to a maximum gradient of 1 in 8 (12.5%), in accordance with AS1428.1. Manual measurements from the site plan suggests a proposed gradient of 1 in 4 (25% based on a proposed ramp length of 0.6m to accommodate a 150mm height difference), therefore not complying with AS1428.1.

7. With respect to the outstanding matters identified in the Acoustics report, the applicant is to liaise with the City of Rockingham Health Services in this regard.

Where an development approval has so lapsed, no development shall be carried out without further approval having first been sought and obtained, unless the applicant has applied and obtained Development Assessment Panel approval to extend the approval term under regulation 17(1)(a) of the *Planning and Development (Development Assessment Panels) Regulations 2011.*

Background

The subject site is located at the corner of Dixon Road, Evinrude Bend and Whittle Road, with Dixon Road to the south, Evinrude Bend to the east and Whittle Road to the north. The subject site has an area of 5,832m^2 and is contained within the East Rockingham Industrial Area.

An access easement exists along the southern portion of the subject site, continuing through adjoining properties to the west and allowing uninterrupted vehicle movement access lots between Evinrude Bend and McCamey Avenue. The access easement is adjacent to Dixon Road road reservation, with both roads affected by Other Regional Road (ORR) reservation under the Metropolitan Region Scheme (MRS).

The subject site is generally flat and vacant.

Previous Development Approvals

In September 2015, the City approved a Showroom, Veterinary Clinic, Warehouse and Service Industry development on the subject site. This Development Approval has since lapsed.

There are no other Development Approvals associated with the subject site.

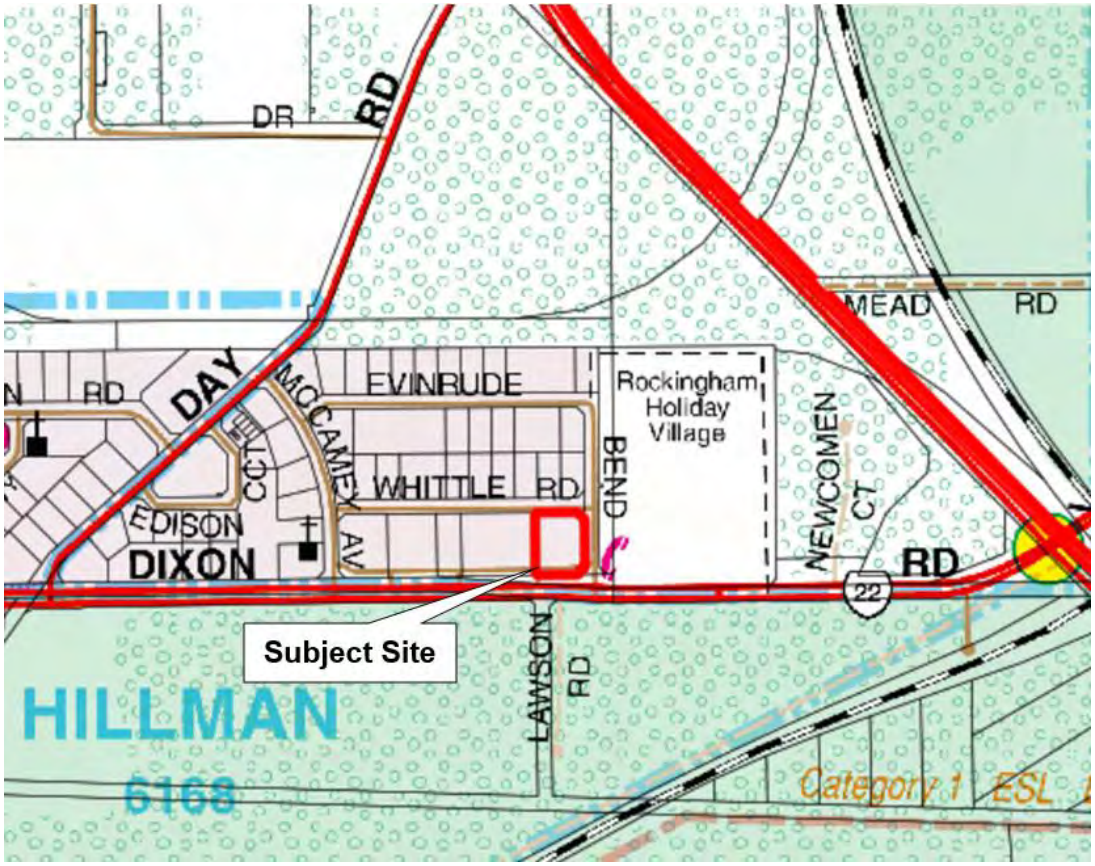

Figure 1 - Location Plan

Figure 2 - Aerial Photograph

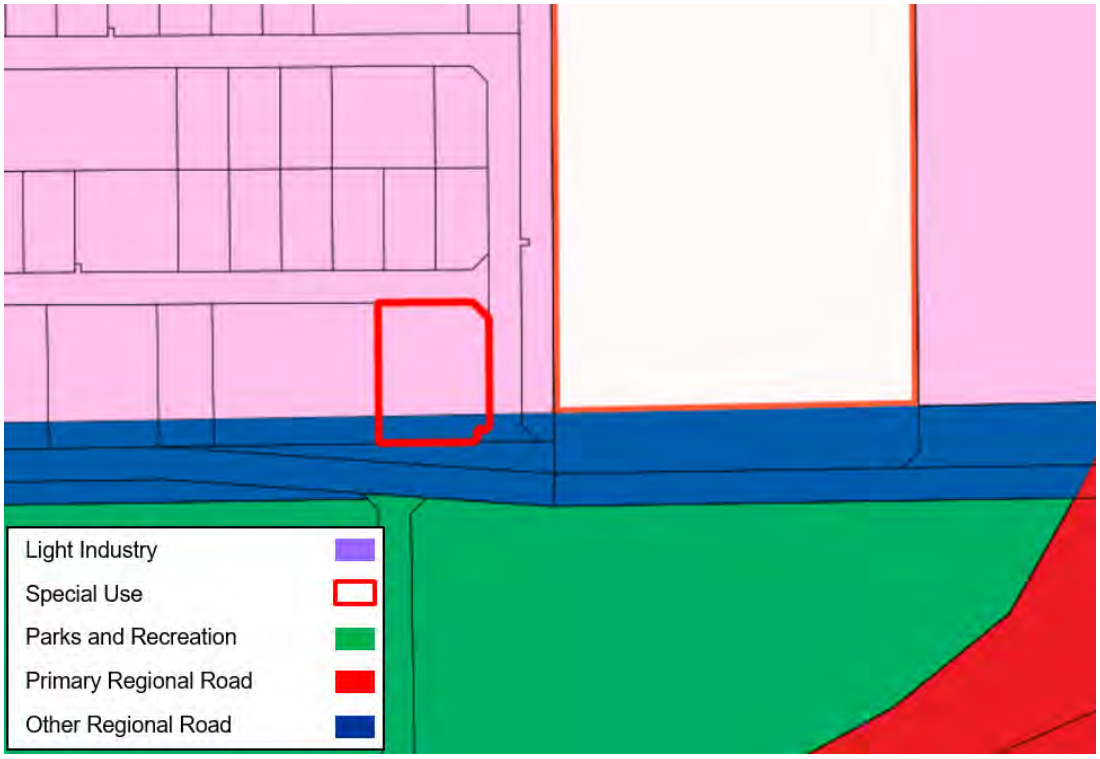

Figure 3 - Town Planning Scheme No.2 zoning map

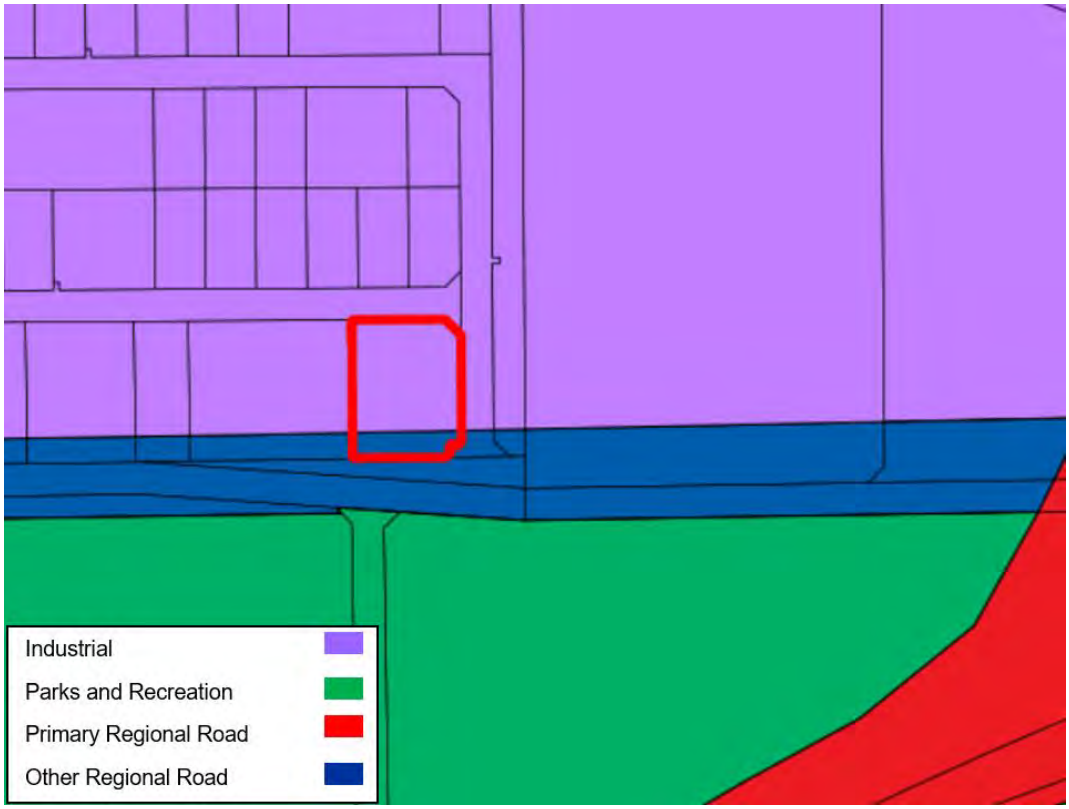

Figure 4 - Metropolitan Region Scheme zoning map

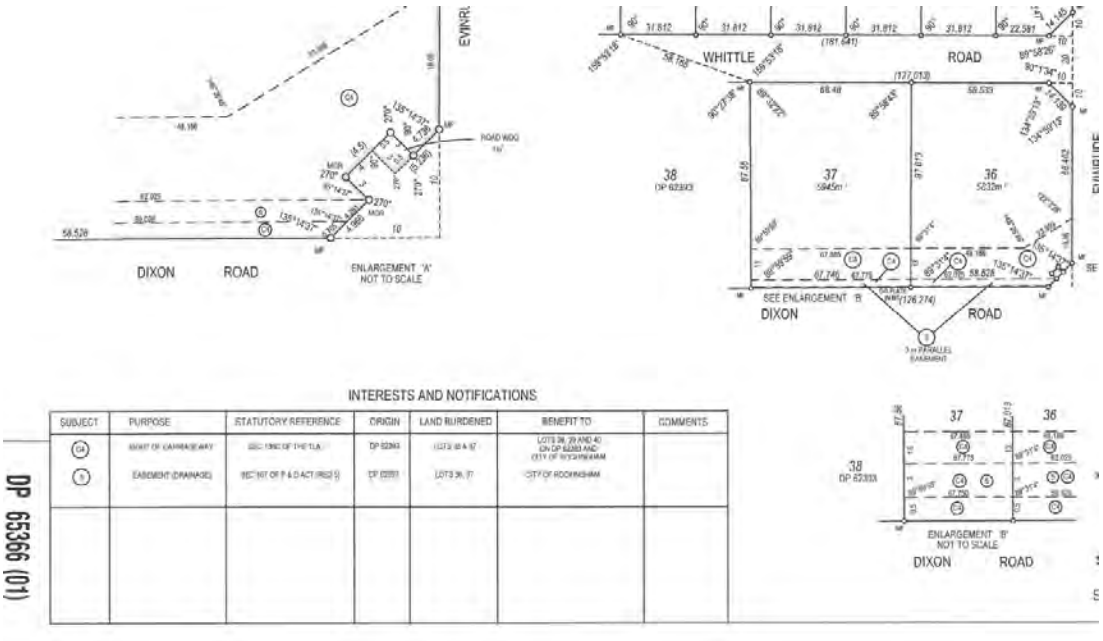

Figure 5 - Section of Deposited Plan depicting road widening requirements

Details: outline of development application

Zoning	MRS:	Industrial
	TPS2:	Light Industry
Use Class:		Service Station - 'D' use
Strategy Policy:		State Planning Policy 3.7 - *Planning in Bushfire Prone Areas;*

	Environmental Protection Authority (EPA) - Separation Distances between Industrial and Sensitive Land Uses No.3; Planning Policy 3.1 - *Control of Advertisements;* Planning Policy 3.8 - *East Rockingham Development Guidelines;* and Planning Policy 3.3.14 - *Bicycle Parking and End-of-Trip Facilities.*
Development Scheme:	City of Rockingham Town Planning Scheme No.2
Lot Size:	5,832m^2
Existing Land Use:	Vacant land

Development

A development assessment panel (DAP) application to construct and operate a Service Station was lodged with the City on 12 March 2019. The proposal involves the development of 'BP' Service Station, retailing fuel and convenience items, and an incidental car service facility. The fuel retailing facility provides for the refuelling of light and heavy vehicles, with two separate fuel canopies.

Specifically, the proposed development comprises:

- A fuel retailing building of 225m^2 gross floor area (GFA) operated by BP;
- A car service building of 400m^2 GFA operated by a separate tenant, who is yet to be confirmed;
- Service yard, bin storage area and rainwater tank contained within a 2.2m high enclosure;
- A delivery and loading area associated with the service yard and bin storage area;
- A light vehicle fuel canopy, comprising a height of 5.9m, which provides cover for four bowsers and a heavy vehicle fuel canopy, comprising a height of 6.4m, which provides cover for one bowser;
- A 17.9m long parapet wall adjacent to the heavy vehicle canopy, comprising a height of 6.8m;
- Two underground fuel storage tanks and an associated filling point to accommodate fuel tankers;
- A total of 35 new car parking spaces and removal of existing 14 car parking spaces adjacent to the Dixon Road road reserve -
    - 13 proposed retail building shopfront car parking spaces;
    - 14 proposed car parking spaces opposite the car service component of the service station;
    - 8 proposed car parking spaces north of the retail building;
- Various signage including two prominent Pylon Signs, including one 9m high Pylon Sign fronting Dixon Road and one 6m high Pylon Sign fronting Evinrude Bend; and
- Associated landscaping treatments adjacent to the southern, eastern, western and northern boundaries of the subject site.

The proposed fuel retailing facility of the service station will operate 24 hours per day, seven days per week and accommodate up to four staff on site at any one time. The proposed vehicle repair facility of the service station will operate 7am to 7pm, six days per week and accommodate approximately five staff on-site at any one time.

The development will generate on average 648 vehicle movements per day with 45 and 61 new trips during weekday AM and PM peak hours.

Legislation and Policy

The development has been assessed against the City's Town Planning Scheme No. 2 (TPS2) and the applicable Local and State Planning Policies. Given the number of Scheme elements and Planning Policies that are applicable to the proposed development, the Legislation and Policy assessment part of this report has been broken down into the following sections:

- City of Rockingham Town Planning Scheme No.2 - Assessment;
- Clause 67 Matters to be considered by Local Government – Planning and Development (Local Planning Scheme) Regulations 2015;
- State Government Policies - Assessment; and
- Local Policies - Assessment.

Legislation

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

Clause 67 of Schedule 2 of the Planning Regulations outlines the matters to which the Local Government is to have due regard when considering an application for development approval. Where relevant, these matters have been discussed throughout this Report.

City of Rockingham Town Planning Scheme No.2 (TPS2)

Clause 3.2 - Zoning Table
The subject site is zoned 'Light Industry' under TPS2. The proposed use of 'Service Station' is not permitted, unless the Local Government has exercised its discretion by granting Development Approval.

TPS2 defines a Service Station as:-

"premises used for:

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

The proposed development offers the retail sale of fuel for private and commercial vehicles as well as the retail sale of incidental convenience goods commonly sold in supermarkets, delicatessens and newsagents. The development also includes service bays that provide for the carrying out of minor mechanical repairs to motor vehicles.

The use is provided across two separate tenancies. The proposed development, although across two separate tenancies satisfies the two elements of the Service Station definition under TPS2.

Clause 4.10.1 - Objectives of the Industrial Zones
The objectives of the Industrial zoned land are:-

"(a) to provide for a range of industrial land uses by establishing guiding principles and policies that are environmentally and socially acceptable;
(b) to encourage and facilitate the establishment of attractive and efficient industrial areas ensuring that acceptable levels of safety and high standard of amenity are provided through the application of appropriate landuse, design and landscaping controls; and
(c) to ensure that industrial areas are developed in a manner which has due regard to potential industries and their infrastructure needs, and that adjacent urban areas are not subjected to pollution and hazards."

The design of the proposed development results in efficient use of the industrial land and required landscaping along Dixon Road, Evinrude Bend and Whittle Road will serve to screen views of the development whilst softening its impact on the public realm. The development presents an attractive facility that ensures a high level of passive surveillance and amenity to the locality.

The subject site is located at the south eastern end of the East Rockingham Industrial Area, which is identified for light industrial land uses. Land uses typically located within this area range from light manufacturing to mechanical workshops, storage and unit developments. The City's Health Services has reviewed the Acoustics report and advised that there are outstanding noise considerations that can be addressed during the detailed design stage. Nevertheless, the City considers that the development is unlikely to have an adverse impact on surrounding land uses. The City has standard noise mitigation conditions which are applied to larger developments of this nature. Thus, should the development be approved, conditions requiring a revised Acoustic report prior to applying for a Building Permit (using general levels for equipment to show required measures that will ensure the development can comply with Environmental Protection (Noise) Regulations 1997 (Noise Regulations), and a final Acoustic report prior to occupancy demonstrating that all mechanical services and other noise sources will comply with the Noise Regulations are recommended.

The proposed development is consistent with the objectives of the zone.

Clause 4.10.2 - Form of Development
The Local Government shall have regard to the following when considering an application for development approval on Industrial zoned land:-

"(a) promotion of a high standard of building development, landscaping and working environment;
(b) protection of the amenity of adjacent residential and open space areas;
(c) management of drainage systems and land uses to promote groundwater and conservation; and
(d) to ensure safe movement of vehicular and pedestrian traffic in the area."

The proposed development is consistent with requirements of PP3.3.8 in regards to the building design, landscaping and the working environment. This is discussed in detail in the Local Policies section of this Report.

The surrounding context of the locality contains a mix of light industrial land uses (to the north and the west), a caravan park (to the east) on the opposite side of Evinrude Bend, vacant land to the north zoned for light industrial purposes and a Parks and Recreation Reserve on the southern side of Dixon Road. The proposed development is set back approximately 62.4m from the nearest caravan and approximately 56.7m from the reserve. To protect the amenity of the adjacent caravan park and the reserve, the proposal implements the following measures:

Odour and Waste

- Bin store area is located to the rear of the development, so as to ensure it is not visible from the caravan park site or reserve;
- Any potential odours to be controlled by extractor fans and vapour recovery system as part of the car service building; and
- No wash down bay or facilities is proposed as they are not required for the car service building.

Noise and Lighting

- Noise emissions from the development will be compliant with the Noise Regulations; and
- External lighting will be designed and regulated by Australian Standard 4282 - Control of Obtrusive Effectives of Outdoor Lighting, so as to ensure there is no glare or light spill that will adversely impact the caravan park site.

Stormwater

The proposed development will increase the amount of impervious surface on site. Although the application does not include any conceptual designs for the management of stormwater within and around the Service Station, it has been demonstrated that stormwater can be appropriately addressed and managed, as the site layout has been designed to ensure development is provided with 'best practice' (i.e. leak monitoring, double-walled construction for pipes and tanks. Should the development be approved, a Stormwater Management Plan will be required to clearly demonstrate how drainage will be managed in accordance with Planning Policy 3.4.3 – *Urban Water Management*. The management of drainage systems is further detailed in the Consultation section of this report.

Traffic

The applicant, through Shawmac Consulting Civic & Traffic Engineers, conducted a Traffic Impact Assessment (TIA) to assess the impacts associated with parking, access and traffic generation from the proposed development. The TIA concluded that there are no issues identified with regard to traffic operations of the proposed development.

Clause 4.10.3 - Parking

TPS2 requires the provision of on-site parking for vehicles for development on industrial zoned land in accordance with the provisions of Clause 4.15 and Table No.2. The table below provides an assessment of the Service Station proposal against the relevant car parking requirements of TPS2.

Use	Rate	Required	Provided
Service Station	1 bay for every service bay, plus 1 bay per employee; and 6 bays per 100m^2 NLA	6 service bays plus 9 employee bays 12 bays (200m^2 NLA, non	35 bays

		inclusive of incidental office/showroom NLA)	
Total		27 bays	35 bays

The proposed development provides a total of 35 car parking spaces which satisfies the car parking requirements of Clause 4.15 of TPS2.

Clause 4.10.4 - General Development Provisions

Clause 4.10.4 provides for development provisions on all Industrial zoned land within the City, unless otherwise specified in Planning Policy 3.3.8 - *East Rockingham Design Guidelines*. The provisions are outlined below and considered in relation to the proposed development.

General Development Provisions	Provided	Compliance
Facade		
The facades of all buildings visible from the primary road or open space area shall be of masonry construction or any other material approved by the Local Government in respect of the ground floor level, provided that if concrete panels are used, such panels must have an exposed aggregate or textured finished. The second floor level or its equivalent may be constructed of any other material in accordance with the Building Code of Australia and to the satisfaction of Local Government.	The facades of the fuel retailing and car service building visible from Dixon Road will be finished in concrete panel and colorbond with textured paint finish to height of 4.2m and 9m.	Yes
Fencing		
No fence visible from a road or open space reserve shall be constructed of materials/colours which in the opinion of Local Government are unsightly or detract from the amenity of the locality, or be used for signage where the approval of the Local Government has not been granted. Any industrial (eg. chain wire) fencing forward of the street building setback line shall be landscaped to the satisfaction of the Local Government.	There is no fencing proposed as part of this development application.	N/A
Setback area		
No use of the area between the street alignment and the prescribed building setback line shall be permitted other than for landscaping, or for pedestrian and vehicular circulation and parking, except that not more than 20% of the setback area may be used for	The front setback area is proposed to be used for landscaping and vehicular access and circulation only.	Yes

trade display purposes, to be approved at the discretion of the Local Government.		

Clause 4.10.8 - Light Industry zone
Clause 4.10.8 provides for setback and landscaping requirements for developments within the Light Industry zone, unless otherwise specified in the East Rockingham Design Guidelines. An assessment against the setback and landscaping requirements has been undertaken in accordance with the Element Precinct of the East Rockingham Design Guidelines, where it is concluded that the development application satisfies the requirements of the Element Precinct (refer below to Local Policies section of this report).

Clause 5.3 - Control of Advertisements
Clause 5.3.1 requires Development approval to be obtained for the erection of advertisements. In considering an application for an advertisement, the Council is required to consider the objectives of TPS2.

Further detail on signage is discussed in the Policy section under *Planning Policy 3.3.1 - Control of Advertisements* (PP3.3.1) where it is concluded that the two proposed Pylon Signs are not appropriate for their location.

State Government Policies
State Planning Policy 3.7 - *Planning in Bushfire Prone Areas* (SPP3.7)

SPP3.7 seeks to guide the implementation of effective risk-based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure.

The majority of the subject site has been designated bushfire prone under the *Fire and Emergency Services Act 1998 (as amended)* and therefore the requirements of SPP3.7 are applicable.

The objectives of SPP3.7 are to:

- "*Avoid any increase in the threat of bushfire to people, property and infrastructure. The preservation of life and the management of bushfire impact are paramount.*
- *Reduce vulnerability to bushfire through the identification and consideration of bushfire risks in decision-making at all stages of the planning and development process.*
- *Ensure that higher order strategic planning documents, strategic planning proposals, subdivision and development applications take into account bushfire protection requirements and include specified bushfire protection measures.*
- *Achieve an appropriate balance between bushfire risk management measures and, biodiversity conservation values, environmental protection and biodiversity management and landscape amenity, with consideration of the potential impacts of climate change."*

As the land is designated as a bushfire prone area and is classified as a 'high risk' land use, the applicant submitted a Bushfire Management Plan (BMP), Risk Management Plan (RMP) and Bushfire Emergency Plan (BEP) in support of the application, as per the requirements of SPP3.7. The proposal was referred to Department of Fire and Emergency Services (DFES), which initially did not support

the proposal as the fuel canopies had not been considered as part of the Bushfire Attack Level (BAL) assessment and due to 'lack' of evidence to support verge vegetation along Dixon Road and Evinrude Bend being classified as 'excluded' from the BAL assessment (refer to the Consultation with other Agencies or Consultants section of this report). The applicant submitted a revised BMP with further clarification which addresses DFES comments. Accordingly, it is concluded that the proposal is compliant with SPP3.7.

Guidelines for Planning in Bushfire Prone Areas (GfPBPA)
The Department of Planning, Lands and Heritage's GfPBPA provide supporting information to assist in the interpretation of the objectives and policy measures outlined in SPP3.7. The following is an assessment against the relevant requirements of the GfPBPA.

Element 1 - Location
The development complies with the relevant Acceptable Solution for this Element, as the applicant has demonstrated through a BAL assessment and implementation of an Asset Protection Zone (APZ) that the maximum BAL level that buildings will be required to be constructed to will be BAL-19 of *Australian Standard 3959 - Construction of Buildings in Bushfire Prone Areas* (AS3959). A condition of development approval is recommended in this regard.

Element 2 - Siting and Development
The development complies with the relevant Acceptable Solution for this Element, as the buildings on the lot will be provided with an APZ (of the required dimension), which is established for the most part within the lot boundaries (excluding APZ extending into Dixon Road and Evinrude Bend verges). Conditions of Development Approval are recommended to ensure the APZ is provided prior to the occupation of the development, and buildings are constructed to the requirements of AS3959.

Element 3 - Vehicular Access
The development complies with the relevant Acceptable Solution for this Element, as development provides several egress options from the site, to the south onto Dixon Road and west and north which lead to Day Road.

Element 4 - Water
The development complies with the relevant Acceptable Solution for this Element, as reticulated water supply is currently available to the site. A condition of approval is recommended in this respect to ensure the connection to reticulated water is maintained at all times.

There are four fire hydrants within close proximity to the development site, with the closes being setback approx. 6m from the south-eastern lot truncation.

Environmental Protection Authority (EPA) - Separation Distances between Industrial and Sensitive Land Uses No.3 (Guidance Statement)
The EPA Guidance Statement provides advice to proponents, responsible authorities, stakeholders and the public, on the minimum requirements for environmental management which the EPA would expect to be met when the Authority considers a development proposal.

The EPA recommends a 200m buffer distance to all 24 hour Service Station operations because of Gaseous, Noise, Odour and Risk to sensitive land uses. The buffer recommended by the Guidance Statement is not an absolute separation

distance, but instead are default distances providing general guidance in the absence of site-specific technical studies.

The nearest noise sensitive premises (a caravan) on the caravan park site is approximately 62.4m from the proposed development. The East Rockingham Development Guidelines recognise the caravan park site's proximity to the broader industrial precinct. A detailed assessment against the separation of the proposed development to sensitive land uses is considered in the Legislation section of this report, where the applicant has demonstrated that the proposed development is appropriately designed and sited to mitigate any potential amenity and environmental impacts on nearby sensitive land uses.

It is also noted that as part of the public consultation period, the City notified the operator of the caravan park site. No submissions were received from the caravan park provider or occupants of the site.

Local Policies

Planning Policy 3.1 - *Control of Advertisements* (PP3.1)

The applicant submitted a signage strategy as part of the development application which included details, type number and size of signage. The signage strategy consists of various wall signs, directional signage, a roof sign and two Pylon Signs.

The following provides an assessment of the pylon signage seeking to vary the requirements of PP3.3.1:

A Pylon Sign must not:	Office Comment	Compliance - 9m high Pylon Sign	Compliance - 6m high Pylon Sign
be located within 1.8m of a boundary	The pylon sign associated with the fuel retailing building is setback 0.9m from the Dixon Road road reserve whilst the pylon sign associated with the car service building is setback 0.8m from the Evinrude Bend road reserve.	No	No
be situated within 6.0m of any other sign of the same lot	There are no existing or proposed signs within 6m of the two proposed pylon signs.	Yes	Yes
project over a street, walkway or any other public area by more than 1.0m	The pylon signs do not project over a street, walkway or any other public area.	Yes	Yes
have a height exceeding 6.0m, unless it can be demonstrated to the Council that a greater height is	A 9m height above natural ground level is proposed for the fuel retailing building, whilst a 6m height above natural ground level is proposed for the car service building.	No	Yes

warranted and it complies with the objectives of this Planning Policy. In any event, a Pylon Sign shall not exceed 9.0m in height			
have any part of the sign less than 2.7m from the ground level, unless the sign is designed such that the underside of the face area is located at ground level	The pylon signs comprise of panels which are incorporated from ground level to the top of the sign.	Yes	Yes
have a face area exceeding more than 3.5m width or height	The face area of both proposed pylon signs exceed 3.5m in height.	No	No
have a face area of more than $4m^2$ on each side (single tenancy) or $13m^2$ on each side (multiple tenancy)	The pylon sings have a face areas of approximately $19.4m^2$ and $13m^2$, both exceeding the permitted $4m^2$, as signs are entirely dedicated to the individual buildings.	No	No
Only one (1) pylon sign shall be permitted on a lot with a single tenancy. For lots with two or more tenancies, only one (1) pylon sign will be generally permitted unless the site is large and has more than one street frontage, in which case one pylon sign per street frontage may be permitted.	The subject site has frontage to three streets. The appropriateness of two proposed pylon signs is further detailed below.	No	No

The following objectives of PP3.3.1 are relevant for the consideration of pylon signs:-

a) *"Ensure that advertisements are appropriate for their location;*

b) *Minimise the proliferation of advertisements;"*

An audit of existing pylon signs along Dixon Road between Evinrude Bend and McCamey Avenue demonstrates the following:

Lot	Signage
Lot 37 Dixon Road	• There is no existing pylon signage.
Lot 38 Dixon Road	• One, 6m high pylon sign which advertises a showroom development; and • There are no other business on this lot.
Lot 39 Dixon Road	• One, 9m high pylon sign which advertises a construction company; and • There are no other business on this lot.
Lot 40 Dixon Road	• One, 9m high pylon sign which advertises all four (4) businesses on this lot (7 eleven convenience store, buccaneer swimming pools, muzz buzz and car wash); and • The lot also has direct frontages to three streets and is similar in size to Lot 36 Dixon Road.

The setback of the proposed 'BP' pylon sign from Dixon Road road reserve is consistent with setbacks of adjoining pylon signs within the audit area, thus the reduced setback of 0.9m can be supported by the City. With regard to the 'car service' pylon sign adjacent to Evinrude Bend, it is noted that there are no obstructions which warrant a reduced setback, thus the reduced setback of 1m is not supported by the City.

It is noted that during the audit of existing pylon signs, the pylon sign on Lot 40 advertises a 'retail fuelling' development as well as three other developments. It is also noted that Lot 40 is akin to Lot 36 in terms of its size and context. There is a clear precedent demonstrating that the proposed pylon signs can be integrated into one sign.

The applicant has indicated that *"the BP tenancy has its own individual sign which is consistent with their pylon sings development across Australia".* The City assesses development applications on a case by case basis, and the proposition by the applicant is not a relevant planning consideration.

In light of the above, two pylon signs are not supported on this site as they do not satisfy the aforementioned objectives a) and b) of PP3.3.1. Should the development be approved, a condition requiring only one pylon sign for the proposed development is recommended.

Planning Policy 3.8 - *East Rockingham Development Guidelines* (PP3.3.8)
The purpose of PP3.3.8 is to guide the orderly development of serviced industrial land within the East Rockingham Industrial Park (Improvement Plan No.14 Area).

The objectives of PP3.3.8 are:-
"(a) To achieve an attractive and unified development which acknowledges the goal of conserving and enhancing the natural environment by emphasising the retention of natural vegetation and the introduction of complementary quality landscaping and well designed buildings;

(b) To achieve a degree of consistency and compatibility in the built form and landscaping, whilst allowing for individuality and a well presented corporate or market image; and

(c) To avoid unsightly and poorly planned development and enhance and protect the investment of all owners within the East Rockingham Industrial Park and the investment of others in the region."

An assessment against the relevant requirements of the Development Guidelines - Element Precinct is provided in the below table.

Element Precinct Provisions	Provided	Compliance
Development Approval		
Plans must be approved by the Estate Architect prior to being lodged with the City of Rockingham.	Refer to Attachment 2 - Development Application Submission of Responsible Authority Report (RAR) for a copy of the LandCorp Pre-Approval, as approved by the Estate Architect on behalf of LandCorp.	Yes
Site Coverage		
Site coverage and plot ratio is to be in accordance with Local Authority Scheme Text requirements and determined by setbacks, landscaping, parking and the Building Code of Australia requirements.	The proposed development covers approximately 1418m^2 (24.3%) of the subject site and incorporates appropriate coverage for its context. There are no plot ratio requirements for land zoned Light Industry under TPS2.	N/A
Building Setbacks and Location *Street Setback* A minimum front setback of fifteen (15) metres shall apply to the primary street and a minimum setback of three (3) metres shall apply to the secondary street, or streets, unless otherwise determined by Council. *Side and Rear Setbacks* Zero lot lines are only permitted where indicated on the Development Guide Plan (DGP), otherwise side setbacks are to be three (3) metres, unless otherwise determined by Council. There is no requirement for rear lot setbacks except for Lots 36 - 40 where a three metre rear	A minimum front setback (Dixon Road) of 21.7m has been provided to the car refuelling canopy, with the car service building achieving a minimum 17.4m secondary street setback (Evinrude Bend) and 13.4m setback to the Whittle Road street boundary. The development provides for a 6.8m high parapet wall on the western (side) boundary, in lieu of minimum 3m and a heavy vehicle fuel canopy with a height of 6.4m, setback 0.4m from the western (side) boundary, in lieu of minimum 3m. The proposed structures which seek setback variations	Yes No, however, the variation is considered to be acceptable.

setback is required.	adjoin a self-storage warehouse development, which provides for a 3m high parapet wall with a length of approximately 56m along the common boundary. Although the proposed structures are higher than the adjacent parapet wall, the heavy vehicle fuel canopy will not be seen from the adjoining development, as the height and length of the proposed parapet wall screens the fuel canopy. Furthermore, the heavy vehicle fuel canopy is open on three sides, thus reducing bulk impact. Finally, both proposed structures are substantially setback from adjacent streets and will be finished to an appropriate standard. For the above reasons, it is considered that the proposed parapet wall and heavy vehicle fuel canopy setbacks will have minimal impact on the adjoining development and adjacent streets.	
Car parking		
The number of car parking bays will be in accordance with the Local Authority Scheme Text. Car parking can be placed between the landscape setback and the building line. Similar, bay sizes, driveway widths and turning circles are to suit these and other functional requirements. Street parking is discouraged within the area: the service roads are likely to be used by large trucks and other heavy vehicles and street parking would impede manoeuvrability and safety. Roadways and parking within a development must be planned to achieve the following: • Separation of service/haulage vehicles from visitor and staff parking areas;	The proposed development satisfies Clause 4.15 and Table No.2 of TPS2. All car parking bays will be constructed in accordance with the Australian Standards. There is a clear distinction between service/haulage vehicle crossovers and visitor and staff parking areas which	Yes Yes Yes

	minimises any conflict between pedestrians and patrons of the development.	
• Siting of parking area adjacent to areas of buildings that are commonly accessed;	The vehicle circulation pattern minimises any conflict.	Yes
• Provide suitable species of shade trees at a ratio of 1 per 4 car bays, evenly throughout parking areas;	This provision is only considered appropriate for 19 of the 35 proposed car parking spaces (excludes 13 proposed retail building shopfront car parking spaces and 3 proposed car parking spaces at the rear of the car service building), thus requiring 5 trees, at a ratio of 1 per 4 car parking bays. The application provides for 5 new trees, at a ratio of 1 per 4 car parking spaces.	Yes
• Provide clear paths for pedestrian movement separate from areas of frequent vehicular movement; and Consider the visitor parking areas as an extension of the corporate/market image in terms of its presentation.	Pedestrian access and movements through the site are focused to the southern end of the development site, limiting interaction with the truck refuelling canopy and fuel bowsers.	Yes
External Service & Storage Area		
Service, storage and bin areas must be screened behind the front building line and from the street. Landscaping, fencing and gates can be utilised to screen these areas.	External service and storage area are screened from the primary street frontage by the retail and car service buildings. From the rear, these areas are screened by a 2.2m high solid enclosure.	Yes
Fencing		
Security fencing is permitted along the side and rear boundaries. The minimum standard of fencing is black PVC coated galvanised link mesh with black support members. Specialised fencing is required along the rear boundaries of Lots 36 to 40 and is to be 1.8m high black powder coated palisade fencing with 'W'	No fencing is proposed as part of this development application.	N/A

profile single pointed pales. This fencing must include 25mpa concrete strip footing, 200mm x 200mm flush with ground surface.		
Landscaping		
• A landscape plan is required to be submitted to the Estate Architect in accordance with Appendix A;	The landscape plan has been approved by the estate architect.	Yes
• A 5m landscaping strip must be provided to any primary frontage;	A minimum 3.9m wide landscaping strip has been provided to the primary frontage.	No; however the 0.7m variation is offset by the wider portion of the landscaping strip at the corner of Dixon Road and Evinrude Bend.
• A 3m landscaping strip must be provided to any secondary frontage.	A 3m wide landscaping strip has been provided to Evinrude Bend and a minimum 4.5m wide landscaping strip has been provided to Whittle Road.	Yes
• Landscaping installed by the owners/occupiers along the rear boundaries of Lots 36 - 40 must use Coral Gums as screen trees;	Coral Gums have been provided as screen trees.	Yes
• Plant species shall be selected from those listed in Appendix B;	The proposed plant species are listed in Appendix B of the Development Guidelines of the PP3.3.8.	Yes
• One (1) shade tree shall be provided per 4 car parking bays. Trees shall be selected from the Appendix B;	The application provides for 5 new trees, at a ratio of 1 per 4 car parking spaces. The trees selected are as per Appendix B of the Design Guidelines for PP3.3.8.	Yes
• Landscaping installed by owners/occupiers must continue the landscaping theme and character of the area; and	The planting scheme (native species) proposes a singular plant species as a groundcover for the entire site.	Yes

• To retain the benefits of good quality landscaping, it is essential that maintenance is carried out regularly by a qualified landscape professional to both verge and lot areas.	The selected planting scheme is considered effective, however it will be more noticeable when plants die and require replacement.	Yes, If not regularly mentioned by the owner/applicant, this could become a compliance matter.
Energy Management		
External lighting must ensure • No glare or light spill shall adversely impact adjoining properties; and • No glare or light spill shall impact passing motorists.	The design of lighting will be subject to and regulated by Australian Standard 4282 - Control of Obtrusive Effectives of Outdoor Lighting.	Yes
Water Management		
Building fit out shall include: • AAA rated shower heads; • AAA rated tap ware and flow regulators; and • AAA duel flush toilets. Landscape areas shall include: • Low flow trickle dripper systems, or coarse sprays are required within the lot; and • Programmable controller/timer system.	The specific specifications can be provided at the detailed design stage prior to issue of the building permit. The landscaping provided comprises native species of flora that do not require significant amounts of water. A water wise irrigation system can be implemented as part of the detailed design stage.	Yes Yes
Rainwater Harvesting Systems		
All lots within the development are to incorporate a rainwater harvesting system designed to capture roof run-off from a minimum of 200m^2 (or 50% of the available roof catchment area for roof areas less than 400m^2) during regular rainfall events. The collected rainwater is to be plumbed to supply a seasonally-independent water use (e.g. toilet flushing)	A rainwater tank is provided at the rear of the retail building, between the service yard and the bin store. Specifics of the harvesting can be provided at the detailed design stage.	Yes
Built Form Character and Detail		
• The front elevation must be designed to address the street and to provide a corporate image and an inviting entrance;	The proposed retail building entrance is oriented south, towards Dixon Road.	Yes

• Architectural form, and character must avoid large unrelieved expanses of wall or roof; • Where more than one building is planned for the site, their design must result in the creation of a group of integrated buildings presenting a harmonious image;	To provide for appropriate architectural form, the majority of building facade fronting Dixon Road incorporates transparent glazing, green panelling on the outer edges and the use of louvers, whilst the building façade fronting Evinrude Bend incorporates a mix of transparent glazing, materials and roller doors, which are capable of being opened. The portion of car service building fronting Whittle Road is entirely solid, however is only 15.3m long and therefore not considered as a large unrelieved expanse of wall. Furthermore, the car service building, oriented east and north alongside the retail building, presents as a unified development.	Yes
• The main entrance is to be on the front elevation or close to the front of the building, clearly visible from the street; and	The development provides for entry points which are clearly visible from streets.	Yes
• Entrance points to buildings are to be designed as focus points and must provide protection for pedestrians by means of a substantial integrated element such as a veranda, canopy or colonnade.	Pedestrian access points to the retail and car service building are legible and distinct. Awnings and pedestrian footpaths along the frontages are connected and assist in the guidance of pedestrians to the buildings.	Yes
Zoning		
For information regarding the compatibility of a purchasers proposed use, reference should be made to the Zoning table, Table No.1 in the City of Rockingham Town Planning Scheme No.2.	Service Station is a discretionary 'D' use within the Light Industry zone under TPS2.	Yes
Materials, Finishes and Colour		
Broad facades of uniform material are to be broken down into sections to create variety and interest.	The materials, finishes and colours are generally considered as being appropriate for contemporary retail/commercial buildings. The development presents as an	Yes

	attractive facility through the selected variety of materials, finishes and colours.	
Plant and Equipment		
All plant and equipment should be screened or remote from public areas, particularly from the street.	All proposed plant and equipment will be screened from public view, located to the rear of the development.	Yes
Outbuildings and Other Structures		
Where there are numerous separate buildings on the site, the design of each should be considered with the whole of sites planning so that they may present as an integrated development; where possible, future expansion and staging should be considered so as to integrate these buildings. Also, use of colours, form and materials should be consistent amongst all these buildings.	The two proposed buildings are presented as one, to present as an integrated development fronting Dixon Road and Evinrude Bend. The materials and colours are consistent with BP's corporate branding and are complementary to existing surrounding buildings.	Yes
Signage and Graphics		
Signs attached to the buildings shall be designed to be an integrated part of the building, e.g. recessed into the façade, facia or awning. • One free standing or composite sign only per lot. • Where multiple occupancy is proposed, the composite sign may have one panel per occupancy.	All proposed wall signage is integrated into the buildings. Two free standing Pylon Sings are proposed. One fronting Dixon Road and other fronting Evinrude Bend.	Yes No

The pylon signage does not satisfy the relevant objectives of PP3.3.1 and therefore the provision of two pylon signs on this site is not supported by the City. Otherwise, the design of the proposed development is suitable notwithstanding the variations to the side setback and landscaping. The proposed development is considered to be consistent with the objectives of PP3.3.8.

Planning Policy 3.3.14 - *Bicycle Parking and End-of-Trip Facilities (*PP3.3.14)

PP3.3.14 facilitates the appropriate provision of secure, well designed and effective on site bicycle parking and end-of-trip facilities to encourage the use of bicycles as a means of transport and access to and within the City.

Bicycle Parking Requirement

Land Use	Required			
	Long Term		Short Term	
	Rate	Number	Rate	Number

Commercial (Service Station - Convenience Store component)	1:250m²	1	1:150m²	2
Total	1		2	

No bicycle spaces have been provided. A condition of development approval requiring the provision of three bicycle parking space is recommended.

Consultation

Public Consultation

The application was advertised for public comment over a period of 21 days, commencing on 2 April 2019 and concluding on 23 April 2019. The nature of the 24hour fuel retailing warranted comment from nearby landowners and occupiers prior to Council providing its recommendation to the Metro South West Joint Development Assessment Panel (MSWJDAP).

Advertising was carried out in the following manner:

- Landowners and occupiers directly adjacent and opposite the subject site were notified in writing of the proposed development; and
- Copies of technical documents and plans of the proposal were made available for public inspection at the City's Administration Offices and placed on the City's website.

Figure 5 - Consultation Plan

At the close of the public consultation period a total of two submissions were received, which included one objection and one supporter, so as long as the development did not propose a car wash facility.

The objection received is from a landowner in Smythe Street, Rockingham, which has been summarised in the table below, including the applicant's and officer's response to the issue. The applicants response to concerns raised have also been summarised.

Land-use and Location
Submission: **There are a sufficient number of petrol stations already in the Rockingham area and BP are well represented. I should think that the residents at the Rockingham Holiday Village do not need and want a petrol station right next door to them! There are a few more petrol stations just over the train line in Kwinana, of which BP is also represented.**
Applicant's Response: A service station is a discretionary land use within the Light Industry zone and is capable of approval on the subject site. The proposed use and development is consistent with the Light Industry zoning and has been supported by the necessary technical reporting, to ensure it does not impact on the surrounding properties. The amount of service stations within the Rockingham area is not a relevant planning consideration.
City's Comment: The City must provide recommendations to the MSWJDAP on planning merits of the proposal. The number of existing service stations in the area is not a relevant planning consideration. The application has been considered in accordance with TPS2 and applicable planning policies. Further, the application will ultimately be determined by the MSWJDAP.

Consultation with other Agencies or Consultants

The following government departments and service agencies were consulted:

- Department of Water and Environmental Regulations (DWER);
- Department of Planning, Lands and Heritage (DPLH);
- Department of Fire and Emergency Services (DFES); and
- Water Corporation.

The comments received are as follows:

1. Department of Planning, Lands and Heritage (DPLH) - summarised
The Department has no objection to the use of the reserved land for the proposed signage, car parking and landscaping on a temporary basis only, and on condition that: • The advertisements do not interfere with sightlines, distract drivers, or have the potential to hinder the intersection of or become confused with traffic

signals or road signs.

- The proponent agrees to remove the signage without seeking compensation from either the Council or the WAPC for any loss, damage or expense should the reserved land be required for road upgrading purposes in the future.

City's Comment:

The subject land is affected by an Other Regional Road (ORR) reservation for Dixon Road under the Metropolitan Region Scheme (MRS). The road reservation extends approximately 16.5m along the southern portion of the subject site and across the entire frontage, continuing through adjoining properties to the west, between Evinrude Bend and McCamey Avenue.

The extent of this reservation has been taken into consideration as part of the design of the proposed development, with development being located outside of the reservation with the exception of the two proposed pylon signs and landscaping. In this instance, the pylon signs and landscaping can be approved, and be erected on a temporarily basis, until such time as the reserved land is required for road upgrading purposes in the future.

Consequently, DPLH recommended conditions are supported by the City.

2. Department of Water and Environmental Regulations (DWER) - summarised

Contamination and Stormwater Management
DWER has identified groundwater contamination risk due to fuel leakage from underground fuel storage tanks, from minor and major fuel/chemical spills and from hydrocarbon contaminated stormwater runoff from impervious surfaces.

With regard to stormwater management, DWER recommends the stormwater drainage system be designed, constructed and managed in accordance with the Stormwater Manual for Western Australia (DWER, 2004).

The planning report has not included any conceptual designs for the management of stormwater within and around the service station and associated infrastructure. The stormwater management plan should demonstrate how and where the small, minor and major rainfall events will be managed and include the following:

- Stormwater runoff be fully contained for small and minor storm events (1 and 0.2 Exceedance per Year runoff). Required storage for each rainfall event, basin sizing and design should be detailed.
- The first 15mm of stormwater runoff (1 Exceedance per year runoff) to undergo water quality treatment via bio-retention.
- Measures to prevent contaminated stormwater runoff mixing with other stormwater runoff from impervious areas and how the SPEL Puraceptor is integrated into the overall stormwater drainage system.
- Permitted outflow of stormwater runoff from the site.

Applicant's Response:

Contamination and Stormwater Management
The design particulars of the underground storage tanks can be provided at the detailed design stage. Modern day fuel storage tanks are state of the art and are double walled and electronically monitored. The tanks will be appropriately located, constructed and maintained as part of best practice service station design and operation.

New underground storage tanks are designed to ensure they do not leak. The double wall of the tank and monitoring ensures that if a breach is identified, it can be rectified before the second wall of the tank is breached. In addition, the tanks are a combination of steel and fibreglass so the erosion of the tank is less than traditional underground tanks.

Stormwater will all be completed at detailed design stage and can be detailed in the stormwater management plan condition of development approval. It is standard to incorporate a SPEL puraceptor onsite to capture hydrocarbons from the forecourt and tank refuelling areas. The puraceptor captures the hydrocarbons and stores them in a chamber to be pumped out. The water can then be transferred into the stormwater system.

City's Comment:

Contamination and Stormwater Management

As vehicles will be moving through the fuel area and into the surrounding car parking next to the convenience store, it is highly likely that hydrocarbons will be mobilised outside of the bunded area. The piped drainage network outside of this area must therefore be connect to the SPEL unit. The City agrees that all underground tanks and their pipe work (excluding any gas venting and tank fill lines that are normally dry) should have double-walled construction, with an interstitial leak-monitoring space.

Applicant's comments in respect to contamination and stormwater management are supported by the City, as it has been demonstrated that the matters raised in DWER's submission can be appropriately addressed and managed. As previously detailed in the Legislation section of this report, should the development be approved, a condition requiring a stormwater management plan is recommended.

Advice Notes

DWER in its submission also provides for Advice Notes relating to Stormwater Management and Emergency Response. A copy of the advice notes forms part of Attachment 4 - Schedule of Submissions.

The applicant has been provided with a copy of the DWER submission.

3. Department of Fire and Emergency Services (DFES) - summarised

Vegetation Classification
The road verges on Evinrude and Dixon Road within Plot 5 have been excluded. Evidence to support these exclusions as managed to low threat in accordance with AS3959 is required.

Development Footprint
The BAL Assessment within the BMP has not considered the location of the fuel canopy. Figure 1 shows a truck and car fuel canopy which appears to adjoin the fuel station convenience store. The BAL ratings should be calculated from the edge of the fuel canopy.

Location, Siting and Design
The BAL ratings cannot be validated, as the BAL assessment has excluded the fuel canopy.

Recommendation
The development design has not demonstrated compliance to Element 1: Location and Element 2: Siting and Design.

Applicant's Response:

Vegetation Classification
The road verges are the responsibility of the adjacent landowner to maintain in accordance with the local Fire Control Notice and City of Rockingham Activities in Thoroughfares and Public Places and Trading Local Law 2001.

Development Footprint
The revised BAL rating has been calculated from the edge of the fuel canopy and includes the fuel canopy as an attached structure.

Location, Siting and Design
The BAL rating of 19 is valid and is considered acceptable for the land use.

Recommendation
BAL 19 has been established for the subject site, corresponding to a limited scale of bushfire risk emanating from the non-vegetated area surrounding the development site, the low threat vegetation to the east of the subject site and the Bush Forever reserve south of Dixon Road.

City's Comment:

Vegetation Classification
It is generally the owner/occupier's responsibility to maintain the verge directly boarding their property, however, the City can confirm that the existing portion of verge on the Dixon Road is irrigated and regularly maintained by the City. The City is therefore satisfied with the verge vegetation exclusion and vegetation management proposed, subject to a condition of development approval that requires the BMP to be updated accordingly, as the land outside the lot can be maintained in perpetuity by the City and the landowner for the life of the development.

Development Footprint
The revised BAL assessment considers the location of the fuel canopies. Consequently, the determined BAL rating for the development has increased from BAL-12.5 to BAL-19. Nevertheless, the inclusion of the fuel canopies within the BAL assessment still ensures that development is appropriately sited in terms of SPP3.7.

Location, Siting and Design
A site visit dated 22 May 2019, confirms that the vegetation within the revised BAL assessment has been correctly identified and it is therefore considered that the BAL-19 rating is valid.

Recommendation
As a result of the modifications to the BAL assessment, it is considered that the BMP is accurate and can be implemented to reduce the vulnerability of the development to bushfire. The City is satisfied that the development design has demonstrated compliance with SPP3.7, specifically Element 1: Location and Element 2: Siting and Design, which is further detailed in the State Government Policy section of this report.

A submission from Water Corporation was not received.

Council Recommendation

The application was referred to the 25th June 2019 Ordinary Council Meeting, where the officer's recommendation to support the development was adopted by the Council.

Conclusion

The proposed development is an appropriate land use within the Light Industry zone under TPS2. The proposed development is unlikely to have an adverse impact on the amenity of the adjacent Caravan Park. The ORR reservation has been taken into consideration as part of the design of the proposed development, so as to ensure the Service Station development does not impact on the long term objectives of the reservation.

The proposed development is compliant with TPS2 and Policy requirements.

It is recommended that the application be conditionally approved.

PROPOSED FUEL STATION & CAR SERVICE

LOCATION:LOTS 36, CNR DIXON ROAD & EVINRUDE BEND, ROCKINGHAM

FOR:DAWNMARK HOLDING PTY LTD. AFT THE ELEMENT UNIT TRUST BY: VEND PROPERTY

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FEB 2019
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COMPOSITE SITE CRITERIA

1. Site Area 5,830m²

2. Zoning
Light Industry
Service Station "D" Use
Motor Vehicle Repair Station "D" Use

3. Landscaping

a. Landscape Required	583.0m² or (10% of site)
b. Landcape Provided	
Soft	873.4m²
Hard	230.1m²
Total	**1,103.5m²** (10.9% of site)

4. Floor Area

a. Convenience Store	225m²
b. Car Service	400m²
Total	**625m²**

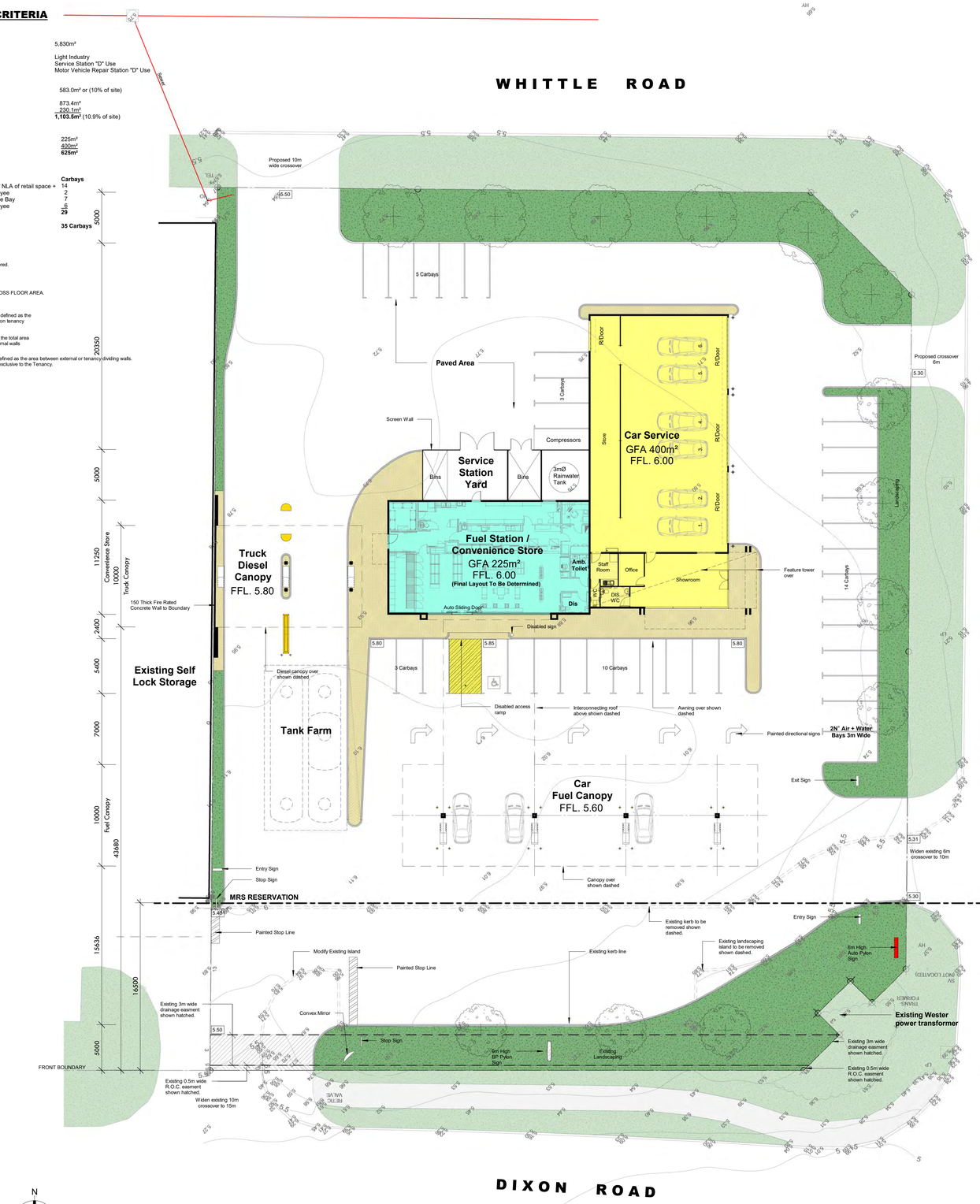
5. Carparking

a. Cars Required		**Carbays**
i. Convenience Store	6/100m² NLA of retail space + 1/Employee	14 2
ii. Car Service	1/Service Bay 1/Employee	7 6
Total		**29**
b. Cars Povided		**35 Carbays**

Landscaping
A. Ha rd Landscaping
Defined as paved walkways either open or covered.
B. Soft Landscaping
Defined as vegetative landscaping.

Gross Floor Area : GFA
A. All Floor Areas on this plan are shown as GROSS FLOOR AREA.
Unless otherwise noted as Nett Floor Area.
B. Definition of Gross Floor Area is defined as:
i/ GROSS FLOOR AREA OF TENANCY
Gross Floor Area of an individual Tenancy is defined as the area contained between the centre line of common tenancy walls and the outside edge of external walls.
ii/ GROSS FLOOR AREA OF A BUILDING
Gross Floor Area of a Building is defined as the total area contained between the outside edge of external walls

Nett Floor Area : NFA
A. Nett Floor Area of a Tenancy on this plan is defined as the area between external or tenancy dividing walls.
B. This area is inclusive of toilets if the toilets are exclusive to the Tenancy.



SITE PLAN
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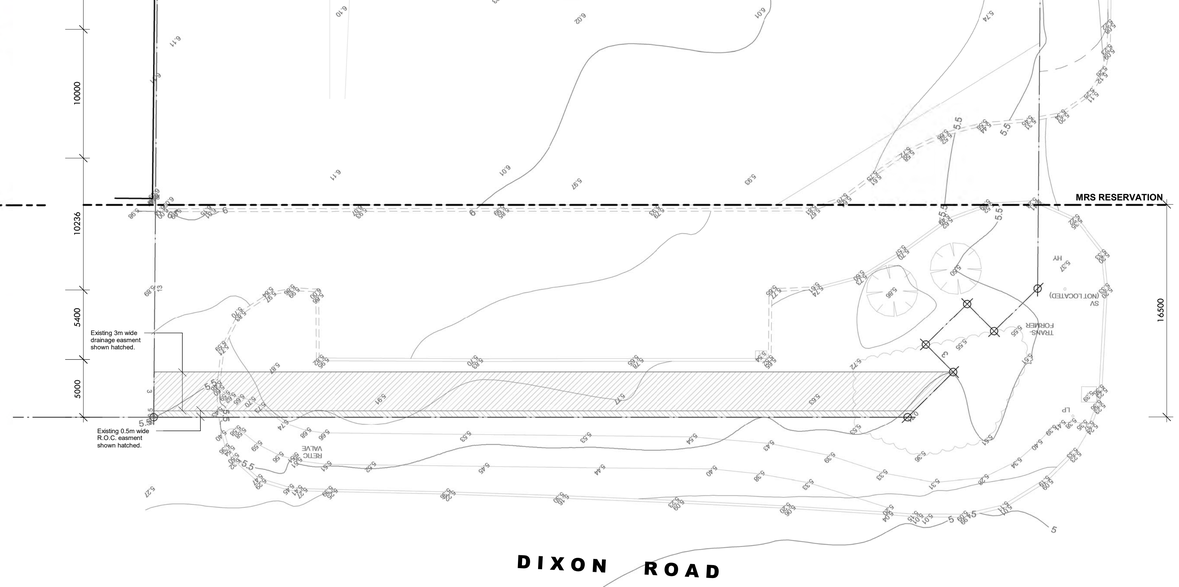

EXISTING SITE SURVEY
SCALE: 1 : 200

PROPOSED FUEL STATION & CAR SERVICE
LOCATION:LOTS 36, CNR DIXON ROAD & EVINRUDE BEND, ROCKINGHAM
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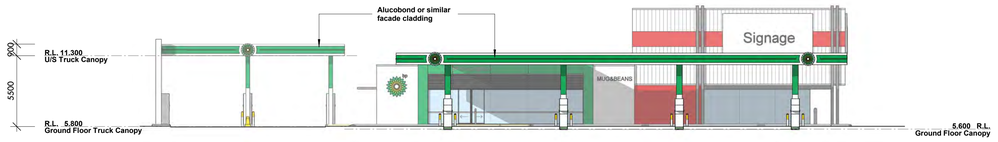

SOUTH ELEVATION (DIXON ROAD) WITH FUEL CANOPY

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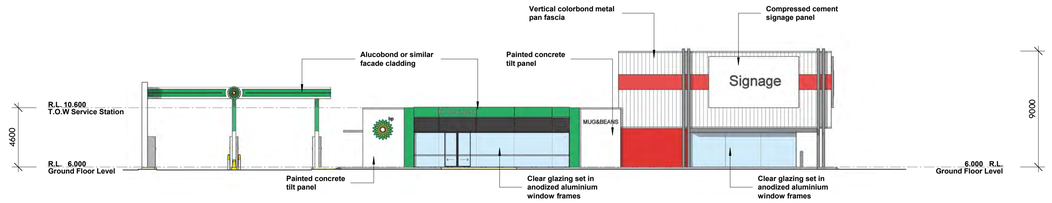

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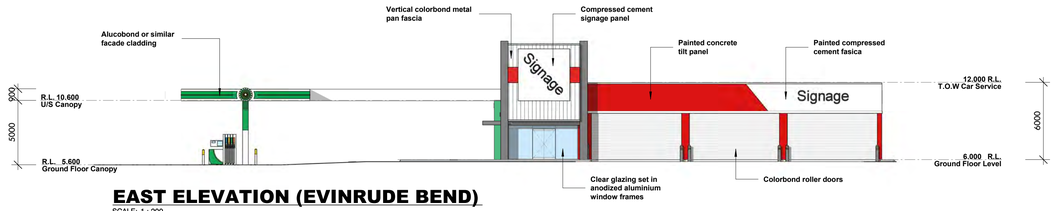
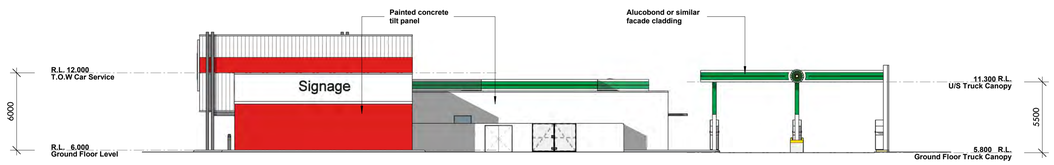


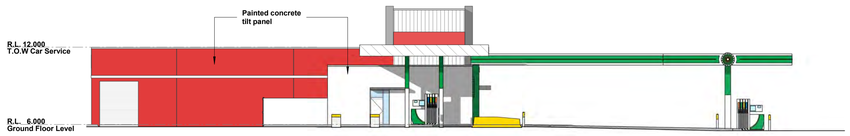
EAST ELEVATION (EVINRUDE BEND)

SCALE: 1 : 200



NORTH ELEVATION (WHITTLE ROAD)

SCALE: 1 : 200



WEST ELEVATION WITHOUT BOUNDARY WALL

SCALE: 1 : 200

WEST ELEVATION WITH BOUNDARY WALL

SCALE: 1 : 200

PROPOSED FUEL STATION & CAR SERVICE

LOCATION:LOTS 36, CNR DIXON ROAD & EVINRUDE BEND, ROCKINGHAM

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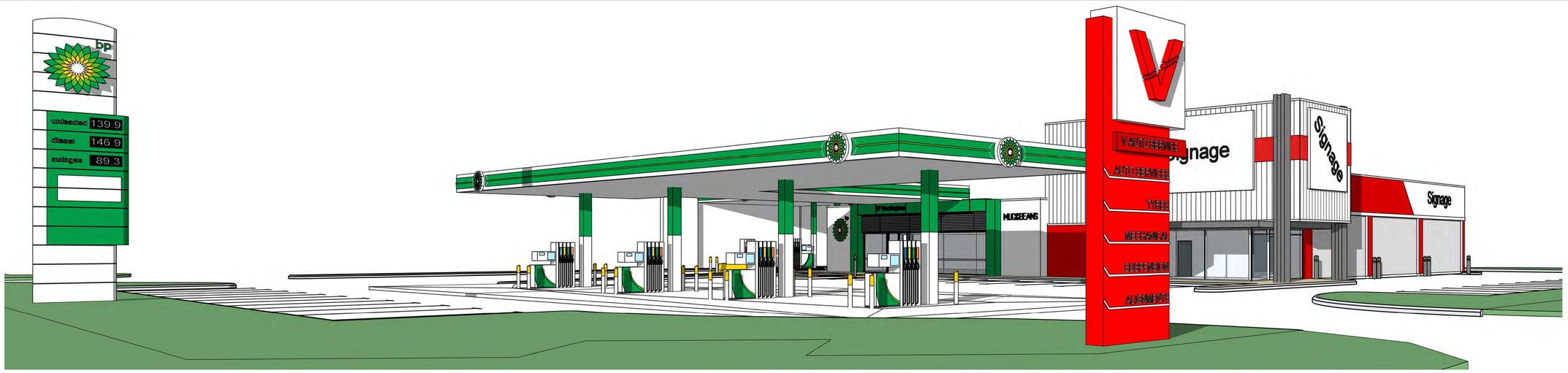
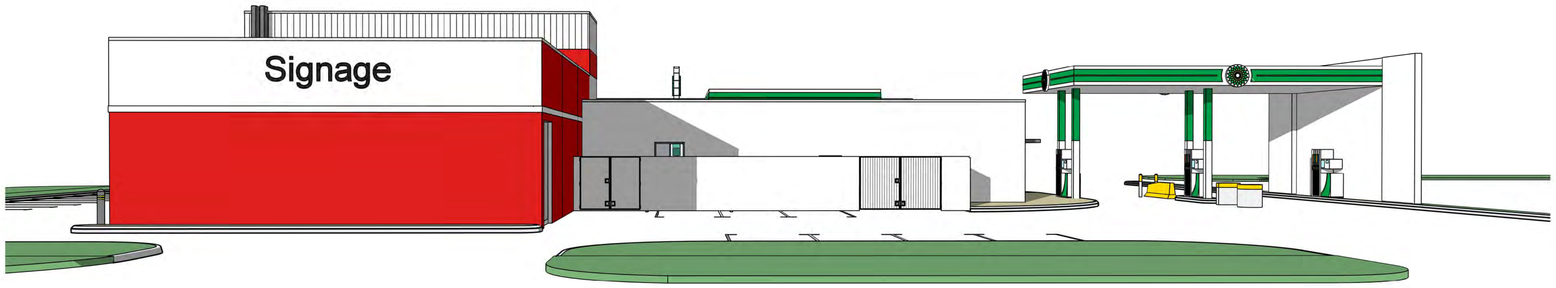
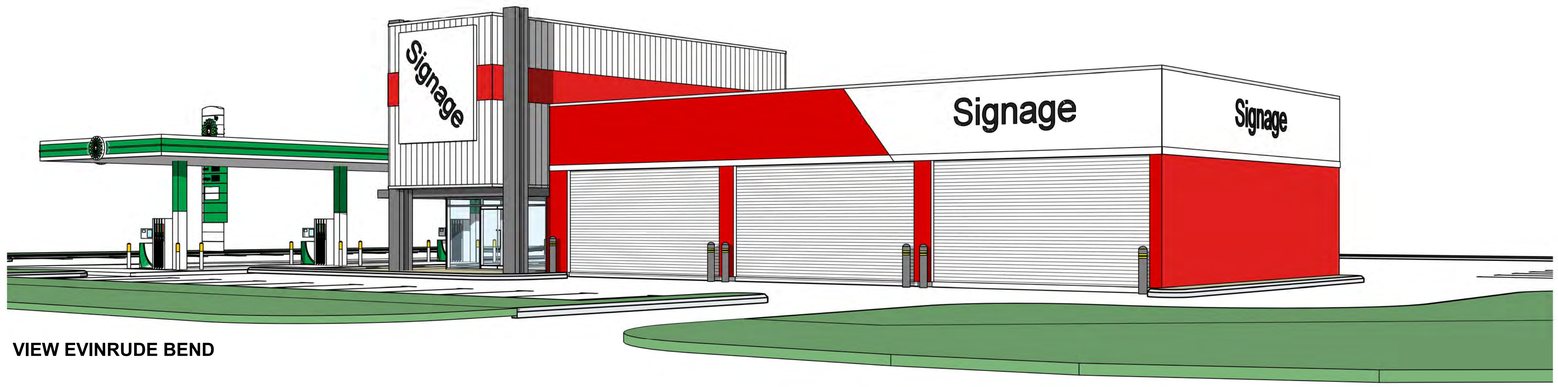


VIEW DIXON ROAD

VIEW DIXION ROAD



VIEW WHITTLE ROAD



VIEW EVINRUDE BEND

PROPOSED FUEL STATION & CAR SERVICE

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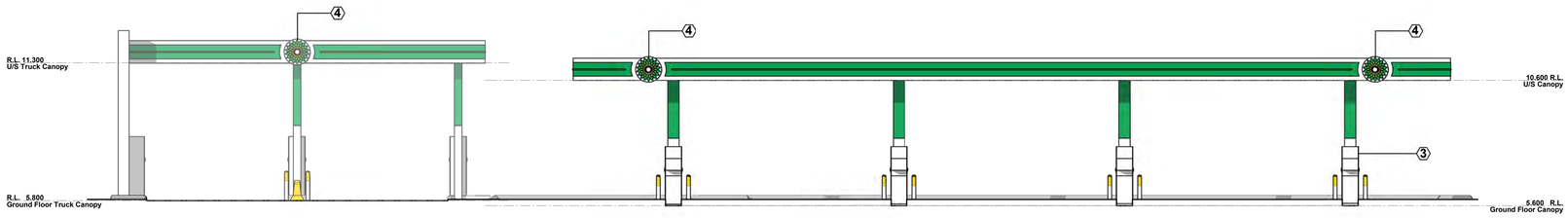
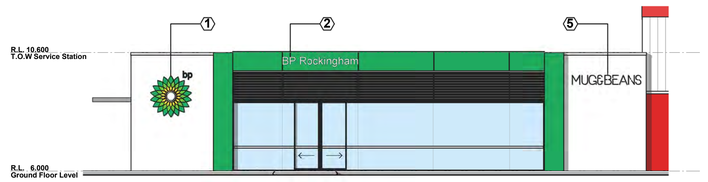
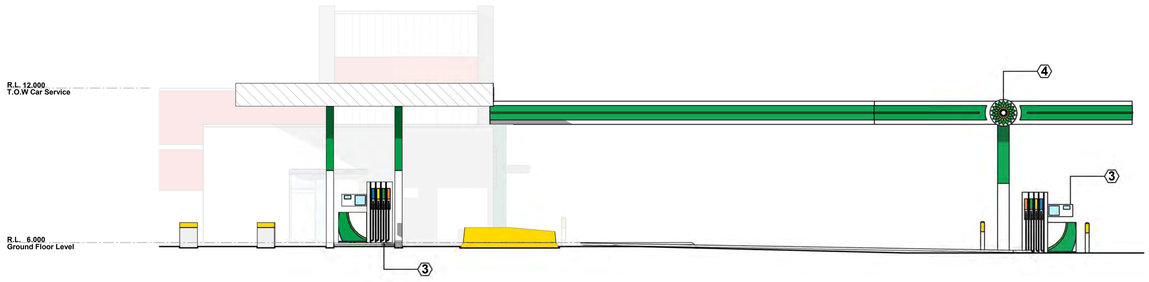


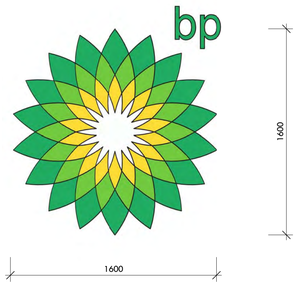
SOUTH ENTRY ELEVATION (DIXON ROAD) TRUCK & FUEL CANOPY
SCALE: 1 : 100



SOUTH ELEVATION (DIXON ROAD) WITHOUT FUEL CANOPY
SCALE: 1 : 100

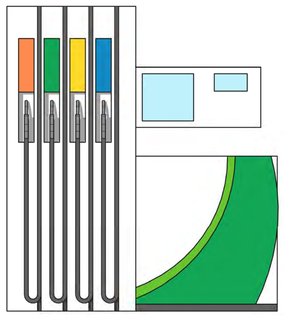


WEST ELEVATION WITHOUT BOUNDARY WALL
SCALE: 1 : 100



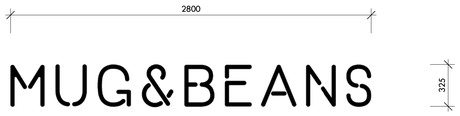
1. BP MAIN BUILDING LOGO
SCALE: 1 : 20

2. BP SITE NAME
SCALE: 1 : 20



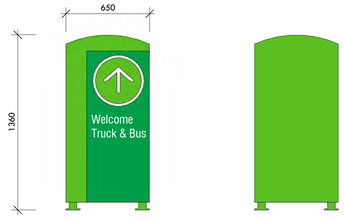
3. TYPICAL PUMP ELEVATION
SCALE: 1 : 20

4. BP CANOPY LOGO
SCALE: 1 : 20



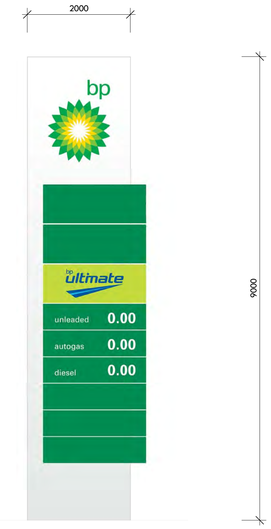
5. MUG&BEANS SIGN
SCALE: 1 : 20

ALL COLOUR AND SIZING
AS PER BP SPECIFICATION



TYPICAL ENTRY & EXIT SIGNS
SCALE: 1 : 20

DISABLE SIGN
SCALE: 1 : 10



TYPICAL BP PYLON SIGN
SCALE: 1 : 50

PROPOSED FUEL STATION & CAR SERVICE
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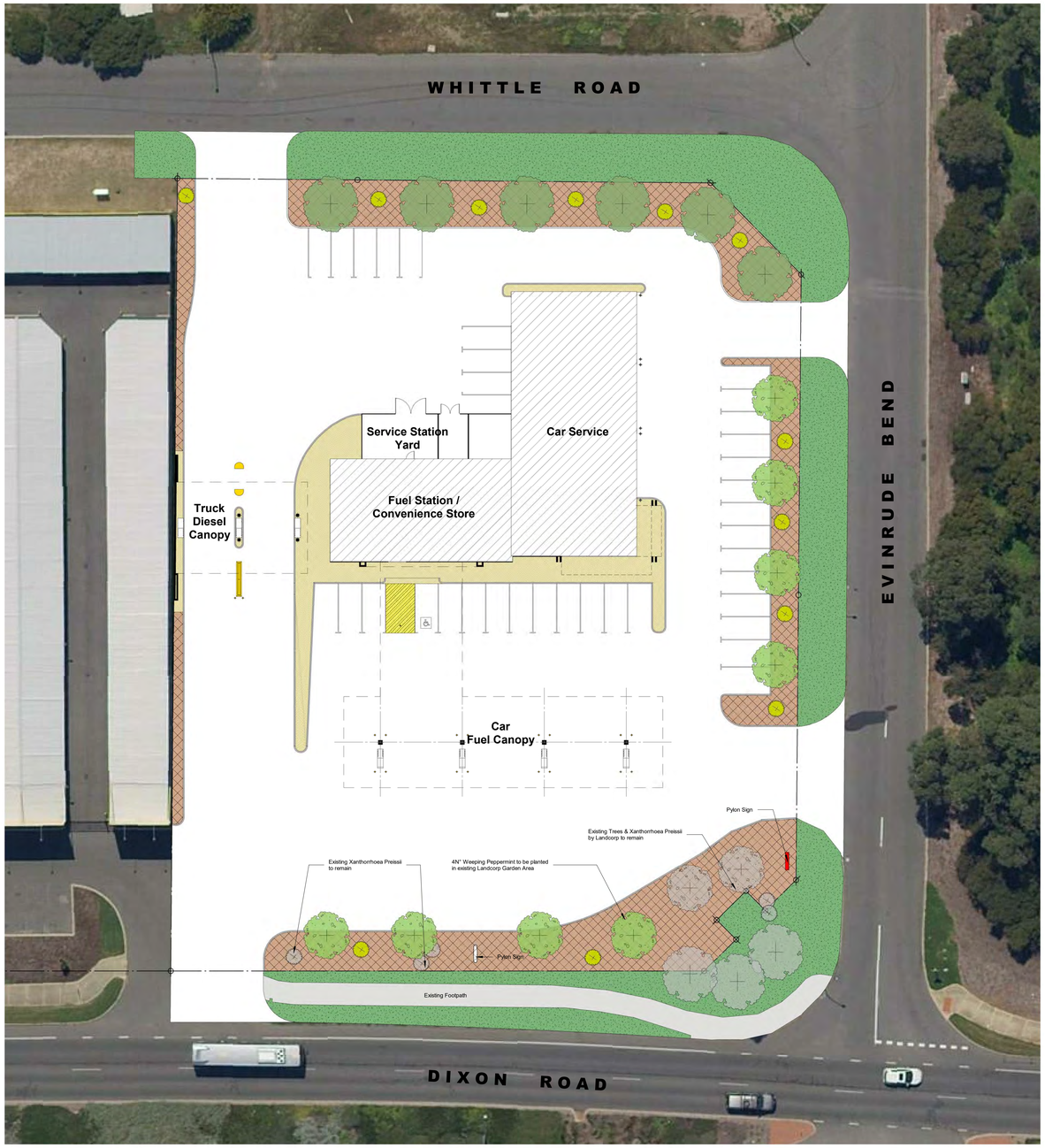

N

LANDSCAPING PLAN

SCALE:1 : 250

Landscape Legend

Symbol	Species	Description	Plant Size
	Brick Paving	**Selected Brick Paving**	
	Mulch	**100mm Jungle mulch**	
	Reticulated Turf	**Grass**	
	Kennedia Coccinea *Coral Vine*	**Groundcover, with brightly coloured flowers in spring, in colours of pink, orange, and yellow-green**	**Height - 30cm to 40cm Width - 3m to 4m**
	Xanthorrhoea Preissii *Blackboy*	**Grassy leaves atop a dark thick trunk, with cream flowers borne on a tall spear-like spike.**	**Height - 3m to 5m Width - 2m to 4m**
	Agonis Flexuosa *Weeping Peppermint*	**A small evergreen tree with delicate, weeping branches. Grown for their clusters of small, 5-petaled, fragrant flowers**	**Height - 7m Width - 5m**
	Eucalyptus Torquata Coral Gum	 **Clusters of orange barrel shaped buds with horned caps.**	**Height - 4m to 11m**

Trees

14 Trees x 4 Cars = 56 Cars

PROPOSED FUEL STATION & CAR SERVICE

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Proposed Service Station

Lot 36 Dixon Road
Rockingham, WA

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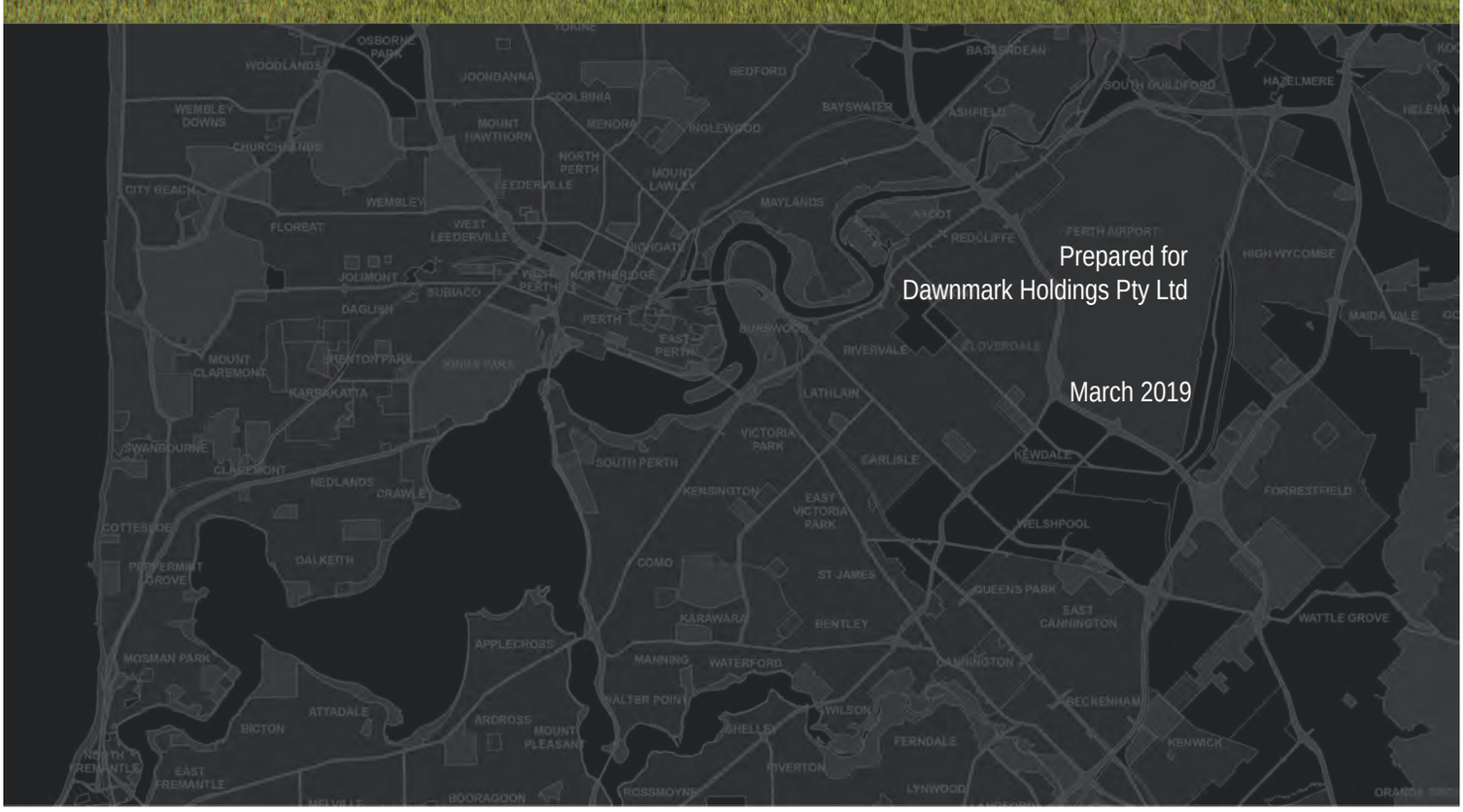

Prepared for
Dawnmark Holdings Pty Ltd

March 2019

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Project details

Job number	5992	
Client	Dawnmark Holdings Pty Ltd	
Prepared by	Planning Solutions	
Consultant Team	Town Planning Architect Traffic Engineer Acoustic Engineer Bushfire	Planning Solutions Meyer Shircore Shawmac Herring Storer Acoustics Entire Fire Management

Document control

Revision number	File name	Document date
Rev 0	190308 5992 DA Report	08 March 2019

Contents

Figures

Appendices

1 Preliminary

1.1 Introduction

Planning Solutions acts on behalf of Dawnmark Holdings Pty Ltd, the proponent of the proposed service station development at Lot 36 (137) Dixon Road, Rockingham (subject site). Planning Solutions has prepared the following report in support of an Application for Development Approval for the development of a fuel retailing and minor repairs service station on the subject site.

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

- LandCorp Pre-Approval.
- Site details.
- Proposed development.
- Town Planning considerations.

The proposal involves the use and development of a service station on the subject site. The proposed service station will provide essential, uninterrupted fuel and convenience retailing services and minor vehicle repair services to the emerging industrial area, local community and patrons travelling along the surrounding road network. The facility is designed to a high standard and will contribute positively to the locality, noting the site is currently vacant and undeveloped.

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

1.2 LandCorp Pre-Approval

The subject site is located within the East Rockingham Industrial Park, part of a State Government initiative implemented by LandCorp to promote well-designed industrial development within East Rockingham.

Prior to the lodgement of any application for development approval with the City of Rockingham, approval from LandCorp is to be obtained. This approval demonstrates the proposed development is consistent with the East Rockingham Industrial Park Development Guidelines, by providing a development that:

- Presents as an attractive and unified development that enhances the locality through the provision of high-quality native landscaping and well-designed buildings;
- Is consistent with the built form and landscaping of the East Rockingham Industrial Park, comprising a unique facility that reflects the corporate image of onsite tenancies;
- Results in a well-planned development that enhances the image of the locality and visual amenity for the community.

Refer to Appendix 1 for a copy of the LandCorp Pre-Approval, as approved by the Estate Architect on behalf of LandCorp.

2 Site details

2.1 Land description

Refer to Table 1 below for a description of the land subject to this development application.

Table 1 – Lot details

Lot	Deposited Plan	Volume	Folio	Area (m^2)
36	65366	2731	580	5,832

The following encumbrances are listed on the Certificate of Title:

Table 2 – Encumbrances and Notifications

Document No.	Purpose	Land Burdened	Land Benefited
DP 65366	Easement for Right of Carriageway purposes – provides legal mechanism to utilise Lot 36 for access.	Lot 36 (subject site) and Lot 37.	Lots 38, 39, 40 and the City of Rockingham.
DP 65366	Easement to the City of Rockingham for drainage purposes.	Lot 36 (subject site) and Lot 37.	City of Rockingham

Refer to Appendix 2 for a copy of the Certificate of Title, Deposited Plan and Encumbrance Documents.

2.2 Location

2.2.1 Regional context

The subject site is located approximately 37km south of the Perth CBD, 4.5km south-west of the Kwinana town centre, and 4km north-east of the Rockingham town centre.

The subject site fronts Dixon Road, a key distributor road which is reserved 'Other Regional Roads' under the Metropolitan Region Scheme (MRS). Dixon Road is a main transport corridor between Rockingham, Kwinana and the surrounding industrial area.

Dixon Road links the subject site to Mandurah Road and the Kwinana Freeway, via Kulija Road. Dixon Road is a four lane, dual carriageway road with a solid central median strip. As of 2018, Dixon Road carried in the order of approximately 16,621 vehicles per day.

A large area of native bushland reserved under the MRS is located south of the subject site, across Dixon Road (Bush Forever site 356).

The subject site is situated within the municipality of the City of Rockingham (City).

2.2.2 Local context, land use and topography

The subject site is located within the emerging industrial suburb of East Rockingham and is currently vacant. The locality is generally characterised by light industrial developments.

The subject site is located at the corner of Dixon Road and Evinrude Bend, with Dixon Road to the south, Evinrude Bend to the east and Whittle Road to the north.

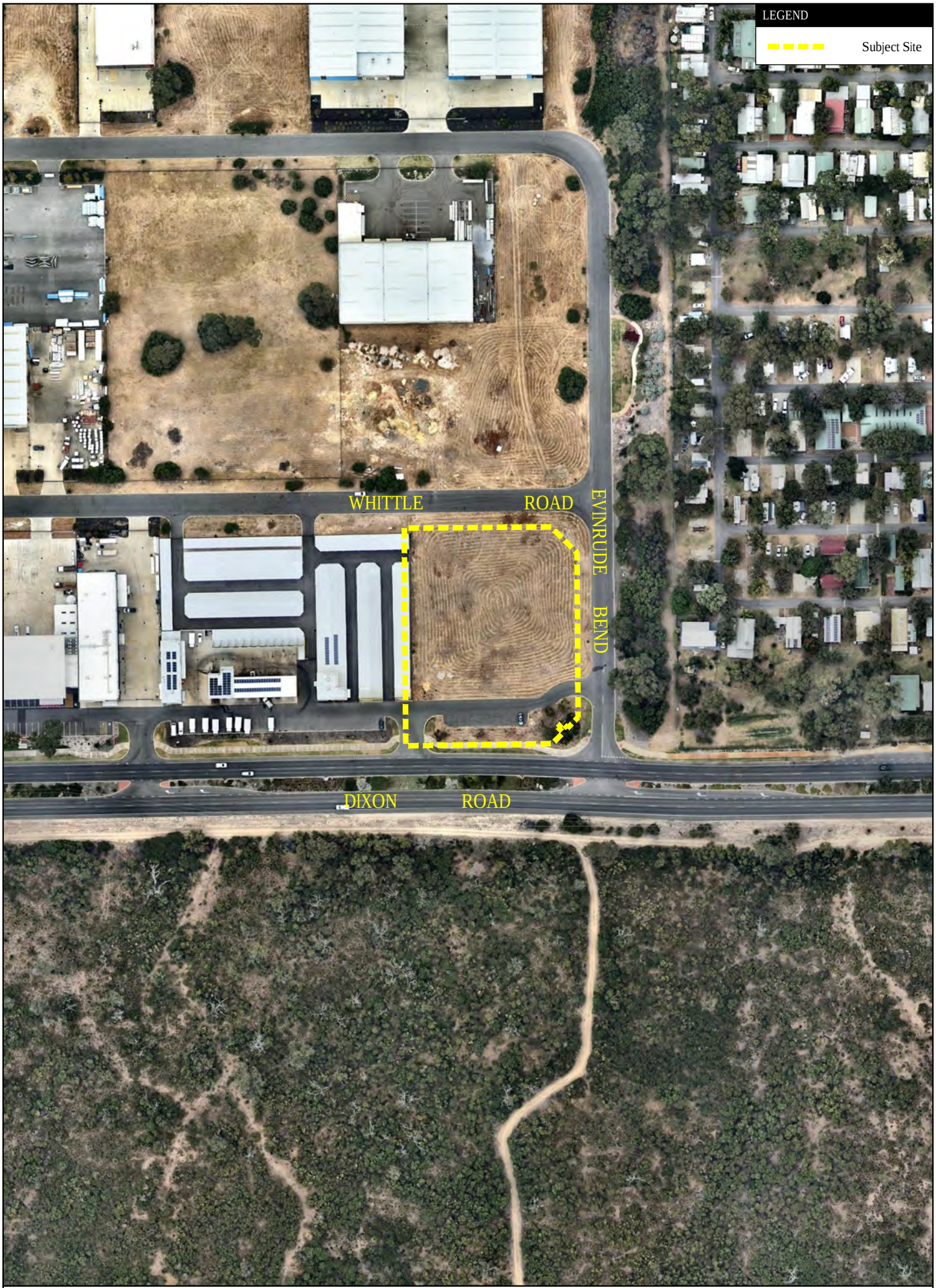
The subject site is located at the south eastern end of the East Rockingham Industrial Park (ERIP).

Within the ERIP, the subject site forms part of the 'Element' Light Industrial precinct, which currently contains a variety of light industrial and service commercial land uses, including a 7-Eleven service station, automotive repairs, wholesale suppliers and a self-storage development adjacently west. The precinct is located predominantly to the west and north of the subject site. The Rockingham Holiday Village is located opposite the subject site, approximately 75m to the east, across from Evinrude Bend.

An access easement exists in the southern aspect of the subsite site, continuing through adjoining properties to the west and allowing uninterrupted vehicle movement across lots between Evinrude Bend and McCamey Avenue.

The subject site is generally flat.

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



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DATE	27 February 2019
FILE	01 190227 5992 Aerial Photograph.dwg
REVISION	1/DR/First Draft/31.01.2019

Scale Bar (m)
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AERIAL PHOTOGRAPH

LOT 36 DIXON ROAD,
ROCKINGHAM, WA

FIGURE
01

3 Proposed development

The proposal involves the development of a BP service station, providing for the retail sale of fuel and convenience items. The fuel retailing facility provides for the refuelling of both light and heavy vehicles, with two separate fuel canopies and refuelling areas ensuring minimal interaction between heavy and light vehicles. The proposal also incorporates a minor vehicle repair service station facility. The proposed developments will comprise of a high quality commercial built form, including associated parking areas, landscaping and signage.

The layout and configuration of the service station responds to the site's shape and physical constraints, bounded by numerous roads, the Right of Carriageway easement and vehicle access points.

The proposed development will result in a modern and attractive built form outcome for the site, which will contribute positively to the locality, with minimal impacts on the amenity of surrounding properties. Supporting co-consultant reports demonstrate its suitability with respect to acoustic, bushfire and traffic.

The proposed development is suitably located within the East Rockingham Industrial Park and will provide essential fuel / convenience retailing and light vehicle minor mechanical repair services to the local community, meeting the existing and growing demand for fuel retailing services in Rockingham and its adjoining suburbs.

3.1 Service Station

The proposed service station development will provide for the retail sale of fuel and associated convenience goods to light and heavy vehicles, and minor repairs to light vehicles. Specifically, the proposed development comprises:

- A fuel retail building of 225m^2 gross floor area (GFA) positioned centrally in the subject site, oriented in a southern direction. This will be operated by BP.
- A car service building of 400m^2 GFA, to the east of the BP retail building, also positioned centrally in the subject site and oriented in an eastern direction towards Evinrude Bend. This facility will be operated by a separate tenant, who is yet to be confirmed.
- Service yard and bin storage area along the rear (northern) side of the retail building and western side of the car service building, contained within a 2.2m high enclosure.
- A delivery/loading area associated with the service yard and bin storage area to the rear of the retail building, suitable for the movements of 12.5m service vehicles.
- A light vehicle (car) fuel canopy positioned south of the retail building, comprising a height of 5.9m, which provides cover for four bowsers (totalling eight refuelling spaces).
- A heavy vehicle (truck) fuel canopy positioned west of the retail building, comprising a height of 6.4m, which provides cover for one bowser (totalling two refuelling spaces).
- Two underground fuel storage tanks, and an associated filling point appropriately positioned in the western portion of the site, to accommodate fuel tankers without compromising site functionality.
- A total of 45 car parking spaces, comprising:
    - Thirteen retail building shopfront car parking spaces (inclusive of one ACROD bay);

  - Twelve cars parking spaces opposite the car service component of the service station, at the eastern portion of the subject site fronting Evinrude Bend;
  - Thirteen car parking spaces (inclusive of two Air and Water bays) south of the car refuelling canopy fronting Dixon Road; and
  - Seven car parking spaces north of the retail building.
- Various signage associated with the proposed service station development, including one 9m high ID sign fronting Dixon Road and one 6m high ID sign fronting Evinrude Bend.
- High quality and extensive landscaping along the development site's frontages to Dixon Road, Evinrude Bend, Whittle Road and the western lot boundary.

The proposed retail building is located at the centrally on the subject site, comprising a 43m setback to Dixon Road, a setback of 31m to Evinrude Bend and a 31.4m setback to Whittle Road.

The proposed car service building is also located at the central aspect of the subject site, comprising a 44m setback to Dixon Road, a setback of 18m to Evinrude Bend and a 13.4m setback to Whittle Road.

The proposed car fuel canopy is set back approximately 18.3m from the Dixon Road lot boundary and approximately 15.2m from Evinrude Bend. The proposed truck fuel canopy is set back approximately 44m from the Dixon Road lot boundary and approximately 0.4m from the western lot boundary. The fuel canopies are visually permeable structures, supported by structural beams integrated into the bowsers (located centrally within the canopy itself).

A 9m high BP ID sign is proposed at the site's frontage to Dixon Road, to ensure there is sufficient exposure for patrons travelling along this road to enter the site in a safe and coordinated manner. A 6m high ID sign is proposed at the site's frontage to Evinrude Bend, providing exposure for the car service facility.

The proposed retail building shop front incorporates a range of architectural design features, which are considered to be of a high standard and contributing to the aesthetic value of the area. These features include:

- Green panelling along the outer edges of the retail building shopfront, and an awning over the entry point for shielding from the weather.
- Substantial glazing to allow for permeability and a direct line of sight between the retail building and forecourt area.
- Various materials, which include textured wall panels and wall cladding in modern and consistent colour schemes.
- Integrated signage which is sympathetic to the layout and design of the overall building and BP's corporate branding.

The proposed car service facility incorporates a range of architectural design features, including:

- Red panelling along the outer edges of the building shopfront, with the roof extending over the entry point for shielding from the weather.
- Various materials, which include textured wall panels and wall cladding in modern and consistent colour schemes.
- Integrated signage which is sympathetic to the layout and design of the overall building and future tenant's corporate branding.

The proposed development provides forty-five non-refuelling car parking bays (inclusive of one ACROD bay and two air/water bays), eight car refuelling bays adjacent to petrol bowsers (one each side) and two truck refuelling bays.

The proposed fuel retailing facility of the service station will operate 24 hours per day, 7 days per week and accommodate up to four staff on site at any one time.

The proposed vehicle repair facility of the service station will operate 7am to 7pm, 6 days per week and accommodate up to six staff on site at any one time.

Refer to Appendix 3 for the development plans, which depict the proposed service station development.

3.2 Access and circulation

The proposed development and access arrangements are supported by a Traffic Impact Assessment (TIA) prepared by Shawmac (refer to Appendix 4). The TIA confirms the proposal is satisfactory from a traffic and access perspective, and the traffic generation associated with the proposed development will have an insignificant impact on the surrounding road network.

The service station proposal involves the following access arrangements:

- Use of the existing 10m wide left-in, left-out crossover to Dixon Road, in the south west portion of the site.
- Widening of the existing 6m crossover to Evinrude Bend, to a 10m wide full movement crossover.
- Proposed 6m wide full movement crossover to Evinrude Bend (north of the existing crossover).
- Two proposed 10m wide full movement crossovers to Whittle Road

Heavy vehicles are able to access the subject site via the crossover from Dixon Road, the northern crossovers to Whittle Road and the southernmost crossover to Evinrude Bend. The swept path diagrams contained in Appendix D of the TIA demonstrate satisfactory movement of heavy vehicles throughout the site. Light vehicle movements will be focussed in the southern and eastern aspect of the subject site, with ingress and egress from the Dixon Road and Evinrude Bend crossovers.

As demonstrated by the supporting TIA prepared by Shawmac, the proposed site layout and access arrangements have been considered holistically, having regard to the Right of Carriageway and results in a safe and coordinated circulation system for the overall development.

Refer to Appendix 4 for the Traffic Impact Assessment prepared by Shawmac.

3.2.1 Servicing arrangements

The proposed service station development has been designed for the safe and efficient movements of fuel tankers and service vehicles. The configuration and siting of onsite refuelling facilities and servicing areas is intended to maximise safety through the segregated movements and stopping of service vehicles, including 19.0m fuel tankers. The central crossover to Whittle Road will primarily be used for the ingress / egress of service vehicles (waste and deliveries), allowing for appropriate separation between light and heavy vehicle movements.

Swept path modelling has been prepared by Shawmac, depicting the following movements:

- 19.0m fuel tanker ingress via the Dixon Road crossover, navigating along the western portion of the site, stopping at the filling point, and safely egressing via the western Whittle Road crossover or ingress via the Whittle Road crossover and safely egressing via the Dixon Road crossover. Ingress locations will depend on the route of the fuel tankers.
- 12.5m rigid truck ingress via the central Whittle Road crossover, navigating through the northern aspect of the development, and comfortably reversing into the service bay at the northern (rear) side of the retail building.
- 12.5m rigid truck egressing the service bay in forward gear navigating along the northern aspect of the development site, and egressing via the Whittle Road crossovers.

The swept path modelling demonstrates the service vehicle movements do not affect any kerbing or structures. The proposed servicing arrangements are therefore safe, coordinated and acceptable.

Fuel tankers will generally make up to 2-4 deliveries per week, depending on retail fuel consumption and general demand. Deliveries generally take place during off-peak traffic periods to ensure minimal disturbance to the site's operations and external traffic.

General stock deliveries and bin servicing will take place 1-2 times per week, although this may fluctuate depending on the time of year and demand for certain products. As depicted on the site plan, the loading area is situated at the northern side of the retail building, away from the traffic flow of patrons and fuel tankers.

Refer to Appendix 3 for the development plans and Appendix 4 for the swept path modelling, contained within Shawmac's TIA.

3.3 Stormwater treatment

The service station facility will include the use of a SPEL Puraceptor, which captures and treats stormwater runoff within the forecourt area (light and heavy vehicle canopy). The Puraceptor is an underground tank which treats stormwater by separating fuels, oils and other potential contaminants from stormwater runoff. Use of the system is considered a standard industry practice, and is implemented on all new fuel sites across Australia. A stormwater management plan containing full stormwater detail will be provided post-approval in accordance with a condition of planning approval.

Refer Appendix 5 for details regarding the SPEL Puraceptor system.

3.4 Noise management

An Environmental Acoustic Assessment has been undertaken by Herring Storer Acoustics (refer to Appendix 6) for the proposed development, noting 24 hour operation is proposed for the fuel retailing facility only. The car service facility is proposed to operate between the hours of 7am and 7pm, Monday to Saturday only.

The assessment has modelled and assessed potential noise sources associated with the proposed development, and demonstrates the development will comply with the *Environmental Protection (Noise) Regulations 1997* at all times, with no noise mitigation measures required.

Refer to Appendix 6 for the Environmental Noise Assessment prepared by Herring Storer Acoustics.

3.5 Signage

The proposed service station development includes various advertising signage throughout the premises, comprising:

- One 9m metre high internally illuminated BP ID sign is proposed within the subject site, fronting Dixon Road. The proposed ID sign comprises an LED digital price board and internally illuminated acrylics sign boxes.
- One 6m metre high internally illuminated V Auto ID sign is proposed within the subject site, fronting Evinrude Bend. The proposed ID sign comprises an LED digital price board and internally illuminated acrylics sign boxes.
- An illuminated BP Helios wall sign integrated into the retail building shopfront (south) elevation.
- Illuminated 'Mugg and Bean' signage integrated on the retail building shopfront (south) elevation.
- Four 950mm BP Helios canopy signs integrated within the car fuel canopy.
- Three 950mm BP Helios canopy signs integrated within the truck fuel canopy.
- One 'BP Rockingham' wall sign integrated into the shopfront above the retail building entrance.
- Two 3.56m x 2m directional signs fronting Evinrude Bend, adjacent to the southernmost crossover.
- Five wall signs incorporated into the facades of the car service facility, displaying the corporate branding of the future tenant.

The proposal incorporates high quality advertising signage that complements the architectural style and design of the retail building, fuel canopies and service facility. The purpose of the signage is to identify the site to motorists travelling along the surrounding road network, and to display the price of fuels and mechanical services provided onsite.

Refer to Appendix 3 for the development plans which contain elevations depicting the proposed signage.

3.6 Landscaping

The proposed development provides approximately 895.5m^2 of soft landscaped area, which represents 15% of the overall 5,830m^2 subject site area.

Extensive landscaping is provided along road frontages, comprising a mixture of native species of low to medium scale and mature trees. Five mature trees are proposed adjacent to the Evinrude Bend car parking bays, within the 3m landscaping strip, creating a buffer between the development and the existing Holiday Park located 75m to the east. These trees also provide shade for parked vehicles and added screening.

Four mature trees are proposed adjacent to the car parking bays fronting Dixon Road, within the 4.5m landscaping strip. These trees will provide shade and improve the amenity. Six 4m to 11m mature Coral Gum trees are also located along the Whittle Road frontage. A substantial number of Grass Trees and colourful ground cover species are proposed amongst the mature trees and the mulched landscaping areas.

The proposed landscaping will enhance the overall presentation of the development and provide an amenity that is consistent with the intent of the East Rockingham Industrial Park. The landscaping is also waterwise and incorporates largely native species that can be maintained sustainably to the highest standard.

Refer to Appendix 3 for the development plans, which contain a landscaping plan.

3.7 Bushfire Management

As the subject site is located within a designated 'bushfire prone area' in accordance with the Department of Fire and Emergency Services Map of Bushfire Prone Areas, a Bushfire Attack Level (BAL) assessment was undertaken over the site. The BAL assessment confirms the subject site has a BAL-12.5 rating, with a BMP required in support of this application.

A Bushfire Management Plan (BMP) and associated formal reporting has been prepared in support of the proposed development and sets out appropriate mitigation/bushfire protection measures satisfying the relevant requirements of SPP3.7.

Refer to Appendix 7 for a copy of the Bushfire Management Plan and formal reporting.

4 Statutory planning framework

4.1 Metropolitan Region Scheme

The subject site is zoned 'Industrial' under the Metropolitan Region Scheme (MRS), with the southern portion of the site reserved as Other Regional Roads which corresponds to Dixon Road.

The reservation extends approximately 16.5m into the subject site at its south west aspect and 6.7m at its south east aspect (due to the truncation of the lot boundary). The extent of this reservation has been taken into consideration as part of the design of this facility. The proposal is consistent with the provisions of the MRS and may be approved accordingly.

Refer to Appendix 8 for a copy of the Clause 42 Certificate depicting the extent of the reservation.

4.2 City of Rockingham Local Planning Scheme No. 2

4.2.1 Zoning

The subject site is zoned 'Light Industry' under the City's Local Planning Scheme No. 2 (LPS2). Refer to Figure 2 - zoning map.

The subject site is also located within the East Rockingham Industrial Park (ERIP) 'Element Precinct'. The specific development standards applicable to the ERIP are discussed in further detail later in this report.

4.2.2 Objectives

The objectives of Industrial zoned land within the City of Rockingham are as follows:

- To provide for a range of industrial land uses by establishing guiding principles and policies that are environmentally and socially acceptable;
- To encourage and facilitate the establishment of attractive and efficient industrial areas ensuring that acceptable levels of safety and high standards of amenity are provided through the application of appropriate land use, design and landscaping controls; and
- To ensure that industrial areas are developed in a manner which has due regard to potential industries and their infrastructure needs, and that adjacent urban areas are not subjected to pollution and hazards of Development.

The proposed service station development is considered entirely acceptable and consistent with the objectives of the Light Industry zone for the following reasons:

- The proposed service station development is environmentally and socially acceptable;
- The proposed service station will present as an attractive facility that ensures a high level of passive surveillance and amenity to the locality;
- The proposed development has due regard to its industrial setting and will not result in any pollution or hazards, supporting surrounding industrial land uses by providing light and heavy vehicle refuelling.

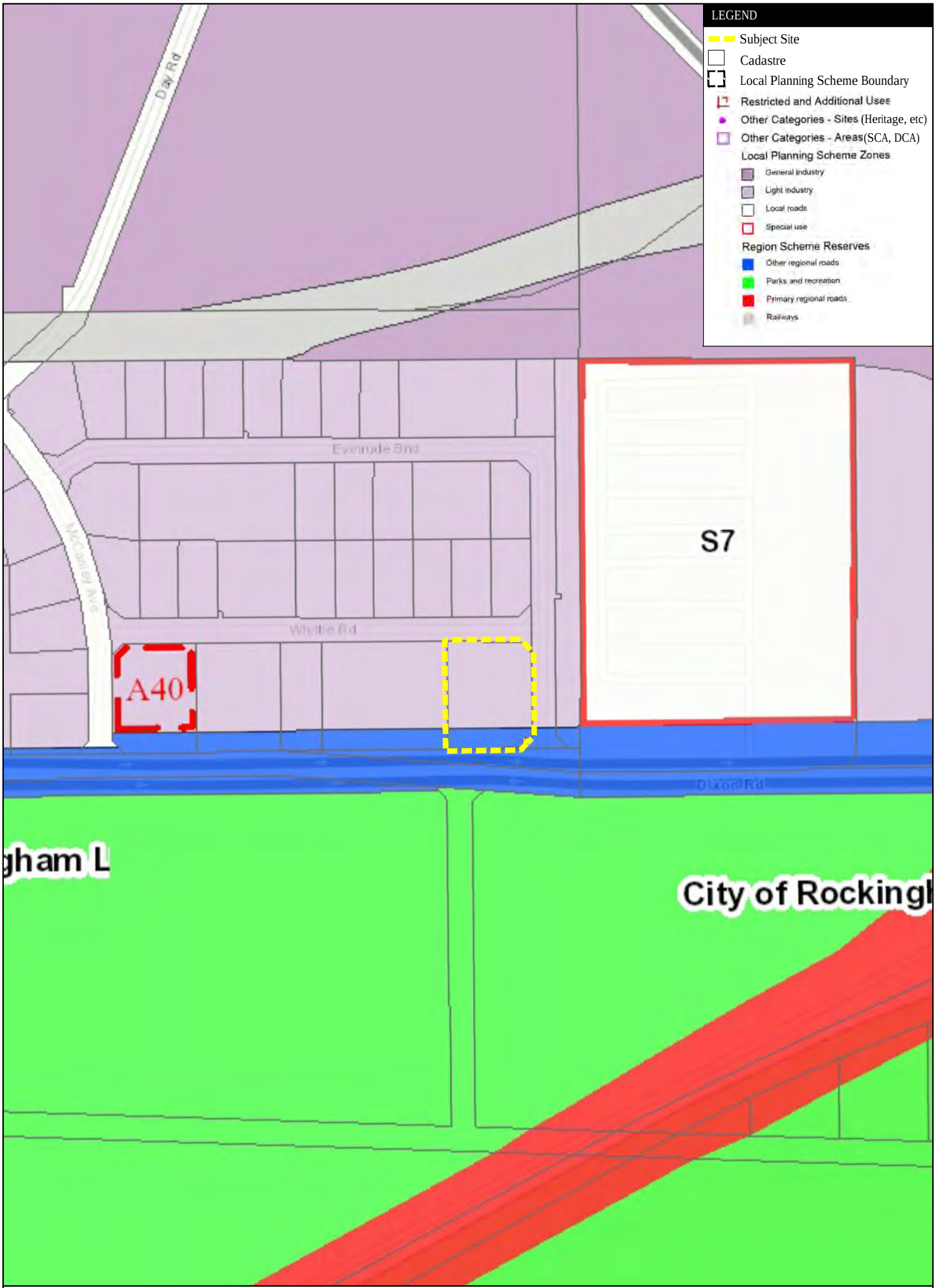
4.2.3 Land use classification and permissibility

The proposed land use is classified as a service station, defined by LPS2 as:

> *Service station means premises used for:*
>
> *(a) the retail sale of petroleum products, motor vehicle accessories and goods of an incidental/ convenience retail nature; and*
>
> *(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.*

The proposed development provides for the retail sale of fuel as well as the retail sale of convenience goods commonly sold in supermarkets, delicatessens and newsagents, and will operate 24 hours per day, 7 days per week. The facility also provides for the carrying out of minor mechanical repairs to motor vehicles. The use is therefore provided for within the two proposed tenancies. The proposed development and two tenancies therefore clearly satisfies the two elements of the service station definition under LPS2.

Under LPS2, a service station land use is a 'D' discretionary use within the Light Industry zone, in accordance with the zoning table. A discretionary use means that the use is not permitted unless the local government has exercised its discretion by granting development approval.



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SCALE	1: 4,000 @ A4
DATE	27 February 2019
FILE	02 190227 5992 Zoning Map.dwg
REVISION	1/DR/First Draft/31.01.2019

Scale Bar (m)

ZONING MAP

LOT 36 DIXON ROAD,
ROCKINGHAM, WA

FIGURE
02

4.2.4 Local Planning Scheme No.2 Development standards

Clause 4.10 of LPS2 sets out the development standards applicable to Industrial zoned land within the scheme area. An assessment against the relevant requirements is provided in Table 3 below.

Table 3 – Industrial development requirements

Requirement	Provided	Compliance
4.10.2 Form of development		
In considering an application for development approval on industrial zoned land, the Local Government, in addition to any other aim or objective of the Scheme and to any other matter it is required or permitted to consider, shall have regard to the following: *a) promotion of a high standard of building development, landscaping and working environment;* *b) protection of the amenity of adjacent residential and open space areas;* *c) management of drainage systems and land uses to promote groundwater conservation; and* *d) to ensure safe movement of vehicular and pedestrian traffic in the area.*	a) The proposed service station development is designed to a high standard, with extensive landscaping to ensure no adverse impacts are experienced by surrounding landowners. In addition, the facility features an attractive built form and design which is intended to address its interface with Dixon Road. This includes its integration with existing landscaped verge areas. b) The proposed development will have no adverse impacts on the amenity of residential and open space areas due to its location in an industrial precinct. The prevalence of the Holiday Park opposite Evinrude Bend has been considered in this proposal and is not expected to experience any adverse impacts. c) & d) The site layout has been designed to ensure efficient, functional and safe movements of vehicles and traffic, with best practice service station design implemented to ensure drainage and stormwater management. Overall, the service station development will enhance the amenity of the subject site, is consistent with the site's Element Precinct classification under the East Rockingham Industrial Park, and will provide an important service to the Rockingham locality.	✓ ✓ ✓
4.10.3 Parking		
Provision shall be made for the on-site parking of motor vehicles for all development on industrial zoned land in accordance with the provisions of clause 4.15 and Table No.2.	Service station: 1 bay for every service bay, plus 1 bay per employee and 6 bays per 100m^2 NLA of retail floorspace. • The car service facility comprises 6 service bays, requiring 6 bays. • The retail building is 225m^2, requiring 13.5 bays (rounded to 14). • 9 Employees are proposed on site at any one time, requiring 9 bays. Total required: 29 bays 45 car parking spaces are provided in total onsite, comprised of 13 retail shopfront bays, 12 car service bays, 13 bays adjacent to Dixon Road and 7 bays to the rear of the site (can be used as staff parking). Parking complies.	✓

4.10.4 General development provisions		
On all industrial zoned land within the City, unless otherwise specified in the Industrial Policy or East Rockingham Development Guidelines: *a) The facades of all buildings visible from the primary road or open space area shall be of masonry construction or any other material approved by the Local Government in respect of the ground floor level, provided that if concrete panels are used, such panels must have an exposed aggregate or textured finish. The second floor level, or its equivalent may be constructed of any other material in accordance with the Building Code of Australia and to the satisfaction of Local Government.*	The construction of the retail building is to be primarily of concrete panel walls with a paint finish, reflecting BP's corporate branding. Various cladding, texture and glazing is incorporated to increase amenity of the building. Further details of materials can be provided at the detailed design phase prior to the issue of the building permit.	✓
b) No fence visible from a road or open space reserve shall be constructed of materials/colours which in the opinion of Local Government are unsightly or detract from the amenity of the locality or be used for signage where the approval of the Local Government has not been granted. Any industrial (e.g. chain wire) fencing forward of the street building setback line shall be landscaped to the satisfaction of the Local Government.	N/A – No fencing is proposed as part of this application.	N/A
c) No use of the area between the street alignment and the prescribed building setback line shall be permitted other than for landscaping, or for pedestrian and vehicular circulation and parking, except that not more than 20% of the setback area may be used for trade display purposes, to be approved at the discretion of the Local Government.	The substantial setback between the street frontages and the building comprise landscaping, parking, vehicle access and car refuelling.	✓
4.10.8 Light Industry Zone		
On all land zoned Light Industry, unless otherwise specified in the Industrial Policy or East Rockingham Development Guidelines: *a) <u>Setbacks:</u> A minimum front setback of fifteen (15) metres shall apply. Where a lot has frontage to two or more streets, the prescribed front setback of fifteen (15) metres shall apply to the primary street and a minimum setback of three (3) metres shall apply to the secondary street, or streets, unless otherwise determined by the Local Government.*	The setback of the car refuelling canopy is 18.3m to the primary street boundary (Dixon Road). The setback of the retail building is 43.7m to the primary street boundary (Dixon Road). The setback of the car service building is 18m to the secondary street boundary (Evinrude Bend) and 13.5m to the Whittle Road boundary, in lieu of the minimum 3m.	✓ ✓ ✓
b) <u>Landscaping:</u> Provision shall be made for a minimum area of landscaping of 10% of the site, comprising a minimum 5 metre wide planting strip adjacent to the primary street boundary, and a minimum 3 metre wide planting strip on the secondary street plus the street verge to be landscaped and maintained to the satisfaction of the Local Government.	The proposed development provides approximately 895.5m^2 of soft landscaped area, which represents 15% of the overall 5,830m^2 subject site area. A 4.5m landscaping strip is provided in lieu of the required 5m, as was developed by LandCorp as part of the original estate development.	✓ Variation

	A conceptual landscape plan is provided as part of the development plans, which indicates the type of planting. Refer to Appendix 3.	

Having regard to Table 3 above, the proposal is generally consistent with the applicable development requirements of LPS2 and warrants approval accordingly.

4.2.5 Car parking

Table No. 2 – Car Parking Table of LPS2 sets out the applicable car parking standards for various land uses. Table 4 below provides an assessment of the proposal against the relevant car parking requirements of LPS2.

Table 4 – Car parking assessment.

Land use	Parking standard	Required car bays	Provided
Service station	1 bay for every service bay, plus 1 bay per employee and 6 bays per 100m^2 NLA of retail floorspace	6 bays 9 bays 14 bays	• 45 light vehicle bays including 1 ACROD bay and 2 air/water bays
Total		29 bays	45 bays (16 bay surplus, exclusive of refuelling bays)

Having regard to Table 4, the proposal complies with the parking requirements of LPS2.

4.3 Matters to be considered

Clause 67 – Part 2 – Schedule 2 (deemed provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015* (LPS Regulations) details the matters to be given due regard by local government when considering development applications. Table 5 below provides an assessment against matters relevant to this proposal.

Table 5 – Matters to be considered by local government

Relevant matters to be considered	Comment
(a) The aims and provisions of this Scheme and any other local planning scheme operating within the Scheme area;	The Scheme and associated East Rockingham Development Guidelines classify the subject site as Light Industry. The proposed development is consistent with this classification, and therefore consistent with the aims and provisions of the local framework.
(b) The requirements of orderly and proper planning including any proposed local planning scheme or amendment to this Scheme that has been advertised under the *Planning and Development (Local Planning Schemes) Regulations 2015* or any other proposed planning instrument that the local government is seriously considering adopting or approving;	This report demonstrates the proposed development complies with the City's local planning framework.
c) Any approved State planning policy;	Bushfire reporting confirms that the subject site has a BAL Low rating. Refer to Appendix 7 for a copy of the formal bushfire reporting and BMP.

Relevant matters to be considered	Comment
e) Any policy of the Commission.	The development application has due regard for SPP3.7 and its relevant matters have been considered appropriately.
(g) Any local planning policy for the Scheme area;	This report demonstrates the proposed development generally complies with the City's local planning policies.
(m) The compatibility of the development with its setting including the relationship of the development to development on adjoining land or on other land in the locality including, but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the development;	The proposed development is entirely compatible with its setting for the following reasons: • The subject site is zoned Light Industry under the City's LPS2 and forms part of the East Rockingham Industrial Park. The proposed development is Light Industrial / Commercial in nature, consistent with this classification. • The proposal presents an attractive, high quality built form which enhances the overall appearance of the subject site. • The service station is single storey, which is largely consistent with other buildings in the area. The roof of the car service facility building entrance extends above one storey as an architectural feature to the corner of the building. • The proposal will significantly improve the amenity of the subject site with the development of land which is currently vacant and underutilised. • The service station will provide essential fuel retailing, convenience services and car servicing to the current and future population of Rockingham, which is currently in a state of growth and development. • Substantial co-consultant reporting and assessment demonstrate amenity impacts are capable of being managed. Having regard to the above, the nature of the proposed development is compatible with its surroundings, and poses no undue impact on the locality.
(n) the amenity of the locality including the following (i) environmental impacts of the development; (ii) the character of the locality; (iii) social impacts of the development;	<u>24-hour Trading</u> The 24-hour operation of the proposed service station is acceptable and warrants approval for the following reasons: • The general layout/configuration of the facility minimises any risk of amenity impacts due to buffering from some sensitive premises to the east, opposite Evinrude Bend. • The proposed development will comply with relevant Australian Standards for the obtrusive effects of outdoor lighting. • An Environmental Noise Assessment is provided in Appendix 6 of this report, demonstrating the proposed development will comply with the Noise Regulations at all times. • 24-hour trading will result in an increased level of passive surveillance in the area during night time periods. <u>Environmental Impacts</u> The service station's stormwater runoff will be treated by a SPEL Puraceptor system (a standard industry practice), which ensures fuels/oils are separated from runoff to prevent potential impacts. The facility will also incorporate use of the Stage 1 Vapour Recovery System, which ensures odours and fumes are appropriately captured and managed.

Relevant matters to be considered	Comment
	Character of the Locality The proposed land use is entirely consistent with the subject site's Light Industry zoning under the City's LPS2 and Element Precinct classification under the East Rockingham Development Guidelines. Building design will improve the amenity of the area by providing an attractive and modern built form outcome. Social Impacts The proposed development will not have any adverse social impacts on the surrounding locality for the following reasons: • The 24-hour operation of the petrol station and the use of CCTV ensures both active and passive surveillance of the surrounding area during all hours. • The petrol station will provide the retail sale of fuel and other associated convenience offerings to the local community and patrons travelling within the surrounding road network, both now and in the future. • The petrol station and car service facility will provide employment opportunities for inhabitants of the local community.
(p) whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved;	The proposed development is consistent with the specific landscaping standards of LPS2 and the East Rockingham Development Guidelines, as demonstrated earlier in this report. A landscaping plan is contained in the development plans (Appendix 3).
(s) the adequacy of — (i) the proposed means of access to and egress from the site; and (ii) arrangements for the loading, unloading, manoeuvring and parking of vehicles;	As demonstrated in Section 3.2 of this report and the supporting Traffic Impact Assessment prepared by Shawmac (Appendix 4), the proposed access arrangements and servicing arrangements are satisfactory.
(t) the amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety;	The Traffic Impact Statement prepared by Shawmac (Appendix 4) demonstrates that traffic generated from the proposed development will have minimal impact and can easily be accommodated by the surrounding road network.
(w) the history of the site where the development is to be located;	As confirmed in Section 1.2 of this report, LandCorp approval has been obtained prior to the lodgement of this application. Refer to Appendix 1 for a copy of the approval.

Having regard to Table 5 above, the proposal appropriately addresses matters to be given due regard as set out in the deemed provisions. The proposal therefore warrants approval accordingly.

4.4 State planning policies

4.4.1 State Planning Policy 3.7 – Planning in Bushfire Prone Areas

Given the development site is located within a 'bushfire prone area', we have provided a further assessment against the requirements of SPP3.7, and associated Guidelines for Planning in Bushfire Prone Areas (Bushfire Guidelines). Appendix 4 of the Bushfire Guidelines details the Bushfire Protection Criteria, which are addressed in the following table.

Table 6 – Bushfire assessment

Bushfire Protection Criteria	Provided	Compliance
Element 1 - Location		
Development to be located in BAL-29 or below.	Maximum bushfire attack level for the development site is BAL 12.5.	✓
Element 2 – Siting and Design of Development		
Siting and design is appropriate to the level of bushfire threat.	A BAL rating of Bal 12.5 has been established for the subject site, corresponding to a limited scale of bushfire risk emanating from the non-vegetated area surrounding the development site, the low threat vegetation to the east of the subject site and the Bush Forever reserve south of Dixon Road. As a result, the bushfire risk of the proposed development is manageable through standard building code management measures, as detailed within sections 3 and 5 of AS 3959-2009.	✓
Element 3 – Vehicular Access		
Internal layout, design and construction of vehicle access and egress in the development allows for emergency and other vehicles to move through it easily and safely at all times.	The development site proposes five separate vehicle access and/or egress points to the public road network. The development site has three street frontages and provides for multiple internal movement paths, including perimeter access for fire vehicle movements.	✓
Element 4 – Water		
The development is provided with a permanently and secure water supply that is sufficient for fire fighting purpose.	The subject site is located within an industrial precinct and will contain a water mains connection.	✓

As demonstrated in the above table, the existing development meets the Bushfire Protection Criteria of the Bushfire Guidelines. Refer to Appendix 7 for a copy of the formal bushfire reporting that was conducted by Entire Fire Management.

4.5 Local Planning Policies

4.5.1 Local Planning Policy 3.3.8 East Rockingham Development Guidelines

Local Planning Policy 3.3.8 East Rockingham Development Guidelines (Development Guidelines) sets out the development standards applicable to the East Rockingham Industrial Park – Element Precinct. An assessment against the relevant requirements of the Development Guidelines is provided in Table 7 below.

Table 7 – East Rockingham Development Guidelines

Requirement	Provided	Compliance
Development Approval		
Plans must be endorsed by the Estate Architect prior to being lodged with the City of Rockingham.	Refer to Appendix 1 for a copy of the development plans approved by the Estate Architect on behalf of LandCorp.	✓
Site coverage		
Site coverage and plot ratio is to be in accordance with Local Authority Scheme Text requirements and determined by setbacks, landscaping, parking and the Building Code of Australia requirements.	There is no plot ratio applicable to the subject site under LPS2. The proposed development covers approximately 1,122m^2 (19%) of the subject site and is considered appropriate site coverage.	✓
Building setbacks and location		
Street setbacks *A minimum front setback of fifteen (15) metres shall apply to the primary street and a minimum setback of three (3) metres shall apply to the secondary street, or streets, unless otherwise determined by Council.*	The setback of the car refuelling canopy is 18.8m to the primary street boundary (Dixon Road). The setback of the retail building is 43.7m to the primary street boundary (Dixon Road). The setback of the car service building is 18m to the secondary street boundary (Evinrude Bend) and 13.5m to the Whittle Road boundary, in lieu of the minimum 3m.	✓ ✓ ✓
Side and rear setbacks *Zero lot lines are only permitted where indicated on the Development Guide Plan (DGP), otherwise side setbacks are to be three (3) metres, unless otherwise determined by Council.* *There is no requirement for rear lot setbacks except for Lots 36-40 where a three (3) metre rear setback is required.*	Side setback The truck duel canopy provides a 0.4m setback to the western lot boundary in lieu of 3m. The reduced setback to the western boundary is considered acceptable as a fuel canopy is more appropriately classed as an open structure and not a building. It should also be noted that the adjoining development appears to have a nil setback on this boundary. Rear A 13.5m setback is provided to the rear (Whittle Road) boundary.	Discretion ✓

Car parking		
The number of car parking bays required will be in accordance with the Local Authority Scheme Text. Car parking can be placed between the landscape setback and the building line. Similarly, bay sizes, driveway widths and turning circles are to suit these and other functional requirements. Street parking is discouraged within the area. The Service roads are likely to be used by large trucks and other heavy vehicles and street parking would impede manoeuvrability and safety.	The proposed parking arrangement and number of car parking bays is compliant with Table 2 – Parking requirements of LPS2 for the service station land use as demonstrated in Table 4 of Section 4.3.4 of this report. Car parking bays will be constructed in accordance with the Australian Standards.	✓ ✓
Roadways and parking within a development must be planned to achieve the following: • *Separation of service/haulage vehicles from visitor and staff parking areas;* • *Siting of parking area adjacent to areas of buildings that are commonly accessed;* • *Provide suitable species of shade trees at a ratio of 1 per 4 car bays, evenly throughout parking areas;* • *Provide clear paths for pedestrian movement separate from areas of frequent vehicular movement; and* *Consider the visitor parking areas as an extension of the corporate/market image in terms of its presentation.*	The vehicle access locations (crossovers) are appropriately located to minimise any conflict with pedestrians and patrons of the development. The vehicle circulation pattern minimises any conflict and is best practice service station design. 45 car parking bays are proposed (12 trees required) 15 shade trees are proposed. Pedestrian access and movements throughout the site are focused to the south portion of the development site, limiting any interaction with the truck refuelling canopy and fuel bowsers.	✓ ✓ ✓ ✓
External service and storage area		
Service, storage and bin areas must be screened behind the front building line and from the street. Landscaping, fencing and gates can be utilised to screen theses areas.	The service area and bin store are screened from the primary street frontage by the retail and car service buildings. From the rear, the service area and bin store are screened by an enclosure and are not visible by the public. No outdoor storage of goods is proposed.	✓
Fencing		
Security fencing is permitted along side and rear boundaries. Front fencing is not permitted forward of the front building line. The minimum standard of fencing is black PVC coated galvanised link mesh with black support members. *Specialised fencing is required along the rear boundaries of Lots 36 to 40 and is to be 1.8m high matt black powder coated palisade fencing with 'W' profile single pointed pales. This fencing must include 25mpa concrete strip footing, 200mm x 200mm flush with ground surface.*	N/A – No fencing is proposed as part of this application.	N/A

Landscaping		
A landscaping plan is required to be submitted to the Estate Architect in accordance with Appendix A;	The landscaping concept plan has been approved by the estate architect.	✓
A 5m landscaping strip must be provided to any primary frontage;	A 4.5m landscaping strip is provided in lieu of 5m as a result of LandCorp's development.	Variation
A 3m landscaping strip must be provided to any secondary frontage;	A 3m landscaping strip is provided to the Evinrude Bend frontage.	✓
Landscaping installed by owners / occupiers along the rear boundaries of Lots 36 to 40 must use Coral Gums (Eucalyptus torquate) as screen trees;	Coral Gums are proposed on the Whittle Road rear boundary.	✓
Plant species shall be selected from those listed in Appendix B;	The proposed plant species are listed in Appendix B of the Development Guidelines.	✓
One (1) shade tree shall be provided per 4 car parking bays. Trees shall be selected from Appendix B;	45 car parking bays are proposed (12 trees required) 15 shade trees are proposed.	✓
Landowners and developers must use, where available, topsoil and mulch from stockpiles on the estate;	N/A – Not planning applicable. Can be dealt with at the building phase.	N/A
Landscaping installed by owners/occupiers must continue the landscaping theme and characters of the area; and	The proposed landscaping including native vegetation is entirely suitable within the context of the area.	✓
To retain the benefits of good quality landscaping. It is essential that maintenance is carried out regularly by a qualified landscape professional to both verge and lot areas.	Appropriate maintenance will be undertaken to the satisfaction of the City.	✓
Energy management		
External lighting • *No glare or light spill shall adversely impact adjoining properties; and* • *No glare or light spill shall impact passing motorists.*	Potential sources of light spill from the proposed development are primarily the lighting of the retail building frontage, the fuel canopy, illuminated signage and any external lights throughout the forecourt area. The final design of lighting will be subject to, and regulated by Australian Standard 4282 – Control of Obtrusive Effects of Outdoor Lighting and any other relevant regulatory requirements. In addition to regulatory requirements, the layout/orientation of the fuel retailing facility towards Dixon Road and the location/direction of the lighting will further control potential light spill.	✓
Water management		
Building fitout • *AAA rated shower heads;* • *AAA rated tap ware and flow regulators; and* • *AAA dual flush toilets.*	The specific specifications of the water systems can be provided at the detailed design stage prior to the issue of the building permit and will be consistent with the provisions of the Development Guidelines and Australian Standards.	✓

Landscape areas (water reticulation) • *Low flow trickle dripper systems, or coarse sprays are required within the lot; and* • *Programmable controller/timer system.*	The landscaping provided comprises native species of flora that do not require significant amounts of water. A water wise irrigation system can be implemented as part of the detailed design stage.	✓
Rainwater harvesting systems		
All lots within the development are to incorporate a rainwater harvesting system designed to capture rood run-off from a minimum of 200m^2 (or 50% of the available roof catchment area for roof areas less than 400m^2) during regular rainfall events. The collected rainwater is to be plumbed to supply a seasonally independent water use (e.g. toilet flushing).	A rainwater tank is provided at the rear of the retail building, between the service yard and the bin store. Specifics of the harvesting system can be provided at the detailed design stage.	✓
Built form character and detail		
• *The front elevation must be designed to addresses the street and to provide a corporate image and an inviting entrance;* • *Architectural form, and character must avoid large unrelieved expanses of wall or roof;* • *Where more than one building is planned for a site, their design must result in the creation of a group of integrated buildings presenting a harmonious image;* • *The main entrance is to be on the front elevation or close to the front of the building, clearly visible from the street; and* • *Entrance points to buildings are to be designed as focus points and must provide protection for pedestrians by means of substantial integrated building element such as a veranda, canopy or colonnade.*	The retail building entrance is oriented south, towards Dixon Road. The proposed retail building employs a range of architectural design features, resulting in a high quality built form outcome. These features include: • Green panelling along the outer edges of the retail building shopfront, and an awning over the entry point for shielding from the weather. • The use of louvres and associated textures to break up the building's appearance and provide internal shading from the sun. • Substantial glazing to allow for permeability and a direct line of sight between the retail building and forecourt area. The car service building, oriented east is integrated alongside the retail building, presenting as a unified development. Pedestrian access points to the retail building are legible and distinct. The awning over the entry to the retail building provides a clear entry and pedestrian footpaths / crosswalks throughout the development site assist in the guidance of pedestrians to the building.	✓ ✓ ✓ ✓
Zoning		
Reference should be made to the Zoning Table, Table No.1 in the City of Rockingham Town Planning Scheme No.2.	Service station is a discretionary use within the Light Industry zone and warrants approval.	✓
Materials, finishes and colour		
Broad facades of uniform material are to be broken down into sections to create variety and interest.	Concrete walls are broken up and softened by a range of architectural design features and colours that are described above.	✓

Plant and equipment		
All plant and equipment should be screened or remote from public areas, particularly from the street. The exception to this may be where stacks or ductwork that is necessary, is used as a 'design element'.	All proposed plant and equipment will be screened from public view, located to the rear of the development.	✓
Outbuildings and other structures		
Where there are numerous separate buildings on the site, the design of each should be considered with the whole of the site's planning so that they may present as an integrated development. Where possible, future expansion and staging should be considered so as to integrate these buildings. Also, use of colours, form and materials should be consistent amongst all these buildings.	The two proposed buildings are incorporated as one to present as an integrated development to the Dixon Road and Evinrude Bend frontages. Building materials and colours are consistent with BP's corporate branding and the Light Industry zone.	✓
Signage and graphics		
Signs attached to the buildings shall be designed to be an integrated part of the building e.g. recessed into the façade, fascia or awning. • *One free standing or composite sign only per lot.* • *Where multiple occupancy is proposed, the composite sign may have one panel per occupancy.*	All proposed wall signs are integrated into the building. Two free standing Pylon signs are proposed. One freestanding sign per frontage.	✓ Variation

As demonstrated in the above table, the proposed development is consistent with the Development Guidelines for the industrial precinct.

4.5.2 Planning Policy 3.3.1 – Control of Advertisements

The City's Local Planning Policy – Control of Advertisements (LPP3.3.1) sets out the standards for signage proposed within the scheme area.

The proposed service station includes the following advertising signs:

- One 9m metre high internally illuminated BP ID sign is proposed within the subject site, fronting Dixon Road. The proposed ID sign comprises an LED digital price board and internally illuminated acrylics sign boxes.
- One 6m metre high internally illuminated car service facility ID sign is proposed within the subject site, fronting Evinrude Bend. The proposed ID sign comprises an LED digital price board and internally illuminated acrylics sign boxes.
- An illuminated BP Helios wall sign integrated into the retail building shopfront (south) elevation.
- Illuminated Mugg and Bean signage integrated on the retail building shopfront (south) elevation.
- Four 950mm BP Helios canopy signs integrated within the car fuel canopy.
- Three 950mm BP Helios canopy signs integrated within the truck fuel canopy.
- One 'BP Rockingham' wall sign integrated into the shopfront above the retail building entrance.

- Two 3.56m x 2m directional signs fronting Evinrude Bend, adjacent to the southernmost crossover.
- Five wall signs incorporated into the facades of the car service facility (specific details to be provided at a later stage).

Table 8 below provides an assessment of the proposed signage against the relevant requirements of the LPP3.3.1.

Table 8 – LPP3.3.1 assessment

Signage Policy Requirements	Provided/Comment	Compliance
Pylon Sign		
Pylon signs shall not be located within 1.8m of a boundary.	The proposed BP ID sign is set back 0.9m from the Dixon Road boundary. This is appropriate, as the purpose of the sign is to display important information including the price of fuel to passing trade on Dixon Road. The proposed car service facility pylon sign is located adjacent to the Evinrude Bend lot boundary. Both variations are considered appropriate, as two tenancies will operate from the subject site and appropriate exposure is required for its 3 street frontages. The signage is not considered excessive and is appropriate within the light industry / service commercial context.	Variation Variation
Pylon signs shall not be situated within 6m of any other sign of the same lot.	The two proposed pylon signs are located approximately 34m apart. The proposed 6m high car service facility ID sign is located 3.85m from the proposed directional (entry) sign, in lieu of the required 6m. This variation is considered minor, as the location of the directional sign is essential for the safe ingress and manoeuvring of vehicles on site. The proximity of the signs will not result in any confusion for vehicles, as the information, size and purpose of the signs are entirely different.	✓ Variation
Pylon signs shall not project over a street, walkway or any other public area by more than 1m.	The proposed pylon signs do not project over any street, walkway or any other public area.	✓
Pylon signs shall not have a height exceeding 6m, unless it can be demonstrated to the Council that a greater height is warranted and it complies with the objectives of this Planning Policy. In any event, a Pylon Sign shall not exceed 9m in height.	The proposed BP ID pylon sign fronting Dixon Road exceeds the 6m standard, with a proposed height of 9m. The proposed 9m sign is appropriate and warrants approval for the following reasons: • The development is located on Dixon Road, which connects Rockingham to the Mitchell Freeway. The additional sign height will ensure vehicles travelling in both directions have sufficient opportunity to identify the facility and access the site safely. • The subject site forms part of a service commercial/light industrial precinct which comprises a range of complementary commercial activities. Signage is an essential component which characterises the amenity and services officered within this precinct.	Variation

	The sign is completely related to the service station, conveying the price of fuel and other important information to motorists travelling in the area. The proposed car service facility pylon sign is 6m high and therefore compliant.	✓
Pylon signs shall not have any part of the sign less than 2.7m from the ground level, unless the sign is designed such that the underside of the face area is located at ground level. *Pylon signs shall not have a face area exceeding more than 3.5m width or height.* *Pylon signs shall not have a face area of more than 4m² on each side (single tenancy).*	The proposed pylon signs comprise panels which are incorporated from ground level to the top of the sign itself. The pylon signs' face area exceeds 3.5m in height. The pylon signs have a face area of approximately 18m² and 12.5m², exceeding the permitted 4m². This type of sign is found at almost every service station site in Australia, and is purposely designed in this way to ensure vehicles are able to read the content of sign panels.	Variation Variation Variation
Only one (1) pylon sign shall be permitted on a lot with a single tenancy. *For lots with two or more tenancies, only one (1) pylon sign will be generally permitted unless the site is large and has more than one street frontage, in which case one pylon sign per street frontage may be permitted.*	N/A – Two tenancies are proposed. The subject site has two proposed tenancies, is large and has three street frontages. Two pylon signs are therefore considered appropriate.	N/A ✓
Signs on buildings		
Unless otherwise determined by the Manager, Statutory Planning, the advertiser shall submit a Sign Strategy demonstrating compliance with the objectives of LPP3.3.1. The proposed signage is assessed against the objectives below:		
Ensure that advertisements are appropriate for their location;	The proposed signage is part of best practice service station design and appropriately located within the site to ensure a satisfactory level of commercial exposure.	✓
Minimise the proliferation of advertisements;	The proposed development includes 2 pylon signs, 2 directional signs and five wall signs. The number of signs is not considered to be a proliferation and are required for the appropriate exposure of the businesses and advertisement of services offered on site.	✓
Ensure that advertisements do not adversely impact on traffic circulation and management, or pedestrian safety;	The proposed signage will not have any adverse impacts on traffic management or pedestrian safety.	✓
Protect the amenity of residential areas, townscape areas and areas of environmental significance;	The subject site is zoned Light Industry and will not have any adverse impacts on the amenity of the surrounding area.	✓
Protect the significance of heritage places or buildings;	N/A – The subject site is not of heritage significance.	✓
Ensure that advertisements are constructed with quality materials;	Signage will be constructed to a high standard, of appropriate materials and in accordance with the Australian Standards.	✓

Encourage advertisements located within the Rural or Special Rural Zone or in areas of environmental significance to be sympathetic with the natural environment in terms of materials and colours;	The subject site is not within the Rural or Special Rural zone. The proposed signage is sympathetic to the Bush Forever reservation south of Dixon Road.	N/A ✓
Ensure advertisements are generally erected on land where the advertised business, sale of goods or service is being carried out; and	The proposed signage relates directly to the services provided on the subject site.	✓
Ensure that advertisements are maintained to a high standard.	Signage will be maintained to ensure a high level of amenity and presentation to the locality.	✓

Having regard to Table 8 above, the proposed signage is acceptable and warrants approval accordingly.

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

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

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

Table 9 below provides further information on the potential externalities from the operation of the proposed petrol filling station / car service facility, and provides justification to demonstrate the proposed location of the development is appropriate.

Table 9 – Mitigation of potential amenity or environmental impacts

Potential amenity or environmental impact	Mitigation methods
Noise	An Environmental Noise Assessment has been prepared for the proposal, incorporating a comprehensive assessment of noise sources as required by the *Environmental Protection (Noise) Regulations 1997.* Refer to Appendix 6, Environmental Noise Assessment.
Risk	As the proposed service station provides for the retail sale of fuel, the proponent must obtain a Dangerous Goods Storage and Handling Licence to store and sell petrol on the subject site (post development approval). The is assessed and considered as part of obtaining the licence: • Separation distances to boundaries, public places, protected places and impact on adjoining properties. • Site accessibility for fuel delivery tankers and vehicles. • Spill containment. • Emergency preparedness and management. • Operator training. • Maintenance provisions. • Lighting. • Equipment to be installed.

Potential amenity or environmental impact	Mitigation methods
	Accordingly, risk is appropriately assessed through the dangerous goods licensing process, which will follow the development approval process.
Odour/Gaseous	The underground fuel storage tanks will be equipped with a Stage 1 Vapour Recovery System. A Stage 1 Vapour Recovery System ensures all petrol vapours from the underground tanks are drawn back into the fuel tanker being emptied and returned to the supply terminal where the vapours are recondensed into liquid. The dangerous goods licensing process assesses the likely impact from vapours/odours. Accordingly, the assessment of petrol vapours and odours is appropriately assessed and managed through the dangerous goods licensing process, and will require implementation of appropriate design measures to mitigate potential risk impact.
Lighting	Exterior lighting has been designed in accordance with Australian Standard 4282 – Control of Obtrusive Effects of Outdoor Lighting and all other relevant regulatory requirements. In addition, the layout/orientation of the development towards Dixon Road and the location/direction of the lighting will further control potential light spill.

As demonstrated in Table 9 above, the proposed development has been appropriately designed and sited to mitigate any potential amenity and environmental impacts on nearby sensitive land uses. Accordingly, a lesser separation distance has been demonstrated to be acceptable and is warranted.

5 Conclusion

The proposal involves the development of a service station on the subject site, comprising two separate tenancies, one BP facility providing the retail sale of fuel / convenience goods and one car service building providing minor mechanical repairs to cars. The proposed service station development will result in an attractive and well-designed facility that is suitably located within the Light Industry zone, to provide key services to passing traffic and residents of the surrounding area.

In summary, the proposal appropriately responds to all relevant aspects of the planning framework and warrants approval for the following reasons:

- The proposed development is entirely consistent with the Industrial zoning of the subject site.
- The proposed development is a significant improvement to the amenity of the subject site which is currently vacant, comprising buildings and structures constructed of high-quality materials.
- The service station development will provide for the retail sale of essential fuel and convenience goods, which will service the local community and patrons travelling along the surrounding road network in an efficient and convenient manner.
- The service station development will provide for the minor mechanical repair of light vehicles, in service of the locality.
- Access and circulation arrangements provide for a high level of functionality, convenience and safety – as demonstrated by a suitably qualified traffic engineer.
- An appropriate level of supporting information is provided to demonstrate any potential amenity impacts are capable of being managed.

Having regard to the above, the proposal clearly demonstrates to suitability of a service station development on the subject site.

We therefore respectfully request the application for development approval be considered on its merits and favourably determined by the Metro South-West Joint Development Assessment Panel.

Appendix 1
LandCorp Pre-Approval

GOVERNMENT OF WESTERN AUSTRALIA

LANDCORP

Our Ref: ROCKI 2019-02-28
Enquiries: Jonathan Roach
Date: 28 February 2019

Planning Department
City of Rockingham
PO Box 2142
ROCKINGHAM DC WA 6967

Dear Sir or Madam

APPROVAL OF DEVELOPMENT PLANS - LOT 36 DIXON ROAD, ROCKINGHAM

I refer to your submission in relation to the above property address. The proposal was assessed by Hodge and Collard Architects against LandCorp's Development Guidelines. LandCorp wishes to advise that the proposed development has been ***APPROVED*** within the context of the Rockingham Industry Zone Element Precinct Design Guidelines.

LandCorp's approval does not constitute approval for a building licence or any other regulatory requirements and does not preclude the outcome of any assessment from the City of Rockingham. It is important that a copy of this letter and the approved plans enclosed be submitted with your application to the City of Rockingham.

Please do not hesitate to contact Jonathan Roach on 9482 7433 should you have any queries in relation to this letter.

Yours Sincerely

Jonathan Roach
DEVELOPMENT MANAGER
28 February 2019

Hodge Collard Preston
ARCHITECTS

22nd February 2019

Mr J. Roach
Project Manager
Landcorp
Locked Bag 5
PERTH BC WA 6849

Our Ref: 58.08-25

Dear Jonathan,

RE: LOT 36 CNR OF DIXON ROAD AND EVINRUDE BEND – ASSESSMENT
ROCKINGHAM ELEMENT PRECINCT
PROPONENT: MEYER SHIRCORE
CONTACT: EDEN MOLINARO
SUITE 2 437 ROBERTS ROAD
SUBIACO WA 6008

We have assessed the final drawings of the above project as forwarded to us on the 7th February 2019:-

Approved Drawing Nos.
Drawing Nos. 8236 SK012 sheets 1 to 6 inclusive dated February 2019 as attached.

1. **Site Coverage**
   To local authority approval.

2. **Building Setbacks and Location**
   All three street frontage building setbacks are acceptable.
   The side building setback to the western boundary is required, under the Design Guidelines, to be a minimum of three metres.
   A setback of nil is proposed and this has been accepted by Landcorp.

3. **Car Parking**
   To local authority approval.

4. **External Service and Storage Area**
   External areas will not be used for storage or servicing.
   The bin area is not to be located in the front setback area.

5. **Fencing**
   No boundary fencing is proposed.

6. **Landscaping**
   Achieved.
   Species have been selected from the list scheduled in the Design Guidelines for ground cover for the mulched areas and the verge.
   The number of shade trees is deemed to be acceptable.

7. **Energy Management**
Advice confirming that compliance will be achieved, has been provided.
Ensure that the mandatory requirements set-out in the Design Guidelines are achieved.

8. **Water Heating**
Advice confirming that compliance will be achieved, has been provided.
Ensure that the mandatory requirements set-out in the Design Guidelines are achieved.

9. **Water Management**
Advice confirming that compliance will be achieved, has been provided.
Ensure that the mandatory requirements set-out in the Design Guidelines are achieved.

10. **Rainwater Harvesting**
Advice confirming that compliance will be achieved, has been provided.
A rainwater tank is proposed to be located at the rear of the building.

11. **Built Form, Character and Detail / Materials, Finishes and Colour**
Acceptable to Landcorp.

12. **Plant and Equipment**
Plant and equipment are required to be screened from view from the street frontage.

13. **Outbuildings and Other Structures**
Not applicable.

14. **Signage and Graphics**
Achieved. Separate signage application to be submitted to local authority for approval.

We believe that the proposed development complies with the Landcorp Design Guidelines, with the provision that the matters highlighted are addressed in the final site and building design and therefore recommend the proposal for approval.

Please note that the developer needs to provide additional information at the pre-building license stage. Changes to the design proposal should be submitted by the proponent to Landcorp for approval prior to lodging for a building license with the local authority.

We have enclosed an A3 copy of the approved drawings for your reference.

Yours faithfully

M. Rainford

Mike Rainford

PROPOSED FUEL STATION & CAR SERVICE

LOCATION:LOTS 36, CNR DIXON ROAD & EVINRUDE BEND, ROCKINGHAM

FOR:DAWNMARK HOLDING PTY LTD. AFT THE ELEMENT UNIT TRUST BY: VEND PROPERTY

APPROVED

LANDCORP

Jonathan Roach
PROJECT MANAGER - INDUSTRIAL

HODGE COLLARD PRESTON
ARCHITECTS
PO BOX 743
WEST PERTH WA 6872
☎ 08 9322 5144
ADMIN@HCPARCH.COM

Drawings 1-6 HAVE BEEN REVIEWED & APPROVED FOR COMPLIANCE WITH THE DESIGN GUIDELINES

M. Rainford

SK012
FEB 2019
1

8236

meyer shircore 55 YEARS
architects 1963|2018

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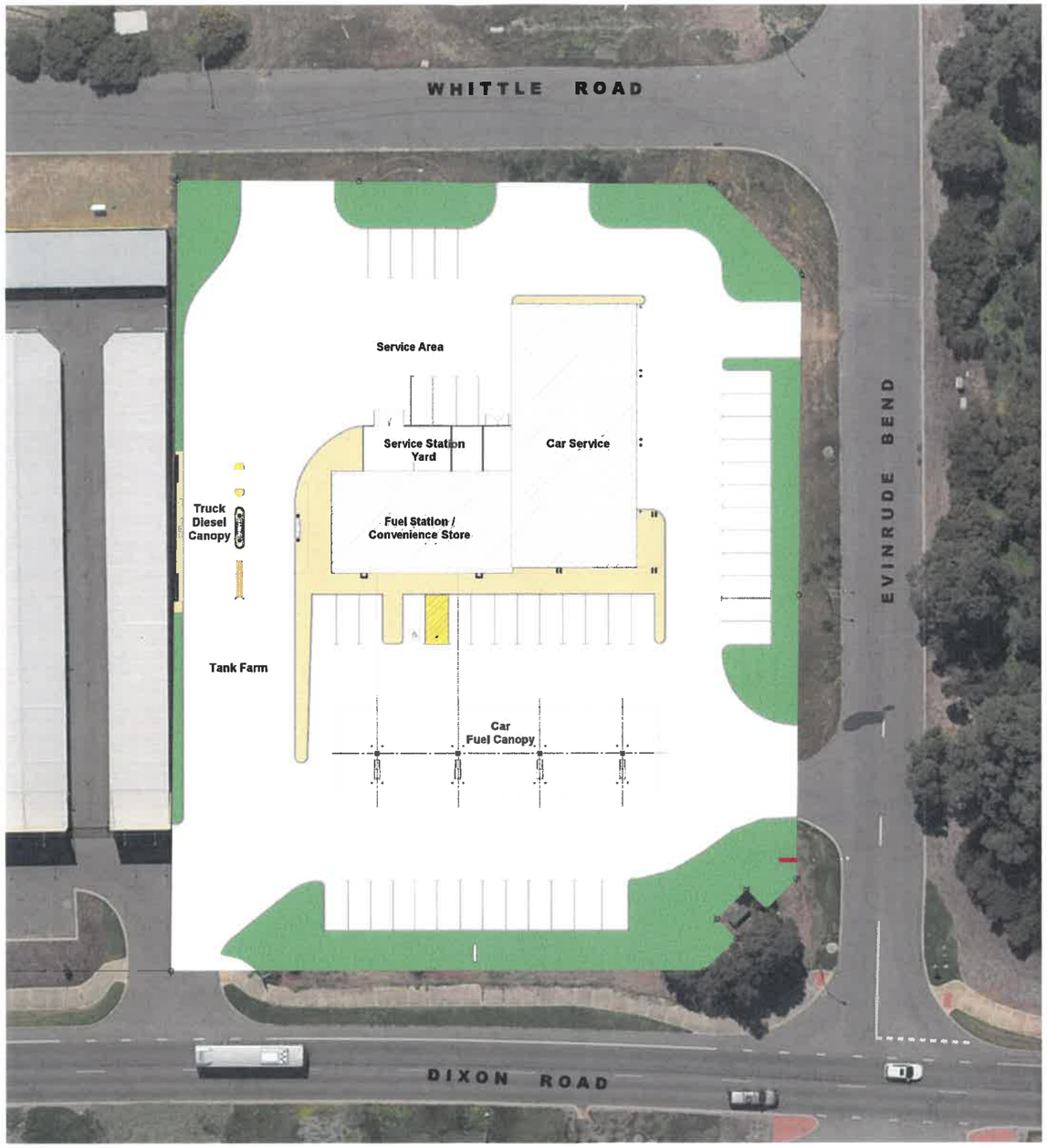

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DEVELOPED AERIAL DIAGRAM
SCALE1 : 250

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LANDCORP
Jonathan Roach
PROJECT MANAGER - INDUSTRIAL

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PROPOSED FUEL STATION & CAR SERVICE

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1 : 250 @ B1

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COMPOSITE SITE CRITERIA

1. Site Area		5,830m²
2. Zoning		Light Industry Service Station "D" Use Motor Vehicle Repair Station "D" Use
3. Landscaping		
a. Landscape Required		583.0m² or (10% of site)
b. Landscape Provided		
Soft		979.0m²
Hard		246.0m²
Total		1,134.6m² (19.5% of site)
4. Floor Area		
a. Convenience Store		225m²
b. Car Service		400m²
Total		625m²
5. Carparking		
a. *Cars Required*		Carbays
i. Convenience Store	6/100m² NLA of retail space +	14
	1/Employee	2
ii. Car Service	1/Bay	6
	1/Employee	4
Total		26
b. *Cars Provided*		45 Carbays

Landscape
A. Hard Landscaping
Defined as paved walkways either open or covered.
B. Soft Landscaping
Defined as vegetative landscaping.

Gross Floor Area GFA
A. All floor Areas on this plan are shown as GROSS FLOOR AREA, Unless otherwise noted as Nett Floor Area
B. Definition of Gross Floor Area is defined as
a GROSS FLOOR AREA OF TENANCY:
Gross Floor Area of an individual Tenancy is defined as the area contained between the centre line of common tenancy walls and the outside edge of external walls.
b. GROSS FLOOR AREA OF A BUILDING:
Gross Floor Area of a Building is defined as the total area contained between the outside edge of external walls

Nett Floor Area NFA
A. Nett Floor Area of a Tenancy on this plan is defined as the area between external or tenancy dividing walls.
B. This area is inclusive of toilets if the toilets are exclusive to the Tenancy.

WHITTLE ROAD

Proposed 10m wide crossover

Proposed 10m wide crossover

Proposed crossover 6m

4 Carbays

Paved Area

Screen Wall

3 Carbays

Service Station Yard

3m3 Rainwater Tank

Bins

Car Service
GFA 400m²
FFL. 6.00

RDoor

Fuel Station / Convenience Store
GFA 225m²
FFL. 6.00
(Final Layout To Be Determined)

Amb. Toilet

Staff Room

Office

Showroom

Feature tower over

Truck Diesel Canopy
FFL. 5.80

Existing Self Lock Storage

Tank Farm

Diesel canopy over shown dashed

3 Carbays

10 Carbays

Car Fuel Canopy
FFL. 5.60

Widen existing 6m crossover to 10m

Canopy over shown dashed

MRS RESERVATION

Painted Stop Line

Modify Existing Island

Existing Carbays

Existing Kerb Line

18 Carbays

Existing landscaping island to be removed shown dashed.

Existing Wester power transformer

Existing 3m wide drainage easement shown hatched.

Existing 0.5m wide R.O.C. easement shown hatched.

Existing 10m wide crossover

DIXON ROAD

EVINRUDE BEND

WHITTLE ROAD

MRS RESERVATION

DIXON ROAD

EVINRUDE BEND

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M. Lamford

APPROVED

LANDCORP

Jonathan Roach

Jonathan Roach
PROJECT MANAGER - INDUSTRIAL

N

SITE PLAN
SCALE: 1 : 200

EXISTING SITE SURVEY
SCALE: 1 : 200

PROPOSED FUEL STATION & CAR SERVICE

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FOR:DAWNMARK HOLDING PTY LTD. AFT THE ELEMENT UNIT TRUST BY: VEND PROPERTY

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SOUTH ELEVATION (DIXON ROAD) WITH FUEL CANOPY
SCALE: 1 : 200

SOUTH ELEVATION (DIXON ROAD) WITHOUT FUEL CANOPY
SCALE: 1 : 200

EAST ELEVATION (EVINRUDE BEND)
SCALE: 1 : 200

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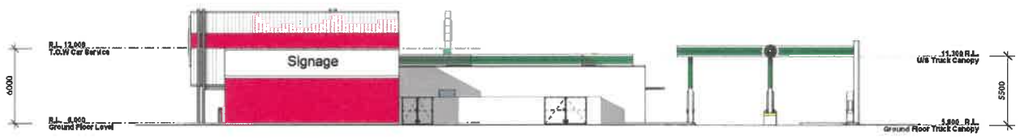
PROJECT MANAGER - INDUSTRIAL



NORTH ELEVATION (WHITTLE ROAD)
SCALE: 1 : 200

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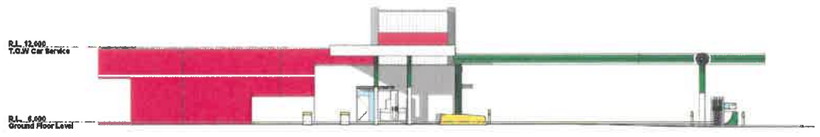
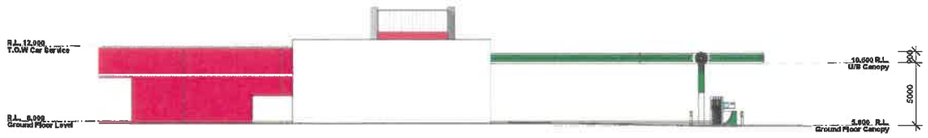


WEST ELEVATION WITHOUT BOUNDARY WALL
SCALE: 1 : 200



WEST ELEVATION WITH BOUNDARY WALL
SCALE: 1 : 200

PROPOSED FUEL STATION & CAR SERVICE
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FOR:DAWNMARK HOLDING PTY LTD. AFT THE ELEMENT UNIT TRUST BY: VEND PROPERTY

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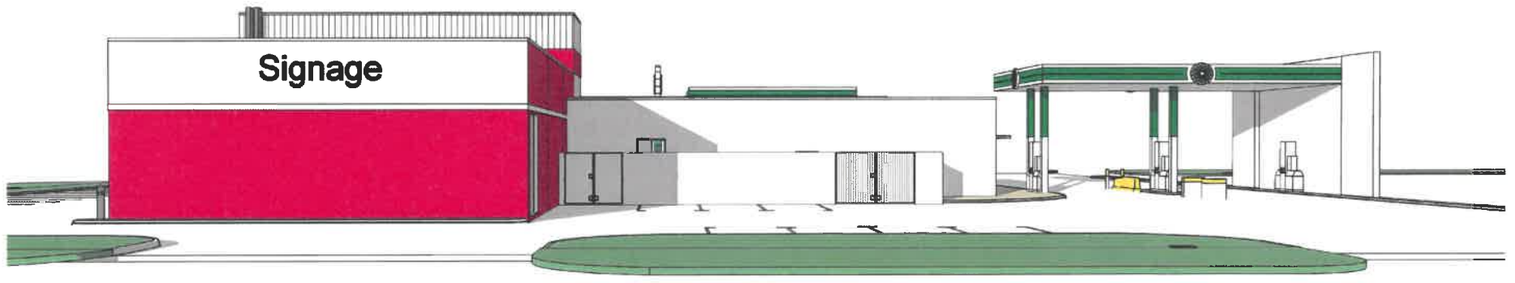
VIEW DIXON ROAD

VIEW DIXION ROAD



VIEW WHITTLE ROAD

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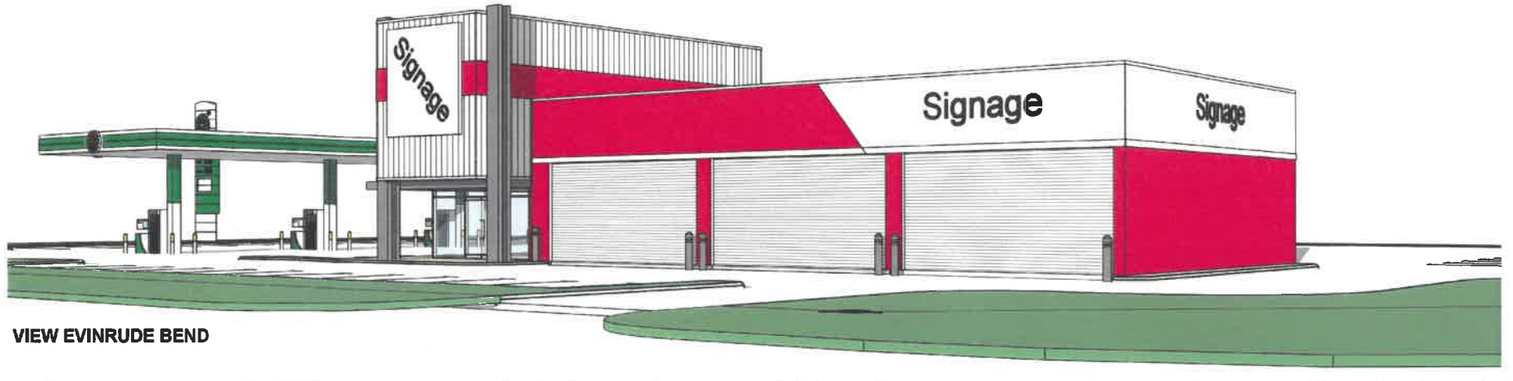

VIEW EVINRUDE BEND

PROPOSED FUEL STATION & CAR SERVICE

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FOR:DAWNMARK HOLDING PTY LTD. AFT THE ELEMENT UNIT TRUST BY: VEND PROPERTY

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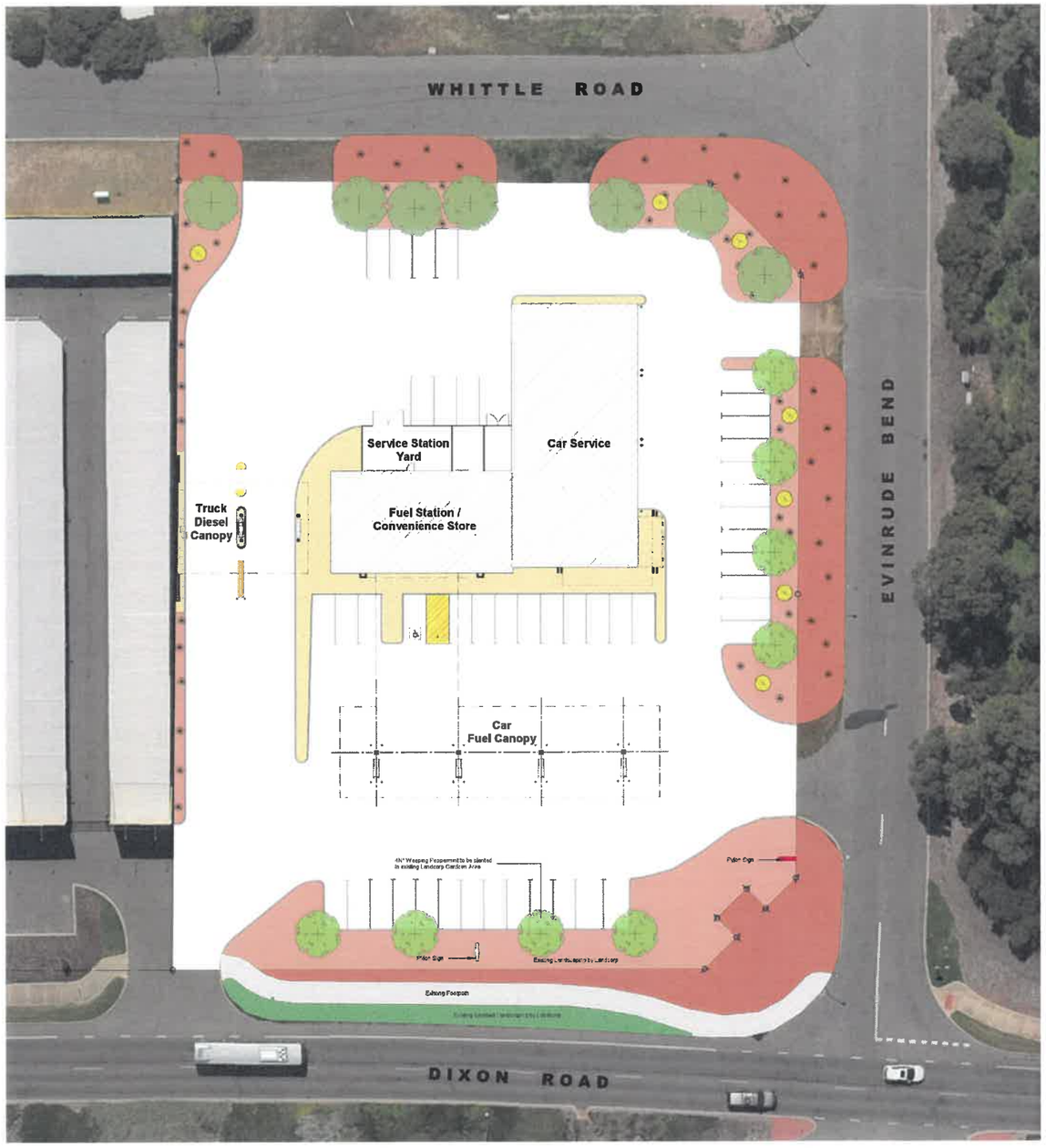

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LANDSCAPING PLAN
SCALE1 : 250

Landscape Legend

Symbol	Species	Description		Plant Size
	Brick Paving	Selected Brick Paving		
	Mulch	100mm Jungle mulch		
	Existing Landcorp Grassed Landscaping	Grass		
	Existing Landcorp Landscaping	Mulch		
	Kennedia Coccinea *Coral Vine*		Groundcover, with brightly coloured flowers in spring, in colours of pink, orange, and yellow-green	Height - 30cm to 40cm Width - 3m to 4m
	Xanthorrhoea Preissii *Blackboy*		Grassy leaves atop a dark thick trunk, with cream flowers borne on a tall spear-like spike.	Height - 3m to 5m Width - 2m to 4m
	Agonis Flexuosa *Weeping Peppermint*		A small evergreen tree with delicate, weeping branches. Grown for their clusters of small, 5-petaled, fragrant flowers	Height - 7m Width - 6m
	Eucalyptus Torquata Coral Gum		Clusters of orange barrel shaped buds with horned caps.	Height - 4m to 11m

Trees

15 Trees x 4 Cars = 60 Cars

APPROVED
LANDCORP
Jonathan Roach
PROJECT MANAGER - INDUSTRIAL

HODGE COLLARD PRESTON
ARCHITECTS
PO BOX 743
WEST PERTH WA 6872
☎ 08 9322 5144
ADMIN@HCPARCH.COM

PROPOSED FUEL STATION & CAR SERVICE
LOCATION:LOTS 36, CNR DIXON ROAD & EVINRUDE BEND, ROCKINGHAM
FOR:DAWNMARK HOLDING PTY LTD. AFT THE ELEMENT UNIT TRUST BY: VEND PROPERTY

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t: 08 9381 8511 e: msa@mevershircore.com.au

Appendix 2
Certificate of Title and Deposited Plan

WESTERN AUSTRALIA

REGISTER NUMBER
36/DP65366

DUPLICATE EDITION	DATE DUPLICATE ISSUED
1	**11/11/2009**

VOLUME **2731** FOLIO **580**

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 36 ON DEPOSITED PLAN 65366

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

DAWNMARK HOLDINGS PTY LTD OF 70 JOHNSTON STREET, MOSMAN PARK
(T N029240) REGISTERED 16/6/2015

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. EASEMENT BURDEN CREATED UNDER SECTION 167 P. & D. ACT FOR DRAINAGE PURPOSES TO LOCAL AUTHORITY - SEE DEPOSITED PLAN 65366 AS CREATED ON DEPOSITED PLAN 62393
2. EASEMENT BENEFIT CREATED UNDER SECTION 136C T.L.A. FOR RIGHT OF CARRIAGEWAY PURPOSES - SEE DEPOSITED PLAN 62393
3. EASEMENT BURDEN CREATED UNDER SECTION 136C T.L.A. FOR RIGHT OF CARRIAGEWAY PURPOSES - SEE DEPOSITED PLAN 65366 AS CREATED ON DEPOSITED PLAN 62393
4. *N029241 MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA REGISTERED 16/6/2015.
5. *N029242 CAVEAT BY WESTERN AUSTRALIAN LAND AUTHORITY LODGED 16/6/2015.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	DP65366
PREVIOUS TITLE:	2713-143
PROPERTY STREET ADDRESS:	NO STREET ADDRESS INFORMATION AVAILABLE.
LOCAL GOVERNMENT AUTHORITY:	CITY OF ROCKINGHAM

NOTE 1: DUPLICATE CERTIFICATE OF TITLE NOT ISSUED AS REQUESTED BY DEALING N029241

VER	AMENDMENT	AUTHORISED BY	DATE
2	LANDGATE AUDIT	N. PAUL	20/10/09
3	SURVEY SHEET REPLACED	LANDGATE	25.11.09

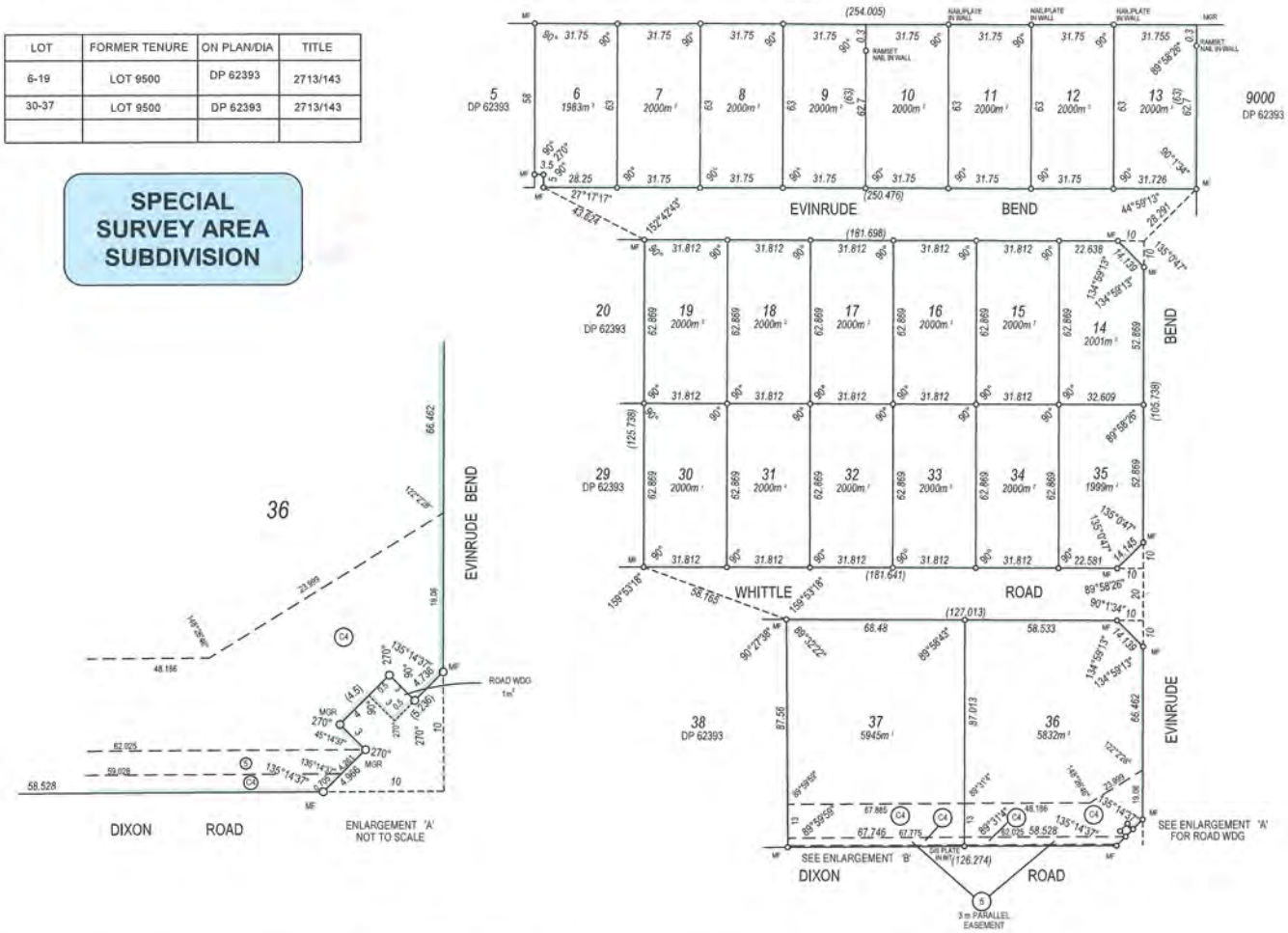
LOT	FORMER TENURE	ON PLAN/DIA	TITLE
6-19	LOT 9500	DP 62393	2713/143
30-37	LOT 9500	DP 62393	2713/143

SPECIAL SURVEY AREA SUBDIVISION

LIMITED IN DEPTH TO 12.19 METRES

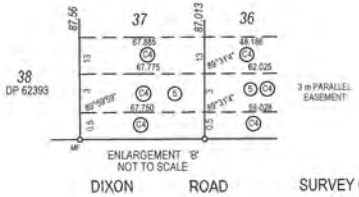
DP 213090

UCL



INTERESTS AND NOTIFICATIONS

SUBJECT	PURPOSE	STATUTORY REFERENCE	ORIGIN	LAND BURDENED	BENEFIT TO	COMMENTS
(C4)	RIGHT OF CARRIAGEWAY	SEC 136C OF THE TLA	DP 62393	LOTS 38 & 37	LOTS 38, 39 AND 40 ON DP 62393 AND CITY OF ROCKINGHAM	
(S)	EASEMENT (DRAINAGE)	SEC 167 OF P & D ACT (REG S)	DP 62393	LOTS 36, 37	CITY OF ROCKINGHAM	



SURVEY CARRIED OUT UNDER REG. 26A (4)
SPECIAL SURVEY AREA GUIDELINES
SEE SHEET 2 FOR SURVEY INFORMATION

TYPE FREEHOLD

PURPOSE SUBDIVISION

PLAN OF

LOTS 6 - 19 & 30 - 37 & ROAD WIDENING

DISTRICT COCKBURN SOUND
TOWNSITE
FILE
LOCAL AUTHORITY CITY OF ROCKINGHAM
LOCALITY EAST ROCKINGHAM
INDEX ON BG 33(5) 04:12

SSA (YES) NO
FORMER TENURE SEE TABLE
FIELD BOOK 101845

SCALE: 1:1250 @ A2
ALL DISTANCES ARE IN METRES

SURVEYOR'S CERTIFICATE - Reg 54
I N. J. PAUL
hereby certify that this plan is accurate and is a correct representation of the - (a) *survey, and/or (b) *calculations from measurements; *I delete if inapplicable undertaken for the purposes of this plan and that it complies with the relevant written law(s) in relation to

Licensed Surveyor Date

SURVEYOR'S CERTIFICATE - Completed
I
hereby certify that this complete plan (a) is a correct and accurate representation of the survey(s) of the subject land; and (b) is in accordance with the relevant law in relation to which it is lodged

Licensed Surveyor Date

SURVEY FIRM Cardno Spectrum Survey
REF: 207099 DP65366_RS_V2

LODGED DATE 15-Oct-09
FEE PAID $1436.00
ASSESS No. 5954163

TYPE OF VALIDATION
FULL AUDIT
LEGAL COMPONENT RF
DOCKET 01677-2005/07
CERTIFIED CORRECT 22.10.09
I.S.C.
F.S.C.

APPROVED BY WESTERN AUSTRALIAN PLANNING COMMISSION
FILE 134276
28/10/2009
Delegated Under S.16 P & D Act 2005 Date

IN ORDER FOR DEALINGS
SUBJECT TO
Sec 168(3) P+D Act
29.10.09
FOR INSPECTOR OF PLANS & SURVEYS / AUTHORIZED LAND OFFICER DATE

APPROVED REG 26A (4)
9-11-09
INSPECTOR OF PLANS & SURVEYS / AUTHORIZED LAND OFFICER DATE

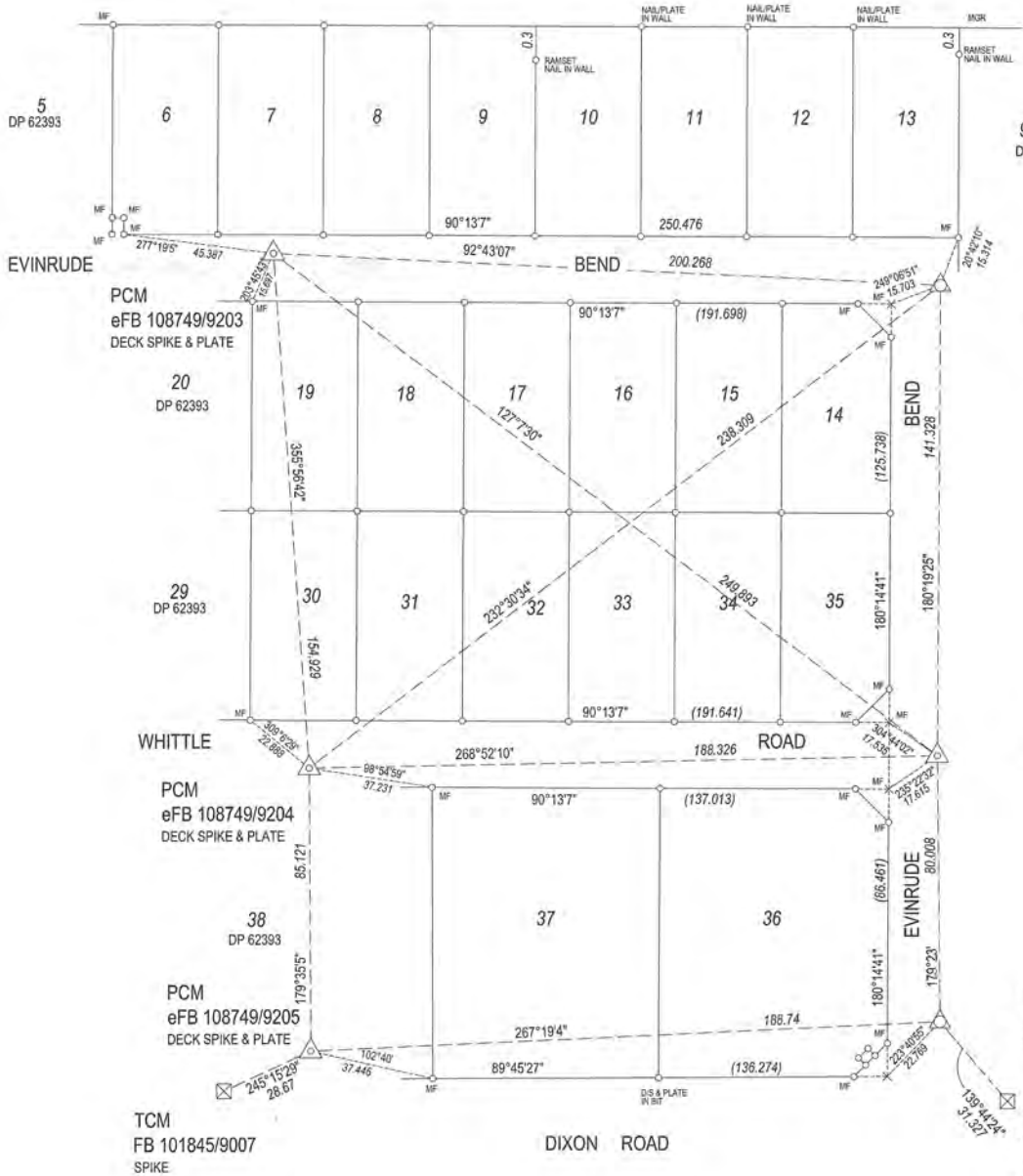
Landgate
Western Australian Land Information Authority

DEPOSITED PLAN
65366
ORIGINAL
SHEET 1 OF 2
VERSION 3

DP 65366 (01)

FOR HEADING SEE SHEET 1

SURVEY SHEET AUDITED
DATE: 07/12/2010 LM
DOCKET: 04283-2010v02



FINAL SURVEY SHEET
SURVEY INFORMATION ONLY

SURVEY CARRIED OUT UNDER REG. 26A
SPECIAL SURVEY AREA GUIDELINES
BEARING DATUM - PCG 94

LEGEND

- DENOTES PEG
- DENOTES SPIKE
- DENOTES PERMANENT CONTROL MARK (PCM)
- DENOTES TEMPORARY CONTROL MARK (TCM)
- DENOTES PERMANENT SURVEY MARK (PSM)
- DENOTES STANDARD SURVEY MARK (SSM)

FOR INTERESTS AND NOTIFICATIONS SEE SHEET 1

SCALE 1 : 1250 (AT A2) ALL DISTANCES ARE IN METRES

Nigel Paul 2009-09-08 2009.10.21 11:49:21 +08'00'
LICENSED SURVEYOR DATE

APPROVED BY
WESTERN AUSTRALIAN PLANNING COMMISSION
FILE 134276
DELEGATED UNDER S. 16 P & D ACT 2005 DATE

SHEET 2 OF 2
VERSION 3

Landgate
Western Australian Land Information Authority

DEPOSITED PLAN
65366

Appendix 3
Development Plans

PROPOSED FUEL STATION & CAR SERVICE

LOCATION:LOTS 36, CNR DIXON ROAD & EVINRUDE BEND, ROCKINGHAM

FOR:DAWNMARK HOLDING PTY LTD. AFT THE ELEMENT UNIT TRUST BY: VEND PROPERTY

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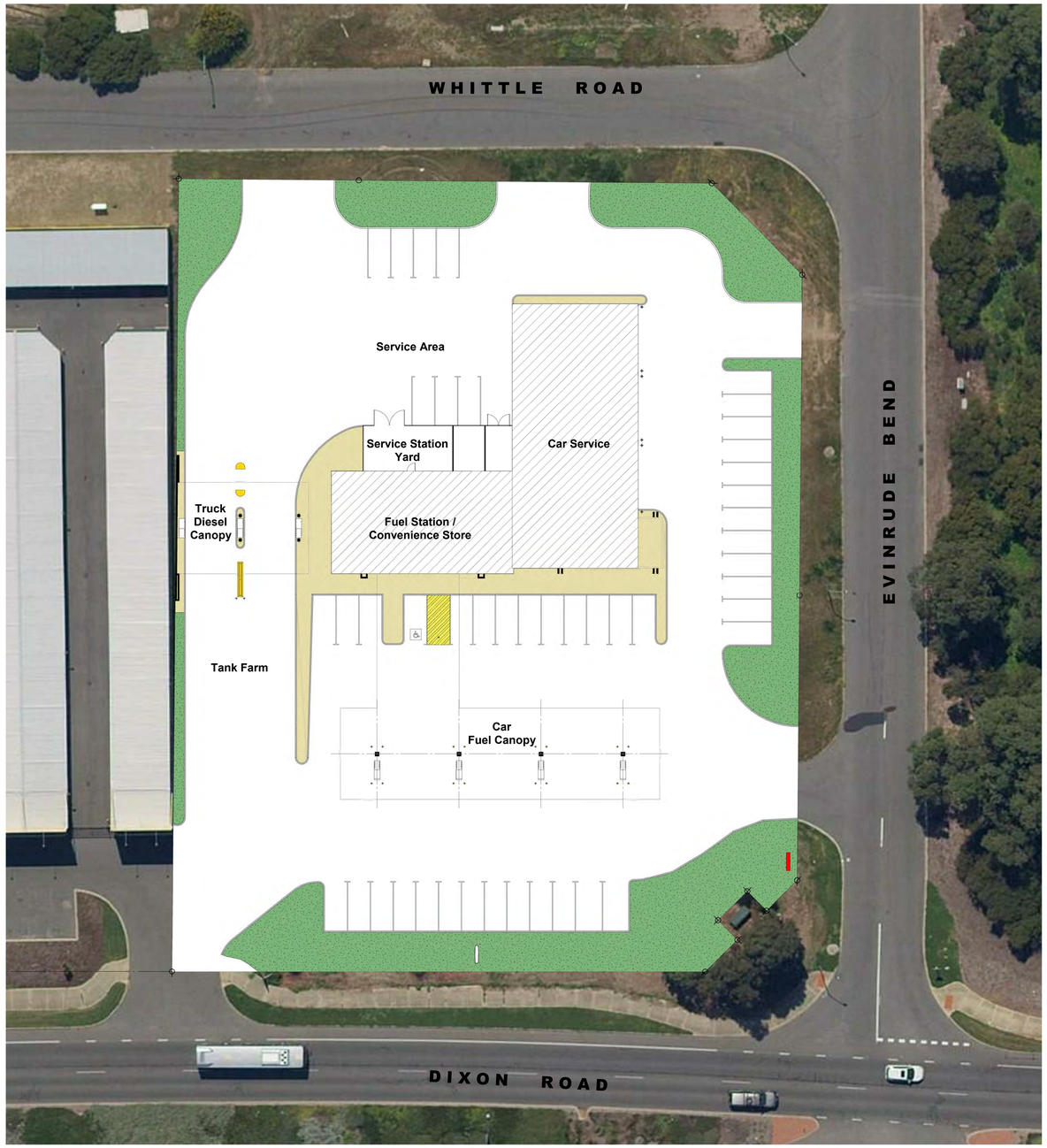
t: 08 9381 8511 e: msa@meyershircore.com.au



N

DEVELOPED AERIAL DIAGRAM

SCALE:1 : 250

PROPOSED FUEL STATION & CAR SERVICE

LOCATION:LOTS 36, CNR DIXON ROAD & EVINRUDE BEND, ROCKINGHAM

FOR:DAWNMARK HOLDING PTY LTD. AFT THE ELEMENT UNIT TRUST BY: VEND PROPERTY

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COMPOSITE SITE CRITERIA

1. Site Area 5,830m²

2. Zoning
Light Industry
Service Station "D" Use
Motor Vehicle Repair Station "D" Use

3. Landscaping

a. Landscape Required	583.0m² or (10% of site)
b. Landcape Provided	
Soft	895.5m²
Hard	245.6m²
Total	**1,141.1m²** (19.6% of site)

4. Floor Area

a. Convenience Store	225m²
b. Car Service	400m²
Total	**625m²**

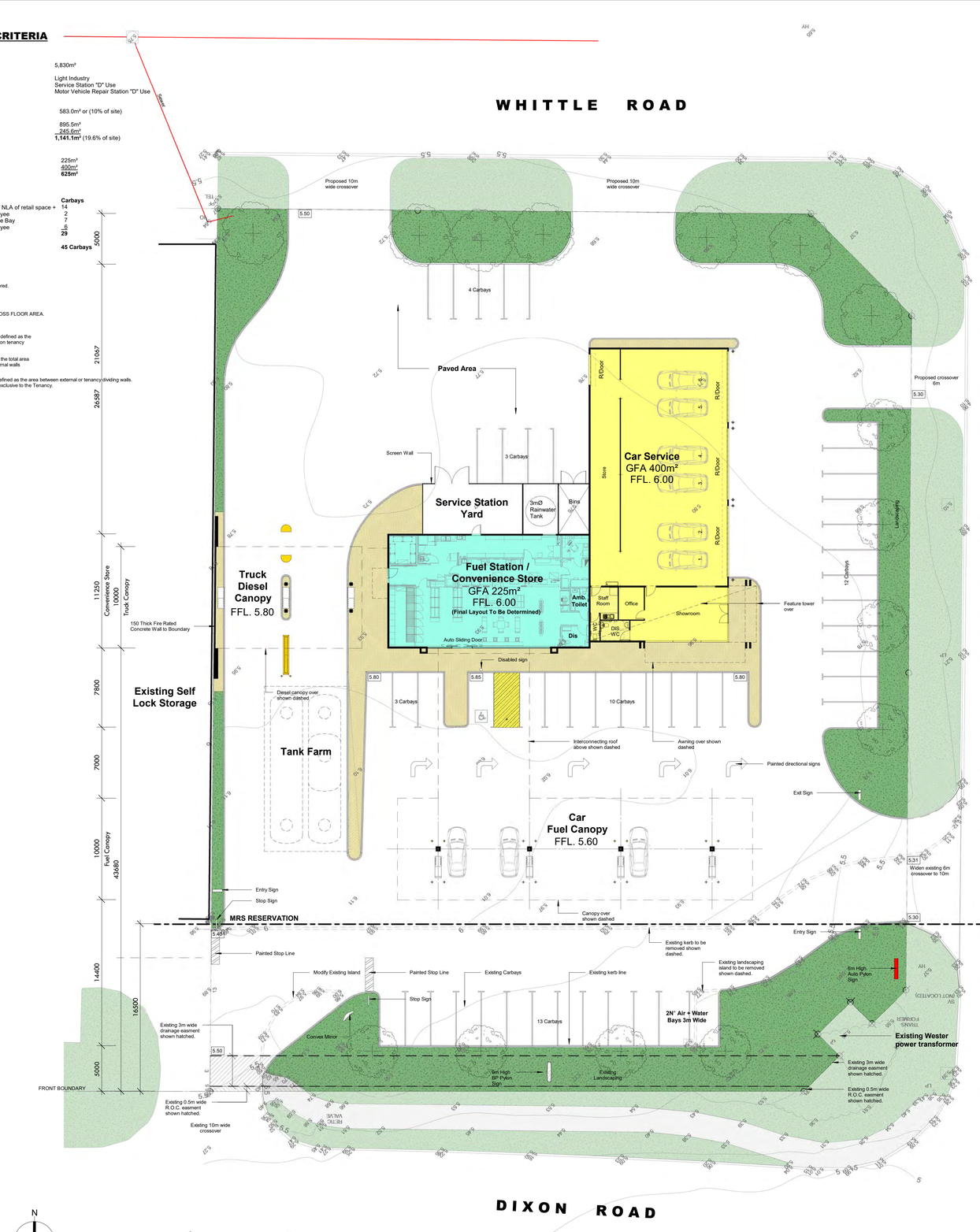
5. Carparking

a. Cars Required		**Carbays**
i. Convenience Store	6/100m² NLA of retail space +	14
	1/Employee	2
ii. Car Service	1/Service Bay	7
	1/Employee	6
Total		**29**
b. Cars Povided		**45 Carbays**

Landscaping
A. Hard Landscaping
Defined as paved walkways either open or covered.
B. Soft Landscaping
Defined as vegetative landscaping.

Gross Floor Area : GFA
A. All Floor Areas on this plan are shown as GROSS FLOOR AREA.
Unless otherwise noted as Nett Floor Area.
B. Definition of Gross Floor Area is defined as:
i/ GROSS FLOOR AREA OF TENANCY:
Gross Floor Area of an individual Tenancy is defined as the area contained between the centre line of common tenancy walls and the outside edge of external walls.
ii/ GROSS FLOOR AREA OF A BUILDING:
Gross Floor Area of a Building is defined as the total area contained between the outside edge of external walls

Nett Floor Area : NFA
A. Nett Floor Area of a Tenancy on this plan is defined as the area between external or tenancy dividing walls.
B. This area is inclusive of toilets if the toilets are exclusive to the Tenancy.



SITE PLAN
SCALE: 1 : 200

EXISTING SITE SURVEY
SCALE: 1 : 200

PROPOSED FUEL STATION & CAR SERVICE
LOCATION:LOTS 36, CNR DIXON ROAD & EVINRUDE BEND, ROCKINGHAM
FOR:DAWNMARK HOLDING PTY LTD. AFT THE ELEMENT UNIT TRUST BY: VEND PROPERTY

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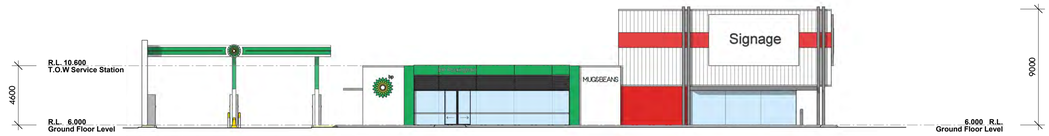
SOUTH ELEVATION (DIXON ROAD) WITH FUEL CANOPY

SCALE: 1 : 200

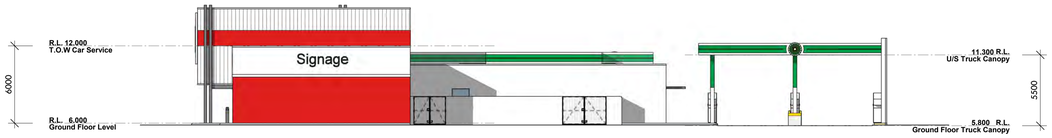


SOUTH ELEVATION (DIXON ROAD) WITHOUT FUEL CANOPY

SCALE: 1 : 200

EAST ELEVATION (EVINRUDE BEND)

SCALE: 1 : 200



NORTH ELEVATION (WHITTLE ROAD)

SCALE: 1 : 200

WEST ELEVATION WITHOUT BOUNDARY WALL

SCALE: 1 : 200

WEST ELEVATION WITH BOUNDARY WALL

SCALE: 1 : 200

PROPOSED FUEL STATION & CAR SERVICE

LOCATION:LOTS 36, CNR DIXON ROAD & EVINRUDE BEND, ROCKINGHAM

FOR:DAWNMARK HOLDING PTY LTD. AFT THE ELEMENT UNIT TRUST BY: VEND PROPERTY

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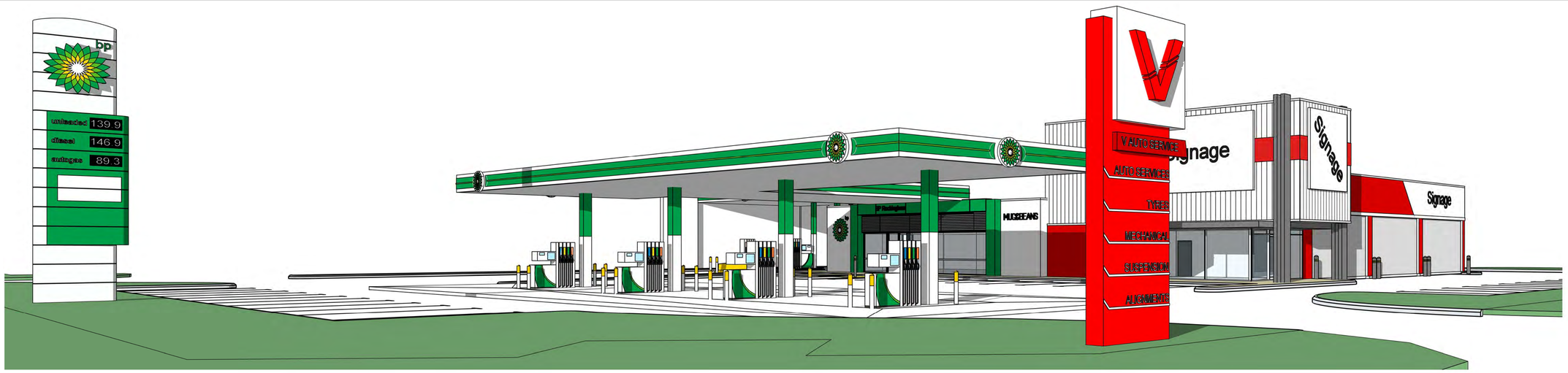
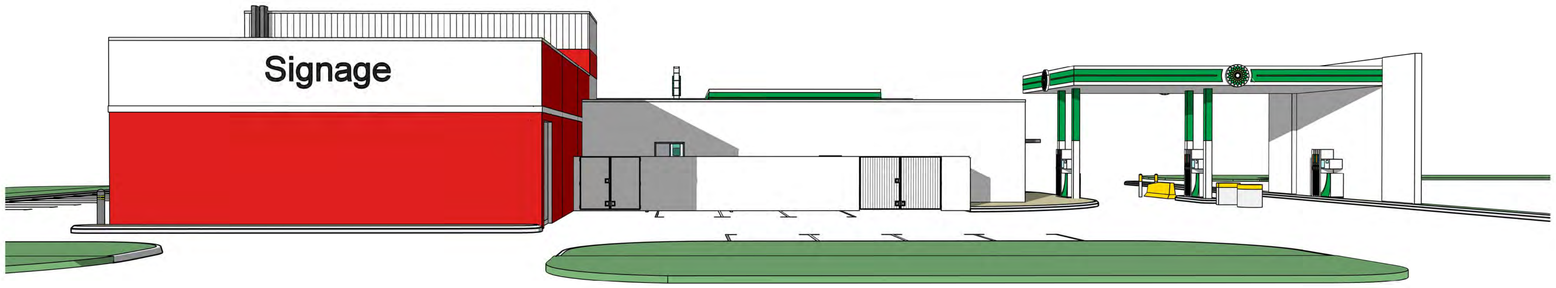
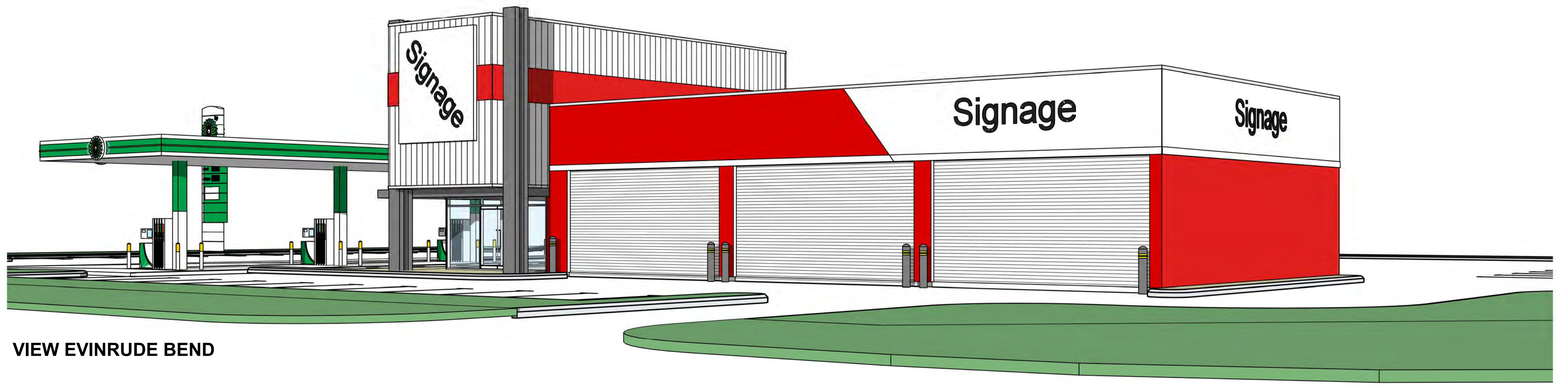


VIEW DIXON ROAD

VIEW DIXION ROAD



VIEW WHITTLE ROAD



VIEW EVINRUDE BEND

PROPOSED FUEL STATION & CAR SERVICE

LOCATION:LOTS 36, CNR DIXON ROAD & EVINRUDE BEND, ROCKINGHAM

FOR:DAWNMARK HOLDING PTY LTD. AFT THE ELEMENT UNIT TRUST BY: VEND PROPERTY

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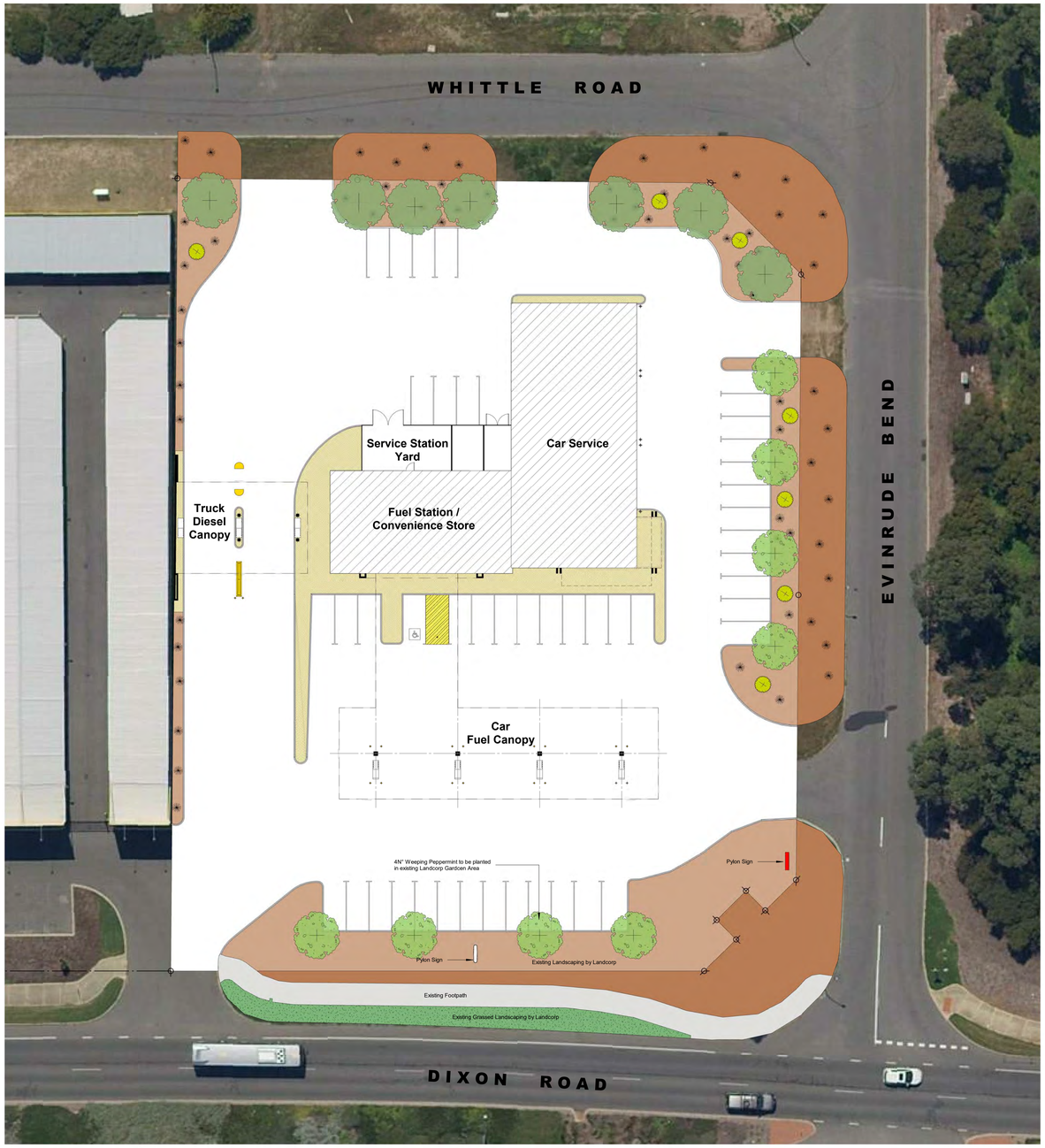

N

LANDSCAPING PLAN
SCALE:1 : 250

Landscape Legend

Symbol	Species	Description	Plant Size
	Brick Paving	**Selected Brick Paving**	
	Mulch	**100mm Jungle mulch**	
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	Existing Landcorp Landscaping	**Mulch**	
	Kennedia Coccinea *Coral Vine*	 **Groundcover, with brightly coloured flowers in spring, in colours of pink, orange, and yellow-green**	**Height - 30cm to 40cm Width - 3m to 4m**
	Xanthorrhoea Preissii *Blackboy*	 **Grassy leaves atop a dark thick trunk, with cream flowers borne on a tall spear-like spike.**	**Height - 3m to 5m Width - 2m to 4m**
	Agonis Flexuosa *Weeping Peppermint*	 **A small evergreen tree with delicate, weeping branches. Grown for their clusters of small, 5-petaled, fragrant flowers**	**Height - 7m Width - 5m**
	Eucalyptus Torquata Coral Gum	 **Clusters of orange barrel shaped buds with horned caps.**	**Height - 4m to 11m**

Trees

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PROPOSED FUEL STATION & CAR SERVICE
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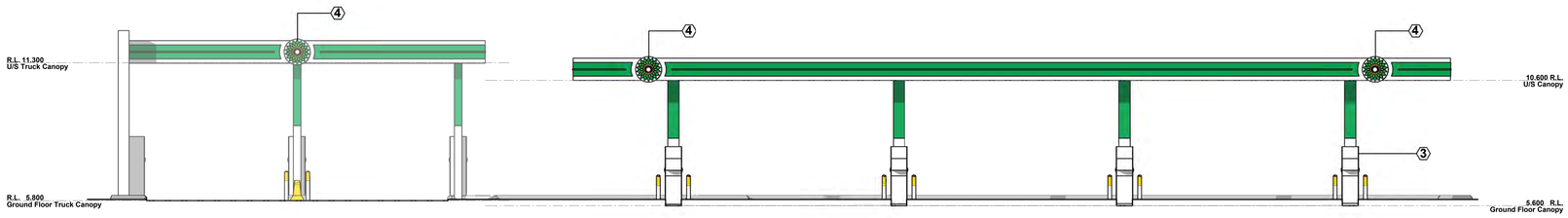
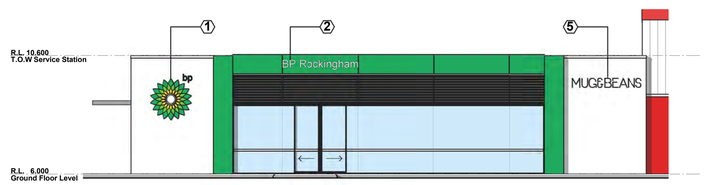
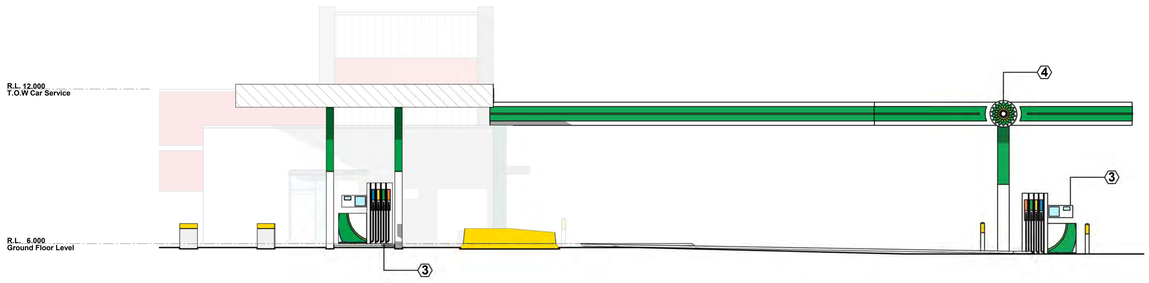


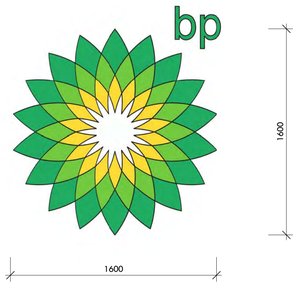
SOUTH ENTRY ELEVATION (DIXON ROAD) TRUCK & FUEL CANOPY
SCALE: 1 : 100



SOUTH ELEVATION (DIXON ROAD) WITHOUT FUEL CANOPY
SCALE: 1 : 100

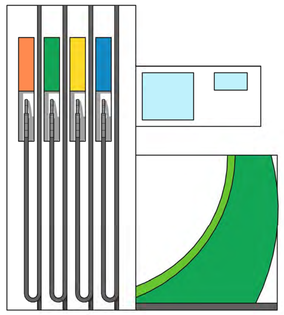


WEST ELEVATION WITHOUT BOUNDARY WALL
SCALE: 1 : 100



1. BP MAIN BUILDING LOGO
SCALE: 1 : 20

2. BP SITE NAME
SCALE: 1 : 20

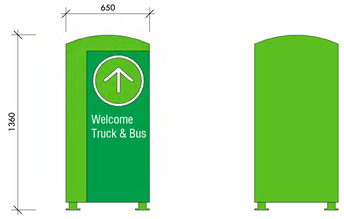


3. TYPICAL PUMP ELEVATION
SCALE: 1 : 20

4. BP CANOPY LOGO
SCALE: 1 : 20

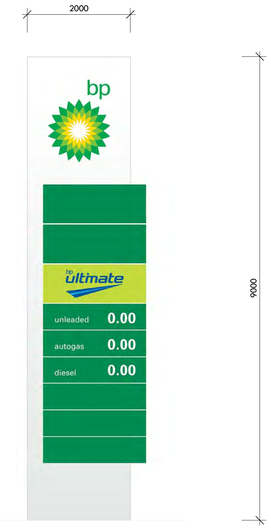
5. MUG&BEANS SIGN
SCALE: 1 : 20

ALL COLOUR AND SIZING
AS PER BP SPECIFICATION



TYPICAL ENTRY & EXIT SIGNS
SCALE: 1 : 20

DISABLE SIGN
SCALE: 1 : 10



TYPICAL BP PYLON SIGN
SCALE: 1 : 50

PROPOSED FUEL STATION & CAR SERVICE
LOCATION:LOTS 36, CNR DIXON ROAD & EVINRUDE BEND, ROCKINGHAM
FOR:DAWNMARK HOLDING PTY LTD. AFT THE ELEMENT UNIT TRUST BY: VEND PROPERTY

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Appendix 4
Traffic Impact Assessment

Transport Impact Statement

Project:	Lot 36 Dixon Road, East Rockingham Proposed Fuel Station & Car Service Centre
Client:	Dawnmark Holdings Pty Ltd c/o Meyer Shircore & Associates
Author:	Keli Li
Revision:	D
Document #	1901005-TIS-001

CONSULTING CIVIL AND TRAFFIC ENGINEERS
1 ST. FLOOR, 908 ALBANY HIGHWAY, EAST VICTORIA PARK WA 6101.
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Document Status

Version	Document Status	Prepared By	Reviewed By	Approved By	Date
A	Client Review	K Li	L Dawson	L Dawson	22/01/2019
B	Client Review	K Li	L Dawson	L Dawson	07/02/2019
C	Client Review	K Li	L Dawson	L Dawson	01/03/2019
D	Final	K Li	L Dawson	L Dawson	07/03/2019

File Reference: Y:\Jobs Active 2019\T&T - Traffic & Parking\Dawnmark Holdings_Fuel Station & Car Service Centre_TIS_1901005\Reports\Dawnmark Holdings_Fuel Station & Car Service Centre_TIS_REV D.docx

Contents

Tables

Figures

1. Summary

Shawmac was commissioned to assess the impacts associated with parking, access and traffic generation from the proposed Fuel Station & Car Service Centre located at Lot 36 Dixon Road, East Rockingham, in the City of Rockingham.

This Transport Impact Statement has been prepared in accordance with the WAPC Transport Impact Assessment Guidelines for Developments: Volume 4 – Individual Developments (2016), for lodgement with the Development Application.

The following conclusions have been made in regards to the proposed development:

- The surrounding roads and intersections can accommodate the forecast increase in traffic from the proposed development;
- The supply of car parking spaces is considered adequate for the development;
- Review of the proposed parking layout indicates a shortage of 0.1m bay width in accordance with AS2890.1 Class 3 parking dimensions, however, the proposed layout is considered acceptable as the excessive aisle width can ensure single manoeuvre to access and egress from the bays and despite the high turnover rate, the parking occupancy is expected to be low;
- The proposed parking areas and internal geometry cater for all expected classes of vehicles;
- Review of the site plan indicates a potential conflict point between trucks traveling south from the diesel canopy and vehicles traveling east along the common thoroughfare. It is therefore recommended to provide line markings and a convex mirror to reduce conflict;
- Based on the assessment of auxiliary lane, the existing right turn auxiliary lane is considered acceptable. Whilst the traffic volumes meet the warrants for an auxiliary left turn lane, an auxiliary left turn lane is not recommended considering the consistency of existing road environment and treatment of the adjacent intersections;
- Based on the proposed land use, the public transport demand of the site is likely to be low and therefore the existing services are considered to be adequate;
- The existing pedestrian/cyclist infrastructure in the vicinity of the site is considered to be adequate to facilitate the safe movement of pedestrians and cyclists.

2. Introduction

2.1. Background

Shawmac has been commissioned to prepare a Transport Impact Statement to assess the potential traffic impacts, car parking and access issues associated with the proposed Fuel Station & Car Service Centre to be located at Lot 36 Dixon Road, East Rockingham, in the City of Rockingham. The site plan of the facility is shown in Appendix A.

2.2. Site Location

The subject site is located as shown in Figure 1.

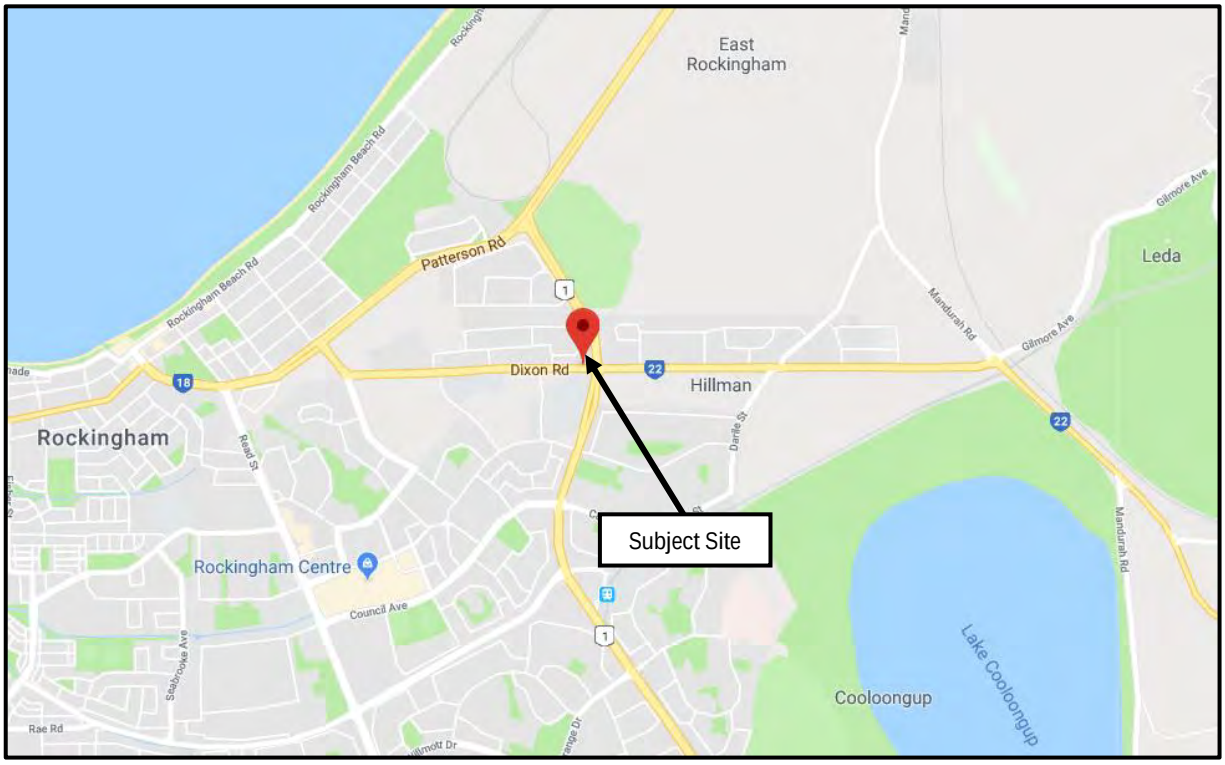


Figure 1 - Site Location

The subject site is currently vacant. The site together with four lots to the west shares an established common thoroughfare along the southern boundary of this land parcel. The thoroughfare driveway provides two accesses adjacent to the site. An aerial view of the subject site in Figure 2.

Figure 2 - Aerial View

2.3. Reference Information

In undertaking the study, the information listed below was referenced.

- WAPC Transport Impact Assessment Guidelines for Developments: Volume 5 – Individual Developments
- MRWA Functional Hierarchy Criteria;
- Livable Neighbourhoods Guidelines 2009;
- Australia Standard AS 2890.1-2004 Parking facilities - Off-street car parking;
- Trip Generation 9th edition, 2003 - Institute of Transportation Engineers, Washington, USA;
- Guide to Traffic Generating Developments Version 2.2, October 2002 – Roads and Traffic Authority, New South Wales;
- City of Rockingham Town Planning Scheme No. 2

3. Site Proposal

3.1. Regional Context

Lot 36 Dixon Road is located in the northwest of Dixon Road / Evinrude Bend intersection and is close to the northeastern boundary of City of Rockingham. The subject site is also situated at the southeast corner of the East Rockingham Industrial Park and is surrounded by:

- Industrial developments to the west and north;
- Vacant land to the south of Dixon Road; and
- A holiday village to the east.

3.2. Land Use

It is proposed to develop the site as a fuel station with a convenience store and a car service centre. Based on information provided by client, the fuel station and convenience store require 2 employees to operate at a time. The car service centre will have 6 service bays and requires up to 7 employees to operate at any given time.

3.3. Vehicle Access

Lot 40, 49, 9001, 401 and 36 (subject site) shares a common thoroughfare through their frontage parking area and this thoroughfare connects to 5 existing crossovers including 3 crossovers to Dixon Road, 1 crossover to McCamey Avenue and a crossover to Evinrude Bend. It is understood that this common thoroughfare and the five crossovers are under common easement to serve all adjacent developments. Vehicle access to the proposed development at Lot 36 will only utilise the crossover from Dixon Road between Lot 401 and 36, the crossover to Evinrude Bend and three additional crossovers from Evinrude Bend and Whittle Road.

Proposed new vehicle access points to the serve the development are as follows:

- An additional crossover off Evinrude Bend (south of Whittle Road); and
- Two crossovers off Whittle Road to access and egress the backyard of the site.

3.4. Parking

The car parking demand of the development will be accommodated by 45 on-site car bays.

3.5. Planning Framework

According to the East Rockingham Industrial Park structure plan, Lot 36 Dixon Road is within the light industry precinct (Precinct 5) of the Structure Plan. The Structure Plan zoning map is shown in Figure 3.

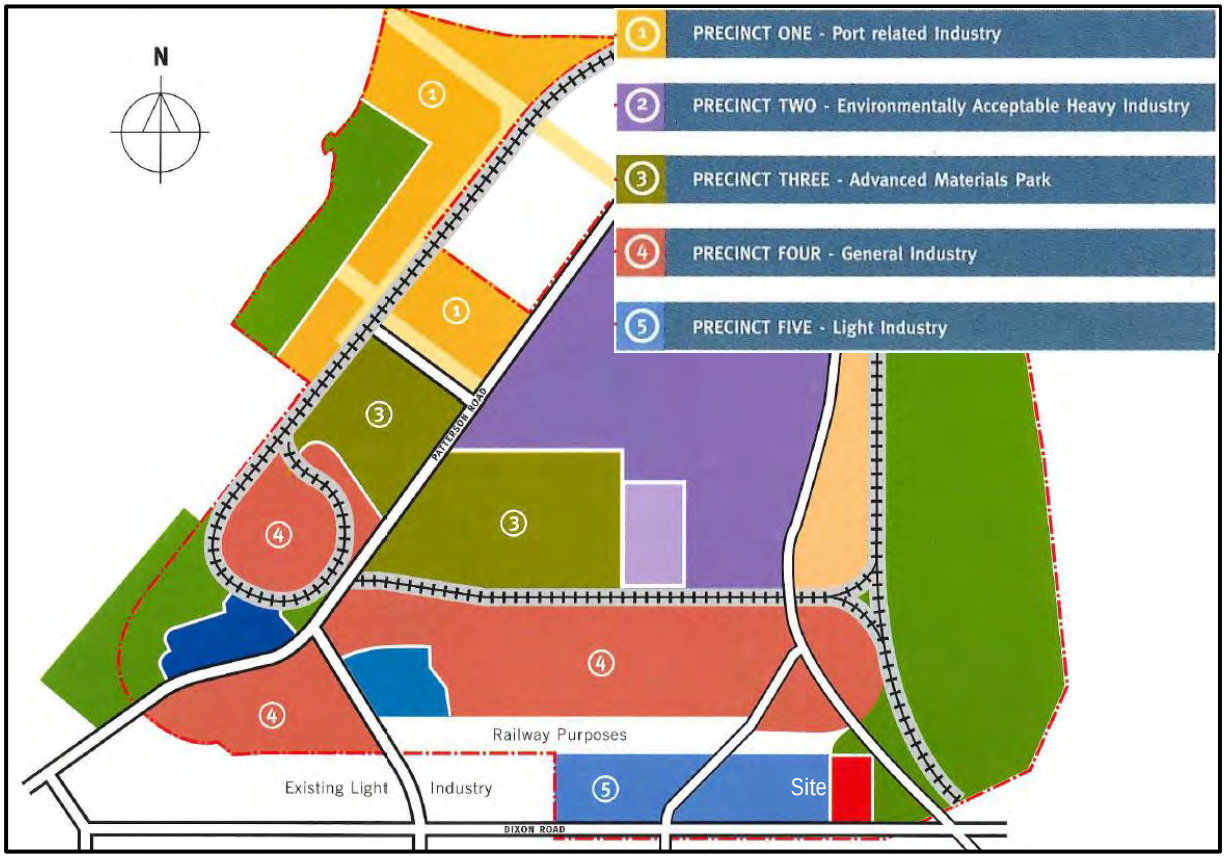


Figure 3 - Zoning Map - Extract from Metropolitan Region Scheme

3.6. Major Attractors and Generators of Traffic

The development site is mainly a traffic attractor. The main generators/attractors expected to influence traffic flows to and from City of Rockingham.

4. Existing Situation

4.1. Existing Roads

An extract of the Main Roads *Road Information Mapping* web tool is shown in Figure 4 and shows the road hierarchy surrounding the site.

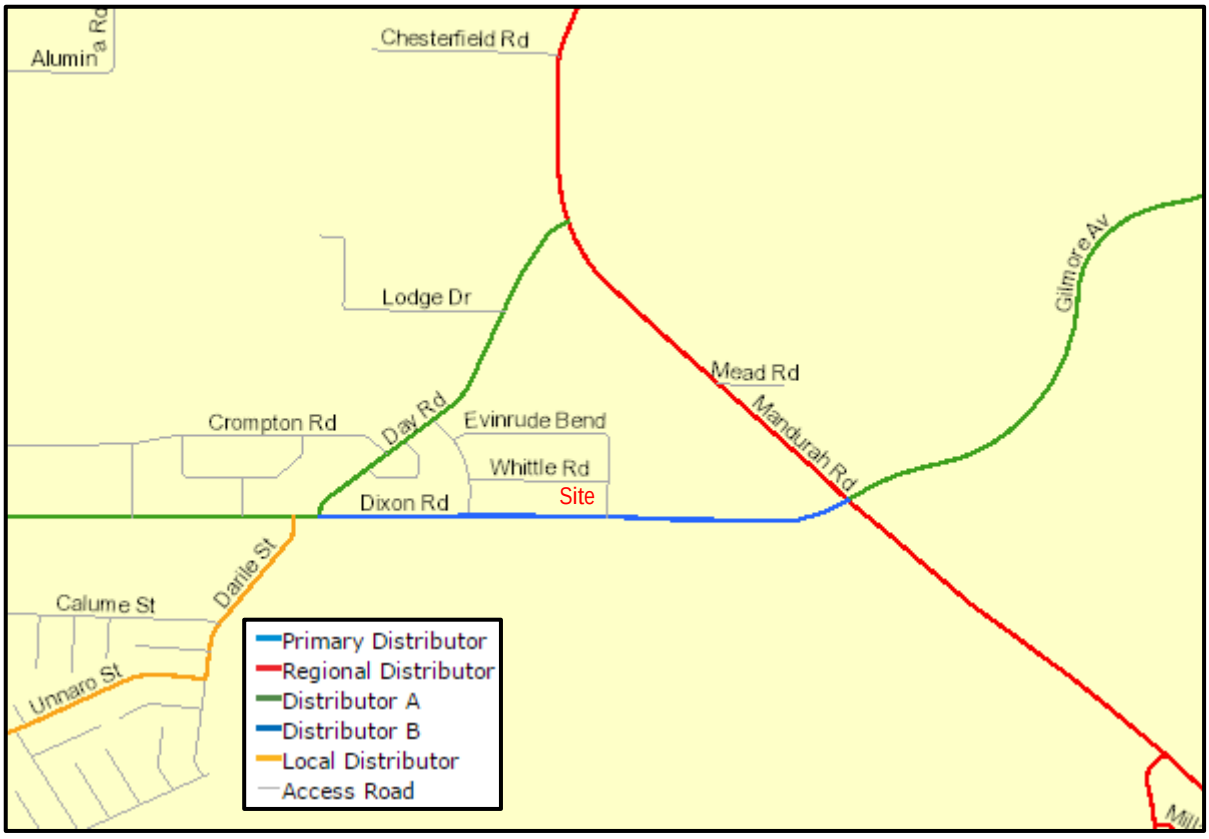


Figure 4 - Road Hierarchy

Dixon Road

Dixon Road is the southern boundary of the site. It is a two-way, four-lane dual carriageway road with a 6.0m wide median in the vicinity of the site. Dixon Road provides access between Rockingham Town Centre to the west and Kwinana Freeway to the east. Dixon Road in the vicinity of the site has sealed shoulders along both sides which can perform the function of on-road cycling lanes. Under the MRWA Functional Road Hierarchy, Dixon Road is classified as a District Distributor B Road east of Day Road and a District Distributor A road west of Day Road. Dixon Road operates with a 70 km/h speed limit east of Evinrude Bend and 60 km/hr towards Rockingham Townsite.

Evinrude Bend

Evinrude Bend is the eastern boundary of the site. Evinrude Bend is a two-way, two lane undivided carriageway with an approximate kerb-to-kerb width of 9.0m. Evinrude Bend is classified as an Access Road under the MRWA Functional Road Hierarchy and operates with a 50km/h speed limit.

Whittle Road

Whittle Road is the northern boundary of the site. Similar to Evinrude Bend, Whittle Road is a two-way, two lane undivided carriageway with an approximate kerb-to-kerb width of 9.0m. Whittle Road is classified as an Access Road under the MRWA Functional Road Hierarchy and operates with a 50km/h speed limit.

Mandurah Road and Gilmore Avenue

Mandurah Road is a Regional Distributor Road located 650m east of Evinrude Bend / Dixon Road intersection. Gilmore Avenue is a District Distributor A road and forms the forth leg of the Mandurah Road-Dixon Road signalised intersection. Mandurah Road and Gilmore Avenue together with Dixon Road allow heavy vehicles originate outside of City of Rockingham to access the East Rockingham Industrial Park without using other local roads in the City.

4.2. Road Hierarchy vs Actual Flows

The latest traffic volumes of the surrounding roads were derived from MRWA SCATS Traffic data. Traffic Data for Evinrude Bend and Whittle Road are not available, it is assumed that Evinrude Bend currently carries 500 vpd and Whittle Road carries 300 vpd. This is considered conservative as the East Rockingham Industrial Park has not been fully developed. Table 1 compares existing traffic volumes with MRWA indicative traffic volumes based on road classifications. Detailed traffic count data is included in Appendix B.

Table 1 - Road Classification and Indicative Traffic Volumes

Road Name	Road Features	MRWA Classification / Indicative Daily Volume (vpd)	Traffic Volume	Source
Dixon Road West of Mandurah Road	Four lane dual carriageway	District Distributor B / above 6,000	16,621	2018 MRWA
Mandurah Road North of Dixon Road	Four lane dual carriageway	Regional Distributor / above 100	7,319	2018 MRWA
Mandurah Road South of Dixon Road	Four lane dual carriageway	Regional Distributor / above 100	16,532	2018 MRWA
Gilmore Avenue West of Mandurah Road	Four lane dual carriageway	District Distributor A / above 8,000	12,920	2018 MRWA
Evinrude Bend North of Dixon Road	Single carriageway road	Access Road / below 3,000	500	Assumed
Whittle Road West of Evinrude Bendr	Single carriageway road	Access Road / below 3,000	300	Assumed

As shown, all roads are within the indicative traffic volumes ranges for their respective classifications.

4.3. RAV Status

As per MRWA HVS network mapping tool, Dixon Road has RAV 4 network status with the following conditions:

- Not to be used as a through route;
- For local delivery and pickup only; and
- Driver must carry documentation as proof of local delivery or pickup;

Evinrude Bend has RAV 4 with the following conditions:

- No Left turn permitted into Evinrude Bend from Dixon Road.
- No Right turn permitted into Evinrude Bend from Dixon Road.
- No Right turn permitted into Dixon Road from Evinrude Bend

Mandurah Road has RAV 4 status no conditions whilst Gilmore Avenue and Whittle Road have no RAV Status.

Figure 5 shows the Restricted Access Vehicle categories for the road network in the vicinity of the subject site.

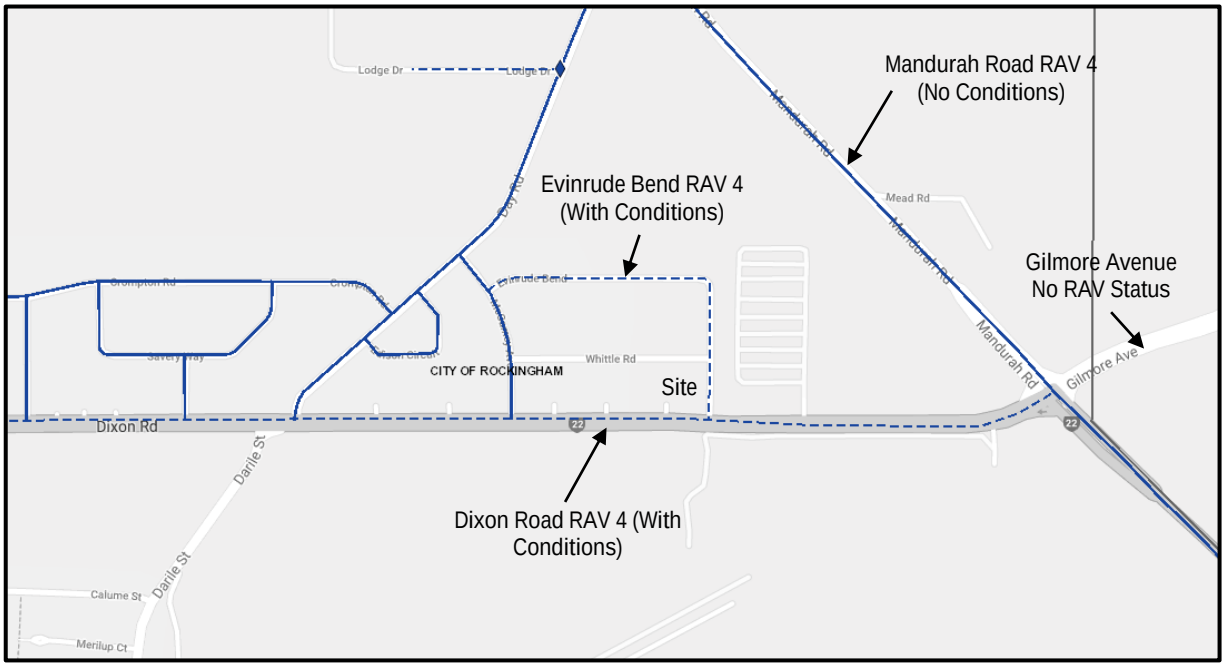


Figure 5: Restricted Access Vehicle Network

4.4. Changes to the Surrounding Network

Communication with the City indicates no significant traffic generators or attractors planned in the nearby road network apart from the East Rockingham Industrial Park. There are also no planned changes to the road network.

5. Transport Assessment

5.1. Assessment Years

The development is assessed based on the year of development, assumed as 2021. The City of Rockingham is not aware of any development in the vicinity that would significantly increase traffic volumes and has advised that a 3% growth from the current traffic count should represent the development year scenario.

5.2. Time Periods for Assessment

The time periods adopted for assessment are the peak hours of the Mandurah Road / Dixon Road / Gilmore Road signalised intersection (8:00-9:00 and 16:00-17:00), as these represent the worst-case conditions of the adjacent network.

5.3. Development Generation

In order to estimate the impact of traffic generated by the proposed development reference was made to the Institute of Transportation Engineers "Trip Generation" 9th edition. The trips generated by the site have been determined for both daily and peak hour. Predicted trip generation are summarised in Table 2.

Table 2 - Predicted Weekday Trip Generation

Land Use	Units	Quantum	Trip Generation Rate			Estimated Generation			Source
			ADT	AM Peak	PM Peak	ADT	AM Peak	PM Peak	
Automobile Care Centre 942	No. of Service Bay	6	12.48	1.52	2.17	75	9	13	ITE
Service Station with Convenience Market 945	Fuel Position	8	162.78	10.16	13.51	1302	81	108	ITE
Total						1377	90	121	
Service station Passer-By Trips*				56%		729	46	61	
Total New Trips						648	45	61	

*Note: As per ITE Trip Generation Guideline, 56% of trips generated by the service station will be existing traffic deviate from the adjacent road to the proposed development and the trips will continue after visiting.

It is estimated that the proposed development has the potential to generate up to 648 new vehicle movements per day with 45 and 61 new trips during weekday AM and PM peak hours. Peak hour in & out distribution is summarised in Table 3 and Table 4.

Table 3 - Predicted Peak Hour Distribution (Including Passer-by Trips)

Land use	Peak Distribution			
	AM Peak In	AM Peak Out	PM Peak In	PM Peak Out
Automobile Care Centre 942	68%	32%	32%	68%
	6	3	4	9
Service Station with Convenience Market 945	50%	50%	50%	50%
	41	41	54	54
Total	47	44	58	63

Table 4 - Predicted Peak Hour Distribution (New Trips Only)

Land use	Peak Distribution			
	AM Peak In	AM Peak Out	PM Peak In	PM Peak Out
Automobile Care Centre 942	68%	32%	32%	68%
	6	3	4	9
Service Station with Convenience Market 945	50%	50%	50%	50%
	18	18	24	24
Total	24	21	28	33

5.4. Distribution

The distribution of the additional traffic has been assumed based on the spatial distribution of reginal land uses. For the purpose of this assessment, trips generated from the site will not be generated onto McCamey Avenue via the four crossovers off Whittle Road and Eveinrude Bend crossovers and therefore the four crossovers off Whittle Road and Eveinrude Bend is considered as a single access point providing full movement to Dixon Road.

The following distribution is assumed:

- 60% of trips generated to and from the west along Dixon Road; and
- 40% of trips generated to and from the east along Dixon Road, of which
    - 20% to and from Mandurah Road north;
    - 10% to and from Mandurah Road south; and
    - 10% to and from Gilmore Avenue

The traffic distribution and assignment of generated traffic are shown in Figure 6.

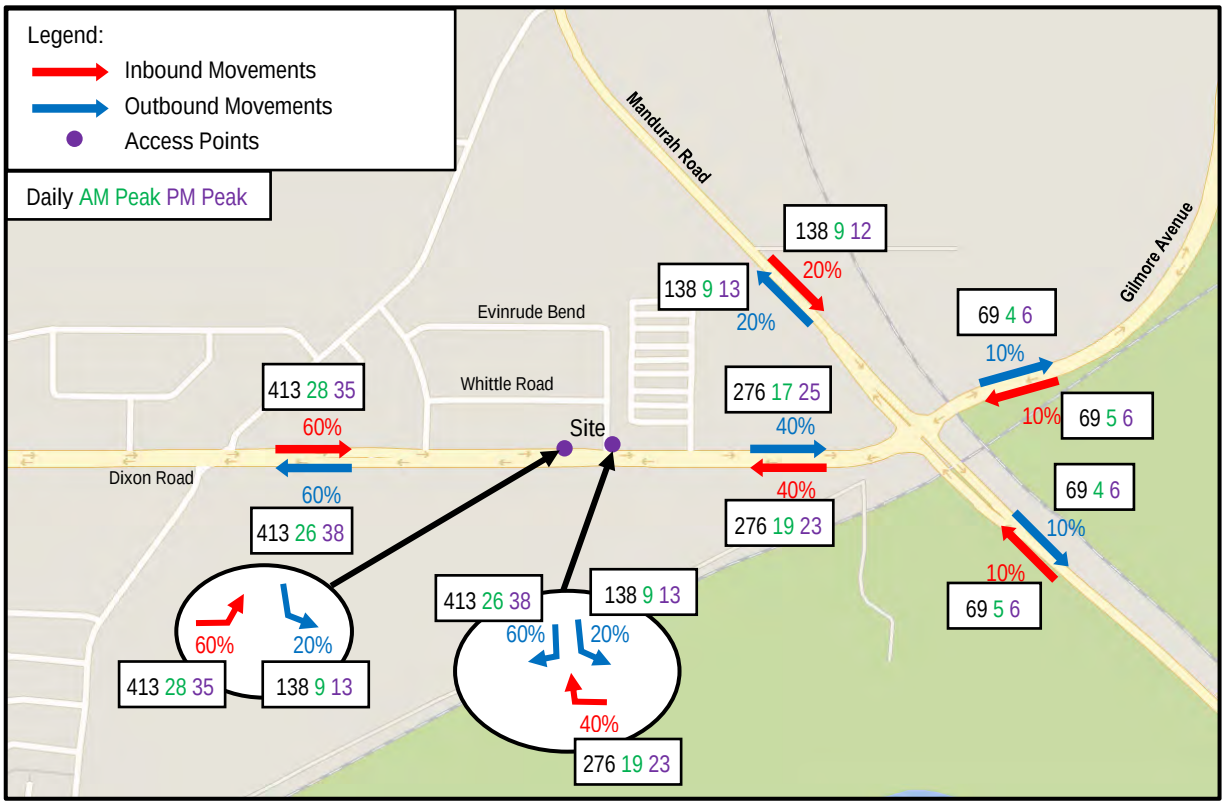


Figure 6 - Trip Distribution

5.5. Impact on Roads

5.5.1. Austroads Guidelines

Table 5.1 of Austroads *Guide to Traffic Management Part 3: Traffic Studies and Analysis* (AGTM06) as shown below in Table 5 provides the mid-block capacities for urban roads with interrupted flow:

Table 5 - Typical Mid-Block Capacities for Urban Roads with Interrupted Flow

Type of Lane	One-way Mid-Block Capacity (Vph)
Median or inner lane	
Divided Road	1,000
Undivided Road	900
Middle Lane (of a Three-Lane Carriageway)	
Divided Road	900
Undivided Road	1,000
Kerb lane	
Adjacent to Parking Lane	900
Occasional Parked Vehicles	600
Clearway Conditions	900

The pre and post development traffic onto the adjacent roads are shown in Table 6.

Table 6 - Pre- and Post-Development Traffic Volumes

Road	Time Period	Direction	2018 Traffic Count	Background Traffic 2021	Increase	2021 Volume with Development
Dixon Road West of Evinrude Bend	AM Peak (Vph)	Eastbound	572	589	27	616
	AM Peak (Vph)	Westbound	1,064	1096	27	1,123
	PM Peak (Vph)	Eastbound	912	939	37	976
	PM Peak (Vph)	Westbound	841	866	37	903
Dixon Road East of Evinrude Bend	AM Peak (Vph)	Eastbound	572	589	18	607
	AM Peak (Vph)	Westbound	1,064	1,096	18	1,114
	PM Peak (Vph)	Eastbound	912	939	24	964
	PM Peak (Vph)	Westbound	841	866	24	891
Evinrude Bend North of Dixon Road	AM Peak (Vph)	Northbound	25	26	18	44
	AM Peak (Vph)	Southbound	25	26	36	62
	PM Peak (Vph)	Northbound	25	26	24	50
	PM Peak (Vph)	Southbound	25	26	49	75
Gilmore Avenue East of Mandurah Road	AM Peak (Vph)	Eastbound	469	483	5	488
	AM Peak (Vph)	Westbound	532	548	5	552
	PM Peak (Vph)	Eastbound	503	518	6	524
	PM Peak (Vph)	Westbound	548	564	6	571
Mandurah Road North of Dixon Road	AM Peak (Vph)	Northbound	273	281	9	290
	AM Peak (Vph)	Southbound	98	101	9	110
	PM Peak (Vph)	Northbound	140	144	12	156
	PM Peak (Vph)	Southbound	724	746	12	758
Mandurah Road South of Dixon Road	AM Peak (Vph)	Northbound	1,061	1093	5	1,097
	AM Peak (Vph)	Southbound	457	471	5	475
	PM Peak (Vph)	Northbound	675	695	6	701
	PM Peak (Vph)	Southbound	1,374	1,415	6	1,421

As shown in Table 6, the resulting traffic volumes are shown to be well within the practical capacity of the existing roads and the proposed development is considered to have minimal impact on the capacity of the road network at mid-block locations.

5.6. Impact on Intersections

5.6.1. Intersections Capacity

SIDRA Intersection 8 has been used to assess the peak hour capacity and performance of the Dixon Road / Site Access intersection and Dixon Road / Evinrude Bend intersection.

SIDRA is a commonly used intersection modelling tool used by traffic engineers for all types of intersections. Outputs for four standard measures of operational performance can be obtained, being Degree of Saturation (DoS), Average Delay, Queue Length, and Level of Service (LoS).

- Degree of Saturation is a measure of how much physical capacity is being used with reference to the full capability of the particular movement, approach, or overall intersection. A DoS of 1.0 equates to full theoretical capacity although in some instances this level is exceeded in practice. Design engineers typically set a maximum DoS threshold of 0.95 for new intersection layouts or modifications.
- Average Delay reports the average delay per vehicle in seconds experienced by all vehicles in a particular lane, approach, or for the intersection as a whole. For severely congested intersections the average delay begins to climb exponentially.
- Queue Length measures the length of approach queues. In this document we have reported queue length in terms of the length of queue at the 95th percentile (the maximum queue length that will not be exceeded for 95 percent of the time). Queue lengths provide a useful indication of the impact of signals on network performance. It also enables the traffic engineer to consider the likely impact of queues blocking back and impacting on upstream intersections and accesses.
- Level of Service is a combined appreciation of queuing incidence and delay time incurred, producing an alphanumeric ranking of A through F. A LoS of A indicates an excellent level of service whereby drivers delay is at a minimum and they clear the intersection at each change of signals or soon after arrival with little if any queuing. Values of B through D are acceptable in normal traffic conditions. Whilst values of E and F are typically considered undesirable, within central business district areas with significant vehicular and pedestrian numbers, delays/queues are unavoidable and hence, are generally accepted by road users.

The peak hour volumes for these two intersections are assumed as shown in Figure 7 and Figure 8.

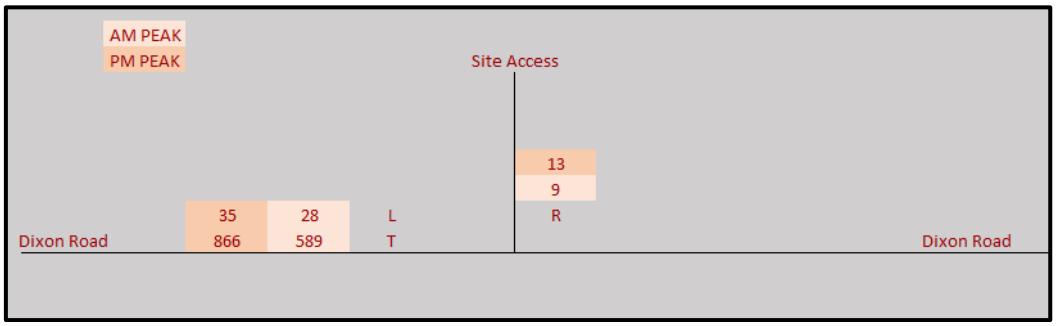


Figure 7 - Dixon Road / Site Access Intersection Volumes

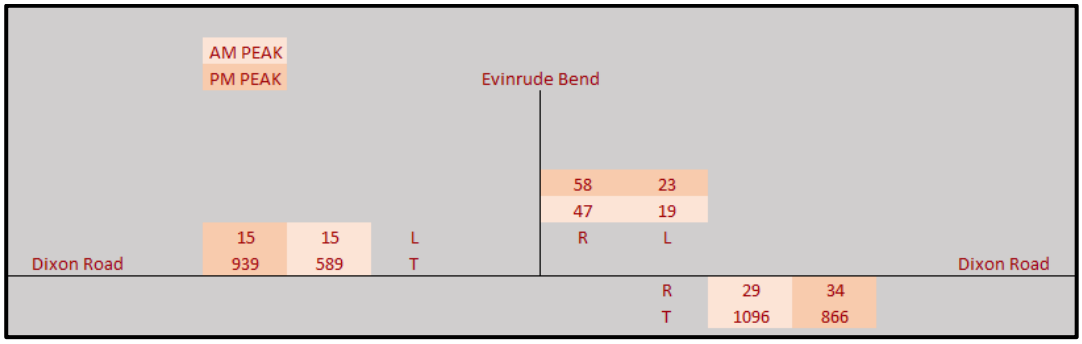


Figure 8 - Dixon Road / Evinrude Bend intersection Volumes

The results of the assessment are summarised in Table 7.

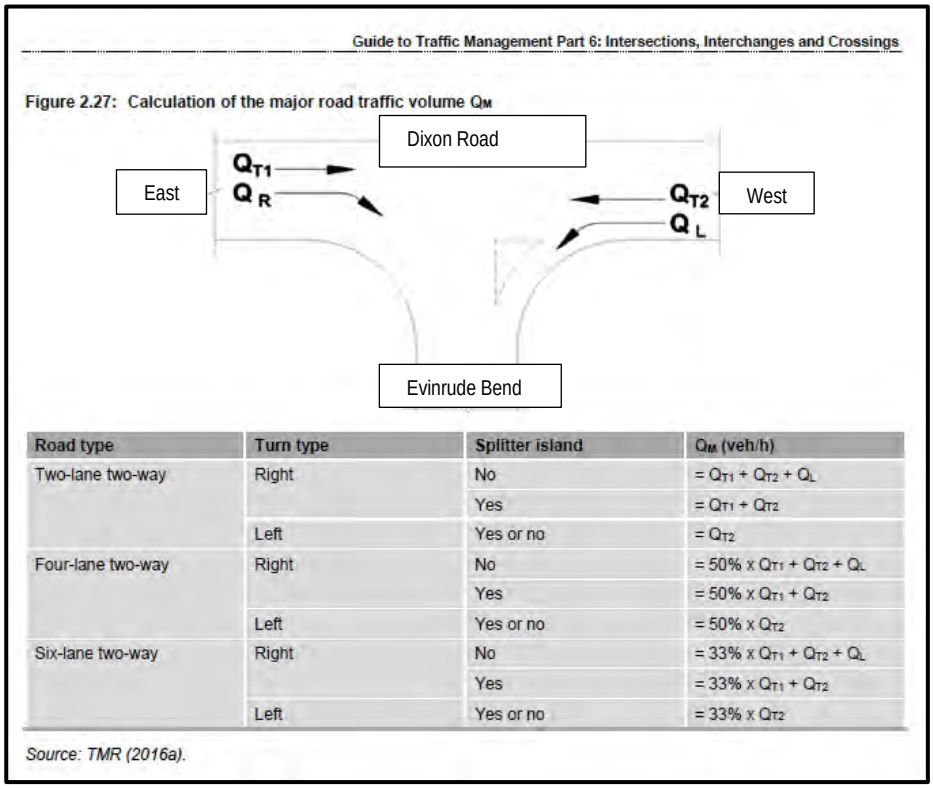
Table 7 - SIDRA Outputs

Intersection	Scenario	Assessment Period	Worst DoS	95%ile Queue (m)	Average Delay (s)	Worst Delay (s)	Average LoS	Worst LoS
Dixon Road / Site Access intersection	2021 with Development	AM Peak	0.168	0.3	0.5	5.6	A	A
		PM Peak	0.245	0.5	0.4	7.3	A	A
Dixon Road / Evinrude Bend	2021 with Development	AM Peak	0.296	1.3	1.7	14.3	A	B
		PM Peak	0.261	3.0	2.1	23.8	A	C

The results indicate both intersections would perform with acceptable degree of saturation, queue distance and delay under all scenarios.

5.6.2. Auxiliary Lanes

The traffic turning movements at intersections was calculated using the turning warrants calculator in accordance with MRWA Supplement to Austroads Guide to Road Design - Part 4 A.8. The through and turning volumes were calculated as per Austroad GTM Part 6 – 2017 as shown in Figure 9 and are summarised in Table 8. (Note: for the purpose of assessing left turn treatment, left turn volumes were left turning volume at Dixon Road / Site Access intersection.



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= Q_{T1} + Q_{T2} + Q_L
		Yes	= Q_{T1} + Q_{T2}
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x Q_{T1} + Q_{T2} + Q_L
		Yes	= 50% x Q_{T1} + Q_{T2}
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x Q_{T1} + Q_{T2} + Q_L
		Yes	= 33% x Q_{T1} + Q_{T2}
	Left	Yes or no	= 33% x Q_{T2}

Source: TMR (2016a).

Figure 9 - Calculation of the Major Road Traffic Volume Q_m

Table 8 - Major Road Turning and Through Volumes at Intersection

	Peak Hour	Q_{T1}	QT1 HV%	Q_{T2}	QT2 HV%	Q_R or Q_L	Q_R or Q_L HV%	Q_M	Calculated Treatment
Left-turn	AM	1096	8%	589	8%	33	8%	589	AUL(S)
	PM	866	8%	939	8%	40	8%	939	AUL or CHL
Right-Turn	AM	1096	8%	589	8%	29	8%	1152	CHR
	PM	866	8%	939	8%	34	8%	1387	CHR

The calculated warrants are shown in Figure 10.

INTERSECTION WARRANTS

Main Roads WA Supplement to Austroads Guide to Road Design - Part 4 A.8

DESIGN SPEED =	80km/h
SPLITTER ISLAND YES / NO =	No
DUAL CARRIAGEWAY YES / NO =	Yes

AM Peak

MOVEMENT	COUNT (v/h)	HV (%)
Q_{T1} =	1096	8
Q_R =	29	8
Q_{T2} =	589	8
Q_L =	33	8

RIGHT TURN ASSESSMENT

Q_m =	1718
% HV =	8.000
x =	7.88
TREATMENT =	CHR

LEFT TURN ASSESSMENT

Q_m =	589
% HV =	8.000
x =	3.13
TREATMENT =	AUL(S)

INTERSECTION WARRANTS

Main Roads WA Supplement to Austroads Guide to Road Design - Part 4 A.8

DESIGN SPEED =	80km/h
SPLITTER ISLAND YES / NO =	No
DUAL CARRIAGEWAY YES / NO =	Yes

PM Peak

MOVEMENT	COUNT (v/h)	HV (%)
Q_{T1} =	866	8
Q_R =	34	8
Q_{T2} =	939	8
Q_L =	40	8

RIGHT TURN ASSESSMENT

Q_m =	1845
% HV =	8.000
x =	8.97
TREATMENT =	CHR

LEFT TURN ASSESSMENT

Q_m =	939
% HV =	8.000
x =	5.18
TREATMENT =	AUL or CHL

Figure 10 - Warrants for Turn Treatments on Major Roads at Unsignalised Intersections

As per Figure 10, the required left-turn and right turn treatments at Dixon Road / Evinrude Bend intersection is an Auxilliary Left Turn (AUL) and a Channelised Right Turn (CHR) treatment, respectively.

The AUL and CHR treatment (refer to Figure 8.6 and Figure 7.8 of Austroad AGTRD4A) on the major road both feature construction of indented left/right turn lane minimising the impact of the slowed turning vehicles on through traffic.

In this instance, the existing right turn auxiliary lane is considered acceptable. Whilst the traffic volumes meet the warrants for an auxiliary left turn lane, an auxiliary left turn lane is not recommended taking into consideration of consistency of existing road environment and treatment of the adjacent intersections.

5.6.3. Vehicle Manoeuvring

It is understood that the maximum heavy vehicles accessing the site will be 19.0m long semi-trailers. The preferred access and egress arrangement as indicated by the client is explained in Figure 11.

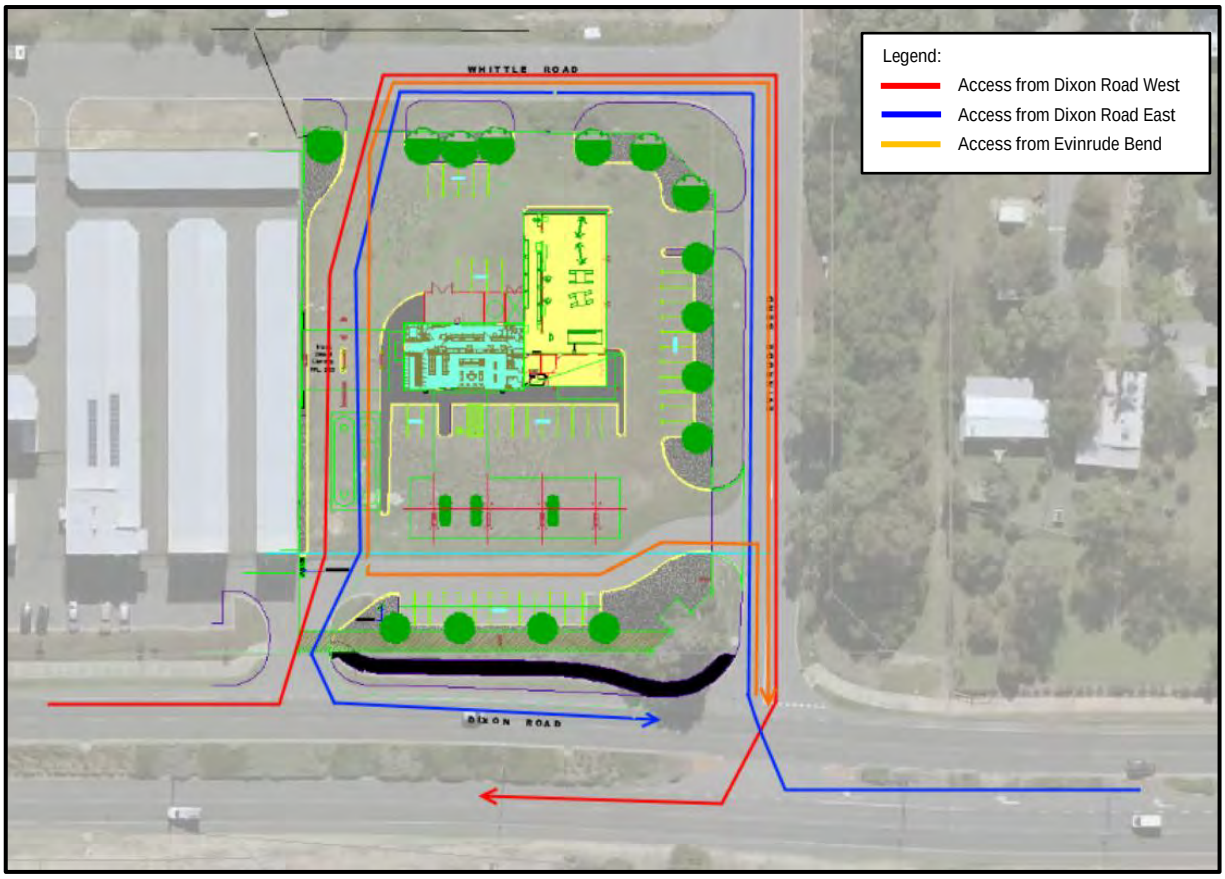


Figure 11 –Heavy Vehicle Access Arrangement

A swept path analysis using MRWA 19.0m Semi-Trailer template were completed and based on the analysis, the above access and egress movements can be completed satisfactorily. The swept path diagrams are included in Appendix D. Note: As survey and design CAD files are not available the swept path analysis was based on aerial view extracted from City of Rockingham Intra-map.

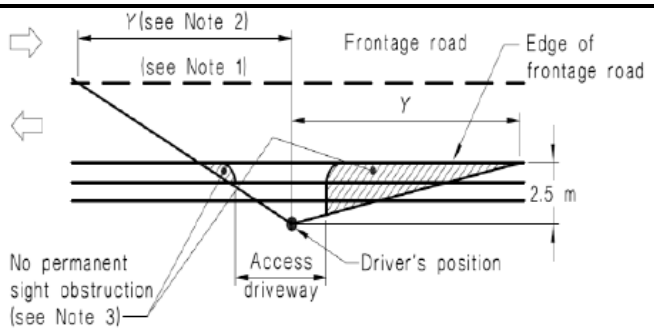
6. Site Access

6.1. Vehicle Accesses

Access and egress to and from the site will be via 5 crossovers as outlined in Section 3.3.

6.2. Access Vehicle Sight Distance

Sight distance from the crossovers along the street is defined in Figure 3.2 of AS2890.1 which is reproduced in Figure 12. A desktop review concluded that the minimum sight distance is achieved for all crossovers.



Dixon Road Design Speed	Km/h	Desirable (5s) gap (m)	Minimum sight distance (m)
	70	97	85
Evinrude Bend Design Speed	Km/h	Desirable (5s) gap (m)	Minimum sight distance (m)
	60	83	65
Whittle Road Design Speed	Km/h	Desirable (5s) gap (m)	Minimum sight distance (m)
	60	83	65

NOTES:
1 Centre-line or centre of road (undivided road), or right-hand edge of right hand through lane (divided road)
2 A check to the left is not required at a divided road where the median is wide enough to shelter a vehicle leaving the driveway.
3 Parking on this side of the frontage road may need to be restricted on either side of the driveway so that the sight distance required by the above table to an approaching vehicle is not obstructed.

Figure 12 - Sight Distance Requirements

In addition to the sight distance at the crossovers, review of the site plan indicates a potential conflict point between trucks traveling south from the diesel canopy and vehicles traveling east along the common thoroughfare. It is therefore recommended to install linemarkings to restrict truck movement along the west boundary of the site to northbound only and a stop line for eastbound movement along the common thoroughfare (refer Figure 13). It is also recommended to install a convex mirror south of the diesel canopy as indicated in Figure 14.

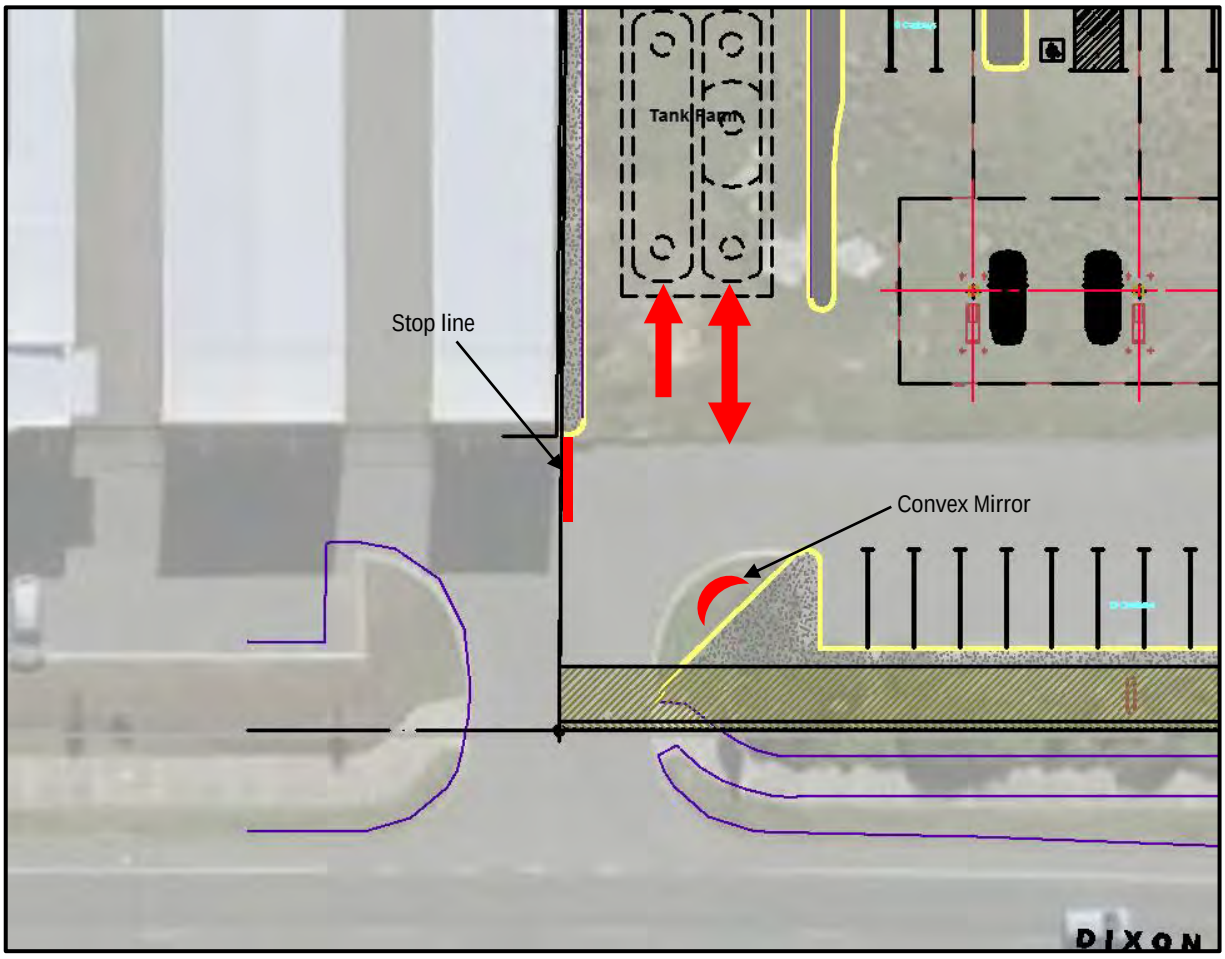


Figure 13 - Line Markings

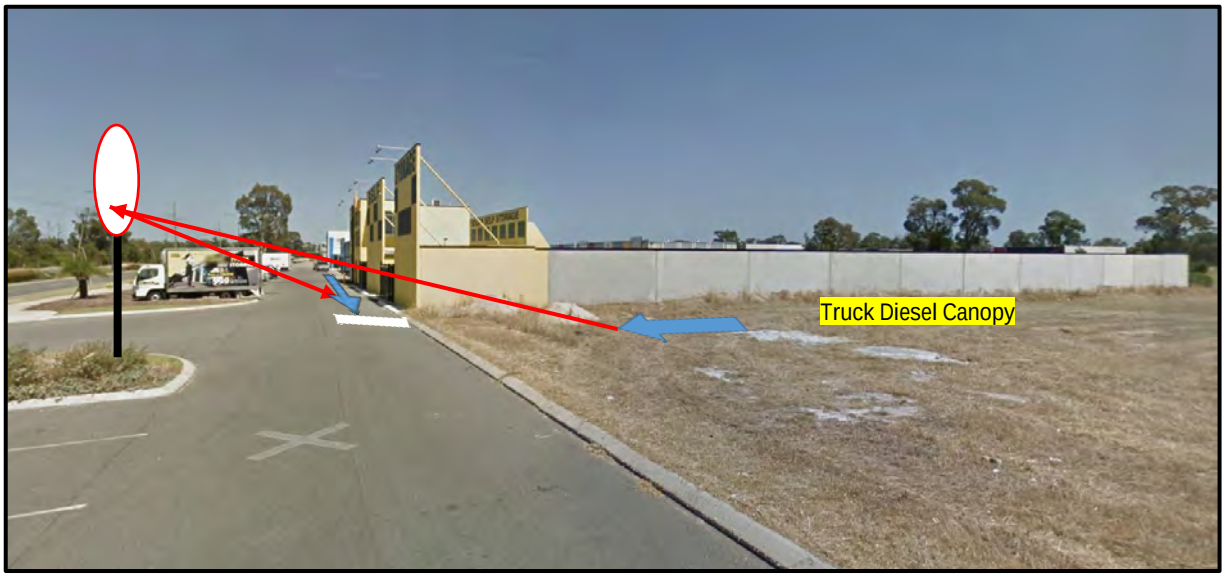


Figure 14 - Convex Mirror Location

6.3. Access Pedestrian Sight Distance

The Australian Standard AS2890.1:2004 provides details for sight lines and distances for pedestrian movements across an access to a car park. Those details are shown in the AS2890.1 Figure 3.3 extract on Figure 15.

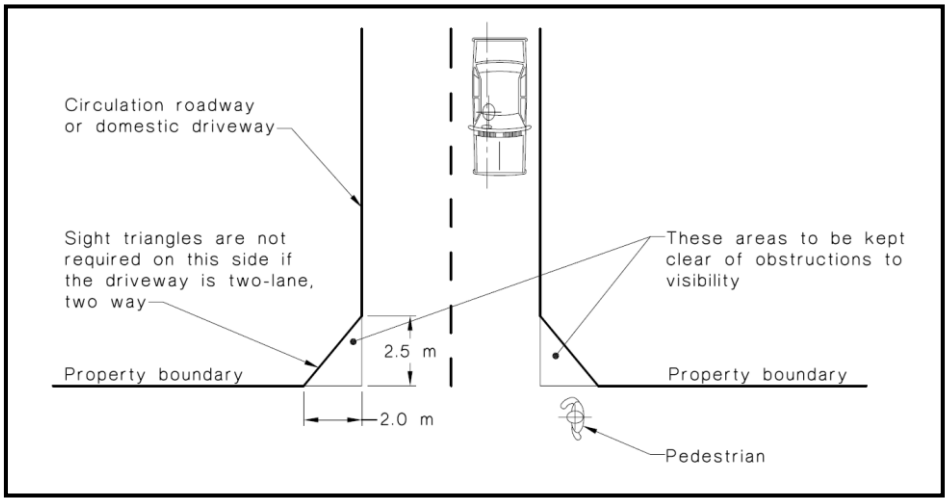


Figure 15 - AS 2890.1 Requirements for Pedestrian Sight Lines

The site plan does not indicate any sight line obstructions at the crossover. It can be concluded that sight distance at the egresses is acceptable.

7. Parking

7.1. Parking Provision

The City of Rockingham Town Planning Scheme No.2 (TPS2) sets out the car parking requirements as shown in Table 9. A comparison of the requirements and proposed parking provision indicates that the proposed parking supply is compliant.

Table 9 - City of Rockingham Town Planning Scheme No. 2 Car Parking Requirements

Land use	Parking Rate	Quantum	Parking Requirement
Service Station	1 bay per service bay	6	6
	1 bay per employee	9	9
	6 bays per 100 m^2 NLA of retail floorspace	225 m^2	14
		Total Required	29 Bays
		Parking Provision	45 Bays

7.2. Car Parking Layout

The bay dimensions for a Class 3 car parking facility according to AS2890.1 (Generally short-term parking) are shown below in Table 10.

Table 10 - AS 2890.1 Parking Bay Dimension for Cars

Bay Details	Bay Dimension Required	Bay Dimension Proposed
Ninety-degree Bays	5.4 x 2.6 x 5.8m aisles.	5.4 x 2.5 x 6.0m aisles. (minimum dimension)

As shown, the proposed bay width is 0.1m below minimum requirement, however, based on the following considerations the variation is considered acceptable and should not cause parking congestion.

- There is excessive provision of aisle width;
- Single manoeuvring in and out of the bays is achievable for the majority of bays.
- Although the turnover of parking bays is expected to be high, the bay occupancy is expected to be low;
- The onsite parking provision is significantly above minimum requirements;

8. Public Transport

8.1. Existing Public Transport Services

Figure 16 summarises the public transport network adjacent to the site. Transperth Bus route 549 is the only bus service operating in the local vicinity and the nearest bus stop is located outside the Rockingham Holiday Village, within 300m walking distance from the site.

The existing service is considered adequate for the proposed development considering the site has a low demand for public transport and the site provides sufficient number of bays for staff parking.

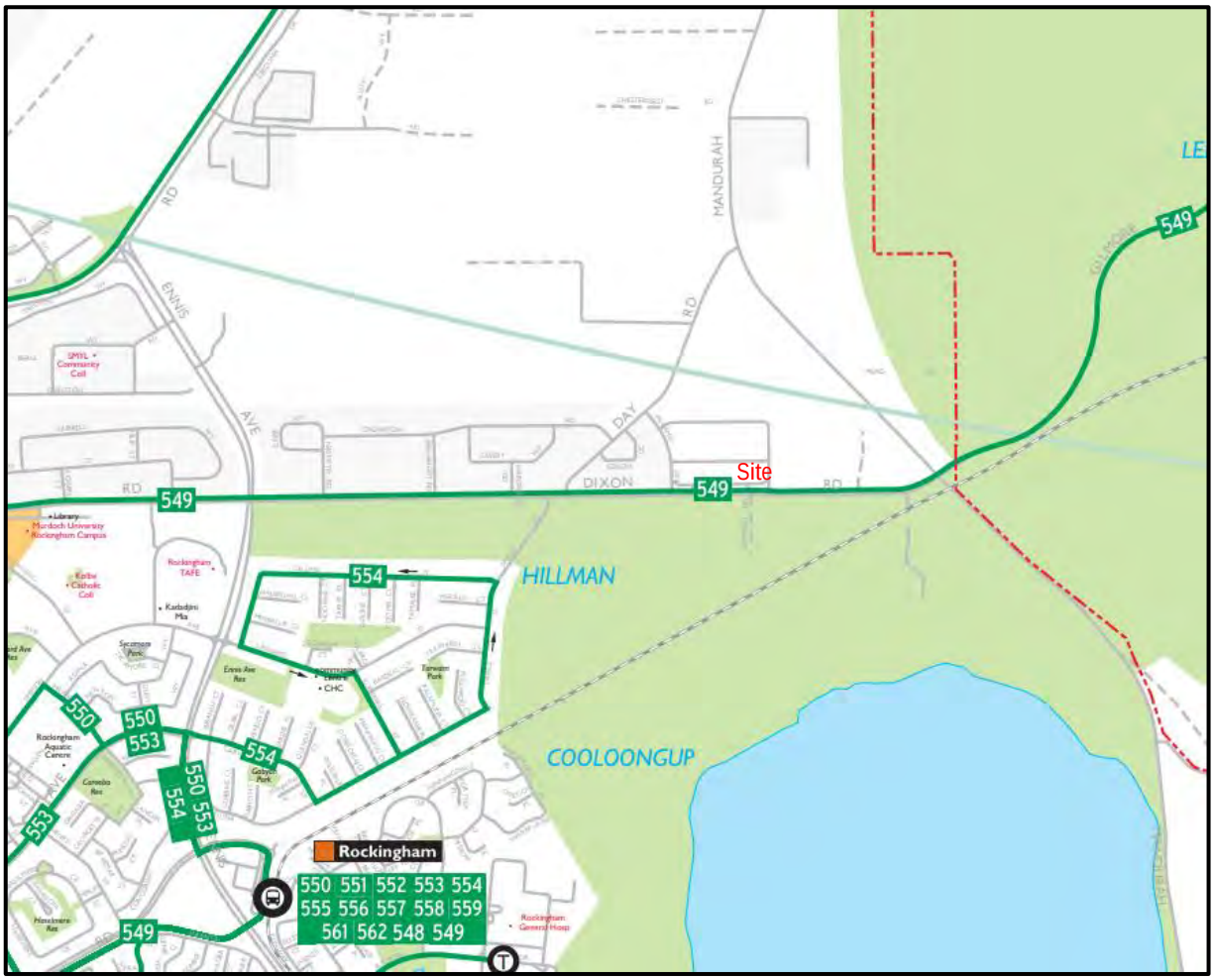


Figure 16 - Public Transport Network

9. Pedestrians and Cycle Networks

9.1. Existing Cycle and Pedestrian Infrastructure

Pedestrian and cycle facilities in the general vicinity of the site are shown in Figure 17. There are sealed shoulders along both sides of Dixon Road, providing access to Rockingham Bicycle Network. Pedestrian footpath is available along the northern side of Dixon Road connecting the light industrial and commercial developments along the road. Pedestrian movement to and from the site is expected to be low, and the existing infrastructure is considered adequate for the proposed development.

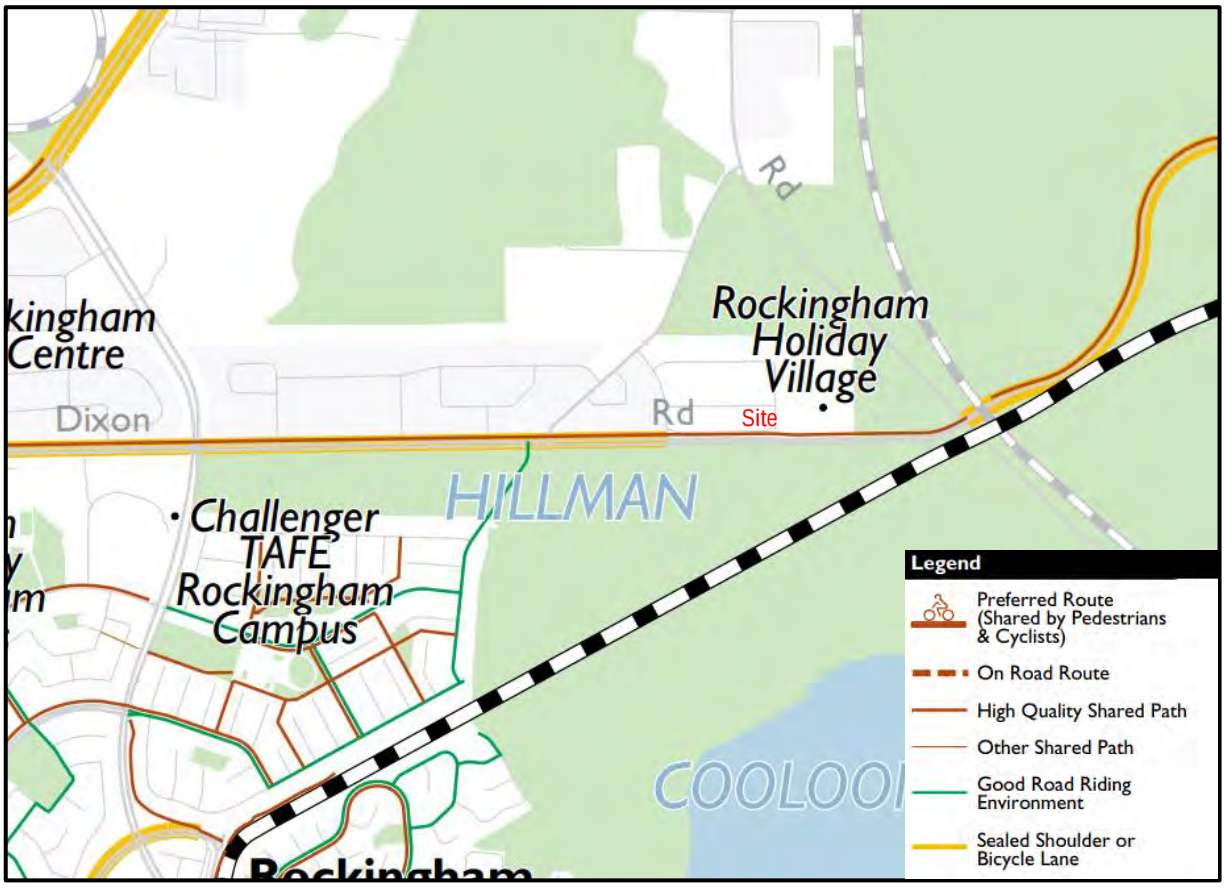


Figure 17 - Pedestrian and Cyclist Facilities

10. Site Specific or Safety Issues

10.1. Crash History

Crash data for the adjacent roads and major intersections were sourced from MRWA Crash Analysis Reporting System (CARS) for the 5-year period ending 31/12/2017. The report is summarised in Table 11.

Table 11 - Crash History

Location	Number of Crashes	MR Nature	Severity
Dixon Road / Mandurah Road / Gilmore Avenue Intersection	43	24 "Rear End" 2 "Sideswipe Same Direction" 6 "Right Angle" 11 "Right Turn Thru"	11 "Property Damage - Minor" 24 "Property Damage - Major" 6 "Medical" 2 "Hospital"
Dixon Road SLK 3.45 (McCamey Ave) to SLK 4.46 (Mandurah Rd)	15	7 "Rear End" 2 "Sideswipe Same Direction" 1 "Right Angle" 1 "Right Turn Thru" 1 "Hit Object" 1 "Other Unknown"	5 "Property Damage - Minor" 6 "Property Damage - Major" 3 "Medical" 1 "Hospital"
Evinrude Bend SLK 0.00 (Dixon Rd) to SLK 4.46 (McCamey Ave)	0	N/A	N/A
Whittle Road SLK 0.00 (Evinrude Bnd) to SLK 0.35 (McCamey Ave)	0	N/A	N/A

The number of crashes recorded at Dixon Road / Mandurah Road / Gilmore Avenue Intersection is relatively high compared to other intersection of similar location, however, while the development will generate additional traffic through this intersection, the number of additional traffic movements is relatively low. This additional volume of traffic is not considered to increase the risk of crashes to unacceptable levels.

11. Conclusion

With respect to the proposed Fuel Station & Car Service Centre, the following is concluded;

- The surrounding roads and intersections can accommodate the forecast increase in traffic from the proposed development;
- The supply of car parking spaces is considered adequate for the development;
- Review of the proposed parking layout indicates a shortage of 0.1m bay width in accordance with AS2890.1 Class 3 parking dimensions, however, the proposed layout is considered acceptable as the excessive aisle width can ensure single manoeuvre to access and egress from the bays and despite the high turnover rate, the parking occupancy is expected to be low;
- The proposed parking areas and internal geometry cater for all expected classes of vehicles;
- Review of the site plan indicates a potential conflict point between trucks traveling south from the diesel canopy and vehicles traveling east along the common thoroughfare. It is therefore recommended to provide line markings and a convex mirror to reduce conflict;
- Based on the assessment of auxiliary lane, the existing right turn auxiliary lane is considered acceptable. Whilst the traffic volumes meet the warrants for an auxiliary left turn lane, an auxiliary left turn lane is not recommended considering the consistency of existing road environment and treatment of the adjacent intersections;
- Based on the proposed land use, the public transport demand of the site is likely to be low and therefore the existing services are considered to be adequate;
- The existing pedestrian/cyclist infrastructure in the vicinity of the site is considered to be adequate to facilitate the safe movement of pedestrians and cyclists.

Appendix A - Site Layout

COMPOSITE SITE CRITERIA

1. Site Area		5,830m²
2. Zoning		Light Industry Service Station "D" Use Motor Vehicle Repair Station "D" Use
3. Landscaping		
a. Landscape Required		583.0m² or (10% of site)
b. Landscape Provided		
Soft		860.5m²
Hard		245.6m²
Total		1,141.1m² (19.6% of site)
4. Floor Area		
a. Convenience Store		225m²
b. Car Service		400m²
Total		625m²
5. Carparking		
a. Cars Required		Carbays
i. Convenience Store	6/100m² NLA of retail space +	14
	1/Employee	2
ii. Car Service	1/Service Bay	7
	1/Employee	2
Total		25
b. Cars Provided		45 Carbays

Landscaping
A. Hard Landscaping
i. Soft Landscaping
B. Soft Landscaping
Defined as vegetative landscaping.

Gross Floor Area / GFA
A. All Floor Areas on this plan are shown as GROSS FLOOR AREA.
Unless otherwise noted as Nett Floor Area.
B. Definition of Gross Floor Area is defined as:
i GROSS FLOOR AREA OF TENANCY
Gross Floor Area of a Tenancy is defined as the area contained between the centre line of common tenancy walls and the outside edge of external walls.
ii GROSS FLOOR AREA OF A BUILDING
Gross Floor Area of a Building is defined as the total area contained between the outside edge of external walls.

Nett Floor Area / NFA
A. Nett Floor Area of a Tenancy on this plan is defined as the area between external or tenancy dividing walls.
B. This area is inclusive of toilets if the toilets are exclusive to the Tenancy.

WHITTLE ROAD

Proposed 10m wide crossover

Paved Area

Screen Wall

Service Station Yard

3m3 Rainwater Tank

Car Service
GFA 400m²
FFL. 6.00

Fuel Station / Convenience Store
GFA 225m²
FFL. 6.00
(Final Layout To Be Determined)

Truck Diesel Canopy
FFL. 5.80

Existing Self Lock Storage

Tank Farm

Car Fuel Canopy
FFL. 5.60

MRS RESERVATION

Existing 24" Air + Water Bays 3m Wide

Existing Water power transformer

Existing 3m wide drainage easement shown hatched.

Existing 0.5m wide R.O.C. easement shown hatched.

FRONT BOUNDARY

DIXON ROAD

EVINRUDE BEND

SITE PLAN
SCALE: 1:200

EXISTING SITE SURVEY
SCALE: 1:200

PROPOSED FUEL STATION & CAR SERVICE

LOCATION:LOTS 36, CNR DIXON ROAD & EVINRUDE BEND, ROCKINGHAM
FOR:DAWNMARK HOLDING PTY LTD. AFT THE ELEMENT UNIT TRUST BY: VEND PROPERTY

SK012
FEB 2019
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As indicated @ B1

8236

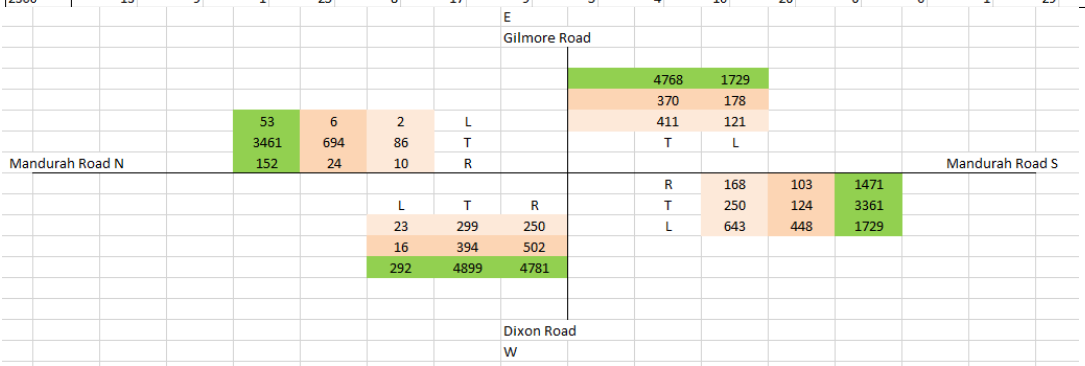
meyer shircore architects 55 YEARS 1963|2018

Suite 2, Ground Floor, 437 Roberts Road Subiaco WA 6008
PO Box 1294 Subiaco WA 6904
t: 08 9381 8511 e: mail@meyershircore.com.au

Appendix B - Traffic Count

MRWA SCATS traffic count for Dixon Road / Mandurah Road / Gilmore Avenue
Average hourly traffic volume from Monday 12/11/2018 to Friday 16/11/2018

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
0000	8	5	0	14	5	9	4	4	2	3	14	3	1	0	17	6	97
0100	7	3	0	6	2	5	1	7	2	2	6	1	0	0	10	6	60
0200	12	2	0	6	2	11	2	8	3	3	5	1	0	1	11	1	66
0300	13	6	0	12	1	12	4	21	8	1	8	2	0	3	14	6	111
0400	15	5	0	26	7	44	20	62	35	7	14	9	1	4	31	14	294
0500	28	23	2	73	40	87	64	355	354	43	38	32	2	19	180	24	1363
0600	46	45	3	129	71	97	80	298	320	75	76	49	0	26	290	43	1647
0700	45	46	6	146	78	99	91	201	240	131	130	92	4	19	630	72	2030
0800	42	44	10	190	109	122	128	121	129	168	225	186	2	23	643	121	2263
0900	48	41	7	201	103	124	126	69	69	107	206	157	2	21	386	88	1756
1000	55	52	11	223	123	140	139	63	56	85	203	138	3	21	367	93	1772
1100	56	58	8	221	127	145	158	58	50	77	213	141	5	24	373	107	1821
1200	72	77	12	224	124	145	159	55	44	81	199	140	5	21	360	90	1806
1300	67	85	8	222	121	147	157	58	47	75	186	120	4	19	337	106	1758
1400	131	192	17	233	139	185	191	59	53	90	199	159	5	22	403	138	2215
1500	192	294	21	262	171	243	248	66	61	121	229	204	5	20	485	181	2802
1600	276	419	24	246	148	248	253	66	57	103	199	171	6	16	448	178	2858
1700	192	305	11	200	122	202	189	66	49	91	188	140	2	13	337	178	2286
1800	93	132	7	150	81	113	108	34	26	69	148	95	3	7	260	110	1436
1900	35	42	1	117	64	80	77	17	11	45	105	52	1	5	155	63	870
2000	24	29	2	100	54	69	64	12	5	36	81	34	1	3	106	40	663
2100	22	21	1	74	38	65	50	11	8	29	62	22	0	2	71	35	511
2200	18	18	1	45	19	30	20	9	4	15	41	13	0	1	51	20	305
2300	13	9	1	25	8	17	9	5	4	10	26	6	0	1	29	8	172



	Daily	AM PEAK	PM PEAK
Mandurah Road N	7319	371	863
Mandurah Road S	16532	1518	2049
Dixon Road	16621	1636	1753
Glimore Avenue	12920	1001	1051

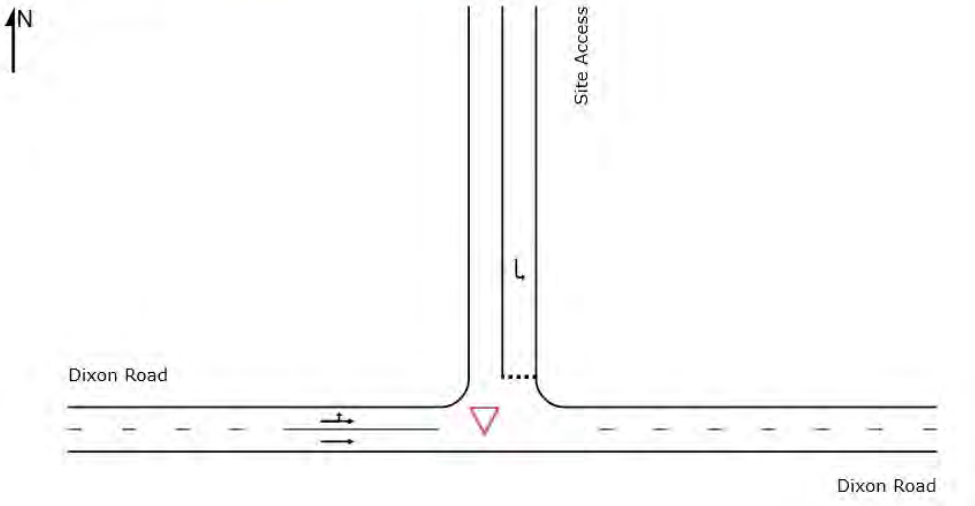
Appendix C - SIDRA Outputs

Site Access / Dixon Road Intersection

SITE LAYOUT

▽ **Site: [2021 AM Peak - Site Access / Dixon Road]**

Site Category: -
Giveway / Yield (Two-Way)



MOVEMENT SUMMARY

▽ Site: [2021 AM Peak - Site Access / Dixon Road]

Site Category: -
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
North: Site Access												
7	L2	14	8.0	0.012	6.6	LOS A	0.0	0.3	0.35	0.56	0.35	52.2
Approach		14	8.0	0.012	6.6	LOS A	0.0	0.3	0.35	0.56	0.35	52.2
West: Dixon Road												
10	L2	33	8.0	0.168	5.6	LOS A	0.0	0.0	0.00	0.06	0.00	57.4
11	T1	589	8.0	0.168	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	59.7
Approach		622	8.0	0.168	0.3	NA	0.0	0.0	0.00	0.03	0.00	59.6
All Vehicles		636	8.0	0.168	0.5	NA	0.0	0.3	0.01	0.04	0.01	59.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▽ Site: [2021 PM Peak - Site Access / Dixon Road]

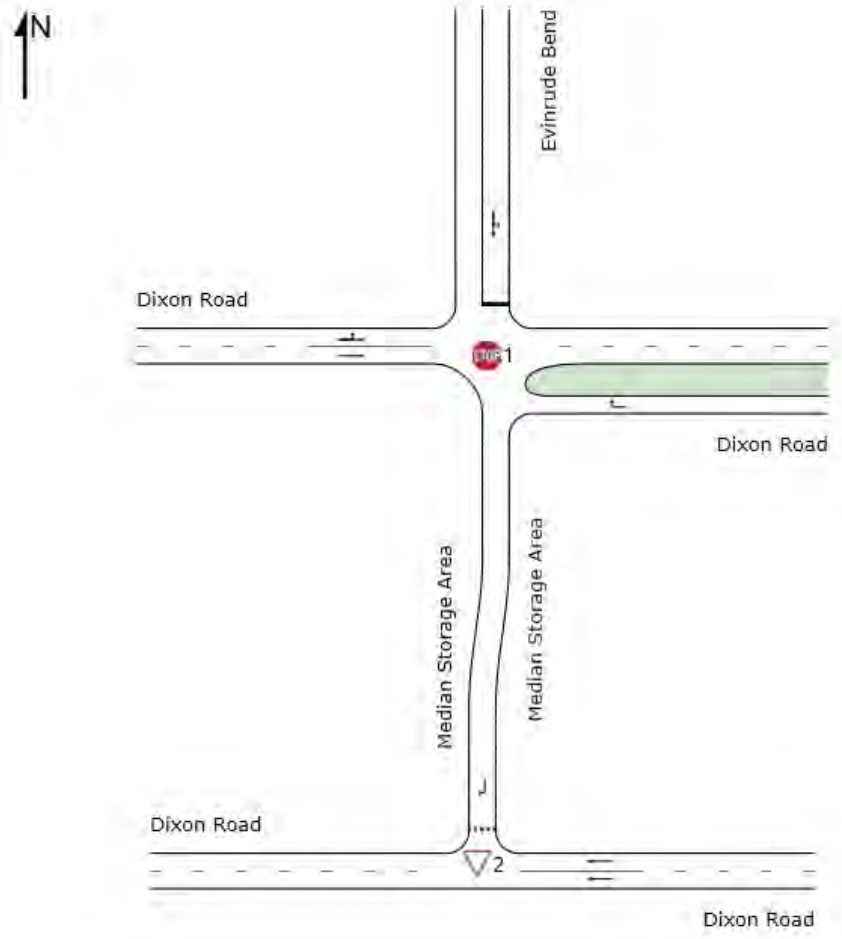
Site Category: -
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
North: Site Access												
7	L2	18	8.0	0.017	7.3	LOS A	0.1	0.5	0.44	0.61	0.44	51.9
Approach		18	8.0	0.017	7.3	LOS A	0.1	0.5	0.44	0.61	0.44	51.9
West: Dixon Road												
10	L2	40	8.0	0.245	5.7	LOS A	0.0	0.0	0.00	0.05	0.00	57.5
11	T1	866	8.0	0.245	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	59.7
Approach		906	8.0	0.245	0.3	NA	0.0	0.0	0.00	0.03	0.00	59.6
All Vehicles		924	8.0	0.245	0.4	NA	0.1	0.5	0.01	0.04	0.01	59.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Dixon Road Evinrude Bend Intersection
Note: this intersection layout is a technique to simulate staged right turn movements.



MOVEMENT SUMMARY

Site: 1 [2021 AM Peak Dixon Road / Evinrude Bend Stage 1]

Network: N101 [2021 AM Peak Dixon Road / Evinrude Bend Staged Right Turn]

Staged crossing Stage 1 (Minor Road) at three-way intersection with 5-lane major road. Major road turn lane is treated as a full-length lane.
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Aver. Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Dixon Road														
12	R2	29	8.0	29	8.0	0.042	9.1	LOS A	0.1	0.5	0.55	0.72	0.55	50.7
Approach		29	8.0	29	8.0	0.042	9.1	NA	0.1	0.5	0.55	0.72	0.55	50.7
North: Evinrude Bend														
1	L2	19	8.0	19	8.0	0.119	9.8	LOS A	0.2	1.3	0.55	0.96	0.55	49.0
2	T1	47	8.0	47	8.0	0.119	14.3	LOS B	0.2	1.3	0.55	0.96	0.55	43.7
Approach		66	8.0	66	8.0	0.119	13.0	LOS B	0.2	1.3	0.55	0.96	0.55	45.9
West: Dixon Road														
4	L2	15	8.0	15	8.0	0.163	5.6	LOS A	0.0	0.0	0.00	0.03	0.00	57.7
5	T1	589	8.0	589	8.0	0.163	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
Approach		604	8.0	604	8.0	0.163	0.2	NA	0.0	0.0	0.00	0.01	0.00	59.8
All Vehicles		699	8.0	699	8.0	0.163	1.7	NA	0.2	1.3	0.07	0.13	0.07	58.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2 [2021 AM Peak Dixon Road / Evinrude Bend Stage 2]

Network: N101 [2021 AM Peak Dixon Road / Evinrude Bend Staged Right Turn]

Staged crossing Stage 2 (Median) at three-way intersection with 5-lane major road.
Give-way behaviour assumed at Stage 2.
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Aver. Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Dixon Road														
11	T1	1096	8.0	1096	8.0	0.296	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		1096	8.0	1096	8.0	0.296	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
North: Median Storage Area														
3	R2	47	8.0	47	8.0	0.108	6.7	LOS A	0.1	0.8	0.71	0.71	0.71	6.3
Approach		47	8.0	47	8.0	0.108	6.7	LOS A	0.1	0.8	0.71	0.71	0.71	6.3
All Vehicles		1143	8.0	1143	8.0	0.296	0.3	NA	0.1	0.8	0.03	0.03	0.03	59.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 1 [2021 PM Peak Dixon Road / Evinrude Bend Stage 1]

Network: N101 [2021 PM Peak Dixon Road / Evinrude Bend Staged Right Turn]

Staged crossing Stage 1 (Minor Road) at three-way intersection with 5-lane major road. Major road turn lane is treated as a full-length lane.
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Aver. Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Dixon Road														
12	R2	34	8.0	34	8.0	0.083	13.4	LOS B	0.1	0.9	0.72	0.88	0.72	47.8
Approach		34	8.0	34	8.0	0.083	13.4	NA	0.1	0.9	0.72	0.88	0.72	47.8
North: Evinrude Bend														
1	L2	23	8.0	23	8.0	0.261	12.1	LOS B	0.4	3.0	0.76	1.02	0.85	44.8
2	T1	58	8.0	58	8.0	0.261	23.8	LOS C	0.4	3.0	0.76	1.02	0.85	37.5
Approach		81	8.0	81	8.0	0.261	20.5	LOS C	0.4	3.0	0.76	1.02	0.85	40.3
West: Dixon Road														
4	L2	15	8.0	15	8.0	0.258	5.7	LOS A	0.0	0.0	0.00	0.02	0.00	57.8
5	T1	939	8.0	939	8.0	0.258	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.9
Approach		954	8.0	954	8.0	0.258	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.8
All Vehicles		1069	8.0	1069	8.0	0.261	2.1	NA	0.4	3.0	0.08	0.11	0.09	57.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2 [2021 PM Peak Dixon Road / Evinrude Bend Stage 2]

Network: N101 [2021 PM Peak Dixon Road / Evinrude Bend Staged Right Turn]

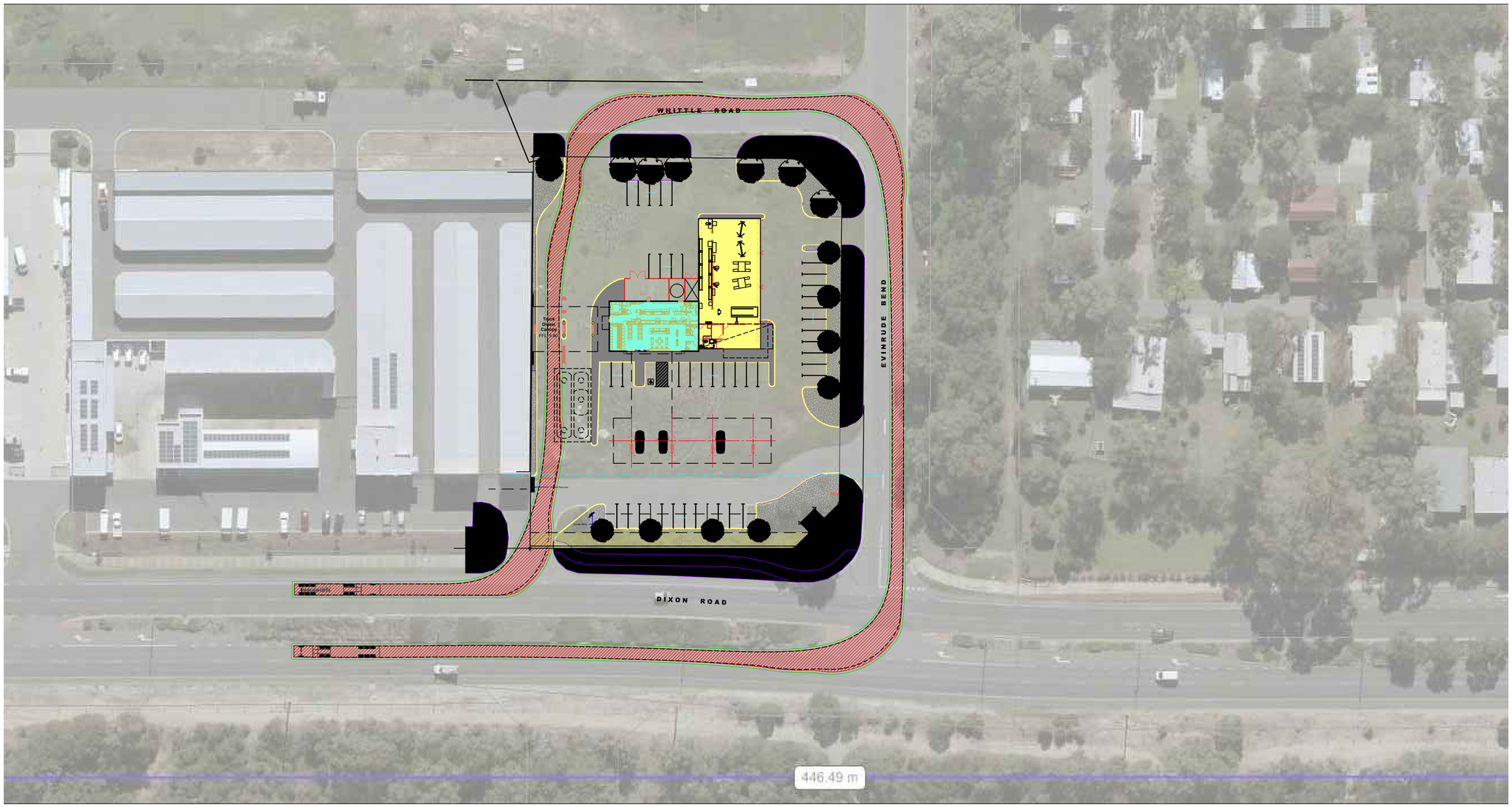
Staged crossing Stage 2 (Median) at three-way intersection with 5-lane major road.
Give-way behaviour assumed at Stage 2.
Site Category: (None)
Giveway / Yield (Two-Way)

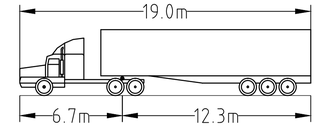
Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Aver. Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Dixon Road														
11	T1	866	8.0	866	8.0	0.234	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		866	8.0	866	8.0	0.234	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
North: Median Storage Area														
3	R2	58	8.0	58	8.0	0.098	4.3	LOS A	0.1	0.7	0.60	0.60	0.60	8.3
Approach		58	8.0	58	8.0	0.098	4.3	LOS A	0.1	0.7	0.60	0.60	0.60	8.3
All Vehicles		924	8.0	924	8.0	0.234	0.3	NA	0.1	0.7	0.04	0.04	0.04	59.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Appendix D - Swept Path Diagram(s)





PRIME MOVER AND SEMI-TRAILER (19m) MRWA

OVERALL LENGTH	19.000m
OVERALL WIDTH	2.500m
OVERALL BODY HEIGHT	4.300m
MIN BODY GROUND CLEARANCE	0.540m
TRACK WIDTH	2.500m
LOCK-TO-LOCK TIME	6.00s
TURNING RADIUS TO OUTSIDE FRONT WHEEL	15.000m

LEGEND

- TURNING TEMPLATE - VEHICLE BODY FORWARD MOVEMENT
- TURNING TEMPLATE - WHEEL PATH
- TURNING TEMPLATE - 0.5m CLEARANCE FROM VEHICLE BODY

SCALE 1:500

A 1

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LOT 36 DIXON ROAD, EAST ROCKINGHAM
SWEPT PATH ANALYSIS
MRWA SEMI TRAILER (19.0m) TURNING TEMPLATE TO AND FROM WEST

DRAWING NUMBER: 1901005-SK-001

REV. B

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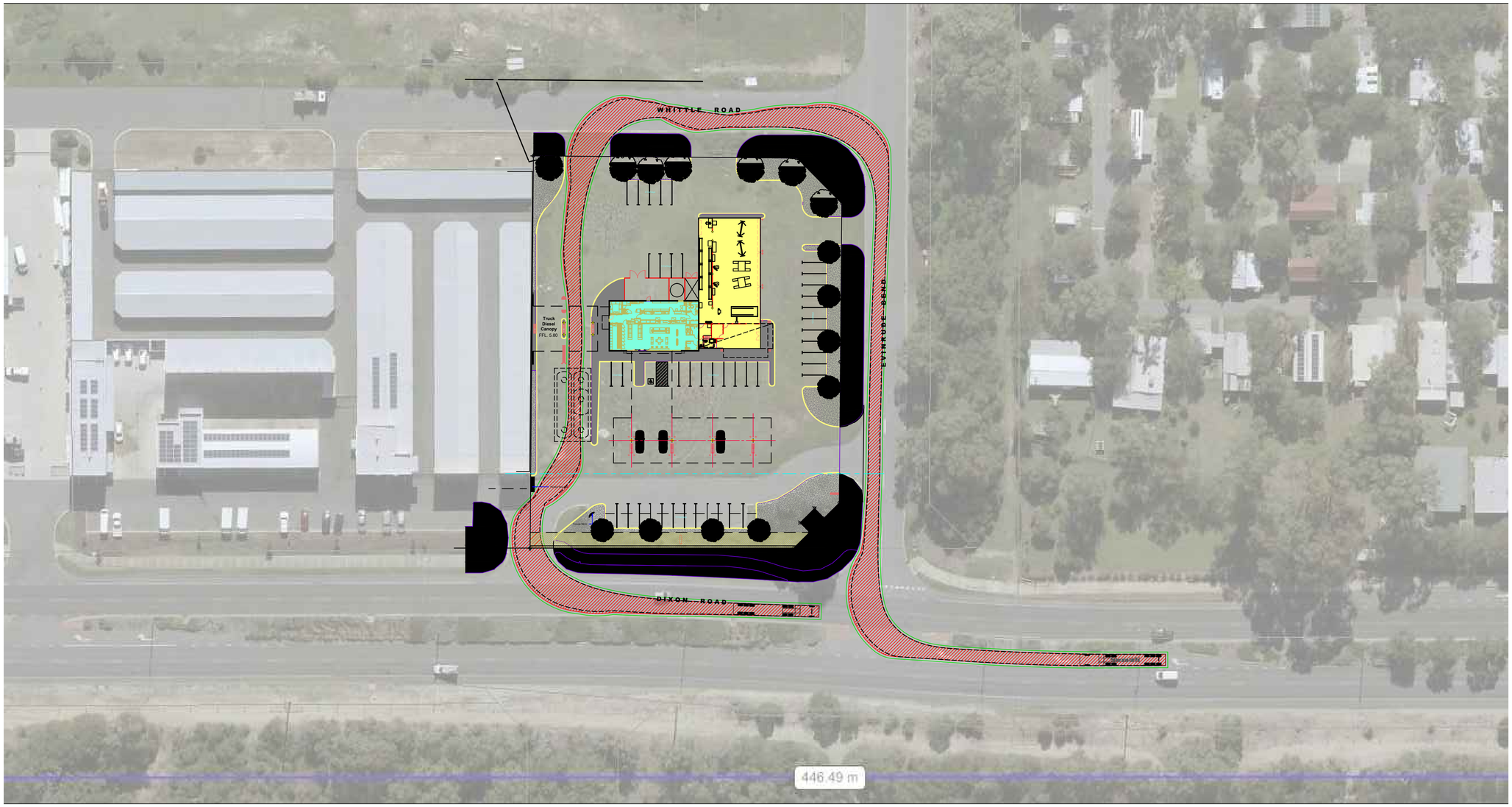

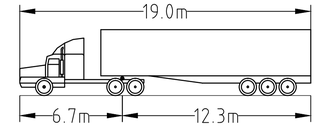

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LOT 36 DIXON ROAD, EAST ROCKINGHAM
SWEPT PATH ANALYSIS
MRWA SEMI TRAILER (19.0m) TURNING TEMPLATE TO AND FROM EAST

DRAWING NUMBER: 1901005-SK-002

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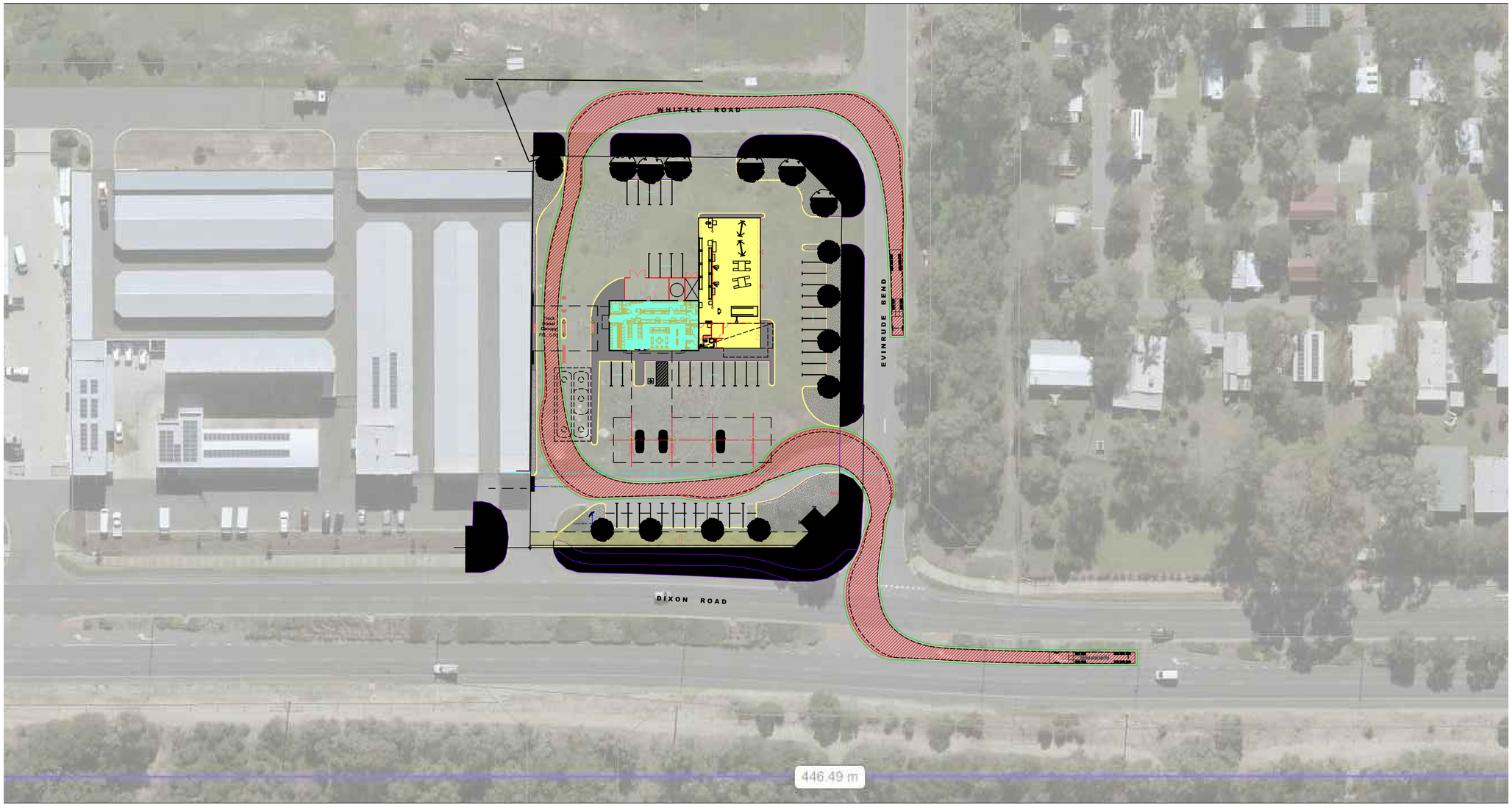

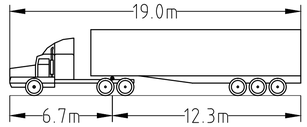

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LOT 36 DIXON ROAD, EAST ROCKINGHAM
SWEPT PATH ANALYSIS
MRWA SEMI TRAILER (19.0m) TURNING TEMPLATE
ACCESS VIA EVINRUDE BEND CROSSOVER

DRAWING NUMBER: 1901005-SK-003

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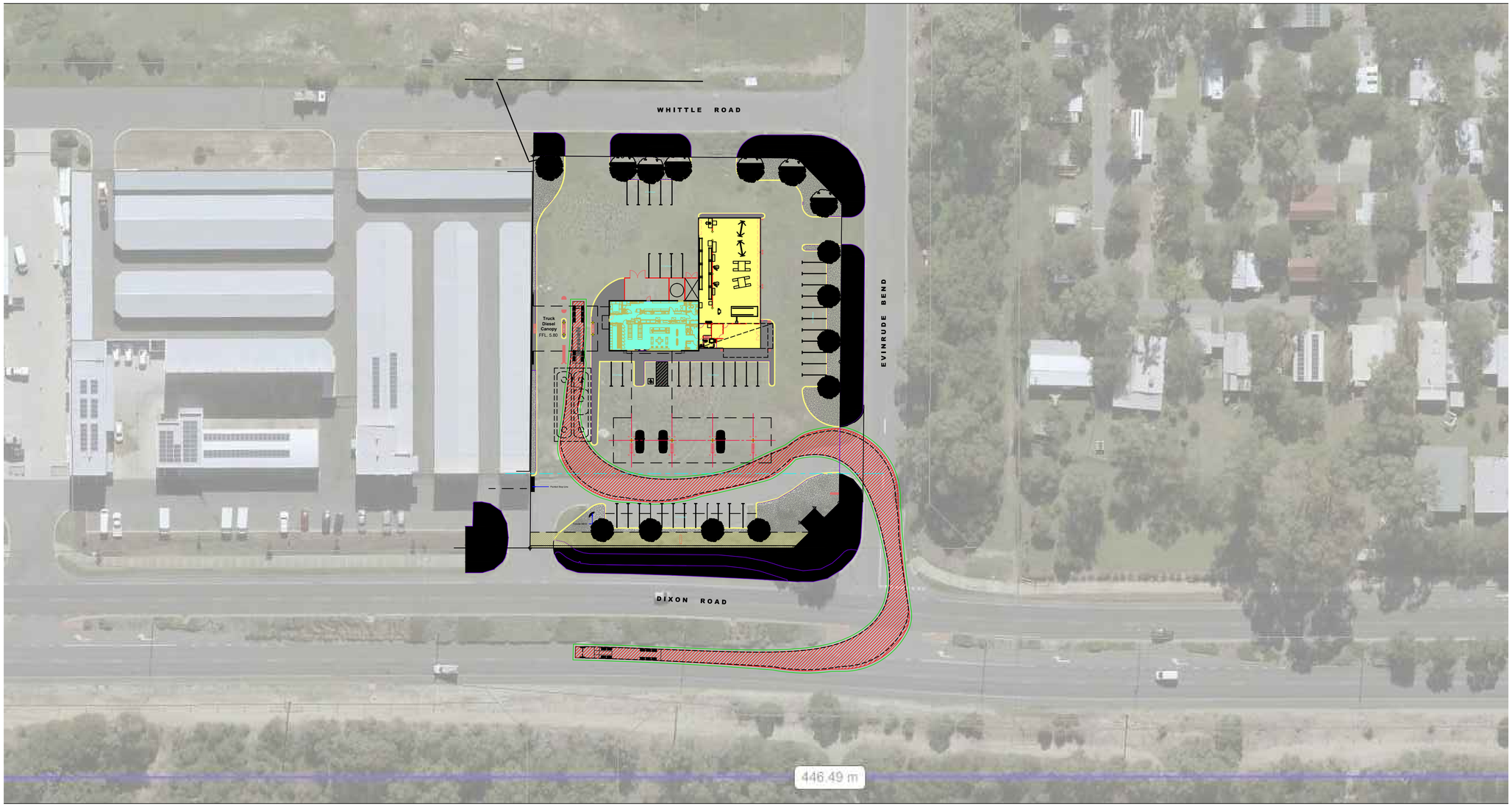

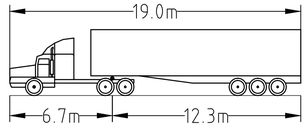

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LOT 36 DIXON ROAD, EAST ROCKINGHAM

SWEPT PATH ANALYSIS
MRWA SEMI TRAILER (19.0m) TURNING TEMPLATE
EGRESS VIA EVINRUDE BEND CROSSOVER

DRAWING NUMBER: 1901005-SK-004

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Appendix 5
SPEL Puraceptor

SPEL

PURACEPTOR

Pollution Prevention

Stormwater Treatment & Hydrocarbon Capture

Petrol Stations

Australia

SPEL STORMWATER SOLUTIONS

Standards & Guidelines for Petrol Station Stormwater Pollution Control

There is no Australian Standard for oil/water separators.

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

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

European Standard
(oil and petrol separators)

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

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

Australian Runoff Quality

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

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

Non-Compliant Sites

Petrol stations with the following defects.

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

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

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

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

Solution for Non-Compliant Petrol Stations

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

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

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

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

Puraceptor Benefits

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

Puraceptor Certification

Australian Independent Tests

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

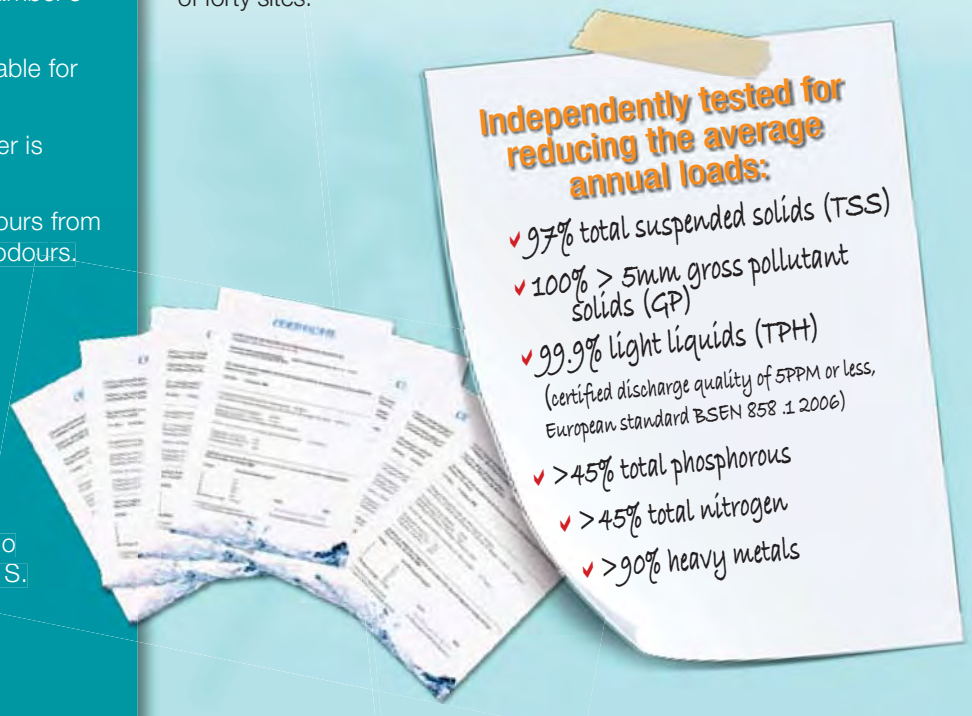
- NATA analysis of the tests shows a water quality of `no visible trace` of hydrocarbons from an inflow concentration of 5,000ppm.

In-Situ Testing

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

Council Approvals

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



MAINTENANCE

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

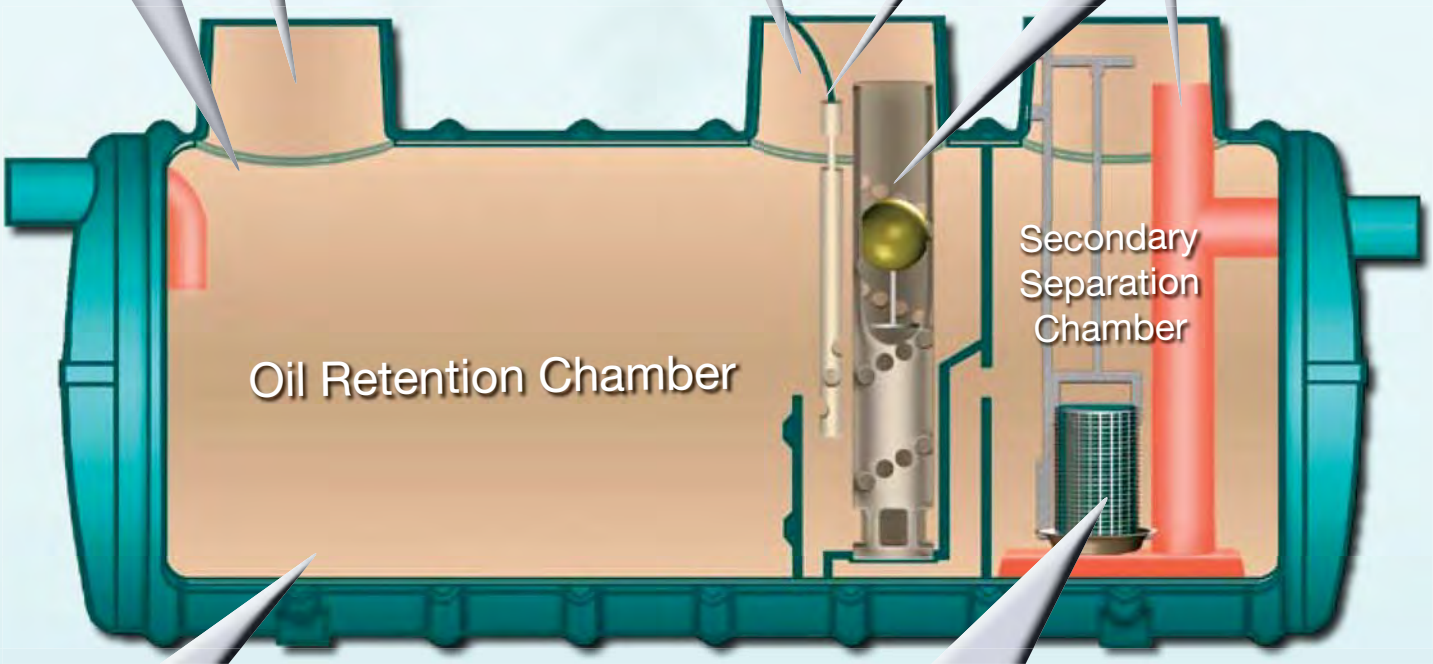
Stormwater discharge quality is < 1.86 mg/l hydrocarbon content exceeding the Environmental Protection Agency (E.P.A.) requirements of 10mg/l hydrocarbon content.

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

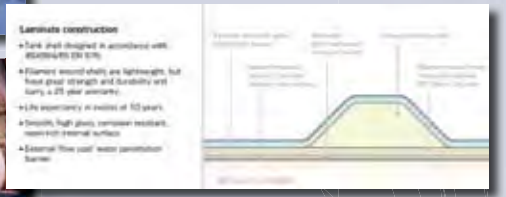
The probe is freely suspended in the probe protection tube in the separator at the correct level. When the oil-layer or depth of hydrocarbons reaches the predetermined level, the top of the probe will be immersed in the oil, breaking the circuit and activating the alarm. It is intrinsically `fail-safe`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

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

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



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



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

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

SPEL PURACEPTOR™

OIL CAPTURE & CONTAINMENT

Head Office
83 – 87 Fennell Street, Parramatta NSW 2150
02 8838 1000

ACT	NZ	NSW / NT	QLD	SA	VIC / TAS	WA
02 6128 1000	+64 9 276 9045	02 8838 1000	07 3390 8677	08 8275 8000	03 5274 1336	08 9350 1000

Appendix 6
Environmental Noise Assessment

HERRING STORER ACOUSTICS

PROPOSED FUEL STATION & CAR SERVICE

LOT 36 CNR DIXON ROAD & EVINRUDE BEND ROCKINGHAM

ENVIRONMENTAL ACOUSTIC ASSESSMENT

MARCH 2019

OUR REFERENCE: 23965-2-19022

Rochdale Holdings Pty Ltd A.B.N. 85 009 049 067 trading as:
HERRING STORER ACOUSTICS
P.O. Box 219, Como, W.A. 6952
(08) 9367 6200
hsa@hsacoustics.com.au

DOCUMENT CONTROL PAGE

ENVIRONMENTAL ACOUSTIC ASSESSMENT

PROPOSED FUEL STATION & CAR SERVICE; ROCKINGHAM

Job No: 19022

Document Reference : 23965-2-19022

FOR

MEYER SHIRCORE ARCHITECTS

DOCUMENT INFORMATION			
Author:	Tim Reynolds	**Checked By:**	Paul Daly
Date of Issue:	30 January 2019		

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Revision	**Description**	**Date**	**Author**	**Checked**
1	Updated Plans	07/03/19	TR	PLD

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CONTENTS

APPENDICIES

1. INTRODUCTION

Herring Storer Acoustics were commissioned by Meyer Shircore Architects to undertake an acoustic assessment of noise emissions associated with the proposed fuel station and car service centre to be located at Lot 36, corner of Dixon Road and Evinrude Bend, Rockingham.

This report assesses noise emissions from the premises with regards to compliance with the requirements of the *Environmental Protection (Noise) Regulations 1997*. It is understood that the development consists of a service station and car service centre, therefore, noise sources considered as part of this assessment include :

- Impact wrench for car service centre;
- Mechanical Services; and
- Car and truck doors closing.

We note that from recent information received from the DWER, the bitumised area would be considered as a road, thus noise relating to the "propulsion and braking" of 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. For completeness, we have also provided an assessment of the noise emissions (attached in Appendix B) from the following:

- Car movements on site;
- Car and truck engine starts; and
- Truck air brakes.

For reference, the plans of the proposed development are attached in Appendix A.

2. SUMMARY

The neighbouring residences to this development are a caravan park located to the east of Evinrude Bend. The service station would be open 24 hours per day, however, the car service centre would only be open during the day period (ie opening after 7am and closing before 7pm, Monday to Saturday; excluding Public Holidays). Hence, noise received at the neighbouring noise (highly) sensitive premises from the service station needs to comply with the appropriate assigned noise levels for the night period, with noise from both usages, needing to comply with the assigned day period noise level.

Analysis of the noise from the car service facility, with impact wrenches, being the worst case, show that compliance with the assigned L_{A1} noise levels would be achieved for the proposed operational hours.

The assessment indicates that noise emissions from car and truck doors closing would be assessed against the assigned L_{AMax} noise level.

Finally, 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.

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

3. CRITERIA

The allowable noise level for noise sensitive premises in the vicinity of the proposed Facility site is prescribed by the *Environmental Protection (Noise) Regulations 1997*. Regulations 7 and 8 stipulate maximum allowable external noise levels or assigned noise levels that can be received at a premise from another premises. For residential premises, this noise level is 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. The base noise levels for residential premises and the assigned noise levels for industrial premises are listed in Table 3.1.

TABLE 3.1 - BASELINE ASSIGNED OUTDOOR NOISE LEVEL

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

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, as shown on Figure 3.1 below.

FIGURE 3.1 – AREA AROUND PROPOSED DEVELOPMENT

The influencing factor at the nearest residential locations to the east of Evinrude Bend have been determined as summarised in Table 3.3.

TABLE 3.3 – INFLUENCING FACTORS

Influencing Factor Parameter	Influencing Factor (dB)
Major Road within inner circle	+6
Major Road within outer circle	-
Secondary Road within inner circle	-
Industrial Premises within the inner circle	+1.3 (13%)
Industrial Premises within the outer circle	+3.0 (30%)
Commercial Premises within the inner	+1.4 (28%)
Commercial Premises within the outer	+0.4 (8%)
TOTAL IF	+12.1 (rounded down to 12 dB)

Note : Although, the caravans or cabins would be considered noise sensitive, for the purposes of determining the Influencing Factor, the grounds on which the caravan park sits would be considered as commercial.

Based on the above, the assigned noise levels are as 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

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

4. 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 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:

- Impact wrench for car service centre;
- Mechanical Services; and
- Doors closing for both cars and trucks.

Although, the noise emissions associated with car and truck activities on site would be considered exempt from the Regulations, for completeness, noise modelling and assessment were also undertaken for the following sources :

- Car movements on site;
- Car and truck engine starts; and
- Truck air brakes.

The modelling results and assessment for these items are contained in Appendix B.

The calculations were based in the sound power levels listed in Tables 4.1 to 4.3.

Table 4.1 – GENERAL SOUND POWER LEVELS

Item of Equipment	Sound Power Level, (dB(A))
Cars moving	81
Truck moving	89
Car Start	85
Car Door	87
Truck Start	94
Truck Door	95
Truck Air Brake	103

TABLE 4.2 – MECHANICAL SERVICES NOISE LEVELS

Plant Item	Sound Power Level dB(A)
Air Conditioning Condensing Units	3 at 70

The dominant noise source associated with the car service facility that needs to be assessed, would be limited to the noise associated with the impact wrenches (rattle guns) used to loosen and tighten the wheel nuts. From previous projects, the noise level of the impact wrenches would be as listed in Table 5.1.

TABLE 4.3 – CAR LIFT (STACKER)

Plant Item	Sound Power Level dB(A)
Impact Wrench	102

The above noise sources need to comply with the following assigned noise levels :

L_{A10} - Mechanical services.
L_{A1} - Impact Wrench.
L_{AMax} - Car and truck doors closing.

With regards to noise emissions, the following are noted:

1 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.

2 It has been assumed that the mechanical services would be located on the roof.

3 The noise level from the impact wrench is with doors to the workshop open.

5. RESULTS

Calculations were undertaken to all the residences noted on Figure 3.1. However, to simplify the assessment, only the noise received at the worst case location has been listed in Table 5.1.

NOTE : The results for those sources exempt of the regulations are attached in Appendix B.

TABLE 5.1 – WORST CASE CALCULATED NOISE LEVELS
NOISE SOURCES REQUIRING COMPLIANCE

Item	Calculated Noise Levels (dB(A))
Mechanical services	30
Impact Wrench	52
Car Door	43
Truck Door	48

6. ASSESSMENT

The following provided the acoustic assessment for the noise sources requiring compliance, as listed in Table 5.1.

For those sources that are exempt from the Regulations, the assessments are attached in Appendix B.

6.1 L_{A10} NOISE EMISSIONS – MECHANICAL SERVICES

Noise emissions from the mechanical services would be steady state and would operate for the majority of time. Hence noise received from the mechanical services needs to comply with the assigned L_{A10} noise level.

Given the resultant noise level at the residences and likely background noise level associated noise from vehicles travelling along Dixon Road, we believe that it is unlikely that noise received at the neighbouring residences would be tonal. However, again to be conservative, a +5 dB(A) penalty has been applied to the calculated noise level associated with the mechanical services. Table 6.1 lists the characteristics that should be included in the assessable noise level.

TABLE 6.1 – APPLICABLE ADJUSTMENTS AND ASSESSABLE L_{A10} NOISE LEVELS, dB(A)
MECHANICAL SERVICES

Location	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	
Caravan Park	30	+5	-	-	35

Table 6.2 shows the applicable Assigned Noise Levels, and assessable noise level emissions associated for the scenarios associated with the mechanical services.

TABLE 6.2 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS
MECHANICAL SERVICES

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{A10} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
Caravan Park	35	Night Period	47	Complies

6.2 L_{A1} NOISE EMISSIONS – IMPACT WRENCH

The impact wrench would operate for less than 10% of the time and would during these times need to comply with the assigned L_{A1} noise levels, to be conservative noise received at the neighbouring residence has been assessed against the assigned L_{A10} noise levels.

Based on the definitions of tonality, noise emissions from the impact wrench would not be considered tonal. Thus, no penalties would be applicable and the assessment would be as listed in Table 6.3.

TABLE 6.3 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS
IMPACT WRENCH

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{A10} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
Caravan Park	57	Day Period	67	Complies

6.3 L_{AMAX} NOISE EMISSION – CAR DOOR

Noise emissions from a car door closing on site need to comply with the assigned L_{AMax} 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_{AMax} noise levels. However, 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.

Noise associated with the closing of a car door could be impulsive and to be conservative, a +10 dB(A) penalty for impulsiveness would be applied.

Table 6.4 list the characteristics that should be included and the assessable noise levels and the assessable noise level for car doors closing.

TABLE 6.4– APPLICABLE ADJUSTMENTS AND ASSESSABLE L_{AMAX} NOISE LEVELS, dB(A)
CAR DOOR

Locations	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	
Caravan Park	43	-	-	+10	53

Table 6.5 shows the applicable Assigned Noise Levels, and assessable noise level emissions associated for the scenarios associated with the car doors closing.

TABLE 6.5 – ASSESSMENT OF L_{AMAX} NOISE LEVEL EMISSIONS
CAR DOOR

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{AMax} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
Caravan Park	53	Night Period	67	Complies

6.4 L_{AMAX} NOISE EMISSION – TRUCK DOOR

Noise emissions from a truck door closing on site need to comply with the assigned L_{AMax} 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_{AMax} noise levels. However, 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.

Noise associated with the closing of a truck door could be impulsive and to be conservative, a +10 dB(A) penalty for impulsiveness would be applied.

Table 6.6 list the characteristics that should be included and the assessable noise levels and the assessable noise level for truck doors closing.

TABLE 6.6 – APPLICABLE ADJUSTMENTS AND ASSESSABLE L_{AMAX} NOISE LEVELS, dB(A)
TRUCK DOOR

Locations	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	
Caravan Park	48	-	-	+10	58

Table 6.7 shows the applicable Assigned Noise Levels, and assessable noise level emissions associated for the scenarios associated with the truck doors closing.

TABLE 6.7 – ASSESSMENT OF L_{AMAX} NOISE LEVEL EMISSIONS TRUCK DOOR

Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned L_{AMax} Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
Caravan Park	58	Night Period	67	Complies

From the above assessments, it can be seen that noise received at the neighbouring residences, even using a conservative analysis, complies with the requirements of the *Environmental Protection (Noise) Regulations 1997* at all times. However, as the mechanical services design would only be confirmed 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.