APPENDIX E

LANDSCAPE INTENT PLAN



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VantageYatala

WOOLWORTHS

WAREHOUSE DEVELOPMENT

Landscape Intent Package

FPI Queensland Pty Ltd

Approved Lot 201.
Lot 502, SP316137

Lot 201 Fairway Street,
STAPYLTON, QUEENSLAND 4207

MAY 2022
Issue - For Approval
Revision - B

Prepared By -
Gassman Development Perspectives
Job No. 6111

FRASERS PROPERTY

Woolworths

gassman development perspectives
est 1985
planning | environment | landscape | engineering | survey

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02 LANDSCAPE INTENT
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08 MATERIAL PALETTE
09 PLANTING PALETTE
10 PLANTING PALETTE

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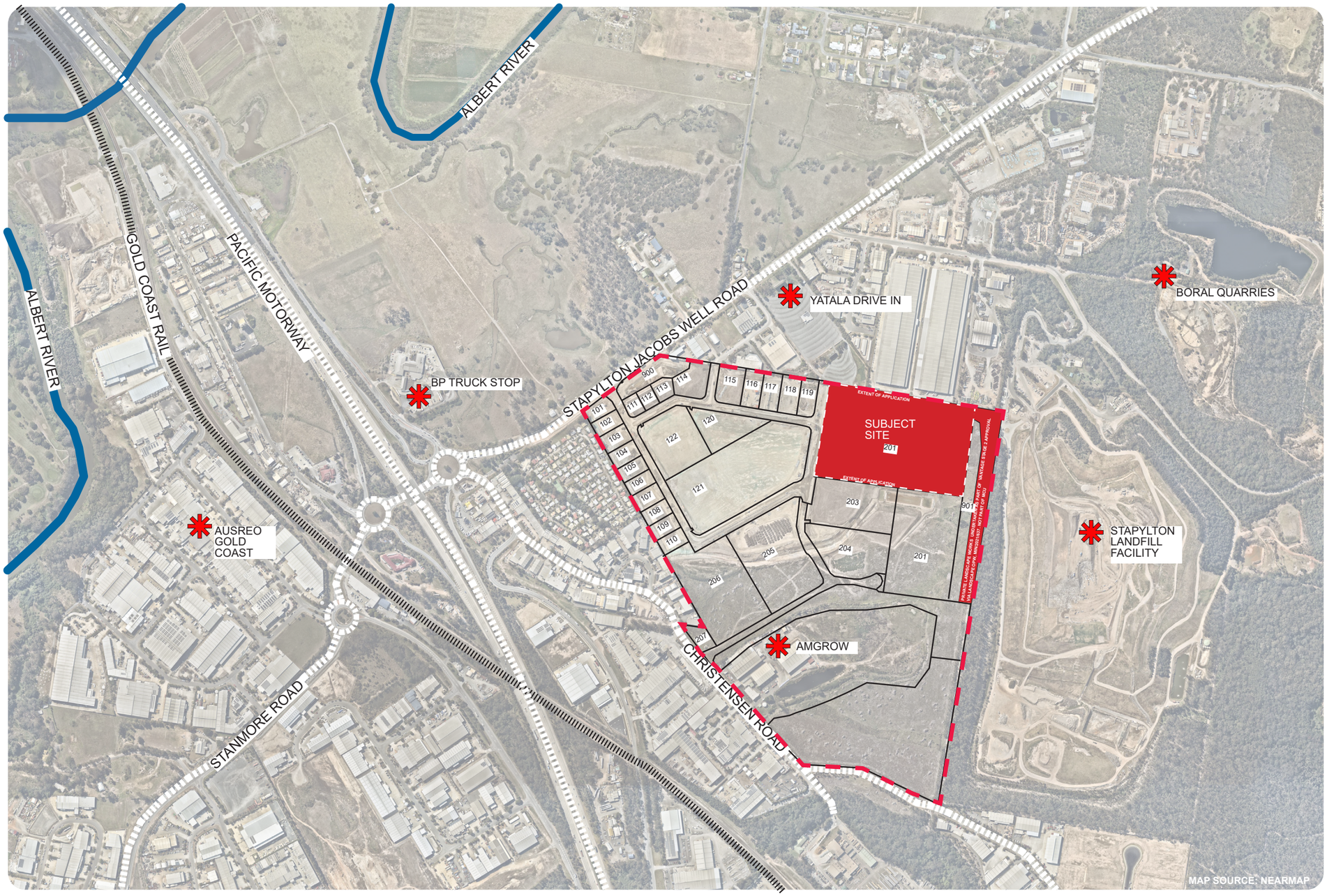
SITE LOCALITY PLAN



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WAREHOUSE
DEVELOPMENT
FPI Queensland Pty Ltd

SITE LOCALITY PLAN

scale nts

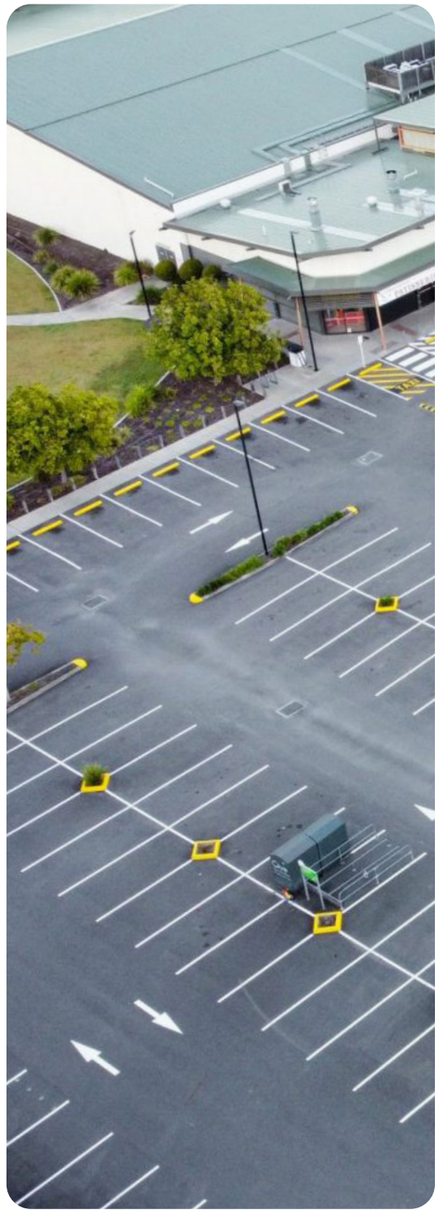
NORTH

Date: 19.05.22
Project no: 6111
Rev: B Dwn: JLS

LANDSCAPE INTENT









The landscape intent of Lot 201 located in the Frasers Vantage Industrial Estate is to;

To facilitate the development of functional, well serviced, amenable, and attractive industrial warehouse that holds regard to its local context.

To create a sense of spaciousness defined by wide roads and buildings, and a flow of landscape between.

To promote a development that integrates with the surrounding environment through the use of compatible landscaping, materials, colours and building forms.

To reduce the potential for conflict between vehicle and pedestrian traffic there will be an appropriate level of separation and/or wayfinding throughout the site.

To ensure soft-scaping softens the built form, yet is durable and requires minimal maintenance.

To create open breakout / recreational areas for staff and visitors of the warehouse development.

LANDSCAPE INTENT PLAN

- EXTENT of application
- PALISADE fence setback 2m from boundary

01 PRIVATE landsape works
undertaken as part of Vantage Stage 2 ROL approval via landscape OPW NO: MIN/2021/637. Not part of MCU approval

02 STREETSCAPE constructed
as part of Vantage Stage 1 Public Landscape Work (MIN/2019/761), treatment to road verge to remain.

03 STREET trees in road verge to be retained

04 PEDESTRIAN sight lines 2.5m x 2m, planting in these zones to have maximum height of 500mm

05 LAYERED planting of tree, shrub and groundcover species, consisting of low maintenance species. Garden width ranges from 5-9m.

06 FEATURE trees to create a sense of place, provide shade for pedestrians and enhance legibility

07 SHADE trees provided to carparking area

08 GROUNDCOVER planting to carparking bays to enhance CEPTED principals

09 OUTDOOR recreation area including seating

10 RETAINING WALL
stone boulder constructed 600mm off common boundary with drainage reserve to allow for screening planting

11 OFFICE location

12 FEATURE tree (Tristaniopsis laurina 'luscious') with strata cell and root barrier positioned to building entry point

13 COUNCIL DRAINAGE reserve LOT 901, as part of Vantage Stage 2 ROL approval via landscape OPW NO: MIN/2021/637. Not part of MCU approval

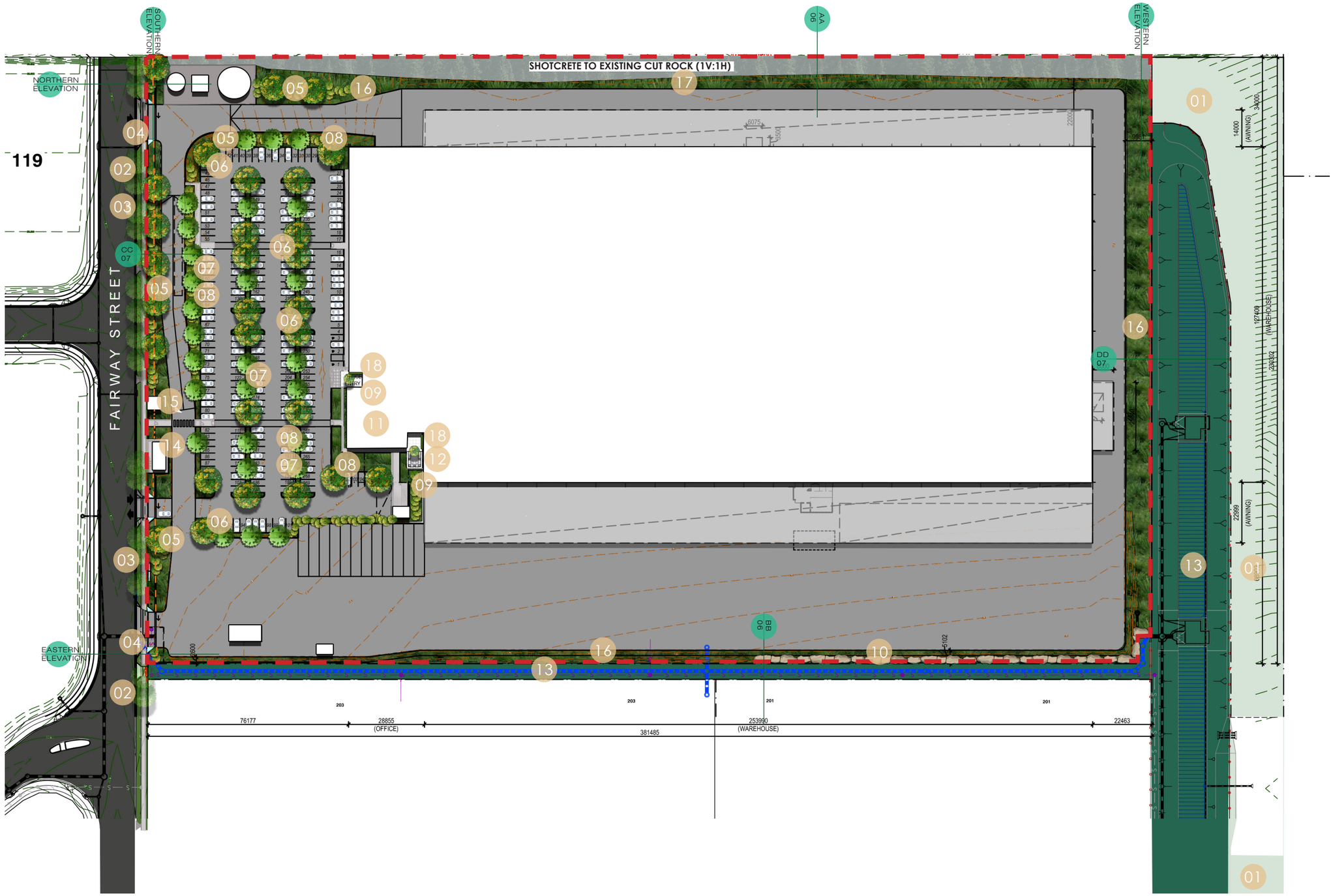
14 PAD mount transformer

15 POTABLE water meter and booster location

16 FILL BATTER with screening shrubs and groundcoverS

17 AT GRADE planting, to toe of batter

18 GREENWALL to built form



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WAREHOUSE DEVELOPMENT
FPI Queensland Pty Ltd

LANDSCAPE INTENT PLAN

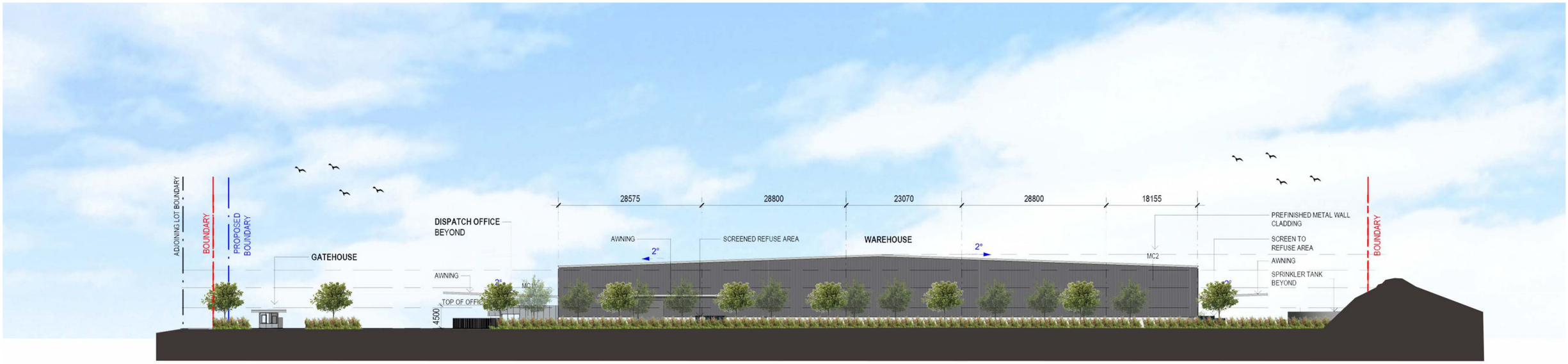
SCALE 0 25 50

NORTH

Date: 19.05.22
Project no: 6111
Rev: B Dwn: JLS

ELEVATION DRAWINGS

EASTERN ELEVATION FAIRWAY STREET



WESTERN ELEVATION (REAR OF LOT)



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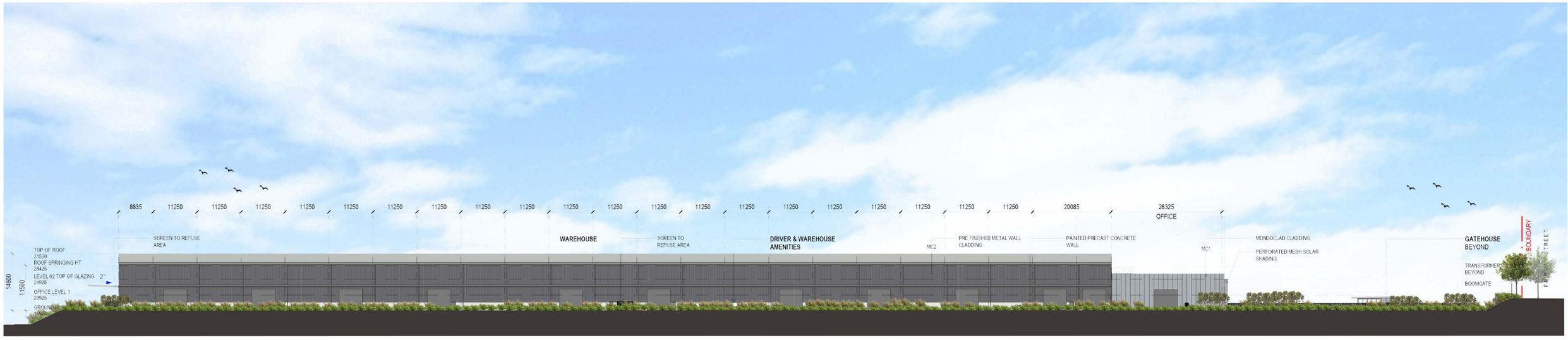
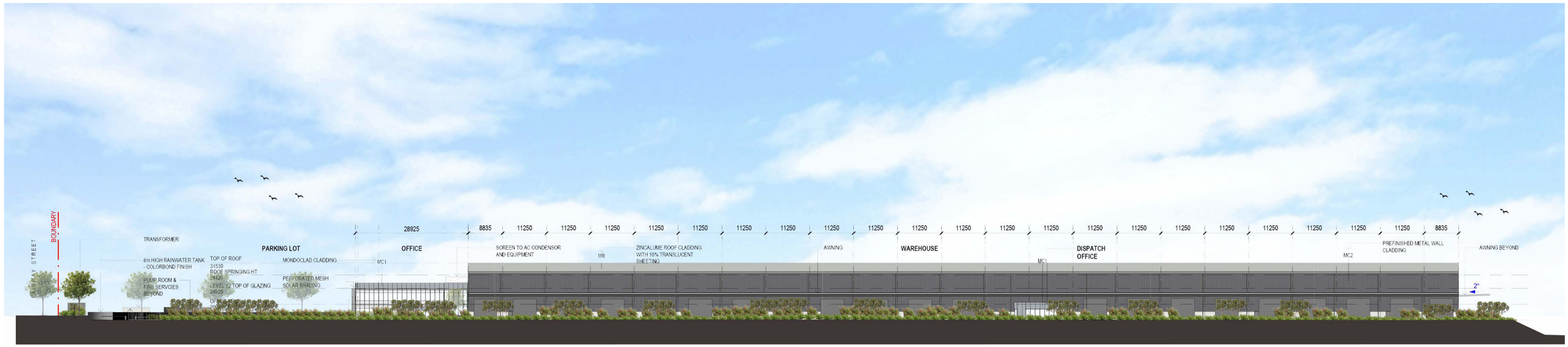
ELEVATION DRAWINGS

NORTHERN ELEVATION



SOUTHERN ELEVATION



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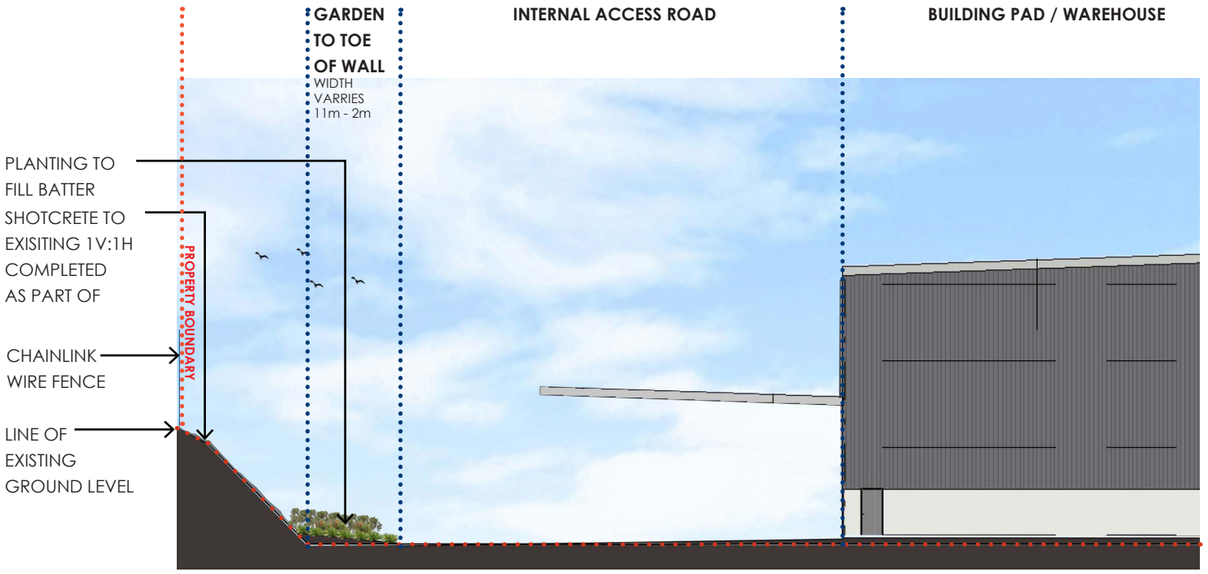
SECTION DRAWINGS

SECTION AA



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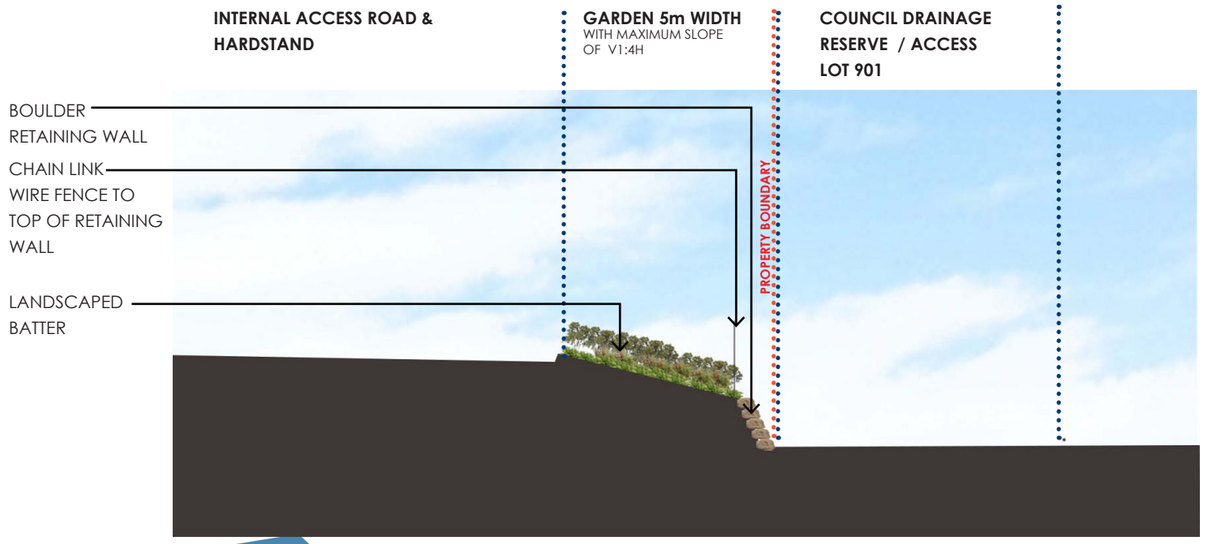
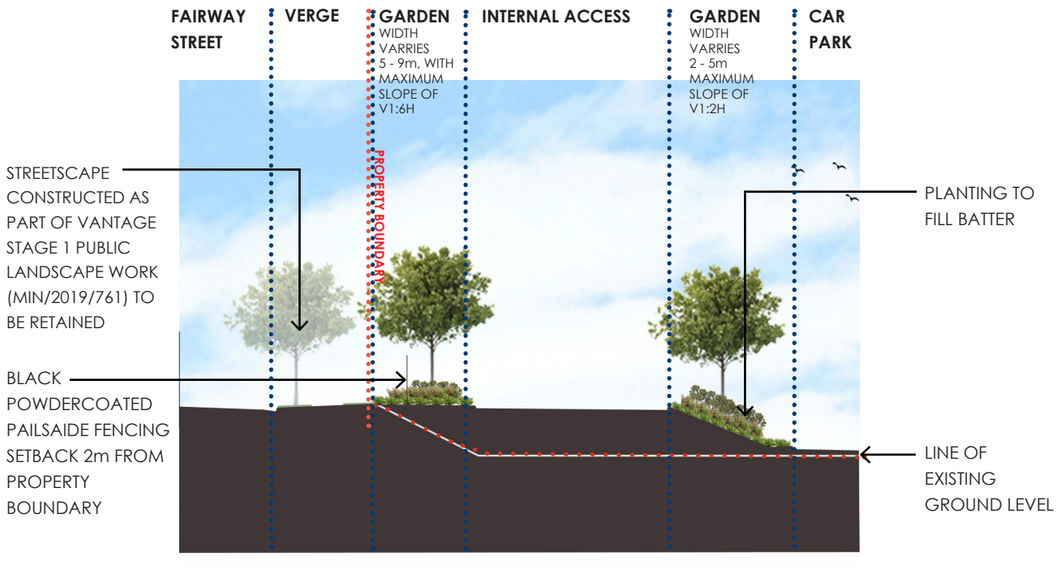
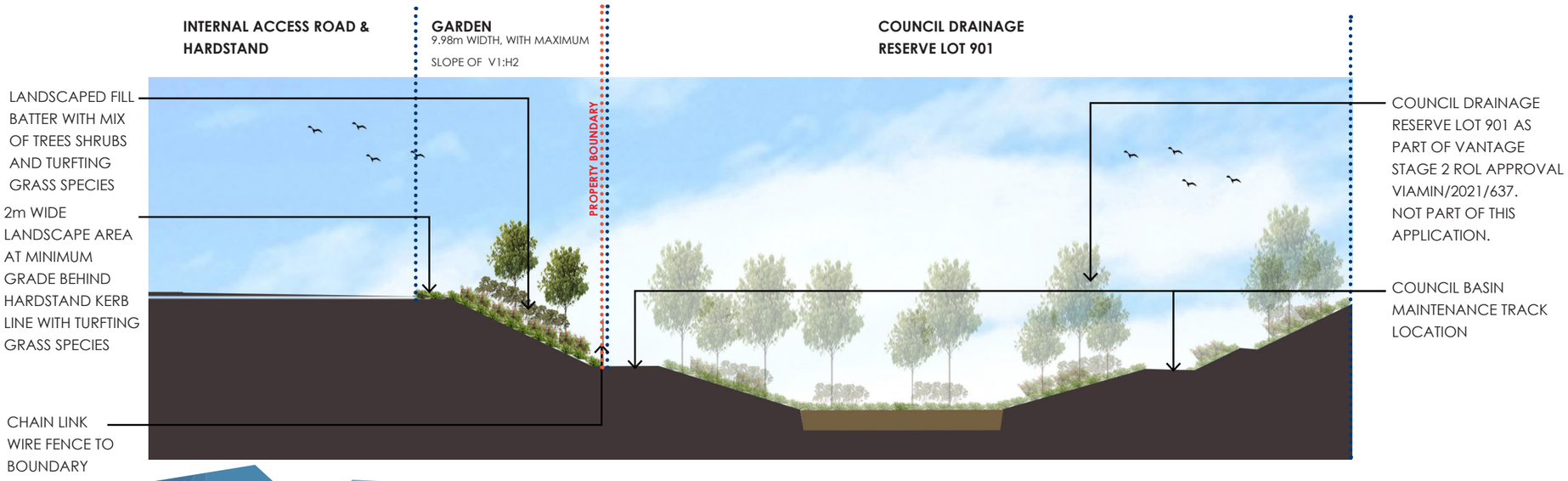


SECTION DRAWINGS

SECTION CC



SECTION DD



MATERIALS PALETTE



Plain grey broom finished concrete path network



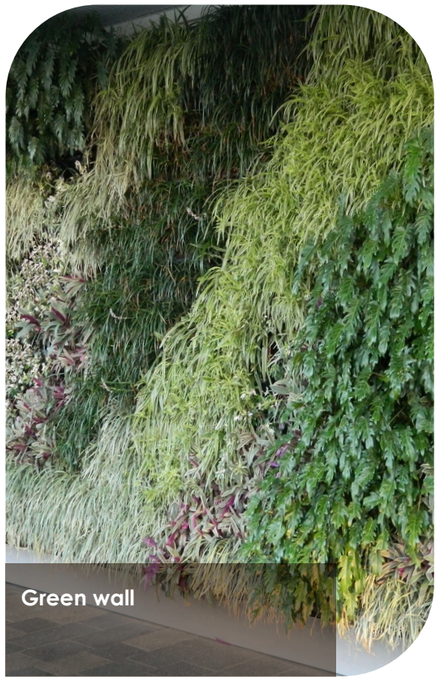
Palisade Fencing



Entry singage example



Shotcrete Wall



Green wall

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PLANTING PALETTE

STREET TREE SPECIES


Tristaniopsis laurina
water gum


Waterhousia floribunda
weeping lilly pilly


Cupaniopsis anacardioides
tuckeroo


Buckinghamia celssisima
ivory curl flower


Xanthostemon chrysanthus
golden penda

TREE SPECIES


Lophostemon suaveolens
swamp Box


Elaeocarpus eumundii
quondong


Stenocarpus sinuatus
firewheel tree


Acacia concurrens
black wattle


Elaeocarpus reticulatus
blueberry ash

PLANTING PALETTE

SHRUB SPECIES


Callistemon 'Little John'
little john


Grevillea 'Ned Kelly'
grevillea


Grevillea 'Robyn Gordon'
grevillea


Acacia cognata
mini cog


Austromytus 'copper tops'
copper tops


Vibernum 'emerald lustre'
vibernum


Melaleuca linariifolia
claret tops


Syzygium australe 'elite'
elite lily pilly


Syzygium australe 'big red'
big red lily pilly


Westringea fruticosa
coastal rosemary

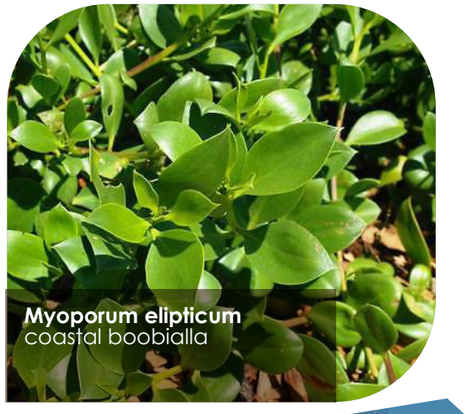
GROUNDCOVER SPECIES


Liriope evergreen giant
turf lilly


Dieties bicolour
spanish iris


Neomarica gracilis
giant walking iris


Grevillea poorinda royal mantle
royal mantle


Myoporum elipticum
coastal boobialla

APPENDIX F

TRAFFIC IMPACT ASSESSMENT



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VantageYatala



rytenskild
Traffic Engineering

TRANSPORT IMPACT ASSESSMENT

PROPOSED WAREHOUSE DEVELOPMENT

60 STAPYLTON JACOBS WELL ROAD, STAPYLTON

APPROVED LOT 201 (CURRENTLY LOT 502 ON SP216137)

Prepared for

FRASERS PROPERTY

23 MAY 2022

DOCUMENT REGISTER

Document Lot 201 Vantage Yatala

RTE Reference 22022

Prepared by Luke Rytenskild, Dare Janzekovic

Document History

Version	Version date	Details	Reviewed and Authorised	
			Name / Position	Signature
1	23 May 2022	DA	Luke Rytenskild Director RPEQ 6293	

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1.0 INTRODUCTION

Rytenskild Traffic Engineering (RTE) has been engaged by Frasers Property to prepare a Transport Impact Assessment of its proposed warehouse development at Yatala.

This report forms part of a Development Application to be lodged with the City of Gold Coast. The following issues have been addressed during the study:

- Site access arrangements;
- Car parking supply and design;
- Provision for pedestrians and cyclists;
- Provision for heavy vehicles.

Responses to the Car Parking, Access and Transport Integration constraint code (2003 Planning Scheme) is provided as Appendix A. A response to State code 6 is provided as Appendix B.

2.0 SUBJECT SITE

As shown in Figure 2.1, the subject site is located on the eastern side of Fairway Street within the Vantage industrial estate. The site has a site area of approximately 86,915m^2. The site is located within the Low and Medium Impact Industry zone.



FIGURE 2.1 – LOCATION OF SUBJECT SITE

3.0 DEVELOPMENT PROPOSAL

The proposed plan of development comprises of a warehouse building with associated office facilities providing a combined floor area of 36,510m^2, as follows:

DEVELOPMENT TABLE	
SITE AREA	**98,665 m²**
- APPROX. USEABLE	86,867 m²
EFFICIENCY	**37.0%**
WAREHOUSE (Including Reclaim Area; Security Cage, Driver & Warehouse Amenities)	32,351 m²
MHE PARKING & MHE WORKSHOP	2,446 m²
GATEHOUSE	34 m²
DISPATCH OFFICE	161 m²
2 STOREY OFFICE	1,518 m²
TOTAL BUILDING AREA	**36,510 m²**
CAR PARKING PROVIDED	270
BICYCLE PARKING PROVIDED	16
AWNINGS	8,912 m²
HEAVY DUTY PAVEMENT (H)	32,292 m²
LIGHT DUTY PAVEMENT (L)	7,868 m²

The proposed warehouse has been purpose designed for Woolworths. The proposal will have a workforce of approximately 445 staff members, who will operate in three x 8 hour shifts.

A total of 270 car parking spaces are proposed to be provided.

Access is proposed to be gained via three separate vehicle crossovers, with two having one-way function (for heavy vehicles) and the third as a two way access to car parking.

The proposed site plan is shown in Figure 3.1.

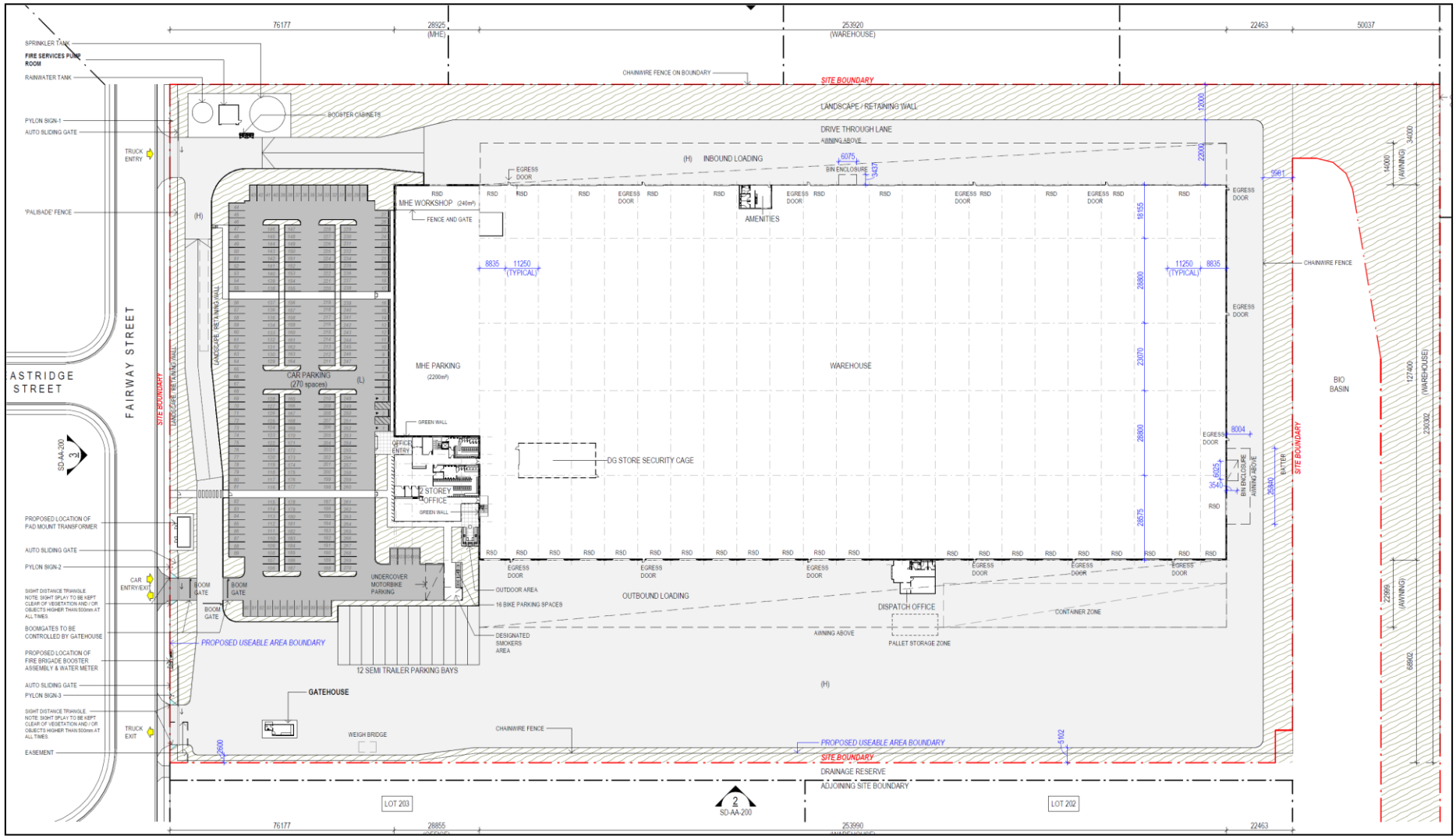


FIGURE 3.1 – PROPOSED SITE PLAN

4.0 CAR PARKING

4.1 Car Parking Supply

In accordance with the Car Parking, Access and Transport Integration constraint code (2003 Planning Scheme), the following rate applies to the proposed use:

Warehouse:
2 spaces per tenancy or lot plus
1 space per 50m^2 of TUA up to and including 500m^2, and
1 space per 100m^2 of TUA over 500m^2

Based on the above, the Acceptable Outcome for car parking for the proposed development is 355 spaces, as follows:

Table 4.1: Requirement for Car Parking (2003 Planning Scheme)

Component	Rate	Acceptable Outcome
1 x tenancy	2 spaces	2 spaces
Warehouse (500m^2)	1 space / 50m^2	10 spaces
Warehouse (34,297m^2)	1 space / 100m^2	343 (342.97) spaces
	TOTAL	**355 spaces**

4.2 Adequacy of proposed car parking supply

The proposed warehouse workforce will operate in eight-hour shifts, as follows:

Start time	Number (projected)	Finish time	Total shift time
5am	188 (growth factored in)	1pm	8 hrs
1pm	175 (growth factored in)	9pm	8 hrs
9pm	38 (growth factored in)	5am	8 hrs

The staff numbers shown above allow for expected future growth in the workforce.

Given car pooling and other modes of travel, it is expected that the staff will generate a maximum demand of approximately 170 cars (ie 90% of 188), however the supply of 270 spaces comfortably caters for the conservative scenario of 100% car travel with 1 person per vehicle.

4.2 Car Parking Design

The geometric layout of the proposed parking facilities has generally been designed to comply with the relevant requirements specified in the Transport Code and AS2890.1: 2004.

The proposed car parking layout has the following dimensions:

Table 4.2 – Car Parking Design Characteristics

Design Aspect	Minimum AS2890.1 Standard	Proposed Provision	Compliance
Parking space length: - General - PWD Bay	 5.4 metres 5.4 metres	 5.4 metres 5.4 metres	 Compliant Compliant
Parking space width: - Staff - PWD Bay	 2.4 metres 2.4 metres	 2.5 metres 2.5 metres	 Compliant Compliant
Aisle Width: - Parking aisle - Circulation aisle	 5.8 metres 5.8 metres	 6.1 metres 6.1 metres	 Compliant Compliant
Maximum Gradient - Parking Bay - Parking Aisle - PWD Bay	 1:20 (5.0%) 1:16 (6.25%) 1:40 (2.5%)	 <1:20 (5.0%) <1:20 (5.0%) <1:40 (2.5%)	Compliant
Maximum Change in Grade	1:8 (12.5%) summit 1:6.67 (15.0%) sag	<1:8 (12.5%) summit <1:8 (12.5%) sag	Compliant
Height Clearance - General Min. - Absolute Min.	 2.2 metres N/A	 N/A	 Compliant
Parking Aisle Extension	1 metre beyond last bay	> 1 metre beyond last bay	Compliant

The proposed dimensions of the car parking area are shown as Figures 4.1 and 4.2. Swept paths of typical car parking spaces are shown in Figure 4.3 and 4.4.

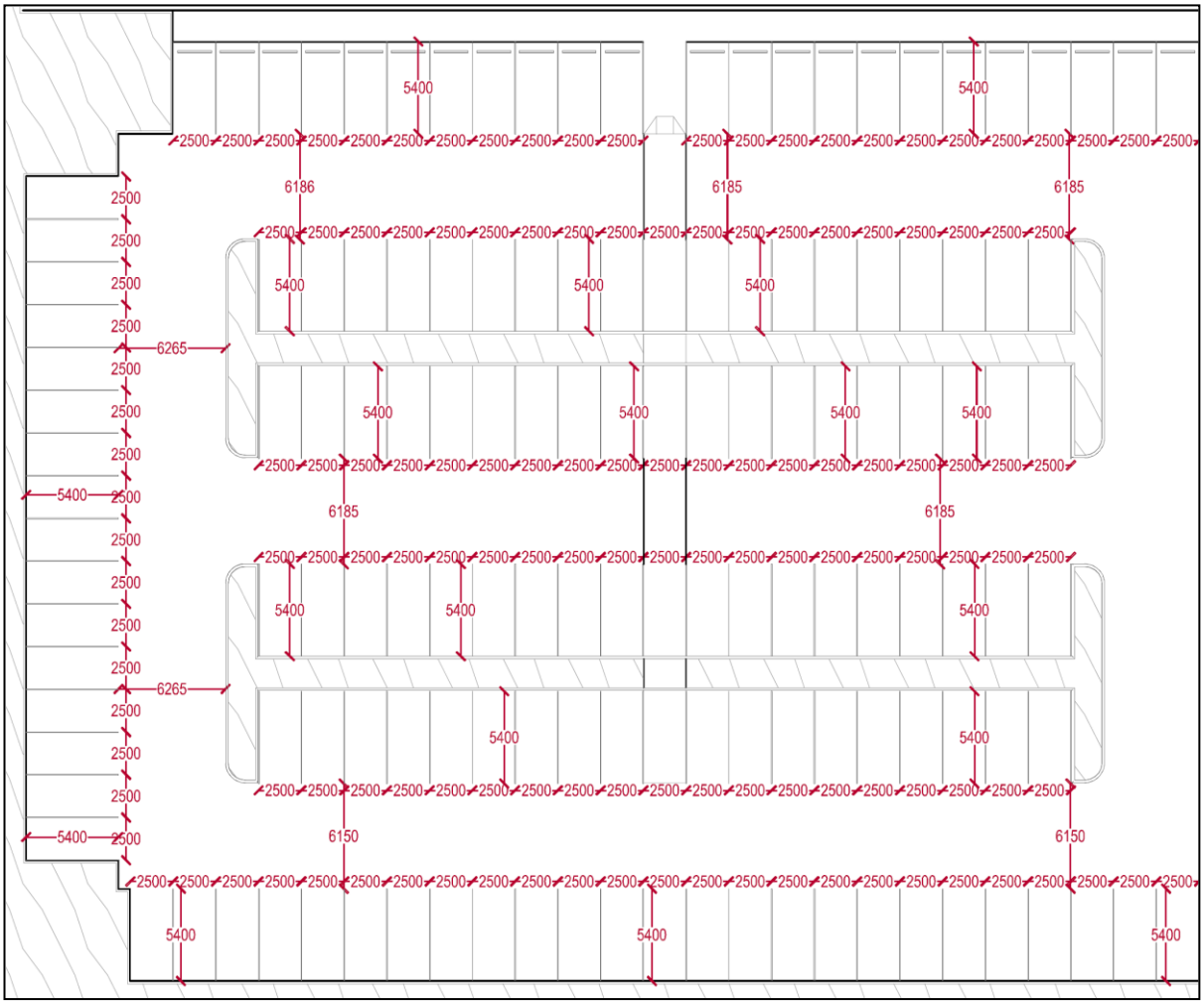


FIGURE 4.1 – DIMENSIONED CAR PARKING LAYOUT (NORTHERN END)

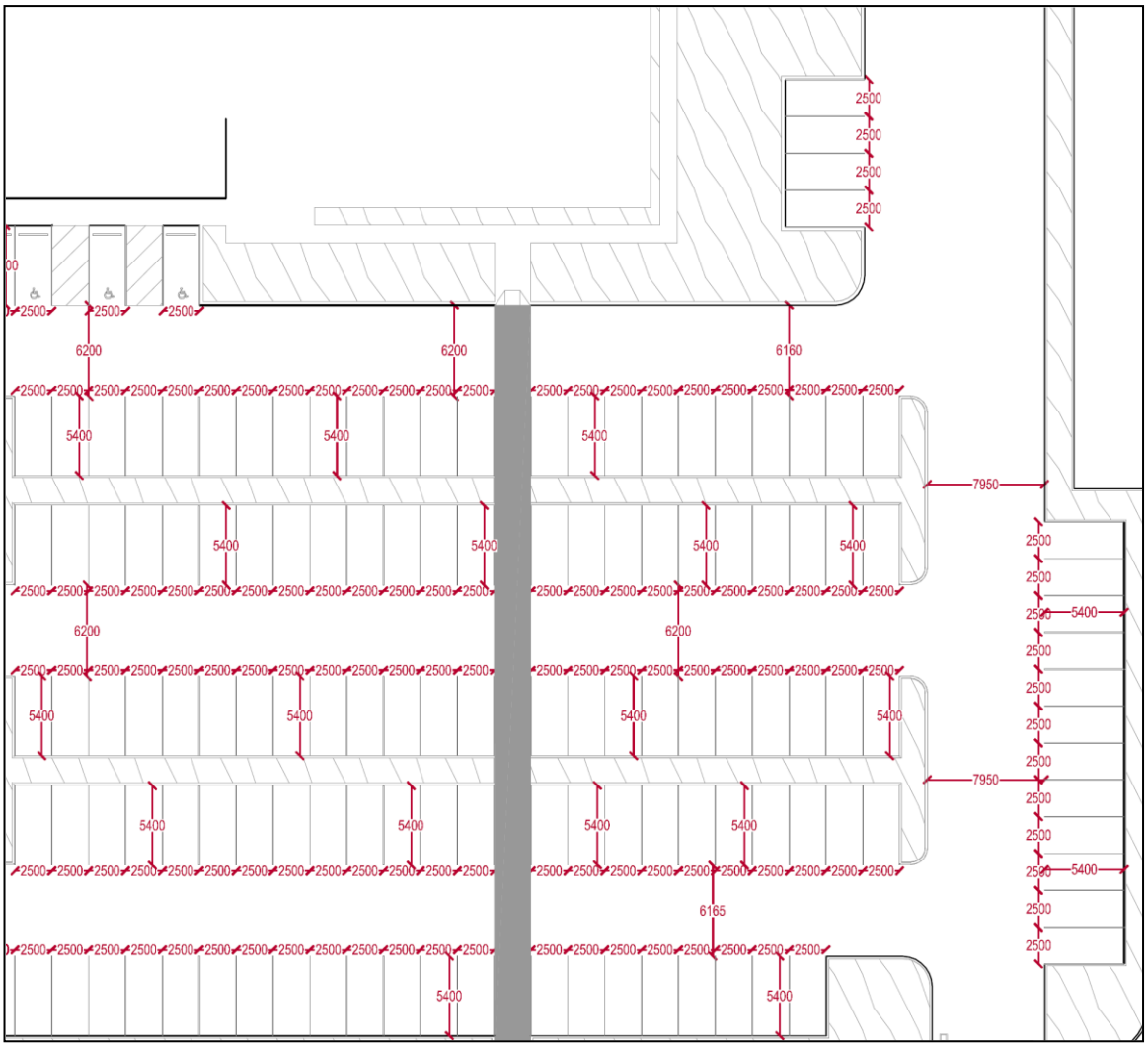


FIGURE 4.2 – DIMENSIONED CAR PARKING LAYOUT (SOUTHERN END)

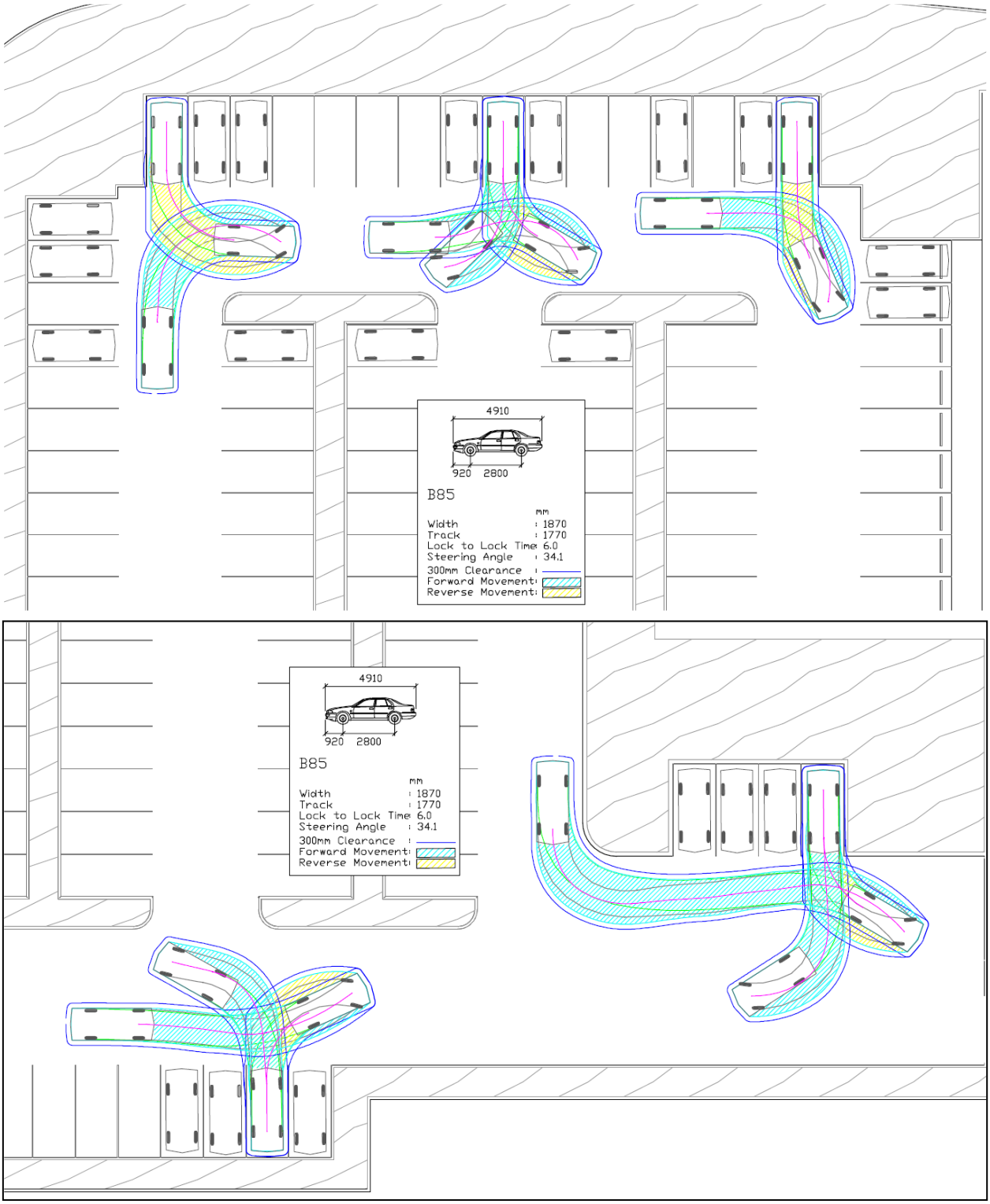


FIGURE 4.3 – SWEPT PATH OF 85TH PERCENTILE VEHICLES (CAR PARKING)

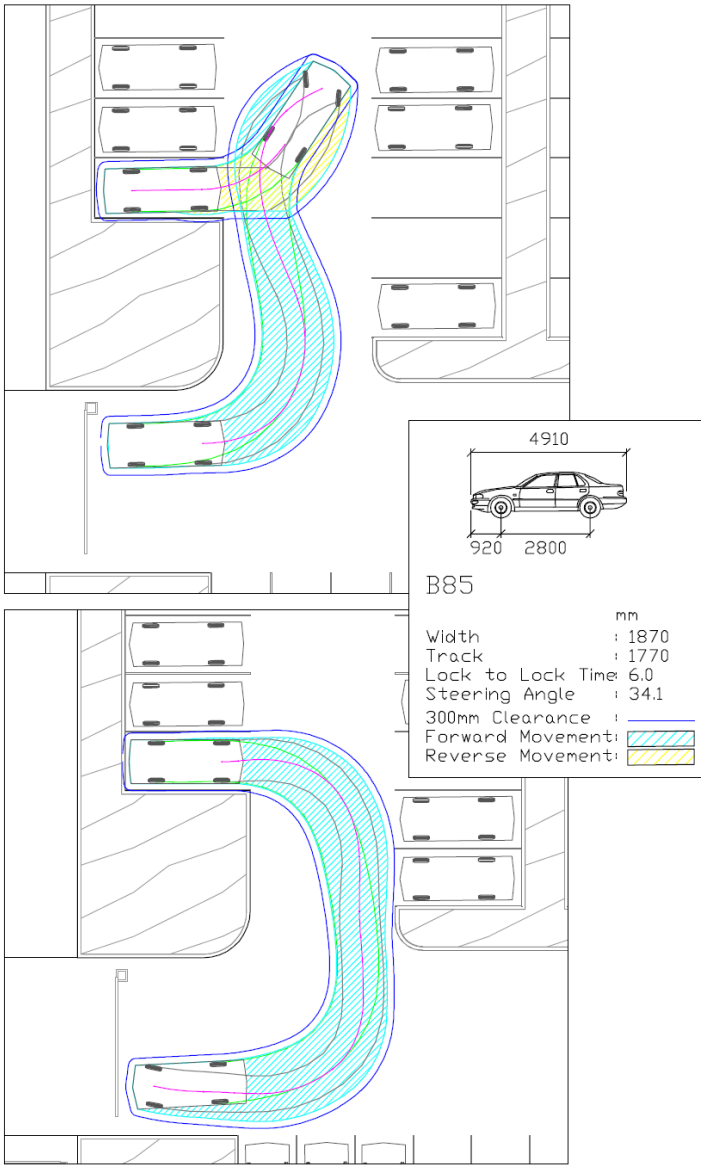


FIGURE 4.4 – SWEPT PATH OF 85TH PERCENTILE VEHICLES (CAR PARKING)

5.0 ACCESS ARRANGEMENTS

It is proposed that separate access points will be provided for heavy and light vehicles. It is proposed that internal heavy vehicle circulation will be restricted to one-way (clockwise), with the northern access facilitating entry movements and exit provided at the southern end. The crossover located approximately midway along the frontage will be provided for access to the car park, and will allow all movements. A laneway is proposed to the provided between the boundary and the eastern

It is proposed that gates will be provided along the boundary of each access crossover. The gates are provided for security and will remain open during daytime operating periods. It is noted that the proposal includes a one-way laneway between the western boundary and the car park. It is intended that the laneway will facilitate movement by smaller service trucks, with the gate at the southern end of the laneway activated by sensor by a vehicle approaching from the north.

As shown in Figures 5.1 – 5.3, the proposed access crossover splays have been designed in accordance with the IPWEA Standard Drawing RS-051. As shown, pedestrian sight splays have been provided at the respective access points in accordance with AS2890.1 and AS2890.2.

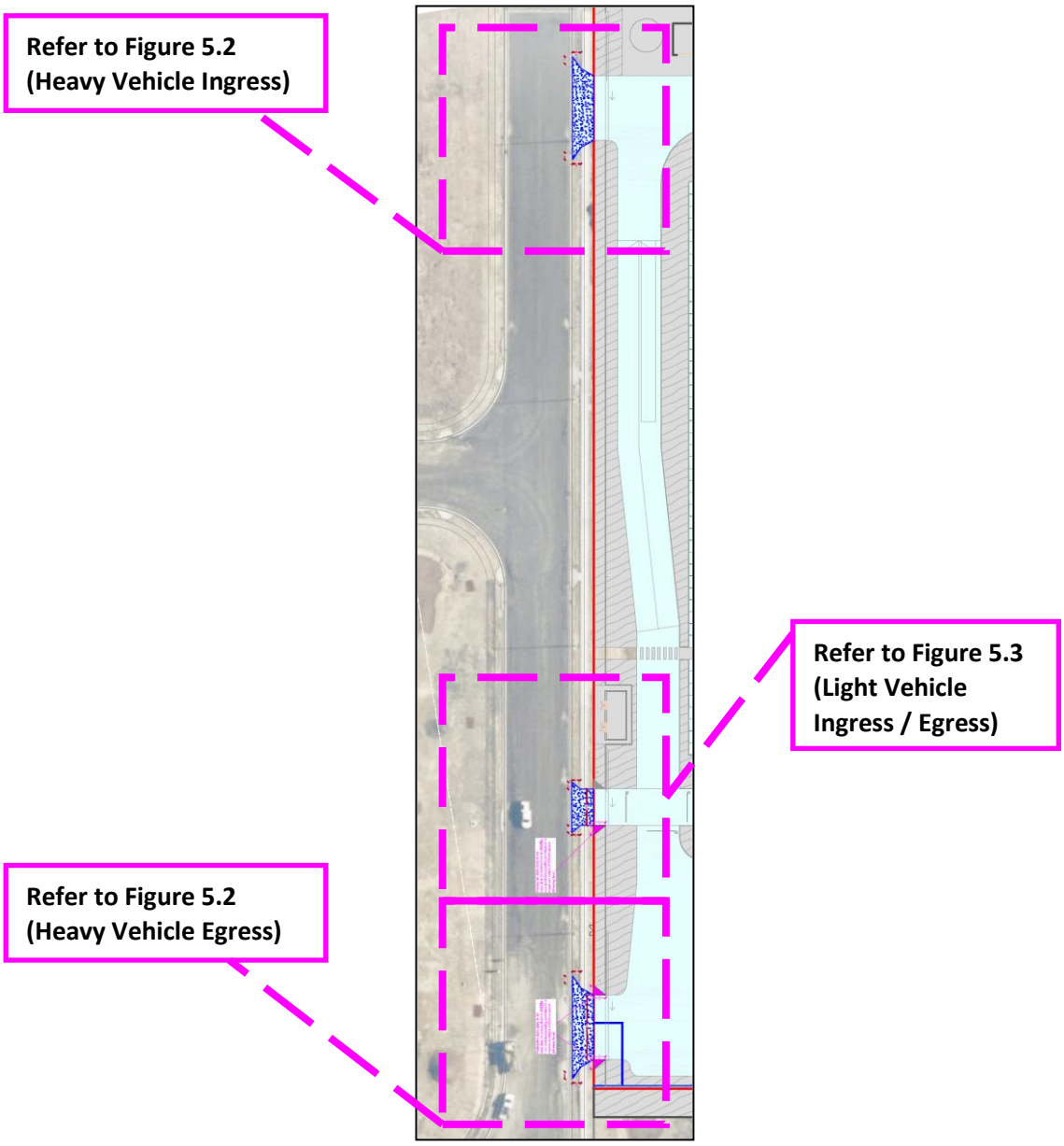
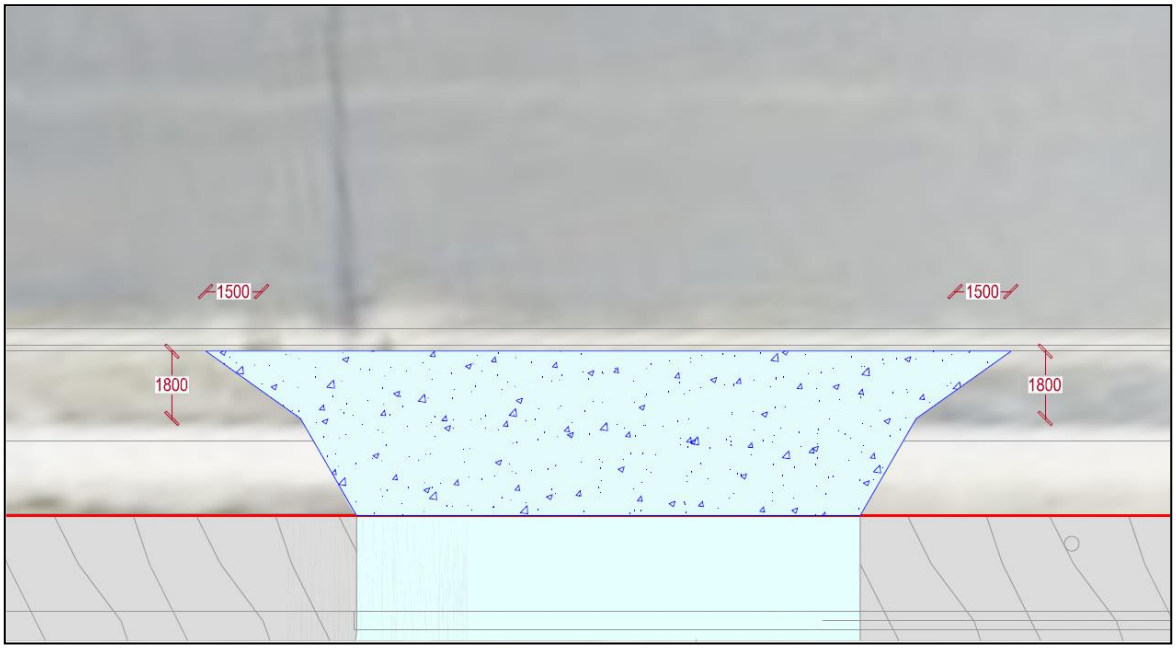


FIGURE 5.1 – PROPOSED ACCESS CROSSOVER ARRANGEMENTS (OVERALL)

HEAVY VEHICLE INGRESS



HEAVY VEHICLE EGRESS

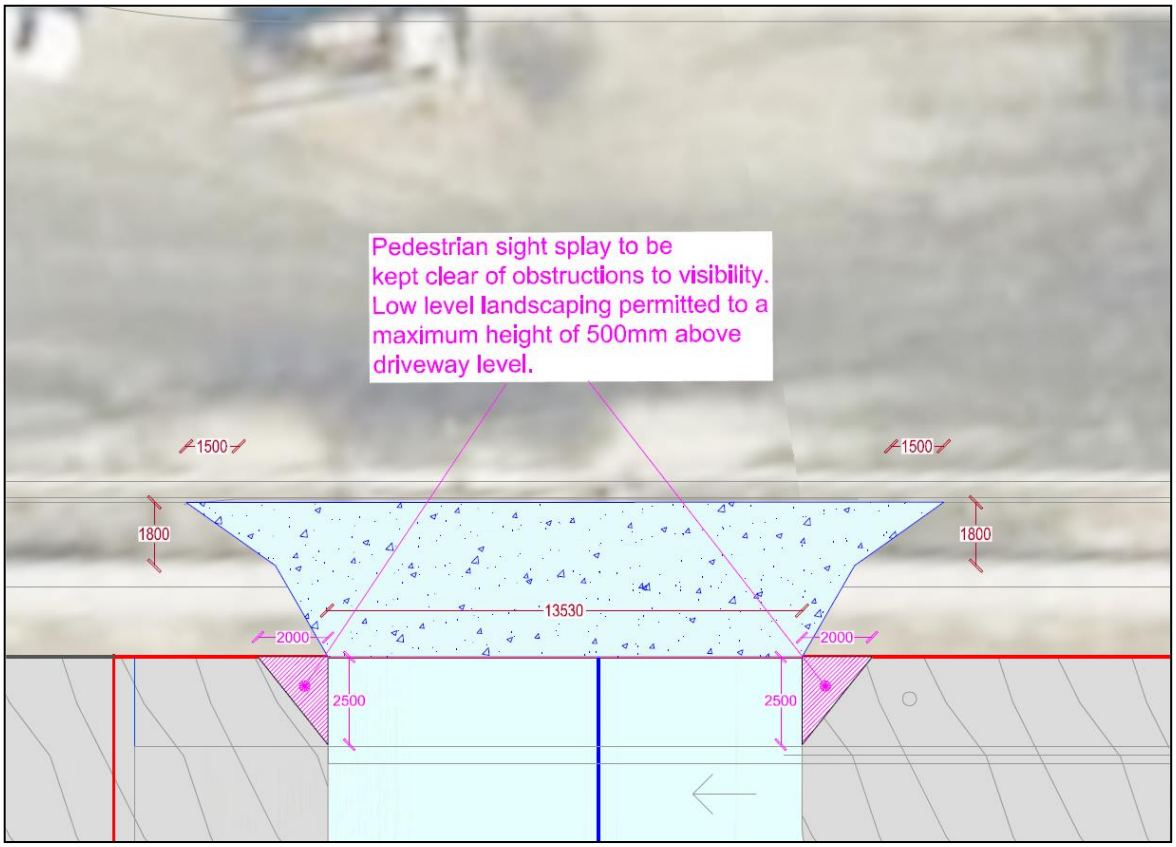


FIGURE 5.2 – HEAVY VEHICLE CROSSOVER ARRANGEMENTS

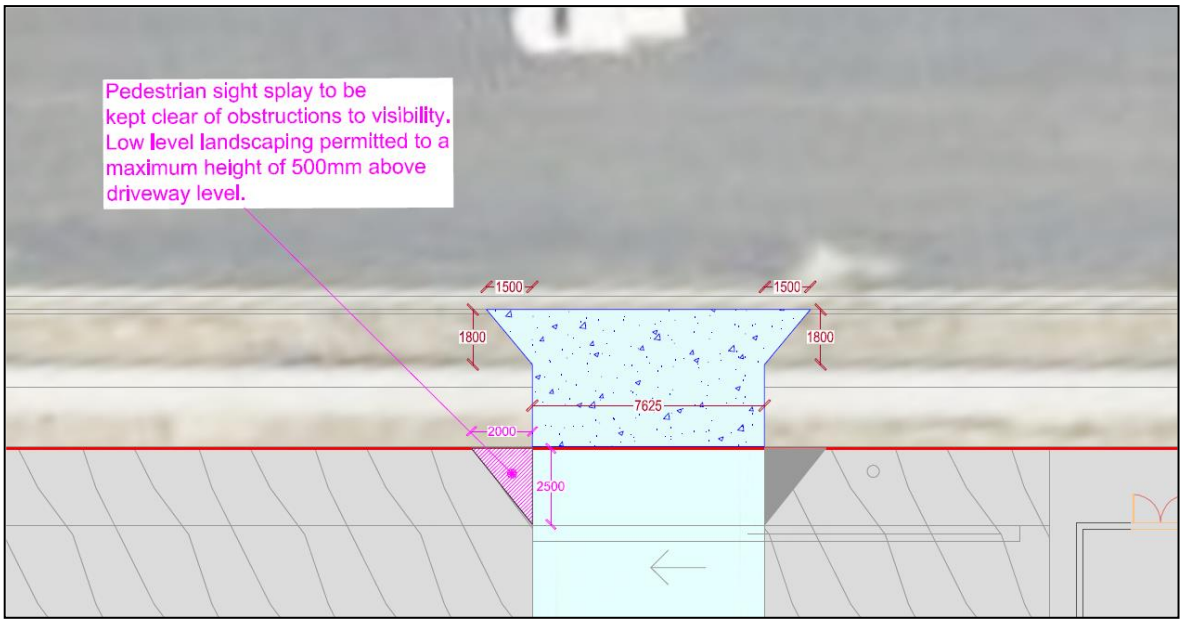


FIGURE 5.3 – LIGHT VEHICLE CROSSOVER ARRANGEMENTS

6.0 PROVISION FOR HEAVY VEHICLES

6.1 Heavy Vehicle Manoeuvring

In accordance with the Planning Scheme, the proposed plan of development allows for 20 metre long Articulated Vehicles (AV) to circulate throughout the site and satisfactorily negotiate the proposed loading dock arrangements. The plan also allows for A-Double and B-Double vehicles to circulate throughout the site, with provision for B-Double vehicles to manoeuvre at designated loading docks.

Various swept paths for Articulated Vehicles, and A-Double and B-Double vehicles are shown in Figures 6.1-6.11.

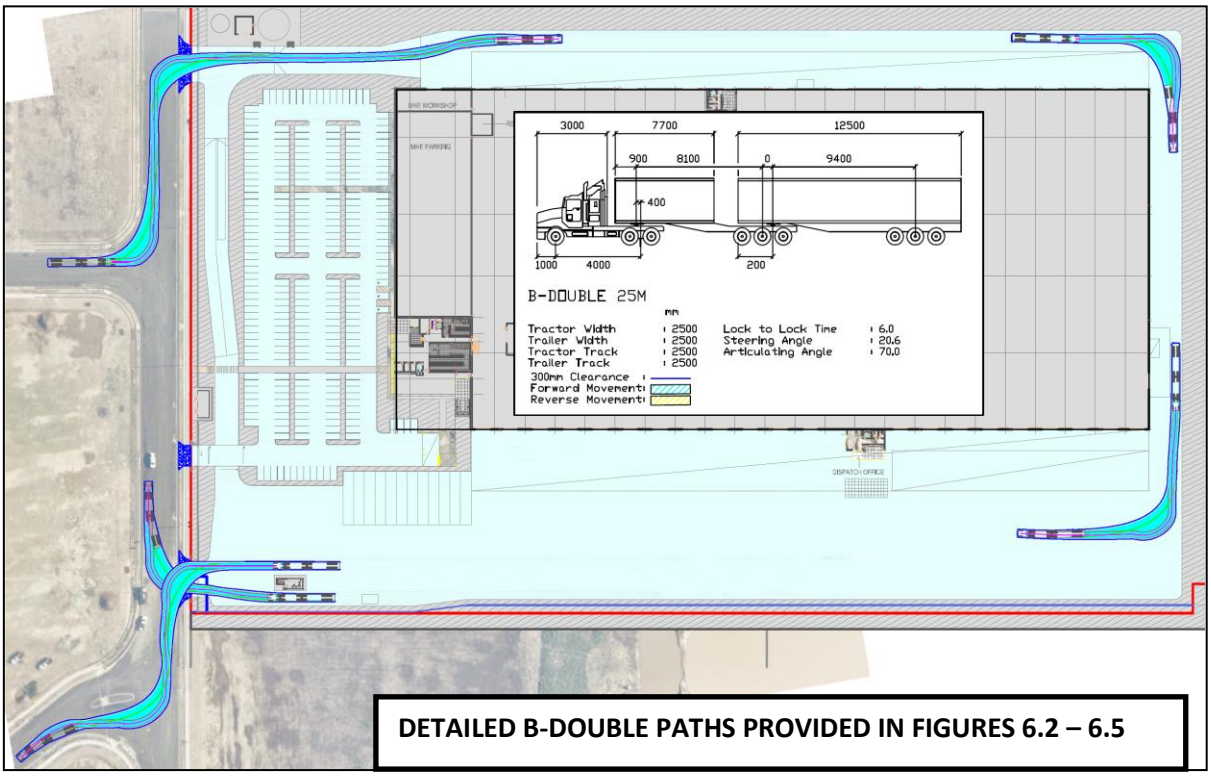


FIGURE 6.1 – B-DOUBLE CIRCULATION PATH (OVERALL)

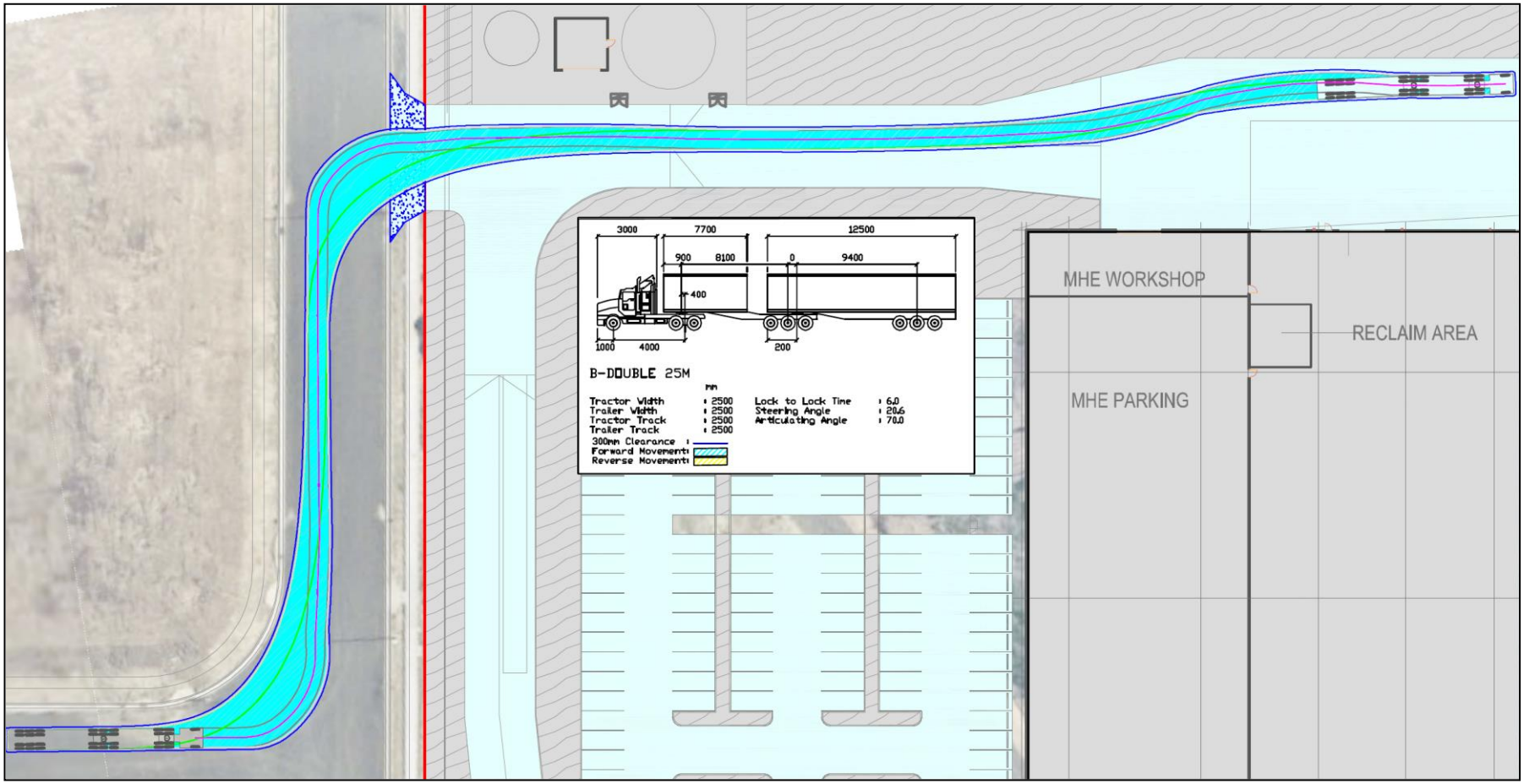


FIGURE 6.2 – B-DOUBLE PATH (NORTHERN ENTRY)

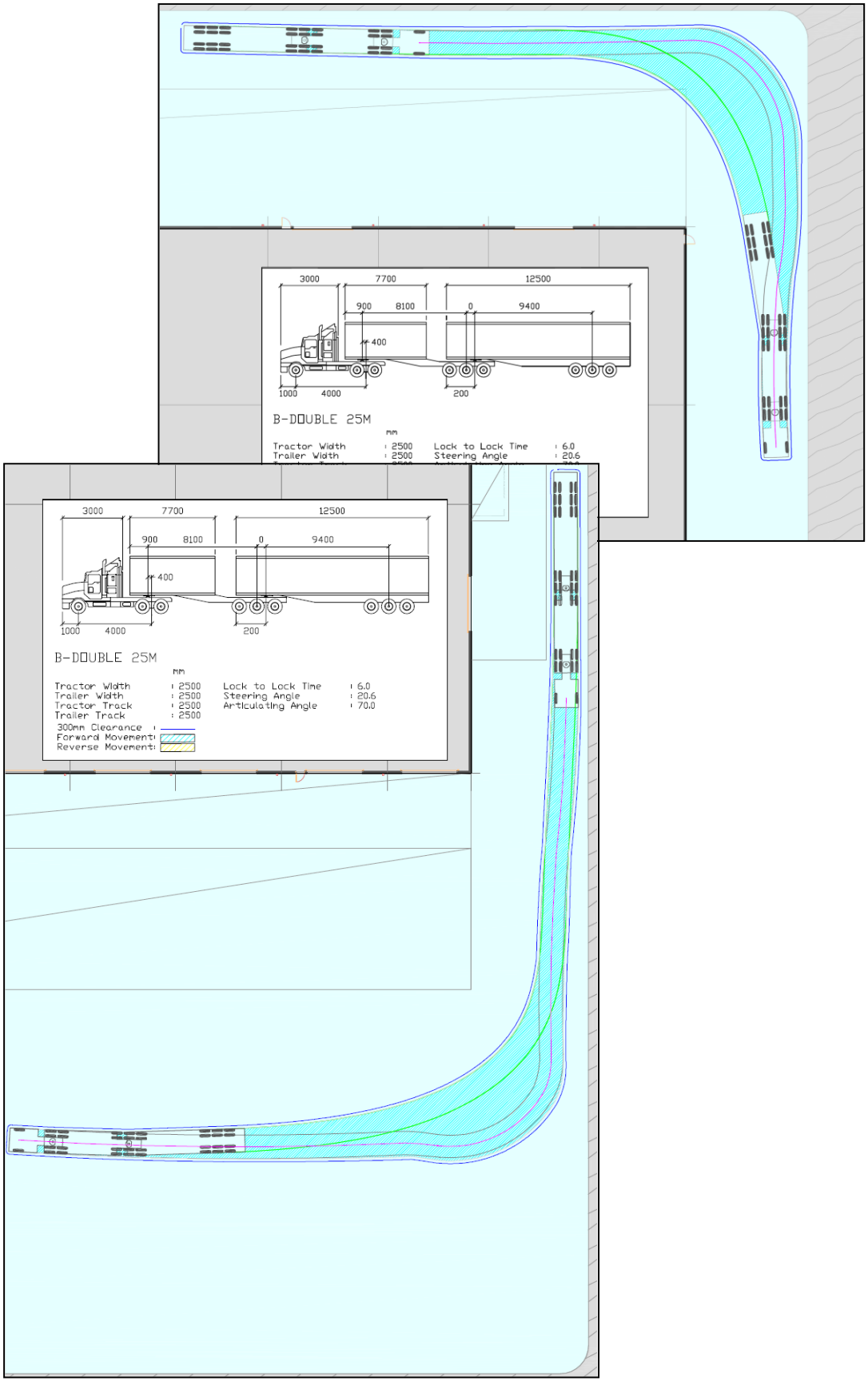


FIGURE 6.3 – B-DOUBLE PATH (CIRCULATION)

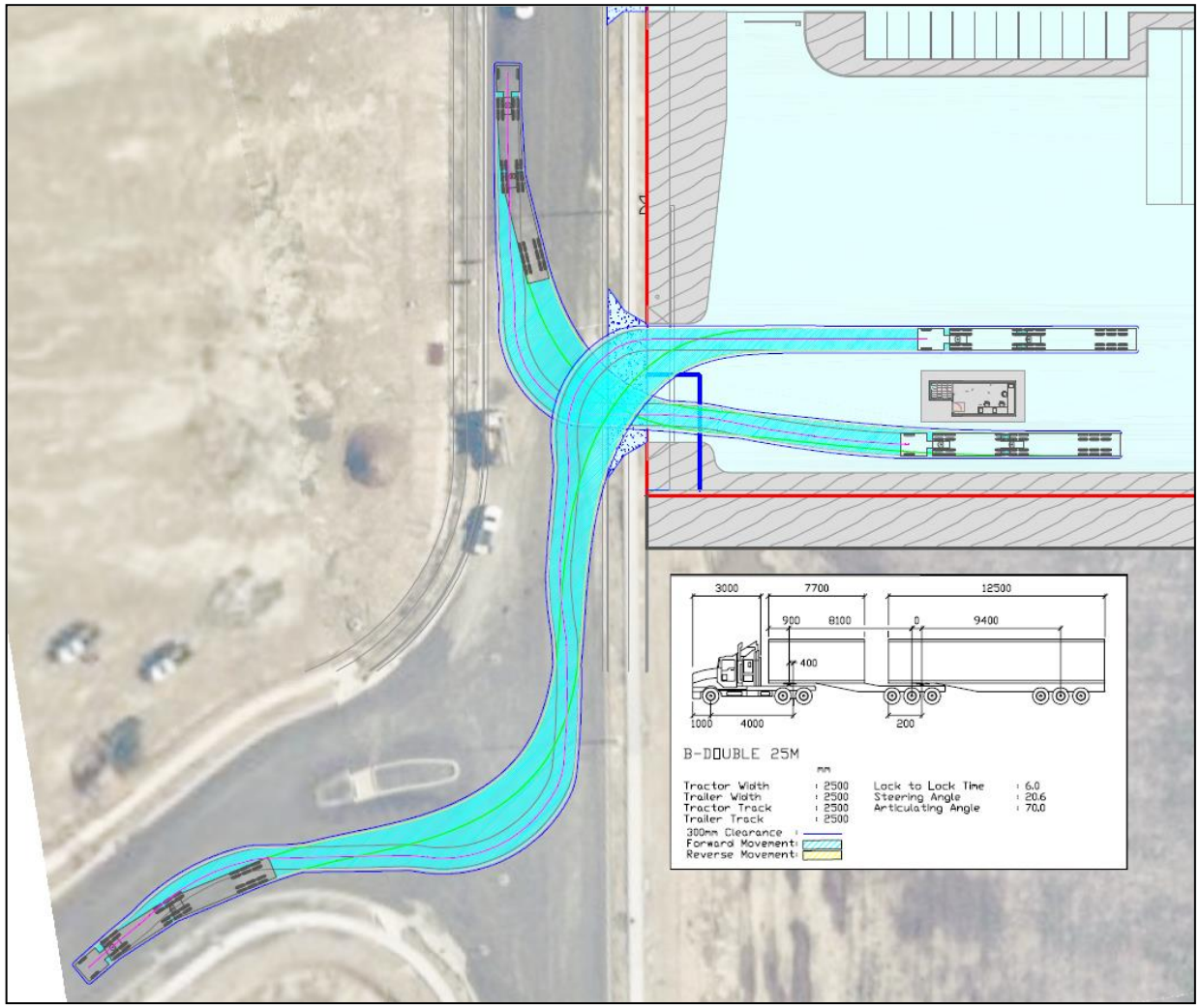


FIGURE 6.4 – B-DOUBLE EXIT PATH (SOUTHERN DRIVEWAY)

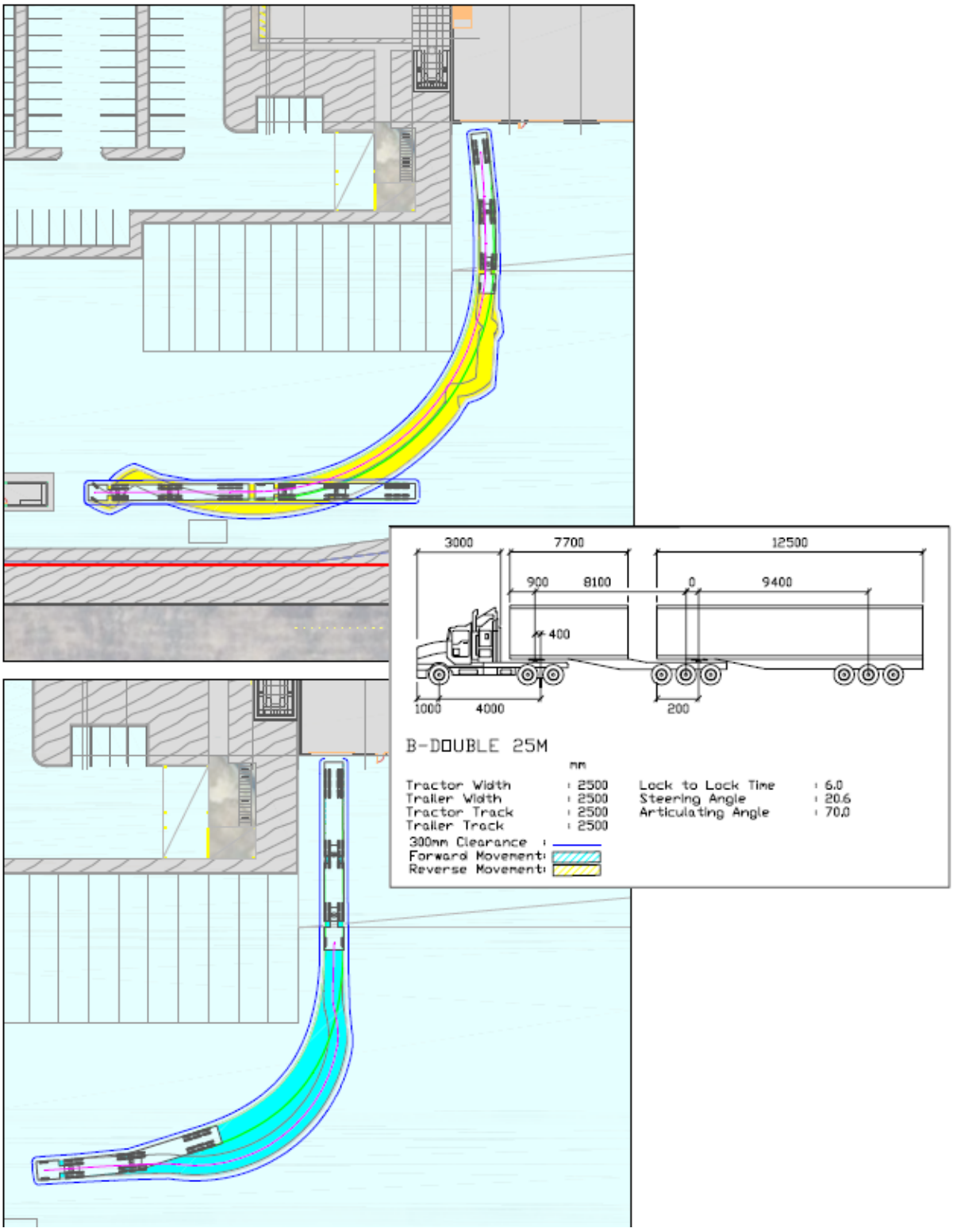


FIGURE 6.5 – B-DOUBLE REVERSE

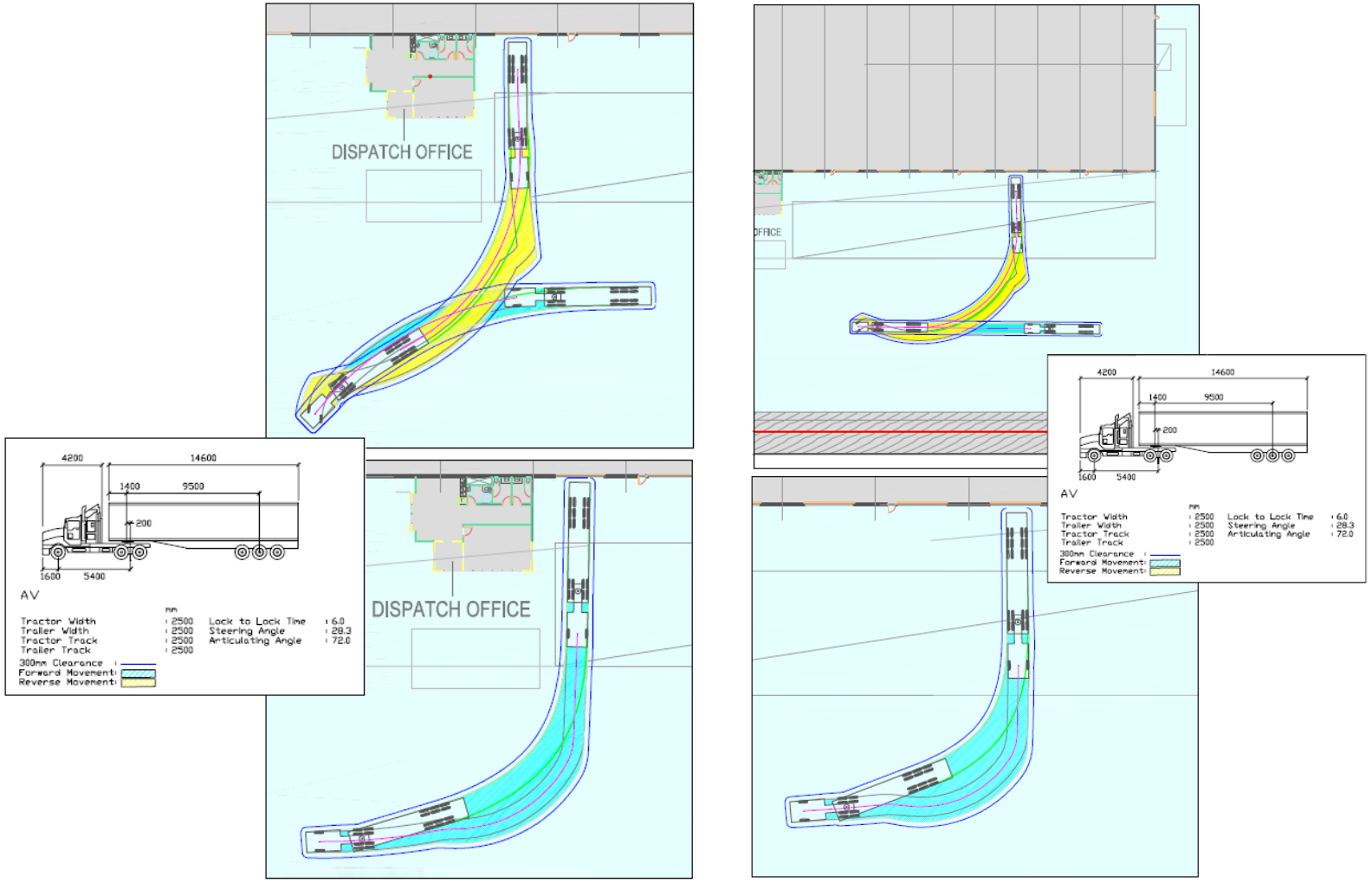


FIGURE 6.6 – ARTICULATED VEHICLE MANOEUVRING (LOADING)

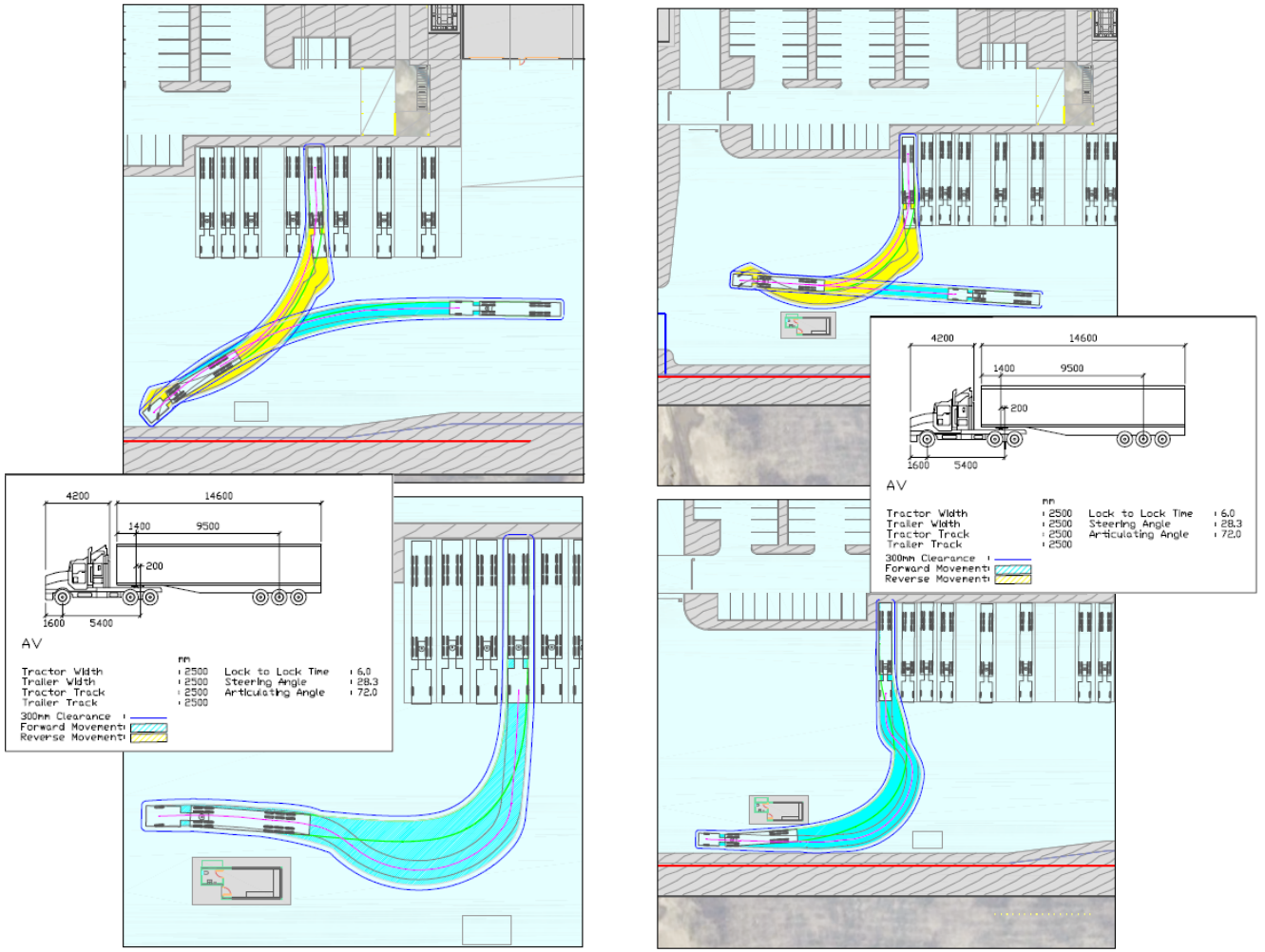


FIGURE 6.7 – ARTICULATED VEHICLE MANOEUVRING (PARKING)

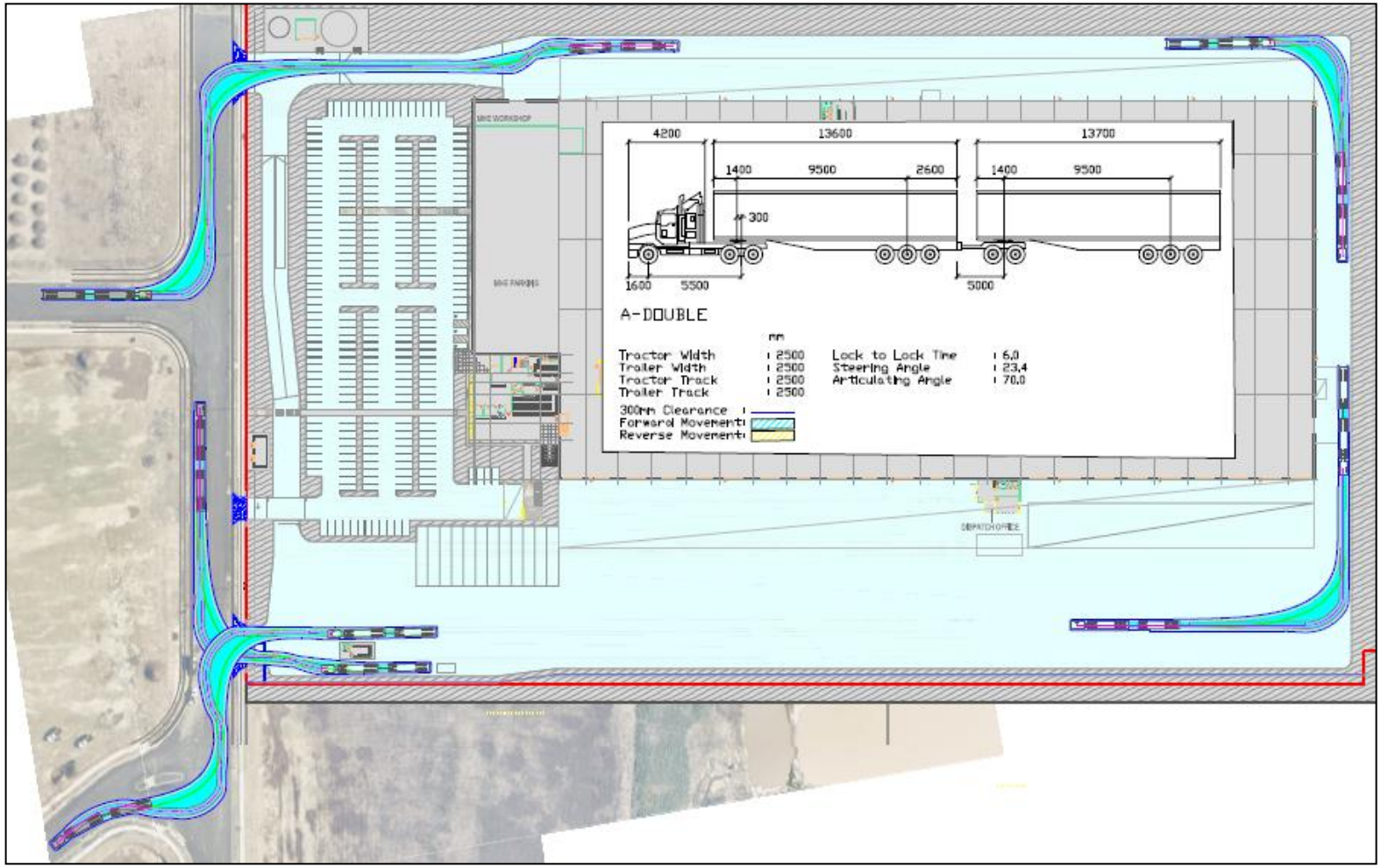


FIGURE 6.8 – ARTICULATED VEHICLE MANOEUVRING (DOUBLE PATHS)

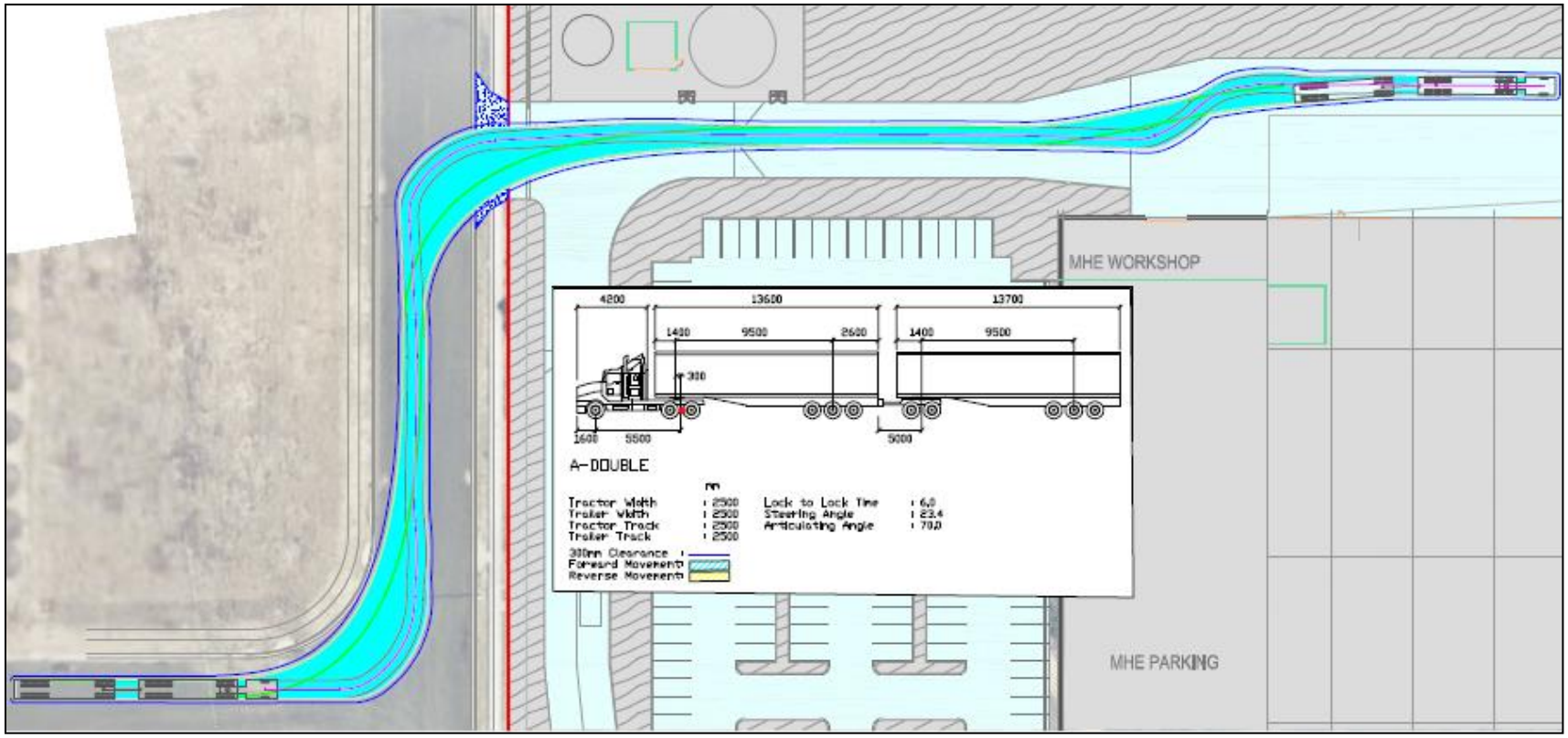


FIGURE 6.9 – ARTICULATED VEHICLE MANOEUVRING (DOUBLE PATHS)

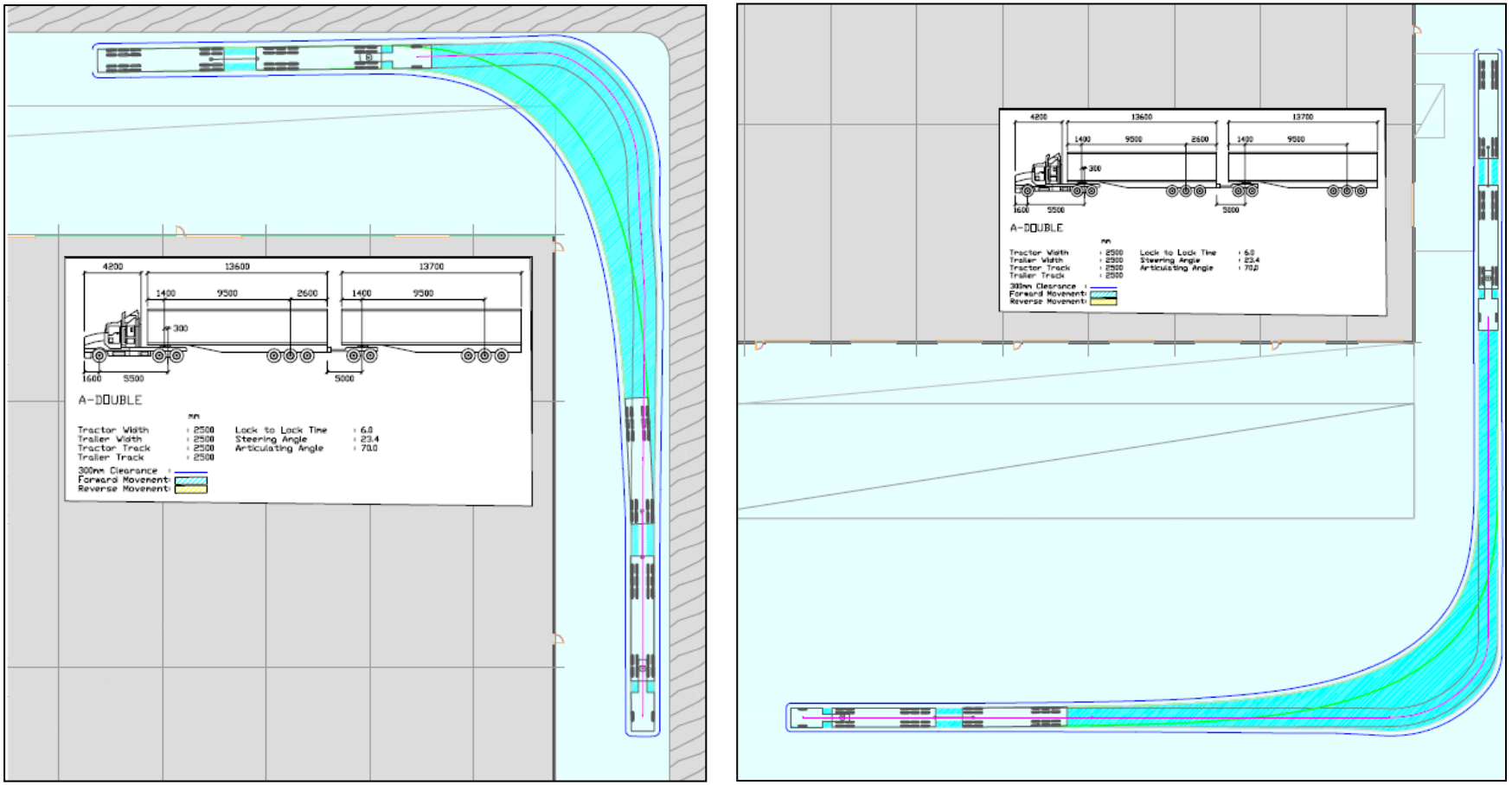


FIGURE 6.10 – ARTICULATED VEHICLE MANOEUVRING (DOUBLE PATHS)

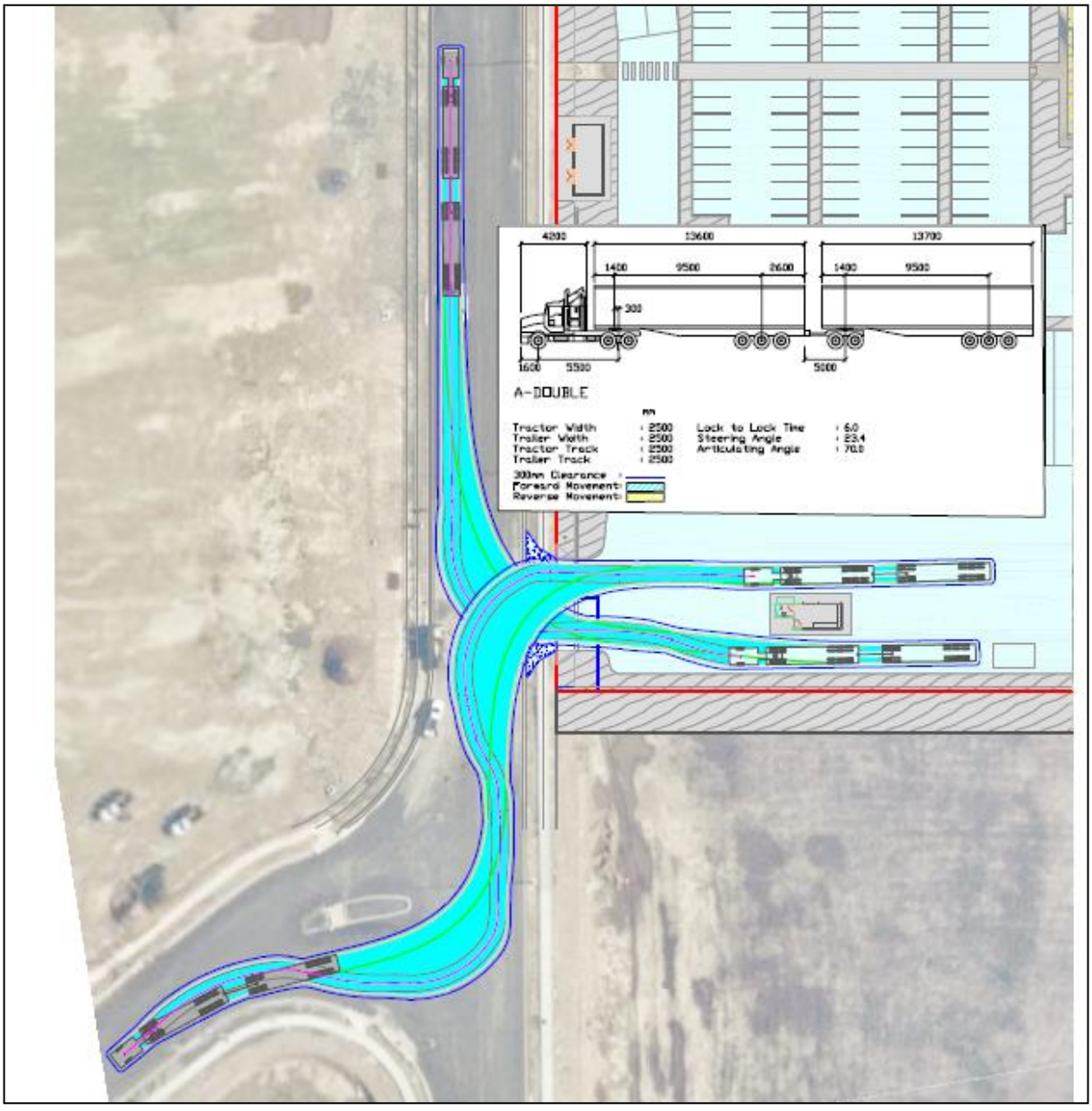


FIGURE 6.11 – ARTICULATED VEHICLE MANOEUVRING (DOUBLE PATHS)

6.2 Service Vehicle Access

As shown in Figures 6.12 and 6.13, a Waste Collection Vehicle and a Urban Pumper Fire Truck can satisfactorily negotiate through the development and exit the site in a forward gear. As shown, it is intended that the site will be serviced by a front loading refuse collection vehicle, servicing the bins from the bin enclosures provided along the internal circulation route.

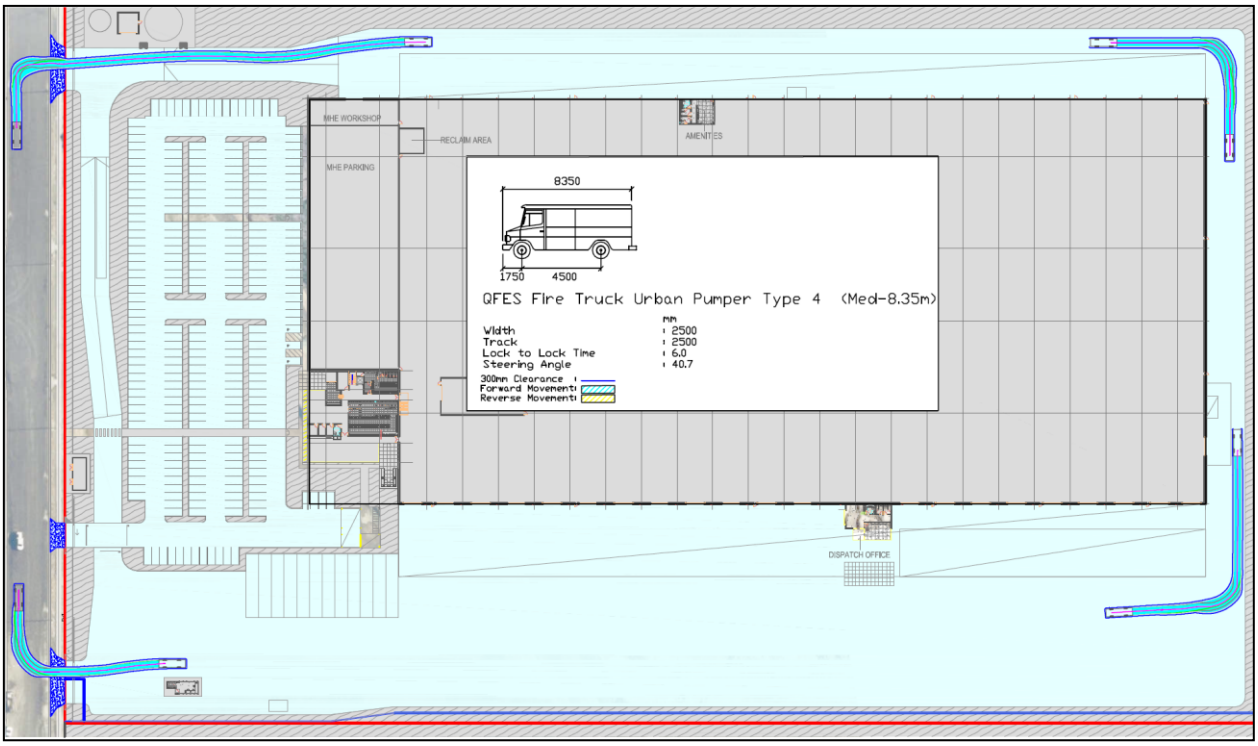
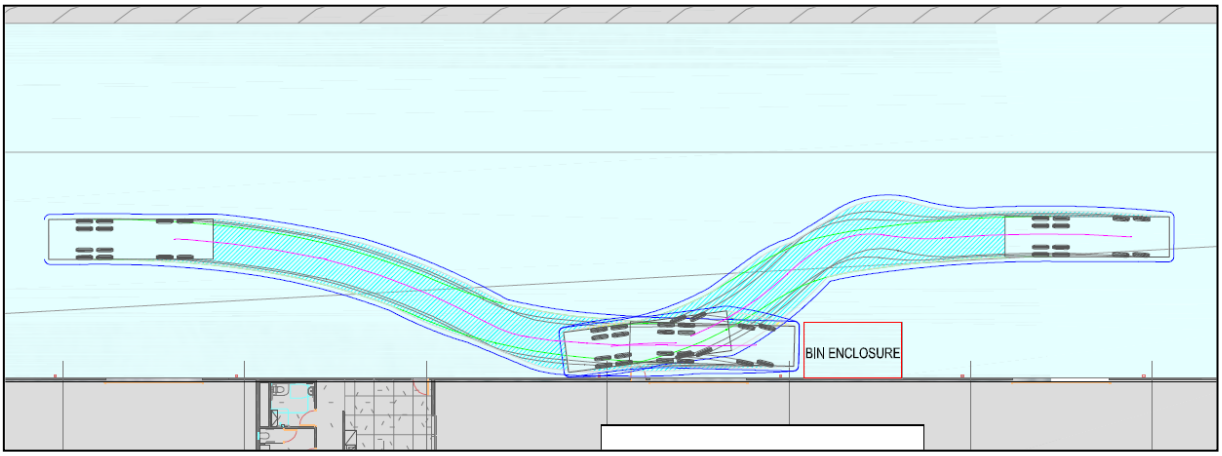


FIGURE 6.12– FIRE TRUCK CIRCULATION PATH



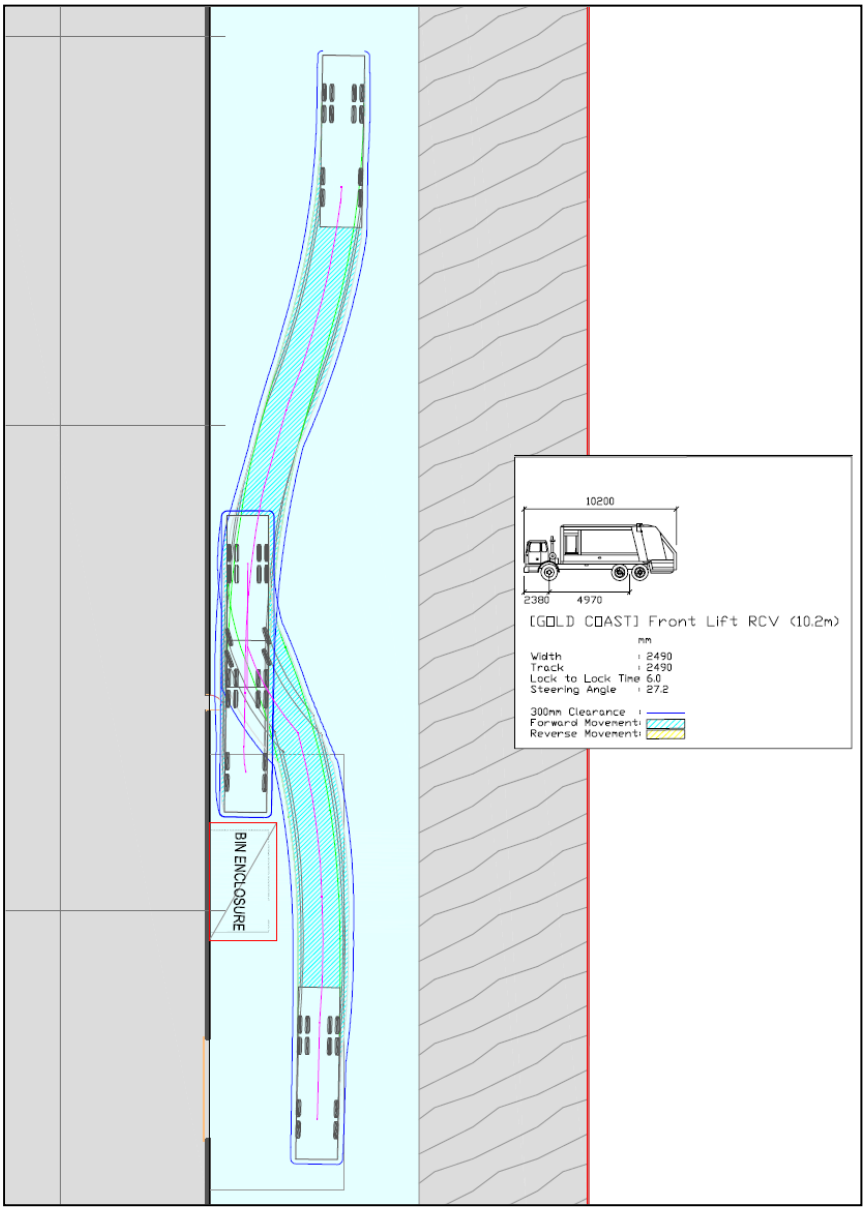


FIGURE 6.13 – REFUSE COLLECTION VEHICLE (RCV) CIRCULATION PATH

7.0 PROVISION FOR BICYCLES

The development will generate a very low (negligible) demand for visitor bicycle and few staff members are expected to travel by bicycle. Notwithstanding this, a visitor bicycle rail will be provided near the front entrance to the building and secured staff bicycle parking and end of trip facilities will be provided.

8.0 SUMMARY OF CONCLUSIONS & RECOMMENDATIONS

- The subject site is located on the eastern side of Fairway Street within the Vantage Industrial Estate.

- The proposed plan of development comprises of a warehouse building with associated office facilities. The proposed warehouse has been purpose designed for Woolworths. The facility will be operated by up to 445 staff, who will operate over three shifts with a maximum of 188 staff at the site at the same time.

- The proposed supply of 270 parking spaces will comfortably cater for the planned workforce and the proposed number of visitors that will access the site.

- The geometric layout of the proposed parking facilities has generally been designed to comply with the relevant requirements specified in the Australian Standard publication AS2890.1:2004.

- In accordance with the Transport code, the proposed plan of development allows for 20 metre long Articulated Vehicles (AV) to satisfactorily access and manoeuvre within the site. The plan also allows A-Double and B-Double vehicles to access and circulate within the site satisfactorily.

APPENDICES

APPENDIX A – RESPONSE TO TRANSPORT CODE
APPENDIX B - RESPONSE TO DRIVEWAYS AND VEHICULAR CROSSINGS CODE

APPENDIX A – RESPONSE TO CAR PARKING, ACCESS, AND TRANSPORT INTEGRATION CONSTRAINT CODE (2003)

Part 7 Codes
Division 3 Constraint Codes
Chapter 4 Car Parking, Access and Transport Integration

1.0 Purpose

To ensure that transport needs, including car parking and service vehicle requirements, associated with the development of land are met by:

- supply of car and bicycle parking facilities;
- provision of loading and service facilities; and
- integration of public transport with private and public development in the City.

Key objectives include:

a) the availability of car park opportunities that are easy to locate and use, in close proximity to all major developments and uses within the City, with on-site provision available for occupants and on-street provision and/or public car parks available for visitors;

b) the effective use of all car park infrastructure provided in the City; and

c) streets that are pedestrian and cyclist friendly.

2.0 Application

2.1 This code applies to development indicated as self, code or impact assessable in the Table of Development in the domain or Local Area Plan (LAP) within which the development is proposed.

2.2 This code specifically applies to development (whether on private or public land) that requires one or more of the following:

- private or public car parking;
- bicycle parking and associated facilities;
- goods loading and circulation in public or private places; and
- integration of public transport with private or public development in the City.

2.3 This code also applies to any development that is proposed for sites identified on Domain Maps or the Priority Infrastructure Plan Maps as being affected by Future Road Requirements, including areas required for future road corridor development.

2.4 Where a domain or LAP Place Code contains car parking requirements that differ from this code, the LAP requirements take precedence.

2.5 Performance Criteria PC1-PC24 apply to all code and impact assessable development referred to in this code. For development identified as self assessable, in the relevant domain or LAP, only the acceptable solutions to Performance Criteria PC1-PC16 apply.

3.0 Development Requirements

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Development that is Self Assessable, Code Assessable or Impact Assessable			
Protection and Preservation of Areas Required for Road Widening, the Provision of Public Transport Facilities or New Transport Corridors			
PC1 Land affected by any proposed road realignment or widening must not have development constructed over that part of the land required for road realignment or road widening.	AS1 All sites that are affected by Future Road Requirement as shown on the Domain Maps, do not have buildings or structures erected forward of the indicated building setback line. This requirement does not apply to a fence with a height not exceeding 1.8 metres and a width not exceeding 0.5 metres.	**COMPLIES**	
Port Cocheres			
PC2 Where provision is made for a *porte cochere*, it must be designed to enable vertical clearance, manoeuvring, access and queuing of vehicles. The capacity of the *porte cochere* and associated access and manoeuvring must accommodate vehicles entirely within the site, including the queuing of vehicles.	AS2 The *porte cochere* has a minimum vertical clearance of 4.5 metres.	N/A – A PORTE COCHERE IS NOT PROPOSED	
Design of Car Parking Areas and Car Park Spaces			
PC3 All car parking spaces must be constructed and line marked to the correct size and standard.	AS3.1 All car parking spaces and facilities are constructed, sealed, line marked and maintained in accordance with the layout	**COMPLIES**	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	requirements of **AS2890.1 – Parking Facilities Part 1: Off Street Car Parking and AS2890.2 – Off Street Parking Part 2: Commercial Vehicles**. AS3.2 Where the development includes a combination of low turnover and high turnover car spaces, the parking spaces and aisles are designed to the high turnover or Class 3 requirements in **AS2980.1 – Parking Facilities Part 1: Off Street Car Parking**.		
PC4 Car parking areas must be landscaped to reduce visual impact and to provide opportunities for shade.	AS4 In car parking areas exceeding 300m^2 in site area: a) at least 5% of the area is landscaped; b) a landscaped buffer, with a minimum height of 600mm and width of 1500mm, is provided along any public street frontage and the common boundary to the adjoining property; and c) one landscaped tree bay is to be provided for every 21 car parking spaces.	REFER TO LANDSCAPE REPORT	
Signs and Line Marking			
PC5 Signs and line marking must be provided to indicate the location of the car park and the position of the access points for all car parks used by the public where:	AS5.1 Signs incorporate the standard Service Sign Series 'P' sign, as detailed under **Guide Signs** in the **Manual of Uniform Traffic Control Devices, Queensland**.	**COMPLIES**	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
a) a car park is located at the rear of the site; b) access to the car park is not located in the main frontage road; c) there are a number of access points serving different parts of the site.	(This does not apply to residential developments with less than 10 units) AS5.2 Signs are used to mark car parking bays which are provided for disabled drivers, motorcycles and special zones, such as bus zones.		
Tandem Car Spaces			
PC6 Tandem car parking must only be used in circumstances where no inconvenience arises from its use.	AS6.1 Tandem car parking spaces (ie. two car parking spaces, nose to tail) are counted as one space, except in the following cases: a) the development is for residential purposes; b) the tandem spaces are to be used by the occupants of the site, in one tenancy; c) the car park area is to be operated as a public car park with on-site management. In this case, a tandem car park may be counted as no more than 1.5 car spaces. AS6.2 The minimum length of the tandem car space is 10.4 metres. AS6.3 Tandem garages have a minimum internal length of 11 metres.	NOT PROPOSED	
Access to Car Park Areas			

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
PC7 Car parking areas must not cause vehicle queues into the frontage road system or encourage drivers to reverse into the road system.	AS7.1 For developments in excess of 100 residential units with frontage to major roads, a turn round facility with a minimum diameter of 12.0m is provided between the gate and the road. AS7.2 All car parking facilities, except those associated with detached dwellings and duplex dwellings is designed so that all vehicles enter and exist the site in a forward gear. AS7.3 Provision is made for a defined queuing area, free of any parking manoeuvres or internal intersections in accordance with the provisions of the **Table to Acceptable Solution AS7.3**, for developments comprising of more than two dwelling units and where a security gate is proposed.		

Table to Acceptable Solution AS7.3

Car Park Capacity (Number of Spaces)	Minimum Queue Length (Vehicles) *
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4

101 to 150	5
151 to 200	6
201 to 250	7
More than 250	7 plus 1% of capacity over 250 spaces

*** Note: Each vehicle shall be taken to occupy 6.0 metres in length.**

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
PC8 Car parking areas providing more than 20 car parking spaces must allow for the separation of vehicles and pedestrians.	AS8 Sealed pedestrian footpaths, at a gradient not exceeding 1:12, are provided from the car parking area along the shortest possible route to the point of destination.	COMPLIES	
PC9 Access to car parking spaces must be provided for employees and visitors.	AS9.1 Car park areas have no gateways, doors or similar devices which restrict vehicular access by employees or visitors.	GATES PROVIDED FOR SECURITY. MANAGEMENT PLAN PROPOSED.	
Driveways and Crossovers			
PC10 Driveways from car parks or developments into public roads must be minimised to reduce interference with public road traffic and pedestrians.	AS10.1 The maximum number of crossovers for residential developments is one for detached dwelling properties and two for multiple unit dwelling complexes. AS10.2 The maximum number of crossovers for non-residential developments is two crossovers per property. AS10.3 A vehicle crossover is separated from any other vehicle crossover by a minimum distance of three metres.	**COMPLIES**	
PC11 All development must make provision for safe access to roads or streets adjacent to the site. Crossovers must be	AS11.1 The geometric design of entry and exit driveways conforms with **Standard Drawing No 59218** of **Planning Scheme**	**COMPLIES**	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
constructed to a standard consistent with the vehicles using the site.	**Policy 11 – Land Development Guidelines**. AS11.2 Access to roads or streets adjacent to the site is consistent with **AS2890.1 – Parking Facilities Part 1: Off Street Car Parking** and **AS2890.2 – Off Street Parking Part 2: Commercial Vehicles**. AS11.3 Where separate entry and exit driveways are used, the first driveway reached from the kerbside land is clearly delineated and sign-posted. AS11.4.1 Access to developments on dual carriageway roads is left in/left out. OR AS11.4.2 A new intersection is provided between the access way and the dual carriageway. AS11.5 Developments with traffic signal controlled or roundabout access to the frontage road dedicate land as public road to accommodate all intersection infrastructure, including traffic signal loops. AS11.6 The boundaries of the frontage road are modified to accommodate all intersection		

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	infrastructure within the public road. AS11.7 Developments with new traffic signal controlled access, within network traffic systems, provide the necessary infrastructure to integrate the new signals.		
Internal Circulation			
PC12 All developments must provide internal circulation to avoid use of the public road system for movement between different car parking and vehicle service areas in the development.	AS12.1 The internal layout of the site is consistent with **AS2890.1 – Parking Facilities Part 1: Off Street Car Parking** and **AS2890.2 – Off Street Parking Part 2: Commercial Vehicles**. AS12.2 Parking and circulation aisles have a maximum length of 100 metres. AS12.3 Dead end aisles do not exceed 20 metres in length. AS12.4 Aisle design does not include cross intersections. AS12.5 Car parking space/s is/are not located in areas used for manoeuvring of heavy vehicles. AS12.6 Car parks are designed so that vehicles	**COMPLIES**	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	do not reverse across pedestrian crossings. AS12.7 Speed humps are not provided in entry or exit queuing areas.		
Loading Bay and Set Down Area Requirements			
PC13 Development must make provision for loading bays and set down areas for the: a) collection and set down of passengers; b) parking of trailers; c) service vehicle parking; and d) loading and unloading of goods.	AS13 Loading and set down areas are provided consistent with the **AS2890.2 – Off Street Parking Part 2: Commercial Vehicles**.	**COMPLIES**	
Design Service Vehicle Requirements			
PC14 Development must provide for the required 'design service vehicle' to service the development.	AS14.1 Provision is made for service vehicles, in accordance with the **Table to Acceptable Solution AS14.1**. AS14.2 Provision is made for service vehicles, in accordance with the **Table to Acceptable Solution AS14.2**, for sites less than 4,000m^2 in area that require access by service vehicles. AS14.3 Provision is made for height clearance of 4.5 metres for service station canopies and access clearance height associated with the appropriate design vehicle in	**COMPLIES**	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	other applicable developments. AS14.4 A driveway which caters for heavy vehicles is designed in accordance with **AS2890.2 – Off Street Parking Part 2: Commercial Vehicles** and **Standard Drawing No 59218 Section 7.4** of **Planning Scheme Policy 11 – Land Development Guidelines**.		

Table to Acceptable Solution AS14.1

Use or Development	Service Vehicle Provisions
Aged Persons Accommodation	HRV
Animal Husbandry	AV
Aquaculture	HRV
Bulk Garden Supplies	HRV
Cafe	SRV
Cinema	SRV
Commercial Services	SRV
Community Care Centre	SRV
Community Purposes	SRV
Convenience Shop	SRV
Educational Establishment	SRV
Fast Food Premises	HRV
Freight Depot	AV

Table to Acceptable Solution AS14.1	
Use or Development	**Service Vehicle Provisions**
Fuel Depot	AV
Funeral Parlour	SRV
Hospital	HRV
Industry	AV
Indoor Recreation including: a) squash court or any other court game; b) meeting place, public hall, pinball parlour, amusement arcade; c) theatre, cinema; d) licensed club; e) skating rink, swimming pool; f) gymnasium; and g) public library, public lecture hall, art gallery, museum, any other indoor recreation.	SRV
Kennel	SRV
Manufacturers Shop	HRV
Marina	AV
Marina Shop	SRV
Market	SRV
Medical Centre	SRV
Milk Depot	AV
Mini-Storage Warehousing	HRV
Minor Tourist Facility	SRV
Motel	SRV
Motor Vehicle Repairs	HRV
Night Club	SRV

Table to Acceptable Solution AS14.1	
Use or Development	**Service Vehicle Provisions**
Outdoor Sport and Recreation: a) tennis court or other court game (where not ancillary to other development); b) lawn bowls; c) skating rinks, swimming pools; d) golf course.	SRV
Office	SRV
Place of Worship	SRV
Reception Room	SRV
Resort Hotel	HRV
Restaurant	SRV
Restricted Club	HRV
Retail Plant Nursery	HRV
Rural Industry	AV
Salvage Yard	HRV
Service Industry	SRV
Service Station	AV
Shop	SRV
Shop with GFA of less than 400m^2	SRV
Shop with GFA 400m^2 – 1500m^2	HRV
Shop with GFA larger than 1500m^2	AV
Shopping Centre Development	AV
Showroom	HRV
Storage	SRV

Table to Acceptable Solution AS14.1	
Use or Development	**Service Vehicle Provisions**
Take-Away Food Premises	SRV
Tavern	HRV
Temporary Use	AV
Theatre	SRV
Tourist Shop	SRV
Transit Centre	HRV
Transport Terminal	AV
Vehicle Hire Premises	AV
Vehicle Sales Premises	AV
Warehouse	AV
Waterfront Industry	HRV

Note: SRV: Small Rigid Vehicle as defined in AS2890.2 – Off Street Parking Part 2: Commercial Vehicles.
HRV: Heavy Rigid Vehicle as defined in AS2890.2 – Off Street Parking Part 2: Commercial Vehicles.
AV: Articulated Vehicle as defined in AS2890.2 – Off Street Parking Part 2: Commercial Vehicles.

Table to Acceptable Solution AS14.2	
HRV and AV Requirements	
Site Area (m^2)	**Requirement**
Less than 1000m^2	Demonstrate that the development can accommodate the particular design vehicle but a separate service bay and associated manoeuvring are not required. Where it can be demonstrated that loading and unloading can take place within the road reserve, without impacting on the safe and efficient operation of traffic and with no detrimental impact on amenity, Council or its delegate may determine that HRV and AV access is not required.

Table to Acceptable Solution AS14.2	
HRV and AV Requirements	
1000m^2 – 2000m^2	a) service bay for HRV is required. b) restricted manoeuvring on site for HRV or AV (as required). c) full on-site manoeuvring for other classes of service vehicle is required.
2000m^2 – 4000m^2	a) service bay to be provided for HRV or AV (as required). b) restricted manoeuvring on site for AV (as required). c) full on-site manoeuvring for HRV and other classes of service vehicle is required.

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Provision of Bicycle Parking Spaces			
PC15 Bicycle parking must be provided for all non-residential developments where the required car parking provision exceeds 20 parking spaces.	AS15.1 Where non-residential development requires the provision of more than 20 car parking spaces, bicycle parking is provided in accordance with the **Austroads Guide to Traffic Engineering Practice: Part 14: Table 10.1**. AS15.2 Where bicycle parking is to be provided, additional facilities for bicycle users are designed and constructed in accordance with **AS2890.3 – Parking Facilities Part 3: Bicycle Parking Facilities**.	REDUCED SUPPLY PROPOSED GIVEN LOCATION OF SITE AND SCALE OF DEVELOPMENT.	
Provision of Car Parking Spaces			
PC16 Sufficient car parking spaces must be provided to meet the car parking needs of the development. The number of car parking spaces provided must be consistent with the practical opportunities available for shared car parking provision and the operation of alternative transport modes to private motor vehicles. Car parking design contributes to delivering development with a built form that is robust and flexible, allowing adaptation or redevelopment over time to a variety of uses, increased densities or increased	AS16.1 Car parking is provided in accordance with the number of spaces required for the specific use listed in the **Table to Acceptable Solution AS16.1**. AS16.2 If an additional building is constructed, or an existing building is extended, the car space requirements determined from **Table to Acceptable Solution AS16.1** accrue only for the additional building or extension, provided that the use of the land remains the same and any existing area for car parking is not reduced or, if	CAR PARKING HAS BEEN DESIGNED TO SATISFY STAFF AND VISITOR PARKING DEMANDS	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
employment intensity.	disturbed, any existing car spaces are replaced in the new development.		

Table to Acceptable Solution AS16.1

This table sets out the minimum number of car parking spaces required according to the use of the land.
Where the calculated number of car spaces is not a whole number, the number of car parking spaces required must be the next higher whole number.

Material Change of Use	Minimum Number of Car Parking Spaces to be Provided
Aged Persons Accommodation	a) one (1) space per self-contained dwelling, plus one (1) visitor space per 10 self-contained dwellings; b) one (1) space per two hostel units; c) one (1) space per four nursing home beds; d) 50% of the total number of car parking spaces required should be provided for visitor parking in a central location.
Amusement Parlour	5 spaces per 100m^2 of GFA – one (1) space per 20m^2.
Apartments	a) for developments with up to 20 apartments, one (1) space per one (1) bedroom apartment, and 2 spaces per 2 bedroom and larger apartments, plus one (1) space per four apartments for visitor parking. b) for developments with more than 20 apartments, requirements for first 20 apartments as in a) plus, one (1) space per apartment and one (1) space per 10 apartments for visitor parking for subsequent units. c) for developments in excess of 20 apartments, the units with 2, 3 or 4 bedrooms shall be considered first in the determination of total parking spaces. d) for mixed-use development with a single apartment, visitor parking for the apartment is not required. e) where development: ▪ is on a site that only has frontage to a road listed below; or ▪ the access to the proposed development is to a road listed below; and ▪ where the frontage is included in that part of the road listed below; additional visitor car parking shall be provided at a rate of one (1) car parking space for every two (2) visitor car parking spaces required. **Road** — **Part of Road** Aloha Lane — The whole Cooinda Avenue — Northern alignment Beulah Lane — The whole Cronin Avenue — The whole Darwalla Avenue — The whole Eden Avenue — Both alignments from Hill Street to Ward Street and from Ward Street to and including BUP 5455 (Lot 1 RP 188138), and to and including Lot 6 RP154810

Table to Acceptable Solution AS16.1

	Fenton Place — The whole Garfield Terrace — The whole Hedges Avenue — The whole Jefferson Lane — North of Third Avenue Lennie Avenue — The whole Little Norman Street — The whole Montgomery Avenue — The whole Mountbatten Avenue — The whole Northcliffe Terrace — The whole Nagel Avenue — Western alignment from and including Lot 12 RP 46948 to and including Lot 1 RP 46948 O'Connor Street — Western Alignment from Wybera Street to and including Lot 26 RP 49999 Owens Lane — The whole Pacific Parade — The whole Park Lane — The whole Peak Avenue — The whole Schuster Avenue — The whole Sunshine Court — The whole Swan Lane — The whole
Attached Dwelling	a) 2 spaces per dwelling, of which one (1) is to be covered, plus one (1) space per two dwellings for visitor parking. b) where development: ▪ is on a site that only has frontage to a road listed below; or ▪ the access to the proposed development is to a road listed below; and ▪ where the frontage is included in that part of the road listed below; additional visitor car parking shall be provided at a rate of one (1) car parking space for every two (2) visitor car parking spaces required. **Road** — **Part of Road** Aloha Lane — The whole Cooinda Avenue — Northern alignment Beulah Lane — The whole Cronin Avenue — The whole

Table to Acceptable Solution AS16.1

	Darwalla Avenue — The whole Eden Avenue — Both alignments from Hill Street to Ward Street and from Ward Street to and including BUP 5455 (Lot RP 1881138), and to and including Lot 6 RP154810 Fenton Place — The whole Garfield Terrace — The whole Hedges Avenue — The whole Jefferson Lane — North of Third Avenue Lennie Avenue — The whole Little Norman Street — The whole Montgomery Avenue — The whole Mountbatten Avenue — The whole Northcliffe Terrace — The whole Nagel Avenue — Western alignment from including Lot 12 RP 46948 to and including Lot 1 RP 46948 O'Connor Street — Western alignment from Wybera Street to and including Lot 26 RP 49999 Owens Lane — The whole Pacific Parade — The whole Park Lane — The whole Peak Avenue — The whole Schuster Avenue — The whole Sunshine Court — The whole Swan Lane — The whole **Note: The visitor parking space may be provided on street in the case of a duplex development.**
Bed and Breakfast	one (1) space per guest room (in addition to the requirement of 2 spaces per dwelling, of which one (1) is to be covered).
Bulk Garden Supplies	2 spaces per 100m^2 of Total Use Area (one (1) space per 50m^2 of Total Use Area).
Cafe	6.7 spaces per 100m^2 of GFA (including any outdoor dining areas) (one (1) space per 15m^2 of GFA).
Caravan Park	one (1) space per site, plus visitor parking of one (1) space per ten sites.
Caretaker's Residence	2 spaces, of which one (1) is to be covered.

Table to Acceptable Solution AS16.1	
Child Care Centre	one (1) space per employee, plus on-site passenger set down area of one (1) space for every five children enrolled.
Cinema	as determined by Council, requiring a Traffic Impact Report.
Commercial Services	4 spaces per 100m^2 of GFA (one (1) space per 25m^2 of GFA).
Community Care Centre	one (1) space per employee, based on the maximum number of employees on the premises at any one time, plus one (1) space per ten residents or other occupants of the premises.
Community Purposes	as determined by Council.
Convenience Shop	6.7 spaces per 100m^2 of GFA (one (1) space per 15m^2 of GFA).
Detached Dwelling	2 spaces per dwelling, of which one (1) is to be covered.
Display Home	as determined by Council.
Ecotourism Facility	as determined by Council, requiring Traffic Impact Report.
Educational Establishment: a) primary school b) secondary school c) tertiary and further education d) other	a) one (1) space per staff member; b) one (1) space per staff member, plus one (1) space per each ten Year 12 students enrolled; c) as determined by Council, requiring Traffic Impact Report; and d) as determined by Council, requiring Traffic Impact Report.
Estate Sales Office	5 spaces.
Family Accommodation	one (1) space, in addition to the spaces required for the main dwelling.
Family Day Care Home	no on-site spaces required.
Farm Stay	one (1) space for each guest bedroom (in addition to the requirement of 2 spaces per dwelling, of which one (1) is to be covered).

Table to Acceptable Solution AS16.1	
Fast Food Premises	a) 0.4 spaces per seat, plus one (1) space per 100m^2 of GFA; OR b) 10 spaces per 100m^2 of GFA, plus 20 spaces per 100m^2 of GFA outdoor seating areas, whichever is the greater, plus queuing area for 10 vehicles associated with any drive through sales facility.
Freight Depot	one (1) space per employee, plus one (1) visitor parking space.
Fuel Depot	one (1) space per employee, plus one (1) visitor parking space.
Funeral Parlour	10 spaces per 100m^2 of GFA (one (1) space per 10m^2 of GFA).
Home Occupation	2 spaces for the purposes of the Home Occupation, in addition to the spaces required for the dwelling.
Home Office	one (1) space for the purpose of the Home Office, in addition to the spaces required for the dwelling.
Hospital	as determined by Council, requiring a Traffic Impact Report.
Hostel Accommodation	a) one (1) car space per 15m^2 of the total sleeping accommodation area, plus one (1) car space for any manager's or caretakers unit. b) where development: ▪ is on a site that only has frontage to a road listed below; or ▪ the access to the proposed development is to a road listed below; and ▪ where the frontage is included in that part of the road listed below. additional visitor car parking shall be provided at a rate of one (1) car parking space for every two (2) visitor car parking spaces required. **Road** **Part of Road** Aloha Lane The whole Cooinda Avenue Northern alignment Beulah Lane The whole Cronin Avenue The whole Darwalla Avenue The whole Eden Avenue Both alignments from Hill Street to Ward Street and from Ward Street to and including BUP 5455 (Lot RP

Table to Acceptable Solution AS16.1

	1881138), and to and including Lot 6 RP154810 Fenton Place The whole Garfield Terrace The whole Hedges Avenue The whole Jefferson Lane North of Third Avenue Lennie Avenue The whole Little Norman Street The whole Montgomery Avenue The whole Mountbatten Avenue The whole Northcliffe Terrace The whole Nagel Avenue Western alignment from including Lot 12 RP 46948 to and including Lot 1 RP 46948 O'Connor Street Western alignment from Wybera Street to and including Lot 26 RP 49999 Owens Lane The whole Pacific Parade The whole Park Lane The whole Peak Avenue The whole Schuster Avenue The whole Sunshine Court The whole Swan Lane The whole
Indoor Recreation Facility: a) squash court or any other court game b) meeting place, public hall c) pinball parlour, amusement arcade d) theatre, cinema e) licensed club f) skating rink or swimming pool g) gymnasium h) public library, public lecture hall, art gallery, museum, any other indoor recreation	a) 4 spaces per court; b) 10 spaces per 100m^2 of GFA (one (1) space per 10m^2 of GFA); c) 5 spaces per 100m^2 of GFA (one (1) space per 20m^2 of GFA); d) as determined by Council, requiring Traffic Impact Report; e) 6 spaces per 100m^2 of GFA (one (1) space per 17m^2 of GFA), additional parking for gaming machines at the rate of one (1) space per 3 gaming machines; f) 15 spaces, plus one (1) space per 100m^2 of GFA; g) 10 spaces per 100m^2 of GFA; h) as determined by Council or its delegate.

Table to Acceptable Solution AS16.1	
Industry	2 spaces per tenancy plus 1 space per 50m^2 of GFA up to 500m^2 plus 1 space per 100m^2 of GFA over 500m^2.
Integrated Housing	2 spaces per dwelling, of which one (1) must be covered, plus 0.5 spaces per dwelling visitor parking, distributed throughout the site in accessible locations.
Kennel	one (1) space per employee, with a minimum of two spaces plus one (1) visitor parking space.
Laundromat	5 spaces per 100m^2 of GFA (one (1) space per 20m^2 of GFA).
Manufacturers Shop	a) 6.7 spaces per 100m^2 of area used for retail (one (1) space per 15m^2 of area used for retail); b) 2.5 spaces per 100m^2 of area used for manufacturing (one (1) space per 40m^2 of area used for industry).
Marina	a) 0.6 spaces for each wet berth designed for boats ten metres and under; b) 0.8 spaces for each wet berth designed for boats between ten metres and 15 metres; c) one (1) space for each wet berth designed for boats greater than 15 metres; d) 0.2 spaces for each dry berth or swing mooring; plus e) 0.5 spaces for each employee; f) one (1) space per 50m^2 of GFA of ancillary activities associated with the marina; g) one (1) space for each wet berth designed for boats greater than 15 metres.
Marina Shop	6.7 spaces per 100m^2 of GFA (one (1) space per 15m^2 of GFA).
Market	as determined by Council, requiring Traffic Impact Report.
Medical Centre	5 spaces per 100m^2 of GFA (one (1) space per 20m^2 of GFA).
Mini-Storage Warehousing	a) one (1) space per ten (10) storage sheds; plus b) one (1) space per 30m^2 GFA administration office area; plus c) a minimum traffic circulation aisle width of 6.5 metres.
Minor Tourist Facility	as determined by Council, requiring Traffic Impact Report.
Motel	a) one (1) space per room, plus one (1) space for the manager's residence. b) where a restaurant is included, 0.15 spaces per seat or 3.5 spaces per 100m^2 of the restaurant GFA, whichever is the greater.

Table to Acceptable Solution AS16.1

c) where development:
- is on a site that only has frontage to a road listed below; or
- the access to the proposed development is to a road listed below; and
- where the frontage is included in that part of the road listed below.

additional visitor car parking shall be provided at a rate of one (1) car parking space for every two (2) visitor car parking spaces required.

Road	Part of Road
Aloha Lane	The whole
Cooinda Avenue	Northern alignment
Beulah Lane	The whole
Cronin Avenue	The whole
Darwalla Avenue	The whole
Eden Avenue	Both alignments from Hill Street to Ward Street and from Ward Street to and including BUP 5455 (Lot RP 1881138), and to and including Lot 6 RP154810
Fenton Place	The whole
Garfield Terrace	The whole
Hedges Avenue	The whole
Jefferson Lane	North of Third Avenue
Lennie Avenue	The whole
Little Norman Street	The whole
Montgomery Avenue	The whole
Mountbatten Avenue	The whole
Northcliffe Terrace	The whole
Nagel Avenue	Western alignment from including Lot 12 RP 46948 to and including Lot 1 RP 46948
O'Connor Street	Western alignment from Wybera Street to and including Lot 26 RP 49999
Owens Lane	The whole
Pacific Parade	The whole
Park Lane	The whole
Peak Avenue	The whole
Schuster Avenue	The whole
Sunshine Court	The whole

Table to Acceptable Solution AS16.1	
	Swan Lane The whole
Motor Vehicle Workshop	6.7 spaces per 100m^2 of GFA (one(1) space per 15m^2 of GFA).
Night Club	6 spaces per 100m^2 of GFA (one (1)space per 17m^2 of GFA).
Office	3 spaces per 100m^2 of GFA (one (1) space per 33m^2 of GFA).
Outdoor Sport and Recreation: a) tennis court or other court game (where not ancillary to other development) b) lawn bowls c) skating rinks, swimming pools d) golf course e) racecourse f) sporting arena g) clubhouse	a) 4 spaces per court; b) 20 spaces per green; c) 15 spaces, plus one (1) space per 100m^2 of Total Use Area; d) the greater of: ▪ 4 spaces per hole, plus 3 spaces per 100m^2 of GFA of club house area; or ▪ 6 spaces per 100m^2 of GFA of club house area; e) as determined by Council, requiring Traffic Impact Report; f) as determined by Council, requiring Traffic Impact Report; g) 6 spaces per 100m^2 of GFA (one (1) space per 17m^2 of GFA).
Place of Worship	10 spaces per 100m^2 of GFA (one (1) space per 10m^2 of GFA).
Reception Room	6 spaces per 100m^2 of GFA (one (1) space per 17m2 of GFA).
Relocatable Home Park	one (1) space per Relocatable Home plus visitor parking of one (1) space per 5 dwellings.
Residential Hotel	a) one (1) space per residential unit plus 10 spaces per 100m^2 of GFA lounge, bar and beer garden area; plus b) 10 spaces per 100m^2 of GFA retail floor area for liquor barns or bulk liquor sales; plus c) a reservoir space for 12 cars for a drive-in bottle shop.
Resort Hotel	a) one (1) space for each guest room or suite, for the first 75 guest rooms or suites, plus 0.1 space for each additional guest room or suite. b) where the development includes commercial facilities that are available for use by the general public, car parking for such facilities shall be provided at 75% of the standard requirements of this table. c) where development:

Table to Acceptable Solution AS16.1

<table>
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is on a site that only has frontage to a road listed below; or
the access to the proposed development is to a road listed below; and
where the frontage is included in that part of the road listed below;

additional visitor car parking shall be provided at a rate of one (1) car parking space for every two (2) visitor car parking spaces required.
<table>
<tr><th>Road</th><th>Part of Road</th></tr>
<tr><td>Aloha Lane</td><td>The whole</td></tr>
<tr><td>Cooinda Avenue</td><td>Northern alignment</td></tr>
<tr><td>Beulah Lane</td><td>The whole</td></tr>
<tr><td>Cronin Avenue</td><td>The whole</td></tr>
<tr><td>Darwalla Avenue</td><td>The whole</td></tr>
<tr><td>Eden Avenue</td><td>Both alignments from Hill Street to Ward Street and from Ward Street to and including BUP 5455 (Lot RP 1881138), and to and including Lot 6 RP154810</td></tr>
<tr><td>Fenton Place</td><td>The whole</td></tr>
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<tr><td>Peak Avenue</td><td>The whole</td></tr>
<tr><td>Schuster Avenue</td><td>The whole</td></tr>
<tr><td>Sunshine Court</td><td>The whole</td></tr>
<tr><td>Swan Lane</td><td>The whole</td></tr>
</table>
</td></tr>
<tr><td>Restricted Club</td><td>6 spaces per 100m^2 of GFA (one (1) space per 17m^2 of GFA).</td></tr>
<tr><td>Restaurant</td><td>6.7 spaces per 100m^2 of GFA (including any outdoor dining areas) (one (1) space per 15 m^2 of GFA).</td></tr>
<tr><td>Retail Plant Nursery</td><td>10 spaces, plus one (1) space per 100m^2 of Total Use Area in excess of 3,000 metres.</td></tr>
</table>

Table to Acceptable Solution AS16.1	
Rural Industry	one (1) space for each employee who does not reside on-site, plus one (1) visitor parking space.
Salvage Yard	0.7 space per 100m^2 of Total Use Area, with a minimum of five spaces.
Serviced Apartment	a) one (1) space per apartment, plus 0.25 per apartment for visitor parking, where parking is contained in a single parking garage and spaces are not dedicated to particular units; OR b) one (1) space per one (1) bedroom apartment and 2 spaces per 2 bedroom and larger apartments, where spaces are dedicated to each apartment, plus 0.25 visitor spaces per apartment.
Service Industry	2.5 spaces per 100m^2 of GFA (one (1) space per 40m^2 of GFA).
Service Station	a) 2 spaces, plus 5 spaces per service bay; plus b) 4 spaces per 100m^2 of GFA of shop sales area of less than 150m^2; plus c) 5 spaces per 100m^2 of GFA of shop sales area exceeding 150m^2; plus d) 10 spaces per 100m^2 of GFA of restaurant or café, or 0.4 spaces per seat, whichever is the greater.
Shop	6.7 spaces per 100m^2 of GFA (one (1) space per 15m^2 of GFA).
Shopping Centre Development: a) initial 2000m² of EGFA; then b) 2,001m² – 10,000m² of EGFA; then c) 10,001m² – 20,000m² of EGFA; then d) 20,001m² – 30,000m² of EGFA; then e) >30,000m² of EGFA.	a) 6.7 spaces per 100m² of EGFA; b) 6.1 spaces per 100m² of EGFA; c) 5.6 spaces per 100m² of EGFA; d) 4.3 spaces per 100m² of EGFA; e) 4.1 spaces per 100m² of EGFA. **Note: Multiple car parking rates may be applicable to a Shopping Centre Development depending on the scale of the existing and/or new development. For example, the car parking rate for a new shopping centre development with 15,000m² of EGFA would equate to (6.7/100 x 2000) + (6.1/100 x 8000) + (5.6/100 x 5000) = 902 car parking spaces. An 8,000m² EGFA extension to this centre would require (5.6/100 x 5000) + (4.3/100 x 3000) = 409 additional car parking spaces.**
Showroom	2 spaces per 100m^2 of GFA (one (1) space per 50m^2 of GFA).
Special Accommodation	2 spaces.

Table to Acceptable Solution AS16.1	
Stall	4 spaces.
Storage	a) one (1) space per ten (10) storage sheds; plus b) one (1) space per 30m^2 GFA administration office area; plus c) a minimum traffic circulation aisle width of 6.5 metres.
Take-Away Food Premises	6.7 spaces per 100m^2 of GFA (one (1) space per 15m^2 of GFA).
Tavern	a) 10 spaces per 100m^2 of GFA lounge, bar and beer garden area,(excluding 'staff only' areas); plus b) 10 spaces per 100m^2 of GFA retail floor area for liquor barns or bulk liquor sales; plus c) a reservoir space for 12 cars for a drive in bottle shop; d) additional parking for gaming machines, at the rate of one (1) space per 3 gaming machines.
Theme Park	at the rate of (number of 'design day' visitors x 0.2347) + 87, where the design day corresponds to the existing 85 percentile day, subject to confirmation of this approach from Council's Manager of Transport Planning.
Tourist Cabins	as determined by Council, requiring Traffic Impact Report.
Tourist Facility	as determined by Council, requiring Traffic Impact Report.
Tourist Shop	5 spaces per 100m^2 of GFA (one (1) space per 20m^2 of GFA).
Transit Centre	as determined by Council, requiring Traffic Impact Report.
Transport Terminal	as determined by Council, requiring Traffic Impact Report.
Vehicle Hire Office	one (1) car space per employee, or one (1) car space per 30m^2, whichever is the greater.
Vehicle Hire Premises	one (1) car space per employee, or one (1) car space per 30m^2, whichever is the greater, plus a minimum of one (1) on-site wash bay, plus a minimum of one(1) car space per every 1.5 vehicles (or part thereof) in the hire vehicle fleet, provided that such spaces may be located in tandem.
Vehicle Sales Premises	3.3 spaces per 100m^2 of GFA plus 0.5 spaces per 100m^2 of display area.

Table to Acceptable Solution AS16.1	
Veterinary Clinic or Veterinary Hospital	3 spaces per practitioner.
Warehouse	2 spaces per tenancy plus 1 space per 50m^2 of GFA up to 500m^2 plus 1 space per 100m^2 of GFA over 500m^2.
Waterfront (or Marine) Industry	2 spaces per 100m^2 of GFA (one (1) space per 50m^2 of GFA).
Any Other Use	as determined by Council, requiring a Car Parking Assessment Report.

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Development that is Code Assessable or Impact Assessable			
PC17 New development must not result in any adverse impact, through the reduction in the car parking capacity of the site and/or the local area.	AS17.1.1 Any car parking spaces lost are replaced elsewhere on the site. OR AS17.1.2 A monetary contribution is provided to Council for those car parking spaces lost, consistent with **AS16.2**. OR AS17.1.3 The Building Work is associated with a Material Change of Use that requires a lesser number of parking spaces than the existing use.	**COMPLIES – PROPOSED PARKING WILL ALLOW FOR PEAK DEMAND**	
Driveways and Crossovers			
PC18 Vehicle crossovers must be constructed to minimise conflict with passing traffic and pedestrians.	AS18 Access to developments with more than one frontage road is via minor roads. Impacts of driveway traffic are concentrated on less busy roads, with traffic distributed to major roads via existing intersections.	**COMPLIES**	
Safe Pedestrian Access			
PC19 All development must make provision for	AS19.1 The design of the development ensures	**COMPLIES**	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
safe pedestrian access to the building from the street and from any car parking or set down area to the building's main entrance.	that priority is given to pedestrians for direct links to the building's main entrance and to any adjoining local activities or public transport services. AS19.2 Landscaping surrounding the pedestrian walkways and shelters is no higher than 600mm and incorporates trees with branching not lower than 2m (clear stem trees). AS19.3 Solid walls and fences are avoided adjacent to pedestrian walkways to improve actual and perceived safety. AS19.4 Security is to be enhanced by passive surveillance over the car parking area from nearby residences or other activities, where practicable.		
Safe Pedestrian and Cyclist Facilities			
PC20 The design of pedestrian and cyclist facilities must be safe, useable and readily accessible.	AS20 Pedestrian and cyclist facilities are designed to encourage the use of these modes by: a) minimising distances, and providing safe grading paths, separated from motorised traffic; b) using even, non-slippery pavement materials.	**COMPLIES – PEDESTRIAN LINKS PROVIDED WITHIN THE SITE**	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Integration of Development with Public Transport			
PC21 Development that attracts a high proportion of people dependent on public transport must provide facilities to accommodate public transport servicing requirements.	AS21.1 Any development that includes activities listed in the **Table to Acceptable Solution AS21.1** provides a bus set down facility on and off-site, in close proximity to the entrance of the development. AS21.2 Where a bus set down area is provided, it is integrated into the development, easily accessible, safe, secure, clearly identified, and attractive to use (in the case of major developments providing a covered walkway to the entry).	N/A	
	Table to Acceptable Solution AS21.1 a) Educational Establishment b) International Hotel c) Resort Hotel d) Transit Centre e) Shopping Centre Development (more than 4,000m^2 of EGFA retail floor space) f) Public Events g) Spectator Sports h) Convention Centre		
PC22 Development that attracts a reasonable proportion of people dependent on public	AS22.1 Any development that includes activities listed in the **Table to Acceptable**		

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
transport must assist in supporting facilities for public transport servicing.	**Solution AS22.1** provides a bus stop and/or a bus shelter, if the entry to the development is not within 400 metres of a an existing bus stop or within 800 metres of a railway station. AS22.2 The bus shelter is located adjacent to the frontage of the site and is connected to the entry of the development by a sealed footpath.		

Table to Acceptable Solution AS22.1

a) Apartment Buildings with more than 60 units
b) Townhouse Complexes with more than 60 units
c) Active Recreation Facility
d) Bulky Goods Retailers (more than 2,000m^2 of GFA retail floor space)
e) Hospitals
f) Community Centres
g) Entertainment Venues
h) Aged Persons Accommodation

Cash In Lieu of Car Park Spaces Required

PC23 Car parking must be provided to meet the car parking needs of the development. If it cannot be provided on site, alternative arrangements may be proposed.	AS23.1.1 The car parking spaces required by **Table to Acceptable Solution AS16.1** are provided on the subject site. OR AS23.1.2	N/A	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	A monetary contribution for all or part of the required car parking may be made towards one or more of the following: a) provision of off-street car parking in the vicinity of the development; b) provision of improved on street car parking and streetscape improvement works, in the vicinity of the development; and/or c) provision of improved public transport facilities and services in the vicinity of the development.		
Traffic Impact			
PC24 Where appropriate, specific measures must be taken in the provision of car parking spaces and access to these, to ensure that the traffic impacts of the car park area's use does not have a negative impact on the local amenity and the operation of the local street network.	AS24 A Traffic Impact Report is prepared and implemented, unless: a) the development has less than 250 high turnover or 500 low turnover parking spaces; or b) it has less than 100 parking spaces with direct access to a major road; or c) the Assessment Manager advises a Traffic Impact Report is not required. This Traffic Impact Report shows how the proposed development is able to comply with the provisions of this code and **Section 7.4** of **Planning Scheme Policy 11 – Land Development Guidelines**.	N/A – ADDRESSED FOR OVERALL ESTATE	

APPENDIX B – RESPONSE TO STATE CODE 6

Table 6.2.2: All development

Performance outcomes	Acceptable outcomes	Response
Network impacts		
PO1 **Development does not result in a worsening of the safety of a state-controlled road.** **Note: To demonstrate compliance with this performance outcome, it is recommended that a Registered Professional Engineer of Queensland (RPEQ) certified road safety audit or road safety assessment (as applicable) is provided.** **Further information on determining whether a road safety audit or road safety assessment is required is provided in section 9 of the Guide to Traffic Impact Assessment, Department of Transport and Main Roads, 2017.**	**No acceptable outcome is prescribed.**	**COMPLIES – EXTERNAL ROAD UPGRADES ARE BEING CARRIED OUT TO MITIGATE THE IMPACT OF THE OVERALL ESTATE OF WHICH THE PROPOSAL IS SITUATED.**
PO2 **Development does not result in a worsening of the infrastructure condition of a state-controlled road or road transport infrastructure.** **Note: To demonstrate compliance with this performance outcome, it is recommended that a RPEQ certified traffic impact assessment and pavement impact assessment are provided.** **Further information on how to prepare a traffic impact assessment and pavement impact assessment is provided in the Guide to Traffic Impact Assessment, Department of Transport and Main Roads, 2017.**	**No acceptable outcome is prescribed.**	**COMPLIES**
PO3 **Development does not result in a worsening of operating conditions on a state-controlled road or the surrounding road network.**	**No acceptable outcome is prescribed.**	**COMPLIES**

Performance outcomes	Acceptable outcomes	Response
Note: To demonstrate compliance with this performance outcome, **it is recommended that an RPEQ certified traffic impact assessment is provided.** **Further information on how to prepare a traffic impact assessment** **is provided in the Guide to Traffic Impact Assessment, Department of Transport and Main Roads, 2017.**		
PO4 **Development does not impose traffic loadings on a state-controlled road which could be accommodated on the local road network.**	AO4.1 **The layout and design of the development directs traffic generated by the development to the local road network.**	**COMPLIES**
PO5 **Upgrade works on, or associated with, a state-controlled road are built in accordance with relevant design standards.**	AO5.1 **Upgrade works on a state-controlled road are designed and constructed in accordance with the Road Planning and Design Manual, 2nd edition, Department of Transport and Main Roads, 2016.**	**NOT APPLICABLE – NO UPGRADE WORKS ARE PROPOSED ON A STATE CONTROLLED ROAD AS PART OF THIS APPLICATION.**
PO6 **Development involving the haulage of fill, extracted material or excavated spoil material exceeding 10,000 tonnes per year does not damage the pavement of a state-controlled road.** **Note: It is recommended that a transport infrastructure impact assessment and pavement impact assessment are provided.** **Further information on how to prepare a traffic impact assessment is provided in the Guide to Traffic Impact Assessment, Department of Transport and Main Roads, 2017.**	AO6.1 **Fill, extracted material and spoil material is not transported to or from the development site on a state-controlled road.**	**NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS .**
PO7 **Development does not adversely impact on the safety of a railway crossing.** **Note: It is recommended that a traffic impact assessment be prepared to demonstrate compliance with this performance outcome. An impact on a level crossing may require an Australian Level Crossing Assessment Model (ALCAM) assessment to be undertaken. Section 2.2 – Railway crossing**	**AO7.1** Development does not require a new railway crossing. OR	**COMPLIES**
	AO7.2 A new railway crossing is grade separated.	
	OR all of the following acceptable outcomes apply:	

Performance outcomes	Acceptable outcomes	Response
safety of the Guide to Development in a Transport Environment: Rail, Department of Transport and Main Roads, 2015, provides guidance on how to comply with this performance outcome.	**AO7.3** Upgrades to a level crossing are designed and constructed in accordance with AS1742.7 – Manual of uniform traffic control devices, Part 7: Railway crossings and applicable rail manager standard drawings. Note: It is recommended a traffic impact assessment be prepared to demonstrate compliance with this acceptable outcome. An impact on a level crossing may require an Australian Level Crossing Assessment Model (ALCAM) assessment to be undertaken. Section 2.2 – Railway crossing safety of the Guide to Development in a Transport Environment: Rail, Department of Transport and Main Roads, 2015, provides guidance on how to comply with this acceptable outcome AND	
	AO7.4 Access points achieve sufficient clearance from a level crossing in accordance with AS1742.7 – Manual of uniform traffic control devices, Part 7: Railway crossings by providing a minimum clearance of 5 metres from the edge running rail (outer rail) plus the length of the largest vehicle anticipated on-site. Note: Section 2.2 of the Guide to Development in a Transport Environment: Rail, Department of Transport and Main Roads, 2015, provides guidance on how to comply with this acceptable outcome. AND	**COMPLIES**
	AO7.5 On-site vehicle circulation is designed to give priority to entering vehicles at all times.	**COMPLIES**
PO8 **Development does not result in a worsening of the infrastructure condition of a railway or rail transport infrastructure.**	No acceptable outcome is prescribed.	**COMPLIES**
PO9 **Development does not result in a worsening**	No acceptable outcome is prescribed.	**COMPLIES**

Performance outcomes	Acceptable outcomes	Response
of operating conditions of a railway		
Stormwater and drainage		
PO10 **Development does not result in an actionable nuisance, or worsening of, stormwater, flooding or drainage impacts in a state transport corridor or state transport infrastructure.**	No acceptable outcome is prescribed.	**NOT APPLICABLE TO TRAFFIC IMACT ANALYSIS.**
PO11 **Run-off from the development site is not unlawfully discharged to a state transport corridor or state transport infrastructure.**	**AO11.1** Development does not create any new points of discharge to a state transport corridor. AND	**NOT APPLICABLE TO TRAFFIC IMACT ANALYSIS.**
	AO11.2 **Stormwater run-off is discharged to a lawful point of discharge.** **Note: Section 3.49 of the Queensland Urban Drainage Manual, Institute of Public Works Engineering Australasia (Queensland Division) Fourth Edition, 2016, provides further information on lawful points of discharge.** AND	**NOT APPLICABLE TO TRAFFIC IMACT ANALYSIS.**
	AO11.3 Development does not worsen the condition of an existing lawful point of discharge to a state transport corridor.	**NOT APPLICABLE TO TRAFFIC IMACT ANALYSIS.**
PO12 **Run-off from the development site does not cause siltation of stormwater infrastructure affecting a state transport corridor or state transport infrastructure.**	**AO12.1** Run-off from the development site is not discharged to stormwater infrastructure for a state transport corridor.	**NOT APPLICABLE TO TRAFFIC IMACT ANALYSIS.**
Planned upgrades		
PO13 **Development does not impede delivery of planned upgrades of state transport infrastructure.**	**AO13.1** Development is not located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of state transport infrastructure.	**COMPLIES**

Performance outcomes	Acceptable outcomes	Response
	Note: Land required for the planned upgrade of state transport infrastructure is identified in the DA mapping system. OR	
	AO13.2 **Development is sited and designed so that permanent buildings, structures, infrastructure, services or utilities are not located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of state transport infrastructure.**	**COMPLIES**
	OR all of the following acceptable outcomes apply: AO13.3 **Structures and infrastructure located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of state transport infrastructure are able to be readily relocated or removed without materially affecting the viability or functionality of the development.** **AND**	
	AO13.4 **Vehicular access for the development is consistent with the function and design of the planned upgrade of state transport infrastructure.** **AND**	
	AO13.5 **Development does not involve filling and excavation of, or material changes to, land required for a planned upgrade to a state transport**	

Performance outcomes	Acceptable outcomes	Response
	infrastructure. **AND**	
	AO13.6 **Land is able to be reinstated to the predevelopment condition at the completion of the use.**	**COMPLIES**

Table 6.2.3: Public passenger transport infrastructure

Performance outcomes	Acceptable outcomes	Response
Public passenger transport infrastructure		
PO14 **Development does not damage or interfere with public passenger transport infrastructure, public passenger services or pedestrian or cycle access to public passenger transport infrastructure and public passenger services.**	AO14.1 **Vehicular access and associated road access works are not located within 5 metres of public passenger transport infrastructure.** **AND**	**COMPLIES**
	AO14.2 **Development does not necessitate the relocation of existing public passenger transport infrastructure.** **AND**	**COMPLIES**
	AO14.3 **Development does not obstruct pedestrian or cyclist access to public passenger transport infrastructure or public passenger services.** **AND**	**COMPLIES**
	AO14.4 **The normal operation of public passenger transport infrastructure or public passenger services is not interrupted during construction of the development.**	**COMPLIES**

Performance outcomes	Acceptable outcomes	Response
PO15 **Upgraded or new public passenger transport infrastructure is provided to accommodate the demand for public passenger transport generated by the development.** **Note: To demonstrate compliance with this performance outcome, it is recommended a public transport impact assessment be prepared in accordance with appendix 1 of the State Development Assessment Provisions Supporting Information – Public Passenger Transport Infrastructure, Department of Transport and Main Roads, 2017.** **New or upgraded public passenger transport infrastructure provided should be in accordance with the Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015.** **Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.**	**No acceptable outcome is prescribed.**	**NOT APPLICABLE – PUBLIC PASSENGER FACILITIES ARE NOT PROPOSED TO BE PROVIDED OR UPGRADED**
PO16 **Development is designed to ensure the location of public passenger transport infrastructure prioritises and enables efficient public passenger services.** **Note: Chapters 2 and 5 of the Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015 provides guidance on how to comply with this performance outcome.** **Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.**	**No acceptable outcome is prescribed.**	**COMPLIES**

Performance outcomes	Acceptable outcomes	Response
PO17 **Development enables the provision or extension of public passenger services to the development and avoids creating indirect or inefficient routes for public passenger services.** **Note: Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.**	**No acceptable outcome is prescribed.**	**COMPLIES**
PO18 **New or modified road networks are designed to enable development to be serviced by public passenger services.** **Note: Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.**	AO18.1 **Roads catering for buses are arterial or sub-arterial roads, collector or their equivalent.** **AND**	**COMPLIES**
	AO18.2 **Roads intended to accommodate buses are designed and constructed in accordance with parts 3, 4-4C and 6 of the Road Planning and Design Manual 2nd edition, Volume 3: Guide to Road Design, Department of Transport and Main Roads, 2016 and Part 13 of the Manual of Uniform Traffic Control Devices, Department of Transport and Main Roads, 2018.** **Note: Parts 3, 4-4C and 6 of the Road Planning and Design Manual, Volume 3: Guide to Road Design, Department of Transport and Main Roads, 2016, must be read in conjunction with the following standards where specified in the Manual:** **1. Supplement to Austroads Guide to Road Design (Parts 3,4-4C and 6), Department of Transport and Main Roads, 2014, and 2. Austroads Guide to Road Design (Parts 3,4-4C and 6).**	

Performance outcomes	Acceptable outcomes	Response
	AND	
	AO18.3 **Traffic calming devices are not installed on roads used for buses.** **Note: Chapter 2 of the Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015 provides guidance on how to comply with this acceptable outcome.**	
PO19 **Development provides safe, direct and convenient pedestrian access to existing and future public passenger transport infrastructure.** **Note: Chapter 3 of the Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015 provides guidance on how to comply with this performance outcome. In particular, it is recommended that a pedestrian demand analysis be provided to demonstrate compliance with the performance outcome.** **Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.**	**No acceptable outcome is prescribed.**	**COMPLIES**
PO20 **On-site vehicular circulation ensures the safety of both public passenger transport services and pedestrians.** **Note: Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.**	AO20.1 **The location of on-site pedestrian crossings ensures safe sight distances for pedestrians and public passenger services.** **AND**	**COMPLIES**
	AO20.2 **On-site circulation is designed and constructed so that public passenger services can enter and leave in a forward gear at all times.**	**COMPLIES**

Performance outcomes	Acceptable outcomes	Response
	AND	
	AO20.3 **Development does not result in public passenger services movements through car parking aisles.**	**COMPLIES**
PO21 **Taxi facilities are provided to accommodate the demand generated by the development.** **Note: Guidance on how to meet the performance outcome are available in chapter 7 of the Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015.** **Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.**	No acceptable outcome is prescribed.	**NOT APPLICABLE – TAXI FACILITIES ARE NOT PROPOSED TO BE PROVIDED.**
PO22 **Taxi facilities are located and designed to provide convenient, safe and equitable access for passengers.** **Note: Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.**	AO22.1 **A taxi facility is provided parallel to the kerb and adjacent to the main entrance.** **AND**	**NOT APPLICABLE – TAXI FACILITIES ARE NOT PROPOSED TO BE PROVIDED.**
	AO22.2 **Taxi facilities are designed in accordance with:** **1. AS2890.5–1993 Parking facilities – on-street parking and AS1428.1–2009 Design for access and mobility – general requirements for access – new building work** **2. AS1742.11–1999 Parking controls – manual of uniform traffic control devices** **3. AS/NZS 2890.6–2009 Parking facilities – offstreet parking for people with disabilities**	**NOT APPLICABLE – TAXI FACILITIES ARE NOT PROPOSED TO BE PROVIDED.**

Performance outcomes	Acceptable outcomes	Response
	4. Disability standards for accessible public transport 2002 made under section 31(1) of the *Disability Discrimination Act 1992* **5. AS/NZS 1158.3.1 – Lighting for roads and public spaces, Part 3.1: Pedestrian area (category P) lighting – Performance and design requirements.**	
PO23 **Educational establishments are designed to ensure the safe and efficient operation of public passenger services and pedestrian access.** **Note: Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.**	AO23.1 **Educational establishments are designed in accordance with the provisions of the Planning for Safe Transport Infrastructure at Schools, Department of Transport and Main Roads, 2011.**	**NOT APPLICABLE – THE PROPOSAL IS NOTE AN ENDUCATIONAL ESTABLISHMENT.**

APPENDIX G

ACOUSTIC IMPACT ASSESSMENT



gassman development perspectives

VantageYatala

acousticworks

Proposed Warehouse Development
Lot 201 Vantage Yatala – Stage 2
Stapylton

ACOUSTIC REPORT






Client:
Frasers Property

Reference:
2022064 R01F Lot 201 Vantage Yatala Stage 2 ENV.docx

Date Issued:
22 May 2022

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16/05/22	R01E	Andrew Hiscox	Michael Gunning	GP
22/05/22	R01F	Andrew Hiscox	Michael Gunning	GP

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1. Introduction

This report is in response to a request by Frasers Property for an environmental noise assessment of a proposed warehouse development to be located on Lot 201 Vantage Yatala – Stage 2, Stapylton. To facilitate the assessment, existing noise monitoring data was utilised from a previous assessment (ref: *2019338 R01B 60 Stapylton Jacobs Well Road Stapylton ENV*, dated 18/12/19) to establish the criteria for onsite activities. Based on the noise data, onsite activities were assessed to sensitive receivers to determine any requirements for acoustic treatments and/or management controls.

2. Site Description

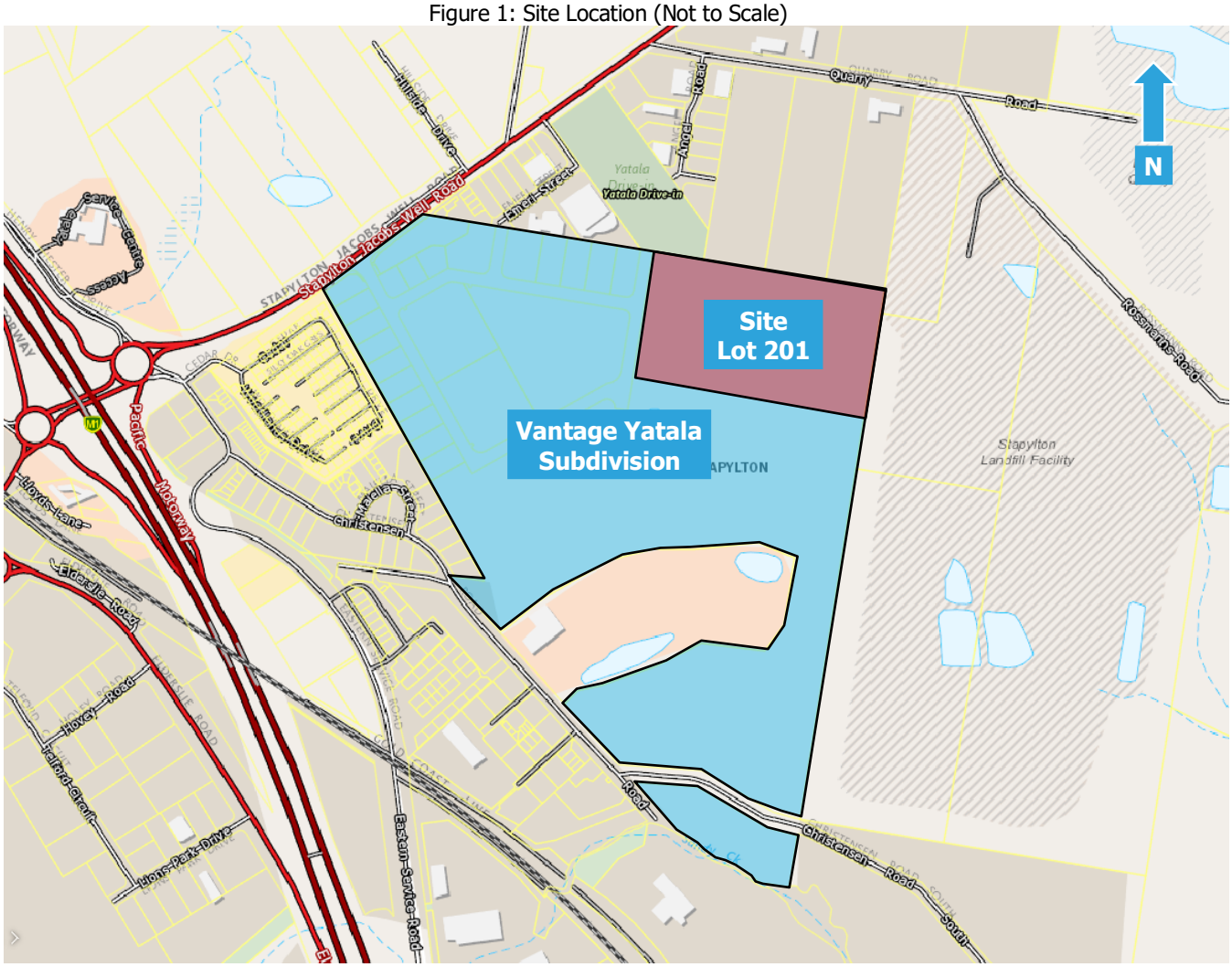
2.1 Site Location

The proposed site is described by the following:

Lot 201 Vantage Yatala – Stage 2, Stapylton
Part of Lot 501 on SP295994

Refer to Figure 1 for site location.

Figure 1: Site Location (Not to Scale)



A comprehensive site survey was conducted on the 9th February 2022 and identified the following:

a) The site is currently vacant and is located in a medium impact industry zone.
b) Industrial/commercial land uses surround the site.
c) Single storey and highset residential dwellings are located to the west of the site.
d) Stapylton Jacobs Well Road separates the site from agricultural/rural residential land uses.
e) The Pacific Motorway is located approximately 900m southwest of the site.

2.2 Proposal

The proposal is to construct an industrial warehouse development consisting of the following:

- Total site lot area of 98,665m^2.
- 32,350m^2 warehouse GFA.
- 1,510m^2 two storey office with outdoor area.
- 160m^2 dispatch office.
- 34m^2 gatehouse
- 2,440m^2 material handling equipment workshop and parking area
- 34 loading docks.
- 270 car parking spaces.
- Proposed 24/7 operating hours.
- Site access via Fairway Street.

Refer to the Appendix for development plans.

2.3 Acoustic Environment

The surrounding area is primarily affected by industrial/commercial activities in the area including road traffic noise from Stapylton Jacobs Well Road and the Pacific Motorway.

3. Equipment

The following equipment was used to record noise levels:

- Rion NL42 Environmental Noise Monitor
- BSWA Technology Co. Ltd Sound Calibrator

The Environmental Noise Monitor holds current NATA Laboratory Certification and was field calibrated before and after the monitoring period, with no significant drift from the reference signal recorded.

4. Receivers and Noise Monitoring

4.1 Receiver Locations

The nearest residential receiver locations were identified as follows;

1. Residential land uses are located to the west of the site.
2. A highset residential dwelling is located to the west at 33 Stapylton Jacobs Well Road.
3. Residential land uses are located to the north west at Hillside Drive.

These locations were chosen as being representative of the nearest residential receivers to the proposed development. Refer to Figure 2 for receiver locations.

Figure 2: Receivers and Noise Monitoring Location



4.2 Unattended Ambient Noise Monitoring

Existing noise monitoring data at 60 Stapylton Jacobs Well Road was utilised to determine the ambient noise levels. This location was considered as being representative of the nearest residential receivers. The monitor was located in a free field position with the microphone approximately 1.4 metres above ground surface level. The noise monitor was set to record noise levels between the 11th and 24th October 2019.

The environmental noise monitor was set to record noise levels in "A" Weighting, Fast response using 15 minute statistical intervals. Ambient noise monitoring was conducted generally in accordance with Australian Standard AS 1055:2018 *Acoustics – Description and measurement of environmental noise*.

For the unattended noise monitoring location refer to Figure 2.

5. Measured Noise Levels

The following table presents the results from the unattended noise survey. Any periods of inclement weather or extraneous noise were omitted from the measurements prior to determining the results.

5.1 Ambient Noise Levels

The measured ambient noise levels measured at the monitoring location are as follows;

Table 1: Measured ambient noise levels – all time periods

Day	Date	L90 dB(A)		
		Day	Evening	Night
Saturday	12/10/19	*53	50	45
Sunday	13/10/19	48	47	46
Monday	14/10/19	50	*53	48
Tuesday	15/10/19	51	*56	49
Wednesday	16/10/19	*52	*52	*52
Thursday	17/10/19	*53	*55	*52
Friday	18/10/19	48	50	50
Saturday	19/10/19	45	*53	46
Sunday	20/10/19	49	47	46
Monday	21/10/19	49	48	46
Tuesday	22/10/19	48	49	49
Wednesday	23/10/19	47	47	49
Overall value		48	48	47

*Note extraneous noise was found to affect the measurements on the 12th, 14th, 15th, 16th, 17th and 19th therefore, the data was omitted for the affected time periods. Refer to the appendix for graphical representation.

6. Noise Criteria

6.1 Environmental Noise Criteria

The noise criteria as applied by City of Gold Coast are as follows;

6.1.1 Acoustic Quality Objectives

Table 2 presents the acoustic quality objectives at noise sensitive receptors as detailed in Schedule 1 of the Environmental Protection Policy (Noise) 2008.

Table 2: Acoustic Quality Objectives at Noise Sensitive Properties

Sensitive Receptor	Time of Day	Acoustic Quality Objectives, dB(A)		
		$L_{Aeq,adj,1hr}$	$L_{A10,adj,1hr}$	$L_{A1,adj,1hr}$
Dwelling (outdoors)	Day and Evening (7am – 10pm)	50	55	65
Dwelling (Indoors)	Day and Evening (7am – 10pm)	35	40	45
	Night (10pm – 7am)	30	35	40

6.1.2 Background Creep

The Background Creep criteria are as follows;

Time-varying noise:

$$L_{Aeq,adj,T,} \leq \text{Ambient } L_{A90,T} + 5\text{dB(A)}$$

Steady-state noise:

$$L_{A90,T} \leq \text{Ambient } L_{A90,T}$$

The time period (T) is a time interval of at least 15 minutes, or if the noise continues for less than 15 minutes, the duration of the noise source.

Based on the results of ambient noise monitoring, the project specific background creep noise limits are shown in Table 3.

Table 3: Background creep noise limits

Time Period	Noise Level Limits SPL dBA	
	$L_{Aeq,adj,T}$	$L_{A90,T}$
Day 7am – 6pm	53	48
Evening 6pm – 10pm	53	48
Night 10pm – 7am	52	47

6.1.3 Sleep Disturbance

Criteria for sleep disturbance under the WHO Guideline is addressed is as follows:

> *"As a rule for planning for short-term or transient noise events, for good sleep over 8 hours the indoor sound pressure level measured as a maximum instantaneous value should not exceed approximately 45 dB(A) $L_{A,(Max)}$ more than 10 or 15 times per night'.*
>
> *'Where noise is continuous, the equivalent sound pressure level should not exceed 30 dB(A) indoors, if negative effects on sleep are to be avoided'."*

7. Onsite Activities

7.1 Onsite Activities

Noise associated with the development was assessed based on previous measurements of similar activities. The calculations assume that the nominated activities are located at the closest representative point within the development site to each receiver location. Any relevant shielding or building transmission loss is taken into account for these activities.

7.1.1 Acoustic Quality Objectives

The average maximum noise source levels and predicted impacts at the receiver locations are shown in Table 4 as follows. Note: L_{A10} and L_{A1} results are not shown in cases where the total duration of the events is less than the minimum time required e.g. $L_{A10(1hr)}$ requires noise events to occur for at least 360 seconds of an hour long period. L_{Aeq} results are not shown where the calculated total is less than 0dBA.

Table 4: Acoustic Quality Objective Noise Levels, 1 hour

Receiver	Receivers 1. Residential Dwellings (W) 2. 33 Stapylton Jacobs Well Road (W) 3. Residential Dwellings (NW) Description	Source Leq@1m dB(A)	Correction dB(A)*	Corrected Leq@1m dB(A)	No. of events per 1hr Day	No. of events per 1hr Eve	No. of events per 1hr Night	Duration per event	Distance (m)	No	Barrier (height (m))	Barrier screening dB	Building Screening dB	Building Transmission Loss dB	Dist atten. @-6dB/dd	LAeq adj.1hr ext. dB(A) Day	LAeq adj.1hr int. dB(A) Day	LAeq adj.1hr ext. dB(A) Eve	LAeq adj.1hr int. dB(A) Eve	LAeq adj.1hr ext. dB(A) Night	LAeq adj.1hr int. dB(A) Night	LA10 adj.1hr ext. dB(A) Day	LA10 adj.1hr int. dB(A) Day	LA10 adj.1hr ext. dB(A) Eve	LA10 adj.1hr int. dB(A) Eve	LA10 adj.1hr ext. dB(A) Night	LA10 adj.1hr int. dB(A) Night	LA1 adj.1hr ext. dB(A) Day	LA1 adj.1hr int. dB(A) Day	LA1 adj.1hr ext. dB(A) Eve	LA1 adj.1hr int. dB(A) Eve	LA1 adj.1hr ext. dB(A) Night	LA1 adj.1hr int. dB(A) Night	Amenity LAeq Compliance			LA10 Compliance			LA1 Compliance		
																																			Day / eve	Day / eve indoor	Night indoor	Day / eve	Day / eve indoor	Night indoor	Day / eve	Day / eve indoor	Night indoor
	Criteria																																		50	35	30	55	40	35	65	45	40
	Car passby	69		69	144	72	48	15	474						-54	13	3	10		8		16	6	16	6	16	6	18	8	18	8	18	8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1	Car door closure	75	2	77	144	72	48	2	492						-54	12	2	9		7								18	8	18	8	18	8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start	74	2	76	144	72	48	2	492						-54	11	1	8		6								17	7	17	7	17	7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck idle	93		93	20	8	4	30	567						-55	29	19	25	15	22	12	31	21					33	23	33	23	33	23	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck manouevring	86		86	20	8	4	30	567						-55	22	12	18	8	15	5	24	14					26	16	26	16	26	16	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck reverse alarm	92	5	97	20	8	4	30	567						-55	33	23	29	19	26	16	35	25					37	27	37	27	37	27	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck passby	82		82	20	8	4	30	464						-53	20	10	16	6	13	3	22	12					24	14	24	14	24	14	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck starting	90		90	20	8	4	2	567						-55	14	4	10		7								18	8					Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck air brakes	102	2	104	20	8	4	1	567						-55	25	15	21	11	18	8													Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck door closing	83		83	20	8	4	2	567						-55	7		3										11	1					Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Forklift activities (indoor)	82	2	84	4	4	4	900	580					-10	-55	18	8	18	8	18	8	20	10	20	10	20	10	22	12	22	12	22	12	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Forklift activities (outdoor)	82	2	84	4	4	4	900	567						-55	28	18	28	18	28	18	30	20	30	20	30	20	32	22	32	22	32	22	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Voice conversation (outdoors)	70		70	4	4	4	900	492						-54	16	6	16	6	16	6	18	8	18	8	18	8	20	10	20	10	20	10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Voice conversation (indoors)	70		70	4	4	4	900	551					-10	-55	5		5		5		7		7		7		9		9		9		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Waste collection	94	2	96	4	4	4	240	855						-59	31	21	31	21	31	21	33	23	33	23	33	23	35	25	35	25	35	25	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Power tools	92	2	94	4	4	4	900	627				-15	-10	-56	13	3	13	3	13	3	15	5	15	5	15	5	17	7	17	7	17	7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Total															38	28	36	26	35	25	39	29	35	25	35	25	41	31	41	31	41	31	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
	Criteria																																		50	35	30	55	40	35	65	45	40
	Car passby	69		69	144	72	48	15	661						-57	10		7		5		13	3	13	3	13	3	15	5	15	5	15	5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Car door closure	75	2	77	144	72	48	2	681						-57	9		6		5								15	5	15	5	15	5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start	74	2	76	144	72	48	2	681						-57	8		5		4								14	4	14	4	14	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck idle	93		93	20	8	4	30	771						-58	27	17	23	13	20	10	29	19					31	21	31	21	31	21	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck manouevring	86		86	20	8	4	30	771						-58	20	10	16	6	13	3	22	12					24	14	24	14	24	14	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck reverse alarm	92	5	97	20	8	4	30	771						-58	31	21	27	17	24	14	33	23					35	25	35	25	35	25	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck passby	82		82	20	8	4	30	663						-56	18	8	14	4	11	1	20	10					22	12	22	12	22	12	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck starting	90		90	20	8	4	2	771						-58	13	3	9		6								17	7					Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck air brakes	102	2	104	20	8	4	1	771						-58	24	14	20	10	17	7													Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck door closing	83		83	20	8	4	2	771						-58	6		2										10						Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Forklift activities (indoor)	82	2	84	4	4	4	900	778					-10	-58	16	6	16	6	16	6	18	8	18	8	18	8	20	10	20	10	20	10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Forklift activities (outdoor)	82	2	84	4	4	4	900	771						-58	26	16	26	16	26	16	28	18	28	18	28	18	30	20	30	20	30	20	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Voice conversation (outdoors)	70		70	4	4	4	900	681						-57	13	3	13	3	13	3	15	5	15	5	15	5	17	7	17	7	17	7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Voice conversation (indoors)	70		70	4	4	4	900	734					-10	-57	3		3		3		5		5		5		7		7		7		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Waste collection	94	2	96	4	4	4	240	898				-18		-59	13	3	13	3	13	3	15	5	15	5	15	5	17	7	17	7	17	7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Power tools	92	2	94	4	4	4	900	764					-10	-58	26	16	26	16	26	16	28	18	28	18	28	18	30	20	30	20	30	20	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Total															35	25	33	23	32	22	37	27	32	22	32	22	39	29	39	29	39	29	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
	Criteria																																		50	35	30	55	40	35	65	45	40
	Car passby	69		69	144	72	48	15	441						-53	14	4	11	1	9		17	7	17	7	17	7	19	9	19	9	19	9	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Car door closure	75	2	77	144	72	48	2	441						-53	13	3	10		8								19	9	19	9	19	9	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start	74	2	76	144	72	48	2	441						-53	12	2	9		7								18	8	18	8	18	8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck idle	93		93	20	8	4	30	527				-7		-54	24	14	20	10	17	7	26	16					28	18	28	18	28	18	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck manouevring	86		86	20	8	4	30	527				-7		-54	17	7	13	3	10		19	9					21	11	21	11	21	11	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck reverse alarm	92	5	97	20	8	4	30	527				-8		-54	27	17	23	13	20	10	29	19					31	21	31	21	31	21	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck passby	82		82	20	8	4	30	420						-52	22	12	18	8	15	5	24	14					26	16	26	16	26	16	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck starting	90		90	20	8	4	2	527				-7		-54	9		5		2								13	3					Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck air brakes	102	2	104	20	8	4	1	527				-8		-54	19	9	15	5	12	2													Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck door closing	83		83	20	8	4	2	527				-7		-54	2												6						Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Forklift activities (indoor)	82	2	84	4	4	4	900	485				-8	-10	-54	12	2	12	2	12	2	14	4	14	4	14	4	16	6	16	6	16	6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Forklift activities (outdoor)	82	2	84	4	4	4	900	527				-8		-54	22	12	22	12	22	12	24	14	24	14	24	14	26	16	26	16	26	16	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Voice conversation (outdoors)	70		70	4	4	4	900	441				-8		-53	9		9		9		11	1	11	1	11	1	13	3	13	3	13	3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Voice conversation (indoors)	70		70	4	4	4	900	500				-8	-10	-54							2		2		2		4		4		4		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Waste collection	94	2	96	4	4	4	240	620				-7		-56	27	17	27	17	27	17	29	19	29	19	29	19	31	21	31	21	31	21	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Power tools	92	2	94	4	4	4	900	500				-7	-10	-54	23	13	23	13	23	13	25	15	25	15	25	15	27	17	27	17	27	17	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Total															33	23	31	21	31	21	35	25	32	22	32	22	37	27	37	27	37	27	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

*Correction due to tonality and impulsiveness as per AS1055:2018.

Compliance is predicted for onsite activities without the need for further acoustic treatments.

7.1.2 Background Creep

Based on assessment of all time periods, the noise source levels and predicted levels at the receiver locations are shown as follows:

Table 5: Onsite Background Creep Noise Levels, 15 minute

Receiver	Description	Source Leq@1m dB(A)	Correction dB(A)*	Corrected Leq@1m dB(A)	No. of events per 15min Day	No. of events per 15min Eve	No. of events per 15min Night	Duration per event	Distance (m)	Barrier (height (m)) No	Barrier screening dB	Building Screening dB	Building Transmission Loss dB	Dist atten. @-6dB/dd	LAeq adj,T ext. dB(A) Day	LAeq adj,T ext. dB(A) Eve	LAeq adj,T ext. dB(A) Night	LAeq 15 min Compliance Day	Eve	Night
	Receivers 1. Residential Dwellings (W) 2. 33 Stapylton Jacobs Well Road (W) 3. Residential Dwellings (NW)																			
	Criteria																	53	53	52
	Car passby	69		69	36	18	12	15	474					-54	13	10	8	Yes	Yes	Yes
1	Car door closure	75	2	77	36	18	12	2	492					-54	12	9	7	Yes	Yes	Yes
	Car start	74	2	76	36	18	12	2	492					-54	11	8	6	Yes	Yes	Yes
	Truck idle	93		93	5	2	1	30	567					-56	29	25	22	Yes	Yes	Yes
	Truck manouevring	86		86	5	2	1	30	567					-56	22	18	15	Yes	Yes	Yes
	Truck reverse alarm	92	5	97	5	2	1	30	567					-56	33	29	26	Yes	Yes	Yes
	Truck passby	82		82	5	2	1	30	464					-54	20	16	13	Yes	Yes	Yes
	Truck starting	90		90	5	2	1	2	567					-56	14	10	7	Yes	Yes	Yes
	Truck air brakes	102	2	104	5	2	1	1	567					-56	25	21	18	Yes	Yes	Yes
	Truck door closing	83		83	5	2	1	2	567					-56	7	3		Yes	Yes	Yes
	Forklift activities (indoor)	82	2	84	1	1	1	900	580				-10	-56	18	18	18	Yes	Yes	Yes
	Forklift activities (outdoor)	82	2	84	1	1	1	900	567					-56	28	28	28	Yes	Yes	Yes
	Voice conversation (outdoors)	70		70	1	1	1	900	492					-54	16	16	16	Yes	Yes	Yes
	Voice conversation (indoors)	70		70	1	1	1	900	551				-10	-55	5	5	5	Yes	Yes	Yes
	Waste collection	94	2	96	1	1	1	240	855					-59	31	31	31	Yes	Yes	Yes
	Power tools	92	2	94	1	1	1	900	627			-15	-10	-56	13	13	13	Yes	Yes	Yes
	Total														38	36	35	**Yes**	**Yes**	**Yes**
	Criteria																	53	53	52
	Car passby	69		69	36	18	12	15	661					-57	10	7	5	Yes	Yes	Yes
2	Car door closure	75	2	77	36	18	12	2	681					-57	9	6	5	Yes	Yes	Yes
	Car start	74	2	76	36	18	12	2	681					-57	8	5	4	Yes	Yes	Yes
	Truck idle	93		93	5	2	1	30	771					-58	27	23	20	Yes	Yes	Yes
	Truck manouevring	86		86	5	2	1	30	771					-58	20	16	13	Yes	Yes	Yes
	Truck reverse alarm	92	5	97	5	2	1	30	771					-58	31	27	24	Yes	Yes	Yes
	Truck passby	82		82	5	2	1	30	663					-56	18	14	11	Yes	Yes	Yes
	Truck starting	90		90	5	2	1	2	771					-58	13	9	6	Yes	Yes	Yes
	Truck air brakes	102	2	104	5	2	1	1	771					-58	24	20	17	Yes	Yes	Yes
	Truck door closing	83		83	5	2	1	2	771					-58	6	2		Yes	Yes	Yes
	Forklift activities (indoor)	82	2	84	1	1	1	900	778				-10	-58	16	16	16	Yes	Yes	Yes
	Forklift activities (outdoor)	82	2	84	1	1	1	900	771					-58	26	26	26	Yes	Yes	Yes
	Voice conversation (outdoors)	70		70	1	1	1	900	681					-57	13	13	13	Yes	Yes	Yes
	Voice conversation (indoors)	70		70	1	1	1	900	734				-10	-57	3	3	3	Yes	Yes	Yes
	Waste collection	94	2	96	1	1	1	240	898			-18		-59	13	13	13	Yes	Yes	Yes
	Power tools	92	2	94	1	1	1	900	764				-10	-58	26	26	26	Yes	Yes	Yes
	Total														35	33	32	**Yes**	**Yes**	**Yes**
	Criteria																	53	53	52
	Car passby	69		69	36	18	12	15	441					-53	14	11	9	Yes	Yes	Yes
3	Car door closure	75	2	77	36	18	12	2	441					-53	13	10	8	Yes	Yes	Yes
	Car start	74	2	76	36	18	12	2	441					-53	12	9	7	Yes	Yes	Yes
	Truck idle	93		93	5	2	1	30	527			-7		-54	24	20	17	Yes	Yes	Yes
	Truck manouevring	86		86	5	2	1	30	527			-7		-54	17	13	10	Yes	Yes	Yes
	Truck reverse alarm	92	5	97	5	2	1	30	527			-8		-54	27	23	20	Yes	Yes	Yes
	Truck passby	82		82	5	2	1	30	420					-52	22	18	15	Yes	Yes	Yes
	Truck starting	90		90	5	2	1	2	527			-7		-54	9	5	2	Yes	Yes	Yes
	Truck air brakes	102	2	104	5	2	1	1	527			-8		-54	19	15	12	Yes	Yes	Yes
	Truck door closing	83		83	5	2	1	2	527			-7		-54	2			Yes	Yes	Yes
	Forklift activities (indoor)	82	2	84	1	1	1	900	485			-8	-10	-54	12	12	12	Yes	Yes	Yes
	Forklift activities (outdoor)	82	2	84	1	1	1	900	527			-8		-54	22	22	22	Yes	Yes	Yes
	Voice conversation (outdoors)	70		70	1	1	1	900	441			-8		-53	9	9	9	Yes	Yes	Yes
	Voice conversation (indoors)	70		70	1	1	1	900	500			-8	-10	-54				Yes	Yes	Yes
	Waste collection	94	2	96	1	1	1	240	620			-7		-56	27	27	27	Yes	Yes	Yes
	Power tools	92	2	94	1	1	1	900	500			-7	-10	-54	23	23	23	Yes	Yes	Yes
	Total														32	31	31	**Yes**	**Yes**	**Yes**

*Correction due to tonality and impulsiveness as per AS1055:2018.

Compliance is predicted for onsite activities without the need for further acoustic treatments.

7.1.3 Sleep Disturbance

The maximum noise source levels and predicted impacts at the receiver locations are shown as follows;

Table 6: L_{Amax} Noise Levels – Sleep Disturbance

Receivers												
1. Residential Dwellings (W) 2. 33 Stapylton Jacobs Well Road (W) 3. Residential Dwellings (NW)		Source @1m dB(A)	Correction dB(A)*	Corrected dB(A)	Distance (m)	Barrier (height (m))	Barrier screening dB	Building Screening dB	Building Transmission Loss dB	Dist atten. @-6dB/dd	LAmax adj,T ext.. dB(A)	Complies Lmax dB(A)
Receiver	Description					No						
												45
	Car passby	72		72	474					-54	8	Yes
1	Car door closure	78	2	80	492					-54	16	Yes
	Car start	78	2	80	492					-54	16	Yes
	Truck idle	95		95	567					-55	30	Yes
	Truck manouevring	90		90	567					-55	25	Yes
	Truck reverse alarm	96	5	101	567					-55	36	Yes
	Truck passby	86		86	464					-53	23	Yes
	Truck starting	93		93	567					-55	28	Yes
	Truck air brakes	104	2	106	567					-55	41	Yes
	Truck door closing	85		85	567					-55	20	Yes
	Forklift activities (indoor)	85	2	87	580				-10	-55	12	Yes
	Forklift activities (outdoor)	85	2	87	567					-55	22	Yes
	Voice conversation (outdoors)	73		73	492					-54	9	Yes
	Voice conversation (indoors)	73		73	551				-10	-55	-2	Yes
	Waste collection	97	2	99	855					-59	30	Yes
	Power tools	96	2	98	627			-15	-10	-56	7	Yes
												45
	Car passby	72		72	661					-56	6	Yes
2	Car door closure	78	2	80	681					-57	13	Yes
	Car start	78	2	80	681					-57	13	Yes
	Truck idle	95		95	771					-58	27	Yes
	Truck manouevring	90		90	771					-58	22	Yes
	Truck reverse alarm	96	5	101	771					-58	33	Yes
	Truck passby	86		86	663					-56	20	Yes
	Truck starting	93		93	771					-58	25	Yes
	Truck air brakes	104	2	106	771					-58	38	Yes
	Truck door closing	85		85	771					-58	17	Yes
	Forklift activities (indoor)	85	2	87	778				-10	-58	9	Yes
	Forklift activities (outdoor)	85	2	87	771					-58	19	Yes
	Voice conversation (outdoors)	73		73	681					-57	6	Yes
	Voice conversation (indoors)	73		73	734				-10	-57	-4	Yes
	Waste collection	97	2	99	898			-18		-59	12	Yes
	Power tools	96	2	98	764				-10	-58	20	Yes
												45
	Car passby	72		72	441					-53	9	Yes
3	Car door closure	78	2	80	441					-53	17	Yes
	Car start	78	2	80	441					-53	17	Yes
	Truck idle	95		95	527			-7		-54	24	Yes
	Truck manouevring	90		90	527			-7		-54	19	Yes
	Truck reverse alarm	96	5	101	527			-8		-54	29	Yes
	Truck passby	86		86	420					-52	24	Yes
	Truck starting	93		93	527			-7		-54	22	Yes
	Truck air brakes	104	2	106	527			-8		-54	34	Yes
	Truck door closing	85		85	527			-7		-54	14	Yes
	Forklift activities (indoor)	85	2	87	485			-8	-10	-54	5	Yes
	Forklift activities (outdoor)	85	2	87	527			-8		-54	15	Yes
	Voice conversation (outdoors)	73		73	441			-8		-53	2	Yes
	Voice conversation (indoors)	73		73	500			-8	-10	-54	-9	Yes
	Waste collection	97	2	99	620			-7		-56	26	Yes
	Power tools	96	2	98	500			-7	-10	-54	17	Yes

*Correction due to tonality and impulsiveness as per AS1055:2018.

Compliance is predicted for onsite activities without the need for further acoustic treatments.

8. Recommendations

8.1 Onsite Activities

Based on the predicted noise levels and subjective assessment of the site and surrounds, 24 hour operation of the site is predicted to comply with the assessment criteria without the need for further acoustic treatments.

8.1.1 Onsite Mechanical Plant

No information regarding any new mechanical services was available at the time of the assessment. We recommend that any new mechanical plant is designed to comply with the criteria stated in Section 6.1.2 with an assessment by qualified acoustic consultant to be conducted prior to installation.

9. Conclusion

An environmental noise assessment was conducted for the proposed warehouse development to be located at Lot 201 Vantage Yatala - Stage 2, Stapylton. On the condition the recommendations detailed in Section 8 are implemented, compliance is predicted with City of Gold Coast assessment criteria.

Should have any queries, please do not hesitate to contact us.

Report Prepared By



Andrew Hiscox
Acoustic Consultant
acousticworks)))

10. Appendices

10.1 Development Plans

FRASERS PROPERTY

VANTAGE YATALA

Sheet Number	Sheet Name
SD-AA-001	COVER PAGE AND DRAWING LIST
SD-AA-002	LOCATION PLAN
SD-AA-010	SITE PLAN
SD-AA-015	AREA PLAN
SD-AA-100	OFFICE FLOOR PLAN
SD-AA-101	OFFICE ROOF PLAN
SD-AA-102	DISPATCH OFFICE / AMENITIES / GATEHOUSE
SD-AA-200	ELEVATIONS



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FRASERS PROPERTY

Client: FRASERS PROPERTY
Project: VANTAGE YATALA
Drawing: COVER PAGE AND DRAWING LIST
Scale: @A1

Project No.: 2686
Date: 10/02/2022
Stage-Drawing: SD-AA-001
Rev: D

SD-AA-001

PROPOSED SPECULATIVE WAREHOUSE FACILITY

VANTAGE YATALA LOT 201, STAPYLTON JACOBS WELL ROAD, JACOBS WELL 4208 QLD



2 CONTEXT PLAN



1 LOCATION PLAN

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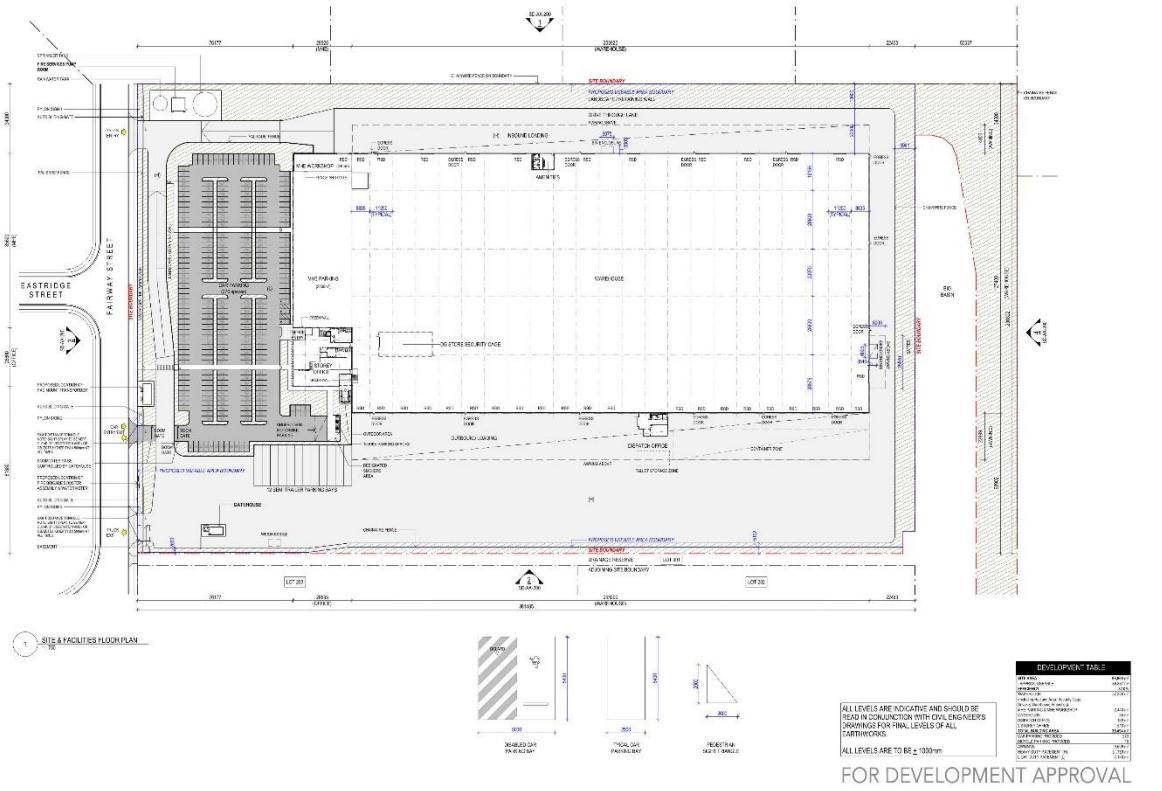
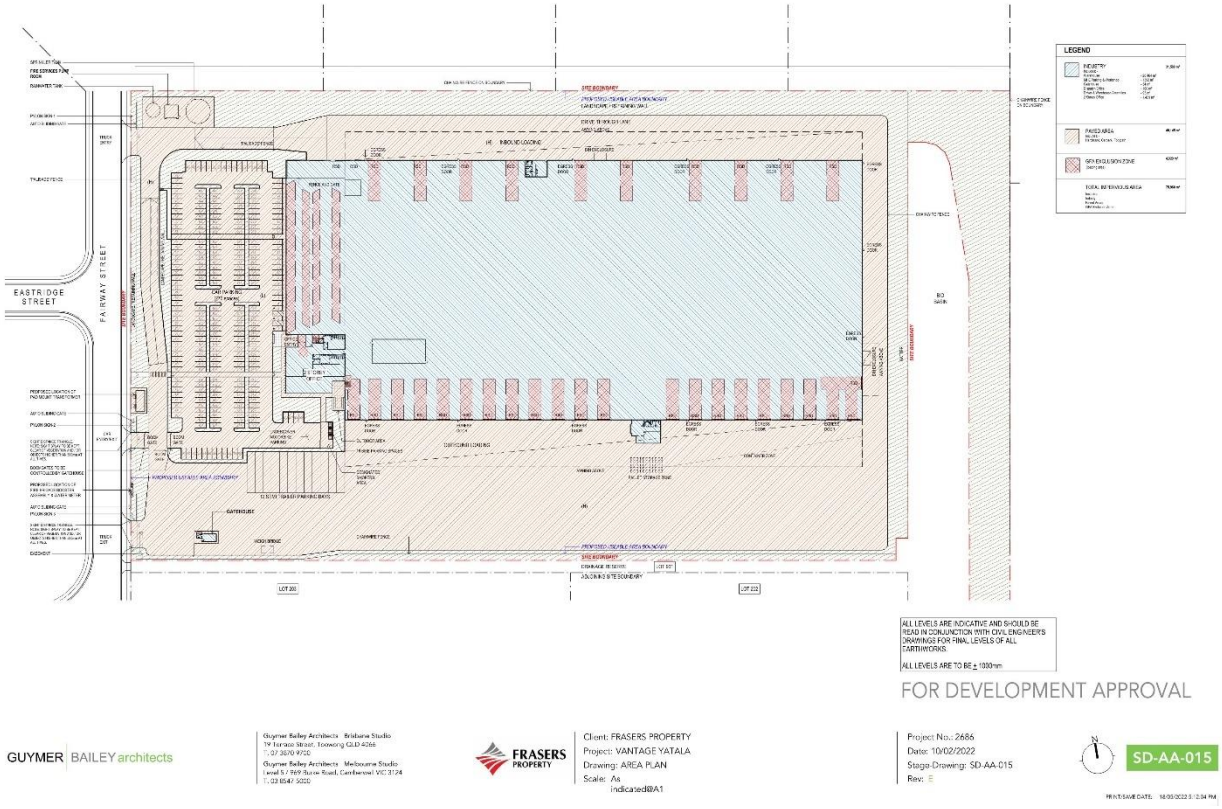
FRASERS PROPERTY

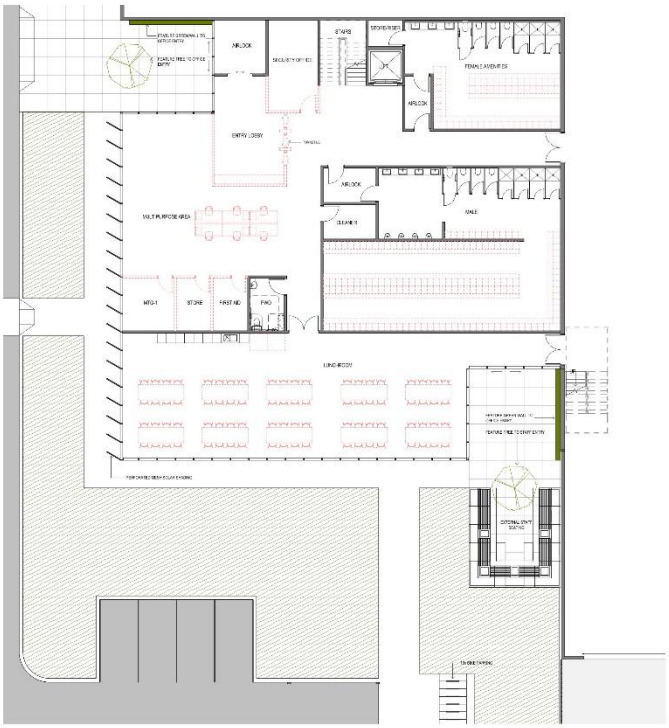
Client: FRASERS PROPERTY
Project: VANTAGE YATALA
Drawing: LOCATION PLAN
Scale: As indicated@A1

Project No.: 2686
Date: 10/02/2022
Stage-Drawing: SD-AA-002
Rev: E

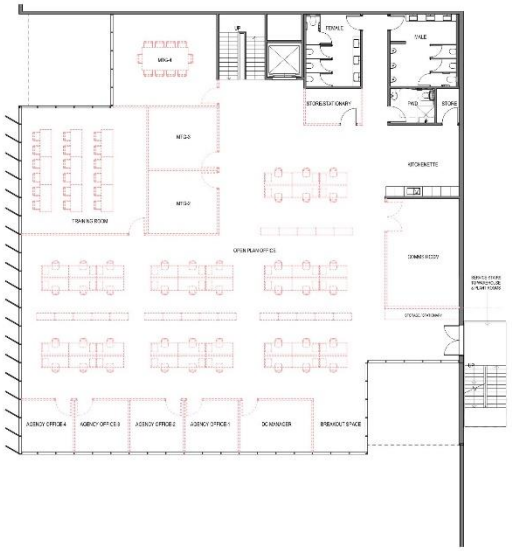
SD-AA-002


EASTRIDGE STREET
FAIRWAY STREET
SITE & FACILITIES FLOOR PLAN
DEVELOPMENT TABLE
ALL LEVELS ARE INDICATIVE AND SHOULD BE READ IN CONJUNCTION WITH CIVIL ENGINEER'S DRAWINGS FOR FINAL LEVELS OF ALL EARTHWORKS.
ALL LEVELS ARE TO BE ± 1000mm
FOR DEVELOPMENT APPROVAL
GUYMER BAILEY architects
FRASERS PROPERTY
Client: FRASERS PROPERTY
Project: VANTAGE YATALA
Drawing: SITE PLAN
Scale: As indicated@A1
Project No.: 2686
Date: 10/02/2022
Stage-Drawing: SD-AA-010
Rev: G
SD-AA-010


EASTRIDGE STREET
FAIRWAY STREET
LEGEND
ALL LEVELS ARE INDICATIVE AND SHOULD BE READ IN CONJUNCTION WITH CIVIL ENGINEER'S DRAWINGS FOR FINAL LEVELS OF ALL EARTHWORKS.
ALL LEVELS ARE TO BE ± 1000mm
FOR DEVELOPMENT APPROVAL
GUYMER BAILEY architects
FRASERS PROPERTY
Client: FRASERS PROPERTY
Project: VANTAGE YATALA
Drawing: AREA PLAN
Scale: As indicated@A1
Project No.: 2686
Date: 10/02/2022
Stage-Drawing: SD-AA-015
Rev: E
SD-AA-015



1 OFFICE - PROPOSED GROUND FLOOR PLAN
1 : 100



2 OFFICE - PROPOSED LEVEL 1 PLAN
1 : 100

LEGEND

ALL LEVELS ARE INDICATIVE AND SHOULD BE READ IN CONJUNCTION WITH CIVIL ENGINEER'S DRAWINGS FOR FINAL LEVELS OF ALL EARTHWORKS.

ALL LEVELS ARE TO BE ± 100mm

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FRASERS PROPERTY

Client: FRASERS PROPERTY
Project: VANTAGE YATALA
Drawing: OFFICE FLOOR PLAN
Scale: 1 : 100@A1

Project No.: 2686
Date: 10/02/2022
Stage-Drawing: SD-AA-100
Rev: D

SD-AA-100

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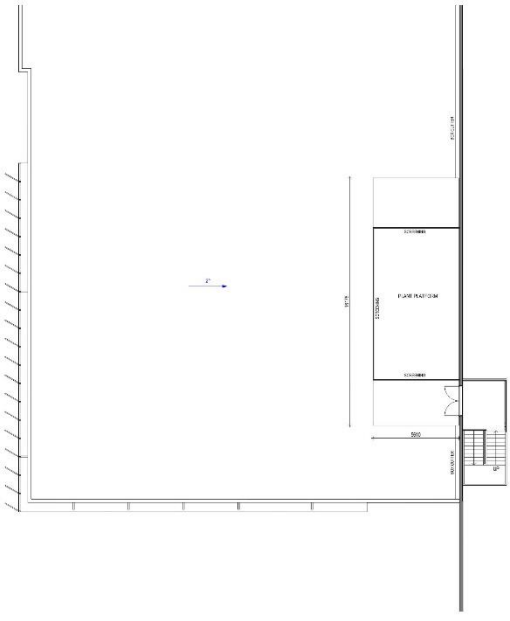

1 OFFICE ROOF PLAN
1 : 100

LEGEND

ALL LEVELS ARE INDICATIVE AND SHOULD BE READ IN CONJUNCTION WITH CIVIL ENGINEER'S DRAWINGS FOR FINAL LEVELS OF ALL EARTHWORKS.

ALL LEVELS ARE TO BE ± 100mm

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Client: FRASERS PROPERTY
Project: VANTAGE YATALA
Drawing: OFFICE ROOF PLAN
Scale: 1 : 100@A1

Project No.: 2686
Date: 10/02/2022
Stage-Drawing: SD-AA-101
Rev: D

SD-AA-101

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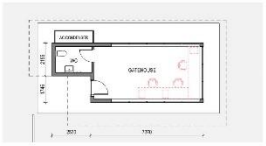
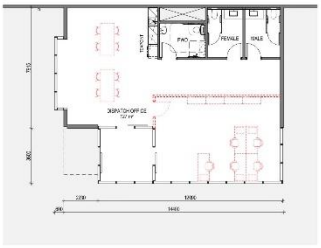


1 GATEHOUSE: PROPOSED FLOOR PLAN



2 DRIVER & WAREHOUSE AMENITIES - PROPOSED FLOOR PLAN



3 DISPATCH OFFICE - PROPOSED FLOOR PLAN

LEGEND

ALL LEVELS ARE INDICATIVE AND SHOULD BE READ IN CONJUNCTION WITH CIVIL ENGINEER'S DRAWINGS FOR FINAL LEVELS OF ALL EARTHWORKS.

ALL LEVELS ARE TO BE ± 1000mm

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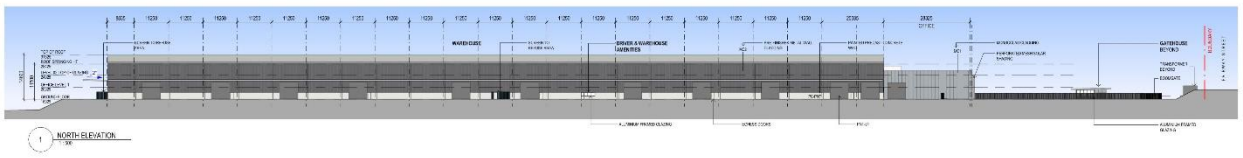
FRASERS PROPERTY

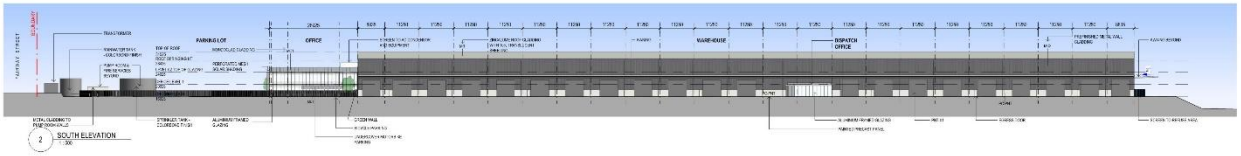
Client: FRASERS PROPERTY
Project: VANTAGE YATALA
Drawing: DISPATCH OFFICE / AMENITIES / GATEHOUSE
Scale: 1 : 100@A1

Project No.: 2686
Date: 10/02/2022
Stage-Drawing: SD-AA-102
Rev: D

SD-AA-102



1 NORTH ELEVATION



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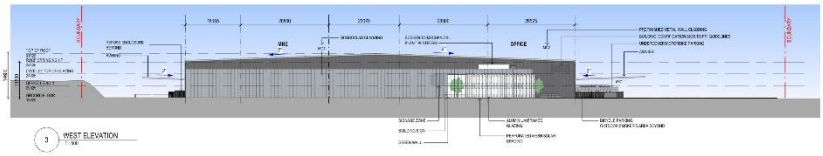

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4 EAST ELEVATION

ALL LEVELS ARE INDICATIVE AND SHOULD BE READ IN CONJUNCTION WITH CIVIL ENGINEER'S DRAWINGS FOR FINAL LEVELS OF ALL EARTHWORKS.

ALL LEVELS ARE TO BE ± 1000mm

FOR DEVELOPMENT APPROVAL

GUYMER BAILEY architects

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FRASERS PROPERTY

Client: FRASERS PROPERTY
Project: VANTAGE YATALA
Drawing: ELEVATIONS
Scale: 1 : 500@A1

Project No.: 2686
Date: 10/02/2022
Stage-Drawing: SD-AA-200
Rev: G

SD-AA-200

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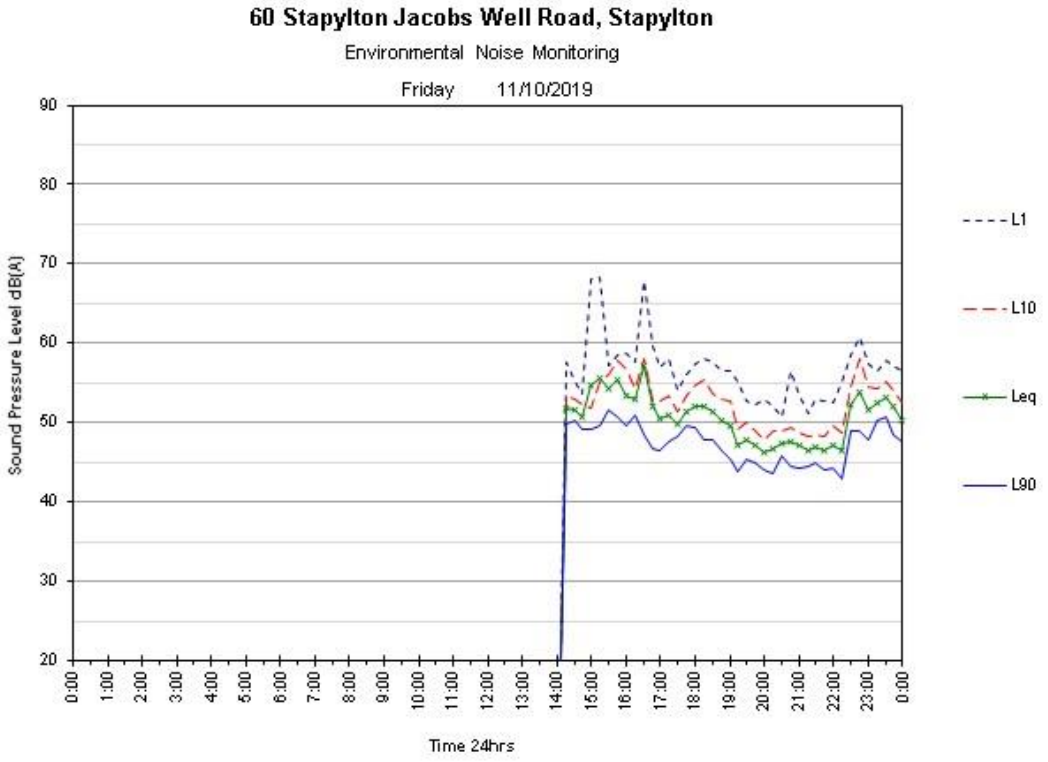

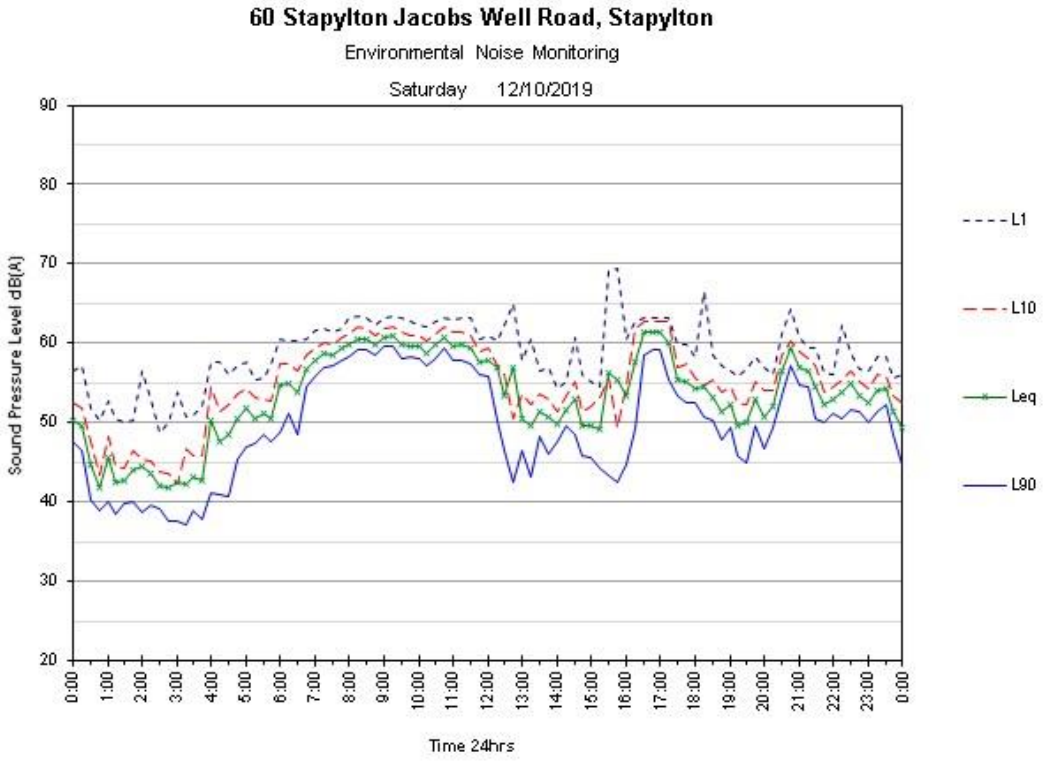

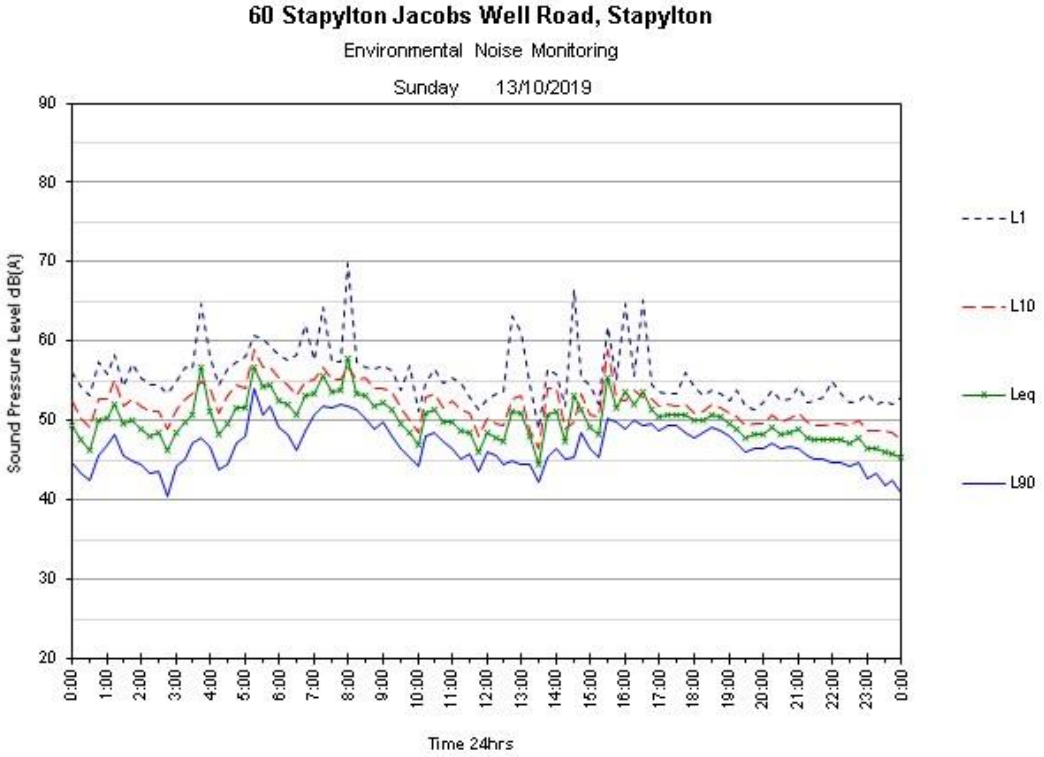
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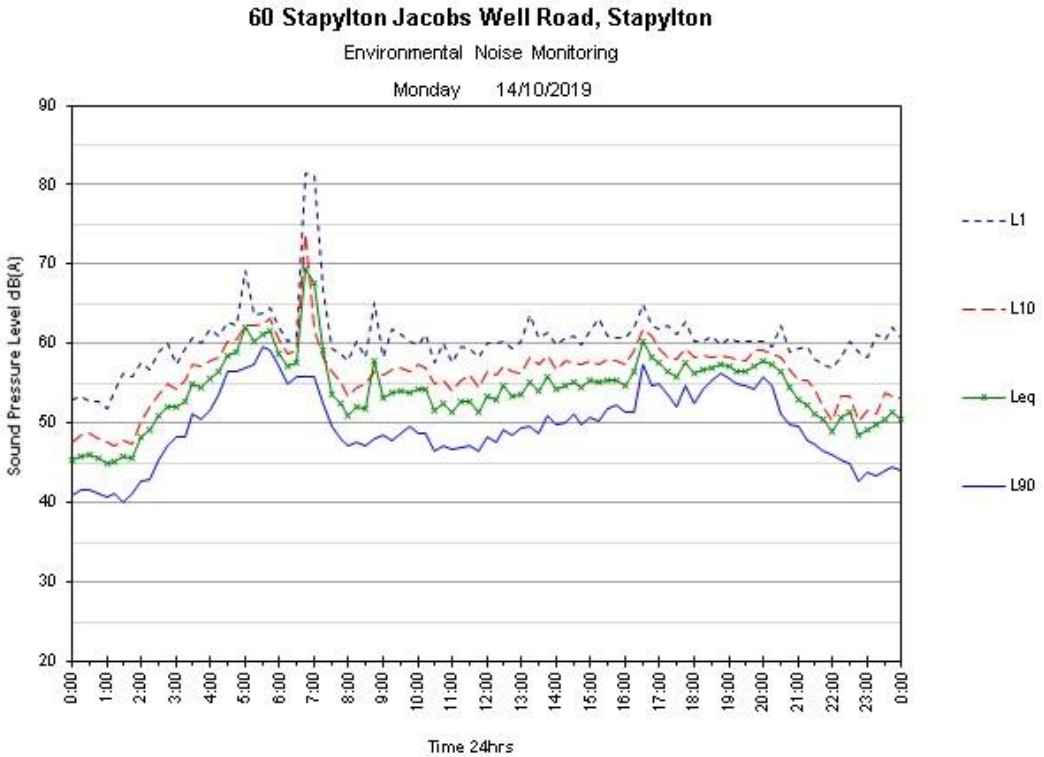
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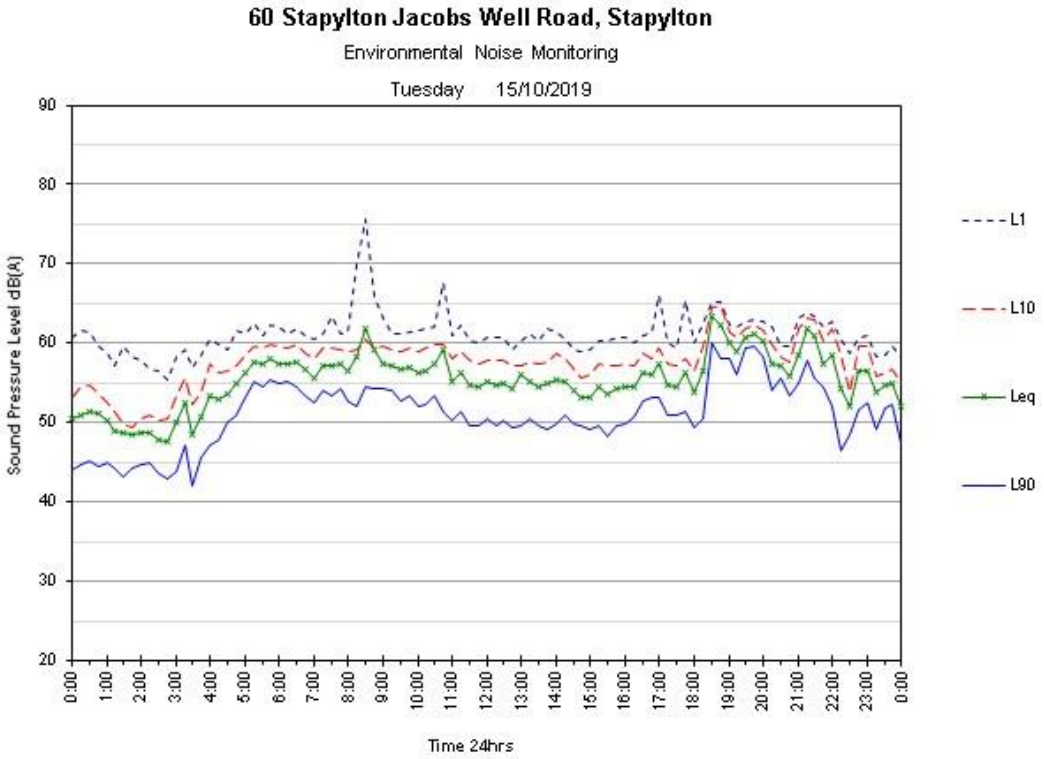
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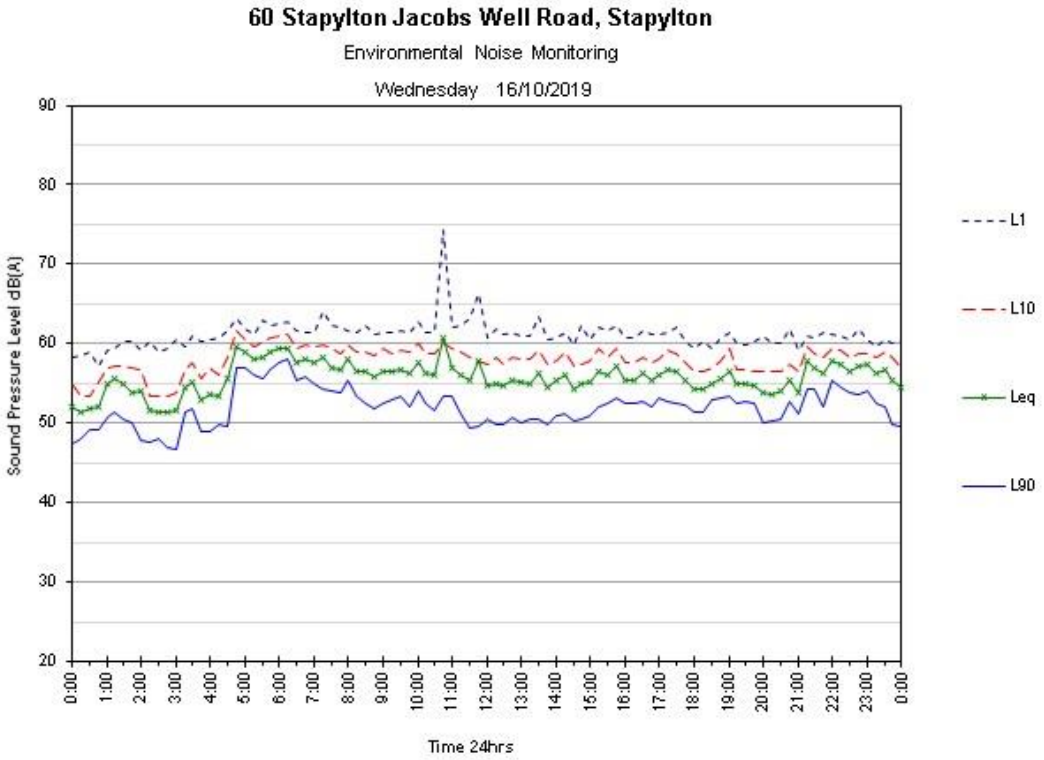
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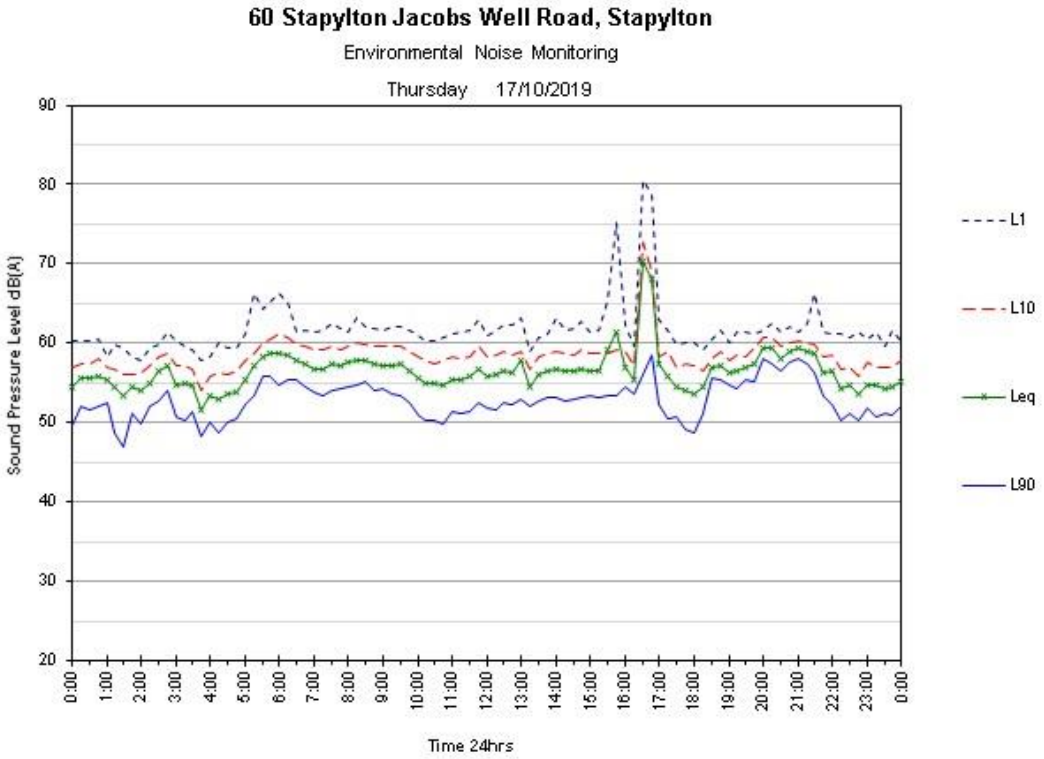
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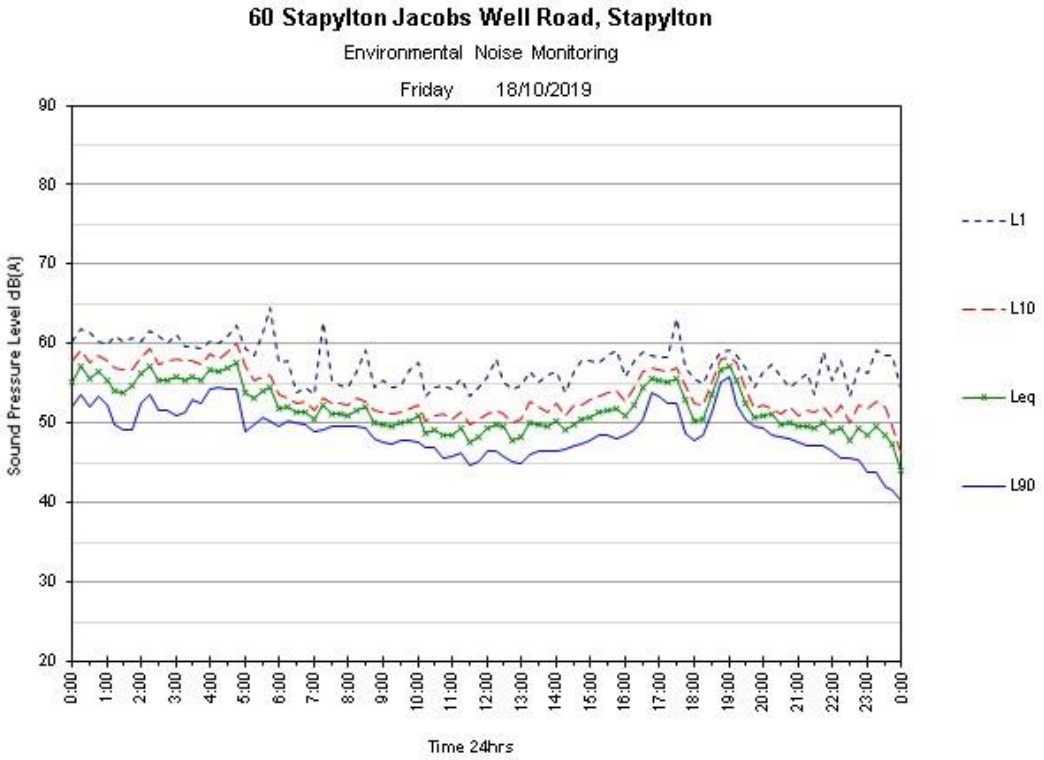
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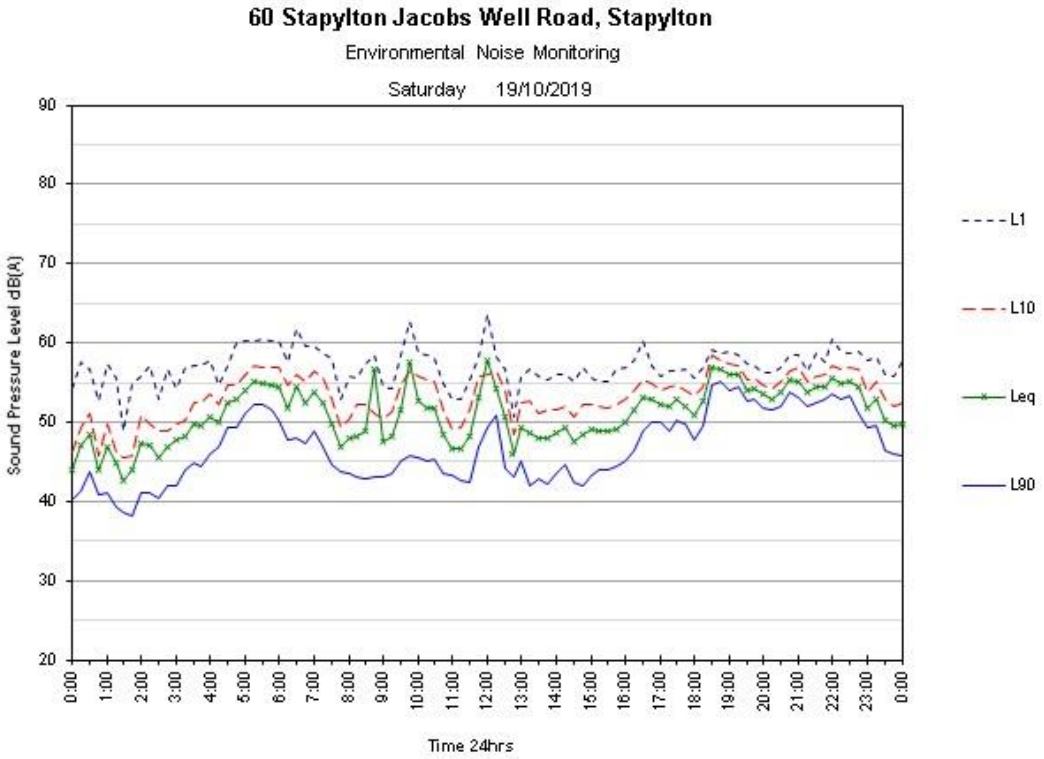
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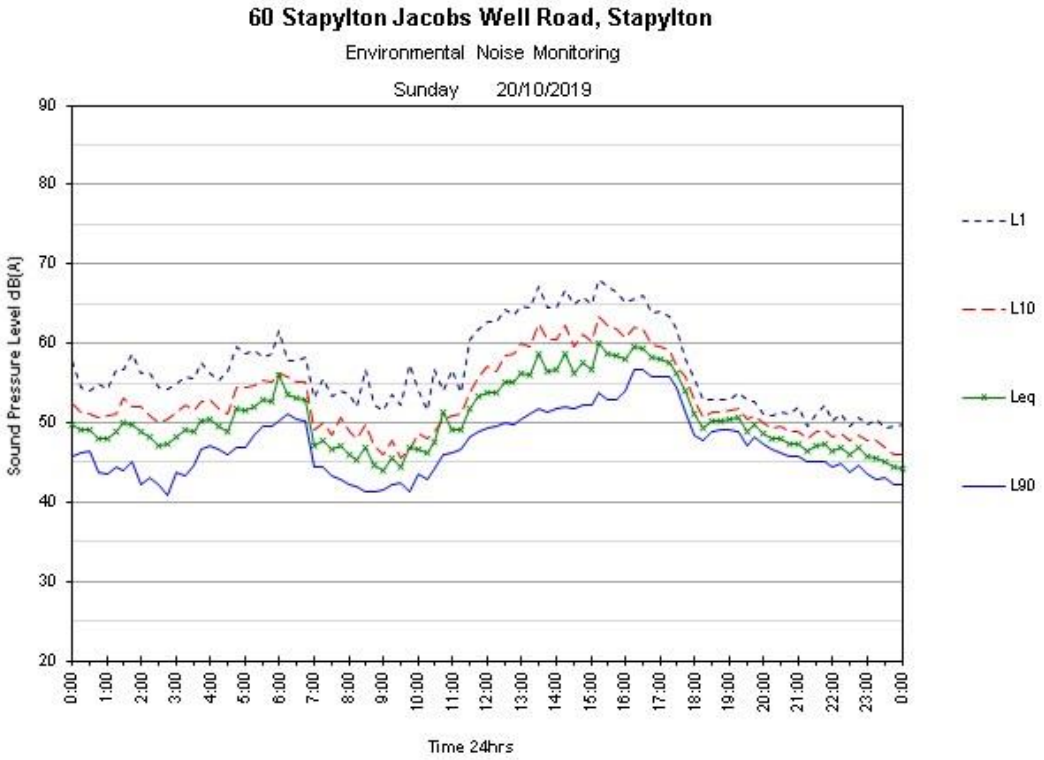
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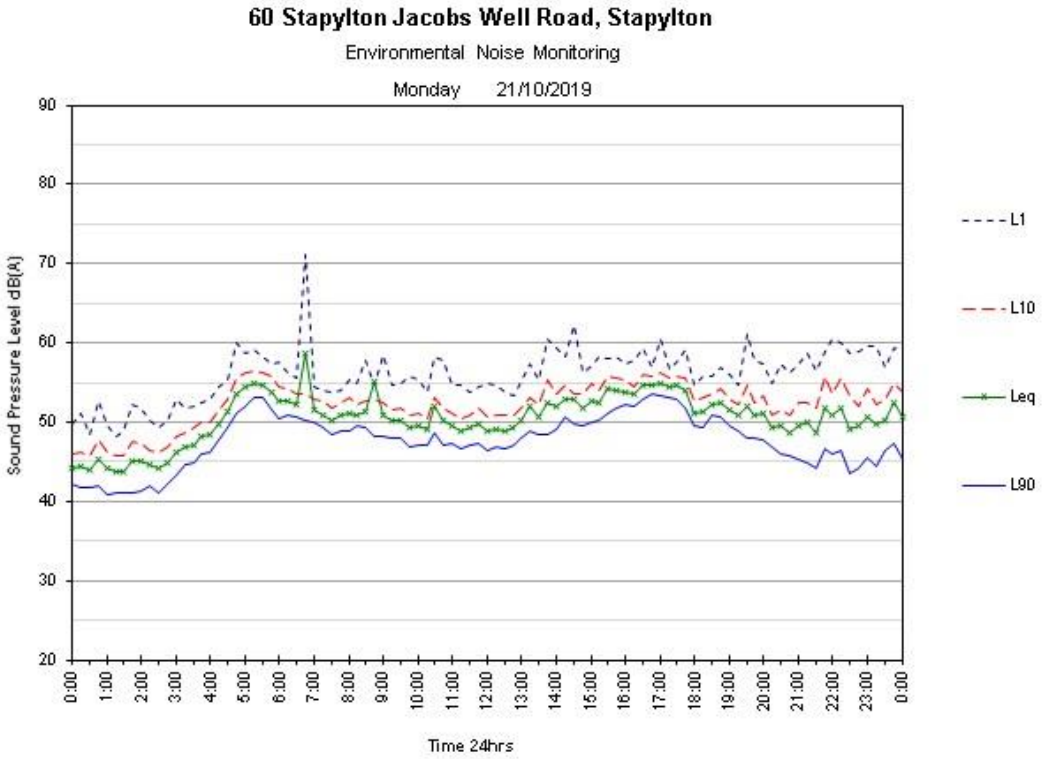
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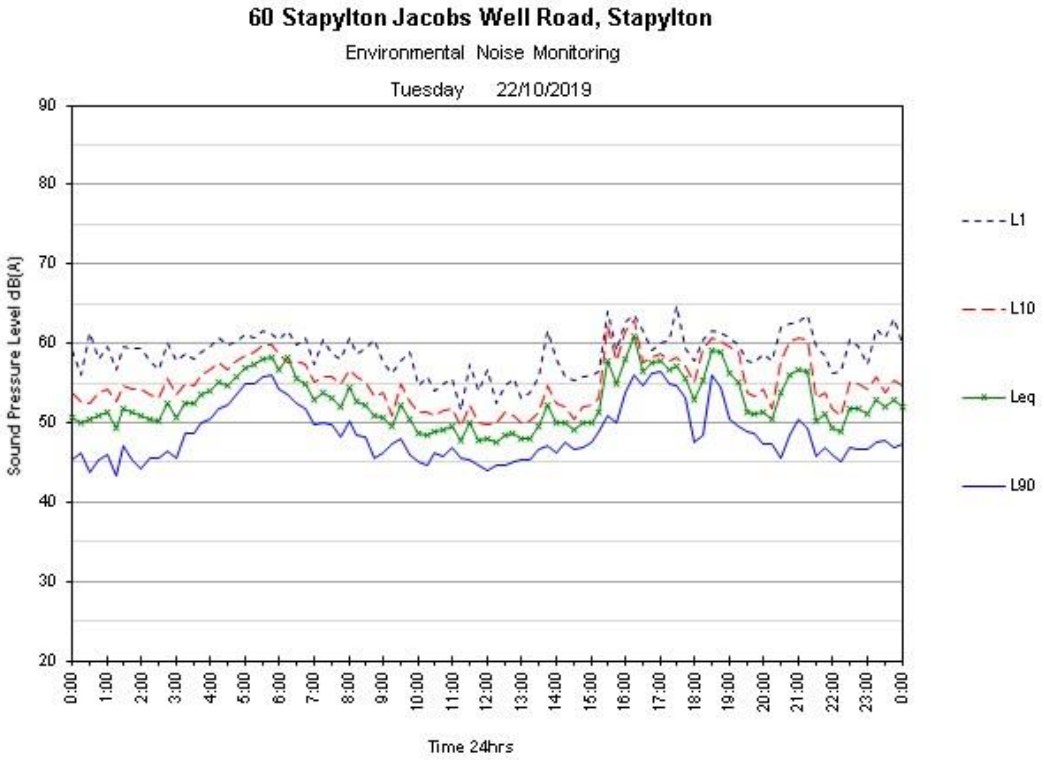
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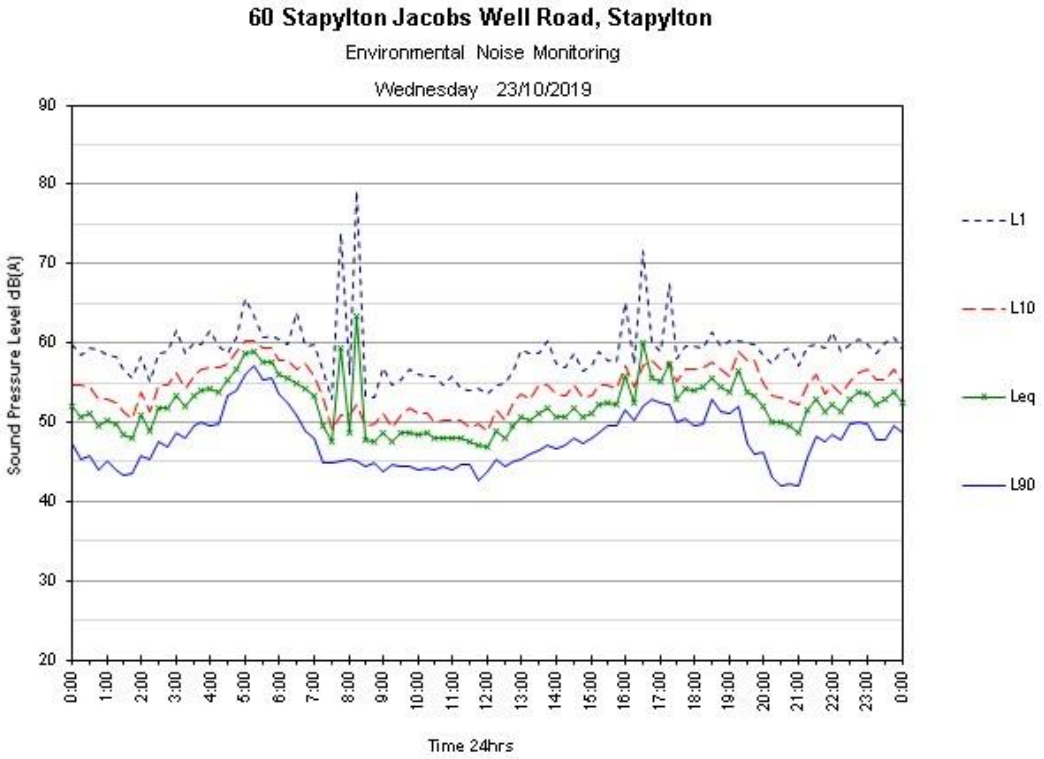
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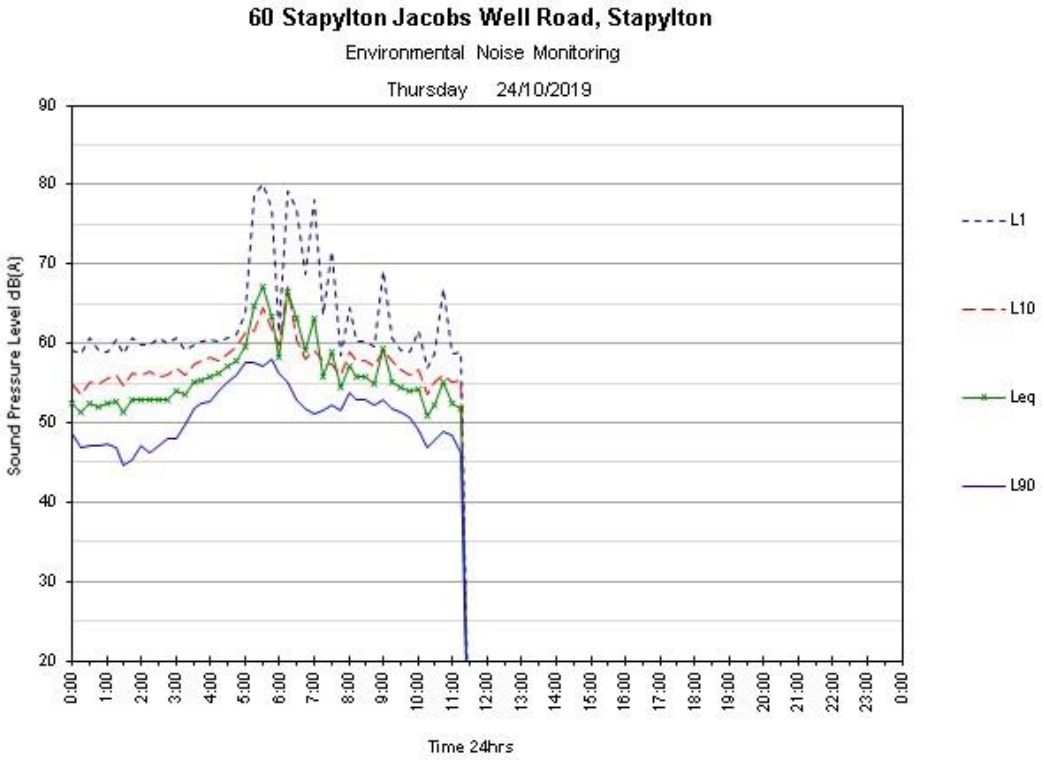
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APPENDIX H

CIVIL SERVICES REPORT



gassman development perspectives

VantageYatala



ENGINEERING SERVICES REPORT

APPLICATION FOR MATERIAL CHANGE OF USE – WAREHOUSE (WITH ANCILLARY OFFICE)

ADDRESS
60 Stapylton Jacobs Well Road, Stapylton

REAL PROPERTY DESCRIPTION
Approved Lot 201 (Currently Lot 502 on SP316137)

PREPARED FOR
FPI Queensland Pty. Ltd.

MAY 2022

gassman development perspectives

project coordination
urban + regional planning
landscape + urban design
engineering services
environmental management
visualisation + spatial services
surveying services
advisory services

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Revision / Checking History

No.	Author	Reviewer
DRAFT	Mitchell Gassman	Alan Kelly
1.	Mitchell Gassman	Mitchell Gassman

Approval for Issue

Rev. No.	Name	Position	Signature	Date
1.	Mitchell Gassman	Civil Project Engineer RPEQ 16939		18 May 2022

Final Distribution

FPI Queensland Pty. Ltd. (Client)	1 electronic copy
City of Gold Coast Council (Assessment Manager)	1 electronic copy
GDP File	1 electronic copy

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1.0 INTRODUCTION

Gassman Development Perspectives (GDP) has been engaged by FPI Queensland Pty. Ltd. (Client) to prepare an Engineering Services Report over land situated at 60 Stapylton Jacobs Well Road, Stapylton (Lot 502 on SP316137) and specifically Lot 201 within the ROL-approved Stage 2 extent of the Vantage Yatala industrial development.

This report has been prepared for submission to City of Gold Coast Council (Council) as part of an Application for a Development Permit for Material Change of Use – Warehouse with Ancillary Office (refer ***Appendix A – Proposed Site Plans***)

The purpose of this report is to supply information relating specifically to Civil Engineering infrastructure, services and issues over the subject lot and how the proposed warehouse and need to reconfigure the approved extent of Lot 201 to cater for its increased size per ***Figure 1*** below can be managed through either the use of existing or minor augmentation to the existing Stage 1 or OPW-approved Stage 2 civil infrastructure.

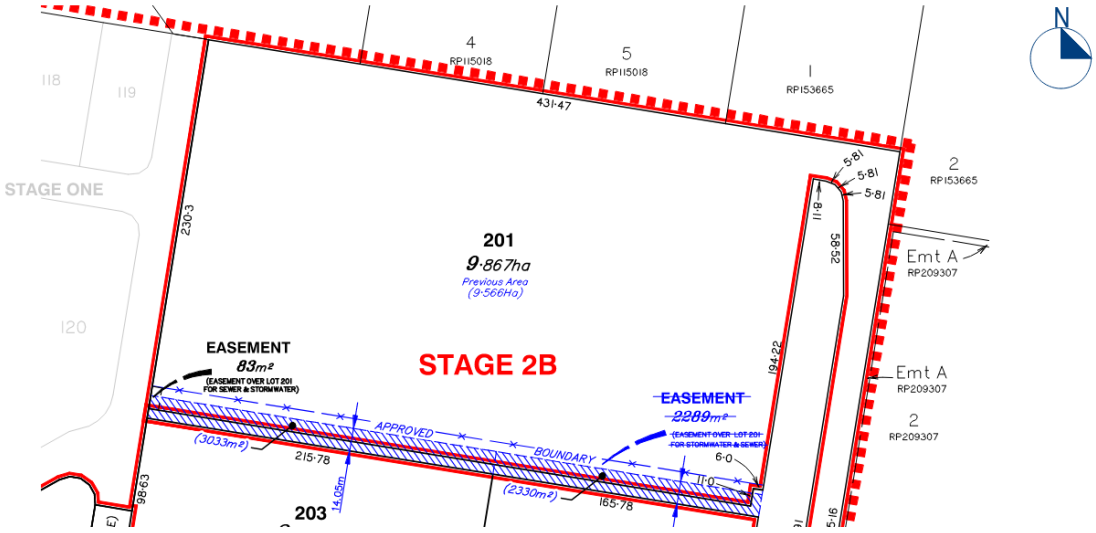


Figure 1.1: Lot 201 Amended Boundary Plan, Source: GDP

2.0 SITE DESCRIPTION

2.1 SITE LOCATION

The subject site is located within the City of Gold Coast Council's (Council) local government boundaries, in Council's "Future Low Impact Industry" and "Future Medium Impact Industry" zone precinct. The subject site is bounded by the recently constructed and registered Stage 1 of the Vantage development to the north-west, Christensen Road and existing industrial uses to the south-west and Council's land fill facility to the south-east (refer to **Figure 2.1**).



Figure 2.1: Site Locality Plan, Source: QLD Globe, 2022)

2.2 LAND ENCUMBRANCES

There are no existing encumbrances over the subject site.

2.3 EXISTING LAND USES

The subject land is currently vacant with earthworks being undertaken as part of the ROL-associated development works.

2.4 TOPOGRAPHY

Along the south-eastern boundary of the subject site is the existing high point of 29.23m AHD with a ridge line extending through to the properties' northern boundary. This existing topography defines the existing catchments of the site and current stormwater discharge locations along the northern and eastern boundaries

2.5 EXISTING VEGETATION

The subject land and specifically the land that will form Lot 201 is vacant of vegetation following recent clearing completed under Council approvals OPW201800486 and OPW201801219. A 10m retained vegetation buffer exists along the subject site's south-east boundary shared with Council's landfill facility. A component of this buffer falls within the Lot 201 extent.

2.6 CONTAMINATED LAND

The subject site is not known to be contaminated.

3.0 EARTHWORKS

Due to the existing topography of the subject site (refer ***Appendix B***) major bulk earthworks will be required to provide generally flat pads suitable for the intended industrial use within Stage 2.

A bulk earthworks strategy has been developed by Gassman Development Perspectives over Stage 2 of the development and approved by Council as part of the combined application lodged for the reconfiguration of lot and change to ground level (Council ref: MIN/2021/637, Decision Notice dated 18 February 2022 to facilitate the creation of suitable flat earthworked pads capable of being serviced to City of Gold Coast Council standards. The current earthworks strategy for Stage 2 ties into the existing Change to Ground Level design (Council Ref: OPW201800485) for Stage 1 to provide connectivity though the development.

The warehouse facility proposed over Lot 201 and the need to realign the common boundary shared with Lots 202 and 203 approximately 14m to the south, triggers the need to amend the approved change to ground level engineering drawings which is being undertaken via a change application to the abovementioned combined approval. A copy of the lot specific change to ground level plans which incorporate the required retaining structures are contained within ***Appendix C***. As evident in these appended plans an RL of 16.9m AHD has been adopted for the finished pad level which is consistent with that currently approved by Council for Lot 201 in its current form which facilitates a free draining surface to the existing Legal Point of Discharge (LPoD).

4.0 ROADWORKS AND ACCESS

Stage 2 of the proposed development will gain access via two (2) locations being the existing approved road network through Stage 1 of the development which links the subject site to its frontage to the State-controlled Stapylton Jacobs Well Road via a signalised intersection along with a secondary connection to the local road network (Christensen Road) proposed as part of Stage 2. Due to the subject site's proximity to Exit 38 of the M1 Motorway the conceptual design of the Christensen Road external intersection has included access provisions for A-Double vehicular movements into the development.

In accordance with the superseded planning scheme approval in place over the subject site, the internal road network will be constructed in accordance with the typical cross section shown on Council standard drawing 05-02-004 for an Industrial Collector Street (refer ***Figure 4.1*** below). It is noted this road reserve configuration has been applied to internal roads that would typically be classed as "Industrial Access Streets" to maintain greater access and manoeuvrability throughout the proposed development. In line with the design intent of the external intersection, the radii of kerb returns throughout the estate have also been designed to accommodate A-Double vehicular movements.

The truncations to lot boundaries necessary to maintain minimum road verge widths through these kerb returns have been incorporated into the Reconfiguration of Lot plan for Stage 2 along with Stage 1 and specifically Fairway Street to which Lot 201 fronts.

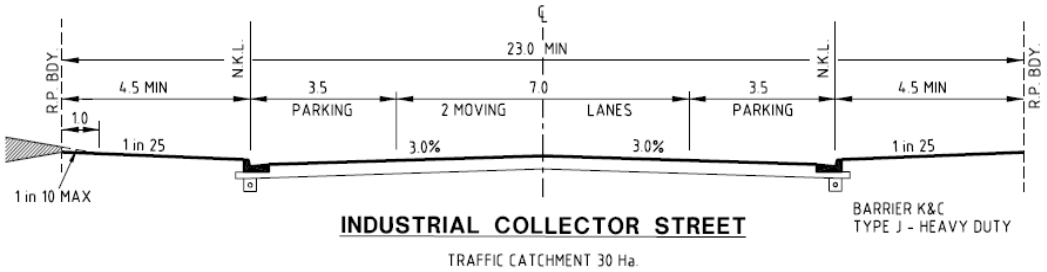


Figure 4.1: Proposed Internal Roads Cross Section, Source: CoGC Std Dwg 05-02-004

As demonstrated within the proposed site plan contained within ***Appendix A***, Lot 201 and its proposed warehouse facility front Fairway Street which was recently constructed as part of Stage 1 of the Vantage industrial development and is the legal point of access for the subject lot. All proposed vehicular crossovers are located in compliant locations and sized to suit the industrial nature in which they will be used. The proposed amendments to the approved change to ground level plans shown in ***Appendix C*** demonstrate compliant grades are achieved throughout the proposed warehouse carparks and surrounding hard stand areas as per AS2890.2 Off-street commercial vehicle facilities.

Due to the fact that the Fairway Street road pavement and associated stormwater pit and pipe network fronting Lot 201 has already been constructed as part of the early Stage 1, an existing gully pit located within the sag point of the road requires replacement with a V grate to avoid clashing with the required heavy-duty vehicular crossover (VXO) on the subject lot's western boundary. Due to the sag nature of the existing gully pit and the need to replace it with a lesser capacity V grate, an analysis assessing the hydraulics and associated flooded widths within the road reserve in various intensities of rainfall events has been undertaken to ensure the proposal is fit for purpose. A copy of this analysis is contained within ***Appendix E*** of this report and assesses Q2, Q20 and Q100 rainfall events with the QUDM-required 50% blockage factor applied to the proposed V grate within the VXO. A further "worst-case" scenario has also been modelled with a 100% blockage factor applied to the V grate which demonstrates the flooded width continues to be contained within the road reserve.

To ensure an emergency overflow path is maintained to the Stage 2 basin and in turn the LPoD of the development, the proposed maintenance access VXO to the section of linear drainage reserve running parallel along Lot 201's western boundary has been designed to have a negative fall into the drainage reserve and its channel. This profile of the maintenance VXO as shown on the plans contained within ***Appendix E*** demonstrate this location as the new low point for the outfall of overland flow from the Fairway Street road reserve and that in large order rainfall events the overland flow will not enter Lot 201 via the heavy duty VXO located at the current sag point of the road pavement.

As per recent Council requests for similar projects where a clash between an existing gully pit and the required VXO location has occurred, an additional "redundancy" gully pit will be added at a 1.0m offset from the edge of the proposed VXO to help with the inlet capacity of the pit and pipe stormwater system within the road pavement.

5.0 INFRASTRUCTURE SERVICES

5.1 SEWERAGE

As existing Operational Works Approval (Council Ref: OPW/2021/1255, Decision Notice dated 25 October 2021) from CoGC is in place for the civil servicing of Vantage Stage 2 which encompasses the sewer connection for the existing Lot 201 configuration. The currently proposed 150mm diameter property connection provided for Lot 201 from the inter-allotment gravity sewer network will be relocated with the re-alignment of the gravity main triggered by the increase in Lot 201 area to the newly proposed drainage reserve linking Fairway Street to the stormwater bioretention basin along the allotment's southern boundary.

The concept design associated with this gravity sewer realignment necessary to facilitate the new Lot 201 dimensions is shown with the Concept Civil Servicing Strategy Plan contained within Appendix D.

The proposed warehouse is consistent with the land use assumptions made in the overall network planning for the development and as such the OPW-approved gravity network for Stage 2 has sufficient capacity to accommodate the site use.

5.2 WATER SUPPLY

An existing 150mm diameter potable water main is contained within the Fairway Street road verge fronting the subject site. This has been approved and constructed as part of Stage 1 of the Vantage industrial development and runs the entire length of the subject lot's frontage to Fairway Street. The location of this main is shown within the Concept Civil Servicing Strategy Plan contained within ***Appendix D*** of this report.

GDP have previously completed and had approved by Council a detailed Water Network Analysis as part of the original Preliminary Approval conditions-compliance process in accordance with Council's requirements to confirm minimum service supply and fire demand can be met for the proposed development.

Suitable spatial provisions have also been made within the proposed site plan (refer ***Appendix A***) for the location of the above ground water meters and their associated access easement requirements needed to service the subject lot from a potable and fire perspective.

5.3 ELECTRICITY AND TELECOMMUNICATIONS

Stages 1 and 2 of the Vantage industrial development has underground reticulated electrical and telecommunications (NBN) networks either approved and/or constructed by the relevant service authorities (refer **Appendix E**). The adequacy of this infrastructure in its current form along with the necessity for any augmentation or upgrades to cater for the proposed use will be confirmed through the detailed design process by the appointed electrical consultant.

6.0 SITE BASED STORMWATER MANAGEMENT

6.1 STORMWATER CONVEYANCE

A private stormwater drainage network will be designed within the Lot 201 extent to ensure the proposed warehouse facility and associated hardstand areas discharge to the OPW-approved (Council-ref: OPW/2021/1255) Legal Points of Discharge (LPoD) for Lot 201 along Fairway Street. A schematic of how the proposed development will utilise the approved LPoDs is contained within ***Appendix D***.

Due to the shift in common boundary location between Lot 201 and Lots 202 and 203 to facilitate the proposed warehouse development, the OPW-approved location of the stormwater line connecting Fairway Street to the Stage 2 stormwater biorientation basin will be re-designed as part of change application to the existing ROL and Civil OPW approvals to be located in a drainage reserve running parallel to the subject lot's southern boundary. This property connections for Lot 201 are currently located off this line and will also be re-designed and located to suit the revised Lot 201 extent. The realignment of this stormwater line and the associated property connections for Lot 201 into the new drainage reserve are shown in the Concept Civil Servicing Strategy Plan contained within ***Appendix D*** of this report.

6.2 STORMWATER QUANTITY

A Site Based Stormwater Management Plan (SWMP) has been prepared by Gassman Development Perspectives (Version 5, dated 18 May 2022) in support of a change application lodged with Council to alter the Vantage Stage 2 ROL approval to reflect the Lot 201 extents necessary to facilitate the warehouse development. This application has been lodged concurrently with the MCU application for the Lot 201 warehouse. The revised SWMP demonstrates that the currently approved attenuation measures are still capable of being incorporated into the proposed revised development lot layout at a regional level to ensure no adverse impacts to downstream properties, waterways or infrastructure occur as a result of an increase in peak stormwater flow rates discharging from the site upon development.

This is achieved through the detailed design and implementation of appropriately sized detention basins that comply with City of Gold Coast Council's Land Development Guidelines along with the Queensland Urban Drainage Manual (QUDM). On this basis no lot-based stormwater detention measures are required over Lot 201 as part of the proposed warehouse facility as the catchment size and impervious area allocation made within the submitted SWMP is consistent with the MCU proposal.

6.3 STORMWATER QUALITY

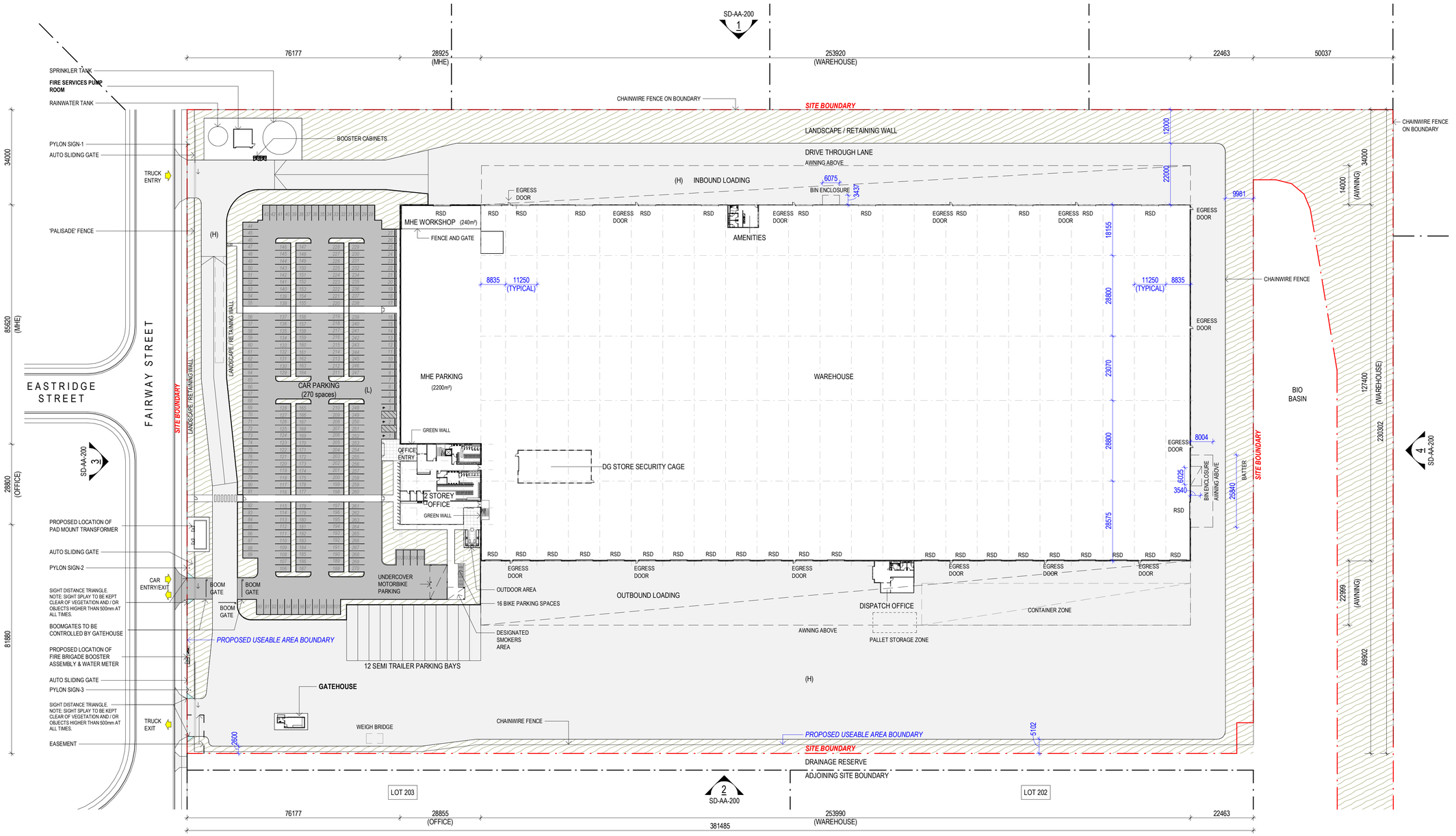
A suitable stormwater treatment train is to be implemented as part of the construction of Vantage Stage 2 to ensure the servicing of the proposed industrial lots, surrounding public road reserves and common property.

A Site Based Stormwater Management Plan (SWMP) has been prepared by Gassman Development Perspectives (Version 5, dated 18 May 2022) in support of a change application lodged with Council to alter the Vantage Stage 2 ROL approval to reflect the Lot 201 extents necessary to facilitate the warehouse development. This application has been lodged concurrently with the MCU application for the Lot 201 warehouse. The revised SWMP outlining how all necessary steps to ensure that the quality of stormwater discharging from the subject site meets the necessary standards to comply with City of Gold Coast Council's Water Sensitive Urban Design (WSUD) requirements, Queensland Urban Drainage Manual (QUDM) and the performance objectives of the Queensland State Planning Policy (SPP). This SWMP demonstrates stormwater quality measures for the development are to be implemented at a regional level with no lot-based measures required.

7.0 CONCLUSION

The above reporting demonstrates that proposed warehouse development can be undertaken through the construction of Civil Engineering infrastructure and services that meet the requirements of City of Gold Coast City Council's Land Development Guidelines and associated Australian Standards.

Appendix A – Proposed Site Plan



1 SITE & FACILITIES FLOOR PLAN
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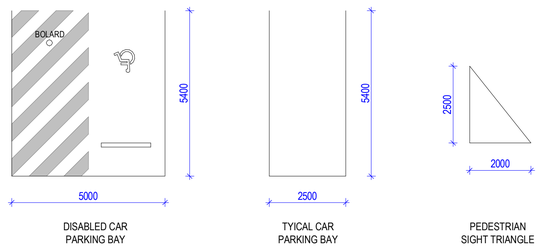


ALL LEVELS ARE INDICATIVE AND SHOULD BE READ IN CONJUNCTION WITH CIVIL ENGINEER'S DRAWINGS FOR FINAL LEVELS OF ALL EARTHWORKS.

ALL LEVELS ARE TO BE ± 1000mm

DEVELOPMENT TABLE	
SITE AREA	**98,665 m²**
- APPROX. USEABLE	86,867 m²
EFFICIENCY	**37.0%**
WAREHOUSE (Including Reclaim Area; Security Cage, Driver & Warehouse Amenities)	32,351 m²
MHE PARKING & MHE WORKSHOP	2,446 m²
GATEHOUSE	34 m²
DISPATCH OFFICE	161 m²
2 STOREY OFFICE	1,518 m²
TOTAL BUILDING AREA	**36,510 m²**
CAR PARKING PROVIDED	270
BICYCLE PARKING PROVIDED	16
AWNINGS	8,912 m²
HEAVY DUTY PAVEMENT (H)	32,292 m²
LIGHT DUTY PAVEMENT (L)	7,868 m²

FOR DEVELOPMENT APPROVAL

GUYMER BAILEY architects

Guymer Bailey Architects Brisbane Studio
19 Terrace Street, Toowong QLD 4066
T. 07 3870 9700
Guymer Bailey Architects Melbourne Studio
Level 5 / 969 Burke Road, Camberwell VIC 3124
T. 03 8547 5000

FRASERS PROPERTY

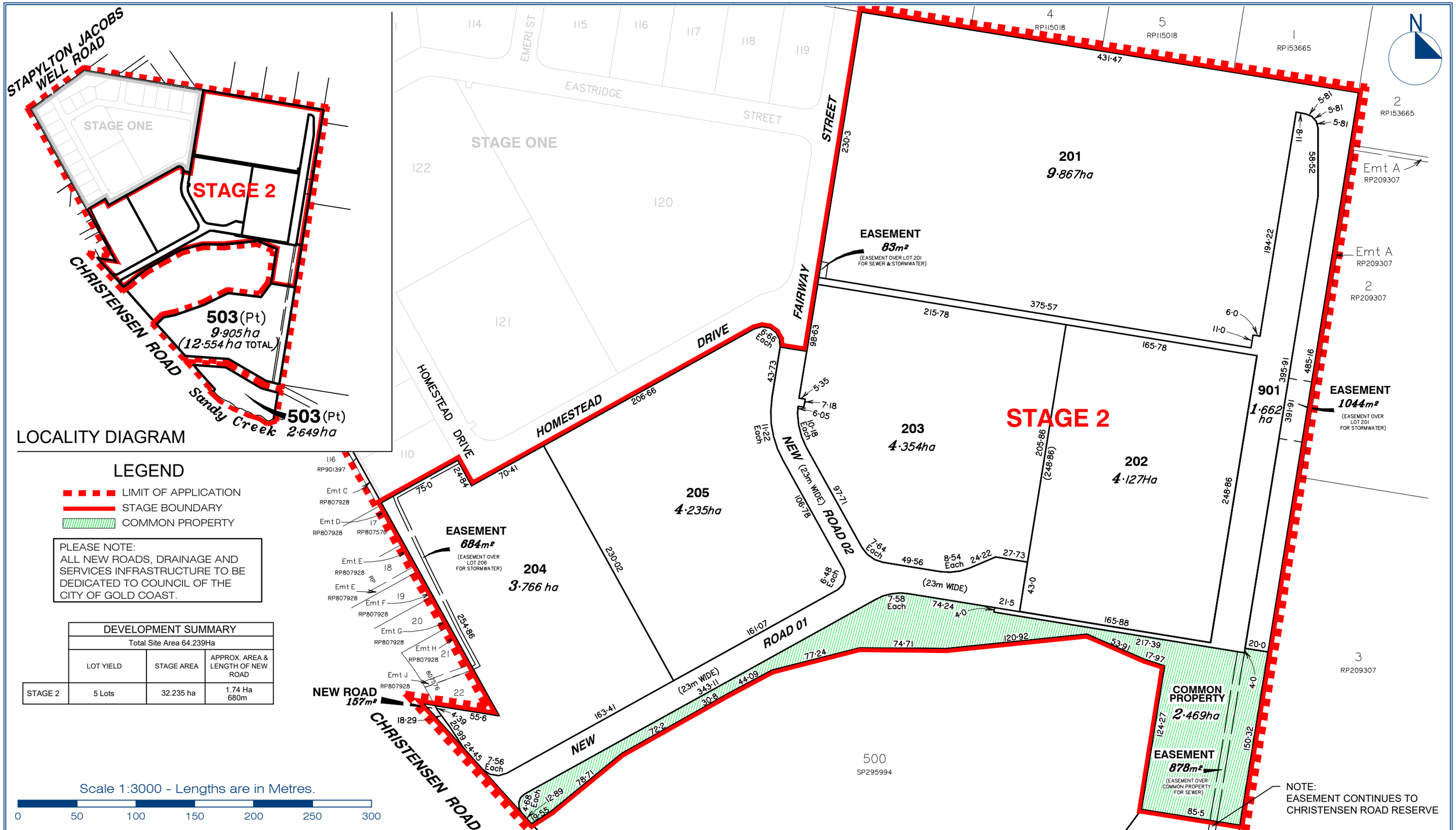
Client: FRASERS PROPERTY
Project: VANTAGE YATALA
Drawing: SITE PLAN
Scale: As indicated@A1

Project No.: 2686
Date: 10/02/2022
Stage-Drawing: SD-AA-010
Rev: F

N

SD-AA-010

PRINT/SAVE DATE: 17/05/2022 5:53:03 PM



LOCALITY DIAGRAM

LEGEND

- LIMIT OF APPLICATION
- STAGE BOUNDARY
- COMMON PROPERTY

PLEASE NOTE:
ALL NEW ROADS, DRAINAGE AND SERVICES INFRASTRUCTURE TO BE DEDICATED TO COUNCIL OF THE CITY OF GOLD COAST.

DEVELOPMENT SUMMARY			
Total Site Area 64.239Ha			
	LOT YIELD	STAGE AREA	APPROX. AREA & LENGTH OF NEW ROAD
STAGE 2	5 Lots	32.235 ha	1.74 Ha 680m

Scale 1:3000 - Lengths are in Metres.

0 50 100 150 200 250 300

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est 1985
planning | environment | landscape | engineering | survey
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76 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

Scale at A3: 1:3000
Date: 17-02-22
Design: MG
Drawn: SH
Checked: MG/AWG

Issue	Date	Description	DRN	CHK
G	17/02/2022	CHANGE LOT NUMBERS	SJH	AG
F	15/02/2022	LOT CHANGES	SJH	AG
E	09/02/2022	REMOVE SUB-STAGING LINES	SJH	AG
D	08/02/2022	CHANGES TO LOTS 901, 201-203	SJH	AG
C	24/11/2021	PMT LOT 203, SUB-STAGING	SJH	AG
B	09/11/2021	CHANGES TO LOTS 205, 206	SJH	AG
A	31/03/2021	CHANGES TO LOT 901	SJH	AG
	16/11/2020	ORIGINAL ISSUE	SJH	GS

Project: VantageYatala

Client: FRASERS PROPERTY

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All dimensions and area's are approximate only and subject to survey.

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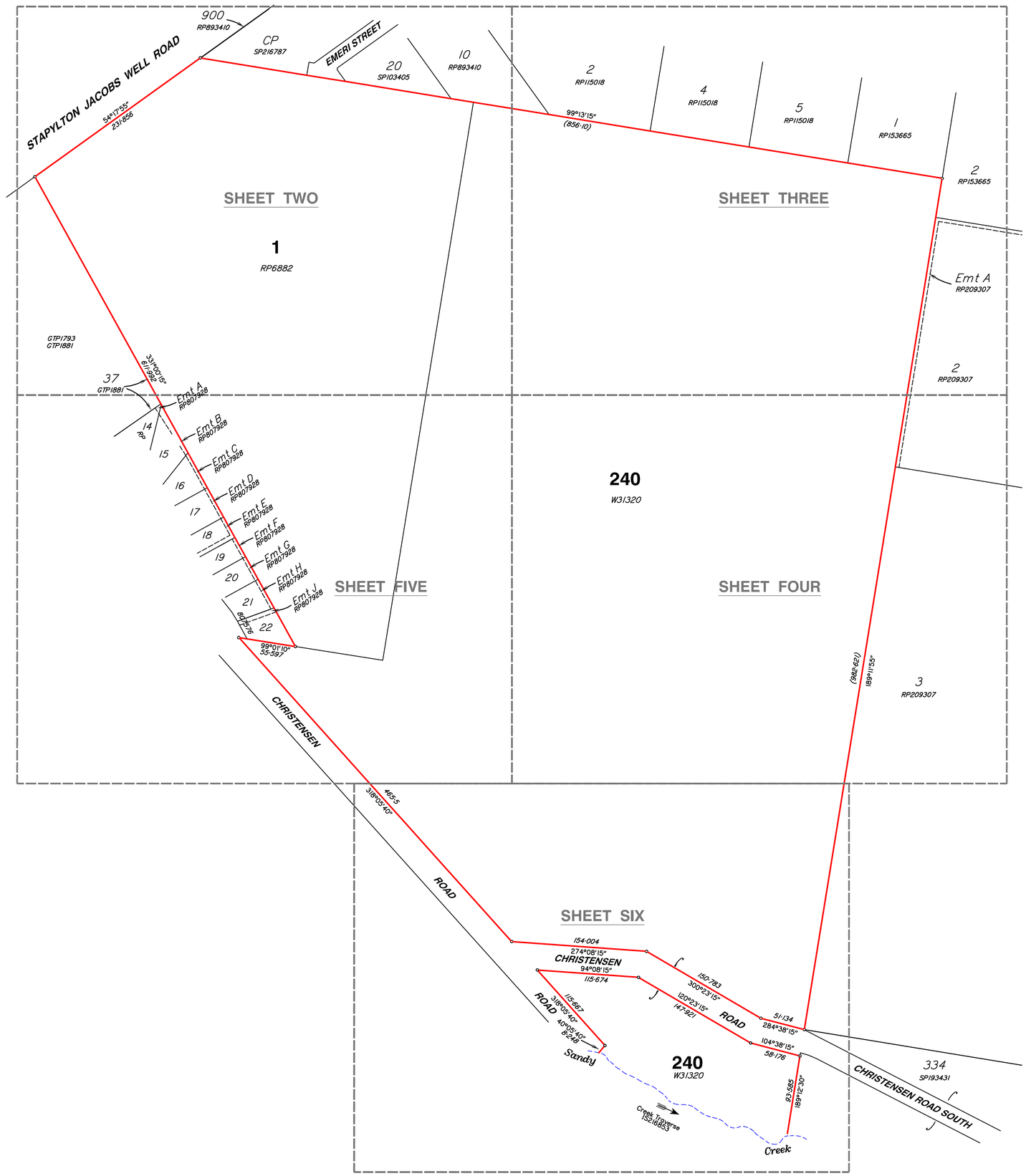
Drawing Title:
Proposed Staged, Community Title Scheme Reconfiguration of Land
Lots 201 to 205, Common Property, Drainage Reserve (Lot 901) & New Road
CANCELLING LOT: 501 on SP295994

LOCATION: 60 Stapylton Jacobs Well Road, Stapylton QLD

Drawing No: 5941 P STAGE 2 001 G
Revision No:

Appendix B – Site Survey



Scale 1:2500 - Lengths are in Metres.

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Over Lot 1 on RP6882 and Lot 240 on WD31320

Parish of ***ALBERT***
County of ***Ward***
Local Govt ***GOLD COAST CITY COUNCIL***

Level Datum	A.H.D.	Date Surveyed	Jan 2011
Meridian	IS216853	Surveyor	A. Macdonald
Contour Interval	0.2	Drawn	S. Holt
F.B.	No	Date Drafted	02–02–2011
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		Date Designed	

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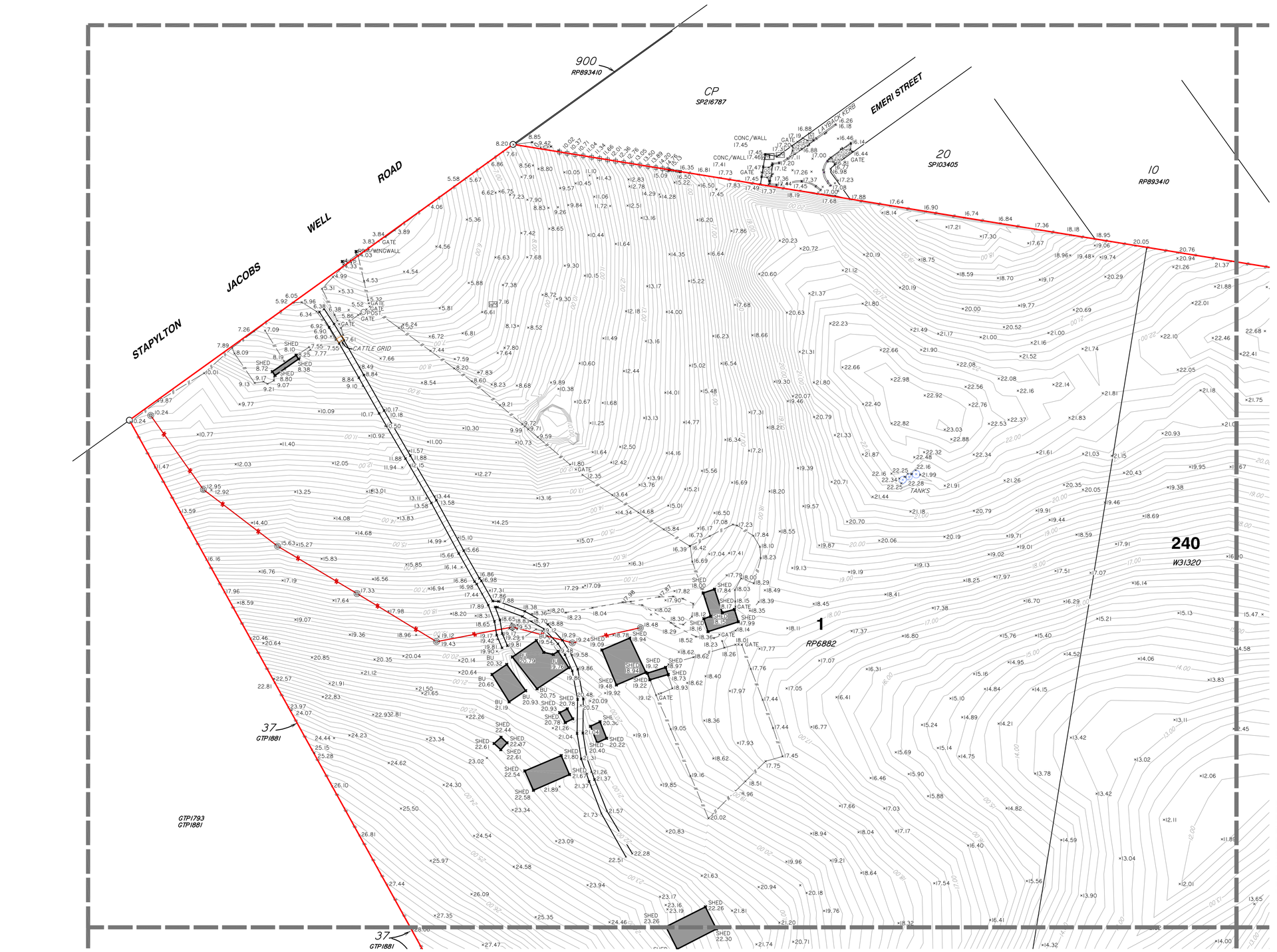
PLAN No. ***5093 S CD 01***



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SHEET 2 OF 6

LEGEND

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- SEWER INSPECTION OUTLET
- ELECTRICITY PILLAR
- ELECTRICITY POLE
- ELECTRICITY POLE WITH LIGHT
- TELSTRA PIT
- MANHOLE
- STORMWATER MANHOLE
- GULLY TRAP
- WATER METER
- FIRE HYDRANT
- VALVE
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- BOLLARD
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- RETAINING WALL
- EDGE OF GARDEN
- CONTOUR LEVEL

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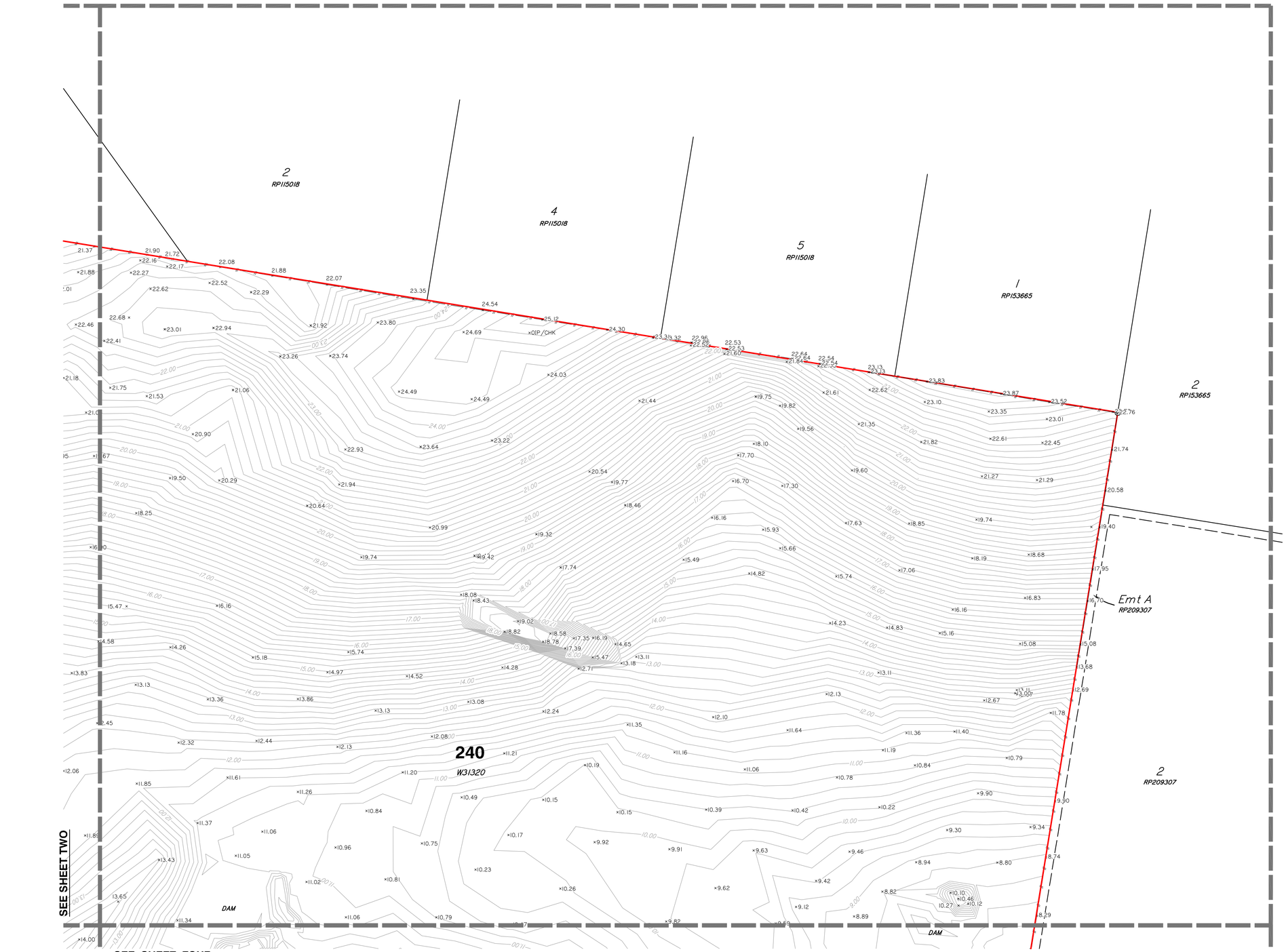

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LEGEND

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- . . . . ELECTRICITY PILLAR
- . . . . ELECTRICITY POLE
- . . . . ELECTRICITY POLE WITH LIGHT
- . . . . TELSTRA PIT
- . . . . MANHOLE
- . . . . STORMWATER MANHOLE
- . . . . GULLY TRAP
- . . . . WATER METER
- . . . . FIRE HYDRANT
- . . . . VALVE
- . . . GATE
- . . . BOLLARD
- . . . CONCRETE
- EDGE OF BITUMEN
- FENCE
- OVERHEAD ELECTRICITY
- OPEN DRAIN
- RETAINING WALL
- EDGE OF GARDEN
- 14.0 CONTOUR LEVEL

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County of *Ward*
Local Govt *GOLD COAST CITY COUNCIL*

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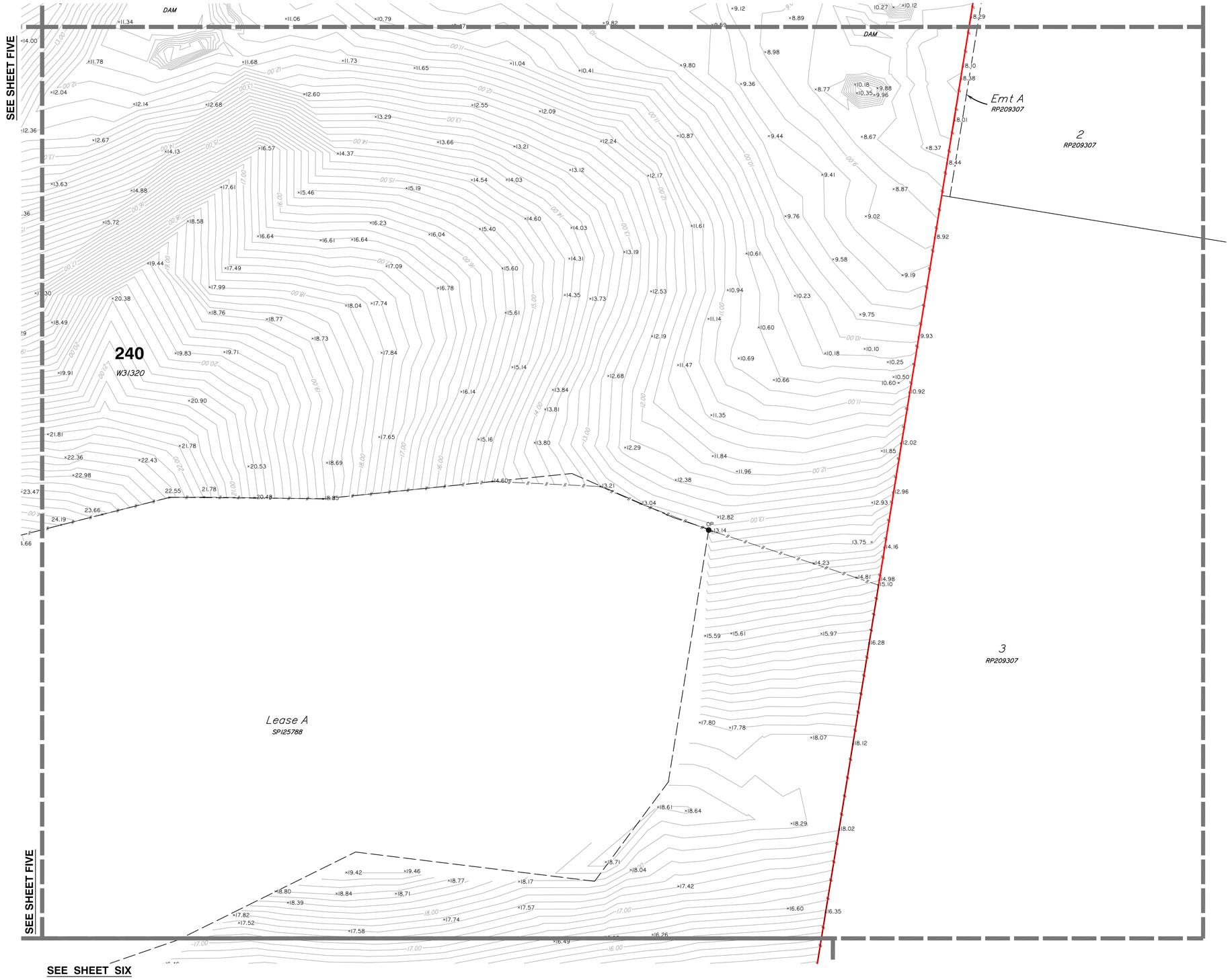

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SHEET 4 OF 6

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CONTOUR AND DETAIL PLAN

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Local Govt ***GOLD COAST CITY COUNCIL***

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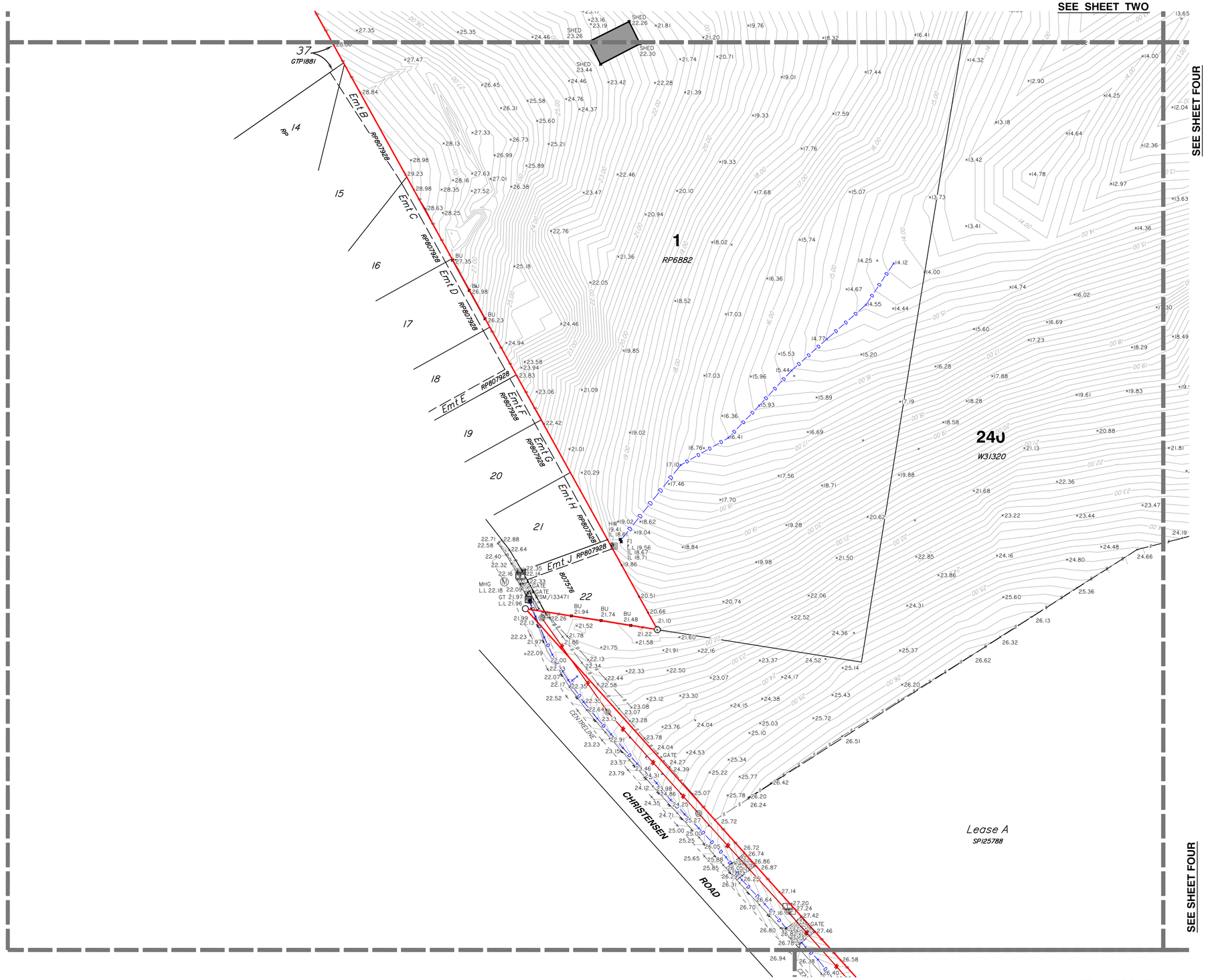

LEGEND

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Client
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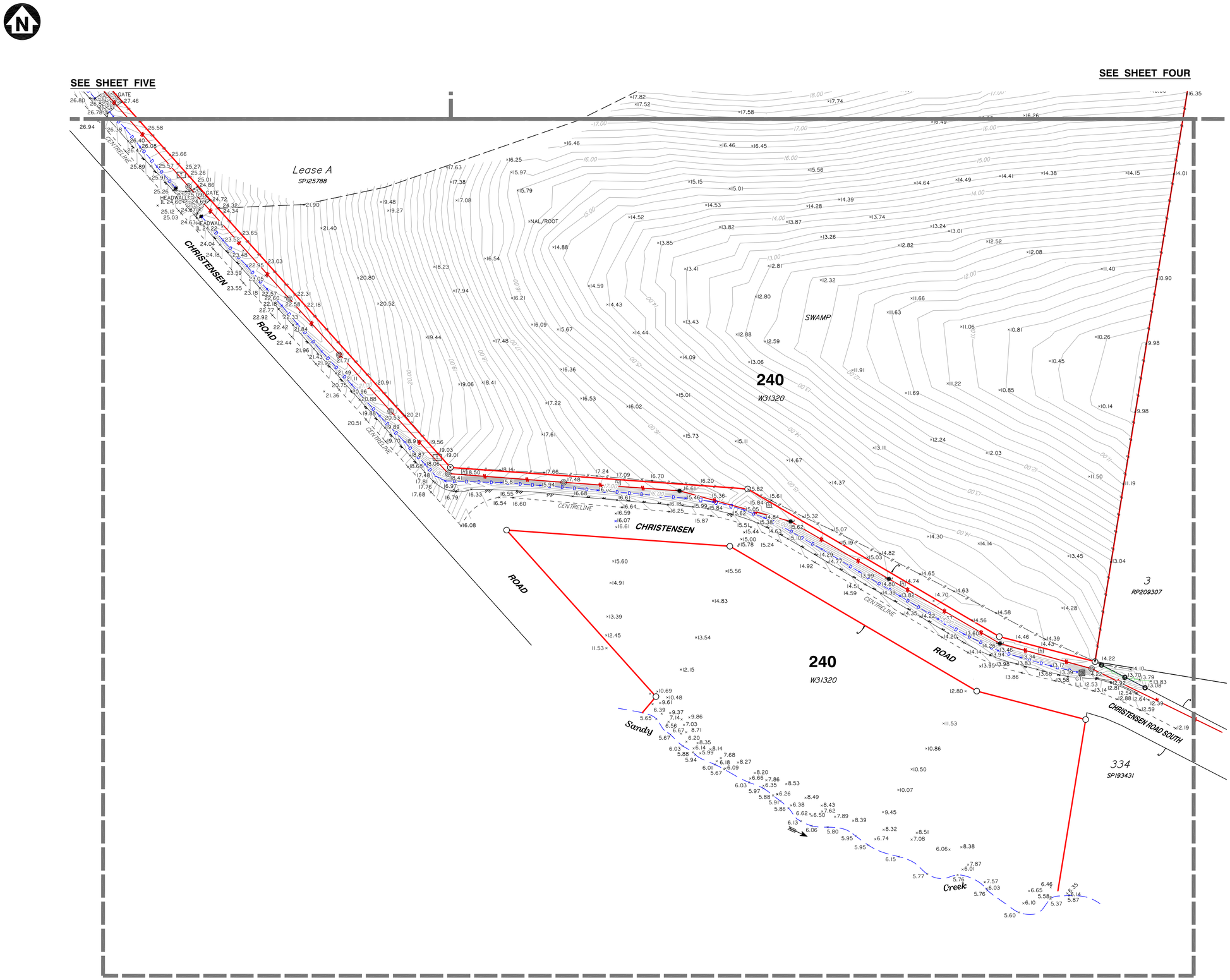
REFERENCE No. *5093-10*

PLAN No. ***5093 S CD 01***



Scale 1:1000 - Lengths are in Metres.

0 10 20 30 40 50 60 70 80

SHEET 6 OF 6

LEGEND

- PERMANENT MARK
- SEWER MANHOLE
- SEWER INSPECTION OUTLET
- ELECTRICITY PILLAR
- ELECTRICITY POLE
- ELECTRICITY POLE WITH LIGHT
- TELSTRA PIT
- MANHOLE
- STORMWATER MANHOLE
- GULLY TRAP
- WATER METER
- FIRE HYDRANT
- VALVE
- GATE
- BOLLARD
- CONCRETE
- EDGE OF BITUMEN
- FENCE
- OVERHEAD ELECTRICITY
- OPEN DRAIN
- RETAINING WALL
- EDGE OF GARDEN
- CONTOUR LEVEL

Notes

This plan has been prepared for the exclusive use and purposes of the client as stated on this plan and should not be used by any other person or corporation and for any other purpose.

Property boundaries have not been defined by this survey and have been compiled from IS216853.

Only those underground features and services as shown on this plan have been located by this survey. Prior to any construction, demolition or excavation on the site, the relevant authority should be contacted for the location of any further underground services and detailed location of all services.

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Client

HESTER

Project

CONTOUR AND DETAIL PLAN

Over Lot 1 on RP6882 and Lot 240 on WD31320

Parish of ***ALBERT***
County of ***Ward***
Local Govt ***GOLD COAST CITY COUNCIL***

Level Datum	A.H.D.	Date Surveyed	Jan 2011
Meridian	IS216853	Surveyor	A. Macdonald
Contour Interval	0.2	Drawn	S. Holt
F.B.	No	Date Drafted	02-02-2011
Origin	PSM 133471	Checked	
	RL 22.169		
Scale (on A1 original)		Designed	
1:1000		Drawn	
		Date Designed	

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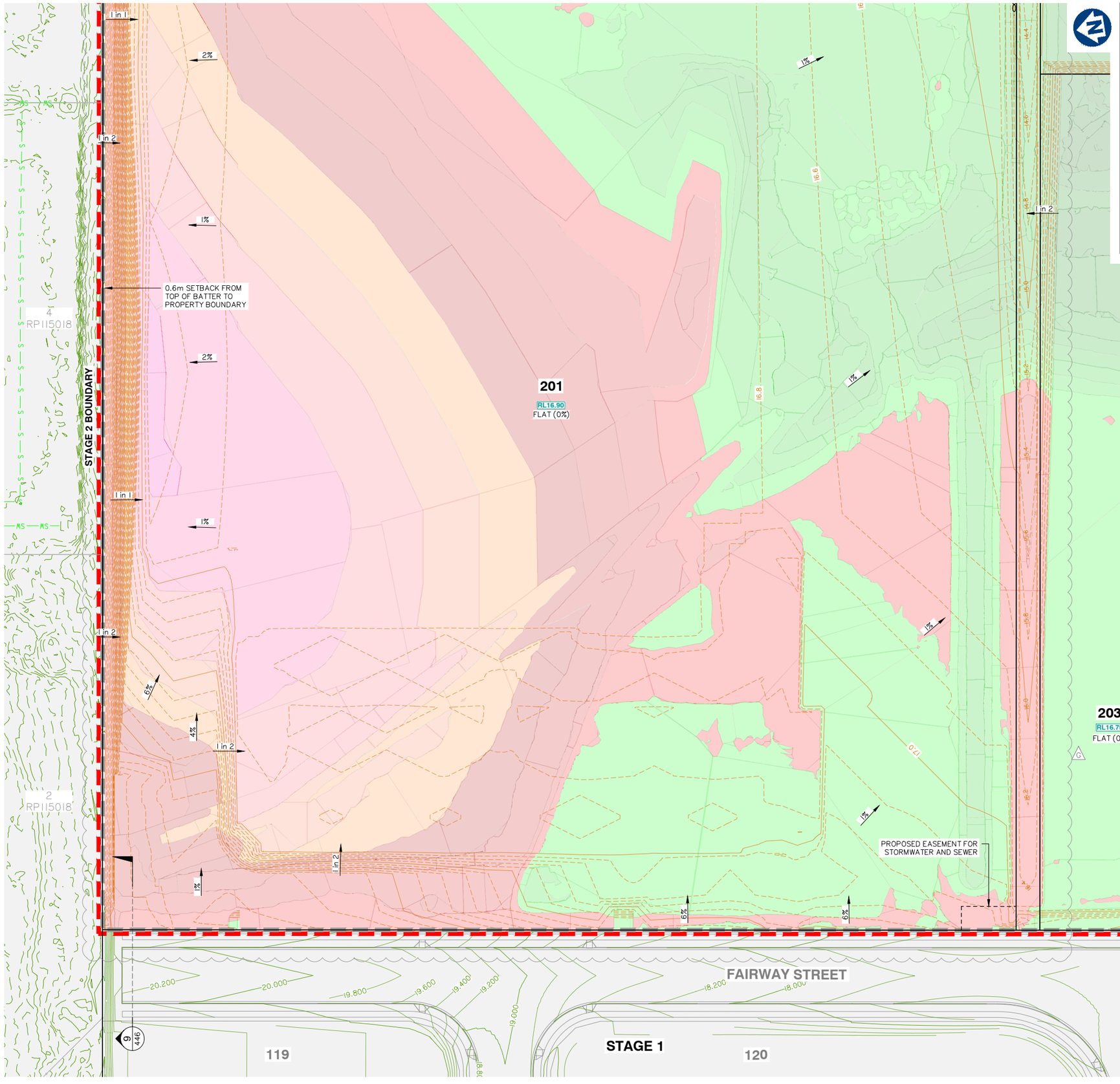
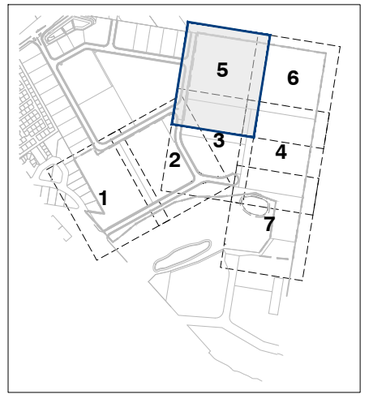
REFERENCE No. *5093-10*

PLAN No. ***5093 S CD 01***

Appendix C – Lot 201 Bulk Earthworks Strategy

FOR CONTINUATION REFER SHEET No. 5941 ENG BE2 055





KEY PLAN
SCALE 1:7500

BULK EARTHWORKS DEPTH RANGE LEGEND

−10	to	−9	m
−9	to	−8	m
−8	to	−7	m
−7	to	−6	m
−6	to	−5	m
−5	to	−4	m
−4	to	−3	m
−3	to	−2	m
−2	to	−1	m
−1	to	0	m
0	to	1	m
1	to	2	m
2	to	3	m
3	to	4	m
4	to	5	m
5	to	6	m
6	to	7	m
7	to	8	m
8	to	9	m

EARTHWORKS VOLUME SUMMARY

CUT	−376,93 m^3
FILL	362,992 m^3
EXCESS OF FILL OVER CUT	−13,94 m^3

BULK EARTHWORKS LAYOUT PLAN SHEET 5 OF 7

G:\Projects\5941\ENGINEERING\Acad\BE2 CGL\Current\5941 ENG BE2 050-058.dwg

FOR CONTINUATION REFER SHEET No. 5941 ENG BE2 052

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Project:
VantageYatala
STAGE 2

Site Address:
60 STAPYLTON JACOBS WELL ROAD, STAPYLTON QLD 4207

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RPD:

Lot:	502
Plan:	SP316137
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RL:	-

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DRAWING TITLE

BULK EARTHWORKS LAYOUT PLAN SHEET 5 OF 7

Issue	Date	Description	DRN	CHK
G	18-05-2022	LOT 201 BOUNDARY AND EARTHWORKS	LAB	MG
F	10-02-2022	BATTER ALONG FAIRWAY STREET REDUCED	DV	MG
E	15-11-2021	RETAINING WALLS LOT 205	DV	MG
D	24-09-2021	EXTENT OF STAGE 2 EARTHWORKS REDUCED	IG	MG
C	31-03-2021	INFORMATION REQUEST RESPONSE	IG	MG
B	15-02-2021	INFORMATION REQUEST RESPONSE	IG	MG
A	20-11-2020	ORIGINAL ISSUE	BA	MG

SCALE IN METRES
0 10 20 30 40 50
1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1:	1:500
Designed:	IG
Drafted:	IG / BA / LAB
Approved:	MG
RPEQ:	16939
Signed:	
Date:	18-05-2022

Drawing No: 5941 ENG BE2 054
Rev. No: G

EARTHWORKS VOLUME SUMMARY	
CUT	−376,93 m/3
FILL	362,992 m/3
EXCESS OF FILL OVER CUT	−13,94 m/3

ALL BATTERS PROPOSED WITHIN THE 20.0m WIDE BUFFER AREA TO THE EASTERN BOUNDARY ARE TO HAVE A MAXIMUM GRADIENT OF 1V IN 2H WHERE THE BATTER IS WITHIN FILL AND 1V IN 2H WHERE THE BATTER IS WITHIN CUT. THE 1V IN 2H CUT BATTER SHALL BE OVER-EXCAVATED, MICRO-BENCHED AND INCORPORATE A MINIMUM OF 400mm DEEP IMPORTED SOIL. REFER CORRESPONDENCE FROM DOUGLAS PARTNERS, PROJECT 90520.00.L.002 DATED 24 JANUARY 2019 TITLED BATTER TREATMENT.

INSTALL TREE PROTECTION FENCING TO EXTENT OF VEGETATION BUFFER. REFER TO DWG No. 5941 ENG BE2 035 FOR DETAILS

PROVIDE A LANDSCAPED BUFFER WITH A MINIMUM WIDTH OF 20.0m FOR THE ENTIRE LENGTH OF THE EASTERN PROPERTY BOUNDARY. PROVIDE AN 'UNDISTURBED' CORRIDOR WIDTH FOR THE FIRST 10.0m FROM THE BOUNDARY WHERE ALL EXISTING VEGETATION IS RETAINED AND NO EARTHWORKS ENCROACH WITHIN. EARTHWORKS ARE PROPOSED WITHIN THE SECOND TEN (10) METRE CORRIDOR BEING THAT OF THE BASIN EMBANKMENT CONSTRUCTION AND OUTLET WORKS, OR BATTERING.

STAGE 2 BOUNDARY

2 RP153665

2 RP209307

1 RP153665

5 RP115018

201

901

SEDIMENT BASIN 1

201
RL16.90
FLAT (0%)

202
RL15.05
FLAT (0%)

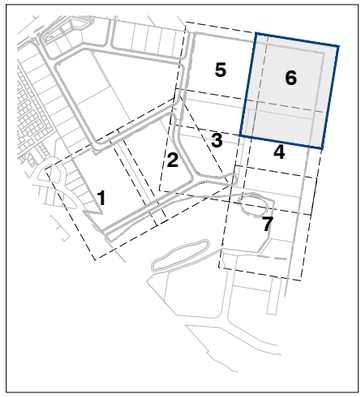
203

PROPOSED BOUNDER RETAINING WALL WITHIN LOT 201

0.6m SETBACK FROM TOP OF BATTER TO PROPERTY BOUNDARY

10.0m

1 in 2 · 1 in 3 · 1 in 1 · 5% · 2% · 1%



KEY PLAN
SCALE 1: 7500

BULK EARTHWORKS DEPTH RANGE LEGEND

−10	to	−9	m
−9	to	−8	m
−8	to	−7	m
−7	to	−6	m
−6	to	−5	m
−5	to	−4	m
−4	to	−3	m
−3	to	−2	m
−2	to	−1	m
−1	to	0	m
0	to	1	m
1	to	2	m
2	to	3	m
3	to	4	m
4	to	5	m
5	to	6	m
6	to	7	m
7	to	8	m
8	to	9	m

FOR CONTINUATION REFER SHEET No. 5941 ENG BE2 054

FOR CONTINUATION REFER SHEET No. 5941 ENG BE2 053

BULK EARTHWORKS LAYOUT PLAN SHEET 6 OF 7

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BULK EARTHWORKS LAYOUT PLAN SHEET 6 OF 7

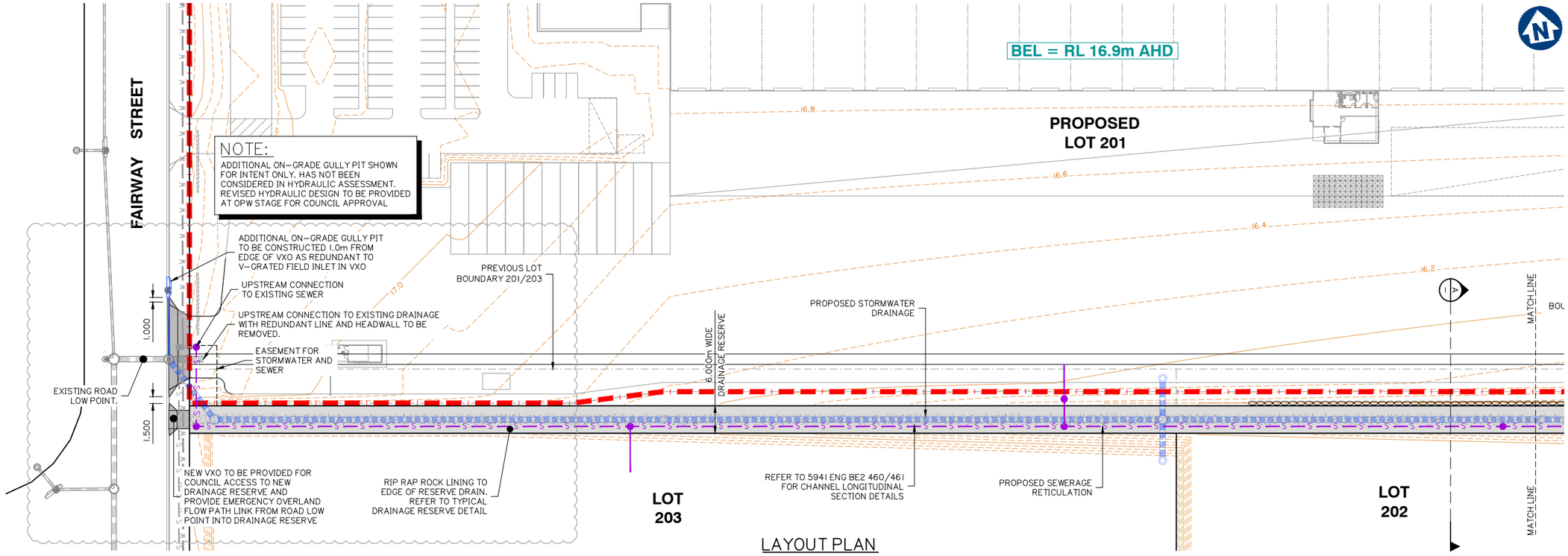
Issue	Date	Description	DRN	CHK
E	18-05-2022	LOT 201 BOUNDARY AND EARTHWORKS	LAB	MG
D	10-02-2022	RETAINING WALLS LOT 205	DV	MG
C	24-09-2021	EXTENT OF STAGE 2 EARTHWORKS REDUCED	IG	MG
B	31/03/21	INFORMATION REQUEST RESPONSE	IG	MG
A	20-11-2020	ORIGINAL ISSUE	BA	MG

SCALE IN METRES
0 10 20 30 40 50
1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

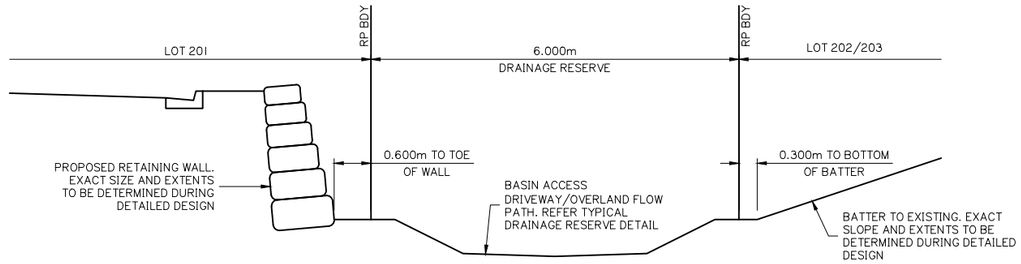
Scale at A1:	1:500
Designed:	IG
Drafted:	IG / BA / LAB
Approved:	MG
RPEQ:	16939
Signed:	
Date:	18-05-2022

Drawing No: 5941 ENG BE2 055
Rev. No: E

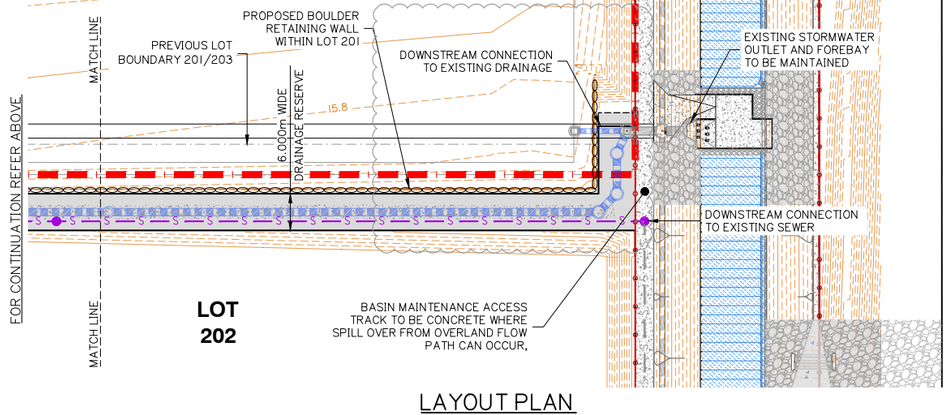
Appendix D – Civil Servicing Strategy Plan



LAYOUT PLAN
SCALE 1:500



SECTION A
SCALE 1:50



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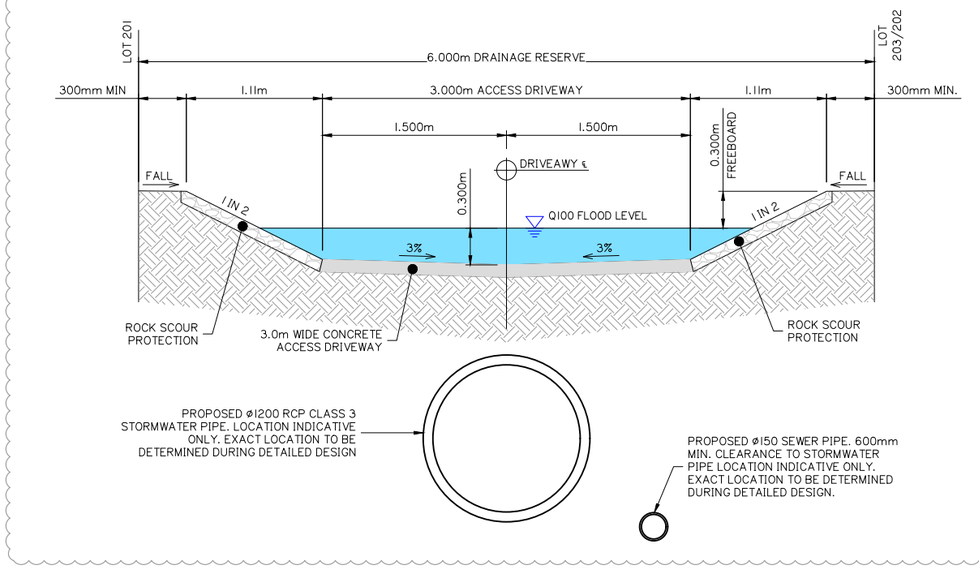

TYPICAL DRAINAGE RESERVE DETAIL
SCALE 1:25

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DRAWING TITLE
CONCEPTUAL STORMWATER AND SEWER RELOCATION PLAN & DETAILS

Issue	Date	Description	DRN	CHK
B	16/05/22	INFORMATION REQUEST	LAB	MG
A	01/02/22	ORIGINAL ISSUE	JH	MG

0 10 20 30 40 50
1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1:	1:500
Designed:	JH
Drafted:	JH
Approved:	MG
RPEQ:	16939
Signed:	
Date:	16-05-2021

Drawing No: 6111 ENG SK 001
Rev. No: B

LEGEND

- LOT BOUNDARY
- SITE BOUNDARY
- 18.0 EXISTING CONTOURS
- 18.0 DESIGN CONTOURS
- EXISTING STORMWATER DRAINAGE
- STAGE 2 OPW APPROVED DESIGN STORMWATER DRAINAGE
- PROPOSED AMENDED STAGE 2 STORMWATER DRAINAGE
- S S S EXISTING SEWERAGE RETICULATION
- S S S STAGE 2 OPW APPROVED DESIGN SEWERAGE RETICULATION
- S S S PROPOSED AMENDED STAGE 2 SEWERAGE RETICULATION
- W W W EXISTING WATER RETICULATION

FUTURE BLOCKWORKS WALL AS PART OF BUILDING WORKS

SHOTCRETE FINISH 1 in 1

1 in 2

6%

1%

4%

3%

BEL = RL 16.9m AHD
FFL = RL 17.2m AHD

LOT 201

FAIRWAY STREET

EXISTING WATER RETICULATION AS APPROVED IN STAGE 1 OPW WORKS

EXISTING SEWERAGE RETICULATION AS APPROVED IN STAGE 1 OPW WORKS

EXISTING STORMWATER DRAINAGE AS APPROVED IN STAGE 1 OPW WORKS

APPROVED SEWERAGE RETICULATION DESIGN AS PER STAGE 2 OPW WORKS APPROVAL TO BE AMENDED TO REFLECT NEW LOT BDYS.

APPROVED STORMWATER DRAINAGE WITH DRAINAGE RESERVE AS PER STAGE 2 OPW WORKS.

AMENDED STORMWATER DRAINAGE LAYOUT WITH PROPOSED DRAINAGE RESERVE

PROPOSED 150ø SEWER CONNECTION FOR LOT 201

AMENDED LOT BOUNDARY

AMENDED SEWERAGE RETICULATION LAYOUT

LOT 203

6.000m WIDE DRAINAGE RESERVE

PROPOSED INTERNAL STORMWATER DRAINAGE CONNECTION 1 FOR LOT

REFER TO SHEET 2 FOR CONTINUATION

LAYOUT PLAN

SCALE 1:500

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LOT 201

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DRAWING TITLE

LOT 201 - ENGINEERING SERVICES STRATEGY PLAN SHEET 1 OF 2

Issue	Date	Description	DRN	CHK
B	16/05/22	INFORMATION REQUEST	LAB	MG
A	01/02/22	ORIGINAL ISSUE	JH	MG

0 10 20 30 40 50

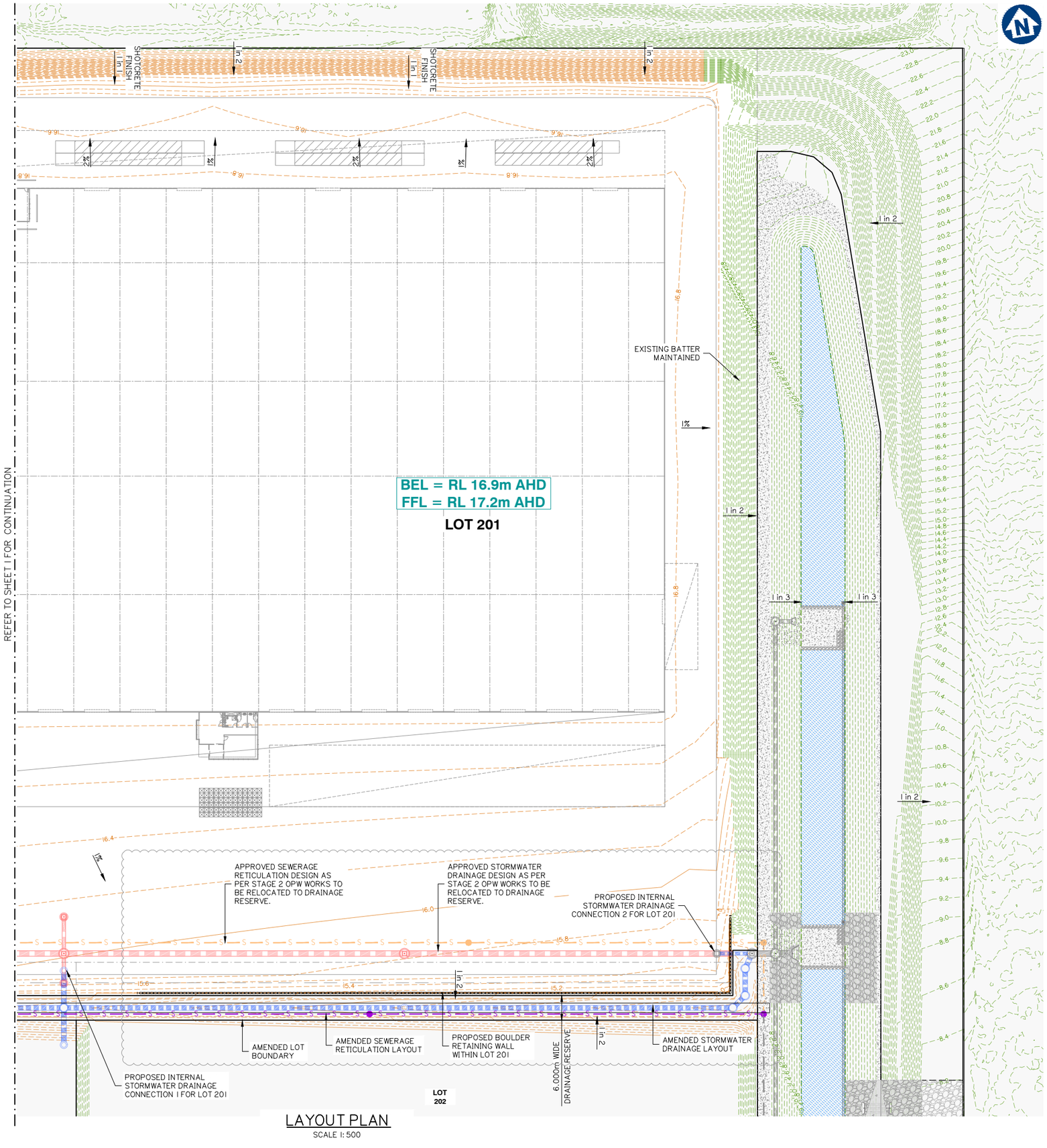
1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1:	1:500
Designed:	JH
Drafted:	JH
Approved:	MG
RPEQ:	
Signed:	
Date:	16-05-2021

Drawing No: 6111 ENG SK 003
Rev. No: B

LEGEND

- LOT BOUNDARY
- SITE BOUNDARY
- 18.0 — EXISTING CONTOURS
- 18.0 — DESIGN CONTOURS
- EXISTING STORMWATER DRAINAGE
- STAGE 2 OPW APPROVED DESIGN STORMWATER DRAINAGE
- PROPOSED AMENDED STAGE 2 STORMWATER DRAINAGE
- S — S — S — EXISTING SEWERAGE RETICULATION
- S — S — S — STAGE 2 OPW APPROVED DESIGN SEWERAGE RETICULATION
- S — S — S — PROPOSED AMENDED STAGE 2 SEWERAGE RETICULATION
- W — W — W — EXISTING WATER RETICULATION



LAYOUT PLAN

SCALE 1:500

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Plan:	SP316137
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DRAWING TITLE

LOT 201 - ENGINEERING SERVICES STRATEGY PLAN SHEET 2 OF 2

Issue	Date	Description	DRN	CHK
B	16/05/22	INFORMATION REQUEST	LAB	MG
A	01/02/22	ORIGINAL ISSUE	JH	MG

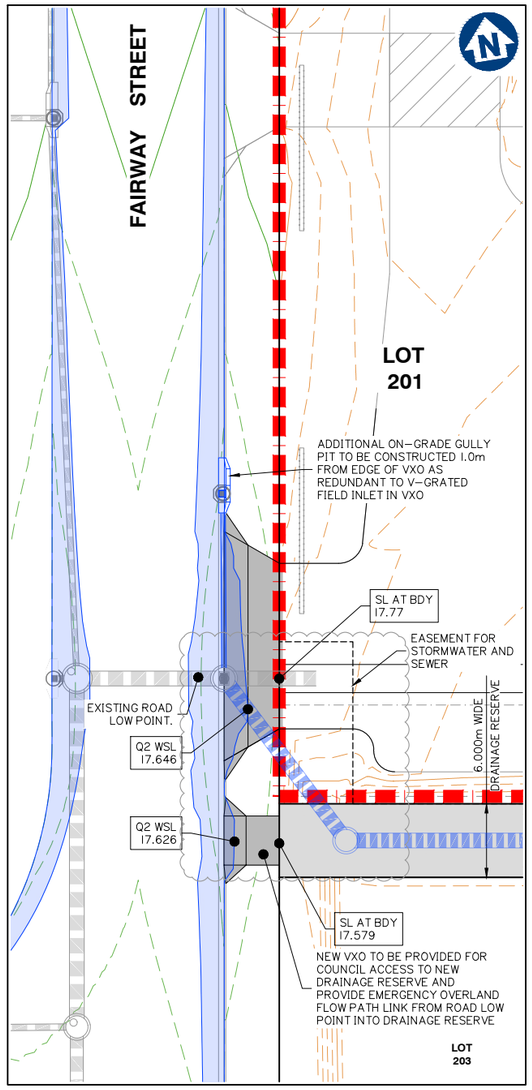
0 10 20 30 40 50

1:500 (FULL SIZE A1)
1:1000 (HALF SIZE A3)

Scale at A1:	1:500
Designed:	JH
Drafted:	JH
Approved:	MG
RPEQ:	
Signed:	
Date:	18-05-2022

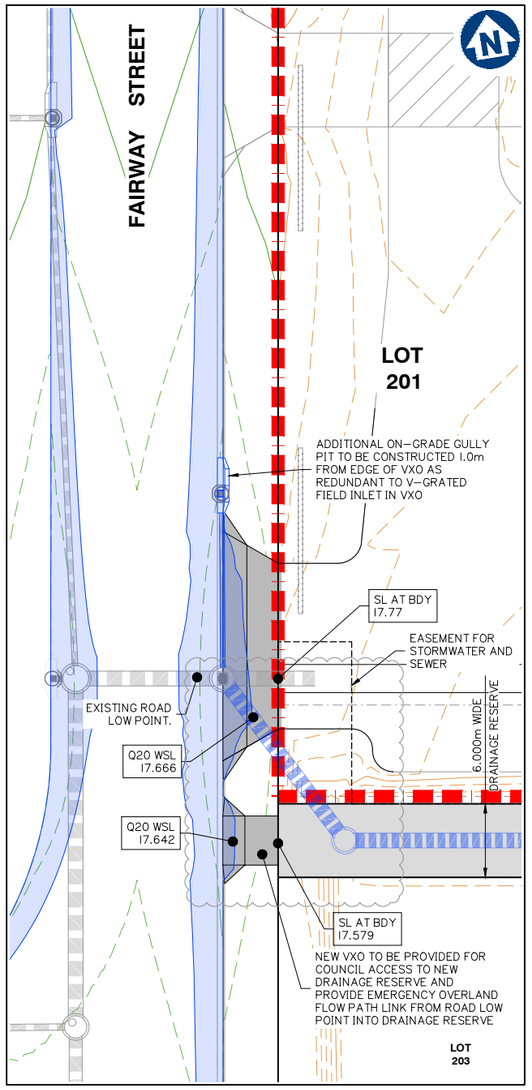
Drawing No: 6111 ENG SK 004
Rev. No: B

Appendix E – Proposed V Grate Hydraulic Analysis



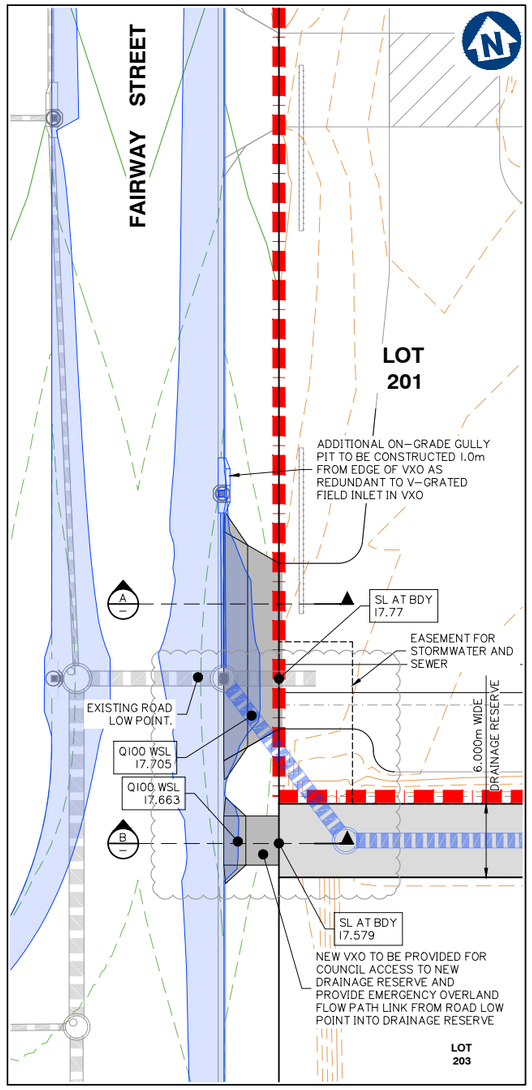
FLOODED WIDTH LAYOUT PLAN – Q2

SCALE 1:250



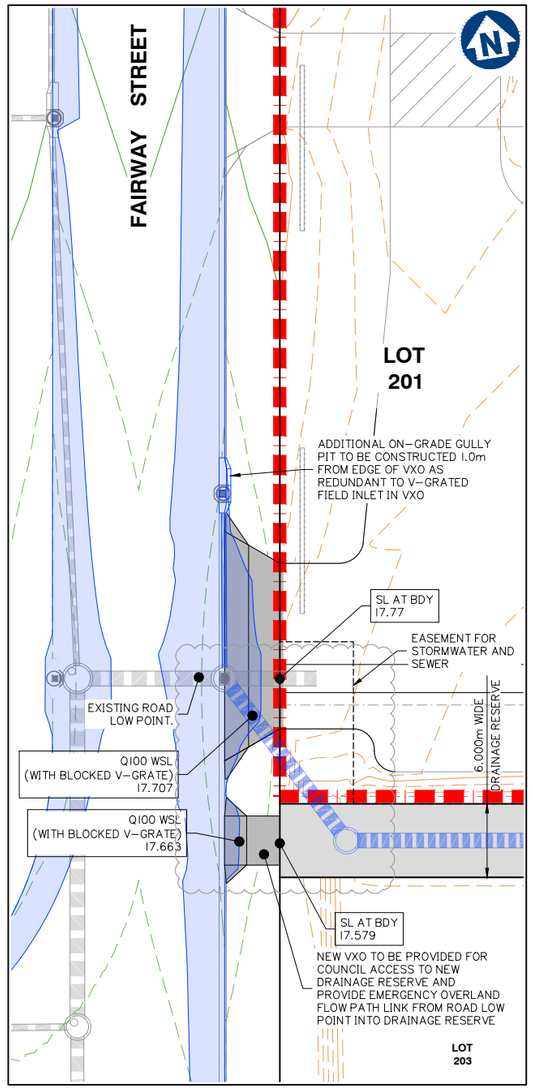
FLOODED WIDTH LAYOUT PLAN – Q20

SCALE 1:250



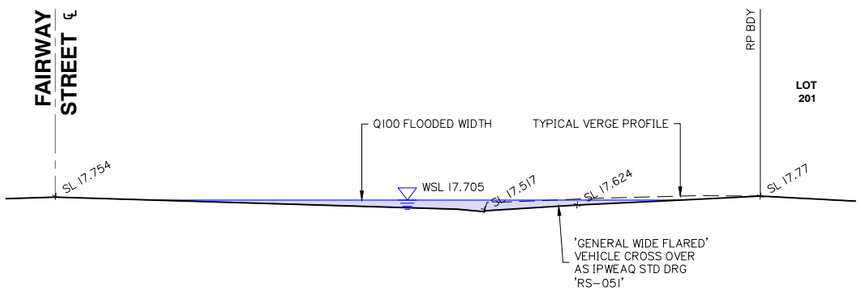
FLOODED WIDTH LAYOUT PLAN – Q100

SCALE 1:250



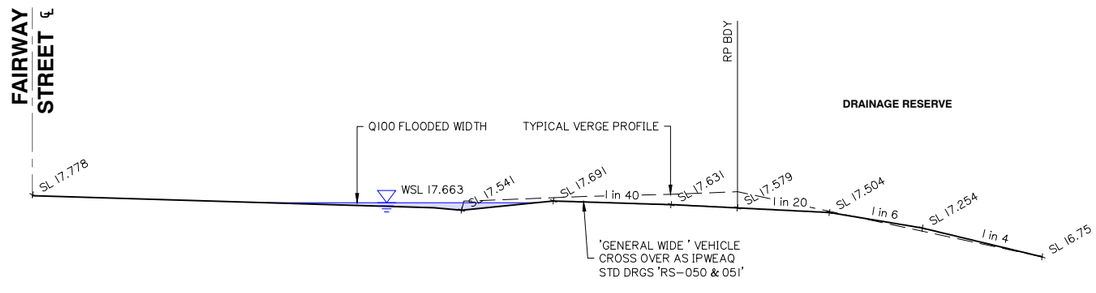
FLOODED WIDTH LAYOUT PLAN – Q100 WITH 100% BLOCKED INLET

SCALE 1:250



SECTION A

SCALE 1:50



SECTION B

SCALE 1:50

NOTE:

ADDITIONAL ON-GRADE GULLY PIT SHOWN FOR INTENT ONLY. HAS NOT BEEN CONSIDERED IN HYDRAULIC ASSESSMENT. REVISED HYDRAULIC DESIGN TO BE PROVIDED AT OPW STAGE FOR COUNCIL APPROVAL

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FAIRWAY STREET,
STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO BE PRINTED IN COLOUR

RPD:

Lot:	502
Plan:	SP316137
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RL:	-

ISSUED FOR APPROVAL
NOT FOR CONSTRUCTION

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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE

FLOODED WIDTH LAYOUT PLAN

Issue	Date	Description	DRN	CHK
B	16/05/21	INFORMATION REQUEST	LAB	MG
A	07/02/22	ORIGINAL ISSUE	JH	MG

0 5 10 15 20 25

1:250 (FULL SIZE A1)
1:500 (HALF SIZE A3)

Scale at A1:	1:250
Designed:	JH
Drafted:	JH
Approved:	MG
RPEQ:	16939
Signed:	
Date:	16-05-2021

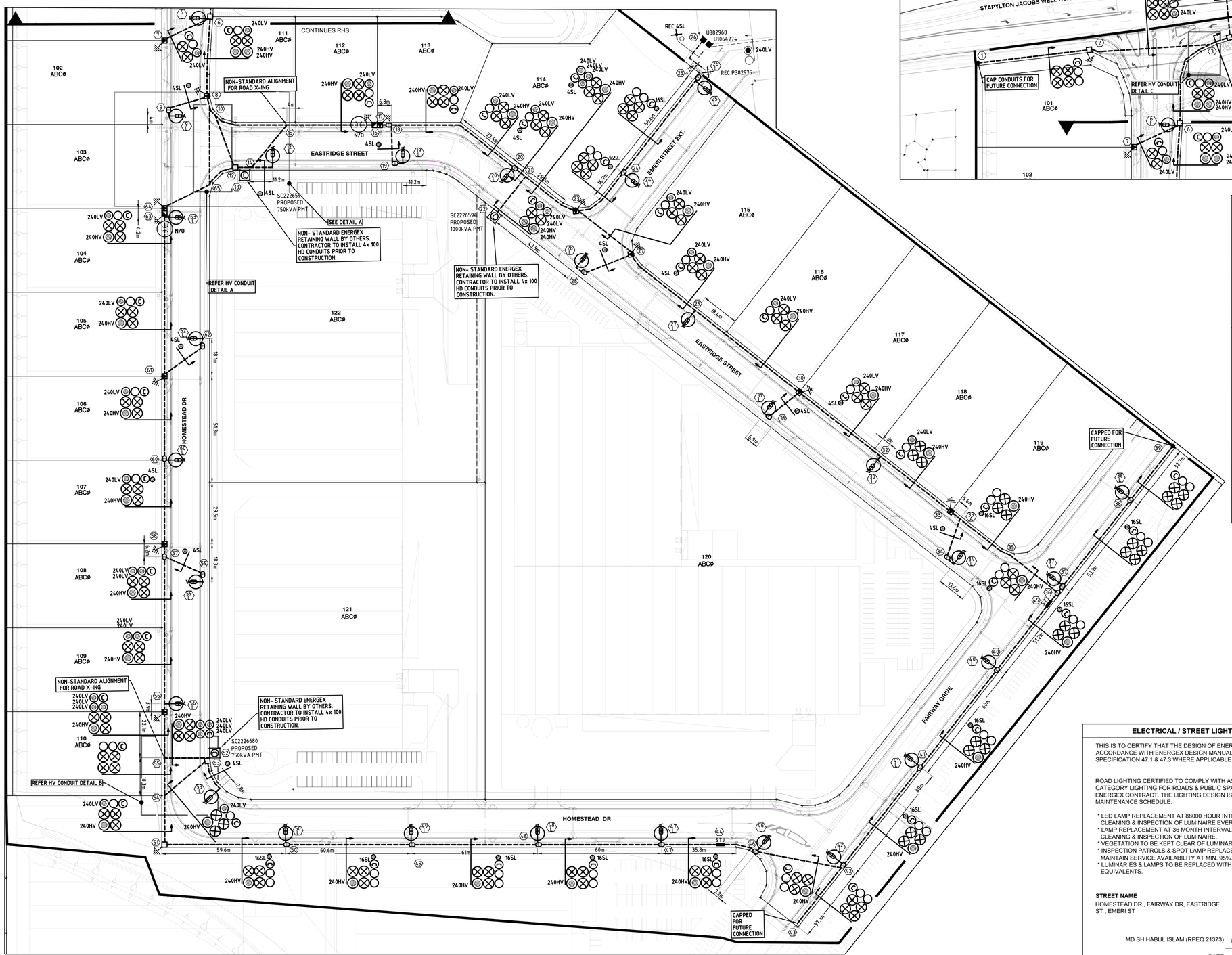
Drawing No: 6111 ENG SK 002

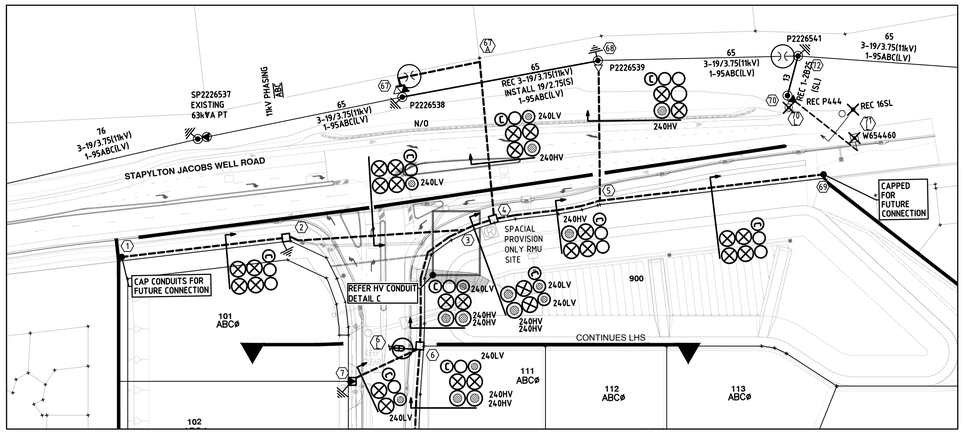
Rev. No: B

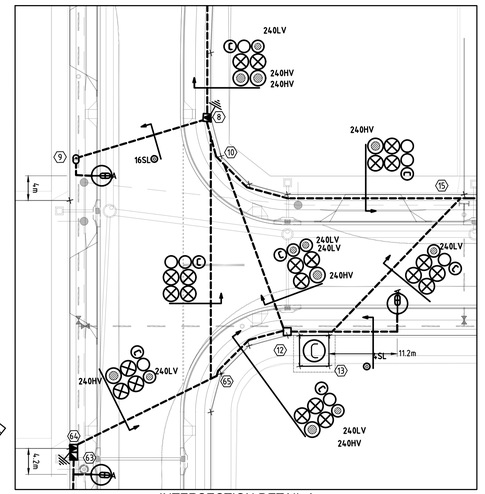
Appendix F – Approved Electrical and Telecommunications Plans

CONSTRUCTION ISSUE

!WARNING!
FIRE ANT TERRITORY
THIS SITE IS WITHIN A RED IMPORTED FIRE ANT BIOSECURITY ZONE. CALL 132523 FOR FURTHER INFORMATION.







INTERSECTION DETAIL A
1:500@A1

SYMBOL LEGEND

- PROPOSED 40mm S/L
- PROPOSED ENERGEX 100mm COMMS
- PROPOSED 100mm
- PROPOSED 125mm
- EXISTING 40mm S/L
- EXISTING ENERGEX 100mm COMMS
- EXISTING 100mm
- EXISTING 125mm
- PROPOSED CABLE (AS MARKED)
- EXISTING CABLE (AS MARKED)
- PROPOSED UNDERGROUND HV/LV ROUTE
- EXISTING UNDERGROUND HV/LV ROUTE
- PROPOSED OVERHEAD HV/LV ROUTE
- EXISTING OVERHEAD HV/LV ROUTE
- PROPOSED S/L CABLE
- EXISTING S/L CABLE
- PADMOUNT TRANSFORMER
- PMT LV GEOGRAPHIC
- PMT HV GEOGRAPHIC
- RING MAIN UNIT
- RMU HV SCHEMATIC
- PROPOSED SUPPLY PILLAR
- EXISTING SUPPLY PILLAR
- PROPOSED LINK PILLAR
- EXISTING LINK PILLAR
- COMMERCIAL PILLAR
- EARTH
- PROPOSED TYPE 4 PIT
- EXISTING TYPE 4 PIT
- RECOVER EQUIPMENT
- 11kV STRAIGHT JOINT
- OVERHEAD POLE TRANSFORMER
- OVERHEAD POLE (HV ONLY)
- OVERHEAD POLE (LV ONLY)
- OVERHEAD POLE (HV & LV)
- OVERHEAD HV TERMINATION
- OVERHEAD LV TERMINATION
- AIR BREAK SWITCH (OPEN)
- AIR BREAK SWITCH (CLOSED)
- DISCONNECT LINKS (OPEN)
- DISCONNECT LINKS (CLOSED)
- WATER METER
- SURVEY PEG

STREET LIGHT SYMBOL LEGEND

- RATE 2 L50A
- EXISTING RATE 2 L50A
- RECOVER S150 (RATE 2)
- RECOVER M125 (RATE3)
- 105W VLED TMR (RATE 3)

ELECTRICAL / STREET LIGHT CERTIFICATION

THIS IS TO CERTIFY THAT THE DESIGN OF ENERGEX RETICULATION IS IN ACCORDANCE WITH ENERGEX DESIGN MANUALS AND WORK CATEGORY SPECIFICATION 47.1 & 47.3 WHERE APPLICABLE.

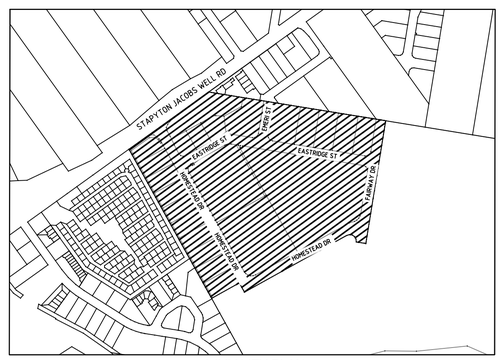
ROAD LIGHTING CERTIFIED TO COMPLY WITH AS/NZS 1158 FOR 'V' & 'P' CATEGORY LIGHTING FOR ROADS & PUBLIC SPACES SUPPLIED UNDER ENERGEX CONTRACT. THE LIGHTING DESIGN IS BASED UPON THE FOLLOWING MAINTENANCE SCHEDULE:

* LED LAMP REPLACEMENT AT 88000 HOUR INTERVALS INC. CLEANING & INSPECTION OF LUMINAIRE EVERY 48 MONTHS.
* LAMP REPLACEMENT AT 36 MONTH INTERVALS INC. CLEANING & INSPECTION OF LUMINAIRE.
* VEGETATION TO BE KEPT CLEAR OF LUMINARIES.
* INSPECTION PATROLS & SPOT LAMP REPLACEMENT TO MAINTAIN SERVICE AVAILABILITY AT MIN. 95%.
* LUMINARIES & LAMPS TO BE REPLACED WITH EXACT EQUIVALENTS.

STREET NAME	LIGHTING CATEGORY
HOMESTEAD DR , FAIRWAY DR, EASTRIDGE ST , EMERI ST	P3

MD SHIHABUL ISLAM (RPEQ 21373) Md Shihabul Islam

DATE 02-11-2021



LOCALITY PLAN
N.TS

R	DESCRIPTION	DATE
A	ISSUED FOR COUNCIL ACCEPTANCE	23.06.2020
B	ISSUED FOR ACCEPTANCE	12.08.2020
C	ISSUED FOR ACCEPTANCE	20.08.2020
D	ISSUE FOR DOMESTIC & ENERGEX ACCEPTANCE.	07.09.20
E	ISSUE FOR CONSTRUCTION	8.12.20
F	ROAD CROSSING 4 - 67 AMENDED	05.01.21
G	STN 67 - 68 OVERHEAD SPAN REMOVED.	21.01.21
H	REISSUE FOR CONSTRUCTION STN 2 PILLAR ADDED	14.04.21
I	REISSUE FOR CONSTRUCTION RMU REMOVED.	2.11.21

CONSULTING ENGINEERS
STREET ADDRESS U14, 39 Lawrence Dr, Nerang QLD 4211
POSTAL ADDRESS PO Box 2835, Nerang DC QLD 4211
TELEPHONE (07) 5596 1425
EMAIL mail@pece.com.au
WEB petereustace.com.au

NORTH

19-0515- 03

SITE CONTACT DETAILS		
NAME		
TBC		
COMPANY		
-		
PHONE	-	
MOBILE	-	
FAX	-	

COUNCIL STANDARD ALIGNMENTS	
Energex OH	**Energex OH**
Energex UG	**Energex UG**
NBN	**REFER NBN**
GAS	**REFER GAS**
HP GAS	**REFER GAS**
WATER	**REFER CIVIL**
STORMWATER	**REFER CIVIL**
SEWERAGE	**REFER CIVIL**
OTHER	**REFER CIVIL**

WORKS COORDINATOR	**PETER EUSTACE & ASSOCIATES**
PARENT PROJECT NO.	
WORK REQUEST NO.	
LOTS	**101-122 , 900**
CANCELLING LOTS	**LOT 501 on SP295994**
LOCAL AUTHORITY	**GOLD COAST CITY COUNCIL**
UBD REF	
PEGGED?	

APPROVED	**SHIHABUL ISLAM**
CHECKED	**DAVID PRUSS**
DESIGNER	**ABRAHAM IKORO**
PHONE	**(07) 5596 1425**
PLANNER	**KRIS BOVEINIS**
PHONE	**(07) 5596 1425**
ISSUE DATE	**02 NOVEMBER 2021**

Peter Eustace & Associates

INSTALL CABLE , CONDUIT , PILLARS, PITS AND STREET LIGHT

23 LOTS SUBDIVISION
HESTER -YATALA STAPYLTON JACOBS WELL ROAD
YATALA

WORKSPLAN VERSION 5.5
SCALE: **1:1000@A1**
PROJECT / SUB PROJECT NO.
S1301356
Sheet **1 of 6**
ISSUE NO: **I**

!WARNING!
FIRE ANT TERRITORY

THIS SITE IS WITHIN A RED IMPORTED FIRE ANT BIOSECURITY ZONE. CALL 132523 FOR FURTHER INFORMATION.

CONSTRUCTION ISSUE

MAINTENANCE REGIME

Maintenance Factor Assumed: The maintenance factor assumed in the calculations is as follows:
* Luminaire Maintenance Factor (refer AS 1158 1.1:2005 APPENDIX E).
* Lamp Lumen Depreciation Factor (Refer Lamp Manufacturer's "Lamp Lumen Depreciation Curves").

Maintenance Factor Calculated **0.75**

Schedule of Maintenance: This road lighting design is based on the following maintenance schedule:

*LED lamp replacement carried out at 88000 hrs intervals. Cleaning regime every 48 months.
*All other luminaires lamp replacement & cleaning carried out at 36 month intervals.

At this time the following shall also occur:

* All optical surfaces, both internal and external, of the luminarie shall be cleaned.
* All gaskets shall be checked for deterioration and replaced where necessary.
* Damaged/weathered visors shall be replaced.
* All accessible screws, nuts etc. shall be checked for tightness.
* A visual check shall be made of the electrical components and wiring for signs of overheating.
* If required, the luminaire shall be realigned/adjusted to the design specification.

CERTIFICATE OF COMPLIANCE

DESIGN DOCUMENTATION IN ACCORDANCE WITH THE REQUIREMENTS OF COMPLIANCE OF AS/NZS 1158

* Refer AS1158.1.1:2005 Appendix D for information regarding V category
* Refer AS1158.3.1:2005 Appendix E for information regarding P category
* PerfectLite 5.06 computer software used

ITEM	PROJECT SPECIFICATION
LIGHTING CATEGORY	
Road Name	**HOMESTEAD DR , FAIRWAY DR, EASTRIDGE ST , EMERI ST**
Nominated Lighting Category	**P3**
Road Surface Reflection Characteristic	**R3**
INSTALLATION GEOMETRY	
Road Reserve Lighting Design Width	**23m**
Mounting Height	**9m**
Overhang	**0.7m**
Lighting Arrangement	**ARR3**
Pole Setback	**0.8 BKI**
Upcast Angle	**5°**
LUMINAIRE/LAMP 1 DETAILS	
Lamp Type / Wattage	**L50A**
Luminaire Identification	**Philips RoadFlair**
Lamp Flux (Lumens)	**6000**
I-Table Number (.cie)	**BRP391 LED60NW 50W DWV**
Lighting Tariff	**2**
Power Factor	**HPF (> 0.95)**
Start/Run Currents (Amps)	**0.223**
IP Rating	**IP66**
CATEGORY Px LUMINAIRE/LAMP 1 MAXIMUM SPACING CALCS	
Average Horizontal Illuminance (E_h)	**≥1.75 lx**
Minimum Point Horizontal Illuminance (E_m)	**≥0.3 lx**
Illuminance Uniformity (U_{E0})	**≤10**
Upward wasted light ratio (UWLR) %	**≤ 0%**
Road Reserve Lighting Design Width (m)	Maximum Spacing (m)
23	**60.2**

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DESIGN DOCUMENTATION IN ACCORDANCE WITH THE REQUIREMENTS OF COMPLIANCE OF AS/NZS 1158

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* Refer AS1158.3.1:2005 Appendix E for information regarding P category
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Luminaire Identification	**Philips RoadFlair**
Lamp Flux (Lumens)	**6000**
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Minimum Point Horizontal Illuminance (E_m)	**≥0.3 lx**
Illuminance Uniformity (U_{E0})	**≤10**
Upward wasted light ratio (UWLR) %	**≤ 0%**
Road Reserve Lighting Design Width (m)	Maximum Spacing (m)
23	**66.4**

URD CIVIL WORKS SCHEDULE (ROAD CROSSINGS)

LOCATION	STATIONS FROM-TO	CONDUIT LENGTH (m) 40	No	100C	No	100	No	125	No	BENDS (<°/No) 40	No	100C	No	100	No	125	No	X-SECTION (m) EXCAV/ TAPE	COVER STRIP	TRENCH DETAIL	DRAW WIRE	KERB MARK	REMARKS
HOMESTEAD DR	2 - 3			55	1	55	2	55	4										55	SP1	385	2	
	6 - 7			25	1	25	2	25	2										25	N	125	2	
	8 - 9	20	1																20	O	20	2	
	10 - 65			40	1	40	2	40	4										40	SP1	280	2	REFER CONDUIT DETAIL 'A'
	53 - 54			30	1	30	2	30	4										30	SP1	210	2	REFER CONDUIT DESTAIL 'B'
	53 - 55			25	1	25	3	25	4										25	SP3	200	2	REFER CONDUIT DETAIL 'B'
	57 - 59	25	1																25	O	25	2	
	61 - 62	25	1																25	O	25	2	
	64 - 65			25	1	25	2	25	4										25	SP1	175	2	
FAIRWAY DR	35 - 36	30	1	30	1	30	2	30	4										30	SP2	240	2	
	42 - 46			40	1	40	2	40	4										40	SP1	280	2	
EASTRIDGE ST	10 - 12			30	1	30	2	30	4										30	SP1	210	2	REFER CONDUIT DETAIL 'A'
	14 - 15			30	1	30	2	30	4										30	SP1	210	2	
	18 - 19	20	1																20	O	20	2	
	21 - 22			20	1	20	2	20	4										20	SP1	140	2	
	23 - 27			30	1	30	2	30	4										30	SP1	210	2	
	27 - 28	25	1																25	O	25	2	
	30 - 31	25	1																25	O	25	2	
	33A - 34	20	1																20	O	20	2	
STAPYLTON JACOBS WELL RD	4 - 67A			50	1	50	2	50	4										50	SP1	350	2	
	5 - 68			45	1	45	2	45	4										45	SP1	315	2	
TOTALS		190		475		975		1850											635		3490	42	

URD CIVIL WORKS SCHEDULE (ALONG FOOTPATHS)

LOCATION	STATIONS FROM-TO	CONDUIT LENGTH (m) 40	No	100C	No	100	No	125	No	BENDS (<°/No) 40	No	100C	No	100	No	125	No	X-SECTION (m) EXCAV/ TAPE	COVER STRIP	TRENCH DETAIL	DRAW WIRE	KERB MARK	REMARKS
STAPYLTON JACOBS WELL RD	1 - 2			65	1	65	2	65	4									65		SP1	455		
	3 - 69			120	1	120	2	120	4									120		SP1	840		
	67A - 67			35	1	35	2	35	4									30	5	SP1	245		
HOMESTEAD DR	3 - 8			85	1	85	2	85	4									85		SP1	595		
	46 - 51	290	1	290	1	290	2	290	4									290		SP2	2320		
	51 - 55			45	1	45	2	45	4									45		SP1	315		
	55 - 56			25	1	25	3	25	4									25		SP3	200		
	56 - 57			80	1	80	2	80	4									80		SP1	560		
	57 - 60	50	1	50	1	50	2	50	4									50		SP2	400		
	60 - 64			125	1	125	2	125	4									125		SP1	875		
	6 - 6L	5	1																5	O	5		
	9 - 9L	5	1																5	O	5		
	46 - 46L	5	1																5	O	5		
	47 - 47L	5	1																5	O	5		
	48 - 48L	5	1																5	O	5		
	49 - 49L	5	1																5	O	5		
	50 - 50L	5	1																5	O	5		
	53 - 53L	20	1															15	5	O	20		
	56 - 56L	5	1																5	O	5		
	59 - 59L	5	1																5	O	5		
	60 - 60L	5	1																5	O	5		
	62 - 62L	5	1																5	O	5		
	63 - 63L	5	1																5	O	5		
EASTRIDGE ST	12 - 14			10	1	10	2	10	4									10		SP1	70		
	12 - 65			20	1	20	2	20	4									20		SP1	140		
	8 - 17			95	1	95	2	95	4									95		SP1	665		
	17 - 18	5	1	5	1	5	2	5	4									5		SP2	40		
	18 - 20			65	1	65	2	65	4									65		SP1	455		
	20 - 21	10	1	10	1	10	2	10	4									10		SP2	80		
	21 - 23	30	1	30	1	30	3	30	4									30		SP4	270		
	27 - 29	40	1	40	1	40	2	40	4									40		SP2	320		
	29 - 30			75	1	75	2	75	4									75		SP1	525		
	30 - 32	50	1	50	1	50	2	50	4									50		SP2	400		
	32 - 33			45	1	45	2	45	4									45		SP1	315		
	33 - 35	35	1	35	1	35	2	35	4									35		SP2	280		
	14 - 12L	10	1															5	5	O	10		
	19 - 19L	5	1																5	O	5		
	20 - 20L	5	1																5	O	5		
	28 - 28L	5	1																5	O	5		
	29 - 27L	5	1																5	O	5		
	31 - 31L	5	1																5	O	5		
	32 - 30L	5	1																5	O	5		
	34 - 34L	5	1																5	O	5		
EMERI ST	23 - 25	90	1	90	1	90	2	90	4									90		SP2	720		
	24 - 24L	5	1																5	O	5		
	25 - 25L	5	1																5	O	5		
FAIRWAY DR	38 - 39			35	1	35	2	35	4									35		SP1	245		
	38 - 42	230	1	230	1	230	2	230	4									230		SP2	1840		
	42 - 43			35	1	35	2	35	4									35		SP1	245		
	37 - 37L	5	1																5	O	5		
	38 - 38L	5	1																5	O	5		
	40 - 40L	5	1																5	O	5		
	41 - 41L	5	1																5	O	5		
	42 - 42L	5	1																5	O	5		
TOTALS		990		1790		3635		7160										1805	145		13575		

UNDERGROUND CABLE SCHEDULE

LOCATION	STATIONS FROM-TO	VOLTS	EXIST	TRF	REC	INSTALL	CABLE SIZE/TYPE	MODEL ID	ROUTE LENGTH (m)	CABLE LENGTH (m) NEW	CABLE LENGTH (m) REC	LCC	REMARKS
STAPYLTON JACOBS WELL RD	67 - 13	11kV				*	240mm² 3 x 1C Al XLPE TRIPLEX	11AT240XSH	227	230			
	67 - 22	11kV				*	240mm² 3 x 1C Al XLPE TRIPLEX	11AT240XSH	442	445			
	2 - 4	LV				*	240mm² 4C Al XLPE	LVA4240XPV	67	70			
	4 - 67	LV				*	240mm² 4C Al XLPE	LVA4240XPV	92	95			
	4 - 6	LV				*	240mm² 4C Al XLPE	LVA4240XPV	55	50			
	70 - 71L	SL	*		*		16mm² 2C Cu PVC/PVC	LVC216PVPV	27		30		
HOMESTEAD DR	44 - 52	11kV				*	240mm² 3 x 1C Al XLPE TRIPLEX	11AT240XSH	332	335			
	6 - 7	LV				*	240mm² 4C Al XLPE	LVA4240XPV	22	25			
	6 - 13	LV				*	240mm² 4C Al XLPE	LVA4240XPV	82	85			
	8 - 12	LV				*	240mm² 4C Al XLPE	LVA4240XPV	37	40			
	12 - 13	LV				*	240mm² 4C Al XLPE	LVA4240XPV	7	10			
	13 - 64	LV				*	240mm² 4C Al XLPE	LVA4240XPV	42	45			
	51 - 53	LV				*	240mm² 4C Al XLPE	LVA4240XPV	52	55			
	52 - 53	LV				*	240mm² 4C Al XLPE	LVA4240XPV	7	10			
	53 - 56	LV				*	240mm² 4C Al XLPE	LVA4240XPV	42	45			
	52 - 58	LV				*	240mm² 4C Al XLPE	LVA4240XPV	127	130			
	52 - 61	LV				*	240mm² 4C Al XLPE	LVA4240XPV	207	210			
	61 - 63	LV				*	240mm² 4C Al XLPE	LVA4240XPV	82	85			
	63 - 64	LV				*	185mm² 4 x 1C Cu PVC	SC0007181	2	5			
	6 - 6L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	8 - 9L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	27	30			
	46 - 46L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	46 - 47	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	47	50			
	47 - 47L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	47 - 48	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	57	60			
	48 - 48L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	48 - 49	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	62	65			
	49 - 49L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	49 - 50	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	57	60			
	50 - 50L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	50 - 51	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	57	60			
	53 - 53L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	32	35			
	56 - 56L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	7	10			
	58 - 59L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	27	30			
	58 - 60L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	52	55			
	61 - 62L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	32	35			
	63 - 63L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	7	10			
EASTRIDGE ST	13 - 52	11kV				*	240mm² 3 x 1C Al XLPE TRIPLEX	11AT240XSH	337	340			
	22 - 45	11kV				*	240mm² 3 x 1C Al XLPE TRIPLEX	11AT240XSH	357	360			
	12 - 16	LV				*	240mm² 4C Al XLPE	LVA4240XPV	77	80			
	16 - 17	LV				*	185mm² 4 x 1C Cu PVC	SC0007181	2	5			
	17 - 23	LV				*	240mm² 4C Al XLPE	LVA4240XPV	97	100			
	22 - 23	LV				*	240mm² 4C Al XLPE	LVA4240XPV	47	50			
	22 - 27	LV				*	240mm² 4C Al XLPE	LVA4240XPV	87	90			
	27 - 30	LV				*	240mm² 4C Al XLPE	LVA4240XPV	107	110			
	30 - 33	LV				*	240mm² 4C Al XLPE	LVA4240XPV	92	95			
	12 - 12L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	17	20			
	17 - 19L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	27	30			
	23 - 20L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	37	40			
	27 - 27L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	47	50			
	27 - 28L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	27	30			
	30 - 31L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	22	25			
	30 - 30L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	57	60			
	33 - 34L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	32	35			
	33 - 36	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	62	65			
EMERI ST	23 - 24	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	27	30			
	24 - 25	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	62	65			
	24 - 24L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	25 - 25L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	26 - 26L	SL	*		*		4mm² 2C Cu PVC/PVC	LVC24PVPV	12		15		
FAIRWAY DR	44 - 45	11kV				*	240mm² 3 x 1C Al XLPE TRIPLEX	11AT240XSH	227	230			
	36 - 37	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	2	5			
	37 - 37L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	37 - 38	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	52	55			
	38 - 38L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	52	55			
	36 - 40	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	42	45			
	40 - 40L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	40 - 41	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	57	60			
	41 - 41L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	41 - 42	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	57	60			
	42 - 42L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
TOTALS		11kV					240mm² 3 x 1C Al XLPE TRIPLEX	11AT240XSH		1940			
		LV					240mm² 4C Al XLPE	LVA4240XPV		1480			
		LV					185mm² 4 x 1C Cu PVC	SC0007181		10			
		E					120mm² Cu PVC/PVC	8939					
		SL					16mm² 2C Cu PVC/PVC	LVC216PVPV		680	30		
		SL					4mm² 2C Cu PVC/PVC	LVC24PVPV		610	15		

SYMBOL LEGEND

- PROPOSED 40mm S/L
- PROPOSED ENERGEX 100mm COMMS
- PROPOSED 100mm
- PROPOSED 125mm
- EXISTING 40mm S/L
- EXISTING ENERGEX 100mm COMMS
- EXISTING 100mm
- EXISTING 125mm
- PROPOSED CABLE (AS MARKED)
- EXISTING CABLE (AS MARKED)
- PROPOSED UNDERGROUND HV/LV ROUTE
- EXISTING UNDERGROUND HV/LV ROUTE
- PROPOSED OVERHEAD HV/LV ROUTE
- EXISTING OVERHEAD HV/LV ROUTE
- PROPOSED S/L CABLE
- EXISTING S/L CABLE
- PADMOUNT TRANSFORMER
- PMT LV GEOGRAPHIC
- PMT HV GEOGRAPHIC
- RING MAIN UNIT
- RMU HV SCHEMATIC
- PROPOSED SUPPLY PILLAR
- EXISTING SUPPLY PILLAR
- PROPOSED LINK PILLAR
- EXISTING LINK PILLAR
- COMMERCIAL PILLAR
- EARTH
- PROPOSED TYPE 4 PIT
- EXISTING TYPE 4 PIT
- RECOVER EQUIPMENT
- 11kV STRAIGHT JOINT
- OVERHEAD POLE TRANSFORMER
- OVERHEAD POLE (HV ONLY)
- OVERHEAD POLE (LV ONLY)
- OVERHEAD POLE (HV & LV)
- OVERHEAD HV TERMINATION
- OVERHEAD LV TERMINATION
- AIR BREAK SWITCH (OPEN)
- AIR BREAK SWITCH (CLOSED)
- DISCONNECT LINKS (OPEN)
- DISCONNECT LINKS (CLOSED)
- WATER METER
- SURVEY PEG

STREET LIGHT SYMBOL LEGEND

- RATE 2 L50A
- EXISTING RATE 2 L50A
- RECOVER S150 (RATE 2)
- RECOVER M125 (RATE3)
- 105W VLED TMR (RATE 3)

R	DESCRIPTION	DATE
A	ISSUED FOR COUNCIL ACCEPTANCE	23.06.2020
B	ISSUED FOR COUNCIL ACCEPTANCE	12.08.2020
C	ISSUED FOR COUNCIL ACCEPTANCE	20.08.2020
D	ISSUE FOR COUNCIL & ENERGEX ACCEPTANCE	07.09.20
E	ISSUE FOR CONSTRUCTION	8.12.20
F	ROAD CROSSING CONDUITS ADDED	05.01.21
G	STN 67 - 68 OVERHEAD SPAN REMOVED	21.01.21
H	REISSUE FOR CONSTRUCTION STN 2 PILLAR ADDED	14.04.21
I	REISSUE FOR CONSTRUCTION, RMU REMOVED	2.11.21

CONSULTING ENGINEERS
STREET ADDRESS: U14, 39 Lawrence Dr, Nerang QLD 4211
POSTAL ADDRESS: PO Box 2835, Nerang DC QLD 4211
TELEPHONE: (07) 5596 1425
EMAIL: mail@pece.com.au
WEB: petereustace.com.au

NORTH

19-0515- 04

SITE CONTACT DETAILS		COUNCIL STANDARD ALIGNMENTS		WORKS COORDINATOR	PETER EUSTACE & ASSOCIATES
NAME		Energex OH	**Energex OH**	PARENT PROJECT NO.	
TBC		Energex UG	**Energex UG**	WORK REQUEST NO.	
COMPANY		NBN	**REFER NBN**		
-		GAS	**REFER GAS**	LOTS	**101-122 , 900**
PHONE	-	HP GAS	**REFER GAS**		
MOBILE	-	WATER	**REFER CIVIL**	CANCELLING LOTS	**LOT 501 on SP295994**
FAX	-	STORMWATER	**REFER CIVIL**	LOCAL AUTHORITY	**GOLD COAST CITY COUNCIL**
		SEWERAGE	**REFER CIVIL**	UBD REF	
		OTHER	**REFER CIVIL**	PEGGED?	

APPROVED	**SHIHABUL ISLAM**
CHECKED	**DAVID PRUSS**
DESIGNER	**ABRAHAM IKORO**
PHONE	**(07) 5596 1425**
PLANNER	**KRIS BOVEINIS**
PHONE	**(07) 5596 1425**
ISSUE DATE	**02 NOVEMBER 2021**

Peter Eustace & Associates

INSTALL CABLE , CONDUIT , PILLARS, PITS AND STREET LIGHT

23 LOTS SUBDIVISION
HESTER -YATALA STAPYLTON JACOBS WELL ROAD
YATALA

WORKSPLAN VERSION 5.5
SCALE: **1:1000@A1**
PROJECT / SUB PROJECT NO.
S1301356
Sheet **2 of 6**
ISSUE NO: **I**

EQUIPMENT SCHEDULE PART 1

LOCATION	STN No	SITE I.D.	EXIST	REC	INSTALL	SIZE & DESCRIPTION	IIN	COMP ID	PLANT No.	MODEL ID	QTY	LCC	REMARKS
HOMESTEAD DRIVE	6	U2226601			*	SUPPLY PILLAR (240-240-240 7F)		PI1		LVSP9-6S	1		
	7	U2226602			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	EARTH				ASSY1037-1	1		
	8	U2226603			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	EARTH				ASSY1037-1	1		
	9				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
	44	U2226795			*	11kV STRAIGHT JOINT		SJ1		11ST24/24X	1		
	46				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
					*	JUNCTION BOX KIT (NO FUSE)				ASSY833-5	1		
	47				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
					*	JUNCTION BOX KIT (NO FUSE)				ASSY833-5	1		
	48				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
					*	JUNCTION BOX KIT (NO FUSE)				ASSY833-5	1		
	49				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
					*	JUNCTION BOX KIT (NO FUSE)				ASSY833-5	1		
	50				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
					*	JUNCTION BOX KIT (NO FUSE)				ASSY833-5	1		
	51	U2226605			*	SUPPLY PILLAR (240 7F)		PI1		LVSP2-6S	1		
					*	EARTH				ASSY1011-2	1		
	52	SC2226680			*	750kVA PADMOUNT TRANSFORMER		TR1		S25119	1		
					*	CULVERT & BASE				C & B	1		
					*	PMT INSTALLATION				PMTINSTALL	1		
					*	PMT COMMISSION				PMTCOM	1		
					*	HV FUSES				DSHVF7SLK	1		
					*	LV FUSES				DSLVF31	3		
					*	HV TERMINATIONS				2DBSTA24D	2		
					*	LV TERMINATIONS				LTSA24D	3		
					*	COMMON EARTHING				DSSQPMCEG	1		
	53	U2226604			*	SUPPLY PILLAR (240-240-240 7F)		PI1		LVSP9-6S	1		
	56	U2226606			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	EARTH				ASSY1037-1	1		
	57				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
	58	U2226607			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	EARTH				ASSY1037-1	1		
	59				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
	60				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
	61	U2226609			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	EARTH				ASSY1037-1	1		
	62				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
	63	LP2226681			*	LINK PILLAR (240-240 7F)		LP1		LVSP14-6	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	EARTH				ASSY1037-1	1		
	64	U2226610			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	EARTH				ASSY1037-1	1		

RATE 2 STREETLIGHT SCHEDULE

LOCATION	STN No	SITE ID (POLE No)	POLE or COMPONENTS						LANTERN								OUTREACH BRACKET				MOUNT HEIGHT (m)	REMARKS
			COMP ID	EXIST (m)	REC (m)	ERECT (m)	SLM or IIN	ALIGN (m)	COMP ID	EXIST	RECOVER LUMIN	RECOVER CUST	DATE DE-ENERG	ERECT LUMIN	ERECT CUST	DATE ENERG	SLM or IIN	EXIST (m)	REC (m)	ERECT (m)	SLM or IIN		
HOMESTEAD DRIVE	6L	P2226562	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	9L	P2226563	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	46L	P2226564	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	47L	P2226565	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	48L	P2226566	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	49L	P2226567	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	50L	P2226568	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	53L	P2226569	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	56L	P2226570	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	59L	P2226571	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	60L	P2226572	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	62L	P2226573	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	63L	P2226574	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
FAIRWAY DRIVE	37L	P2226575	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	38L	P2226576	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	40L	P2226577	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	41L	P2226578	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	42L	P2226579	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
EASTRIDGE ST	12L	P2226580	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	19L	P2226581	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	20L	P2226582	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	27L	P2226584	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	28L	P2226583	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	30L	P2226585	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	31L	P2226586	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	34L	P2226587	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
EMERI STREET	24L	P2226588	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	25L	P2226589	PO 1			7.0 BPM	SB90115UCI	0.8 BKI	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	26L	P382975	PO 1	7.0 BIG	7.0 BIG		EX	EX	SL 1	M50D	M50DL2	GCCC					EX	1.5	1.5		-	9	

RATE 3 STREETLIGHT SCHEDULE

LOCATION	STN No	SITE ID (POLE No)	POLE or COMPONENTS						LANTERN								OUTREACH BRACKET				MOUNT HEIGHT (m)	REMARKS
			COMP ID	EXIST (m)	REC (m)	ERECT (m)	SLM or IIN	ALIGN (m)	COMP ID	EXIST	RECOVER LUMIN	RECOVER CUST	DATE DE-ENERG	ERECT LUMIN	ERECT CUST	DATE ENERG	SLM or IIN	EXIST (m)	REC (m)	ERECT (m)	SLM or IIN		
STAPYLTON JACOBS WELL RD	70L	P444	PO 1	WOOD POLE			EX	EX	SL 1		M125L3	GCCC					EX			EX		EX	
	71L	W654460	PO 1	8.5BPM	8.5BPM		EX	EX	SL 1		S150L3	DTMR					EX			3.0		10.5	

EQUIPMENT SCHEDULE PART 2

LOCATION	STN No	SITE I.D.	EXIST	REC	INSTALL	SIZE & DESCRIPTION	IIN	COMP ID	PLANT No.	MODEL ID	QTY	LCC	REMARKS
EASTRIDGE ST	12	U2226590			*	SUPPLY PILLAR (240-240-240 7F)		PI1		LVSP9-6S	1		
	13	SC2226591			*	750kVA PADMOUNT TRANSFORMER		TR1		S25119	1		
					*	CULVERT & BASE				C & B	1		
					*	PMT INSTALLATION				PMTINSTALL	1		
					*	PMT COMMISSION				PMTCOM	1		
					*	HV FUSES				DSHVF7SLK	1		
					*	LV FUSES				DSLVF31	3		
					*	HV TERMINATIONS				2DBSTA24D	2		
					*	LV TERMINATIONS				LTSA24D	3		
					*	COMMON EARTHING				DSSQPMCEG	1		
	16	LP2226592			*	LINK PILLAR (240-240 6F)		LP1		LVSP14-6	1		
					*	EARTH				ASSY1037-1	1		
	17	U2226593			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	EARTH				ASSY1037-1	1		
	18				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
	19				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
	20				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
	22	SC2226594			*	1000kVA PADMOUNT TRANSFORMER		TR1		S25120	1		
					*	CULVERT & BASE				C & B	1		
					*	PMT INSTALLATION				PMTINSTALL	1		
					*	PMT COMMISSION				PMTCOM	1		
					*	HV FUSES				DSHVF10SLK	1		
					*	LV FUSES				DSLVF31	2		
					*	HV TERMINATIONS				2DBSTA24D	2		
					*	LV TERMINATIONS				LTSA24D	2		
					*	COMMON EARTHING				DSSQPMCEG	1		
	23	U2226595			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	EARTH				ASSY1037-1	1		
	27	U2226596			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	EARTH				ASSY1037-1	1		
	28				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
	30	U2226597			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	EARTH				ASSY1037-1	1		
	31				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
	33	U2226598			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	EARTH				ASSY1037-1	1		
	34				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
EMERI ST	24				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
					*	JUNCTION BOX KIT (NO FUSE)				ASSY833-5	1		
	25				*	S/L PIT & LID (TYPE 4)		PIT11		ASSY833-1	1		
					*	JUNCTION BOX KIT (NO FUSE)				ASSY833-5	1		
	26	U382968	*			SERVICE PILLAR		PI1		EX	1		
			*	*		SL FUSE				EX	1		
FAIRWAY DR	36				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
					*	JUNCTION BOX KIT (NO FUSE)				ASSY833-5	1		
	37				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
					*	JUNCTION BOX KIT (NO FUSE)				ASSY833-5	1		
	38				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
					*	JUNCTION BOX KIT (NO FUSE)				ASSY833-5	1		
	40				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
					*	JUNCTION BOX KIT (NO FUSE)				ASSY833-5	1		
	41				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-9	1		
					*	JUNCTION BOX KIT (NO FUSE)				ASSY833-13	1		
	42				*	S/L PIT & LID (TYPE 4)		PIT1		ASSY833-1	1		
					*	JUNCTION BOX KIT (NO FUSE)				ASSY833-5	1		
	45	U2226796			*	11kV STRAIGHT JOINT		SJ1		11ST24/24X	1		
STAPYLTON JACOBS WELL RD	2	U2242837			*	SUPPLY PILLAR (240 6F)		PI1		LVSP2-6	1		
					*	EARTH				ASSY1011-2	1		
	4	U2226599			*	SUPPLY PILLAR (240-240-240 6F)		PI1		LVSP9-6	1		

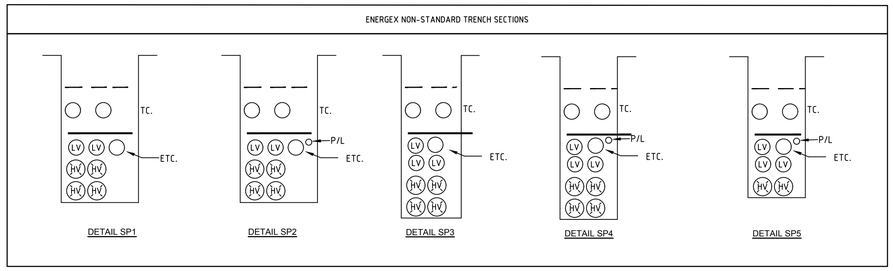
SYMBOL LEGEND

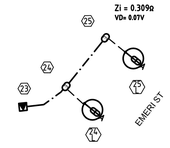
- PROPOSED 40mm S/L
- PROPOSED ENERGEX 100mm COMMS
- PROPOSED 100mm
- PROPOSED 125mm
- EXISTING 40mm S/L
- EXISTING ENERGEX 100mm COMMS
- EXISTING 100mm
- EXISTING 125mm
- PROPOSED CABLE (AS MARKED)
- EXISTING CABLE (AS MARKED)
- PROPOSED UNDERGROUND HV/LV ROUTE
- EXISTING UNDERGROUND HV/LV ROUTE
- PROPOSED OVERHEAD HV/LV ROUTE
- EXISTING OVERHEAD HV/LV ROUTE
- PROPOSED S/L CABLE
- EXISTING S/L CABLE
- PADMOUNT TRANSFORMER
- PMT LV GEOGRAPHIC
- PMT HV GEOGRAPHIC
- RING MAIN UNIT
- RMU HV SCHEMATIC
- PROPOSED SUPPLY PILLAR
- EXISTING SUPPLY PILLAR
- PROPOSED LINK PILLAR
- EXISTING LINK PILLAR
- COMMERCIAL PILLAR
- EARTH
- PROPOSED TYPE 4 PIT
- EXISTING TYPE 4 PIT
- RECOVER EQUIPMENT
- STJ 11kV STRAIGHT JOINT
- OVERHEAD POLE TRANSFORMER
- OVERHEAD POLE (HV ONLY)
- OVERHEAD POLE (LV ONLY)
- OVERHEAD POLE (HV & LV)
- OVERHEAD HV TERMINATION
- OVERHEAD LV TERMINATION
- AIR BREAK SWITCH (OPEN)
- AIR BREAK SWITCH (CLOSED)
- DISCONNECT LINKS (OPEN)
- DISCONNECT LINKS (CLOSED)
- WATER METER
- SURVEY PEG

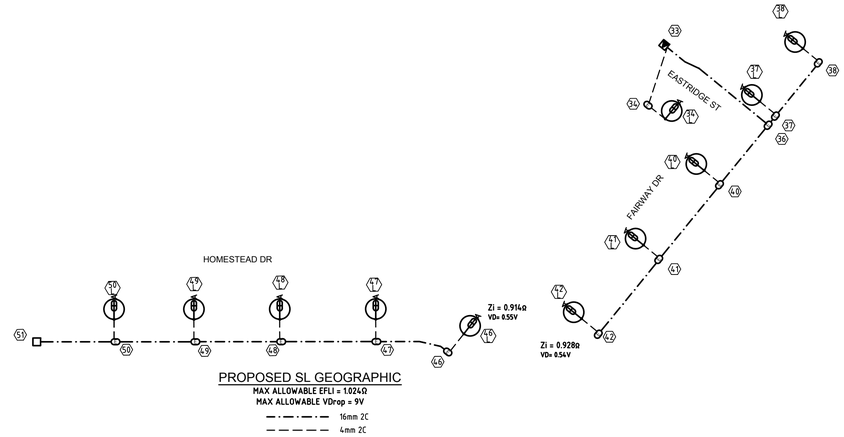
STREET LIGHT SYMBOL LEGEND

- RATE 2 L50A
- EXISTING RATE 2 L50A
- RECOVER S150 (RATE 2)
- RECOVER M125 (RATE3)
- 105W VLED TMR (RATE 3)

ENERGEX NON-STANDARD TRENCH SECTIONS







!WARNING!
FIRE ANT TERRITORY

THIS SITE IS WITHIN A RED IMPORTED FIRE ANT BIOSECURITY ZONE. CALL 132523 FOR FURTHER INFORMATION.

CONSTRUCTION ISSUE

R	DESCRIPTION	DATE
A	ISSUED FOR COUNCIL ACCEPTANCE	23.06.2020
B	ISSUED FOR COUNCIL ACCEPTANCE	12.08.2020
C	ISSUED FOR COUNCIL ACCEPTANCE	20.08.2020
D	ISSUE FOR COUNCIL & ENERGEX ACCEPTANCE	07.09.20
E	ISSUE FOR CONSTRUCTION	8.12.20
F	ROAD CROSSING 4, 6, 47 AMENDED	05.01.21
G	STN 67 - 68 OVERHEAD SPAN REMOVED	21.01.21
H	REISSUE FOR CONSTRUCTION STN 2 PILLAR ADDED	14.04.21
I	REISSUE FOR CONSTRUCTION, RMU REMOVED.	2.11.21

CONSULTING ENGINEERS
STREET ADDRESS: U14, 39 Lawrence Dr, Nerang QLD 4211
POSTAL ADDRESS: PO Box 2835, Nerang DC QLD 4211
TELEPHONE: (07) 5596 1425
EMAIL: mail@pecs.com.au
WEB: petereustace.com.au

NORTH

19-0515- 05

SITE CONTACT DETAILS		COUNCIL STANDARD ALIGNMENTS		WORKS COORDINATOR	PETER EUSTACE & ASSOCIATES
NAME		Energex OH	Energex OH	PARENT PROJECT NO.	
TBC		Energex UG	Energex UG	WORK REQUEST NO.	
COMPANY		NBN	REFER NBN		
-		GAS	REFER GAS	LOTS	101-122 , 900
PHONE	-	HP GAS	REFER GAS		
MOBILE	-	WATER	REFER CIVIL	CANCELLING LOTS	LOT 501 on SP295994
FAX	-	STORMWATER	REFER CIVIL	LOCAL AUTHORITY	GOLD COAST CITY COUNCIL
		SEWERAGE	REFER CIVIL	UBD REF	
		OTHER	REFER CIVIL	PEGGED?	

APPROVED	SHIHABUL ISLAM	
CHECKED	DAVID PRUSS	
DESIGNER	ABRAHAM IKORO	
PHONE	(07) 5596 1425	
PLANNER	KRIS BOVEINIS	
PHONE	(07) 5596 1425	
ISSUE DATE	02 NOVEMBER 2021	

Peter Eustace & Associates

INSTALL CABLE , CONDUIT , PILLARS, PITS AND STREET LIGHT

23 LOTS SUBDIVISION
HESTER -YATALA STAPYLTON JACOBS WELL ROAD
YATALA

WORKSPLAN VERSION 5.5
SCALE: N.T.S.
PROJECT / SUB PROJECT NO.
S1301356
Sheet 3 of 6
ISSUE NO: I

OVERHEAD WORKS SCHEDULE

LOCATION	STN No.	SITE I.D (POLE No)	POLES											CONSTRUCTIONS (Note: KBS is top KB to top KB)							REMARKS
			EDT ANG	EDT kN	SST Kn	LST Kn	EXISTING	RECOVER	ERECT	SINK	FOOT	COMP ID	ALIGN	LCC	EXISTING	RECOVER	ERECT	No	KBS	ANG	LCC	
STAPYLTON JACOBS WELL RD	67	P2226538	EX	EX	EX	EX	P15.5/12-22			EX	EX	PO1	EX		11SC2/S	11SC2/S	11TC2/S	1	150			CONVERT SHACKLE TO TERMINATION
																	11BRAL/240XL	1				
																	11PTTRIPXW	1	1400			
															LVABC/SU4			1	1550			
																	SC0010604	1				
																	LVBR240/ABC	1				
																	LVT4C240/HV	1	500			
																	LVABC/DS2	1				
															MEN			1				
																	CGEC	1				CONNECT CGEC TO MEN
	68	P2226539	EX	EX	EX	EX	P15.5/12-22			EX	EX	PO1	EX		11SC2/S	11SC2/S	11TC2/S	1	150			CONVERT SHACKLE TO TERMINATION
																	11BRAL/240XL	1				
																	11PTTRIPXW	1	1400			
															LVABC/SU4			1	2800			
																	SC00010604	1				
															MEN			1				
																	CGEC	1				CONNECT CGEC TO MEN
	70	P444	-	-	-	-	P15.5/12	P15.5/12		EX	EX	PO1	EX		SOHSL	SOHSL		1				
	72	P2226541	-	-	-	-	P15.5/12-22			EX	EX	PO1	EX	EX	11SC2/S			1	150			
															LVT			1	2000			
															LVTMO			2				
															LVABC/S			1				
															SOHSL225BW	SOHSL225BW		1				
															MEN			1				

PMT LV SWBD - SWITCH FUSE CIRCUITS

LOCATION: EASTRIDGE ST **STATION:** SC2226594

CIRCUIT No.	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
TFMR ISOLATOR	80 x 35	WB	6	TO TRANSFORMER
1	80 x 35	WB	5	TO LOT 120 CUSTOMER
2	80 x 35	WB	5	
3	80 x 35	WB	5	TO EASTRIDGE ST U2226596 (DIRECT) / EASTRIDGE ST U2226598 & SERVICES
4	80 x 35	WB	5	TO EASTRIDGE ST U2226595 (DIRECT) / EASTRIDGE ST LP2226592 & SERVICES

MATERIAL: GRAVOPLY II (1.5mm) or similar

PMT LV SWBD - SWITCH FUSE CIRCUITS

LOCATION: EASTRIDGE ST **STATION:** SC2226591

CIRCUIT No.	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
TFMR ISOLATOR	80 x 35	WB	6	TO TRANSFORMER
1	80 x 35	WB	5	TO LOT 122 CUSTOMER
2	80 x 35	WB	5	TO EASTRIDGE ST U2226590 (DIRECT) / EASTRIDGE ST LP2226592 / HOMESTEAD DR U2226603 & SERVICES
3	80 x 35	WB	5	TO HOMESTEAD DR U2226601 (DIRECT) / U2226602 / STAPYLTON JACOBS WELL RD P2226538 / STAPYLTON JACOBS WELL RD U2242837 & SERVICES
4	80 x 35	WB	5	TO HOMESTEAD DR U2226610 (DIRECT) / HOMESTEAD DR LP2226681 & SERVICES

MATERIAL: GRAVOPLY II (1.5mm) or similar

NEW STYLE LINK PILLAR

LOCATION: EASTRIDGE ST **STATION:** LP2226592

CIRCUIT No.	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
1 (LHS)	150x50	WB	5	TO EASTRIDGE ST SC2226591 / HOMESTEAD DR U2226603 & SERVICES
2 (RHS)	150x50	WB	5	TO EASTRIDGE ST SC2226594 & SERVICES

MATERIAL: GRAVOPLY II (1.5mm) or similar

LV POLE TERMINATION LABEL

LABEL SIZE	SITE LOCATION FOR ATTACHING OF LABEL	LABEL INFORMATION
300x100	POLE No: P2226538	LV CABLE TO EASTRIDGE ST SC2226591 / HOMESTEAD DR U2226602 / STAPYLTON JACOBS WELL RD U2242837 & SERVICES
	LOCATION: STAPYLTON JACOBS WELL RD	

MATERIAL: GRAVOPLY II (1.5mm) or similar

PMT LV SWBD - SWITCH FUSE CIRCUITS

LOCATION: HOMESTEAD DR **STATION:** SC2226680

CIRCUIT No.	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
TFMR ISOLATOR	80 x 35	WB	6	TO TRANSFORMER
1	80 x 35	WB	5	T0 LOT 121 CUSTOMER
2	80 x 35	WB	5	TO HOMESTEAD DR U2226609 (DIRECT) / HOMESTEAD DR LP2226681& SERVICES
3	80 x 35	WB	5	TO HOMESTEAD DR U2226607 (DIRECT) & SERVICES
4	80 x 35	WB	5	TO HOMESTEAD DR U2226604 (DIRECT) / HOMESTEAD DR U2226605 / HOMESTEAD DR U2226606 & SERVICES

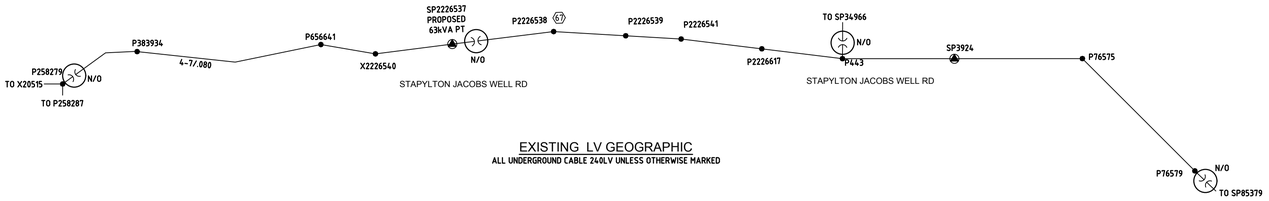
MATERIAL: GRAVOPLY II (1.5mm) or similar

NEW STYLE LINK PILLAR

LOCATION: HOMESTEAD DR **STATION:** LP2226681

CIRCUIT No.	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
1 (LHS)	150x50	WB	5	TO EASTRIDGE ST SC2226680 & SERVICES
2 (RHS)	150x50	WB	5	TO EASTRIDGE ST SC2226591 & SERVICES

MATERIAL: GRAVOPLY II (1.5mm) or similar

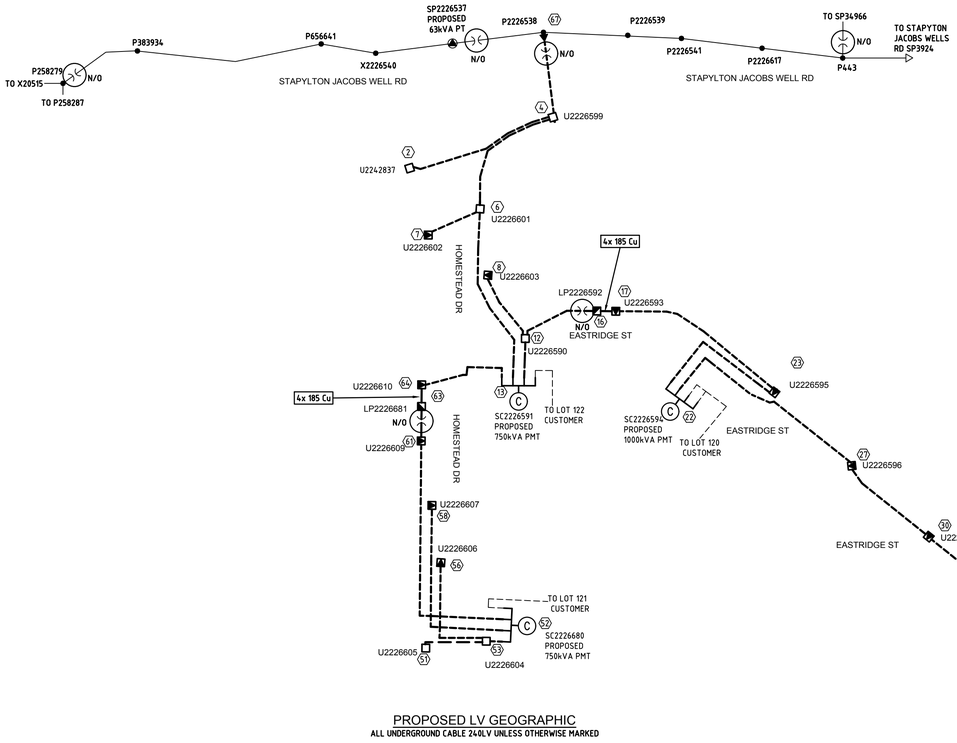


EXISTING LV GEOGRAPHIC

ALL UNDERGROUND CABLE 240LV UNLESS OTHERWISE MARKED

LV OVERHEAD SERVICE CONDUCTOR SCHEDULE

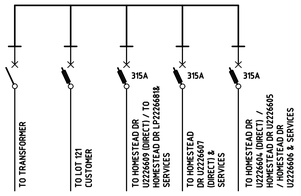
LOCATION	STN No.	HOUSE No	EXISTING	TRANSFER	RECOVER	ERECT	No OF SPANS	DIST (m)	SAG SPAN	SAG(m) 15°	SAG(m) 30°	TOTAL CONDUCTOR LENGTH (m)	FITTINGS MAINS BOX	FITTINGS CHANGE P.O.A.	FITTINGS FUSE SIZE	FITTINGS φ	FITTINGS SERVICE FITTING CODE or IIN	REMARKS
STAPYLTON JACOBS WELL ROAD	70-72	SL	1-2B25		1-2B25		1	13	70-72			13	REC	EX	EX		SOHL225BW	



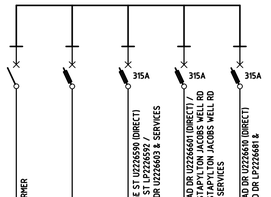
PROPOSED LV GEOGRAPHIC

ALL UNDERGROUND CABLE 240LV UNLESS OTHERWISE MARKED

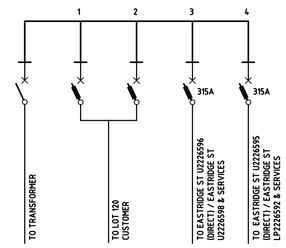
SC2226680
LV SWITCHBOARD LAYOUT



SC2226591
LV SWITCHBOARD LAYOUT



SC2226594
LV SWITCHBOARD LAYOUT



CONSTRUCTION ISSUE

!WARNING!
FIRE ANT TERRITORY
THIS SITE IS WITHIN A RED IMPORTED FIRE ANT BIOSECURITY ZONE. CALL 132523 FOR FURTHER INFORMATION.

SYMBOL LEGEND

- PROPOSED 40mm S/L
- PROPOSED ENERGEX 100mm COMMS
- PROPOSED 100mm
- PROPOSED 125mm
- EXISTING 40mm S/L
- EXISTING ENERGEX 100mm COMMS
- EXISTING 100mm
- EXISTING 125mm
- PROPOSED CABLE (AS MARKED)
- EXISTING CABLE (AS MARKED)
- PROPOSED UNDERGROUND HV/LV ROUTE
- EXISTING UNDERGROUND HV/LV ROUTE
- PROPOSED OVERHEAD HV/LV ROUTE
- EXISTING OVERHEAD HV/LV ROUTE
- PROPOSED S/L CABLE
- EXISTING S/L CABLE
- PADMOUNT TRANSFORMER
- PMT LV GEOGRAPHIC
- PMT HV GEOGRAPHIC
- RING MAIN UNIT
- RMU HV SCHEMATIC
- PROPOSED SUPPLY PILLAR
- EXISTING SUPPLY PILLAR
- PROPOSED LINK PILLAR
- EXISTING LINK PILLAR
- COMMERCIAL PILLAR
- EARTH
- PROPOSED TYPE 4 PIT
- EXISTING TYPE 4 PIT
- RECOVER EQUIPMENT
- STJ 11kV STRAIGHT JOINT
- OVERHEAD POLE TRANSFORMER
- OVERHEAD POLE (HV ONLY)
- OVERHEAD POLE (LV ONLY)
- OVERHEAD POLE (HV & LV)
- OVERHEAD HV TERMINATION
- OVERHEAD LV TERMINATION
- AIR BREAK SWITCH (OPEN)
- AIR BREAK SWITCH (CLOSED)
- DISCONNECT LINKS (OPEN)
- DISCONNECT LINKS (CLOSED)
- WM WATER METER
- SURVEY PEG

STREET LIGHT SYMBOL LEGEND

- RATE 2 L50A
- EXISTING RATE 2 L50A
- RECOVER S150 (RATE 2)
- RECOVER M125 (RATE3)
- 105W VLED TMR (RATE 3)

R	DESCRIPTION	DATE
A	ISSUED FOR COUNCIL ACCEPTANCE	23.06.2020
B	ISSUED FOR COUNCIL ACCEPTANCE	12.08.2020
C	ISSUED FOR COUNCIL ACCEPTANCE	20.08.2020
D	ISSUE FOR CONSTRUCTION & ENERGEX ACCEPTANCE	07.09.20
E	ISSUE FOR CONSTRUCTION.	8.12.20
F	ROAD CROSSING U4, 67 AMENDED	05.01.21
G	STN 67 - 68 OVERHEAD SPAN REMOVED.	21.01.21
H	REISSUE FOR CONSTRUCTION. STN 2 PILLAR ADDED	14.04.21
I	REISSUE FOR CONSTRUCTION. RMU REMOVED.	2.11.21

CONSULTING ENGINEERS
STREET ADDRESS: U14, 39 Lawrence Dr, Nerang QLD 4211
POSTAL ADDRESS: PO Box 2835, Nerang DC QLD 4211
TELEPHONE: (07) 5596 1425
EMAIL: mail@pece.com.au
WEB: petereustace.com.au

NORTH

19-0515- 06

SITE CONTACT DETAILS		COUNCIL STANDARD ALIGNMENTS		WORKS COORDINATOR	PETER EUSTACE & ASSOCIATES
NAME		Energex OH	Energex OH	PARENT PROJECT NO.	
TBC		Energex UG	Energex UG	WORK REQUEST NO.	
COMPANY		NBN	REFER NBN		
-		GAS	REFER GAS	LOTS	101-122 , 900
PHONE	-	HP GAS	REFER GAS		
MOBILE	-	WATER	REFER CIVIL	CANCELLING LOTS	LOT 501 on SP295994
FAX	-	STORMWATER	REFER CIVIL	LOCAL AUTHORITY	GOLD COAST CITY COUNCIL
		SEWERAGE	REFER CIVIL	UBD REF	
		OTHER	REFER CIVIL	PEGGED?	

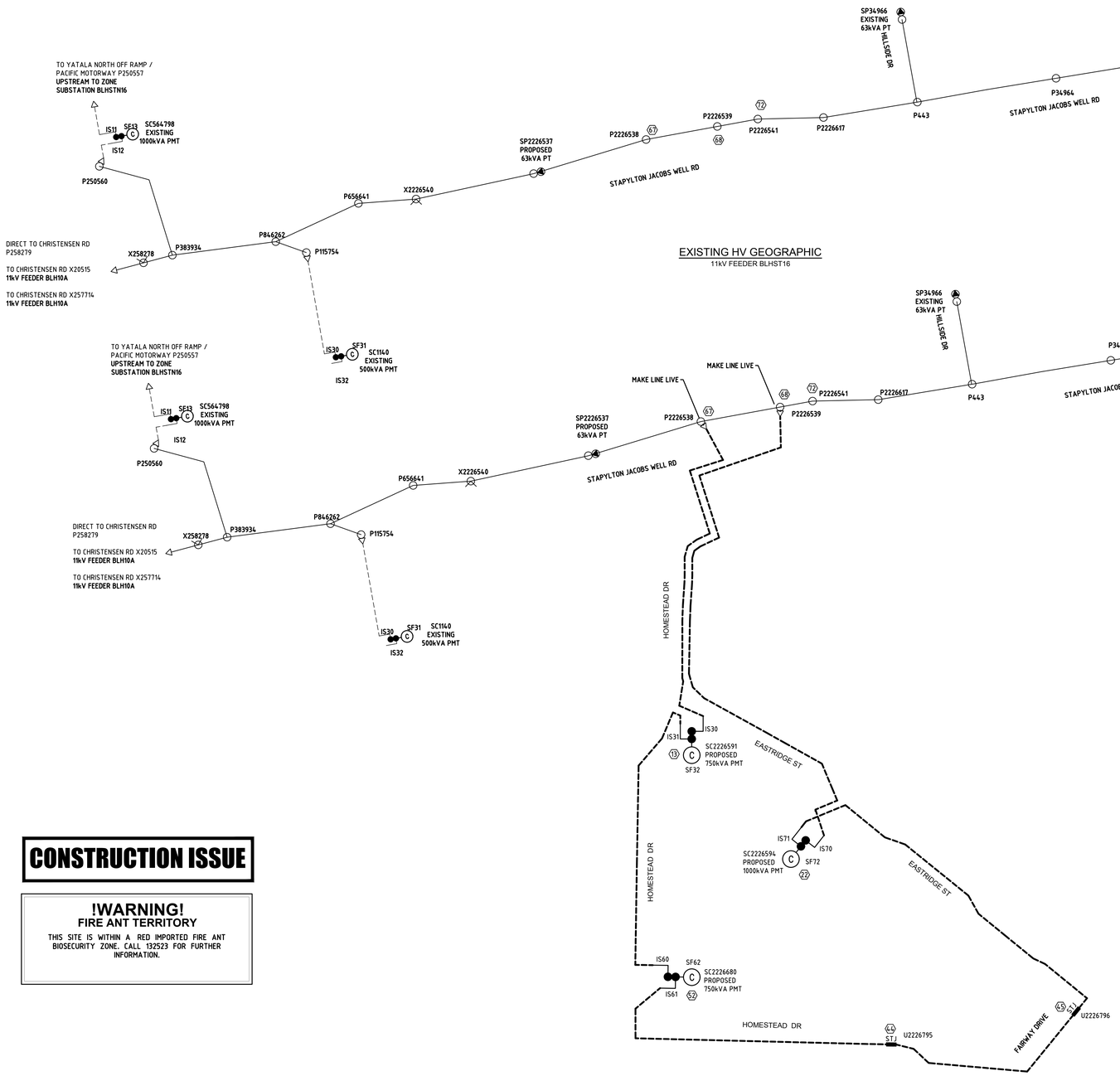
APPROVED	SHIHABUL ISLAM	
CHECKED	DAVID PRUSS	
DESIGNER	ABRAHAM IKORO	
PHONE	(07) 5596 1425	
PLANNER	KRIS BOVEINIS	
PHONE	(07) 5596 1425	
ISSUE DATE	02 NOVEMBER 2021	

Peter Eustace & Associates

INSTALL CABLE , CONDUIT , PILLARS, PITS AND STREET LIGHT

23 LOTS SUBDIVISION
HESTER -YATALA STAPYLTON JACOBS WELL ROAD
YATALA

WORKSPLAN VERSION 5.5
SCALE: N.T.S.
PROJECT / SUB PROJECT NO.
S1301356
Sheet 4 of 6
ISSUE NO: I



EXISTING HV GEOGRAPHIC

11kV FEEDER BLHST16

PROPOSED HV GEOGRAPHIC

11kV FEEDER BLHST16

CONSTRUCTION ISSUE

!WARNING!
FIRE ANT TERRITORY

THIS SITE IS WITHIN A RED IMPORTED FIRE ANT BIOSECURITY ZONE. CALL 132523 FOR FURTHER INFORMATION.

11kV FEEDER DESTINATION LABELS

LOCATION: STAPYLTON JACOBS WELL RD

LABEL SIZE	STATION I.D	LABEL INFORMATION
300 x 100	**POLE No:** P2226538	11kV CABLE TO EASTRIDGE ST SC2226591 IS30

MATERIAL: GRAVOPLY II (1.5mm) or similar

11kV FEEDER DESTINATION LABELS

LOCATION: STAPYLTON JACOBS WELL RD

LABEL SIZE	STATION I.D	LABEL INFORMATION
300 x 100	**POLE No:** P2226539	11kV CABLE TO EASTRIDGE ST SC2226594 IS70

MATERIAL: GRAVOPLY II (1.5mm) or similar

SIEMENS 8DJH RMU RRT

LOCATION: EASTRIDGE ST **STATION:** SC2226594

LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION			LABEL LOCATION	LABEL DESCRIPTION
150x40	WB	20	SC2226594			FRONT	RMU IDENTIFICATION
50x20	BLUE W	10				FRONT	DESIGN IDENTIFICATION
100x30	GW	8				NEAR EARTH SW	EARTH SWITCH DESCRIPTION
100x40	BW	15	IS70	IS71	SF72	NEAR ISOLATOR	ISOLATOR IDENTIFICATION
150x40	BW	20	EXISTING			FRONT	FEEDER IDENTIFICATION
150x50	BW	10	TO STAPYLTON JACOBS WELL RD P2226539	TO HOMESTEAD DR SC2226680 IS61	TO TRANSFORMER	CABLE BOX	CABLE DESTINATION
150x50	BW	10	TO STAPYLTON JACOBS WELL RD P2226539	TO HOMESTEAD DR SC2226680 IS61	TO TRANSFORMER	INSIDE SIDE WALL	CABLE DESTINATION

NOTES: 1) Label to be made in GRAVOPLY II (1.5mm) or similar
2) The Feeder I.D Label is only required if the RMU is the first termination outside a Zone Substation
3) Design I.D and Component I.D labels are only required if the RMU is installed in a Zone Substation

SIEMENS 8DJH RMU RRT

LOCATION: HOMESTEAD DR **STATION:** SC2226680

LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION			LABEL LOCATION	LABEL DESCRIPTION
150x40	WB	20	SC2226680			FRONT	RMU IDENTIFICATION
50x20	BLUE W	10				FRONT	DESIGN IDENTIFICATION
100x30	GW	8				NEAR EARTH SW	EARTH SWITCH DESCRIPTION
100x40	BW	15	IS60	IS61	SF62	NEAR ISOLATOR	ISOLATOR IDENTIFICATION
150x40	BW	20	EXISTING			FRONT	FEEDER IDENTIFICATION
150x50	BW	10	TO EASTRIDGE SC2226591 IS31	TO EASTRIDGE SC2226594 IS71	TO TRANSFORMER	CABLE BOX	CABLE DESTINATION
150x50	BW	10	TO EASTRIDGE SC2226591 IS31	TO EASTRIDGE SC2226594 IS71	TO TRANSFORMER	INSIDE SIDE WALL	CABLE DESTINATION

NOTES: 1) Label to be made in GRAVOPLY II (1.5mm) or similar
2) The Feeder I.D Label is only required if the RMU is the first termination outside a Zone Substation
3) Design I.D and Component I.D labels are only required if the RMU is installed in a Zone Substation

SIEMENS 8DJH RMU RRT

LOCATION: EASTRIDGE ST **STATION:** SC2226591

LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION			LABEL LOCATION	LABEL DESCRIPTION
150x40	WB	20	SC2226591			FRONT	RMU IDENTIFICATION
50x20	BLUE W	10				FRONT	DESIGN IDENTIFICATION
100x30	GW	8				NEAR EARTH SW	EARTH SWITCH DESCRIPTION
100x40	BW	15	IS30	IS31	SF32	NEAR ISOLATOR	ISOLATOR IDENTIFICATION
150x40	BW	20	EXISTING			FRONT	FEEDER IDENTIFICATION
150x50	BW	10	TO STAPYLTON JACOBS WELL RD P2226538	TO HOMESTEAD DR SC2226680 IS60	TO TRANSFORMER	CABLE BOX	CABLE DESTINATION
150x50	BW	10	TO STAPYLTON JACOBS WELL RD P2226538	TO HOMESTEAD DR SC2226680 IS60	TO TRANSFORMER	INSIDE SIDE WALL	CABLE DESTINATION

NOTES: 1) Label to be made in GRAVOPLY II (1.5mm) or similar
2) The Feeder I.D Label is only required if the RMU is the first termination outside a Zone Substation
3) Design I.D and Component I.D labels are only required if the RMU is installed in a Zone Substation

PROPOSED COMMISSIONING SCHEDULE

TENTATIVE ONLY SUBJECT TO AMENDMENT BY SWITCHING CO-ORDINATOR

ITEM No	LOCATION	APPARATUS	ACTION
	COMMISSION NEW LV EQUIPMENT - LV SWITCHING		
1	ADVISE CONTRACT SUPERVISOR SWITCHING TO COMMENCE		
2	RECEIVE CLEARANCE FROM WORK CREWS ALL WORK COMPLETED		
3	NOTIFY ALL WORK CREWS TREAT PILLARS AS LIVE		
4	**STAPYLTON JACOBS WELL RD. HOMESTEAD DR, EMERI ST, EASTRIDGE ST, FAIRWAY DR**	NEW EQUIPMENT	MAKE READY
5	**STAPYLTON JACOBS WELL RD P2226538 & P2226539**	LIVE LINE	MAKE BRIDGES LIVE
4	**STAPYLTON JACOBS WELL RD. HOMESTEAD DR, EMERI ST, EASTRIDGE ST, FAIRWAY DR**	NEW EQUIPMENT	CONNECT
6	**STAPYLTON JACOBS WELL RD. HOMESTEAD DR, EMERI ST, EASTRIDGE ST, FAIRWAY DR**	NEW LV EQUIPMENT	COMMISSION & TEST
7	ADVISE CONTRACT SUPERVISOR SWITCHING COMPLETE		

SYMBOL LEGEND

- PROPOSED 40mm S/L
- PROPOSED ENERGEX 100mm COMMS
- PROPOSED 100mm
- PROPOSED 125mm
- EXISTING 40mm S/L
- EXISTING ENERGEX 100mm COMMS
- EXISTING 100mm
- EXISTING 125mm
- PROPOSED CABLE (AS MARKED)
- EXISTING CABLE (AS MARKED)
- PROPOSED UNDERGROUND HV/LV ROUTE
- EXISTING UNDERGROUND HV/LV ROUTE
- PROPOSED OVERHEAD HV/LV ROUTE
- EXISTING OVERHEAD HV/LV ROUTE
- PROPOSED S/L CABLE
- EXISTING S/L CABLE
- PADMOUNT TRANSFORMER
- PMT LV GEOGRAPHIC
- PMT HV GEOGRAPHIC
- RING MAIN UNIT
- RMU HV SCHEMATIC
- PROPOSED SUPPLY PILLAR
- EXISTING SUPPLY PILLAR
- PROPOSED LINK PILLAR
- EXISTING LINK PILLAR
- COMMERCIAL PILLAR
- EARTH
- PROPOSED TYPE 4 PIT
- EXISTING TYPE 4 PIT
- RECOVER EQUIPMENT
- 11kV STRAIGHT JOINT
- OVERHEAD POLE TRANSFORMER
- OVERHEAD POLE (HV ONLY)
- OVERHEAD POLE (LV ONLY)
- OVERHEAD POLE (HV & LV)
- OVERHEAD HV TERMINATION
- OVERHEAD LV TERMINATION
- AIR BREAK SWITCH (OPEN)
- AIR BREAK SWITCH (CLOSED)
- DISCONNECT LINKS (OPEN)
- DISCONNECT LINKS (CLOSED)
- WATER METER
- SURVEY PEG

STREET LIGHT SYMBOL LEGEND

- RATE 2 L50A
- EXISTING RATE 2 L50A
- RECOVER S150 (RATE 2)
- RECOVER M125 (RATE3)
- 105W VLED TMR (RATE 3)

R	DESCRIPTION	DATE
A	ISSUED FOR COUNCIL ACCEPTANCE	23.06.2020
B	ISSUED FOR COUNCIL ACCEPTANCE	12.08.2020
C	ISSUED FOR COUNCIL ACCEPTANCE	20.08.2020
D	ISSUE FOR COUNCIL & ENERGEX ACCEPTANCE	07.09.20
E	ISSUE FOR CONSTRUCTION	8.12.20
F	ROAD CROSSING L4 - 47 AMENDED	05.01.21
G	STN 67 - 68 OVERHEAD SPAN REMOVED.	21.01.21
H	REISSUE FOR CONSTRUCTION, STN 2 PILLAR ADDED	14.04.21
I	REISSUE FOR CONSTRUCTION, RMU REMOVED.	2.11.21

CONSULTING ENGINEERS
STREET ADDRESS U14, 39 Lawrence Dr, Nerang QLD 4211
POSTAL ADDRESS PO Box 2835, Nerang DC QLD 4211
TELEPHONE (07) 5596 1425
EMAIL mail@pece.com.au
WEB petereustace.com.au

NORTH

19-0515- 07

SITE CONTACT DETAILS		COUNCIL STANDARD ALIGNMENTS		WORKS COORDINATOR	PETER EUSTACE & ASSOCIATES
NAME		Energex OH	**Energex OH**	PARENT PROJECT NO.	
TBC		Energex UG	**Energex UG**	WORK REQUEST NO.	
COMPANY		NBN	**REFER NBN**		
-		GAS	**REFER GAS**	LOTS	**101-122 , 900**
PHONE	-	HP GAS	**REFER GAS**		
MOBILE	-	WATER	**REFER CIVIL**	CANCELLING LOTS	**LOT 501 on SP295994**
FAX	-	STORMWATER	**REFER CIVIL**	LOCAL AUTHORITY	**GOLD COAST CITY COUNCIL**
		SEWERAGE	**REFER CIVIL**	UBD REF	
		OTHER	**REFER CIVIL**	PEGGED?	

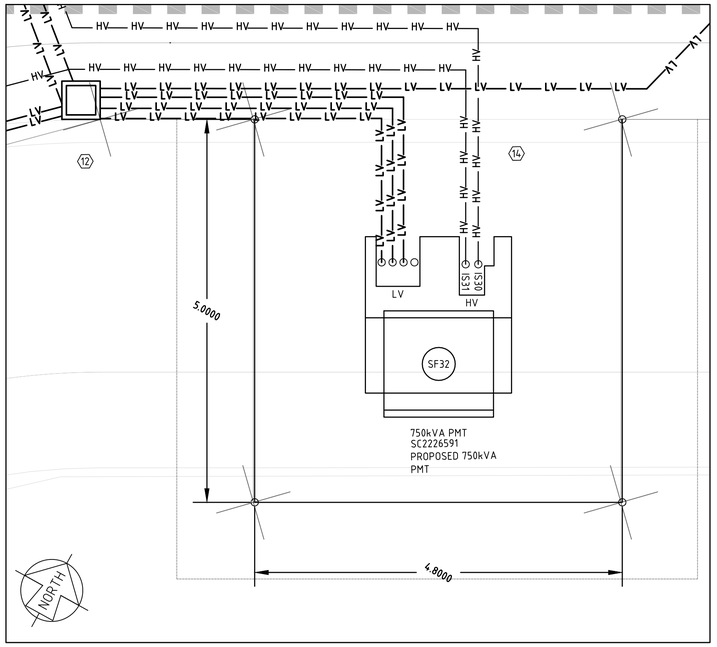
APPROVED	**SHIHABUL ISLAM**
CHECKED	**DAVID PRUSS**
DESIGNER	**ABRAHAM IKORO**
PHONE	**(07) 5596 1425**
PLANNER	**KRIS BOVEINIS**
PHONE	**(07) 5596 1425**
ISSUE DATE	**02 NOVEMBER 2021**

Peter Eustace & Associates

INSTALL CABLE , CONDUIT , PILLARS, PITS AND STREET LIGHT

23 LOTS SUBDIVISION
HESTER -YATALA STAPYLTON JACOBS WELL ROAD
YATALA

WORKSPLAN VERSION 5.5
SCALE: **N.T.S.**
PROJECT / SUB PROJECT NO.
S1301356
Sheet **5 of 6**
ISSUE NO: **I**



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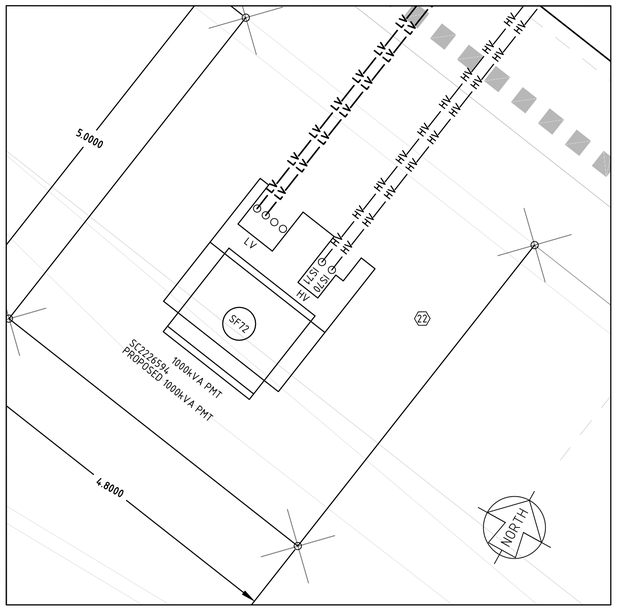

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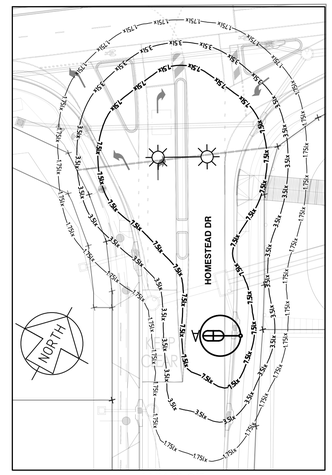


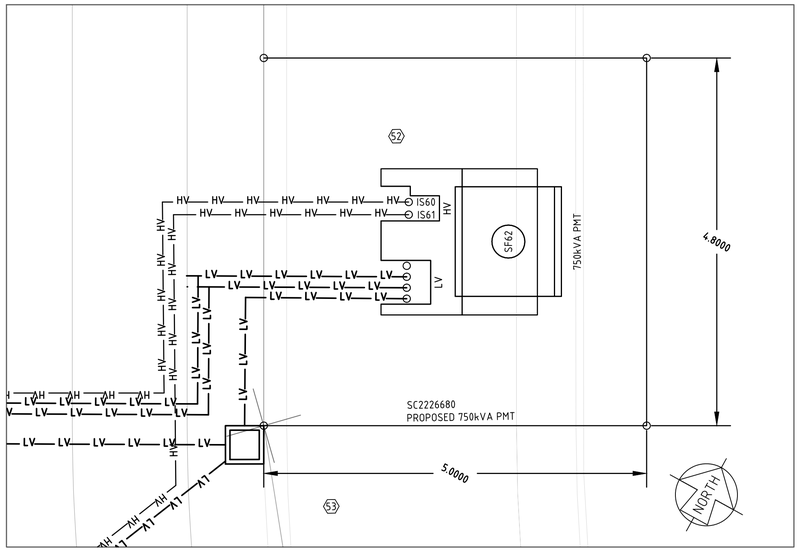
LUX PLOT
1:500@A1

SYMBOL LEGEND

- PROPOSED 40mm S/L
- PROPOSED ENERGEX 100mm COMMS
- PROPOSED 100mm
- PROPOSED 125mm
- EXISTING 40mm S/L
- EXISTING ENERGEX 100mm COMMS
- EXISTING 100mm
- EXISTING 125mm
- PROPOSED CABLE (AS MARKED)
- EXISTING CABLE (AS MARKED)
- PROPOSED UNDERGROUND HV/LV ROUTE
- EXISTING UNDERGROUND HV/LV ROUTE
- PROPOSED OVERHEAD HV/LV ROUTE
- EXISTING OVERHEAD HV/LV ROUTE
- PROPOSED S/L CABLE
- EXISTING S/L CABLE
- PADMOUNT TRANSFORMER
- PMT LV GEOGRAPHIC
- PMT HV GEOGRAPHIC
- RING MAIN UNIT
- RMU HV SCHEMATIC
- PROPOSED SUPPLY PILLAR
- EXISTING SUPPLY PILLAR
- PROPOSED LINK PILLAR
- EXISTING LINK PILLAR
- COMMERCIAL PILLAR
- EARTH
- PROPOSED TYPE 4 PIT
- EXISTING TYPE 4 PIT
- RECOVER EQUIPMENT
- STJ 11kV STRAIGHT JOINT
- OVERHEAD POLE TRANSFORMER
- OVERHEAD POLE (HV ONLY)
- OVERHEAD POLE (LV ONLY)
- OVERHEAD POLE (HV & LV)
- OVERHEAD HV TERMINATION
- OVERHEAD LV TERMINATION
- AIR BREAK SWITCH (OPEN)
- AIR BREAK SWITCH (CLOSED)
- DISCONNECT LINKS (OPEN)
- DISCONNECT LINKS (CLOSED)
- WM WATER METER
- SURVEY PEG

STREET LIGHT SYMBOL LEGEND

- RATE 2 L50A
- EXISTING RATE 2 L50A
- RECOVER S150 (RATE 2)
- RECOVER M125 (RATE3)
- 105W VLED TMR (RATE 3)



SC2226680 TRANSFORMER DETAIL
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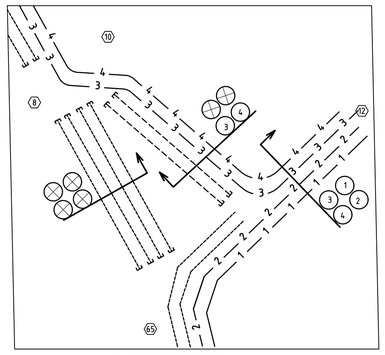
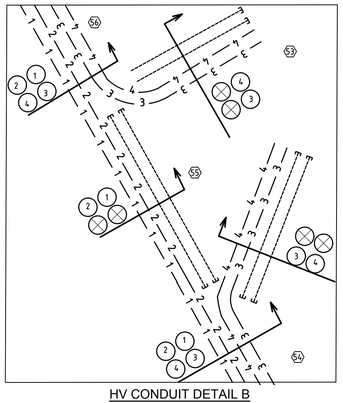
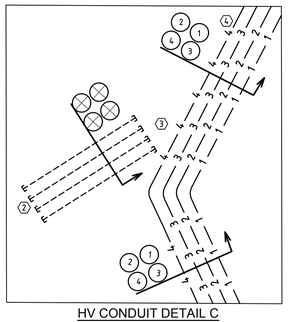


HV CONDUIT DETAIL A
N.T.S

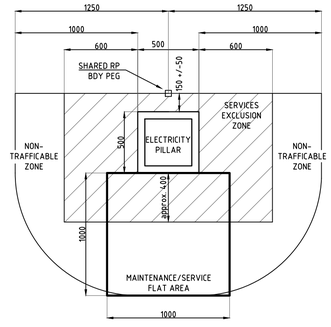


HV CONDUIT DETAIL B
N.T.S



HV CONDUIT DETAIL C
N.T.S

PILLAR OFFSET TO ONE
SIDE OF SHARED RP BDY



PILLAR CENTRED ON
SHARED RP BDY

!WARNING!
FIRE ANT TERRITORY

THIS SITE IS WITHIN A RED IMPORTED FIRE ANT BIOSECURITY ZONE. CALL 132523 FOR FURTHER INFORMATION.

CONSTRUCTION ISSUE

NOTES
1. PILLARS MAY BE SET CENTRED ON BDY PEG OR OFFSET TO ONE SIDE AS SHOWN.
2. PILLARS TO BE OFFSET 150 (+/-50) FROM RP BDY.
3. SERVICES EXCLUSION ZONE IS FOR ABOVE GROUND SERVICES ONLY. (PITS, MANHOLES ETC). UNDERGROUND PIPES MAY PASS THROUGH THIS AREA AS LONG AS THEY DO NOT CONFLICT WITH ELECTRICITY ASSETS.
4. IF ROADS/DRIVEWAYS ARE WITHIN 1000 OF PILLAR 2 X PROTECTION BOLLARDS WILL BE REQUIRED.
5. FLAT AREA IN FRONT OF PILLAR TO BE MAINTAINED FOR ACCESS AND MAINTENANCE.

R	DESCRIPTION	DATE
A	ISSUED FOR COUNCIL ACCEPTANCE	23.06.2020
B	ISSUED FOR COUNCIL ACCEPTANCE	12.08.2020
C	ISSUED FOR COUNCIL ACCEPTANCE	20.08.2020
D	ISSUE FOR COUNCIL & ENERGEX ACCEPTANCE	07.09.20
E	ISSUE FOR CONSTRUCTION	8.12.20
F	ROAD CROSSING & S - 67 ABANDED	05.01.21
G	S TN 67 - 68 OVERHEAD SPAN REMOVED.	21.01.21
H	REISSUE FOR CONSTRUCTION S TN 2 PILLAR ADDED	14.04.21
I	REISSUE FOR CONSTRUCTION RMU REMOVED.	2.11.21

CONSULTING ENGINEERS
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EMAIL: mail@peace.com.au
WEB: petereustace.com.au

NORTH

19-0515- 08

SITE CONTACT DETAILS		**COUNCIL STANDARD ALIGNMENTS**		WORKS COORDINATOR	**PETER EUSTACE & ASSOCIATES**
NAME		Energex OH	**Energex OH**	PARENT PROJECT NO.	
TBC		Energex UG	**Energex UG**	WORK REQUEST NO.	
COMPANY		NBN	**REFER NBN**		
-		GAS	**REFER GAS**	LOTS	**101-122 , 900**
PHONE	-	HP GAS	**REFER GAS**		
MOBILE	-	WATER	**REFER CIVIL**	CANCELLING LOTS	**LOT 501 on SP295994**
FAX	-	STORMWATER	**REFER CIVIL**	LOCAL AUTHORITY	**GOLD COAST CITY COUNCIL**
		SEWERAGE	**REFER CIVIL**	UBD REF	
		OTHER	**REFER CIVIL**	PEGGED?	

APPROVED	**SHIHABUL ISLAM**
CHECKED	**DAVID PRUSS**
DESIGNER	**ABRAHAM IKORO**
PHONE	**(07) 5596 1425**
PLANNER	**KRIS BOVEINIS**
PHONE	**(07) 5596 1425**
ISSUE DATE	**02 NOVEMBER 2021**

Peter Eustace & Associates

INSTALL CABLE , CONDUIT , PILLARS, PITS AND STREET LIGHT

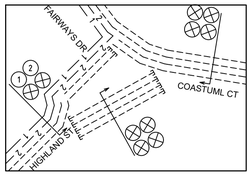
23 LOTS SUBDIVISION
HESTER -YATALA STAPYLTON JACOBS WELL ROAD
YATALA

WORKSPLAN VERSION 5.5
SCALE: **N.T.S.**
PROJECT / SUB PROJECT NO.
S1301356
Sheet **6 of 6**
ISSUE NO: **I**

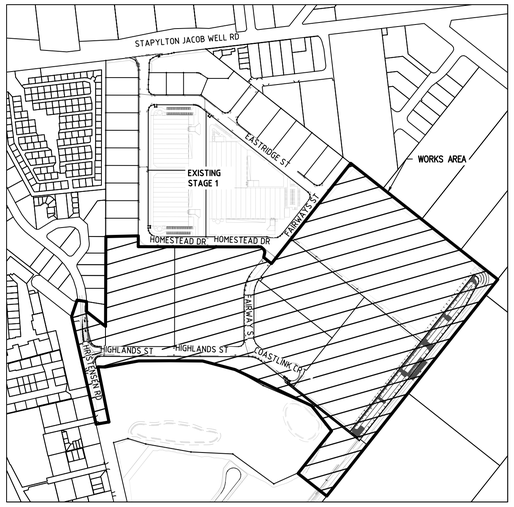
ISSUE FOR ENERGEX & COUNCIL ACCEPTANCE ONLY

NOT FOR CONSTRUCTION

This drawing is to be considered preliminary until this disclaimer is removed by Peter Eustace Pty. Ltd.



PROPOSED HV CONDUIT DETAIL 'A'
SCALE = NTS



LOCALITY PLAN
N.T.S

ELECTRICAL / STREET LIGHT CERTIFICATION

THIS IS TO CERTIFY THAT THE DESIGN OF ENERGEX RETICULATION IS IN ACCORDANCE WITH ENERGEX DESIGN MANUALS AND WORK CATEGORY SPECIFICATION 47.1 & 47.3 WHERE APPLICABLE.

ROAD LIGHTING CERTIFIED TO COMPLY WITH AS/NZS 1158 FOR 'V' & 'P' CATEGORY LIGHTING FOR ROADS & PUBLIC SPACES SUPPLIED UNDER ENERGEX CONTRACT. THE LIGHTING DESIGN IS BASED UPON THE FOLLOWING MAINTENANCE SCHEDULE:

* LED LAMP REPLACEMENT AT 88000 HOUR INTERVALS INC. CLEANING & INSPECTION OF LUMINAIRE EVERY 48 MONTHS.
* LAMP REPLACEMENT AT 36 MONTH INTERVALS INC. CLEANING & INSPECTION OF LUMINAIRE.
* VEGETATION TO BE KEPT CLEAR OF LUMINARIES.
* INSPECTION PATROLS & SPOT LAMP REPLACEMENT TO MAINTAIN SERVICE AVAILABILITY AT MIN. 95%.
* LUMINARIES & LAMPS TO BE REPLACED WITH EXACT EQUIVALENTS.

STREET NAME	LIGHTING CATEGORY
FAIRWAY ST , COASTLINK CRT, HIGHLANDS ST	P3
CHRISTENSEN RD	V5

MD SHIHABUL ISLAM (RPEQ 21373) Md Shihabul Islam

DATE 31-08-2021

MAINTENANCE REGIME

Maintenance Factor Assumed: The maintenance factor assumed in the calculations is as follows:
* Luminaire Maintenance Factor (refer AS 1158 1.1:2005 APPENDIX E).
* Lamp Lumen Depreciation Factor (Refer Lamp Manufacturer's "Lamp Lumen Depreciation Curves").

Maintenance Factor Calculated **0.75**

Schedule of Maintenance: This road lighting design is based on the following maintenance schedule:

*LED lamp replacement carried out at 88000 hrs intervals. Cleaning regime every 48 months.
*All other luminaires lamp replacement & cleaning carried out at 36 month intervals.

At this time the following shall also occur:

* All optical surfaces, both internal and external, of the luminarie shall be cleaned.
* All gaskets shall be checked for deterioration and replaced where necessary.
* Damaged/weathered visors shall be replaced.
* All accessible screws, nuts etc. shall be checked for tightness.
* A visual check shall be made of the electrical components and wiring for signs of overheating.
* If required, the luminaire shall be realigned/adjusted to the design specification.

!WARNING!
FIRE ANT TERRITORY

THIS SITE IS WITHIN A RED IMPORTED FIRE ANT BIOSECURITY ZONE. CALL 132523 FOR FURTHER INFORMATION.

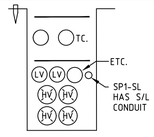
SYMBOL LEGEND

- PROPOSED 50mm S/L
- PROPOSED ENERGEX 100mm COMMS
- PROPOSED 100mm
- PROPOSED 125mm
- EXISTING 40mm S/L
- EXISTING ENERGEX 100mm COMMS
- EXISTING 100mm
- EXISTING 125mm
- PROPOSED CABLE (AS MARKED)
- EXISTING CABLE (AS MARKED)
- PROPOSED UNDERGROUND HV/LV ROUTE
- EXISTING UNDERGROUND HV/LV ROUTE
- PROPOSED OVERHEAD HV/LV ROUTE
- EXISTING OVERHEAD HV/LV ROUTE
- PROPOSED S/L CABLE
- EXISTING S/L CABLE
- PADMOUNT TRANSFORMER
- PMT LV GEOGRAPHIC
- PMT HV GEOGRAPHIC
- RING MAIN UNIT
- RMU HV SCHEMATIC
- PROPOSED SUPPLY PILLAR
- EXISTING SUPPLY PILLAR
- PROPOSED LINK PILLAR
- EXISTING LINK PILLAR
- COMMERCIAL PILLAR
- EARTH
- PROPOSED TYPE 4 PIT
- EXISTING TYPE 4 PIT
- RECOVER EQUIPMENT
- 11kV STRAIGHT JOINT
- OVERHEAD POLE TRANSFORMER
- OVERHEAD POLE (HV ONLY)
- OVERHEAD POLE (LV ONLY)
- OVERHEAD POLE (HV & LV)
- OVERHEAD HV TERMINATION
- OVERHEAD LV TERMINATION
- AIR BREAK SWITCH (OPEN)
- AIR BREAK SWITCH (CLOSED)
- DISCONNECT LINKS (OPEN)
- DISCONNECT LINKS (CLOSED)
- WATER METER
- SURVEY PEG

STREET LIGHT SYMBOL LEGEND

- PROPOSED L50 (RATE 2)
- EXISTING L50 (RATE 2)
- PROPOSED L90 (RATE 2)
- EXISTING L90 (RATE 2)
- EXISTING M50 (RATE 2)

ENERGEX NON-STANDARD TRENCH DETAILS (NTS)



DETAIL SP1 & SP1-SL

R	DESCRIPTION	DATE
A	ISSUED FOR ENERGEX & COUNCIL ACCEPTANCE	31.08.21

CONSULTING ENGINEERS
STREET ADDRESS U14, 39 Lawrence Dr, Nerang QLD 4211
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EMAIL mail@pece.com.au
WEB petereustace.com.au

NORTH

20-0210- 01

SITE CONTACT DETAILS		**COUNCIL STANDARD ALIGNMENTS**		WORKS COORDINATOR	**PETER EUSTACE & ASSOCIATES**
NAME		Energex OH	**Energex OH**	PARENT PROJECT NO.	
TBC		Energex UG	**Energex UG**	WORK REQUEST NO.	
COMPANY		NBN	**REFER NBN**		
-		GAS	**REFER GAS**	LOTS	**LOT 201 - 207**
PHONE	-	HP GAS	**REFER GAS**		
MOBILE	-	WATER	**REFER CIVIL**	CANCELLING LOTS	**LOT 501 on SP295994**
FAX	-	STORMWATER	**REFER CIVIL**	LOCAL AUTHORITY	**GOLD COAST CITY COUNCIL**
		SEWERAGE	**REFER CIVIL**	UBD REF	
		OTHER	**REFER CIVIL**	PEGGED?	**YES**

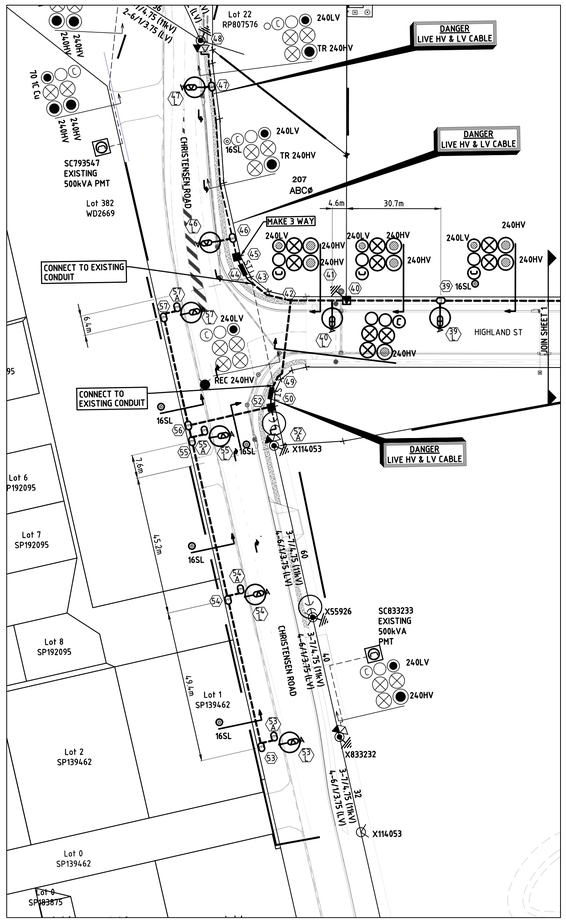
APPROVED	**SHIHABUL ISLAM**
CHECKED	**DAVID PRUSS**
DESIGNER	**ABRAHAM IKORO**
PHONE	**(07) 5596 1425**
PLANNER	**KRIS BOVEINIS**
PHONE	**(07) 5596 1425**
ISSUE DATE	**31 AUGUST 2021**

Peter Eustace & Associates

INSTALL CONDUITS, CABLES, TRANSFORMER, STREETLIGHTS, PILLARS

7 LOT SUBDIVISION
HESTER STAGE 2 -YATALA STAPYLTON JACOBS WELL ROAD
YATALA

WORKSPLAN VERSION 5.5
SCALE: **1:1000@A1**
PROJECT / SUB PROJECT NO.
S1301568
Sheet **1 of 5**
ISSUE NO: **A**



URD CIVIL WORKS SCHEDULE (ROAD CROSSINGS)

LOCATION	STATIONS FROM-TO	CONDUIT LENGTH (m)								BENDS (<°/No)								X-SECTION (m)			DRAW WIRE	KERB MARK	REMARKS
		50	No	100C	No	100	No	125	No	50	No	100C	No	100	No	125	No	EXCAV/ TAPE	COVER STRIP	TRENCH DETAIL			
FAIRWAY ST	17 - 20	35	1																35	O	35	2	
	24 - 31			30	1	30	2	30	4										30	SP1	210	2	
	25 - 31			45	1	45	2	45	4										45	SP1	315	2	
COASTLINK CRT	27 - 30	45	1																45	O	45	2	
HIGHLANDS ST	32 - 33	35	1																35	O	35	2	
	42 - 49			30	1	30	2	30	4										30	SP1	210	2	
CHRISTENSEN RD	52 - 56	30	1																30	O	30	2	OPEN CUT TRENCHING
TOTALS		145		105		210		420											250		880	14	

URD CIVIL WORKS SCHEDULE (ALONG FOOTPATHS)

LOCATION	STATIONS FROM-TO	CONDUIT LENGTH (m)								BENDS (<°/No)								X-SECTION (m)			DRAW WIRE	KERB MARK	REMARKS
		50	No	100C	No	100	No	125	No	40	No	100C	No	100	No	125	No	EXCAV/ TAPE	COVER STRIP	TRENCH DETAIL			
FAIRWAY ST	16 - 20			55	1	55	2	55	4									55		SP1	385		
	20 - 22	85	1	85	1	85	2	85	4									85		SP1-SL	680		
	22 - 23			55	1	55	2	55	4									55		SP1	385		
	23 - 24	10	1	10	1	10	2	10	4									10		SP1-SL	80		
	17 - 20L	30	1															25	5	O	30		
	21 - 21L	5	1															5		O	5		
	22 - 22L	5	1															5		O	5		
	24 - 23L	5	1															5		O	5		
COASTLINK CRT	24 - 26			70	1	70	2	70	4									70		SP1	490		
	26 - 28	80	1	80	1	80	2	80	4									80		SP1-SL	640		
	28 - 29			45	1	45	2	45	4									45		SP1	315		
	26 - 26L	5	1															5		O	5		
	27 - 27L	5	1															5		O	5		
	30 - 30L	5	1															5		O	5		
HIGHLANDS ST	31 - 33			15	1	15	2	15	4									15		SP1	105		
	33 - 35	100	1	100	1	100	2	100	4									100		SP1-SL	800		
	35 - 36			55	1	55	2	55	4									55		SP1	385		
	36 - 39	120	1	120	1	120	2	120	4									120		SP1-SL	960		
	39 - 41	40	1	40	1	40	2	40	4									40		SP1-SL	320		
	41 - 43			30	1	30	2	30	4									30		SP1	210		
	32 - 32L	10	1															5	5	O	10		
	34 - 34L	5	1																5	O	5		
	35 - 35L	5	1																5	O	5		
	37 - 37L	5	1																5	O	5		
	38 - 38L	5	1																5	O	5		
	39 - 39L	5	1																5	O	5		
	40 - 40L	5	1																5	O	5		
CHRISTENSEN RD	49 - 50			5	1	5	2	5	4									5		SP1	35		
	53 - 57	145	1															145		O	145		
	46 - 46L	5	1																5	O	5		
	47 - 47L	5	1																5	O	5		
	53 - 53L	5	1																5	O	5		
	54 - 54L	5	1																5	O	5		
	55 - 55L	5	1																5	O	5		
	57 - 57L	5	1																5	O	5		
TOTALS		680		765		1530		3060										970	40		6035		

CERTIFICATE OF COMPLIANCE

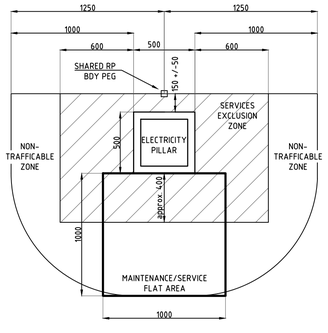
DESIGN DOCUMENTATION IN ACCORDANCE WITH THE REQUIREMENTS OF COMPLIANCE OF AS/NZS 1158

* Refer AS1158.1.1:2005 Appendix D for information regarding V category
* Refer AS1158.3.1:2005 Appendix E for information regarding P category
* PerfectLite 5.06 computer software used

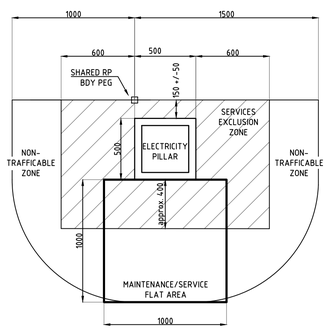
ITEM	PROJECT SPECIFICATION	
LIGHTING CATEGORY		
Road Name	**CHRISTENSEN RD**	**FAIRWAY ST, COASTLINK CRT , HIGHLANDS ST**
Nominated Lighting Category	**V5**	**P3**
Road Surface Reflection Characteristic	**R3**	**R3**
INSTALLATION GEOMETRY		
Road Reserve Lighting Design Width	**14m**	**20m**
Mounting Height	**10.5m**	**9m**
Overhang	**2m**	**0.7m**
Lighting Arrangement	**ARR1/ARR3**	**ARR1/ARR3**
Pole Setback	**1.0 BOK**	**0.8 BOK**
Upcast Angle	**5**	**5**
LUMINAIRE/LAMP 1 DETAILS		
Lamp Type / Wattage	**L90A**	**L50A**
Luminaire Identification	**Philips RoadFlair**	**Philips RoadFlair**
Lamp Flux (Lumens)	**10800**	**6000**
I-Table Number (.cie)	**BRP392 LED108NW 90W DWV**	**BRP391 LED60NW 50W DWV**
Lighting Tariff	**2**	**2**
Power Factor	**HPF (> 0.95)**	**HPF (> 0.95)**
Start/Run Currents (Amps)	**0.375**	**0.223**
IP Rating	**IP66**	**IP66**
LUMINANCE BASED DESIGN - CATEGORY V LUMINAIRE/LAMP 1 TECHNICAL PARAMETER COMPLIANCE		
Spacing (m)	**59m / 35m**	**59m**
Traffic Direction	**Normal**	**Oncoming**
Average carraigeway luminance ($\bar{L}$) cd/m^2	**0.49 / 0.80**	**0.46**
Overall uniformity (U_o)	**0.38 / 0.43**	**0.37**
Longitudinal Uniformity (U_l)	**0.64 / 0.51**	**0.51**
Upward wasted light ratio (*UWLR*) %	**0.04 / 0.04**	**0.04**
Threshold increment (*TI*) %	**8.22 / 10.31**	**15.1**
Surround verge illuminance (E_{sl}) %	**72.7 / 66.02**	**61.17**
Complies with standard	**YES**	**YES**
ILLUMINANCE BASED DESIGN - CATEGORY V TECHNICAL PARAMETER COMPLIANCE - "design area" ie. intersection of x and x roads		
Point Horizontal Illuminance (E_{av})	**3.5**	
Illuminance (Horizontal Uniformity) Cat V (U_{E1})	**8**	
CATEGORY Px LUMINAIRE/LAMP 1 MAXIMUM SPACING CALCS		
Average Horizontal Illuminance ($\bar{E}_h$)		**≥1.75 lx**
Minimum Point Horizontal Illuminance (E_{hm})		**≥0.30 lx**
Illuminance Uniformity (U_{E0})		**≤10**
Upward wasted light ratio (UWLR) %		**≤0.0%**
Road Reserve Lighting Design Width (m)		Maximum Spacing (m)
23		**60**

RATE 2 STREETLIGHT SCHEDULE

LOCATION	STN No	SITE ID (POLE No)	POLE or COMPONENTS						LANTERN								OUTREACH BRACKET				MOUNT HEIGHT (m)	REMARKS
			COMP ID	EXIST (m)	REC (m)	ERECT (m)	SLM or IIN	ALIGN (m)	COMP ID	EXIST	RECOVER LUMIN	RECOVER CUST	DATE DE-ENERG	ERECT LUMIN	ERECT CUST	DATE ENERG	SLM or IIN	EXIST (m)	REC (m)	ERECT (m)	SLM or IIN		
FAIRWAY ST	20L	P2256073	PO 1			7.0 BPM	SB90115UCI	0.8 BOK	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	21L	P2256074	PO 1			7.0 BPM	SB90115UCI	0.8 BOK	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	22L	P2256075	PO 1			7.0 BPM	SB90115UCI	0.8 BOK	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	23L	P2256076	PO 1			7.0 BPM	SB90115UCI	0.8 BOK	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
COASTLINK CRT	26L	P2256077	PO 1			7.0 BPM	SB90115UCI	0.8 BOK	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	27L	P2256078	PO 1			7.0 BPM	SB90115UCI	0.8 BOK	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	30L	P2256079	PO 1			7.0 BPM	SB90115UCI	0.8 BOK	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
HIGHLANDS ST	32L	P2256080	PO 1			7.0 BPM	SB90115UCI	0.8 BOK	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	34L	P2256081	PO 1			7.0 BPM	SB90115UCI	0.8 BOK	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	35L	P2256082	PO 1			7.0 BPM	SB90115UCI	0.8 BOK	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	37L	P2256083	PO 1			7.0 BPM	SB90115UCI	0.8 BOK	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	38L	P2256084	PO 1			7.0 BPM	SB90115UCI	0.8 BOK	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	39L	P2256085	PO 1			7.0 BPM	SB90115UCI	0.8 BOK	SL 1					L50AL2	GCCC		SLEDPH0509A			1.5	-	9	
	40L	P2256086	PO 1			9.0 BPM	SB105130UCI	1.0 BOK	SL 1					L90AL2	GCCC		SLEDPH0912A			3.0	-	10.5	NOTE 1
CHRISTENSEN RD	46L	P2256267	PO 1			9.0 BPM	SB105130UCI	1.0 BOK	SL 1					L90AL2	GCCC		SLEDPH0912A			3.0	-	10.5	NOTE 1
	47L	P2256268	PO 1			9.0 BPM	SB105130UCI	1.0 BOK	SL 1					L90AL2	GCCC		SLEDPH0912A			3.0	-	10.5	NOTE 1
	53L	P2256269	PO 1			9.0 SBM	SS105130UCI	1.0 BOK	SL 1					L90AL2	GCCC		SLEDPH0912A			3.0	-	10.5	NOTE 1
	54L	P2256270	PO 1			9.0 SBM	SS105130UCI	1.0 BOK	SL 1					L90AL2	GCCC		SLEDPH0912A			3.0	-	10.5	NOTE 1
	55L	P2256271	PO 1			9.0 SBM	SS105130UCI	1.0 BOK	SL 1					L90AL2	GCCC		SLEDPH0912A			3.0	-	10.5	NOTE 1
	57L	P2256272	PO 1			9.0 SBM	SS105130UCI	1.0 BOK	SL 1					L90AL2	GCCC		SLEDPH0912A			3.0	-	10.5	NOTE 1
NOTE 1: CHRISTENSEN RD LIGHT POLES TO PEGGED BY A SURVEYOR PRIOR TO CONSTRUCTION																							



PILLAR CENTRED ON SHARED RP BDY



PILLAR OFFSET TO ONE SIDE OF SHARED RP BDY

NOTES
1. PILLARS MAY BE SET CENTRED ON BDY PEG OR OFFSET TO ONE SIDE AS SHOWN.
2. PILLARS TO BE OFFSET 150 (+/-50) FROM RP BDY.
3. SERVICES EXCLUSION ZONE IS FOR ABOVE GROUND SERVICES ONLY. (PITS, MANHOLES ETC). UNDERGROUND PIPES MAY PASS THROUGH THIS AREA AS LONG AS THEY DO NOT CONFLICT WITH ELECTRICITY ASSETS.
4. IF ROADS/DRIVEWAYS ARE WITHIN 1000 OF PILLAR 2 X PROTECTION BOLLARDS WILL BE REQUIRED.
5. FLAT AREA IN FRONT OF PILLAR TO BE MAINTAINED FOR ACCESS AND MAINTENANCE.

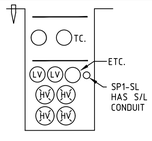
SYMBOL LEGEND

- PROPOSED 50mm S/L
- PROPOSED ENERGEX 100mm COMMS
- PROPOSED 100mm
- PROPOSED 125mm
- EXISTING 40mm S/L
- EXISTING ENERGEX 100mm COMMS
- EXISTING 100mm
- EXISTING 125mm
- PROPOSED CABLE (AS MARKED)
- EXISTING CABLE (AS MARKED)
- PROPOSED UNDERGROUND HV/LV ROUTE
- EXISTING UNDERGROUND HV/LV ROUTE
- PROPOSED OVERHEAD HV/LV ROUTE
- EXISTING OVERHEAD HV/LV ROUTE
- PROPOSED S/L CABLE
- EXISTING S/L CABLE
- PADMOUNT TRANSFORMER
- PMT LV GEOGRAPHIC
- PMT HV GEOGRAPHIC
- RING MAIN UNIT
- RMU HV SCHEMATIC
- PROPOSED SUPPLY PILLAR
- EXISTING SUPPLY PILLAR
- PROPOSED LINK PILLAR
- EXISTING LINK PILLAR
- COMMERCIAL PILLAR
- EARTH
- PROPOSED TYPE 4 PIT
- EXISTING TYPE 4 PIT
- RECOVER EQUIPMENT
- 11kV STRAIGHT JOINT
- OVERHEAD POLE TRANSFORMER
- OVERHEAD POLE (HV ONLY)
- OVERHEAD POLE (LV ONLY)
- OVERHEAD POLE (HV & LV)
- OVERHEAD HV TERMINATION
- OVERHEAD LV TERMINATION
- AIR BREAK SWITCH (OPEN)
- AIR BREAK SWITCH (CLOSED)
- DISCONNECT LINKS (OPEN)
- DISCONNECT LINKS (CLOSED)
- WATER METER
- SURVEY PEG

STREET LIGHT SYMBOL LEGEND

- PROPOSED L50 (RATE 2)
- EXISTING L50 (RATE 2)
- PROPOSED L90 (RATE 2)
- EXISTING L90 (RATE 2)
- EXISTING M50 (RATE 2)

ENERGEX NON-STANDARD TRENCH DETAILS (NTS)



DETAIL SP1 & SP1-SL

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R.	DESCRIPTION	DATE
A	ISSUED FOR ENERGEX & COUNCIL ACCEPTANCE	31.08.21

CONSULTING ENGINEERS
STREET ADDRESS U14, 39 Lawrence Dr, Nerang QLD 4211
POSTAL ADDRESS PO Box 2833, Nerang DC QLD 4211
TELEPHONE (07) 5596 1425
EMAIL mail@pece.com.au
WEB petereustace.com.au

NORTH

20-0210- 02

SITE CONTACT DETAILS		COUNCIL STANDARD ALIGNMENTS		WORKS COORDINATOR	PETER EUSTACE & ASSOCIATES
NAME		Energex OH	**Energex OH**	PARENT PROJECT NO.	
TBC		Energex UG	**Energex UG**	WORK REQUEST NO.	
COMPANY		NBN	**REFER NBN**		
-		GAS	**REFER GAS**	LOTS	**LOT 201 - 207**
PHONE	-	HP GAS	**REFER GAS**		
MOBILE	-	WATER	**REFER CIVIL**	CANCELLING LOTS	**LOT 501 on SP295994**
FAX	-	STORMWATER	**REFER CIVIL**	LOCAL AUTHORITY	**GOLD COAST CITY COUNCIL**
		SEWERAGE	**REFER CIVIL**	UBD REF	
		OTHER	**REFER CIVIL**	PEGGED?	**YES**

APPROVED	**SHIHABUL ISLAM**
CHECKED	**DAVID PRUSS**
DESIGNER	**ABRAHAM IKORO**
PHONE	**(07) 5596 1425**
PLANNER	**KRIS BOVEINIS**
PHONE	**(07) 5596 1425**
ISSUE DATE	**31 AUGUST 2021**

Peter Eustace & Associates

INSTALL CONDUITS, CABLES, TRANSFORMER, STREETLIGHTS, PILLARS

7 LOT SUBDIVISION
HESTER STAGE 2 -YATALA STAPYLTON JACOBS WELL ROAD
YATALA

WORKSPLAN VERSION 5.5
SCALE: **1:1000@A1**
PROJECT / SUB PROJECT NO.
S1301568
Sheet **2 of 5**
ISSUE NO: **A**

UNDERGROUND CABLE SCHEDULE

LOCATION	STATIONS FROM-TO	VOLTS	EXIST	TRF	REC	INSTALL	CABLE SIZE/TYPE	MODEL ID	ROUTE LENGTH (m)	CABLE LENGTH (m) NEW	CABLE LENGTH (m) REC	LCC	REMARKS
FAIRWAY ST	6 - 7	11kV	*		*		240mm² 3 x 1C AI XLPE TRIPLEX	11AT240XSH	2		5		
	6 - 18	11kV				*	240mm² 3 x 1C AI XLPE TRIPLEX	11AT240XSH	92	95			
	7 - 19	11kV				*	240mm² 3 x 1C AI XLPE TRIPLEX	11AT240XSH	97	100			
	19 - 36A	11kV				*	240mm² 3 x 1C AI XLPE TRIPLEX	11AT240XSH	317	320			
	19 - 36B	11kV				*	240mm² 3 x 1C AI XLPE TRIPLEX	11AT240XSH	317	320			
	1 - 4	LV				*	240mm² 4C AI XLPE	LVA4240XPV	202	205			
	4 - 5	LV				*	185mm² 4 x 1C Cu PVC	SC0007181	2	5			
	5 - 9	LV				*	240mm² 4C AI XLPE	LVA4240XPV	42	45			
	9 - 11	LV				*	240mm² 4C AI XLPE	LVA4240XPV	52	55			
	9 - 18	LV				*	240mm² 4C AI XLPE	LVA4240XPV	77	80			
	18 - 20	LV				*	240mm² 4C AI XLPE	LVA4240XPV	7	10			
	20 - 23	LV				*	240mm² 4C AI XLPE	LVA4240XPV	137	140			
	2 - 3	SL	*		*		16mm² 2C Cu PVC/PVC	LVC216PVPV	57		60		
	3 - 8	SL	*		*		16mm² 2C Cu PVC/PVC	LVC216PVPV	57		60		
	3 - 4	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	27		30		
	20 - 21	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	27	30			
	21 - 22	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	57	60			
	9 - 9L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	20 - 20L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	47	50			
	21 - 21L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	22 - 22L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	23 - 23L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	17	20			
HOMESTEAD DR	11 - 14	LV				*	240mm² 4C AI XLPE	LVA4240XPV	197	200			
	14 - 15	LV				*	240mm² 4C AI XLPE	LVA4240XPV	87	90			
	11 - 13	SL	*		*		16mm² 2C Cu PVC/PVC	LVC216PVPV	37		40		
	10 - 11	SL	*	*			16mm² 2C Cu PVC/PVC	LVC216PVPV					
COASTLINK CRT	23 - 28	LV				*	240mm² 4C AI XLPE	LVA4240XPV	152	155			
	26 - 27	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	57	60			
	27 - 28	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	17	20			
	26 - 26L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	27 - 27L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	27 - 30L	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	47	50			
HIGHLANDS ST	36B - 50	11kV				*	240mm² 3 x 1C AI XLPE TRIPLEX	11AT240XSH	212	215			
	36A - 44	11kV				*	240mm² 3 x 1C AI XLPE TRIPLEX	11AT240XSH	217	220			
	23 - 36	LV				*	240mm² 4C AI XLPE	LVA4240XPV	197	200			
	36 - 40	LV				*	240mm² 4C AI XLPE	LVA4240XPV	162	165			
	40 - 45	LV				*	240mm² 4C AI XLPE	LVA4240XPV	42	45			
	33 - 34	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	37	40			
	34 - 35	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	62	65			
	36 - 37	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	12	15			
	37 - 38	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	62	65			
	33 - 32L	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	42	45			
	34 - 34L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	35 - 35L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	37 - 37L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	38 - 38L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	38 - 39L	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	57	60			
	40 - 40L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	17	20			
CHRISTENSEN RD	44 - 50	11kV	*		*		240mm² 3 x 1C AI XLPE TRIPLEX	11AT240XSH	37	40			
	45 - 46	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	7	10			
	46 - 47	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	52	55			
	52 - 56	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	22	25			
	53A - 54A	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	52	55			
	54A - 55A	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	57	60			
	55A - 56	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	7	10			
	56 - 57A	SL				*	16mm² 2C Cu PVC/PVC	LVC216PVPV	37	40			
	46 - 46L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	47 - 47L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	53A - 53L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	54A - 54L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	55A - 55L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
	57A - 57L	SL				*	4mm² 2C Cu PVC/PVC	LVC24PVPV	2	5			
TOTALS		11kV					240mm² 3 x 1C AI XLPE TRIPLEX	11AT240XSH		1310			
		LV					240mm² 4C AI XLPE	LVA4240XPV		1390			
		LV					185mm² 4 x 1C Cu PVC	SC0007181		5			
		SL					16mm² 2C Cu PVC/PVC	LVC216PVPV		765	160		
		SL					4mm² 2C Cu PVC/PVC	LVC24PVPV		165	30		

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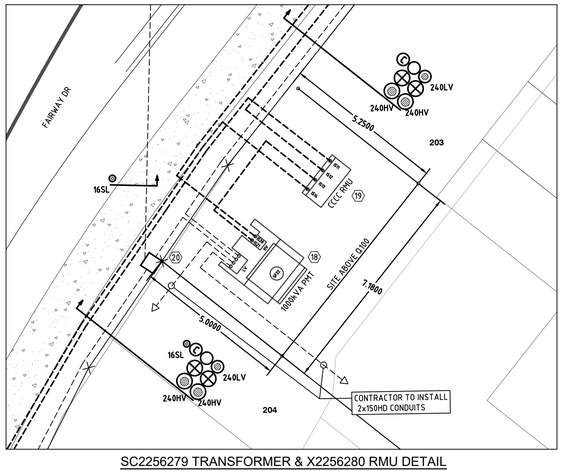
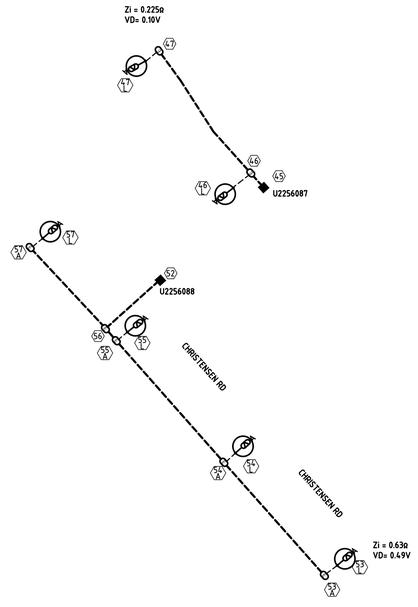


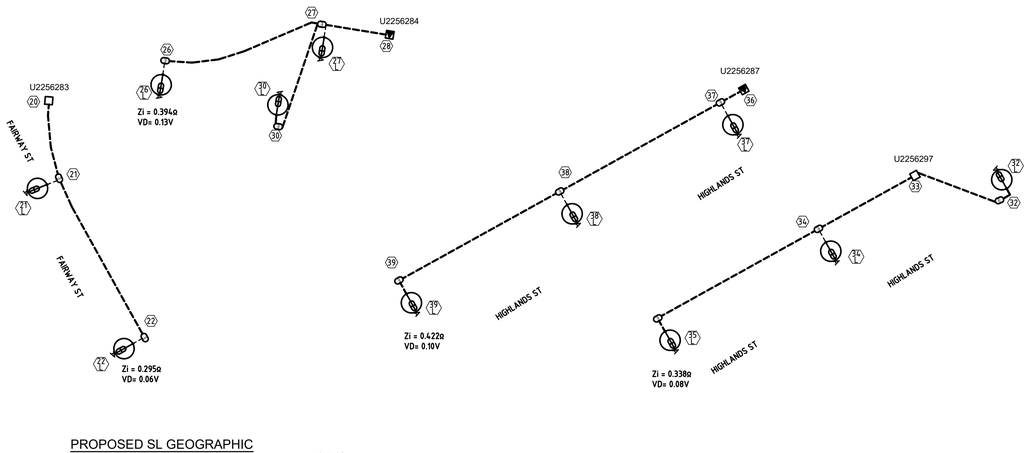
SC2256279 TRANSFORMER & X2256280 RMU DETAIL

1:100@A1



EQUIPMENT SCHEDULE

LOCATION	STN No	SITE I.D.	EXIST	REC	INSTALL	SIZE & DESCRIPTION	IIN	COMP ID	PLANT No.	MODEL ID	QTY	LCC	REMARKS
EASTRIDGE ST	1	U2226598	*			SERV PILLAR		EX		EX	EX		MAKE 2-WAY
					*	240 LUG SET				LVSPL240	1		
FAIRWAY ST	4	LP2256273			*	LINK PILLAR (240-240 7F)		LP1		LVSP14-6	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		MAINTAIN 600mm SEPARATION TO STN 5
					*	185 LUG SET				LVSPL185	1		
					*	EARTH				ASSY1037-1	1		
	5	U2256274			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		MAINTAIN 600mm SEPARATION TO STN 4
					*	185 LUG SET				LVSPL185	1		
					*	EARTH				ASSY1037-1	1		
	6	U2256275			*	11kV STRAIGHT JOINT [240-240]		SJ1		11ST24/24X	1		
	7	U2256276			*	11kV PARALLEL BUTT JOINT [240-240]				2JXCA24XACA24	1		
	8		*	*		S/L PIT & LID (TYPE 4)		EX		EX	1		
	9	U2256277			*	SUPPLY PILLAR (240-240-240 7F)		PI1		LVSP9-6S	1		
	18	SC2256279			*	1000kVA PADMOUNT TRANSFORMER		TR1		S25120	1		
					*	CULVERT & BASE				C & B	1		
					*	PMT INSTALLATION				PMTINSTALL	1		
					*	PMT COMMISSION				PMTCOM	1		
					*	HV FUSES				DSHVF10SLK	1		
					*	LV FUSES				DSLVF31	2		
					*	HV TERMINATIONS				2DBSTA24D	2		
					*	LV TERMINATIONS				LTSA24D	2		
					*	COMMON EARTHING				DSSQPMCEG	1		
	19	X2256280			*	ABB SAFELINK 2 'CCCC' RMU - OUTDOOR		RM1		34142	1		
					*	OUTDOOR ENCLOSURE				20732	1		
					*	CONCRETE PLYNTH				20735	1		
					*	BASE SLAB FOR UNICULVERT				19960	1		
					*	BOX CULVERT FOUNDATION				19566	1		
					*	STEEL SUPPORT CHANNELS				18434	3		
					*	EARTH GRID				DSGT4EGS	1		
					*	EARTH TAILS TO RMU				DSRMEGT	1		
					*	11kV TERMINATION				1SGTPM9524XG	4		
	20	U2256283			*	SUPPLY PILLAR (240-240 7F)		PI1		LVSP4-6S	1		
	23	U2256282			*	SUPPLY PILLAR (240-240-240 7F)		PI1		LVSP9-6S	1		MAKE PILLAR 8-FUSE TYPE
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
	17A					S/L PIT & LID (TYPE 4)		PT1		ASSY833-1	1		
	21,22					S/L PIT & LID (TYPE 4)		PT1		ASSY833-1	1		
					*	JUNCTION BOX KIT				ASSY833-5	1		
HOMESTEAD DR	11	LP2256278			*	LINK PILLAR (240-240 7F)		LP1		LVSP14-6	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	EARTH				ASSY1037-1	1		
	14	U2256281			*	MEN PILLAR (240-240 NF)		PI1		LVSP4-6NF	1		
					*	EARTH				ASSY1011-2	1		
	15	U2226605				SERV PILLAR		EX		EX	EX		MAKE 2-WAY
					*	240 LUG SET				LVSPL240	A/R		
COASTLINK CRT	28	U2256284			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	FUSES					A/R		
					*	S/L FUSE				ASSY801-1	A/R		
					*	S/L FUSE HOLDER				ASSY1043-3	A/R		
					*	EARTH				ASSY1037-1	1		
	26,27				*	S/L PIT & LID (TYPE 4)		PT1		ASSY833-1	1		
					*	JUNCTION BOX KIT				ASSY833-5	1		
	30				*	S/L PIT & LID (TYPE 4)		PT1		ASSY833-1	1		
HIGHLANDS ST	36A	U2256285			*	11kV STRAIGHT JOINT [240-240]		SJ1		11ST24/24X	1		
	36B	U2256286			*	11kV STRAIGHT JOINT [240-240]		SJ1		11ST24/24X	1		
	36	U2256287			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	EARTH				ASSY1037-1	1		
	33	U2256297			*	SUPPLY PILLAR (240-240 7F)		PI1		LVSP4-6S	1		MAKE PILLAR 8-FUSE TYPE
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
	40	U2256288			*	C + I PILLAR		CI1		LVLP400CFS	1		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	EARTH				ASSY1037-1	1		
	32,39				*	S/L PIT & LID (TYPE 4)		PT1		ASSY833-1	1		
	34, 35,37,38				*	S/L PIT & LID (TYPE 4)		PT1		ASSY833-1	1		
					*	JUNCTION BOX KIT				ASSY833-5	1		
CHRISTENSEN RD	44	U2256289			*	11kV STRAIGHT JOINT [240-240]		SJ1		11ST24/24X	1		
	45	U2256087	*			SERV PILLAR		EX		EX	EX		MAKE 2-WAY
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
					*	240 LUG SET				LVSPL240	1		
	50	U2256290			*	11kV STRAIGHT JOINT [240-240]		SJ1		11ST24/24X	1		
	52	U2256088	*			SERV PILLAR		EX		EX	EX		
					*	S/L FUSE				ASSY801-1	1		
					*	S/L FUSE HOLDER				ASSY1043-3	1		
	53A,54A,55A,57A				*	S/L PIT & LID (TYPE 4) & FUSED J/BOX (SSM)		PT1		ASSY831-1	1		
	53,54,55,57				*	S/L PIT & LID (TYPE 4)		PT1		ASSY833-1	1		
	56				*	S/L PIT & LID (TYPE 4)		PT1		ASSY833-1	1		
					*	JUNCTION BOX KIT				ASSY833-5	1		



PROPOSED SL GEOGRAPHIC

MAX ALLOWABLE EFLI = 1.024Ω — 16mm 2C

MAX ALLOWABLE VDrop = 9V — 4mm 2C

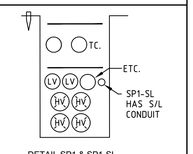
SYMBOL LEGEND

- PROPOSED 50mm S/L
- PROPOSED ENERGEX 100mm COMMS
- PROPOSED 100mm
- PROPOSED 125mm
- EXISTING 40mm S/L
- EXISTING ENERGEX 100mm COMMS
- EXISTING 100mm
- EXISTING 125mm
- PROPOSED CABLE (AS MARKED)
- EXISTING CABLE (AS MARKED)
- PROPOSED UNDERGROUND HV/LV ROUTE
- EXISTING UNDERGROUND HV/LV ROUTE
- PROPOSED OVERHEAD HV/LV ROUTE
- EXISTING OVERHEAD HV/LV ROUTE
- PROPOSED S/L CABLE
- EXISTING S/L CABLE
- PADMOUNT TRANSFORMER
- PMT LV GEOGRAPHIC
- PMT HV GEOGRAPHIC
- RING MAIN UNIT
- RMU HV SCHEMATIC
- PROPOSED SUPPLY PILLAR
- EXISTING SUPPLY PILLAR
- PROPOSED LINK PILLAR
- EXISTING LINK PILLAR
- COMMERCIAL PILLAR
- EARTH
- PROPOSED TYPE 4 PIT
- EXISTING TYPE 4 PIT
- RECOVER EQUIPMENT
- 11kV STRAIGHT JOINT
- OVERHEAD POLE TRANSFORMER
- OVERHEAD POLE (HV ONLY)
- OVERHEAD POLE (LV ONLY)
- OVERHEAD POLE (HV & LV)
- OVERHEAD HV TERMINATION
- OVERHEAD LV TERMINATION
- AIR BREAK SWITCH (OPEN)
- AIR BREAK SWITCH (CLOSED)
- DISCONNECT LINKS (OPEN)
- DISCONNECT LINKS (CLOSED)
- WATER METER
- SURVEY PEG

STREET LIGHT SYMBOL LEGEND

- PROPOSED L50 (RATE 2)
- EXISTING L50 (RATE 2)
- PROPOSED L90 (RATE 2)
- EXISTING L90 (RATE 2)
- EXISTING M50 (RATE 2)

ENERGEX NON-STANDARD TRENCH DETAILS (NTS)



DETAIL SP1 & SP1-SL

R.	DESCRIPTION	DATE
A	ISSUED FOR ENERGEX & COUNCIL ACCEPTANCE	31.08.21

NORTH

20-0210- 03

SITE CONTACT DETAILS		COUNCIL STANDARD ALIGNMENTS		WORKS COORDINATOR	PETER EUSTACE & ASSOCIATES
NAME		Energex OH	Energex OH	PARENT PROJECT NO.	
TBC		Energex UG	Energex UG	WORK REQUEST NO.	
COMPANY		NBN	REFER NBN		
-		GAS	REFER GAS	LOTS	LOT 201 - 207
PHONE	-	HP GAS	REFER GAS		
MOBILE	-	WATER	REFER CIVIL	CANCELLING LOTS	LOT 501 on SP295994
FAX	-	STORMWATER	REFER CIVIL	LOCAL AUTHORITY	GOLD COAST CITY COUNCIL
		SEWERAGE	REFER CIVIL	UBD REF	
		OTHER	REFER CIVIL	PEGGED?	YES

APPROVED	SHIHABUL ISLAM	
CHECKED	DAVID PRUSS	
DESIGNER	ABRAHAM IKORO	
PHONE	(07) 5596 1425	
PLANNER	KRIS BOVEINIS	
PHONE	(07) 5596 1425	
ISSUE DATE	31 AUGUST 2021	

Peter Eustace & Associates

INSTALL CONDUITS, CABLES, TRANSFORMER, STREETLIGHTS, PILLARS

7 LOT SUBDIVISION
HESTER STAGE 2 -YATALA STAPYLTON JACOBS WELL ROAD
YATALA

WORKSPLAN VERSION 5.5

SCALE: N.T.S.

PROJECT / SUB PROJECT NO.

S1301568

Sheet 3 of 5

ISSUE NO: A

NEW STYLE LINK PILLAR

LOCATION: HOMESTEAD DR **STATION:** LP2256278

CIRCUIT No.	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
1 (LHS)	150x50	WB	5	TO HOMESTEAD DR SC2226680 / HOMESTEAD DR U2226606 & SERVICES
2 (RHS)	150x50	WB	5	TO FAIRWAY ST SC2256279 / FAIRWAY ST LP2256273 & SERVICES
MATERIAL: GRAVOPLY II (1.5mm) or similar				

NEW STYLE LINK PILLAR

LOCATION: FAIRWAY ST **STATION:** LP2256273

CIRCUIT No.	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
1 (LHS)	150x50	WB	5	TO FAIRWAY ST SC2256279 / FAIRWAY ST LP2256278 & SERVICES
2 (RHS)	150x50	WB	5	TO HOMESTEAD DR SC2226594 & SERVICES
MATERIAL: GRAVOPLY II (1.5mm) or similar				

LV POLE TERMINATION LABEL

LABEL SIZE	SITE LOCATION FOR ATTACHING OF LABEL	LABEL INFORMATION
300x100	**POLE No:** P2256118	LV CABLE TO CHRISTENSEN RD P2256119 / COASTLINK CRT U2256284 / FAIRWAY ST SC2256279 & SERVICES
	LOCATION: CHRISTENSEN RD	
MATERIAL: GRAVOPLY II (1.5mm) or similar		

LV POLE TERMINATION LABEL

LABEL SIZE	SITE LOCATION FOR ATTACHING OF LABEL	LABEL INFORMATION
300x100	**POLE No:** P2256119	LV CABLE TO CHRISTENSEN RD P2256118 / COASTLINK CRT U2256284 / FAIRWAY ST SC2256279 & SERVICES
	LOCATION: CHRISTENSEN RD	
MATERIAL: GRAVOPLY II (1.5mm) or similar		

PMT LV SWBD - SWITCH FUSE CIRCUITS

LOCATION: FAIRWAY ST **STATION:** SC2256279

CIRCUIT No.	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
TFMR ISOLATOR	80 x 35	WB	6	TRANSFORMER
1	80 x 35	WB	5	TO FAIRWAY ST U2256277 (DIRECT) / HOMESTEAD DR LP2256278 / FAIRWAY ST LP2256273 & SERVICES
2	80 x 35	WB	5	TO FAIRWAY ST U2256283 (DIRECT) / COASTLINK CRT U2256284 / CHRISTENSEN RD P2256118 / CHRISTENSEN RD P2256119 & SERVICES
3	80 x 35	WB	5	SPARE
4	80 x 35	WB	5	SPARE
MATERIAL: GRAVOPLY II (1.5mm) or similar				

PMT LV SWBD - SWITCH FUSE CIRCUITS

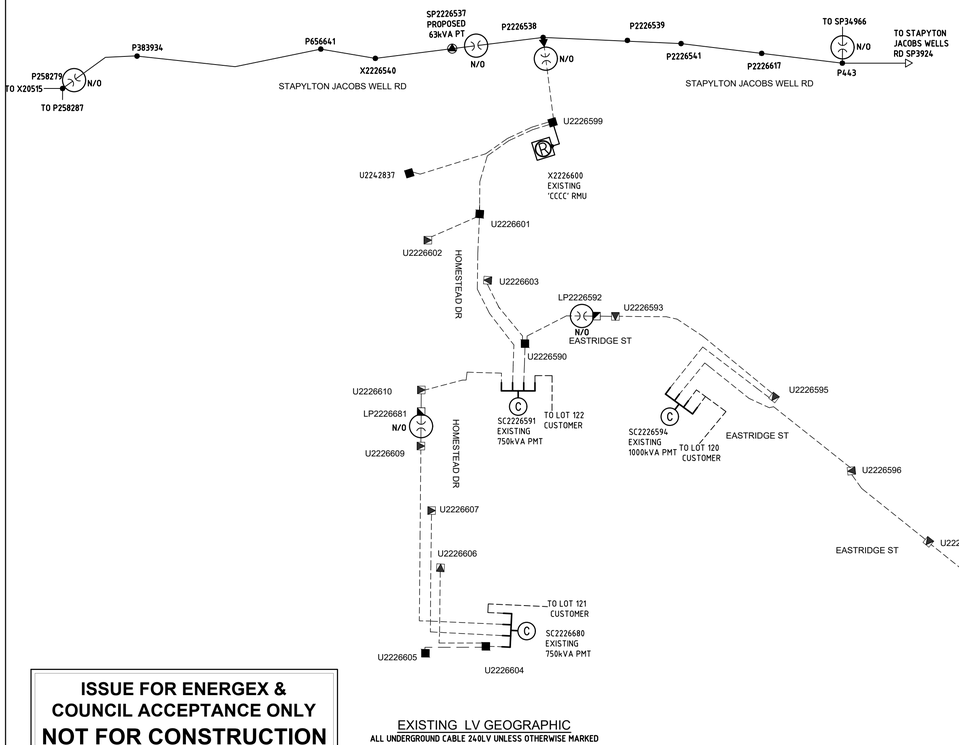
LOCATION: EASTRIDGE ST **STATION:** SC2226594

CIRCUIT No.	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
TFMR ISOLATOR	80 x 35	WB	6	TRANSFORMER
1	80 x 35	WB	5	EXISTING
2	80 x 35	WB	5	TO EASTRIDGE ST U2226596 (DIRECT) / FAIRWAY ST LP2256273 & SERVICES
3	80 x 35	WB	5	EXISTING
4	80 x 35	WB	5	EXISTING
MATERIAL: GRAVOPLY II (1.5mm) or similar				

PMT LV SWBD - SWITCH FUSE CIRCUITS

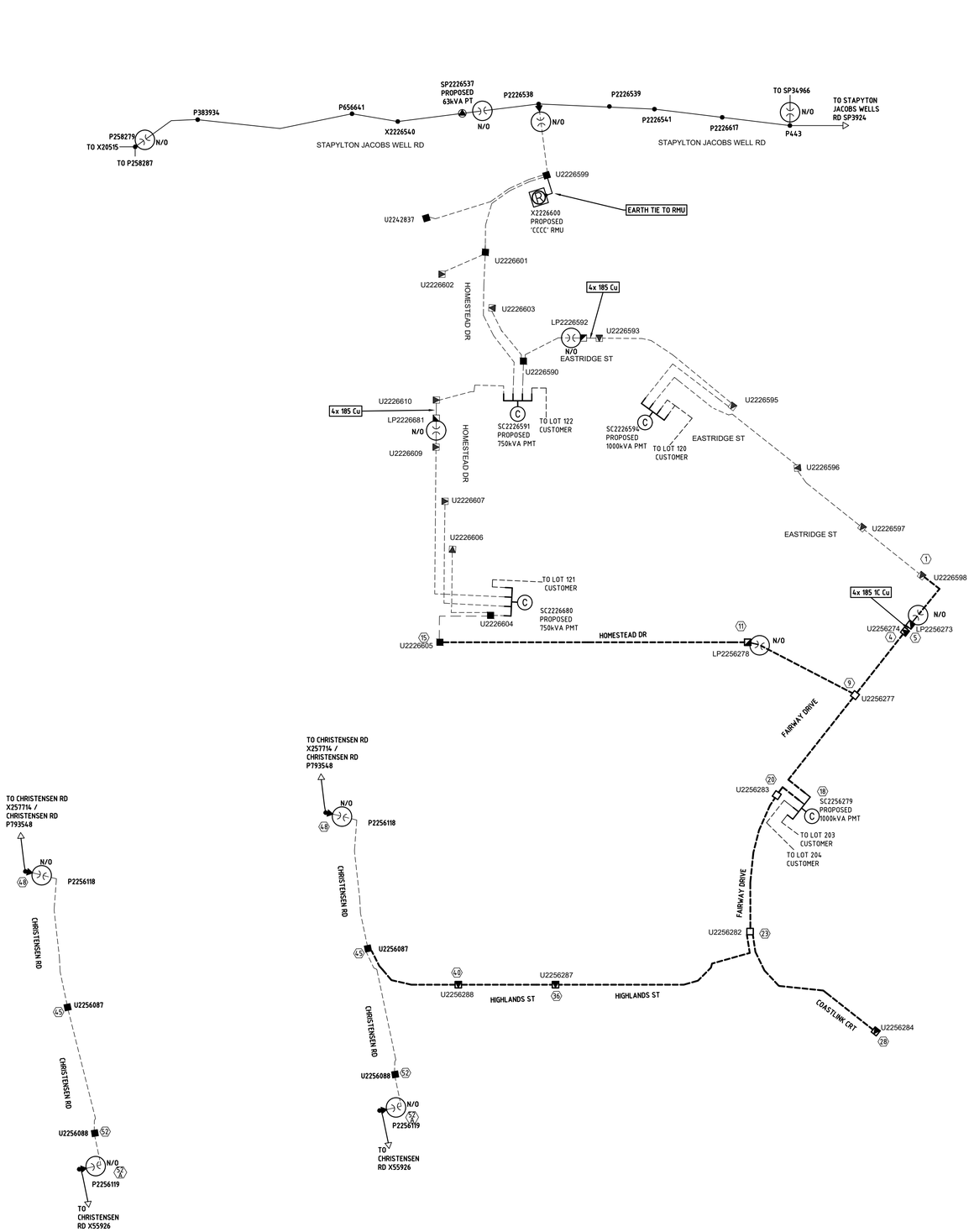
LOCATION: HOMESTEAD DR **STATION:** SC2226680

CIRCUIT No.	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
TFMR ISOLATOR	80 x 35	WB	6	TRANSFORMER
1	80 x 35	WB	5	EXISTING
2	80 x 35	WB	5	EXISTING
3	80 x 35	WB	5	EXISTING
4	80 x 35	WB	5	TO HOMESTEAD DR U2226604 (DIRECT) / HOMESTEAD DR U2226606 / HOMESTEAD DR LP2256278 & SERVICES
MATERIAL: GRAVOPLY II (1.5mm) or similar				



EXISTING LV GEOGRAPHIC

ALL UNDERGROUND CABLE 240LV UNLESS OTHERWISE MARKED



EXISTING LV GEOGRAPHIC

ALL UNDERGROUND CABLE 240LV UNLESS OTHERWISE MARKED

PROPOSED LV GEOGRAPHIC

ALL UNDERGROUND CABLE 240LV UNLESS OTHERWISE MARKED

ISSUE FOR ENERGEX & COUNCIL ACCEPTANCE ONLY

NOT FOR CONSTRUCTION

This drawing is to be considered preliminary until this disclaimer is removed by Peter Eustace Pty. Ltd.

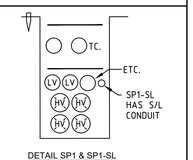
SYMBOL LEGEND

- PROPOSED 50mm S/L
- PROPOSED ENERGEX 100mm COMMS
- PROPOSED 100mm
- PROPOSED 125mm
- EXISTING 40mm S/L
- EXISTING ENERGEX 100mm COMMS
- EXISTING 100mm
- EXISTING 125mm
- PROPOSED CABLE (AS MARKED)
- EXISTING CABLE (AS MARKED)
- PROPOSED UNDERGROUND HV/LV ROUTE
- EXISTING UNDERGROUND HV/LV ROUTE
- PROPOSED OVERHEAD HV/LV ROUTE
- EXISTING OVERHEAD HV/LV ROUTE
- PROPOSED S/L CABLE
- EXISTING S/L CABLE
- PADMOUNT TRANSFORMER
- PMT LV GEOGRAPHIC
- PMT HV GEOGRAPHIC
- RING MAIN UNIT
- RMU HV SCHEMATIC
- PROPOSED SUPPLY PILLAR
- EXISTING SUPPLY PILLAR
- PROPOSED LINK PILLAR
- EXISTING LINK PILLAR
- COMMERCIAL PILLAR
- EARTH
- PROPOSED TYPE 4 PIT
- EXISTING TYPE 4 PIT
- RECOVER EQUIPMENT
- 11kV STRAIGHT JOINT
- OVERHEAD POLE TRANSFORMER
- OVERHEAD POLE (HV ONLY)
- OVERHEAD POLE (LV ONLY)
- OVERHEAD POLE (HV & LV)
- OVERHEAD HV TERMINATION
- OVERHEAD LV TERMINATION
- AIR BREAK SWITCH (OPEN)
- AIR BREAK SWITCH (CLOSED)
- DISCONNECT LINKS (OPEN)
- DISCONNECT LINKS (CLOSED)
- WATER METER
- SURVEY PEG

STREET LIGHT SYMBOL LEGEND

- PROPOSED L50 (RATE 2)
- EXISTING L50 (RATE 2)
- PROPOSED L90 (RATE 2)
- EXISTING L90 (RATE 2)
- EXISTING M50 (RATE 2)

ENERGEX NON-STANDARD TRENCH DETAILS (NTS)



DETAIL SP1 & SP1-SL

R	DESCRIPTION	DATE
A	ISSUED FOR ENERGEX & COUNCIL ACCEPTANCE	31.08.21

PETER EUSTACE CONSULTING ENGINEERS
STREET ADDRESS U14, 39 Lawrence Dr, Nerang QLD 4211
POSTAL ADDRESS PO Box 2835, Nerang DC QLD 4211
TELEPHONE (07) 5596 1425
EMAIL mail@pece.com.au
WEB petereustace.com.au

NORTH

20-0210- 04

SITE CONTACT DETAILS		COUNCIL STANDARD ALIGNMENTS		WORKS COORDINATOR	PETER EUSTACE & ASSOCIATES
NAME		Energex OH	**Energex OH**	PARENT PROJECT NO.	
TBC		Energex UG	**Energex UG**	WORK REQUEST NO.	
COMPANY		NBN	**REFER NBN**		
-		GAS	**REFER GAS**	LOTS	**LOT 201 - 207**
PHONE	-	HP GAS	**REFER GAS**		
MOBILE	-	WATER	**REFER CIVIL**	CANCELLING LOTS	**LOT 501 on SP295994**
FAX	-	STORMWATER	**REFER CIVIL**	LOCAL AUTHORITY	**GOLD COAST CITY COUNCIL**
		SEWERAGE	**REFER CIVIL**	UBD REF	
		OTHER	**REFER CIVIL**	PEGGED?	**YES**

APPROVED	**SHIHABUL ISLAM**
CHECKED	**DAVID PRUSS**
DESIGNER	**ABRAHAM IKORO**
PHONE	**(07) 5596 1425**
PLANNER	**KRIS BOVEINIS**
PHONE	**(07) 5596 1425**
ISSUE DATE	**31 AUGUST 2021**

Peter Eustace & Associates

INSTALL CONDUITS, CABLES, TRANSFORMER, STREETLIGHTS, PILLARS

7 LOT SUBDIVISION
HESTER STAGE 2 -YATALA STAPYLTON JACOBS WELL ROAD
YATALA

WORKSPLAN VERSION 5.5

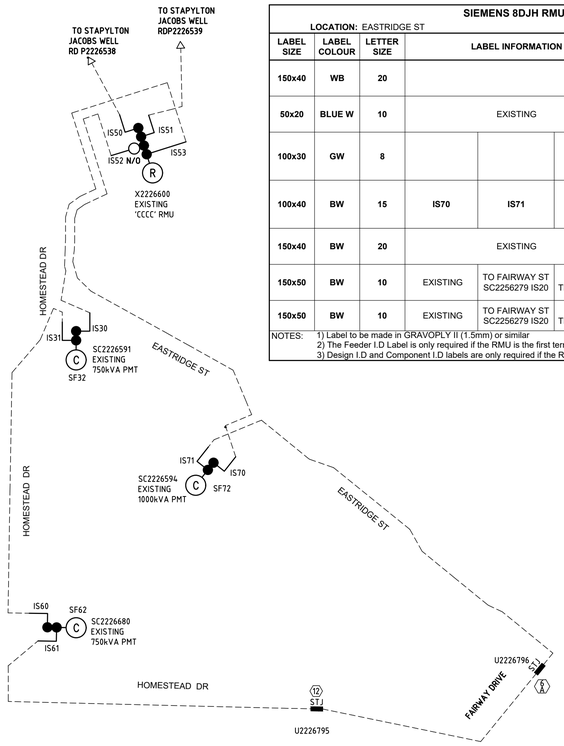
SCALE: **N.T.S.**

PROJECT / SUB PROJECT NO.

S1301568

Sheet **4 of 5**

ISSUE NO: **A**



EXISTING HV GEOGRAPHIC
11kV FEEDER BLHST16

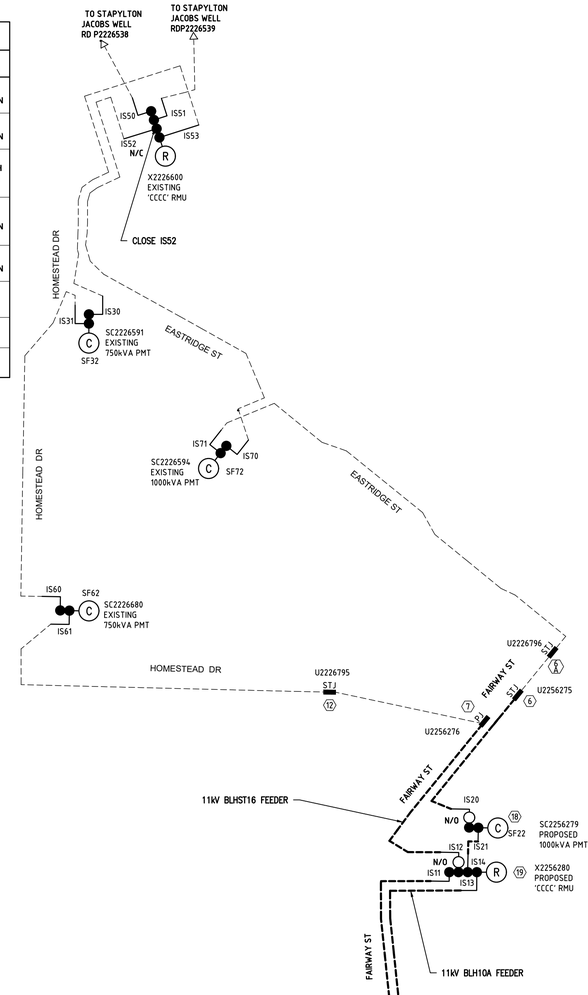
SIEMENS 8DJH RMU RRT							
LOCATION: EASTRIDGE ST						**STATION:** SC2226594	
LABEL SIZE	**LABEL COLOUR**	**LETTER SIZE**	**LABEL INFORMATION**			**LABEL LOCATION**	**LABEL DESCRIPTION**
150x40	WB	20				FRONT	RMU IDENTIFICATION
50x20	BLUE W	10	EXISTING			FRONT	DESIGN IDENTIFICATION
100x30	GW	8				NEAR EARTH SW	EARTH SWITCH DESCRIPTION
100x40	BW	15	IS70	IS71	SF72	NEAR ISOLATOR	ISOLATOR IDENTIFICATION
150x40	BW	20	EXISTING			FRONT	FEEDER IDENTIFICATION
150x50	BW	10	EXISTING	TO FAIRWAY ST SC2256279 IS20	TO TRANSFORMER	CABLE BOX	CABLE DESTINATION
150x50	BW	10	EXISTING	TO FAIRWAY ST SC2256279 IS20	TO TRANSFORMER	INSIDE SIDE WALL	CABLE DESTINATION

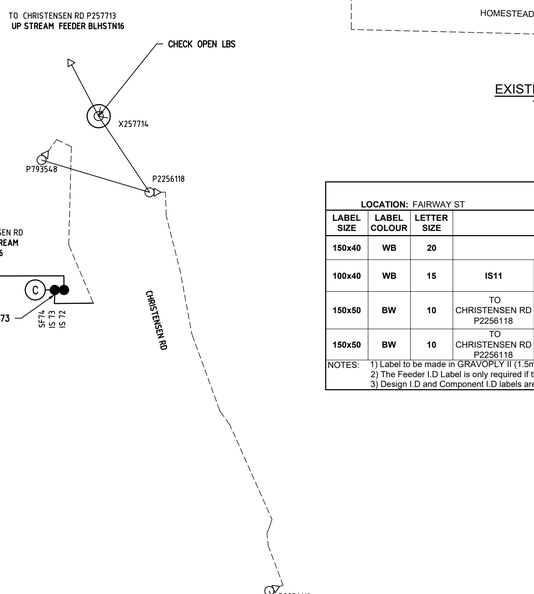
NOTES: 1) Label to be made in GRAVOPLY II (1.5mm) or similar
2) The Feeder I.D Label is only required if the RMU is the first termination outside a Zone Substation
3) Design I.D and Component I.D labels are only required if the RMU is installed in a Zone Substation

SIEMENS 8DJH RMU RRT							
LOCATION: FAIRWAY ST						**STATION:** SC2256279	
LABEL SIZE	**LABEL COLOUR**	**LETTER SIZE**	**LABEL INFORMATION**			**LABEL LOCATION**	**LABEL DESCRIPTION**
150x40	WB	20				FRONT	RMU IDENTIFICATION
50x20	BLUE W	10	SC2256279			FRONT	DESIGN IDENTIFICATION
100x30	GW	8				NEAR EARTH SW	EARTH SWITCH DESCRIPTION
100x40	BW	15	IS20	IS21	SF22	NEAR ISOLATOR	ISOLATOR IDENTIFICATION
150x40	BW	20	EXISTING			FRONT	FEEDER IDENTIFICATION
150x50	BW	10	TO EASTRIDGE ST SC2256594 IS71	TO FAIRWAY ST X2256280 IS13	TO TRANSFORMER	CABLE BOX	CABLE DESTINATION
150x50	BW	10	TO EASTRIDGE ST SC2256594 IS71	TO FAIRWAY ST X2256280 IS13	TO TRANSFORMER	INSIDE SIDE WALL	CABLE DESTINATION

NOTES: 1) Label to be made in GRAVOPLY II (1.5mm) or similar
2) The Feeder I.D Label is only required if the RMU is the first termination outside a Zone Substation
3) Design I.D and Component I.D labels are only required if the RMU is installed in a Zone Substation

PROPOSED COMMISSIONING SCHEDULE			
TENTATIVE ONLY SUBJECT TO AMENDMENT BY SWITCHING CO-ORDINATOR			
ITEM No	**LOCATION**	**APPARATUS**	**ACTION**
	COMMISSION NEW PMT - LV AND HV SWITCHING		
1	ADVISE CONTRACT SUPERVISOR SWITCHING TO COMMENCE		
2	RECEIVE CLEARANCE FROM WORK CREWS ALL WORK COMPLETED		
3	NOTIFY ALL WORK CREWS TREAT PILLARS AS LIVE		
4	FAIRWAY ST , HIGHLANDS ST , COASTLINK CRT	NEW HV & LV EQUIPMENT	MAKE READY
5	CHRISTENSEN RD SC833233, CHRISTENSEN RD SG747134, CHRISTENSEN RD SP383749, CHRISTENSEN RD SP763958, CHRISTENSEN RD SP383758, CHRISTENSEN RD SC714279, CHRISTENSEN RD SG11309, CHRISTENSEN RD SC736411	GENSET	CONNECT GENSET
6	CHRISTENSEN RD SC793547	IS73	OPEN
7	STAPYLTON JACOBS WELL ROAD X2226600 (BACKFEED FEEDER BLHST16)	IS52	CLOSE
8	HOMESTEAN DR SC2226680	IS62	OPEN
9	EASTRIDGE ST SC2226594	IS71	OPEN
10	CHRISTENSEN RD X55926	LBS	OPEN
11	CHRISTENSEN RD X257714	ABS	CHECK OPEN
12	FAIRWAY ST , HIGHLANDS ST , COASTLINK CRT	NEW HV & LV EQUIPMENT	CONNECT
13	REVERSE		REVERSE
14	FAIRWAY ST , HIGHLANDS ST , COASTLINK CRT	NEW HV & LV EQUIPMENT	COMMISSION & TEST
15	ADVISE CONTRACT SUPERVISOR SWITCHING COMPLETE		





TO CHRISTENSEN RD X55926 / TO CHRISTENSEN RD SC833233
/ CHRISTENSEN RD SG747134 / CHRISTENSEN RD SP383749 / CHRISTENSEN RD
SP763958 / CHRISTENSEN RD SP383758 / CHRISTENSEN RD SC714279 / CHRISTENSEN
RD SC777098 / CHRISTENSEN RD SG11309 / CHRISTENSEN RD SC736411

EXISTING HV GEOGRAPHIC
11kV FEEDER BLH10A

ABB SAFELINK 'CCCC' RMU								
LOCATION: FAIRWAY ST							**STATION:** X2256280	
LABEL SIZE	**LABEL COLOUR**	**LETTER SIZE**	**LABEL INFORMATION**				**LABEL LOCATION**	**LABEL DESCRIPTION**
150x40	WB	20	X2256280				FRONT	RMU IDENTIFICATION
100x40	WB	15	IS11	IS12	IS13	IS14	NEAR ISOLATOR	ISOLATOR IDENTIFICATION
150x50	BW	10	TO CHRISTENSEN RD P2256118	TO HOMESTEAD DR SC2226680 IS61	TO FAIRWAY DR SC2256279 IS 21	TO CHRISTENSEN RD P2256119	CABLE BOX	CABLE DESTINATION
150x50	BW	10	TO CHRISTENSEN RD P2256118	TO HOMESTEAD DR SC2226680 IS61	TO FAIRWAY DR SC2256279 IS 21	TO CHRISTENSEN RD P2256119	CABLE BOX	CABLE DESTINATION

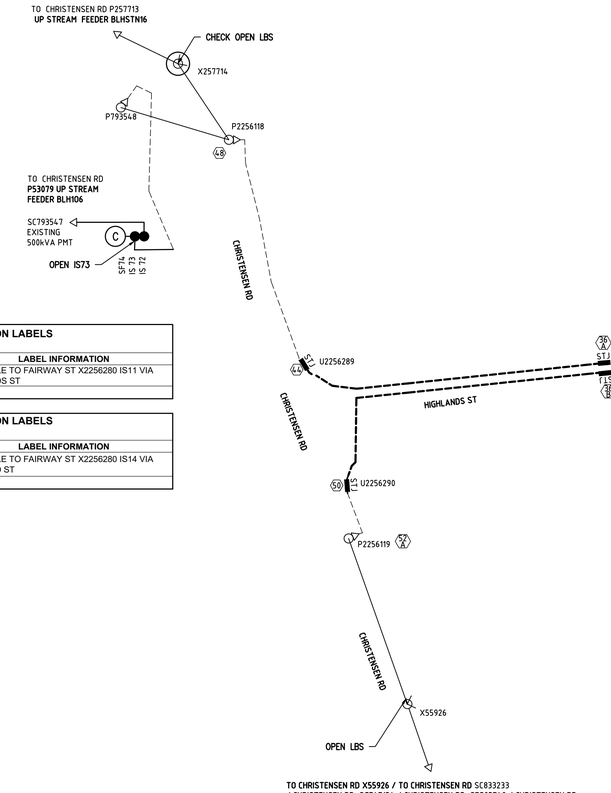
NOTES: 1) Label to be made in GRAVOPLY II (1.5mm) or similar
2) The Feeder I.D Label is only required if the RMU is the first termination outside a Zone Substation
3) Design I.D and Component I.D labels are only required if the RMU is installed in a Zone Substation

11kV FEEDER DESTINATION LABELS		
LOCATION: CHRISTENSEN RD		
LABEL SIZE	**STATION I.D**	**LABEL INFORMATION**
300 x 100	**POLE No:** P2256118	11kV CABLE TO FAIRWAY ST X2256280 IS11 VIA HIGHLANDS ST
MATERIAL: GRAVOPLY II (1.5mm) or similar		

11kV FEEDER DESTINATION LABELS		
LOCATION: CHRISTENSEN RD		
LABEL SIZE	**STATION I.D**	**LABEL INFORMATION**
300 x 100	**POLE No:** P2256119	11kV CABLE TO FAIRWAY ST X2256280 IS14 VIA HIGHLAND ST
MATERIAL: GRAVOPLY II (1.5mm) or similar		

SIEMENS 8DJH RMU RRT							
LOCATION: HOMESTEAD DR						**STATION:** SC2226680	
LABEL SIZE	**LABEL COLOUR**	**LETTER SIZE**	**LABEL INFORMATION**			**LABEL LOCATION**	**LABEL DESCRIPTION**
150x40	WB	20				FRONT	RMU IDENTIFICATION
50x20	BLUE W	10	EXISTING			FRONT	DESIGN IDENTIFICATION
100x30	GW	8				NEAR EARTH SW	EARTH SWITCH DESCRIPTION
100x40	BW	15	IS60	IS61	SF62	NEAR ISOLATOR	ISOLATOR IDENTIFICATION
150x40	BW	20	EXISTING			FRONT	FEEDER IDENTIFICATION
150x50	BW	10	EXISTING	TO FAIRWAY ST X2256280 IS12	TO TRANSFORMER	CABLE BOX	CABLE DESTINATION
150x50	BW	10	EXISTING	TO FAIRWAY ST X2256280 IS12	TO TRANSFORMER	INSIDE SIDE WALL	CABLE DESTINATION

NOTES: 1) Label to be made in GRAVOPLY II (1.5mm) or similar
2) The Feeder I.D Label is only required if the RMU is the first termination outside a Zone Substation
3) Design I.D and Component I.D labels are only required if the RMU is installed in a Zone Substation



TO CHRISTENSEN RD X55926 / TO CHRISTENSEN RD SC833233
/ CHRISTENSEN RD SG747134 / CHRISTENSEN RD SP383749 / CHRISTENSEN RD
SP763958 / CHRISTENSEN RD SP383758 / CHRISTENSEN RD SC714279 / CHRISTENSEN
RD SC777098 / CHRISTENSEN RD SG11309 / CHRISTENSEN RD SC736411

PROPOSED HV GEOGRAPHIC
11kV FEEDERS BLH10A & BLHST16

ISSUE FOR ENERGEX & COUNCIL ACCEPTANCE ONLY

NOT FOR CONSTRUCTION

This drawing is to be considered preliminary until this disclaimer is removed by Peter Eustace Pty. Ltd.

!WARNING!
FIRE ANT TERRITORY

THIS SITE IS WITHIN A RED IMPORTED FIRE ANT BIOSECURITY ZONE. CALL 132523 FOR FURTHER INFORMATION.

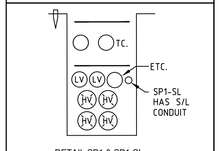
SYMBOL LEGEND

- PROPOSED 50mm S/L
- PROPOSED ENERGEX 100mm COMMS
- PROPOSED 100mm
- PROPOSED 125mm
- EXISTING 40mm S/L
- EXISTING ENERGEX 100mm COMMS
- EXISTING 100mm
- EXISTING 125mm
- PROPOSED CABLE (AS MARKED)
- EXISTING CABLE (AS MARKED)
- PROPOSED UNDERGROUND HV/LV ROUTE
- EXISTING UNDERGROUND HV/LV ROUTE
- PROPOSED OVERHEAD HV/LV ROUTE
- EXISTING OVERHEAD HV/LV ROUTE
- PROPOSED S/L CABLE
- EXISTING S/L CABLE
- PADMOUNT TRANSFORMER
- PMT LV GEOGRAPHIC
- PMT HV GEOGRAPHIC
- RING MAIN UNIT
- RMU HV SCHEMATIC
- PROPOSED SUPPLY PILLAR
- EXISTING SUPPLY PILLAR
- PROPOSED LINK PILLAR
- EXISTING LINK PILLAR
- COMMERCIAL PILLAR
- EARTH
- PROPOSED TYPE 4 PIT
- EXISTING TYPE 4 PIT
- RECOVER EQUIPMENT
- ST J 11kV STRAIGHT JOINT
- OVERHEAD POLE TRANSFORMER
- OVERHEAD POLE (HV ONLY)
- OVERHEAD POLE (LV ONLY)
- OVERHEAD POLE (HV & LV)
- OVERHEAD HV TERMINATION
- OVERHEAD LV TERMINATION
- AIR BREAK SWITCH (OPEN)
- AIR BREAK SWITCH (CLOSED)
- DISCONNECT LINKS (OPEN)
- DISCONNECT LINKS (CLOSED)
- WATER METER
- SURVEY PEG

STREET LIGHT SYMBOL LEGEND

- PROPOSED L50 (RATE 2)
- EXISTING L50 (RATE 2)
- PROPOSED L90 (RATE 2)
- EXISTING L90 (RATE 2)
- EXISTING M50 (RATE 2)

ENERGEX NON-STANDARD TRENCH DETAILS (NTS)



DETAIL SP1 & SP1-SL

R	DESCRIPTION	DATE
A	ISSUED FOR ENERGEX & COUNCIL ACCEPTANCE	31.08.21

CONSULTING ENGINEERS
STREET ADDRESS: U14, 39 Lawrence Dr, Nerang QLD 4211
POSTAL ADDRESS: PO Box 2835, Nerang DC QLD 4211
TELEPHONE: (07) 5596 1425
EMAIL: mail@pece.com.au
WEB: petereustace.com.au

NORTH

20-0210- 05

SITE CONTACT DETAILS		**COUNCIL STANDARD ALIGNMENTS**		WORKS COORDINATOR	**PETER EUSTACE & ASSOCIATES**
NAME		Energex OH	**Energex OH**	PARENT PROJECT NO.	
TBC		Energex UG	**Energex UG**	WORK REQUEST NO.	
COMPANY		NBN	**REFER NBN**		
-		GAS	**REFER GAS**	LOTS	**LOT 201 - 207**
PHONE	-	HP GAS	**REFER GAS**		
MOBILE	-	WATER	**REFER CIVIL**	CANCELLING LOTS	**LOT 501 on SP295994**
FAX	-	STORMWATER	**REFER CIVIL**	LOCAL AUTHORITY	**GOLD COAST CITY COUNCIL**
		SEWERAGE	**REFER CIVIL**	UBD REF	
		OTHER	**REFER CIVIL**	PEGGED?	**YES**

APPROVED	**SHIHABUL ISLAM**	
CHECKED	**DAVID PRUSS**	
DESIGNER	**ABRAHAM IKORO**	
PHONE	**(07) 5596 1425**	
PLANNER	**KRIS BOVEININIS**	
PHONE	**(07) 5596 1425**	
ISSUE DATE	**31 AUGUST 2021**	

Peter Eustace & Associates

INSTALL CONDUITS, CABLES, TRANSFORMER, STREETLIGHTS, PILLARS

7 LOT SUBDIVISION
HESTER STAGE 2 -YATALA STAPYLTON JACOBS WELL ROAD
YATALA

WORKSPLAN VERSION 5.5
SCALE: **N.T.S.**
PROJECT / SUB PROJECT NO.
S1301568
Sheet **5 of 5**
ISSUE NO: **A**