



APPENDIX E

LANDSCAPE INTENT PLAN



gasman
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perspectives

NATIONAL TILES

PROPOSED WAREHOUSE

WAREHOUSE DEVELOPMENT

Landscape Intent Package

Fraser Property Investment Pty Ltd

Lot 501 on SP295994

Lot 120-121 Vantage Yatala
HOMESTEAD DRIVE,
YATALA, QUEENSLAND 4207

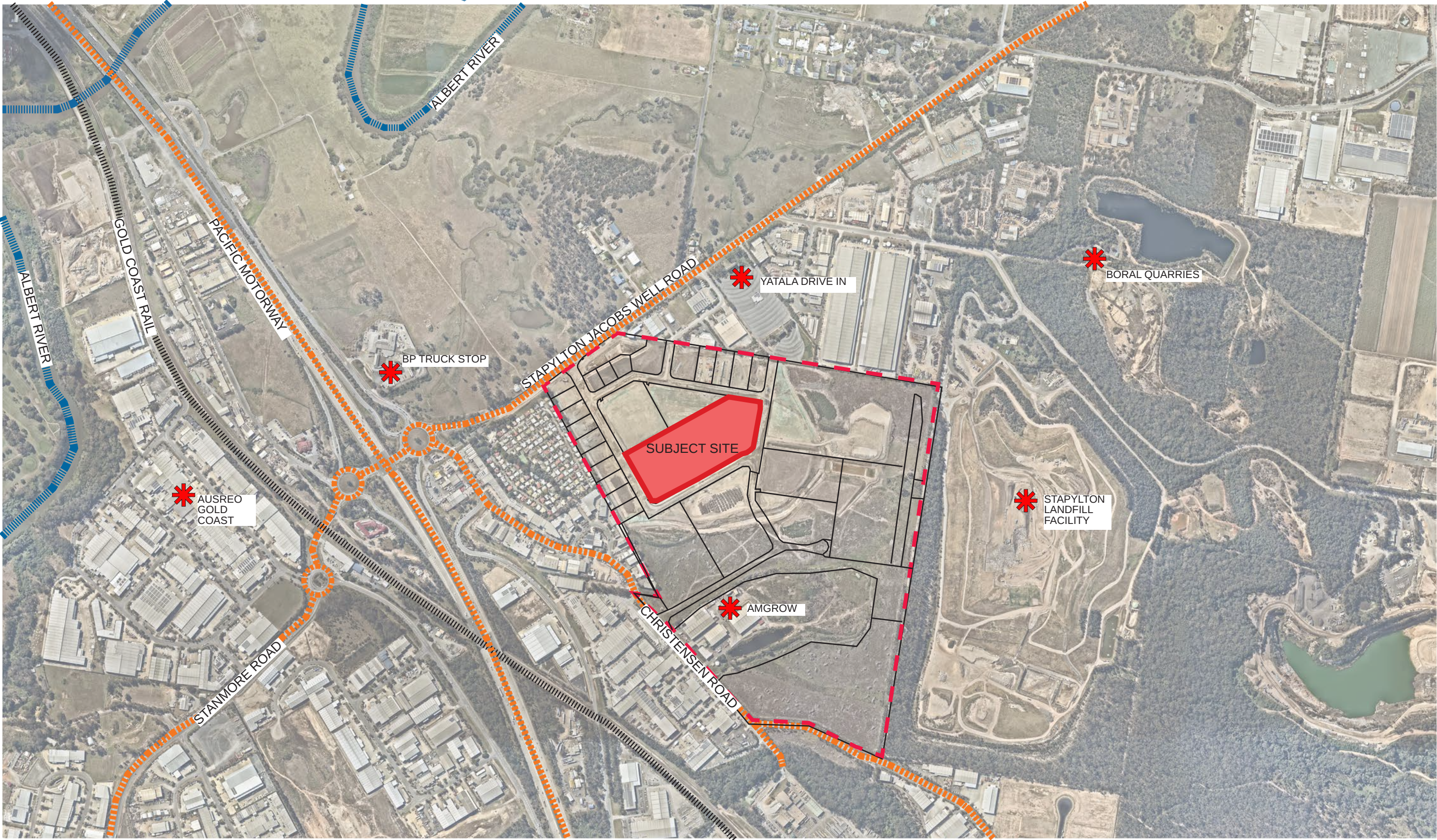
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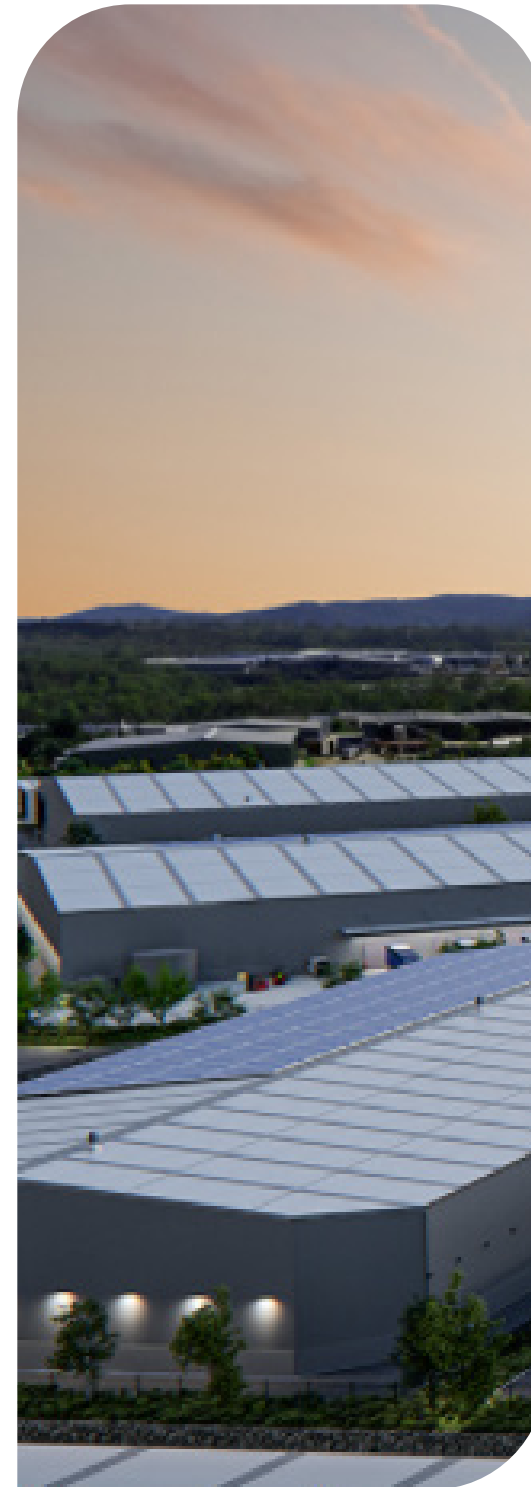
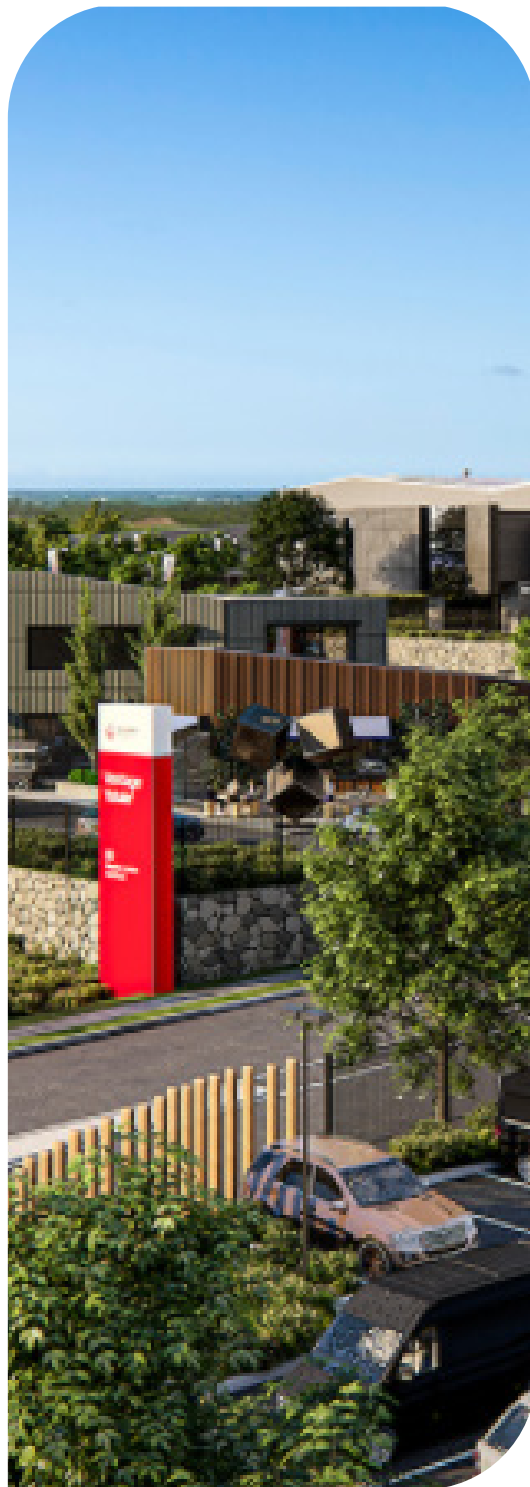
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SITE LOCALITY PLAN



Map Source: Near Map

LANDSCAPE INTENT



The landscape intent of Lot 120 ,and 121 at Vantage Yatala is;

To facilitate the development of functional, well serviced, amenable, and attractive industrial warehouse that holds regard to its local context, inline with Gold coast City Ccouncils development guidelines and in line with the design setting guidelines for Frasers Property International.

With high empasis a creation of a sense of spaciousness for the site will be made, defined by wide roads and buildings, and a flow of landscape between.

The promotion of a development that integrates with the surrounding environment through the use of compatible landscaping, materials, colours and building forms, will be made.

The reduction of potential for conflict between vehicle and pedestrian traffic snd an appropriate level of separation and/or wayfinding will be designed throughout the site.

Soft-scaping will be used to softens the built form, yet will be selected to be durable and require minimal maintenance.

The creation of open recreational areas for staff and visitors of the warehouse development will be delivered.

LANDSCAPE INTENT PLAN

LEGEND

- PROPERTY boundary
- 01 STREETSCAPE treatment to road verge to remain
- 02 PEDESTRIAN sight lines
- 03 STREET trees in road verge to be retained.
- 04 LAYERED planting of tree, shrub and groundcover species, consisting of low maintenance species
- 05 FEATURE trees to create a sense of place, provide shade for pedestrians and enhance legibility
- 06 SHADE trees provided to carparking area
- 07 GROUNDCOVER planting to carparking bays to enhance CEPTED principals
- 08 OUTDOOR recreation area including seating
- 09 OFFICE / SHOWROOM location
- 10 BIKERACKS
- 11 FEATURE planter pot with Cyathea cooperi (with 3m trunk) planted within.
- 12 FIRE TRUCK path
- 13 WATER METER easement location



ELEVATION DRAWINGS



NORTHERN ELEVATION



SOUTHERN ELEVATION

ELEVATION DRAWINGS



EASTERN ELEVATION



SOUTHERN ELEVATION

MATERIALS PALETTE

HARDSCAPE MATERIALS



Plain grey broom finished
concrete path network



Palisade Fencing



Entry signage example



Feature potted plant



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



GROUNDCOVER SPECIES





APPENDIX F

TRAFFIC IMPACT ASSESSMENT



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TRANSPORT IMPACT ASSESSMENT
PROPOSED WAREHOUSE DEVELOPMENT
Lot 501 SP295994 VANTAGE ESTATE, YATALA

Prepared for



22 DECEMBER 2021

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Prepared by Luke Rytenskild, Dare Janzekovic

Document History

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			Name / Position	Signature
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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 Department of Transport and Main Roads is triggered as a referral agency for the application.

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 Transport Code, Driveways and Vehicular Crossings code, and State Codes 1 and 6 are provided as Appendices A - D.

2.0 SUBJECT SITE

2.1 Location of Subject Site

As shown in Figure 2.1, the subject site is located central within the Vantage Industrial estate at Yatala. The site has an area of 49,469m².

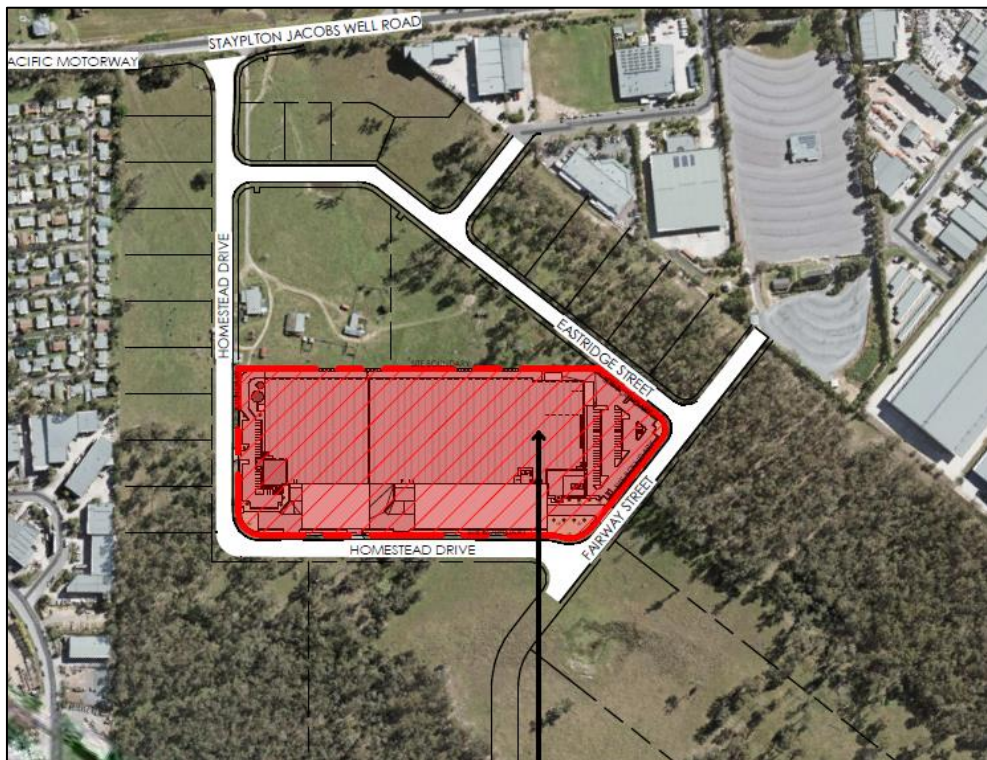


FIGURE 2.1 – LOCATION OF SUBJECT SITE

3.0 DEVELOPMENT PROPOSAL

The proposed plan of development comprises of a warehouse building with associated office facilities, with the following floor areas:

DEVELOPMENT AREAS	
TOTAL SITE	49469 m ²
NATIONAL TILES - 2 STOREY OFFICE	1012 m ²
NATIONAL TILES WAREHOUSE (INCLUDING DISPATCH OFFICE, COMMERCIAL HUB AND FUTURE TRADE CENTRE AND DRIVER AMENITIES)	17074 m ²
WAREHOUSE A	8233 m ²
WAREHOUSE A - 2 STOREY OFFICE - A	495 m ²
TOTAL BUILDING AREA	26814 m ²
CAR PARKING PROVIDED	172
AWNING	7308 m ²
HEAVY DUTY PAVEMENT	10108 m ²
LIGHT DUTY PAVEMENT	6195 m ²
EFFICIENCY	54.2%

The proposal includes two tenancies with the larger western most tenancy being specifically designed for National Tiles. A total of 172 car parking spaces are proposed to be provided for the site.

National Tiles expects that its tenancy will be occupied by up to 65 staff members.

Vehicular access is proposed to be gained via six separate crossovers, with three serving each tenancy. For each tenancy, there will be a two way crossover for the car parking facilities, and separate entry and exit crossovers for heavy vehicle access.

The proposed site plan is shown in Figure 3.1.



4.0 CAR PARKING

4.1 Car Parking Supply

In accordance with the *Table 9.4. 13-3* of the Transport Code, the following rate applies to the proposed use:

Warehouse:

2 spaces per tenancy or lot plus

1 space per 50m² of TUA up to and including 500m², and

1 space per 100m² of TUA over 500m²

Based on the above, the Acceptable Outcome for car parking for the proposed development is 273 spaces, as follows:

Table 4.1: Acceptable Outcome for car parking

Component	Acceptable outcome for car parking
Warehouse (GFA: 26,814m ²):	4 + 268.14 spaces
TOTAL	273 spaces

The proposal provides a total of 172 parking spaces which equates to a rate of approximately 1 space / 156m² GFA. This rate is typical of larger warehouse tenancies where there is a lower density of employees per unit floor area. Furthermore, the proposed car parking supply satisfies the operational requirements of the primary tenant (National Tiles). National Tiles expects that its tenancy will be occupied by up to 65 staff members at any time.

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	6.2 metres 6.2 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	2.5 metre beyond last bay	Compliant

A swept path analysis of the proposed car park indicates that the required design vehicle will be able to access and manoeuvre within the facility satisfactorily.

The proposed car parking layouts and dimensions are shown as Figures 4.1 and 4.2.

Swept path diagrams for typical B85 vehicle movements are provided as Figures 4.3 and 4.4.

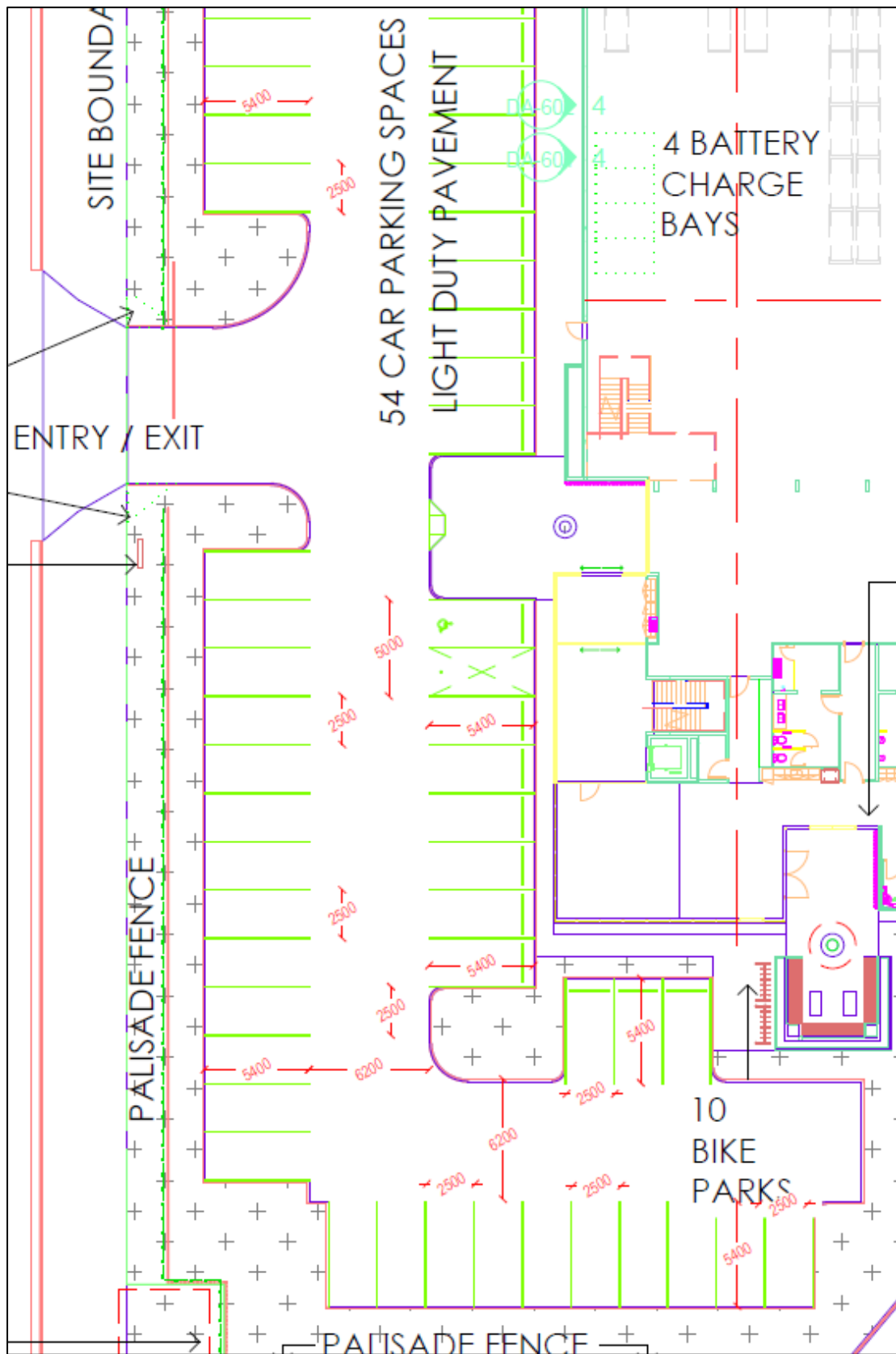
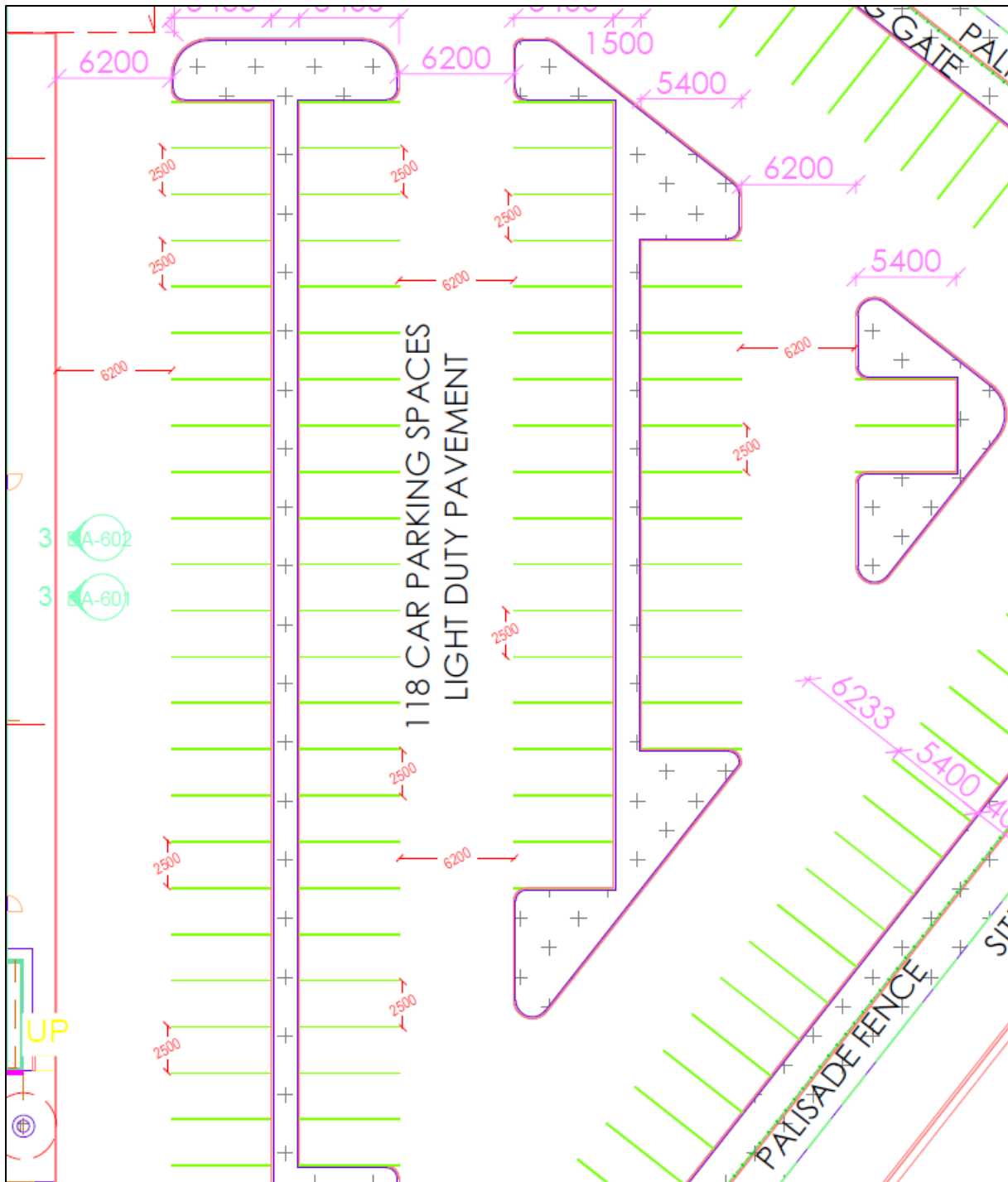


FIGURE 4.1 – PROPOSED CAR PARK DIMENSIONS (WESTERN CAR PARK)



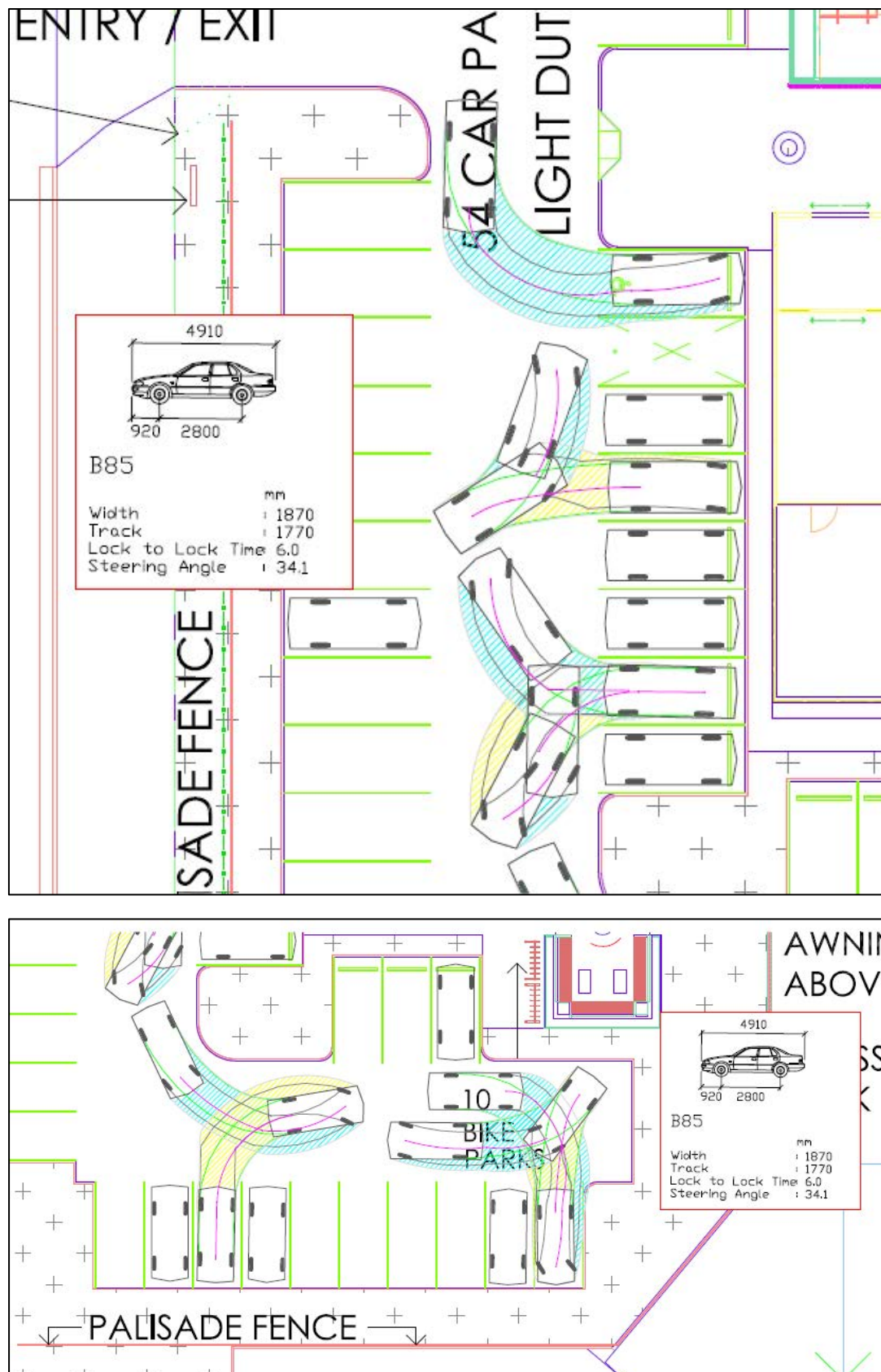


FIGURE 4.3 – SWEEP PATHS OF B85 VEHICLES (TENANCY A CAR PARK)

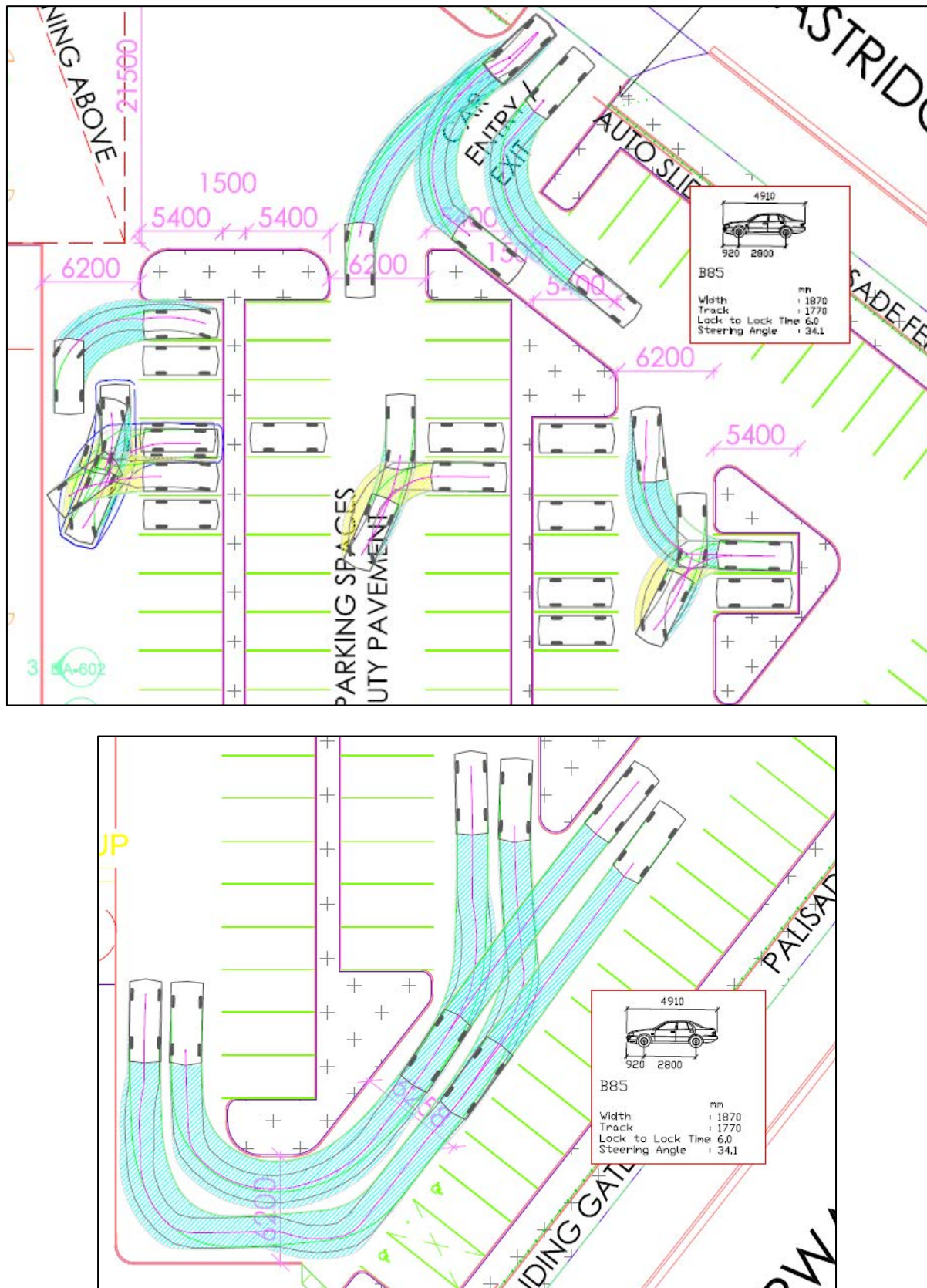


FIGURE 4.4 – SWEEP PATHS OF B85 VEHICLES (NATIONAL TILES CAR PARK)

5.0 ROAD NETWORK IMPACT

The proposed use and scale of development is permitted under the City Plan and was accounted for during the original Traffic Impact Assessment for Vantage Industrial Estate. A further assessment of impacts upon the surrounding local and State controlled network is not considered to be warranted.

6.0 PROPOSED VEHICLE CROSSOVERS

Vehicular access is proposed to be gained via six separate crossovers, with three serving each tenancy. For each tenancy, there will be a two way crossover for the car parking facilities, and separate entry and exit crossovers for heavy vehicles.

The proposed heavy vehicle crossovers have been designed with a width of 13.5 metres to allow comfortable access for vehicles up to A-Double size.

As shown in Figures 6.1 – 6.3, the proposed access crossover splays have been designed in accordance with the IPWEA Standard Drawing RS-051. Pedestrian sight splays have been provided in accordance with AS2890.1 and AS2890.2.



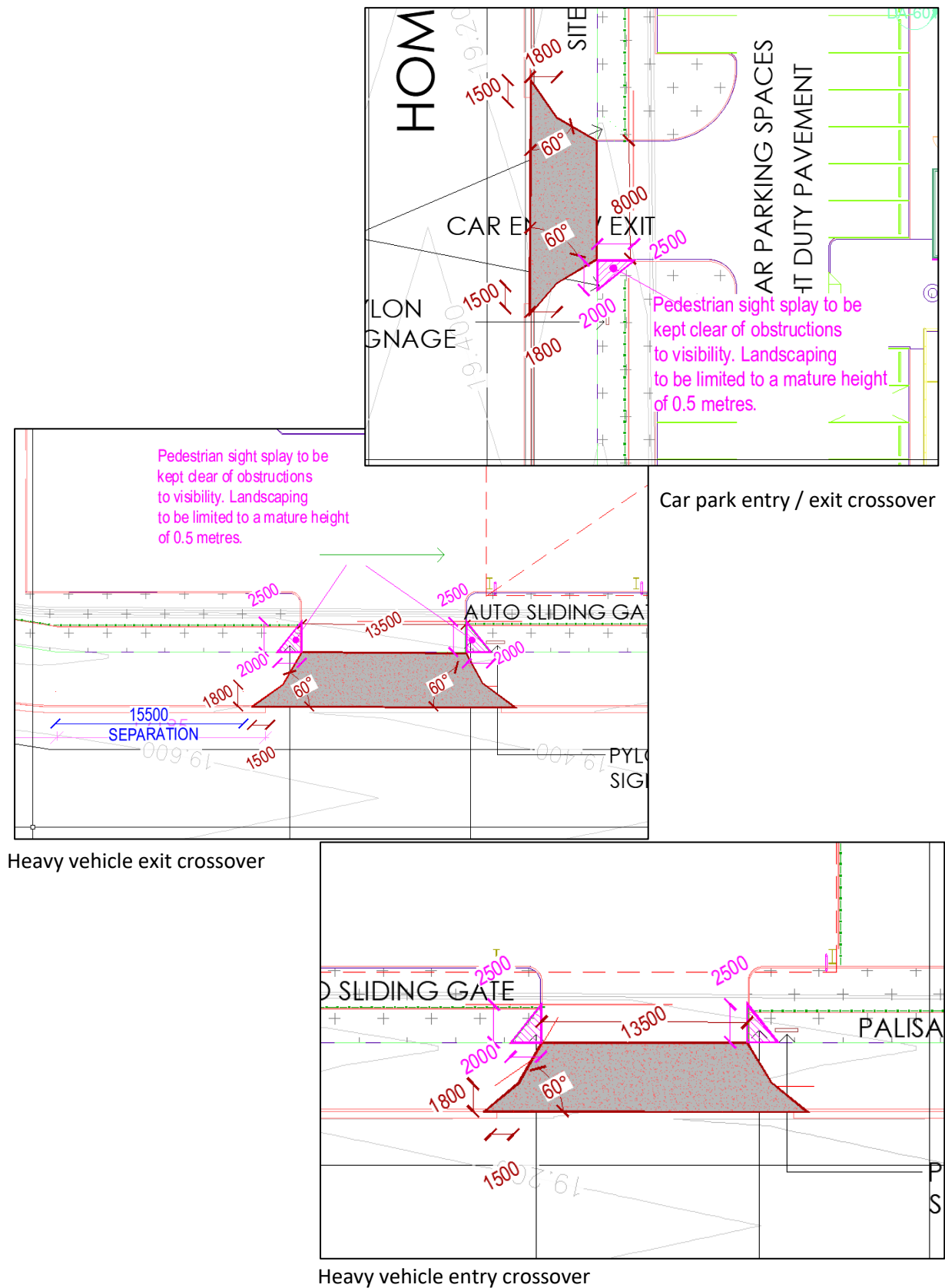


FIGURE 6.2 – PROPOSED VEHICLE CROSSOVER LAYOUT (WAREHOUSE A)

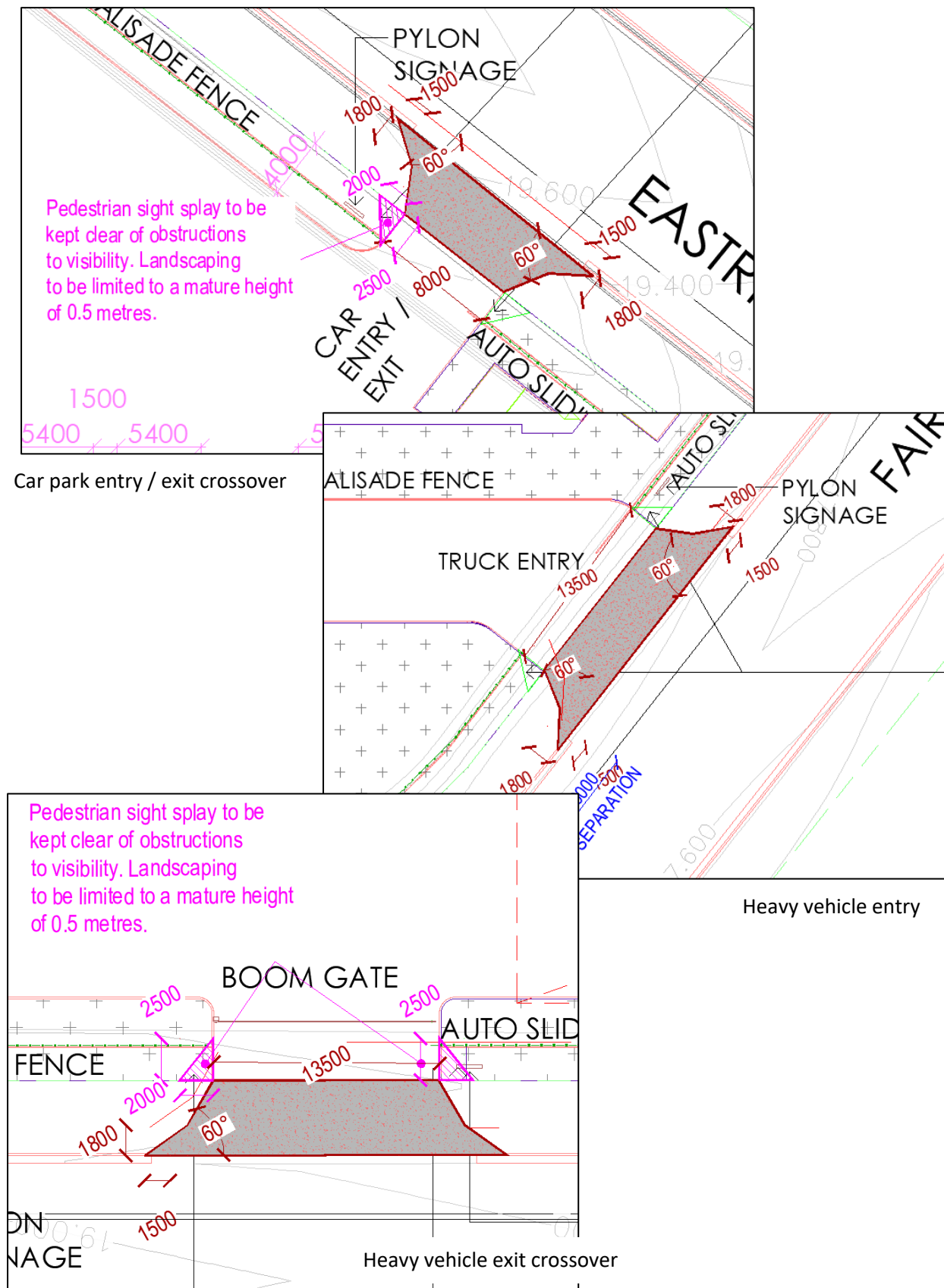


FIGURE 6.3 – PROPOSED VEHICLE CROSSOVER LAYOUT (NATIONAL TILES)

7.0 HEAVY VEHICLE ACCESS

The proposed plan of development has been designed to allow 20 metre Articulated Vehicles (AV) to satisfactorily access and circulate through the site, and manouvre to and from the loading docks, whilst maintaining a clearance of 0.5 metres to obstructions. The proposed access and circulation arrangements allow for vehicles up to A-Double size.

The swept paths for heavy vehicle movements associated with Tenancy A are shown in Figures 7.1 – 7.3.

The swept paths for heavy vehicle movements associated with the National Tiles tennacy are shown in Figures 7.4 – 7.9.

Swept paths of an emergency vehicle (QFES Urban Fire truck) are shown in Figures 7.10 -7.12.

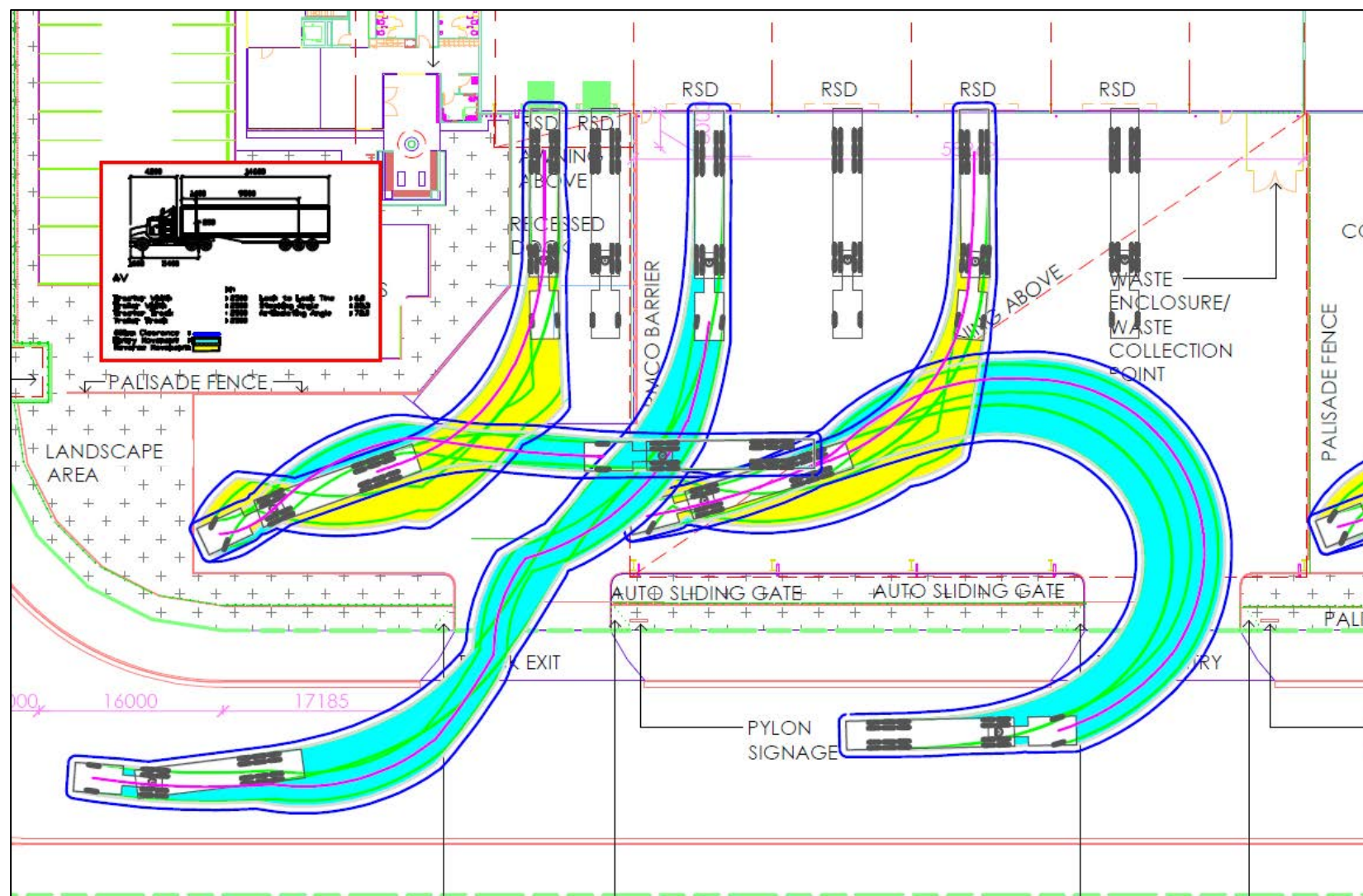


FIGURE 7.1 – HEAVY VEHICLE MANOEUVRING FOR TENANCY A (20 METRE ARTICULATED VEHICLE)

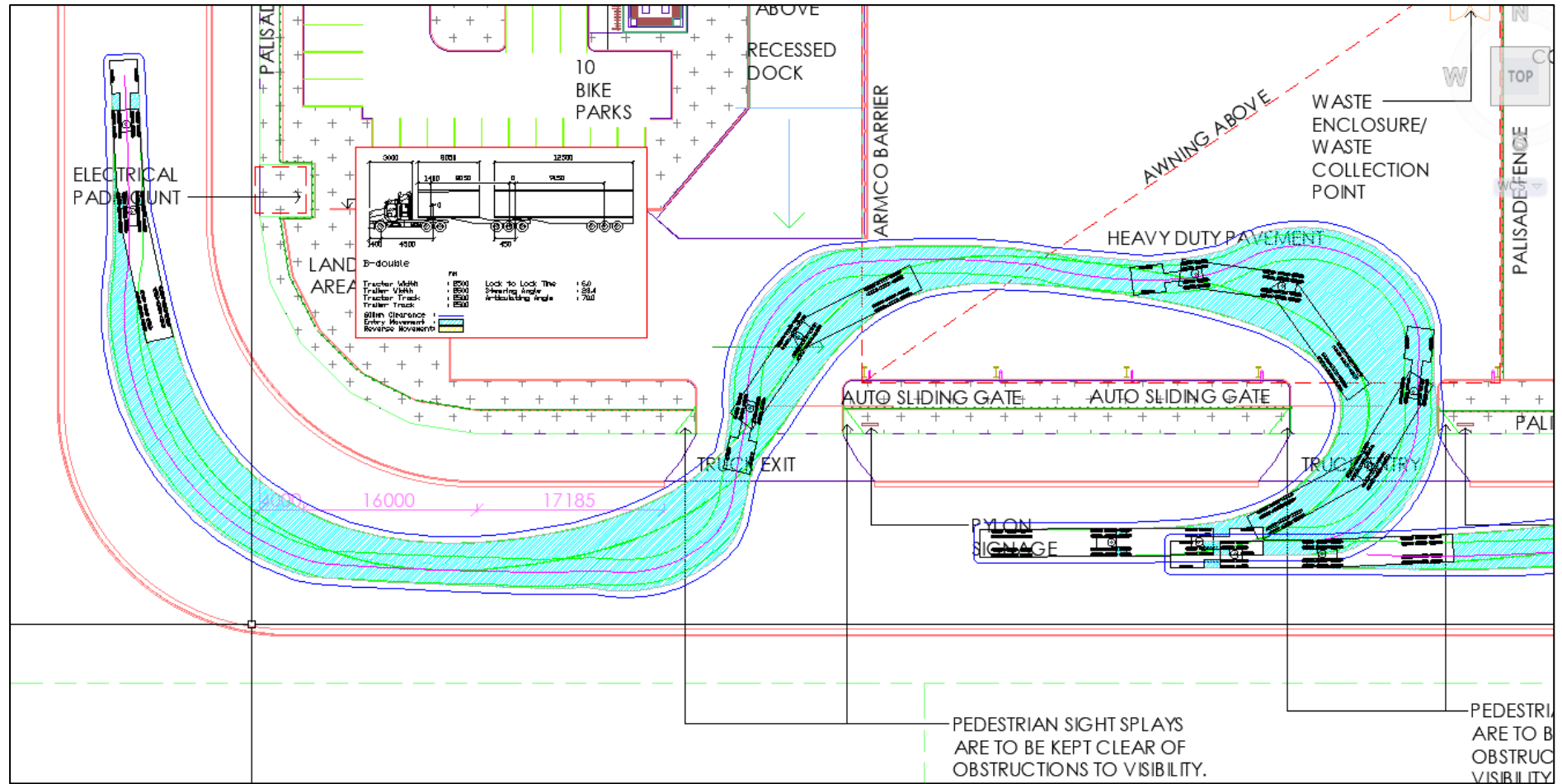


FIGURE 7.2 – HEAVY VEHICLE ACCESS AND CIRCULATION FOR TENANCY A (26 METRE B-DOUBLE VEHICLE)

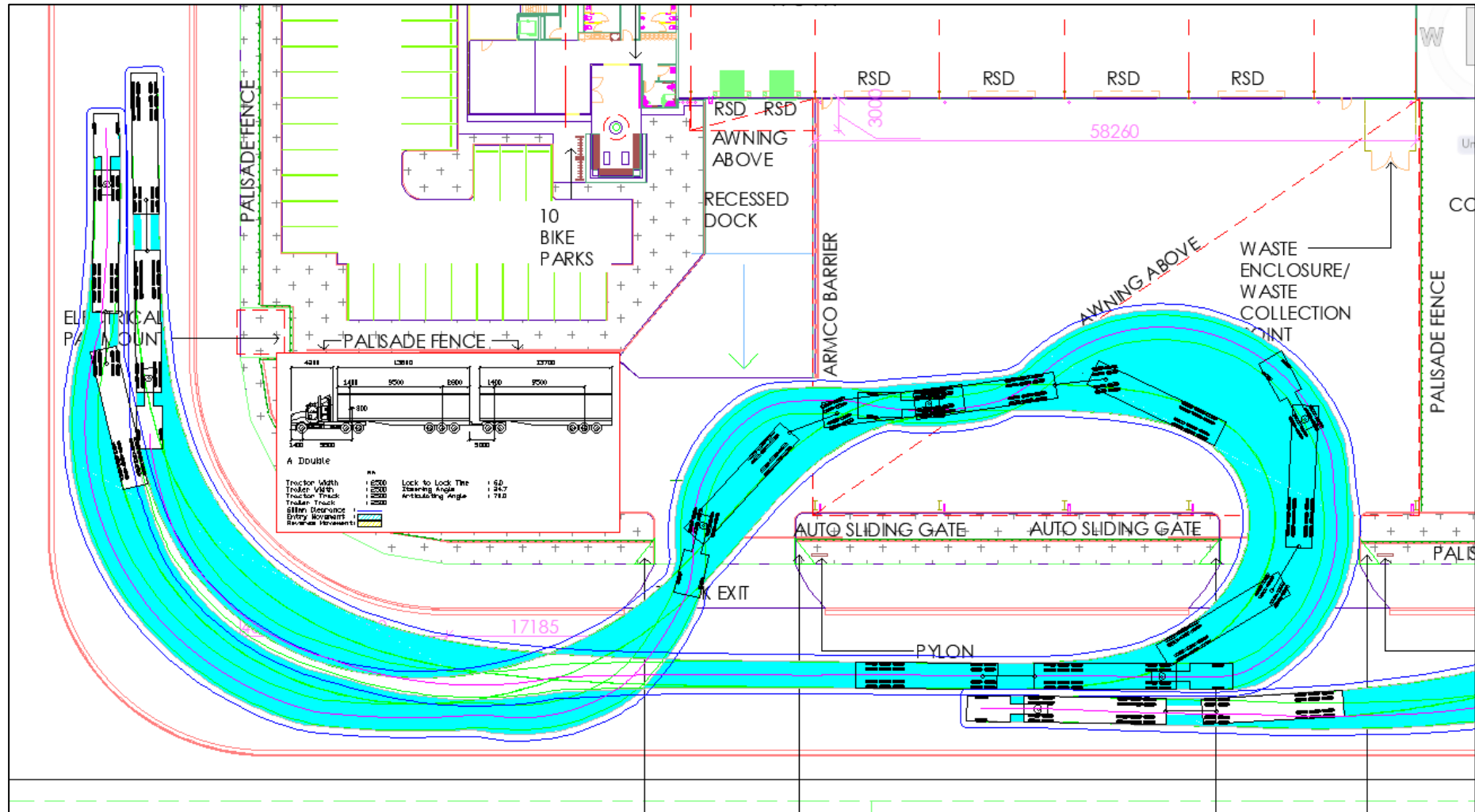


FIGURE 7.3 – HEAVY VEHICLE ACCESS AND CIRCULATION FOR TENANCY A (A-DOUBLE VEHICLE)

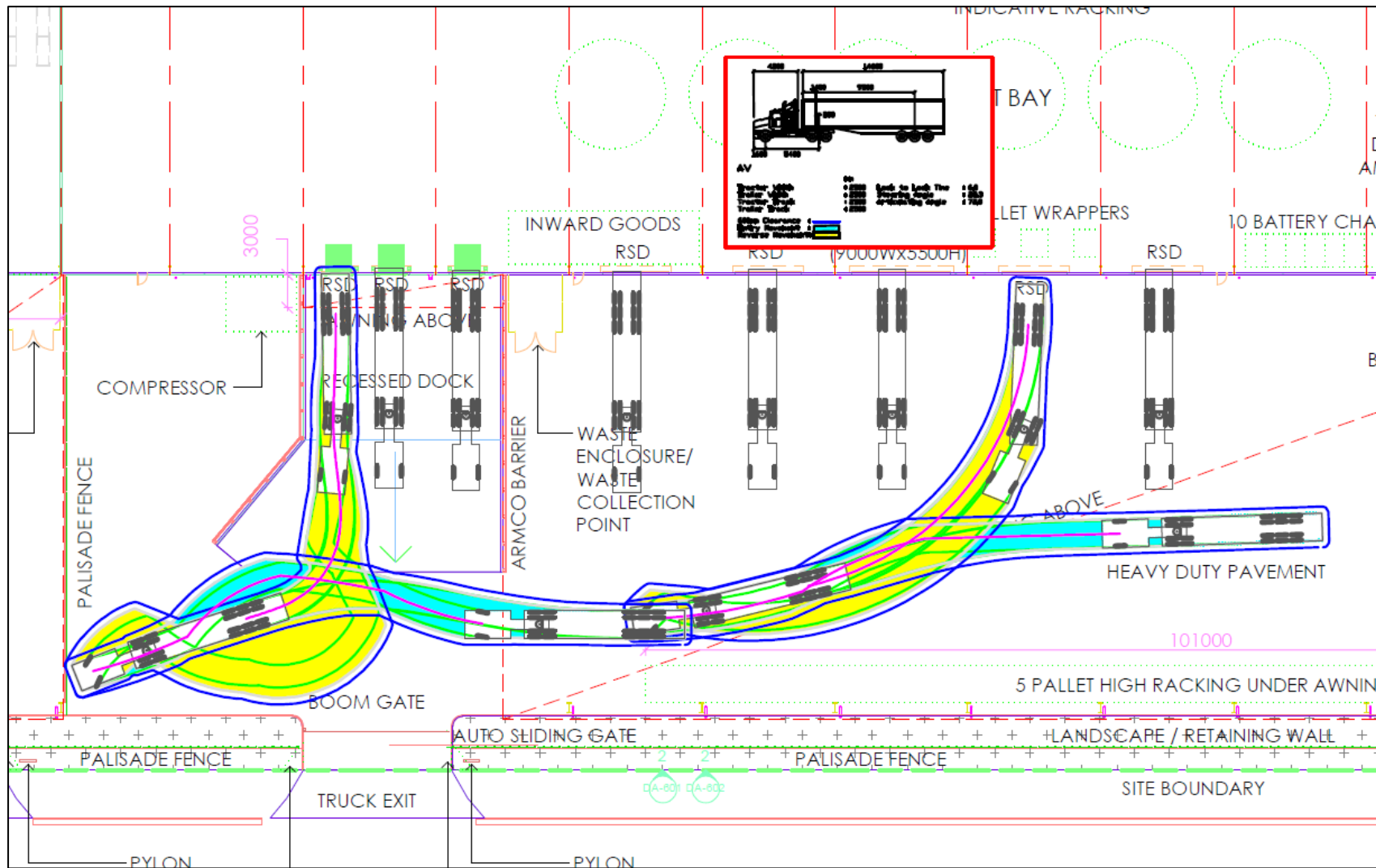


FIGURE 7.4 – HEAVY VEHICLE MANOEUVERING FOR NATIONAL TILES TENANCY (20 METRE ARTICULATED VEHICLE)

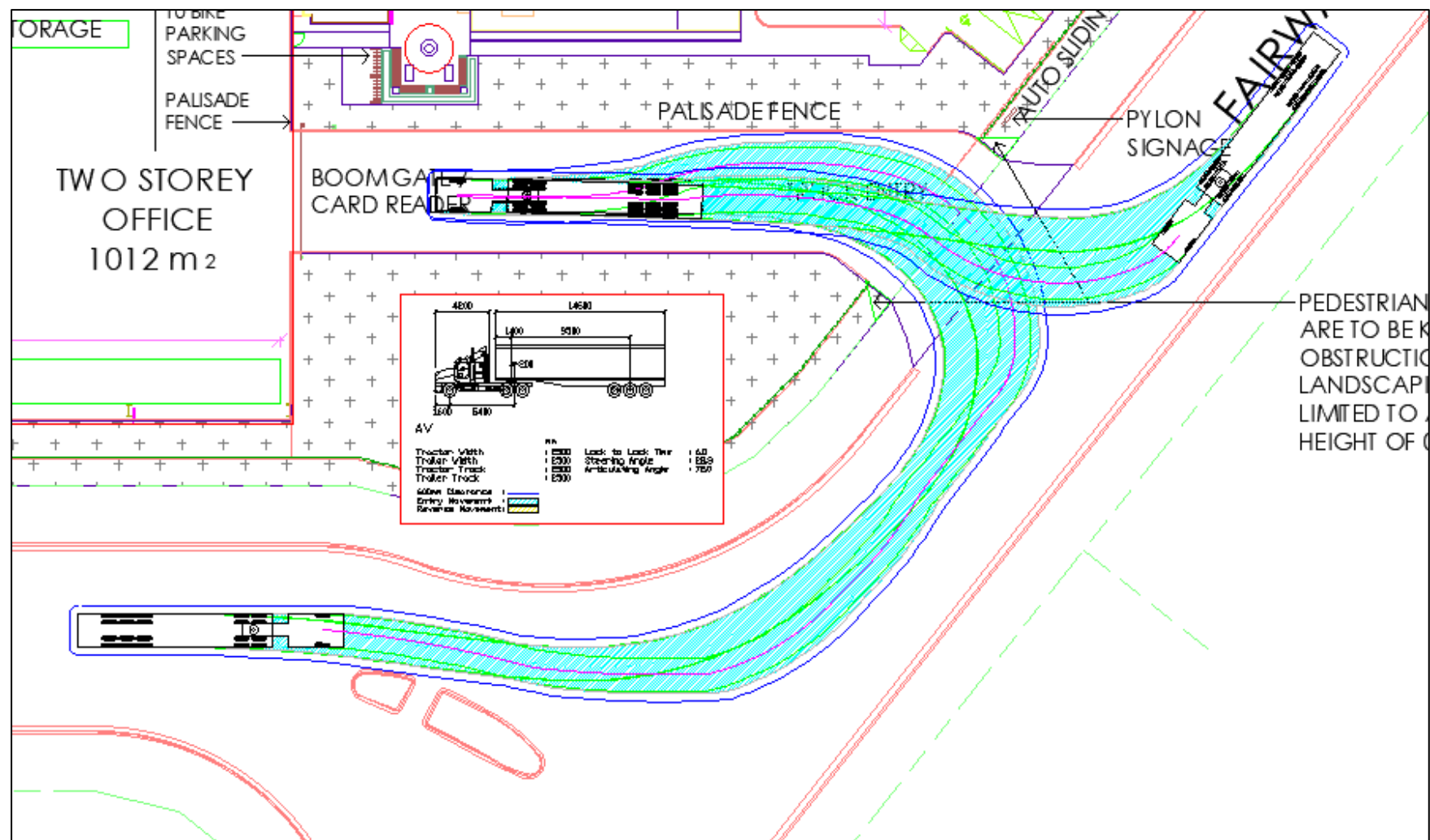


FIGURE 7.5 – HEAVY VEHICLE ENTRY TO NATIONAL TILES (20 METRE ARTICULATED VEHICLE)



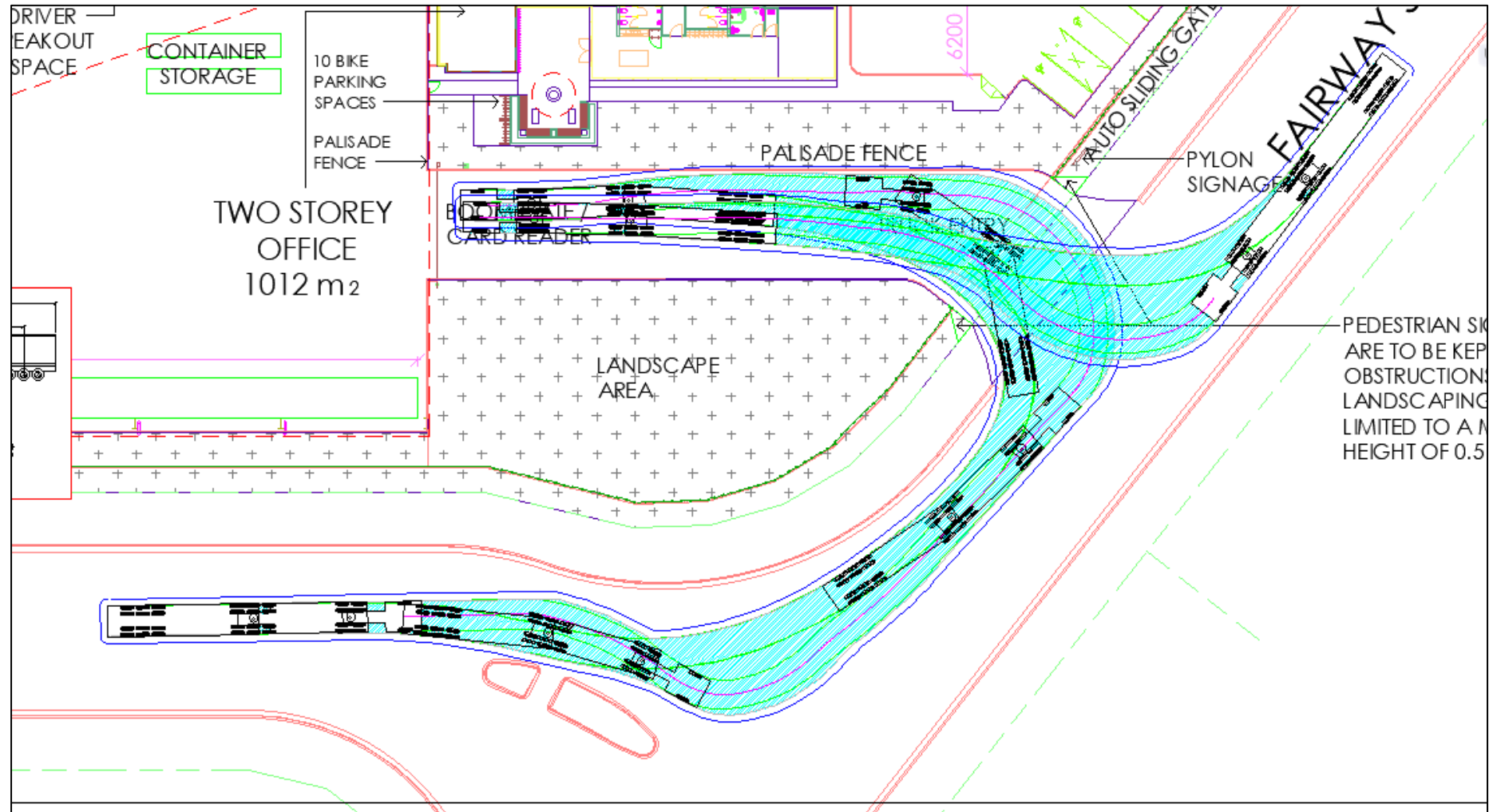


FIGURE 7.7 – HEAVY VEHICLE ENTRY TO NATIONAL TILES (26 METRE B-DOUBLE VEHICLE)

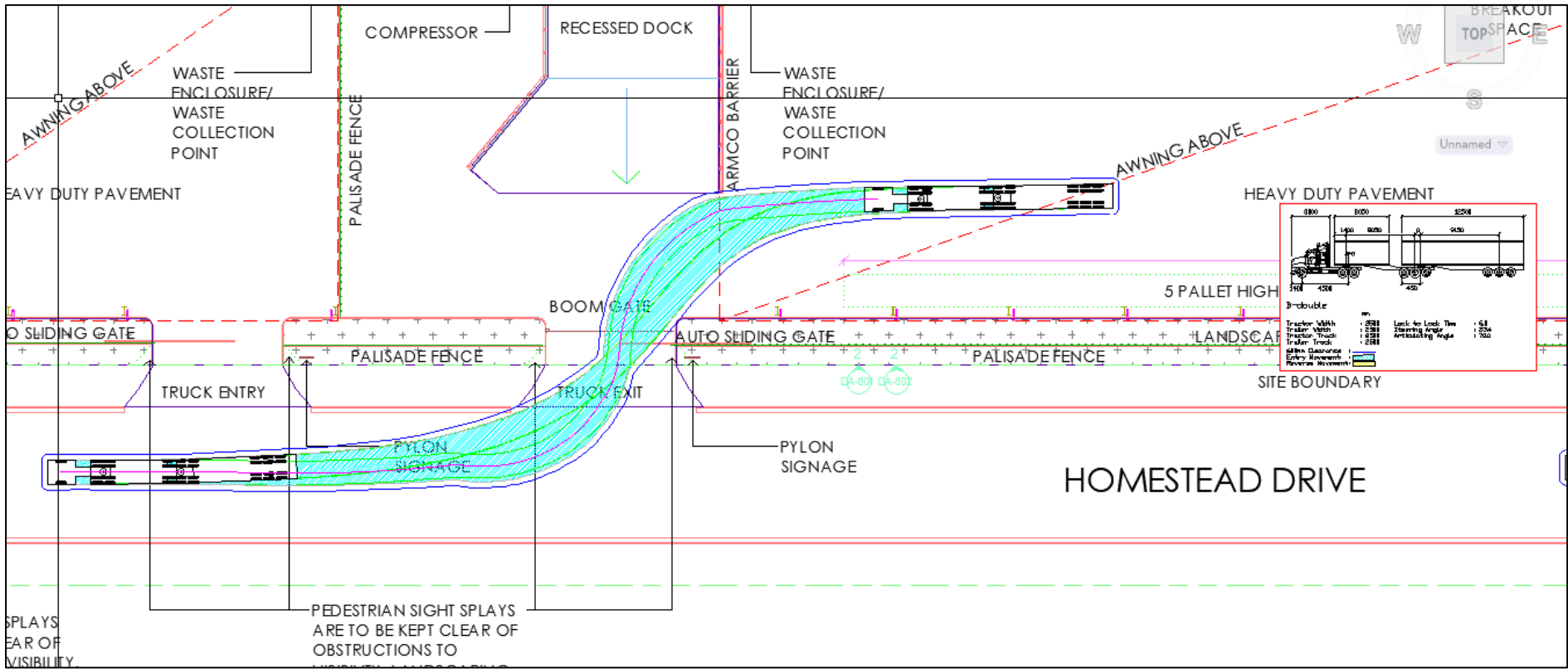


FIGURE 7.8 – HEAVY VEHICLE CIRCULATION AND EXIT FOR NATIONAL TILES (B - DOUBLE)

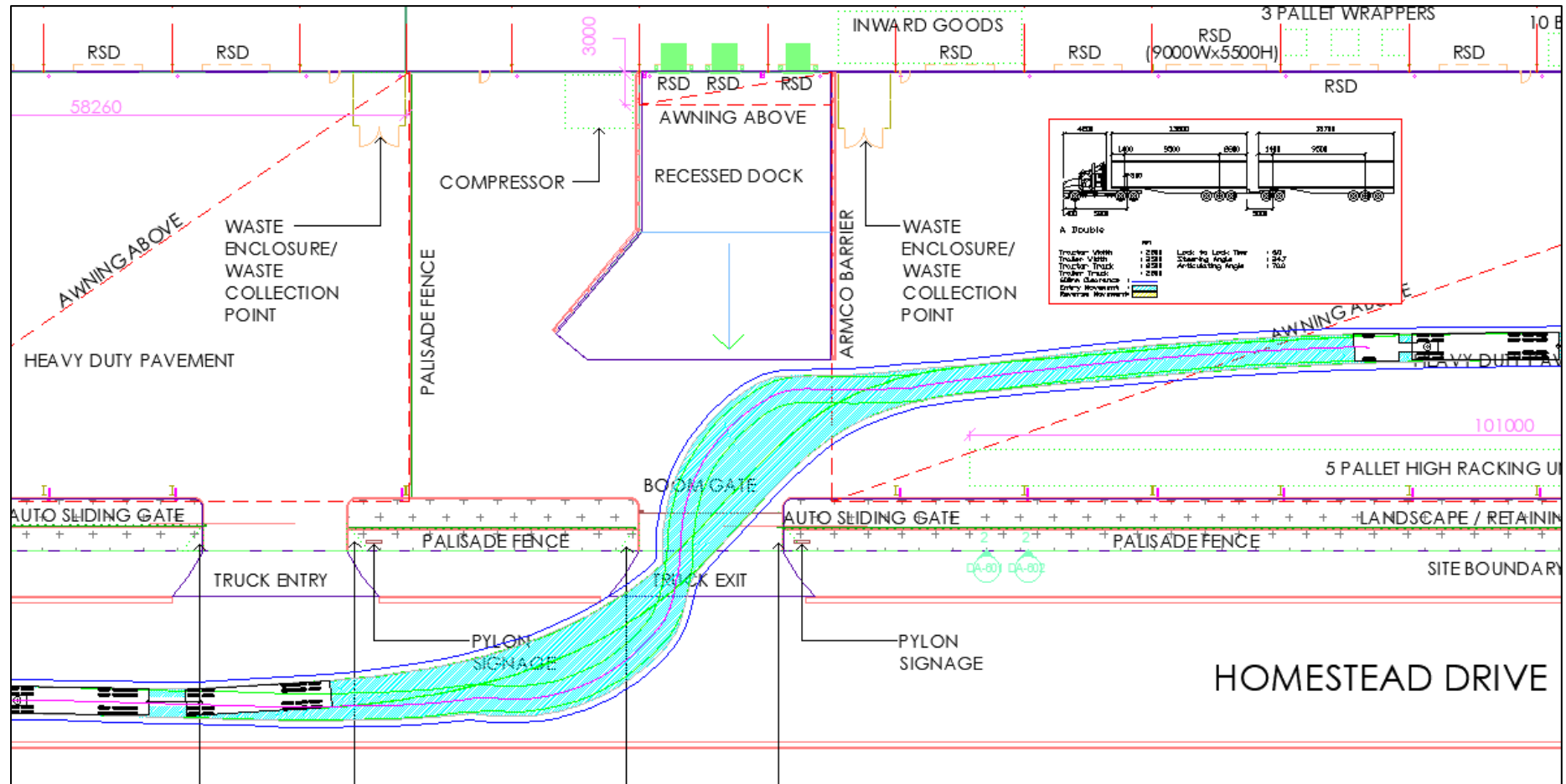


FIGURE 7.9 – HEAVY VEHICLE CIRCULATION AND EXIT FOR NATIONAL TILES (A - DOUBLE)

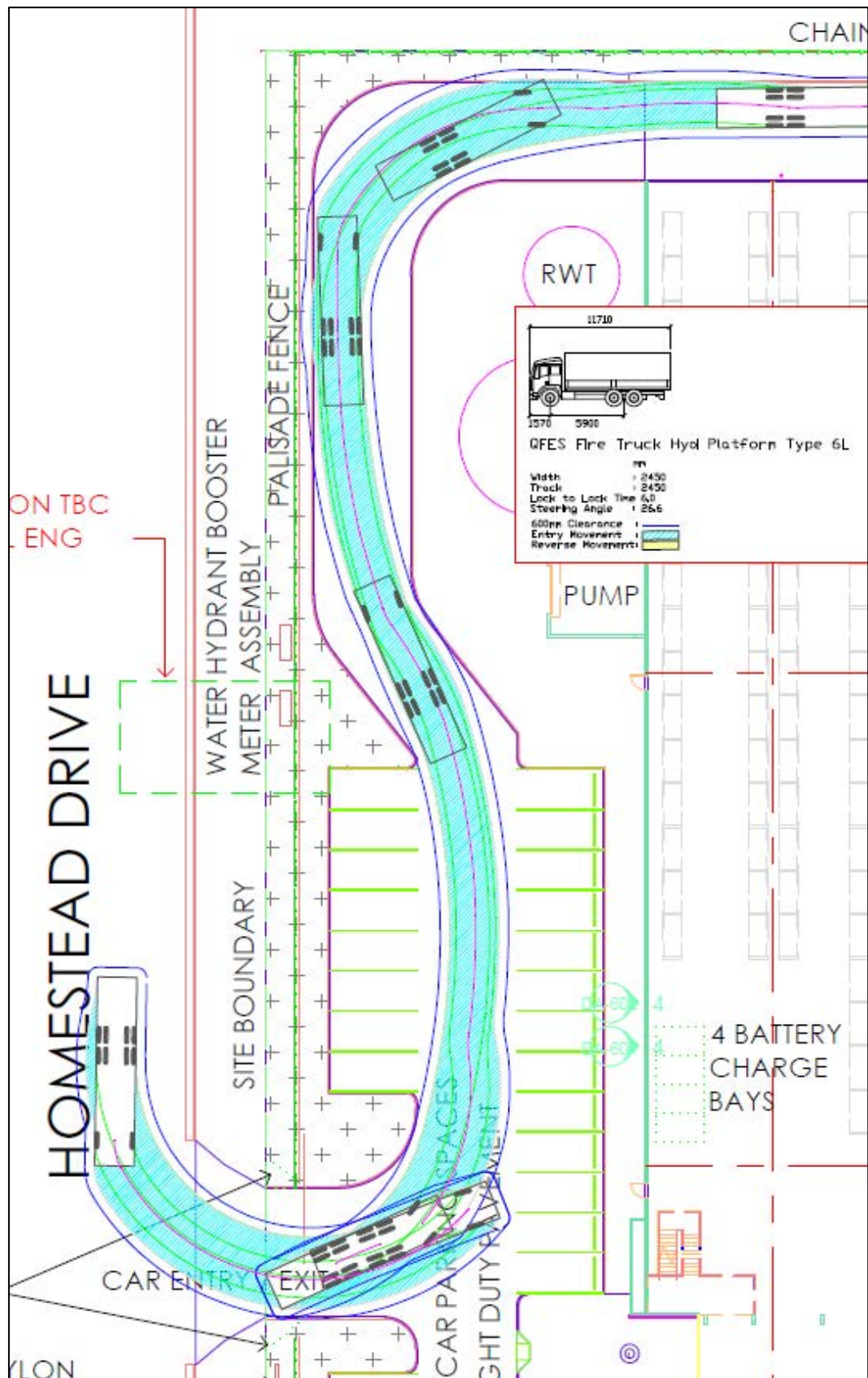


FIGURE 7.10 – EMERGENCY VEHICLE ENTERING WESTERN CAR PARK (TYPE 6 – URBAN FIRE TRUCK)

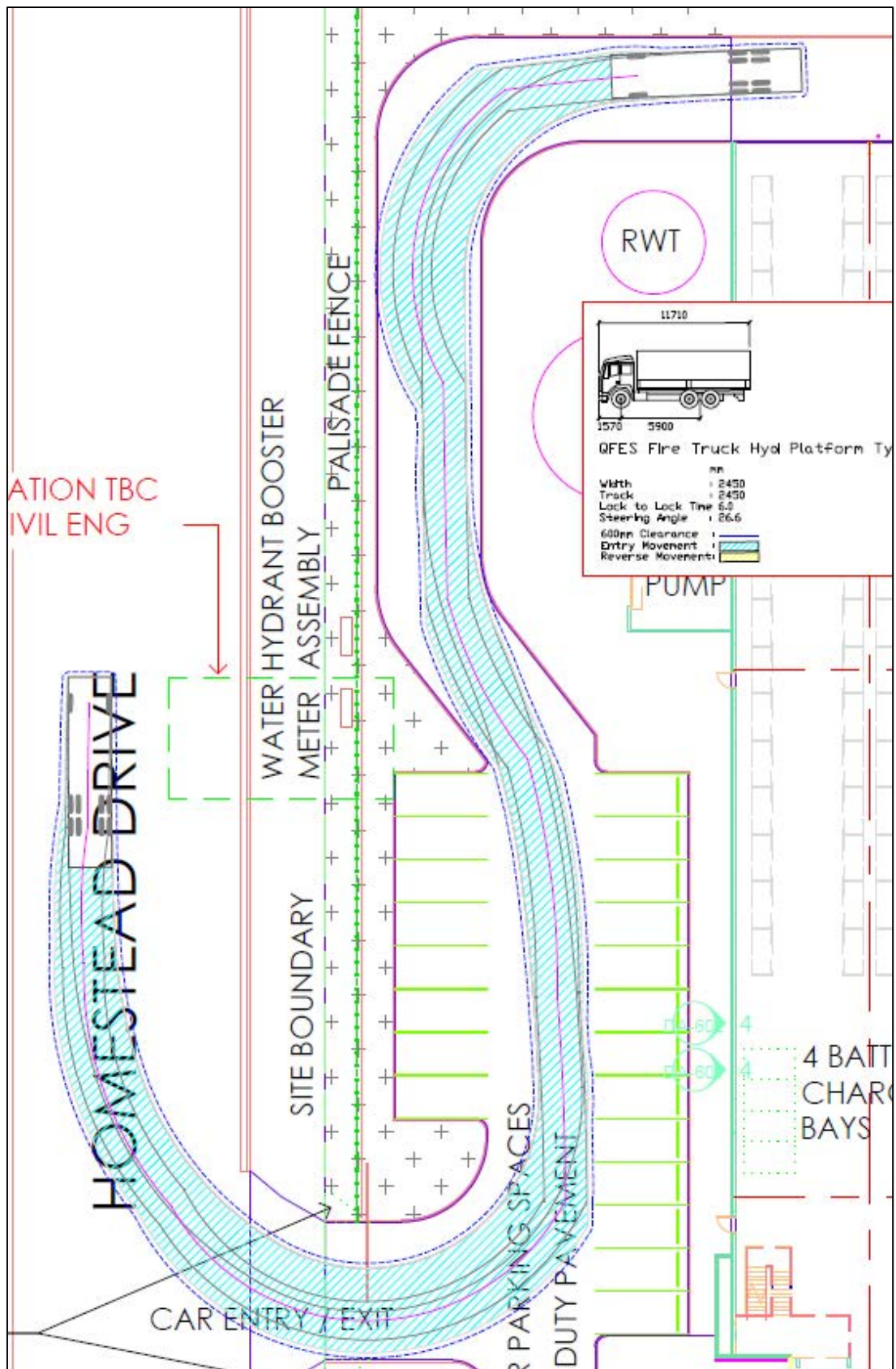


FIGURE 7.11 – EMERGENCY VEHICLE EXITING WESTERN CAR PARK (TYPE 6 – URBAN FIRE TRUCK)

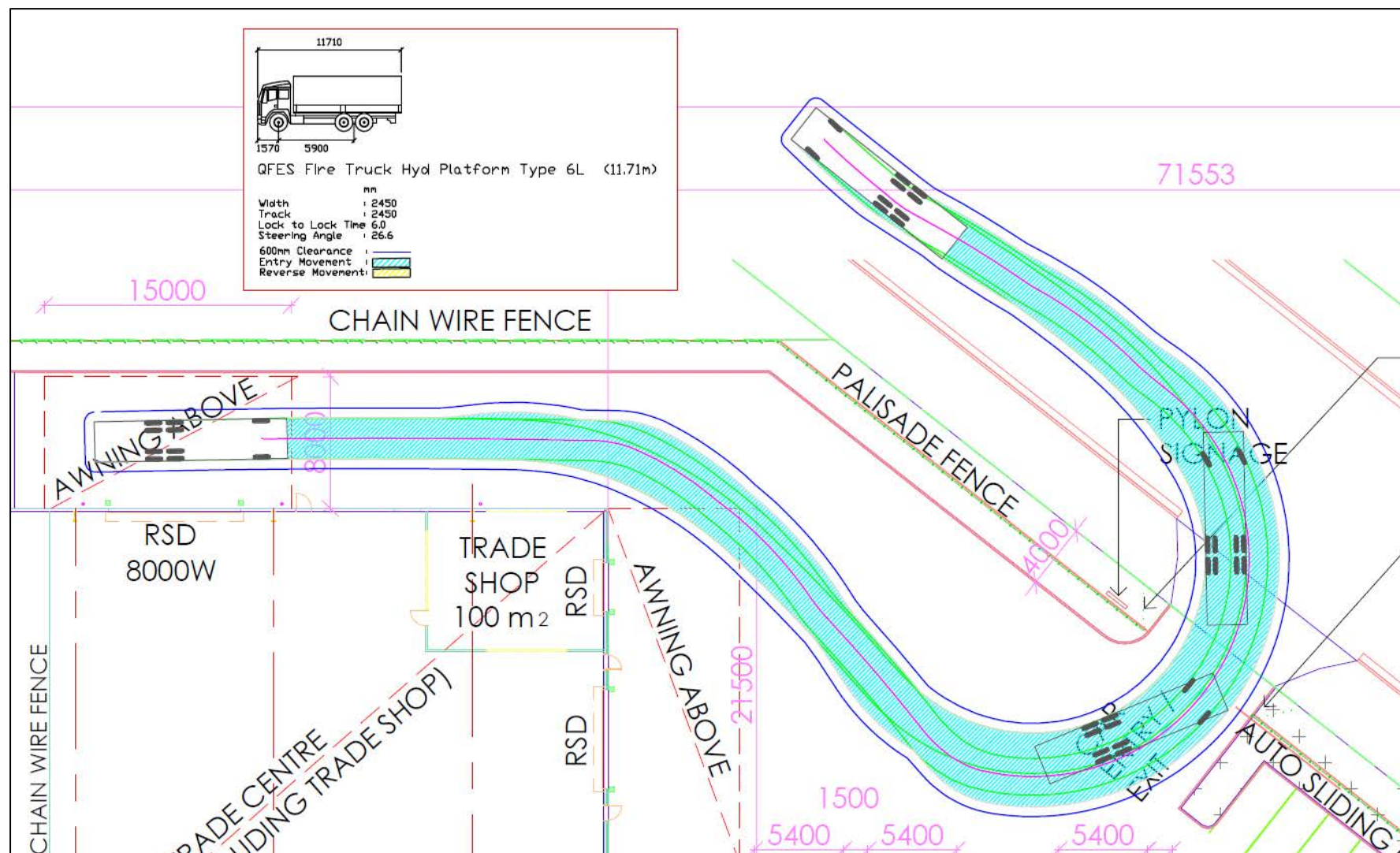


FIGURE 7.12 – EMERGENCY VEHICLE ENTERING EASTERN CAR PARK (TYPE 6 – URBAN FIRE TRUCK)

8.0 PROVISION FOR BICYCLES

The Transport code states the following rates as an Acceptable outcome for bicycle parking”

- Visitors - 1 space / 200m² Total use area
- Staff - 1 space / 800m² Total use area

Application of the above rates results in an Acceptable outcome of 134 spaces for visitors and 34 spaces for staff.

The above provisions are not reasonable. The proposed plan of development provides ten class 3 spaces for each tenancy. These will be available to both staff and visitors, although staff will also be able to store their bicycle in the secured staff areas if preferred.

9.0 SUMMARY OF CONCLUSIONS & RECOMMENDATIONS

- The subject site is located central within the Vantage Industrial estate at Yatala. The site has an area of 49,469m². The proposal includes two tenancies with the larger western most tenancy being specifically designed for National Tiles. A total of 172 car parking spaces are proposed to be provided for the site. National Tiles expects that its tenancy will be occupied by up to 65 staff members at any time.
- Vehicular access is proposed to be gained via six separate crossovers, with three serving each tenancy. For each tenancy, there will be a two way crossover for the car parking facilities, and separate entry and exit crossovers for heavy vehicles.
- The proposed heavy vehicle crossovers have been designed with a width of 13.5 metres to allow comfortable access for vehicles up to A-Double size.
- The proposed car parking supply is less than the Acceptable Outcome to Performance outcome 4 of the Transport code, however the proposed rate of supply (approx. 1 space / 155m² TUA) is typical for warehouse developments of the scale proposed and will comfortably meet the operational requirements of National Tiles, and a future tenant of Warehouse A.
- 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.
- The proposed plan of development has been designed to allow 20 metre Articulated Vehicles (AV) to satisfactorily access and circulate through the site, and manouvre to and from the loading docks, whilst maintaining a clearance of 0.5 metres to obstructions. The proposed access and circulation arrangements allow for vehicles up to A-Double size.

APPENDICES

APPENDIX A – RESPONSE TO TRANSPORT CODE

City Plan code template

This code template supports the preparation of a development application against either the acceptable outcome(s) or performance outcome(s) contained in the code. Development assessment rules are outlined in **Section 5.3.3** of the City Plan.

Please note:

For assessment against the overall outcomes, refer to the appropriate code.

Impact assessable development requires assessment against the strategic framework prior to using this template.

9.4.13 Transport code

9.4.13.1 Application

This code applies to assessing a material change of use for all development, except where:

- (a) the development is listed as self-assessment; and
- (b) establishing in an existing lawful non-residential premises; and
- (c) involving:
 - (i) no building work (other than an internal fit-out); or
 - (ii) only minor building work; and
- (d) the development results in no loss of car parking spaces.

When using this code, reference should be made to section 5.3.2 and, where applicable, section 5.3.3, in Part 5.

9.4.13.1 Purpose

- (1) The purpose of the Transport code is to ensure transport needs associated with the development of land are met.
- (2) The purpose of the code will be achieved through the following overall outcomes:
 - (a) Development –

- (i) ensures that onsite access and parking, manoeuvring and servicing areas are designed to result in a pedestrian focussed environment and promote a high quality public realm.
- (b) To provide an integrated transport system that –
 - (i) is convenient, efficient and flexible, being able to accommodate major events and provide a high level of connectivity between all activity centres, urban neighbourhoods, mixed use and industrial areas, inclusive of all modes, including active transport networks;
 - (ii) supports well designed urban development, which is concentrated within activity centres and urban neighbourhoods, that is easy to access via frequent public transport, walking and cycling, thereby reducing the need to travel by car;
 - (iii) supports community and privately operated transport services as viable alternatives to the private car;
 - (iv) reduces congestion and car dependency and significantly increases levels of walking, cycling and public transport use; and
 - (v) ensures existing and future transport corridors are protected.
- (c) To provide active transport networks that –
 - (i) are direct, safe, pleasant and comfortable to make walking and cycling an attractive alternative to the car;
 - (ii) ensure development within centres and urban neighbourhoods, including the light rail corridor have access to high quality active transport infrastructure including paths, bicycle parking and end of trip facilities;
 - (iii) are directly connected to local attractions and services;
 - (iv) are clear and easily accessed; and
 - (v) ensure the active transport infrastructure are completed in the early stages of development.
- (d) To provide public transport networks that –
 - (i) are of a standard and quality to provide an attractive alternative to the car;
 - (ii) ensure district and regional level community uses are within walking distance of public transport facilities; and
 - (iii) are clear and easily accessed.
- (e) To provide road network that:
 - (i) is developed and managed efficiently and meets the city's needs for the movement of people and goods, and can be safely shared by all users;
 - (ii) ensures development impacts on amenity caused by traffic is consistent with the community's reasonable expectations for the intended use;

- (iii) develops local road networks that are permeable and legible to facilitate a high level of connectivity, are safe and are shared with active and public transport.
- (iv) ensures developments are designed for safe and efficient waste collection, carried out with minimal disruption or impact to the road network; and
- (v) Development within the Coomera Town Centre area provides an integrated network of predominantly public streets to ensure efficient movement of pedestrians, cyclists, vehicles and strong public transport connections in accordance with **strategic framework map 8**.
- (f) Major freight corridors and haulage routes:
 - (i) are protected from incompatible uses and ensure their safe and efficient operation.
- (g) Navigable waterways:
 - (i) support active and public transport facilities in waterfront locations for public water transport and enhance access to the city's waterways.

9.4.13.2 Criteria for assessment

Table 9.4.13-2: Transport code – for assessable development

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
Car parking			
PO1 Development provides off-street car parking to accommodate for the parking demand. OR Where located in the Centre zone or the Southport Priority Development Area at rates that: (a) reduce congestion and car dependency; (b) maximise the efficiency of car parking provided; and	AO1 Off- street car parking spaces are provided in accordance with the identified relevant table as follows:	REFER TO TRAFFIC REPORT	
	Location		
	All zones except: (a) Centre zone; (b) High density residential zone (where located in the Transport		
	Off-street car parking rate Table 9.4.13-3		

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
(c) encourage alternative transport options such as walking, cycling and the use of public transport.	hub area in Figure 9.4.13-1); or (c) Special purposes zone – Special development area precinct – Southport Priority Development Area		
	Centre zone and High density residential zone where nominated in the Transport hub area in Figure 9.4.13-1	Table 9.4.13-4	
	Centre zone not nominated in the Transport hub area in Figure 9.4.13-1	Table 9.4.13-5	
	Special purposes zone – Special development area precinct – Southport Priority Development Area	Table 9.4.13-6	
	Note: Where off-street car parking cannot be reasonably provided, Council may consider improvements to active and public transport to offset the shortfall in car parking spaces.		

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
PO2 Development ensures that access to car parking spaces is provided for employees and bona fide visitors.	AO2 Car parking spaces for employees and visitors does not have gateways, doors or similar devices which restrict vehicular access.	COMPLIES – SECURITY GATES WILL ONLY BE CLOSED AFTER HOURS	
PO3 Extensions to development are provided with additional car parking spaces to meet the increased parking demand. Note: Additional car parking spaces are not required where it can be demonstrated that the existing parking on-site was in excess of the City Plan requirements at the time of approval or the applicable parking rates currently in effect or results in the loss of existing pedestrian and cycling facilities.	AO3 Extensions to development provide additional car parking spaces based on the increased GFA.	NOT APPLICABLE	
Travel demand measures			
PO4 Development provides alternative modes of travel to reduce dependency on private vehicle usage.	AO4.1 Development that is identified in the Transport hub area in Figure 9.4.13-1: Transport hub area has the option to apply travel demand measures in accordance with Table 9.4.13-7: Travel demand measures .	NOT APPLICABLE	
	AO4.2	NOT APPLICABLE	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	Development has the option to apply the car sharing travel demand measure in accordance with Table 9.4.13-7: Travel demand measures, where: : (a) located in the Centre zone and not identified in the Transport hub area in Figure 9.4.13-1: Transport hub area; or (b) located in any another zone (except the Centre zone)		
Servicing			
PO5 Development accommodates for the required design service vehicle, including waste collection vehicles to service the development.	AO5 Development is designed to cater for the largest service vehicle in accordance with Table 9.4.13-9: Minimum class of service vehicle .	NOT APPLICABLE	
PO6 Development is designed to ensure: (a) that areas are provided for loading and unloading of service vehicles; (b) that loading operations are contained wholly within the site; and (c) that pathways from service areas to tenancies are an appropriate width to allow for pallets and trolleys to manoeuvre without	AO6.1 Development is designed to provide for the design service vehicle in accordance with Table 9.4.13-8: Service vehicle requirements .	COMPLIES	
	AO6.2 Service areas are designed in accordance with AS2890.2.	COMPLIES	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
conflicting with doors, gates or landscaping.			
PO7 Development ensures that service vehicle routes to and from the development minimise impacts on residential safety and amenity.	AO7 Development ensures that service vehicles use the shortest and most direct route to and from the major road network as identified on the Functional road hierarchy network as shown on the Zone map without impacting upon residential amenity and safety of surrounding local area.	COMPLIES	
Public transport network			
PO8 Development that attracts a high proportion of people using high frequency public transport incorporates on-site provision for integration with the public transport network. This includes appropriate pedestrian and cyclist linkages which are safe, attractive and convenient to use and connected with adjoining uses, public areas and the functional road hierarchy.	AO8 Development provides for the integration of an off-road public passenger transport facility for the following land uses: (a) Air services; (b) Educational establishment (new and existing); (c) Hospital; (d) Major sport, recreation and entertainment facility; (e) Shop (2,000m ² or greater); and (f) Tourist attraction.	NOT APPLICABLE	
PO9 Development that attracts a reasonable proportion of people utilising public transport and is	AO9 Development that is located within 400m walking distance of a public passenger	NOT APPLICABLE	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
located within 400m walking distance of an existing or future: (a) bus stop on a high frequency public transport route; (b) light rail station; and (c) heavy rail station; (d) provides appropriate pedestrian and cyclist linkages, including crossing points, which are safe, attractive and convenient to use and connect with public transport infrastructure.	transport facility provide footpaths and crossing points to access the facility safely.		
Active transport network			
PO10 Development ensures that adequate off-street bicycle parking and end-of-trip facilities are provided to encourage use and meet the needs and volumes of predicted pedestrian and cyclist users.	AO10.1 Development provides off-street bicycle parking and end-of-trip facilities in accordance with Table 9.4.13-10: Bicycle parking rates and Table 9.4.13-11: End-of-trip facilities for active travel users . Note: This AO does not apply to the following uses: • Dwelling house; • Secondary dwelling; • Dual occupancy; or • Multiple dwelling (where there are 3 dwellings or less).	COMPLIES – APPROPRIATE BICYCLE PARKING FACILITIES WILL BE PROVIDED AS REQUIRED FOR THE OPERATIONAL USE OF THE SITE.	
	AO10.2 Development locates end-of-trip facilities within the site in close proximity to areas of	NOT APPLICABLE.	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	bicycle parking and entrances to the site and/or building.		
	AO10.3 Signage for end-of-trip facilities and bicycle parking areas is provided within the site at: (a) ground level, external to buildings, identifying the location of bicycle parking areas; and (b) at bicycle parking areas, indicating the location of end-of-trip facilities.	COMPLIES – APPROPRIATE SIGNAGE WILL BE PROVIDED AS REQUIRED.	
PO11 Development ensures that access for pedestrians and cyclists from the street frontage and from any car parking or set down area to the main entry of the building is designed to provide safe movement. It should be convenient and clearly identifiable and avoid conflict with vehicle movements.	AO11.1 Development with 20 dwellings or less and have a single road frontage, provides a footpath, separated from the extension of the access driveway, from the property boundary for a distance equivalent to the zone front setback.	NOT APPLICABLE	
	AO11.2 Development with 20 dwellings or less and have more than 1 road frontage, provides a pedestrian and cyclist pathway from the primary road frontage that is separated from vehicle movements for a distance equivalent to the zone front setback.	NOT APPLICABLE	
	AO11.3 Development with 21 dwellings or more provides for at least 1 continuous pedestrian and cyclist pathway from each road frontage that is separated from vehicle movements.	NOT APPLICABLE	
	AO11.4	NOT APPLICABLE	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	Pathways are to be designed and constructed in accordance with AS1428.1.		
	AO11.5 Where a non-residential land use is to occupy an established residential premises, there is no requirement to provide for a pathway from any road frontage.	COMPLIES	
PO12 Development ensures that off-street bicycle parking areas are designed to be: (a) located outside pedestrian movements paths and be visible from the street (casual surveillance); (b) easily accessible from the road; (c) arranged so that parking and unparking manoeuvres in a car park do not damage adjacent bicycles; (d) close as practical to the cyclists ultimate destination; (e) well lit by appropriate lighting; and (f) protected from the weather.	AO12 Development provides bicycle parking within the site that is designed, constructed and maintained in accordance with the <i>Cycling Aspects of Austroads</i> and AS2890.3 and the following: (a) employee and residential bicycle parking is provided to a User Class 2 classification accessed by users with a key or security device; (b) visitor (residential and non-residential) is provided to a User Class 3 classification, positioned at ground level in a visible line of sight to the developments main entry; and (c) ramps and pathways be provided as direct as possible from the roadway and/or pathways to the bicycle parking facilities.	COMPLIES	
PO13 Development ensures that access for pedestrians and cyclists to and from the site is designed to be direct, safe,	AO13 Development provides for a disability access compliant shared path or footpath along the frontage of the site within the road reserve, designed and constructed in accordance with	COMPLIES	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
pleasant and comfortable environments that connect people with places of local interest, services, public transport facilities and neighbourhoods.	the Functional road hierarchy network as shown on the Zone map and SC6.9 City Plan policy – Land development guidelines. Note: This AO does not apply to the following uses: • Dwelling house; • Secondary dwelling; • Dual occupancy; or • Multiple dwelling (where there are 3 dwellings or less).		
PO14 Development contributes to the safe and efficient provision and operation of the bicycle network.	AO14.1 Development that abuts a service road as shown on the Bicycle network classification map provides: (a) 2m on-road exclusive bike lane to be constructed along the full frontage of the site – development side only; and (b) on-road exclusive bicycle lanes (full-time; minimum 2.0 metres in width) through any new intersection with the required navigational aids such as (but not limited to) directional signage, route markers, pavement treatments and schematic signage. Note: This AO does not apply to the following uses: • Dwelling house; • Secondary dwelling; • Dual occupancy; or • Multiple dwelling (where there are 3 dwellings or less)	NOT APPLICABLE	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	AO14.2 Development that abuts a Principal route or District route as shown on the Bicycle network classification map provides a 3m off-road shared footpath to be constructed along the full frontage of the site – development side only. Note: This AO does not apply to the following uses: • Dwelling house; • Secondary dwelling; • Dual occupancy; or • Multiple dwelling (where there are 3 dwellings or less).	NOT APPLICABLE	
	AO14.3 Development that abuts a Neighbourhood route as shown on Bicycle network classification map provides a 2.5m off-road shared footpath to be constructed along the full frontage of the site – development side only. Note: This AO does not apply to the following uses: • Dwelling house; • Secondary dwelling; • Dual occupancy; or • Multiple dwelling (where there are 3 dwellings or less).	NOT APPLICABLE	
	AO14.4 Development that abuts a Principal route, District route or Neighbourhood route as	NOT APPLICABLE	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	shown on Bicycle network classification map provides a 2m wide on-road cycle lanes. Note: This AO does not apply to the following uses: • Dwelling house; • Secondary dwelling; • Dual occupancy; or • Multiple dwelling (where there are 3 dwellings or less).		
	AO14.5 Footpaths and on-road cycle lanes are designed and constructed in accordance with SC6.9 City Plan policy – Land development guidelines.	COMPLIES	
	AO14.6 Development does not remove or compromise existing on-road and off-road bicycle and pedestrian infrastructure and facilities.	COMPLIES	
Roads and freight			
PO15 Where new development creates public road, the road is to be constructed to an appropriate standard.	AO15.1 Development provides public roads that are designed and constructed in accordance with SC6.9 City Plan policy – Land development guidelines and <i>Austrorads</i>.	NOT APPLICABLE	
	AO15.2 Development provides public roads which prevent the need for traffic calming devices to manage vehicle design speed, deter through traffic and create safe conditions for pedestrians and cyclists.	NOT APPLICABLE	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
PO16 Where development provides for an access easement, the easement: (a) is an adequate width; (b) is constructed to a standard appropriate to the situation; and (c) does not result in unreasonable detriment or nuisance to an adjacent premises.	AO16 No acceptable outcome provided.	NOT APPLICABLE	
PO17 Development ensures that corner lots to a public roadway provide a corner truncation to ensure safety, functioning and visibility at the intersection.	AO17.1 Development provides for a corner truncation, if not already provided, at each corner of a site to a public roadway.	COMPLIES	
	AO17.2 Land required to provide a corner truncation made by three equal chords of a 6m radius (8m where in an Industrial estate) on the corner of the site to a public roadway must be dedicated to Council as road reserve.	COMPLIES	
	AO17.3 At roundabouts and intersections, the truncation must be enlarged to maintain verge widths and sight line requirements.	NOT APPLICABLE	
	AO17.4 In brownfield areas, the truncation must not reduce the size of the existing verge area.	NOT APPLICABLE	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	AO17.5 At the entry/exit to a laneway, the truncation is an area made by one chord of a 2m radius.	NOT APPLICABLE	
PO18 Development that provides a new intersection is designed to ensure: (a) safety and does not compromise the efficiency, function, convenience of use or capacity of the road network; (b) verge areas that provide sufficient area for safe pedestrian and cycling movement; and (c) sufficient area to provide essential services and infrastructure, including traffic management.	AO18.1 Development that creates a new intersection within a public roadway ensures that the intersection is designed and constructed in accordance with <i>Austroads</i> and SC6.9 City Plan policy – Land development guidelines .	NOT APPLICABLE	
	AO18.2 In brownfield areas, verge areas are not to be reduced but may be widened to accommodate essential services and infrastructure, including bicycle and pedestrian pathways and public transport infrastructure.	NOT APPLICABLE	
Ingress and egress			
PO19 Development ensures that all vehicles ingress and egress the site in a forward gear.	AO19 Development is designed so that all vehicle classes enter and exit the site in a forward gear, unless otherwise stated in Table 9.4.13-8: Service vehicle requirements . Note: This AO does not apply to the following uses: • Dwelling house; • Secondary dwelling;	COMPLIES	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	• Dual occupancy; or • Multiple dwelling (where there are 3 dwellings or less).		
Integrated transport and land use			
PO20 Development is: (a) appropriately located to reduce the need to travel by car and is accessible by public transport, walking and cycling; and (b) designed to reduce impacts on the amenity, safety and operation of the road network through appropriate measures to ensure that the function and capacity of the road network is not compromised.	AO20 A Traffic Impact Assessment is prepared and submitted to Council in the following instances: (a) when the development is identified as "any other use not listed in this table" or "any other undefined use" in Part 5 – Tables of assessment ; (b) when the development is freight dependent; (c) when vehicle access will be required to a road identified on the Function road hierarchy map ; (d) when vehicle access will be required to a service road as identified on the Pacific motorway service road types overlay map ; (e) when vehicle access will be required within 100m of a signalised intersection; (f) when vehicle access will be required within 50m of a roundabout; or (g) when a new intersection is proposed.	COMPLIES	
PO21 Development is not located in areas that compromises future transport corridors, including	AO21 Land shown on the zone maps for the purposes of existing or future road network infrastructure, is to be dedicated to Council as public road.	COMPLIES	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
roads, public transport and active transport.			
PO22 Staged development is planned, designed and constructed to ensure that: (a) the construction of active and public transport infrastructure occurs in initial stages of development; and (b) adequate car parking is provided for each stage to support the function of the development.	AO22 No acceptable outcome provided.	NOT APPLICABLE	
PO23 Development within the Coomera Town Centre area provides an integrated network of predominantly public streets to ensure efficient movement of pedestrians, cyclists, vehicles and strong public transport connections in accordance with strategic framework map 8 .	AO23 No acceptable outcome provided.	NOT APPLICABLE	
General			
PO24 New development must ensure that continuous circulation aisles	AO24.1 All car parking modules and service areas are accessed by circulation aisles.	COMPLIES	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
must be provided linking all driveways and intersections to provide access to car parking modules and service areas, and avoid the use of the road network when accessing different vehicular areas of the development.	AO24.2 Circulation aisles are not disconnected by car parking modules or service areas.	COMPLIES	
	AO24.3 All access driveways are linked by circulation aisles free from parking manoeuvres.	COMPLIES	
	AO24.4 All vehicles can circulate throughout the new development in a forward gear without performing reverse manoeuvres.	COMPLIES	
PO25 Off street car parking areas are designed to: (a) provide a legible and efficient internal layout; (b) ensure the safety and security of users; (c) clearly distinguishable from pedestrian paths and entry points; (d) be easily negotiated by vehicles and pedestrians including persons with a disability; (e) ensure that there is no disruptions to or queues onto the public road network;	AO25.1 Off street car parking is designed, constructed, line marked and maintained in accordance with AS2890.1, AS2890.2, AS2890.6 and AS1428.1.	COMPLIES	
	AO25.2 The entry/exit to a driveway, internal to the property boundary of the development, is separated by a central island containing an intercom or similar electronic access device. The intercom (or similar device) is to be setback 4m from the property boundary. OR The intercom: (a) is positioned on the right hand side of the access driveway against a wall; and (b) setback 4m from the property boundary, internal to the development.	NOT APPLICABLE	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
(f) provide sight distances from driveways to ensure visibility between vehicles on the driveway and pedestrians on the verge; and (g) be marked and maintained to the current relevant standard.	Note: The intercom system is only required where visitor car parking is provided behind a security gate.		
	AO25.3 Development does not provide pavement humps or raised platforms in queuing areas.	COMPLIES	
	AO25.4 Development is designed so that vehicles do not reverse across marked pedestrian crossings.	COMPLIES	
PO26 Car parking spaces do not restrict any other space unless it is in a tandem arrangement where no inconvenience arises from its use.	AO26.1 Tandem car parking (2 car spaces parked nose to tail) are counted as 1 space, except in the following cases: (a) the spaces are designated and signed for residential purposes of the same dwelling; or (b) the spaces are designed and signed for the occupants of the site, in a single tenancy; or (c) the off-street car parking is to be operated as a privately operated public car park with on-site management whereby the off-street tandem car parking spaces may be counted as no greater than 1.5 spaces.	NOT APPLICABLE	
	AO26.2 The minimum length of a tandem car space is 10.4m.	NOT APPLICABLE	
	AO26.3	NOT APPLICABLE	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	The minimum length of a tandem garage is 11m.		
PO27 Development ensures that where provision is made for a porte cochere, it is designed to enable vertical clearance, manoeuvring, access and queuing of vehicles. The capacity of the porte cochere must accommodate vehicles entirely within the site, including the queuing of vehicles.	AO27 The porte cochere is to be a minimum of 4.5m in height.	NOT APPLICABLE	

APPENDIX B –RESPONSE TO DRIVEWAYS AND VEHICULAR CROSSINGS CODE

City Plan code template

This code template supports the preparation of a development application against either the acceptable outcome(s) or performance outcome(s) contained in the code. Development assessment rules are outlined in **Section 5.3.3** of the City Plan.

Please note:

For assessment against the overall outcomes, refer to the appropriate code.

Note: The whole of the planning scheme is identified as the assessment benchmark for impact assessable development. This specifically includes assessment of impact assessable development against this strategic framework. The strategic framework may contain intentions and requirements that are additional to and not necessarily repeated in zone, overlay or other codes. In particular, the performance outcomes in zone codes address only a limited number of aspects, predominantly related to built form. Development that is impact assessable must also be assessed against the overall outcomes of the code as well as the strategic framework.

9.4.2 Driveways and vehicular crossings code

9.4.2.1 Application

This code applies to assessing operational work for vehicle crossing works and material change of use for any development involving vehicle access or driveway works where indicated within **Part 5 Tables of assessment**.

When using this code, reference should be made to **Section 5.3.2** and, where applicable, **Section 5.3.3**, in **Part 5**.

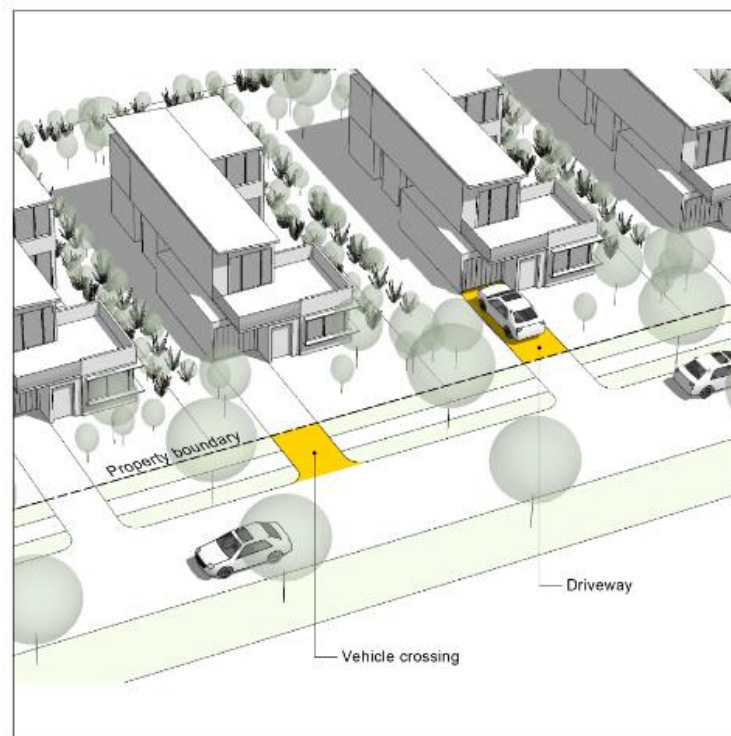


Figure 9.4.2-1

Illustration showing driveway and vehicle crossing for access to parking spaces

9.4.2.2 Purpose

- (1) The purpose of the Driveways and vehicular crossings code is to provide design standards for the construction, repair or modification to a driveway and/or a vehicular crossing and to ensure that the decisions are compatible.
- (2) The purpose of the code will be achieved through the following overall outcomes:
 - (a) Vehicular crossings provide safe access from the edge of the road carriageway to the property boundary.
 - (b) Vehicular crossings are located and constructed to avoid adverse impacts on City or utility infrastructure.
 - (c) Vehicular crossings are constructed to a standard that is consistent with a standard vehicle.
 - (d) Vehicular crossings are designed to ensure that there is minimal loss of on-street car parking spaces.
 - (e) Driveways provide safe access from the property boundary to the on-site vehicle accommodation or standing area.
 - (f) Driveways are located to ensure damage to existing street trees located within the verge is avoided.
 - (g) Driveways are located to retain space for the future planting of street trees.
 - (h) The construction, location and design of vehicular crossings and driveways prevent interference with the safe movement of vehicles or the safe use of the footpath to maintain the amenity of the area.
 - (i) The design and construction of the driveway and vehicular crossing are such that vertical and horizontal alignments provide a continuous, smooth access of good rideability and clearance for vehicles and driveway and vehicular crossing do not cause adverse stormwater drainage impacts.

9.4.2.3 Specific benchmarks for assessment

Table 9.4.2-3: Driveways and vehicular crossings code – assessable development for driveways

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
Location			
PO1 The location of the driveway is considered at the design stage of the development to ensure it does not	AO1 The design of the driveway:	COMPLIES	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use						
unnecessarily damage street trees and allows space for the planting of street trees within the verge.	(a) does not cause damage to street trees in the verge; and (b) retains space for the planting of street trees within the verge.								
Design									
PO2 The driveway is designed and constructed to ensure: (a) safe access for a B85 vehicle (AS2890) from the property boundary to the on-site vehicle accommodation or standing area; (b) it does not cause adverse stormwater drainage impacts on or off the site; and (c) safe pedestrian movement in the proximity of the site.	AO2 The driveway is designed in accordance with the following design standards:	COMPLIES							
	<table><tr><th>Land use</th><th>Design standard</th></tr><tr><td> - Dual occupancy - Dwelling house - Multiple dwellings (where the development is for townhouses) </td><td>Queensland Development Code – NMP 1.1 - Driveways</td></tr><tr><td>All other land uses</td><td>AS/NZS 2890.1:2004 – Parking facilities – Part 1: Off-street car parking</td></tr></table>	Land use	Design standard	- Dual occupancy - Dwelling house - Multiple dwellings (where the development is for townhouses)	Queensland Development Code – NMP 1.1 - Driveways	All other land uses	AS/NZS 2890.1:2004 – Parking facilities – Part 1: Off-street car parking		
	Land use	Design standard							
	- Dual occupancy - Dwelling house - Multiple dwellings (where the development is for townhouses)	Queensland Development Code – NMP 1.1 - Driveways							
	All other land uses	AS/NZS 2890.1:2004 – Parking facilities – Part 1: Off-street car parking							
OR Where particularly restrictive physical conditions exist and the above standard arrangements are not attainable, the design and construction of the proposed driveway is certified by a RPEQ having regard to the following: (a) Disability Discrimination Act 1992; (b) AS 2890.1;									

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	(c) QUDM; and (d) Good engineering practice.		

Table 9.4.2-4: Driveways and vehicular crossings code – assessable development for vehicular crossings

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
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Construction of vehicular crossings

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
PO1 The vehicle crossing is designed and constructed to ensure: (a) safe access for a B85 vehicle (AS2890) from the road carriageway to the property boundary; (b) it does not cause adverse stormwater drainage impacts on or off the site; and (c) safe pedestrian movement in the proximity of the site.	AO1 Prior to the use commencing a vehicular crossing is constructed to provide access from the road to the property. Either: (a) The vehicular crossing is designed and constructed in accordance with the relevant vehicular crossing standards drawing in SC6.9 City Plan policy – Land development guidelines; or (b) where particularly restrictive physical conditions exist and the above standard arrangements are not attainable, the design and construction of the proposed vehicular crossing is certified by a RPEQ having regard to the following: (i) <i>Disability Discrimination Act 1992</i>; (ii) <i>AS 2890.1</i>; (iii) <i>QUDM</i>; and (iv) Good engineering practice.	WILL COMPLY	
PO2 Location and construction of the vehicular crossing avoids damage to utility services, pathways, kerbs, road pavement and seal and other municipal infrastructure.	AO2 The vehicular crossing is designed and constructed in accordance with the relevant vehicular crossing standards in SC6.9 City Plan policy – Land development guidelines .	COMPLIES	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use	
Maximum number of vehicular crossings per site				
PO3 The number of vehicular crossings per site are minimised to avoid the loss of on-street car parking spaces and to prevent adverse interference with: (a) the safety, capacity and operations of the existing or planned road network; (b) the proposed driveway; and (c) cycleways or pedestrian footpaths.	AO3 The maximum number of vehicular crossings per site, for the following land uses, is as follows:	IT IS PROPOSED THAT SIX VEHICLE CROSSOVERS BE PROVIDED, THREE FOR EACH TENANCY. THE REQUIRED NUMBER IS REQUIRED TO MEET FUNCTIONAL AND SAFETY REQUIREMENTS. THE SITE HAS EXTENSIVE ROAD FRONTAGE THAT WILL ALLOW SATISFACTORY SPACING BETWEEN EACH CROSSOVER AND TO INTERSECTIONS.		
	Land use			Maximum number of vehicular crossings per site
	Dwelling house			1 OR 2 - when the road frontage at the kerb is at least 40m
	Dual occupancy Multiple dwelling			1 OR 2 - where the road frontage at the kerb is greater than 20m
	Non-residential use			2
Separation distances				
PO4 Vehicular crossings are appropriately separated from other vehicular crossings and side property boundaries to prevent interference with: (a) the safety, capacity and operations of the existing or planned road network;	AO4 Vehicular crossings are separated from:	COMPLIES		
	Instance			Minimum distance (m)
	Any other vehicular crossing			3m
	Any side property boundary:			1.5m

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
(b) adjoining properties; and (c) cycleways or pedestrian footpaths.	- for residential development of 2 dwellings or less - All other development	2m	
Location			
PO5 Vehicle access to a public roadway is safe and does not compromise the efficiency, function, convenience of use or capacity of the road network.	AO5.1 The location of the vehicular crossing to a public roadway is consistent with AS2890.1 and AS2890.2.	COMPLIES	
	AO5.2 No new vehicular crossings are created on roads identified on the Functional Road Hierarchy as shown on the Zone maps or the Pacific motorway service road types overlap map .	COMPLIES	
PO6 Vehicular crossings are located to: (a) avoid damage to existing street trees located within the verge; and (b) retain space for the future planting of street trees within the verge.	AO6 No acceptable outcome provided.	COMPLIES	
Sight distances and lines			
PO7 Vehicular crossings are designed to prevent conflict between vehicles with cyclists and pedestrians.	AO7.1 Safe sight distances are provided, based on the vehicle speed at the vehicular crossing.	COMPLIES	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
	Note: This AO does not apply to the following uses: • Dwelling house; • Secondary dwelling; • Dual occupancy; or • Multiple dwelling (where there are 3 dwellings or less).		
	AO7.2 Vehicular crossings are designed to provide safe sight lines for vehicles exiting the vehicular crossing in accordance with AS2890.2. Where no service vehicle is required to access the site, including waste collection, the requirements for sight lines at the vehicular crossing are in accordance with AS2890.1. Note: This AO does not apply to the following uses: • Dwelling house; • Secondary dwelling; • Dual occupancy; or • Multiple dwelling (where there are 3 dwellings or less).	COMPLIES	

APPENDIX C – RESPONSE TO STATE CODE 1

Table 1.2.1: Development in a state-controlled road environment

Performance outcomes	Acceptable outcomes	Response
Buildings and structures		
PO1 The location of buildings, structures, infrastructure, services and utilities does not create a safety hazard in a state-controlled road, or cause damage to, or obstruct road transport infrastructure.	AO1.1 Buildings, structures, infrastructure, services and utilities are not located in a state-controlled road. AND	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
	AO1.2 Buildings, structures, infrastructure, services and utilities can be maintained without requiring access to a state-controlled road.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
PO2 The design and construction of buildings and structures does not create a safety hazard by distracting users of a state-controlled road.	AO2.1 Facades of buildings and structures facing a state-controlled road are made of non-reflective materials. OR	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
	AO2.2 Facades of buildings and structures do not reflect point light sources into the face of oncoming traffic on a state-controlled road. AND	
	AO2.3 External lighting of buildings and structures is not directed into the face of oncoming traffic on a state-controlled road and does not involve flashing or laser lights. AND	

Performance outcomes	Acceptable outcomes	Response
	AO2.4 Advertising devices visible from a state-controlled road are located and designed in accordance with the Roadside Advertising Guide, 2 nd Edition, Department of Transport and Main Roads, 2017.	
PO3 Road, pedestrian and bikeway bridges over a state-controlled road are designed and constructed to prevent projectiles from being thrown onto a state-controlled road.	AO3.1 Road, pedestrian and bikeway bridges over a state-controlled road include throw protection screens in accordance with section 4.9.3 of the Design Criteria for Bridges and Other Structures Manual, Department of Transport and Main Roads, 2018.	
Filling, excavation and retaining structures		
PO4 Filling and excavation does not interfere with, or result in damage to, infrastructure or services in a state-controlled road. Note: Information on the location of services and public utility plants in a state-controlled road can be obtained from the Dial Before You Dig service. Where development will impact on an existing or future service or public utility plant in a state-controlled road such that the service or public utility plant will need to be relocated, the alternative alignment must comply with the standards and design specifications of the relevant service or public utility provider, and any costs of relocation are to be borne by the developer. Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	No acceptable outcome is prescribed.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
PO5 Filling, excavation, building foundations and retaining structures do not undermine, or cause subsidence of, a state-controlled road. Note: To demonstrate compliance with this performance outcome, it is recommended an RPEQ certified geotechnical assessment, prepared in accordance with the Road Planning and Design	No acceptable outcome is prescribed.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS

Performance outcomes	Acceptable outcomes	Response
Manual 2nd Edition: Volume 3, Department of Transport and Main Roads, 2016, is provided. Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome and prepare a geotechnical assessment.		
PO6 Filling, excavation, building foundations and retaining structures do not cause ground water disturbance in a state-controlled road. Note: To demonstrate compliance with this performance outcome, it is recommended an RPEQ certified geotechnical assessment, prepared in accordance with the Road Planning and Design manual 2nd Edition: Volume 3, Department of Transport and Main Roads, 2016, is provided. Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome and prepare a geotechnical assessment.	No acceptable outcome is prescribed.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
PO7 Excavation, boring, piling, blasting or fill compaction during construction of a development does not result in ground movement or vibration impacts that would cause damage or nuisance to a state-controlled road, road transport infrastructure or road works. Note: To demonstrate compliance with this performance outcome, it is recommended an RPEQ certified geotechnical assessment, prepared in accordance with Road Planning and Design Manual 2nd Edition: Volume 3, Department of Transport and Main Roads, 2016, is provided. Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome and prepare a geotechnical assessment.	No acceptable outcome is prescribed.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS

Performance outcomes	Acceptable outcomes	Response
PO8 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 a pavement impact assessment is provided. Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, and the Guide to Traffic Impact Assessment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome and prepare a pavement impact assessment.	AO8.1 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
PO9 Filling and excavation associated with the construction of vehicular access to a development does not compromise the operation or capacity of existing drainage infrastructure for a state-controlled road. Note: Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	No acceptable outcome is prescribed.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
PO10 Fill material used on a development site does not result in contamination of a state-controlled road. Note: Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	AO10.1 Fill material is free of contaminants including acid sulfate content. Note: Soils and rocks should be tested in accordance with AS 1289.0 – Methods of testing soils for engineering purposes and AS 4133.0-2005 – Methods of testing rocks for engineering purposes. AND	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
	AO10.2 Compaction of fill is carried out in accordance with the requirements of AS 1289.0 2000 – Methods of testing soils for engineering purposes.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS

Performance outcomes	Acceptable outcomes	Response
PO11 Filling and excavation does not cause wind-blown dust nuisance in a state-controlled road. Note: Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	AO11.1 Compaction of fill is carried out in accordance with the requirements of AS 1289.0 2000 – Methods of testing soils for engineering purposes. AND	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
	AO11.2 Dust suppression measures are used during filling and excavation activities such as wind breaks or barriers and dampening of ground surfaces.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
Stormwater and drainage		
PO12 Development does not result in an actionable nuisance, or worsening of, stormwater, flooding or drainage impacts in a state-controlled road. Note: Refer to the SDAP Supporting Information: Stormwater and drainage in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	No acceptable outcome is prescribed.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
PO13 Run-off from the development site is not unlawfully discharged to a state-controlled road. Note: Refer to the SDAP Supporting Information: Stormwater and drainage in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	AO13.1 Development does not create any new points of discharge to a state-controlled road. AND	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
	AO13.2 Stormwater run-off is discharged to a lawful point of discharge. Note: Section 3.9 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 IMPACT ANALYSIS
	AO13.3 Development does not worsen the condition of an existing lawful point of discharge to the state-controlled road.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS

Performance outcomes	Acceptable outcomes	Response
P014 Run-off from the development site during construction does not cause siltation of stormwater infrastructure affecting a state-controlled road. Note: Refer to the SDAP Supporting Information: Stormwater and drainage in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	AO14.1 Run-off from the development site during construction is not discharged to stormwater infrastructure for a state-controlled road.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
Vehicular access to a state-controlled road		
P015 Vehicular access to a state-controlled road that is a limited access road is consistent with government policy for the management of limited access roads. Note: Refer to the SDAP Supporting Information: Vehicular access to a state-controlled road, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	AO15.1 Development does not require new or changed access to a limited access road. Note: Limited access roads are declared by the transport chief executive under section 54 of the <i>Transport Infrastructure Act 1994</i> and are identified in the DA mapping system. OR	COMPLIES, ACCESS IS FROM A LOCAL ROAD
	AO15.2 A new or changed access to a limited access road is consistent with the limited access policy for the state-controlled road. Note: Limited access policies for limited access roads declared under the <i>Transport Infrastructure Act 1994</i> can be obtained by contacting the relevant Department of Transport and Main Roads regional office. AND	
	AO15.3 Where a new or changed access is for a service centre, access is consistent with the Service centre policy, Department of Transport and Main Roads, 2013 and the Access policy for roadside service centre facilities on limited access roads, Department of Transport and Main Roads, 2013, and the Service centre strategy for the state-controlled road. Note: The Service centre policy, Department of Transport and Main Roads, 2013, Access policy for roadside service centre facilities, Department of Transport and Main Roads, 2013 and the relevant Service centre strategy for a state-controlled road can be	

Performance outcomes	Acceptable outcomes	Response
	accessed by contacting the relevant Department of Transport and Main Roads regional office.	
PO16 The location and design of vehicular access to a state-controlled road (including access to a limited access road) does not create a safety hazard for users of a state-controlled road or result in a worsening of operating conditions on a state-controlled road. Note: Where a new or changed access between the premises and a state-controlled road is proposed, the Department of Transport and Main Roads will need to assess the proposal to determine if the vehicular access for the development is safe. An assessment can be made by Department of Transport and Main Roads as part of the development assessment process and a decision under section 62 of <i>Transport Infrastructure Act 1994</i> issued. Refer to the SDAP Supporting Information: Vehicular access to a state-controlled road, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	AO16.1 Vehicular access is provided from a local road.	COMPLIES
	OR all of the following acceptable outcomes apply: AO16.2 Vehicular access for the development is consistent with the function and design of the state-controlled road. AND	
	AO16.3 Development does not require new or changed access between the premises and the state-controlled road. Note: A decision under section 62 of the <i>Transport Infrastructure Act 1994</i> outlines the approved conditions for use of an existing vehicular access to a state-controlled road. Current section 62 decisions can be obtained from the relevant Department of Transport and Main Roads regional office. AND	
	AO16.4 Use of any existing vehicular access to the development is consistent with a decision under section 62 of the <i>Transport Infrastructure Act 1994</i>. Note: The development which is the subject of the application must be of an equivalent use and intensity for which the section 62 approval was issued and the section 62 approval must have been granted no more than 5 years prior to the lodgement of the application. AND	
	AO16.5 On-site vehicle circulation is designed to give priority to entering vehicles at all times so vehicles do not queue in a road intersection or on the state-controlled road.	

Performance outcomes	Acceptable outcomes	Response
Vehicular access to local roads within 100 metres of an intersection with a state-controlled road		
PO17 The location and design of vehicular access to a local road within 100 metres of an intersection with a state-controlled road does not create a safety hazard for users of a state-controlled road. Note: Refer to the SDAP Supporting Information: Vehicular access to a state-controlled road, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	AO17.1 Vehicular access is located as far as possible from the state-controlled road intersection. AND	
	AO17.2 Vehicular access is in accordance with parts, 3, 4 and 4A of the Road Planning and Design Manual, 2 nd Edition: Volume 3, Department of Transport and Main Roads, 2016. AND	
	AO17.3 On-site vehicle circulation is designed to give priority to entering vehicles at all times so vehicles do not queue in the intersection or on the state-controlled road.	
Public passenger transport infrastructure on state-controlled roads		
PO18 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. Note: Refer to the SDAP Supporting Information: Vehicular access to a state-controlled road, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	AO18.1 Vehicular access and associated road access works are not located within 5 metres of existing public passenger transport infrastructure. AND	COMPLIES
	AO18.2 Development does not necessitate the relocation of existing public passenger transport infrastructure. AND	COMPLIES
	AO18.3 On-site vehicle circulation is designed to give priority to entering vehicles at all times so vehicles using a vehicular access do not obstruct public passenger transport infrastructure and public passenger services or obstruct pedestrian or cycle access to public passenger transport infrastructure and public passenger services. AND	COMPLIES

Performance outcomes	Acceptable outcomes	Response
	AO18.4 The normal operation of public passenger transport infrastructure or public passenger services is not interrupted during construction of the development.	COMPLIES
Planned upgrades		
PO19 Development does not impede delivery of planned upgrades of state-controlled roads.	AO19.1 Development is not located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of a state-controlled road. Note: Land required for the planned upgrade of a state-controlled road is identified in the DA mapping system . OR	COMPLIES
	AO19.2 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 a state-controlled road.	COMPLIES
	OR all of the following acceptable outcomes apply: AO19.3 Structures and infrastructure located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of a state-controlled road are able to be readily relocated or removed without materially affecting the viability or functionality of the development. AND	

Performance outcomes	Acceptable outcomes	Response
	AO19.4 Vehicular access for the development is consistent with the function and design of the planned upgrade of the state-controlled road. AND	
	AO19.5 Development does not involve filling and excavation of, or material changes to, land required for a planned upgrade to a state-controlled road. AND	
	AO19.6 Land is able to be reinstated to the pre-development condition at the completion of the use.	
Network impacts		
PO20 Development does not result in a worsening of operating conditions on the state-controlled road <u>network</u> . Note: To demonstrate compliance with this performance outcome, it is recommended that an RPEQ certified traffic impact assessment is provided. Please refer to the Guide to Traffic Impact Assessment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	No acceptable outcome is prescribed.	COMPLIES
PO21 Development does not impose traffic loadings on a state-controlled road which could be accommodated on the local road network.	AO21.1 The layout and design of the development directs traffic generated by the development to the local road network.	COMPLIES
PO22 Upgrade works on, or associated with, a <u>state-controlled road</u> are built in accordance with Queensland road design standards.	AO22.1 Upgrade works required as a result of the development are designed and constructed in accordance with the <i>Road Planning and Design Manual</i> , 2 nd edition, Department of Transport and Main Roads, 2016. Note: Road works in a state-controlled road require approval under section 33 of the <i>Transport Infrastructure Act 1994</i> before the works commence.	COMPLIES

Table 1.2.3: Development in a future state-controlled road environment

Performance outcomes	Acceptable outcomes	
P032 Development does not impede delivery of a future state-controlled road.	A032.1 Development is not located in a future state-controlled road. OR	COMPLIES
	A032.2 Development is sited and designed so that permanent buildings, structures, infrastructure, services or utilities are not located in a future state-controlled road.	
	OR all of the following acceptable outcomes apply: A032.3 Structures and infrastructure located in a future state-controlled road are able to be readily relocated or removed without materially affecting the viability or functionality of the development. AND	
	A032.4 Development does not involve filling and excavation of, or material changes to, a future state-controlled road. AND	
	A032.5 Land is able to be reinstated to the pre-development condition at the completion of the use.	

Performance outcomes	Acceptable outcomes	
P033 Vehicular access to a future state-controlled road is located and designed to not create a safety hazard for users of a future state-controlled road or result in a worsening of operating conditions on a future state-controlled road. Note: Where a new or changed access between the premises and a future state-controlled road is proposed, the Department of Transport and Main Roads will need to assess the proposal to determine if the vehicular access for the development is safe. An assessment can be made by Department of Transport and Main Roads as part of the development assessment process and a decision under section 62 of <i>Transport Infrastructure Act 1994</i> issued.	AO33.1 Development does not require new or changed access between the premises and a future state-controlled road. AND	COMPLIES
	AO33.2 Vehicular access for the development is consistent with the function and design of the future state-controlled road.	
P034 Filling, excavation, building foundations and retaining structures do not undermine, or cause subsidence of, a future state-controlled road. Note: To demonstrate compliance with this performance outcome, it is recommended that an RPEQ certified geotechnical assessment is provided, prepared in accordance with the Road Planning and Design Manual, 2nd edition: Volume 3, Department of Transport and Main Roads, 2016. Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome and prepare a geotechnical assessment.	No acceptable outcome is prescribed.	COMPLIES

Performance outcomes	Acceptable outcomes	
PO35 Fill material from a development site does not result in contamination of land for a future state-controlled road. Note: Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	A035.1 Fill material is free of contaminants including acid sulfate content. Note: Soil and rocks should be tested in accordance with AS1289 – Methods of testing soils for engineering purposes and AS4133 2005 – Methods of testing rocks for engineering purposes. AND	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
	A035.2 Compaction of fill is carried out in accordance with the requirements of AS1289.0 2000 – Methods of testing soils for engineering purposes.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
PO36 Development does not result in an actionable nuisance, or worsening of, stormwater, flooding or drainage impacts in a future state-controlled road. Note: Refer to the SDAP Supporting Information: Stormwater and drainage in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	No acceptable outcome is prescribed.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS
PO37 Run-off from the development site is not unlawfully discharged to a future state-controlled road.	A037.1 Development does not create any new points of discharge to a future state-controlled road.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS

Performance outcomes	Acceptable outcomes	
Note: Refer to the SDAP Supporting Information: Stormwater and drainage in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	AND	
	A037.2 Stormwater run-off is discharged to a lawful point of discharge. Note: Section 3.9 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 IMPACT ANALYSIS
	A037.3 Development does not worsen the condition of an existing lawful point of discharge to the future state-controlled road.	NOT APPLICABLE TO TRAFFIC IMPACT ANALYSIS

APPENDIX D – 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
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.
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.	COMPLIES
	OR 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.	A07.3 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	
	A07.4 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
	A07.5 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

Performance outcomes	Acceptable outcomes	Response
PO9 Development does not result in a worsening of operating conditions of a railway	No acceptable outcome is prescribed.	COMPLIES
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	COMPLIES

Performance outcomes	Acceptable outcomes	Response
	state transport infrastructure. 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	

Performance outcomes	Acceptable outcomes	Response
	for a planned upgrade to a state transport 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.	COMPLIES
	AND	
	AO14.2 Development does not necessitate the relocation of existing public passenger transport infrastructure.	COMPLIES
	AND	
	AO14.3 Development does not obstruct pedestrian or cyclist access to public passenger transport infrastructure or public passenger services.	COMPLIES
	AND	
	AO14.4 The normal operation of public passenger	COMPLIES

Performance outcomes	Acceptable outcomes	Response
	transport infrastructure or public passenger services is not interrupted during construction of the development.	
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	No acceptable outcome is prescribed.	COMPLIES

Performance outcomes	Acceptable outcomes	Response
performance outcome.		
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 AO20.2 On-site circulation is designed and constructed so that public passenger services can	COMPLIES COMPLIES

Performance outcomes	Acceptable outcomes	Response
	enter and leave in a forward gear at all times. AND AO20.3 Development does not result in public passenger services movements through car parking aisles.	
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 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	NOT APPLICABLE – TAXI FACILITIES ARE NOT PROPOSED TO BE PROVIDED. NOT APPLICABLE – TAXI FACILITIES ARE NOT PROPOSED TO BE PROVIDED.

Performance outcomes	Acceptable outcomes	Response
	parking for people with disabilities 4. Disability standards for accessible public transport 2002 made under section 31(1) of the <i>Disability Discrimination Act 1992</i> 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 NOT AN EDUCATIONAL ESTABLISHMENT.



APPENDIX G

ACOUSTIC REPORT



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National Tiles
Proposed Industrial Warehouse
60 Stapylton Jacobs Well Road
Yatala

ACOUSTIC REPORT



Client:
Fraser's Property

Reference:
2021556 R01B National Tiles Stapylton Jacobs Well Road Yatala ENV.docx

Date Issued:
20 December 2021

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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 to be located on the Vantage Yatala subdivision, located at 60 Stapylton Jacobs Well Road, Stapylton. To facilitate the assessment, unattended noise monitoring was conducted in the vicinity of nearby residence to establish the criteria for onsite activities. Based on the data obtained, onsite activities were assessed to surrounding sensitive receivers with recommendations for acoustic treatments specified in this report.

2. Site Description

2.1 Site Location

The proposed site is described by the following:

60 Stapylton Jacobs Well Road, 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 17th October 2021 and identified the following:

- a) The site is currently vacant.
- b) The surrounding area consists primarily of industrial/commercial land uses.
- c) Single storey and highset dwellings are located adjacent the subdivision's western site boundary.
- d) Stapylton Jacobs Well Road separates the subdivision from agricultural/rural residential land uses to the northwest.
- e) The Pacific Motorway is located approximately 540m west of the site.

2.2 Proposal

The proposal is to construct a warehouse/industrial development on the Vantage Yatala subdivision as follows:

- Total site area of 49,469m².
- National Tiles warehouse – Total area of 17,074 m² (including dispatch office, commercial hub, future trade centre and driver amenities).
- National Tiles Office – Total area of 1,012m²
- Warehouse A – Total area of 8,233m²
- Office A – Total area of 495m²
- Car park with 172 spaces.
- Proposed 24/7 hours of operation.

Refer to the Appendix for development plans.

2.3 Acoustic Environment

The surrounding area is primarily affected by existing industrial/commercial activities in the area and 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. Single storey and highset dwellings fronting Cedar Drive to the west.
2. Highset dwelling at 33 Stapylton Jacobs Well Road to the northwest.
3. Residential land uses at Hillside Drive to the north.

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

A Rion NL42 environmental noise monitor was placed onsite at 60 Stapylton Jacobs Well Road to measure existing ambient noise levels. 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 AS1055:2018 *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		49	51	48

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	54	49
Evening 6pm – 10pm	56	51
Night 10pm – 7am	53	48

7. Onsite Activities

7.1 Methodology

Noise predictions were determined with SoundPLAN 8.2 noise modelling software, which applied CONCAWE methodology. The CONCAWE algorithm takes into account distance, intervening terrain and buildings, screening features and meteorological conditions. For the purposes of this assessment, neutral wind conditions were applied in the noise model.

7.2 Source Sound Power Levels

Source sound power levels associated with normal operation was assessed based on previous measurements of similar activities and are presented in Table 4.

Table 4: Source sound power levels

Activity	Sound Power Level, dB(A)
Truck passbys	104
Truck air brakes	112
Truck reverse alarm	105
Car passbys	77
Car door closure	85
Forklifts	92

All activities include corrections for tonality and impulsiveness as per AS1055:2018, where applicable.

7.3 Predicted Noise Levels

7.3.1 Background Creep Criteria

Predicted noise levels for the site, utilising the data in Table 4, is presented in Table 5 and compared to the Background Creep criteria. A noise contour map for the site is presented in Section 7.4.

Table 5: Predicted noise levels - Background Creep LAeq 15min

Receiver	Predicted Noise Level, dB(A) Leq, 15min	Leq Compliance		
		Day	Evening	Night
Criteria		54	56	53
1. Cedar Drive (west)	42	Yes	Yes	Yes
2. 33 Stapylton Jacobs Well Rd (northwest)	34	Yes	Yes	Yes
3. Hillside Drive (northeast)	29	Yes	Yes	Yes

Compliance is predicted with the Background Creep criteria for the 24 hour operation of the site on the condition the recommendations in Section 8 are implemented.

7.3.2 Acoustic Quality Objectives

Predicted noise levels for the modelled scenario, compared to the Acoustic Quality Objectives, are presented in Table 6. A noise contour map for the site is presented in Section 7.4.

Table 6: Predicted noise levels - Acoustic Quality Objectives 1 hour

Receiver	Predicted Noise Level, dB(A) Leq, 1 hour		Predicted Noise Level, dB(A) L10, 1 hour		Predicted Noise Level, dB(A) L01, 1 hour		Leq Compliance			LA10 Compliance			LA01 Compliance		
							Day/Eve		Night	Day/Eve		Night	Day/Eve		Night
	External	Internal	External	Internal	External	Internal	External	Internal	Internal	External	Internal	Internal	External	Internal	Internal
Criteria							50	35	30	55	40	35	65	45	40
1. Cedar Drive (west)	42	32	46	36	50	40	Yes	n/a	n/a	Yes	n/a	n/a	Yes	n/a	n/a
2. 33 Stapylton Jacobs Well Rd (northwest)	34	24	37	27	42	32	Yes	n/a	n/a	Yes	n/a	n/a	Yes	n/a	n/a
3. Hillside Drive (northeast)	29	19	32	22	37	27	Yes	n/a	n/a	Yes	n/a	n/a	Yes	n/a	n/a

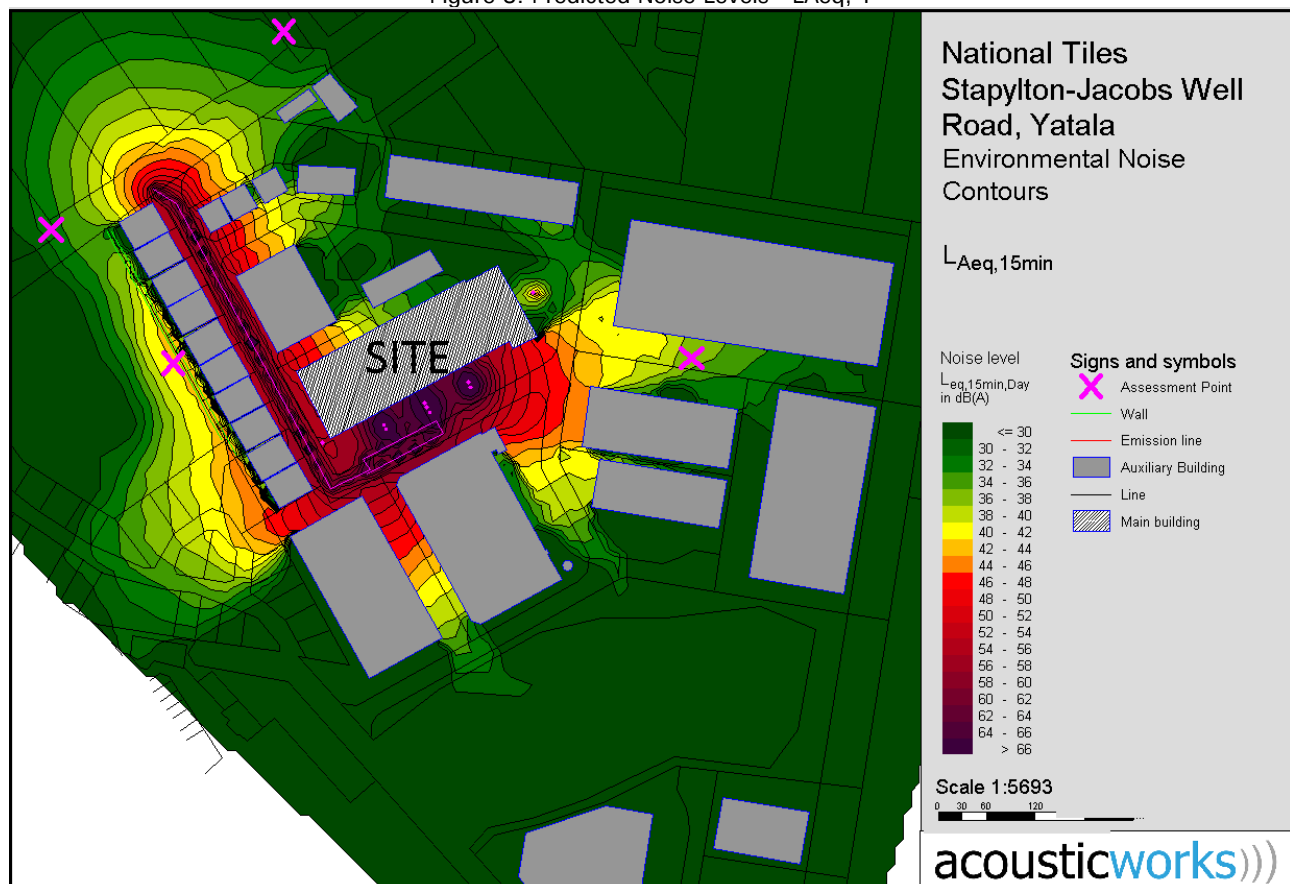
Compliance is predicted with the external Acoustic Quality Objectives for the proposed 24/7 operation for the site on the condition the recommendations in Section 8 are implemented.

In regards to the internal Acoustic Quality Objectives, due to the surrounding environment (i.e. industry/local roads/Pacific Motorway) the existing background noise levels already exceed the internal Acoustic Quality Objectives for all time periods. Therefore, it is not possible to apply the internal Acoustic Quality Objectives for this development.

7.4 Noise Contour Maps

A noise contour map for the development, utilising the noise data in Table 4, is presented in Figure 3.

Figure 3: Predicted Noise Levels - LAeq, T



8. Recommendations

8.1 Onsite Activities

Compliance is predicted for the proposed 24/7 operation for the site on the condition the warehouse incorporates a tilt concrete panel for all walls facing northwest, southwest and northeast to a minimum height of 2.1 metres.

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/industrial development at 60 Stapylton Jacobs Well Road, Yatala. On the condition the recommendations detailed in Section 8 are implemented, compliance is predicted with City of Gold Coast assessment criteria.

If you should have any queries please do not hesitate to contact us.

Report Prepared By

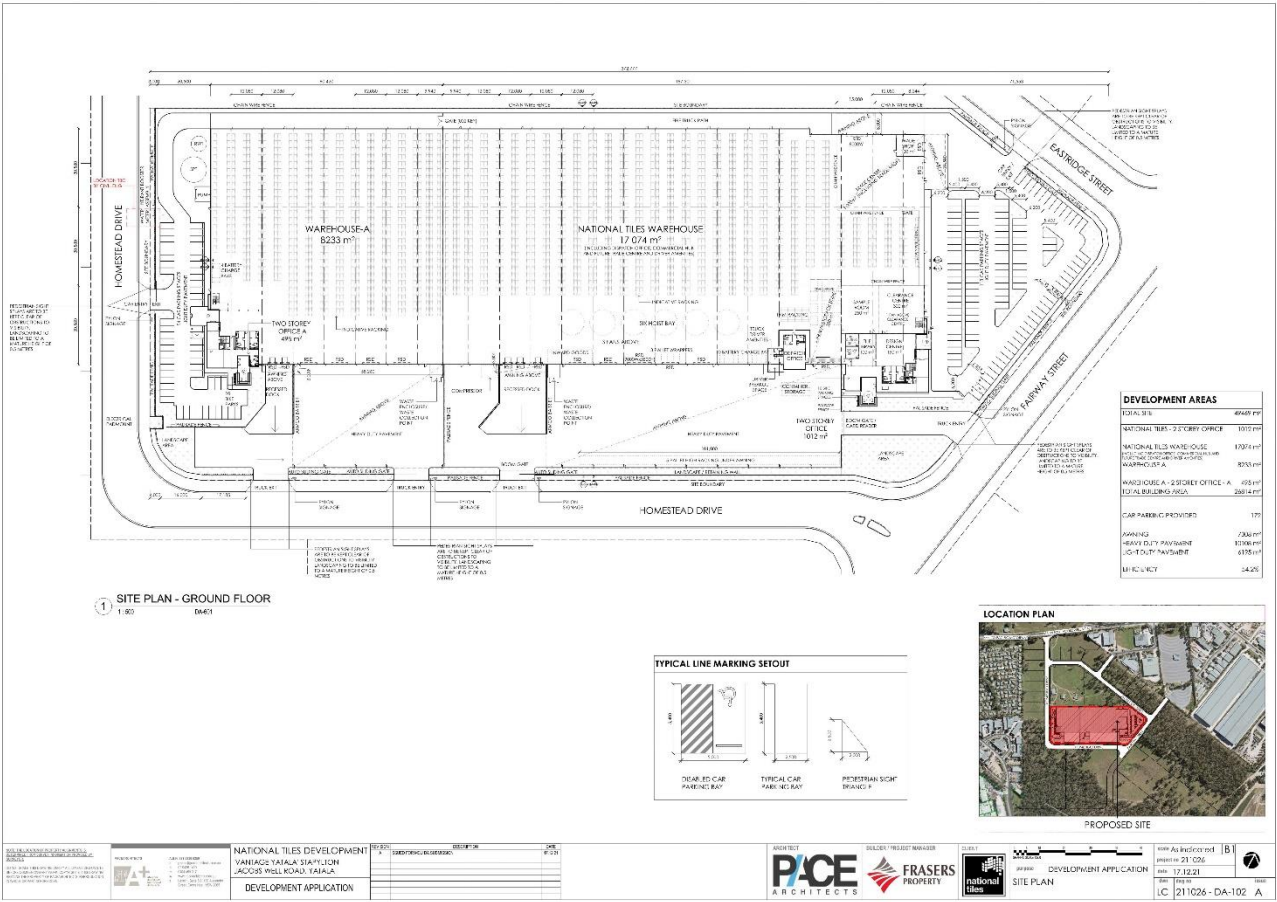


Matthew Bechara M.ArchSci MAAS
Senior Acoustic Consultant

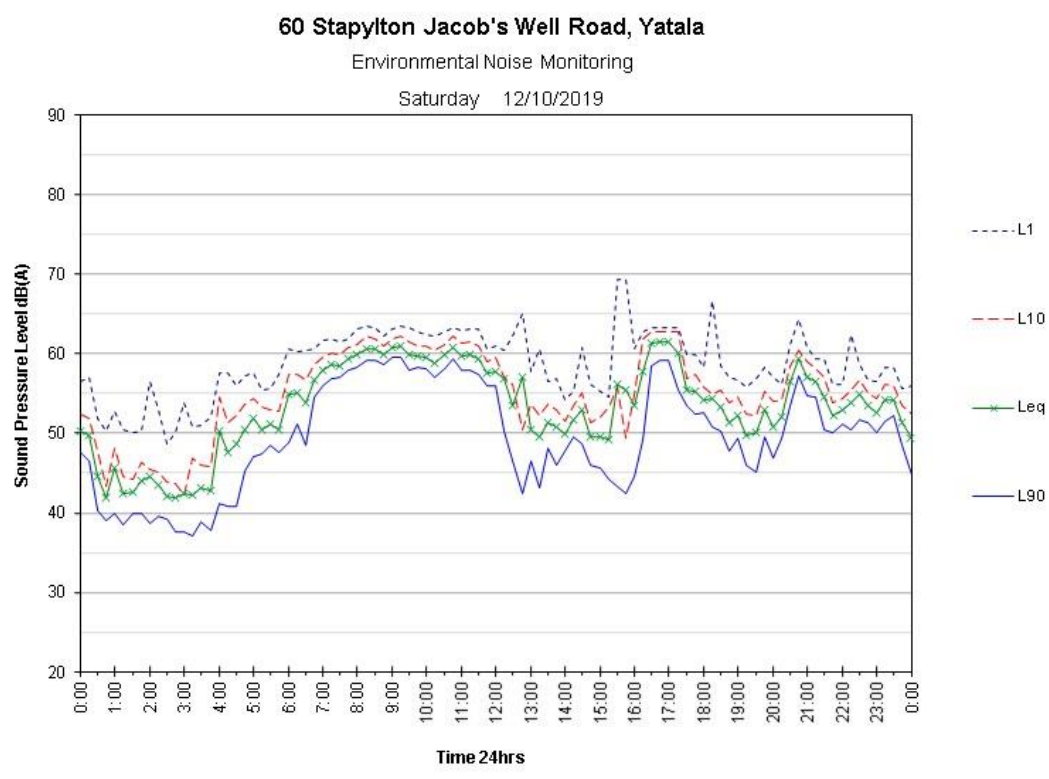
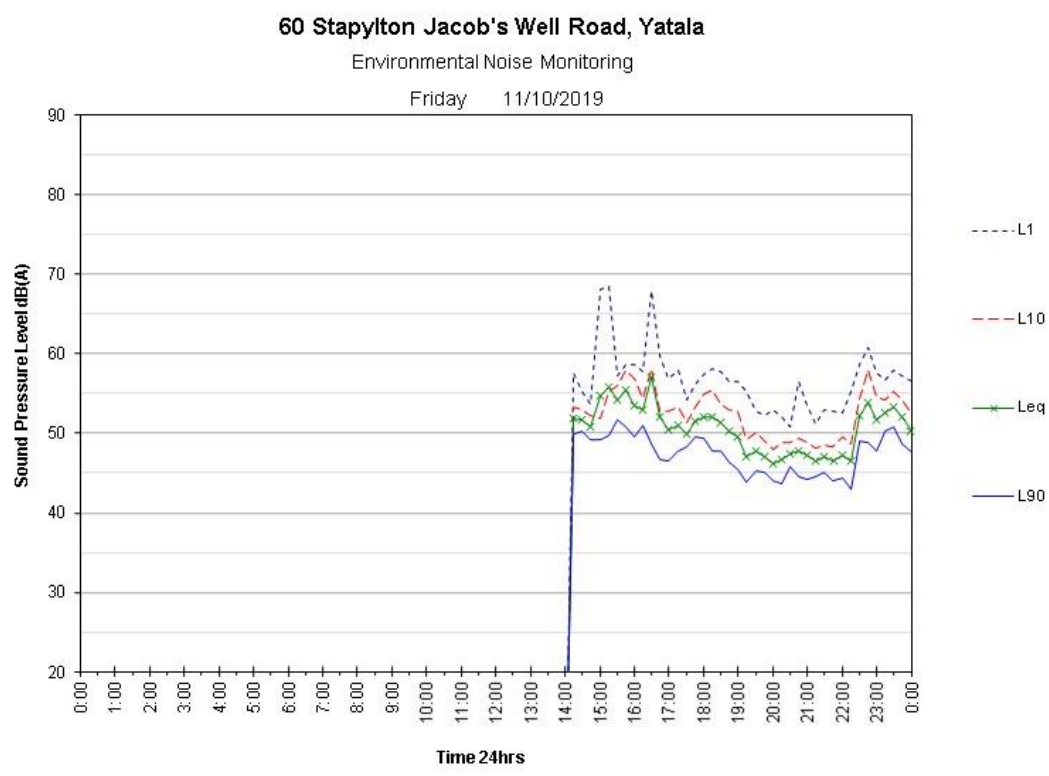
acousticworks)))

10. Appendices

10.1 Development Plans



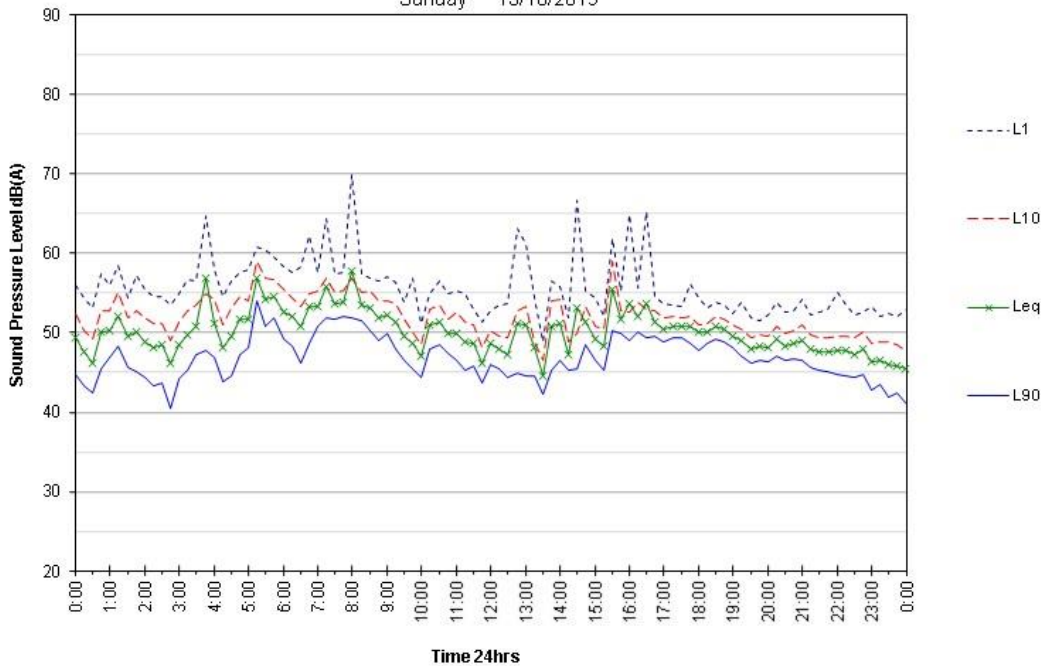
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60 Stapylton Jacob's Well Road, Yatala

Environmental Noise Monitoring

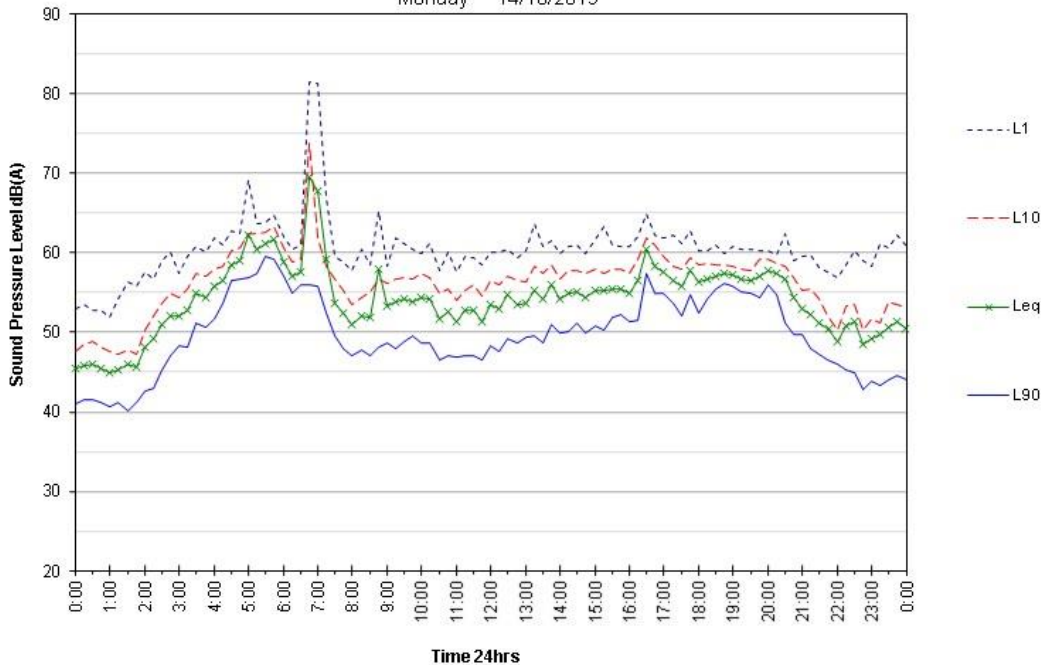
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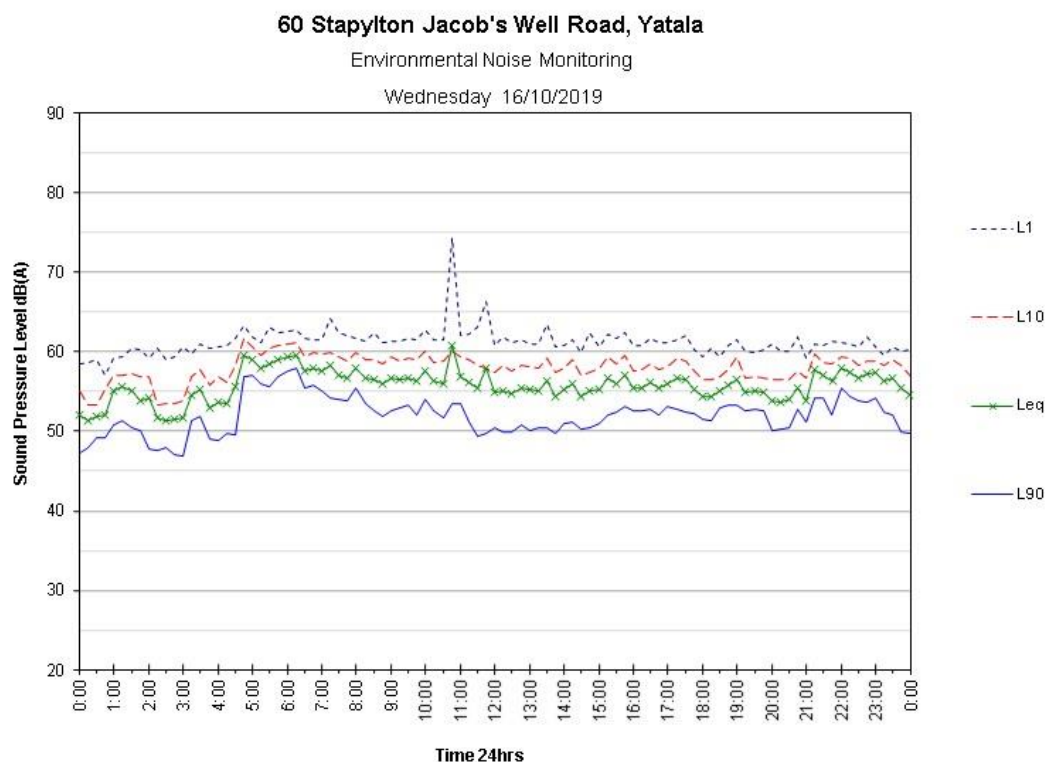
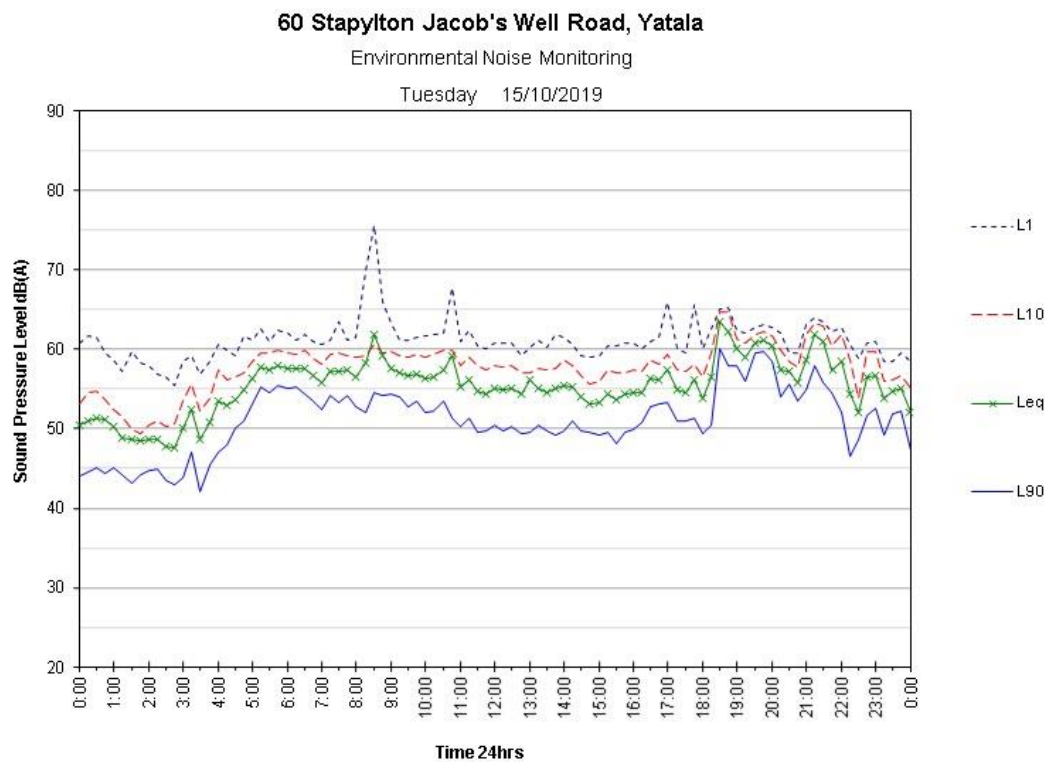


60 Stapylton Jacob's Well Road, Yatala

Environmental Noise Monitoring

Monday 14/10/2019

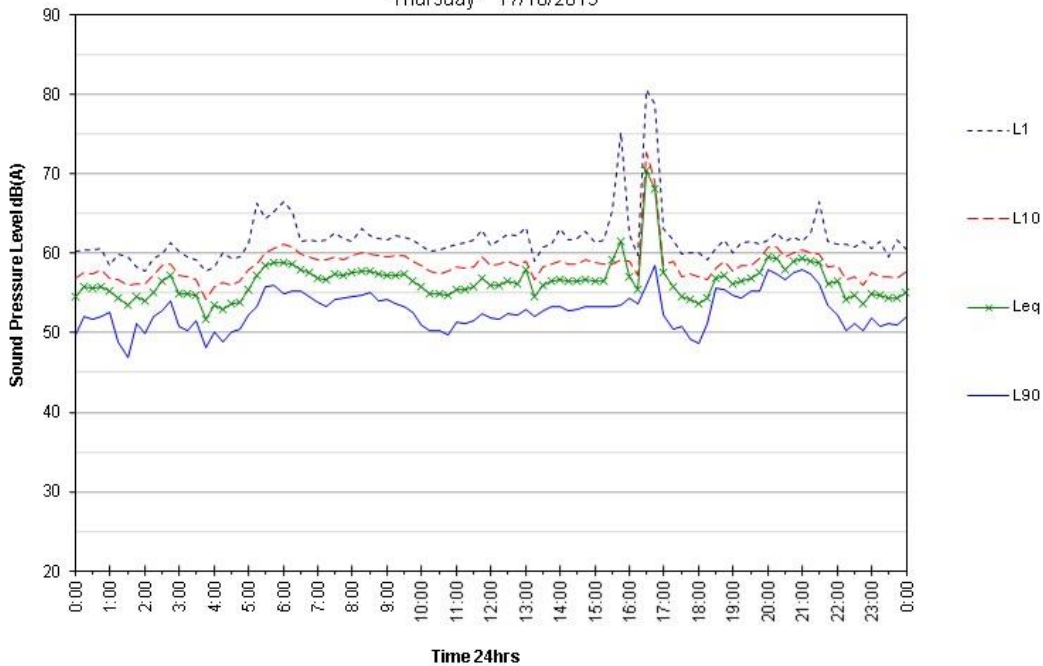




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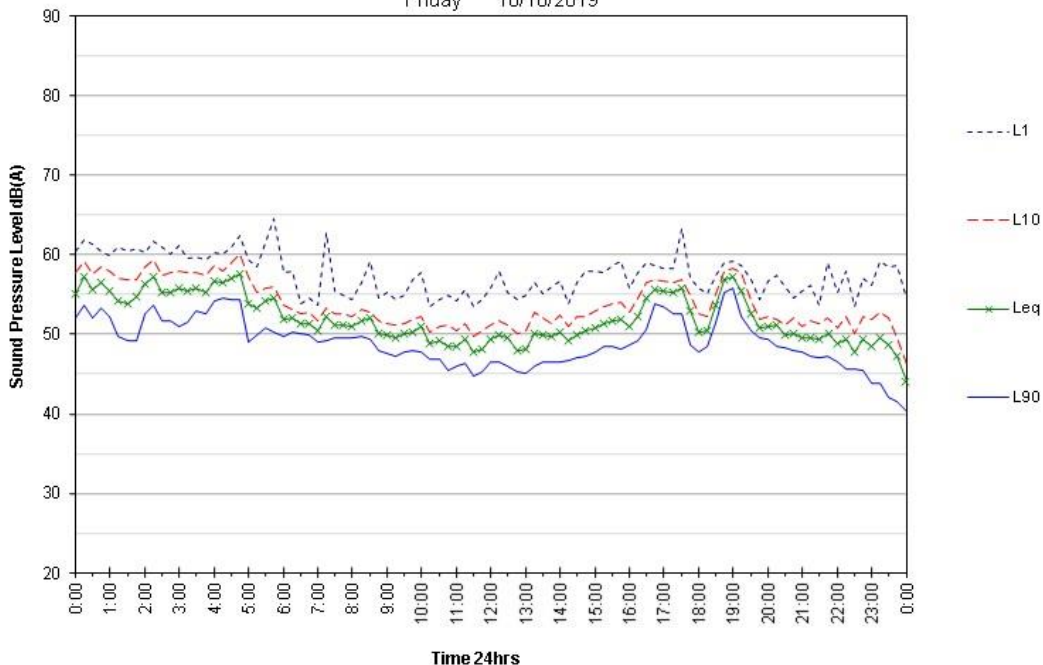
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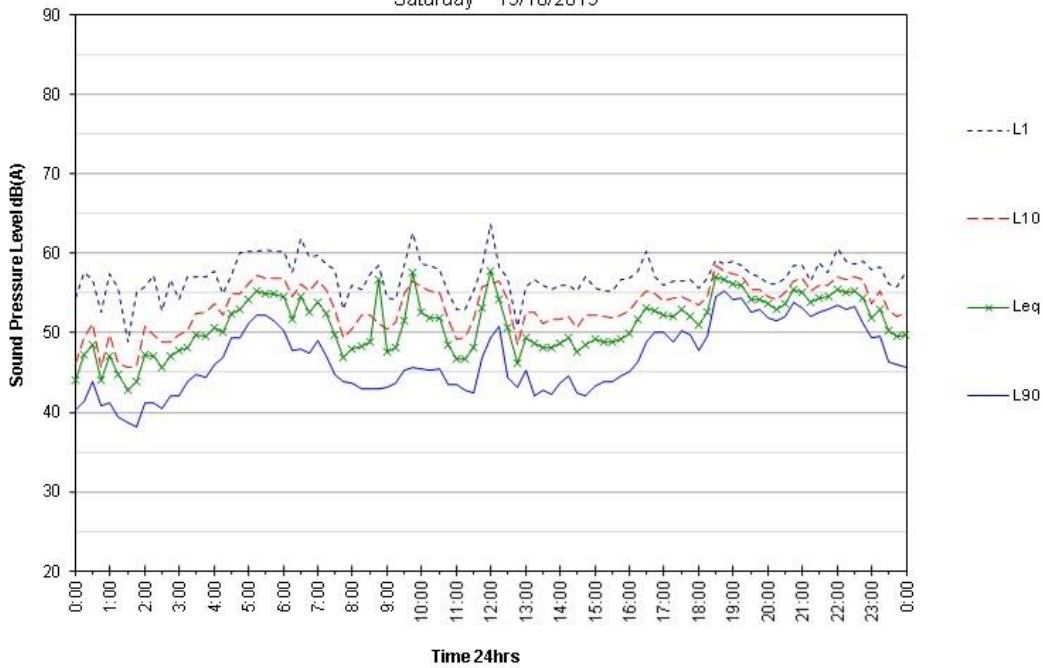
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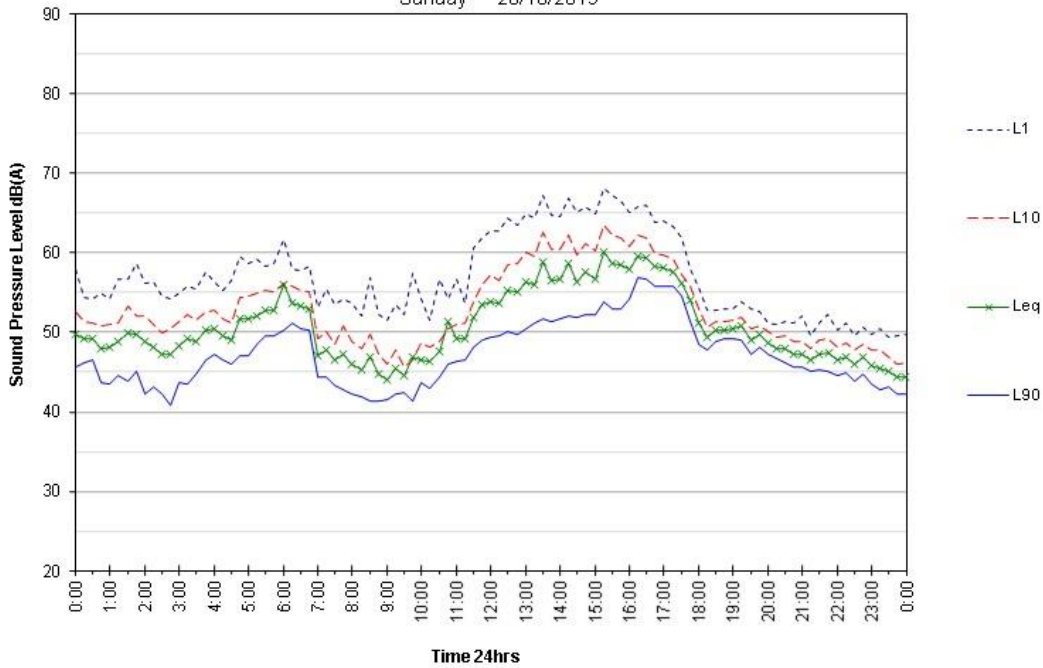
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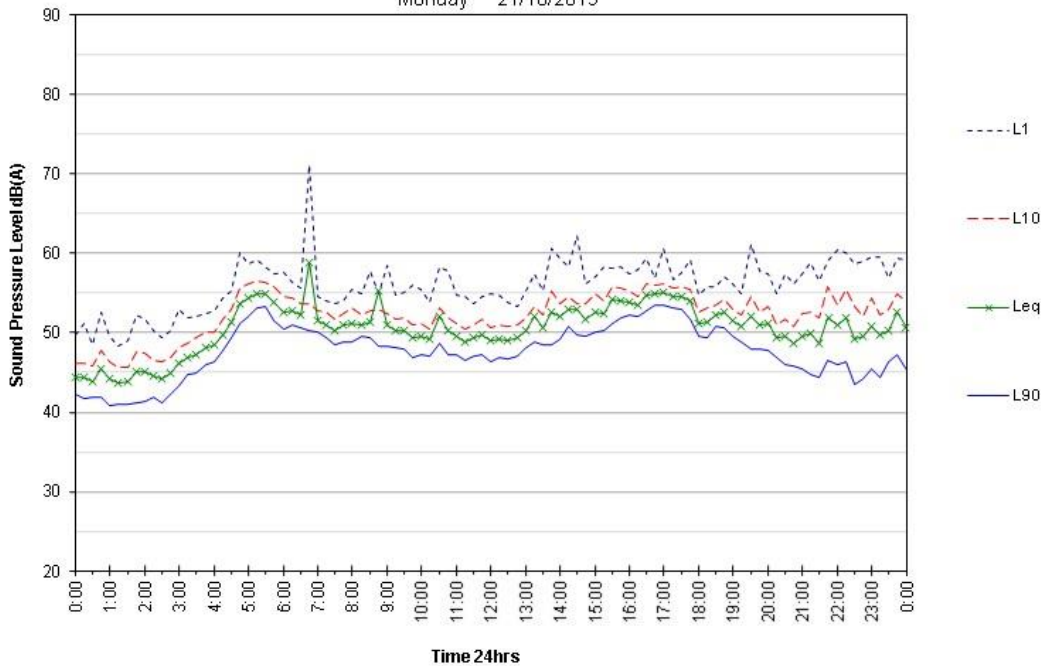
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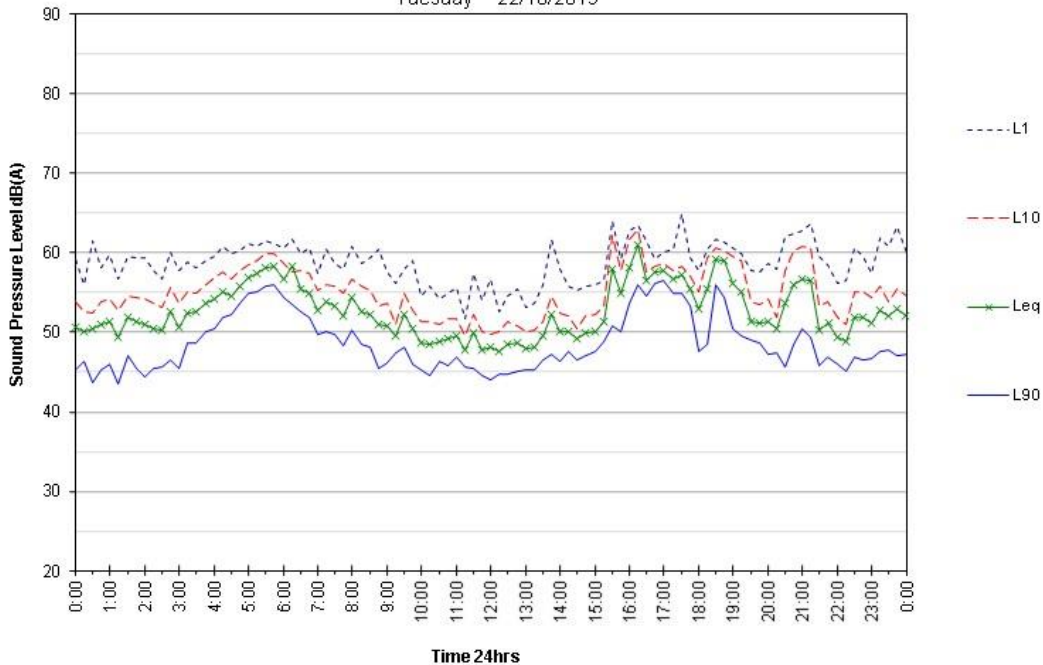
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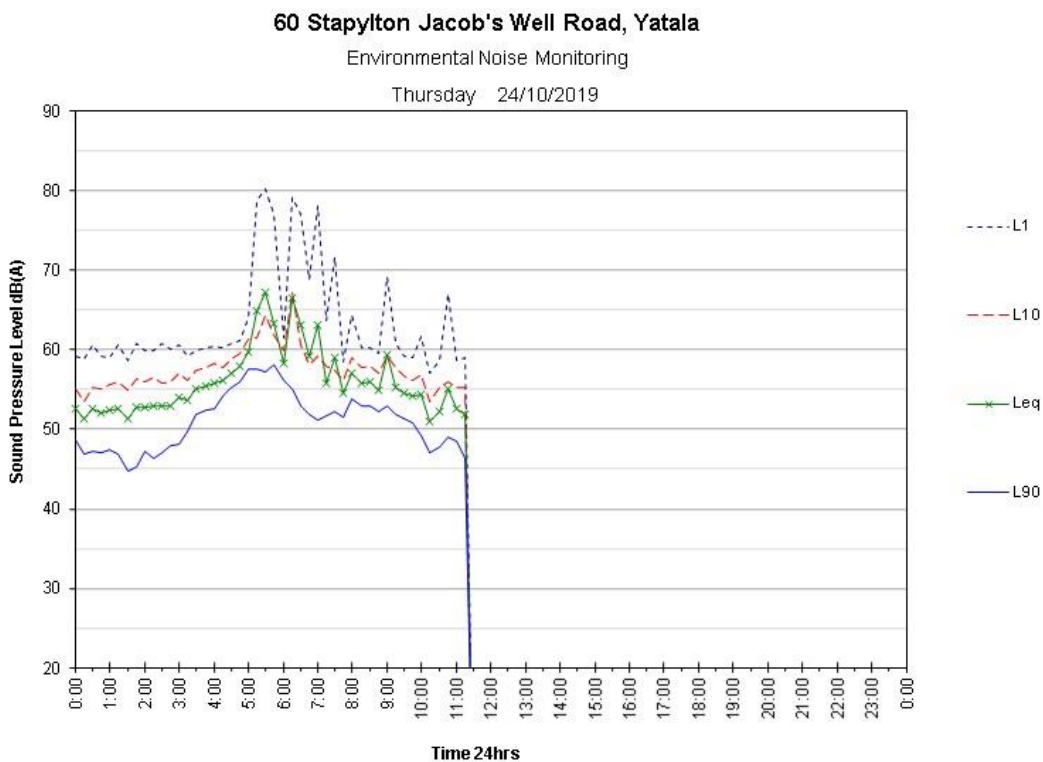
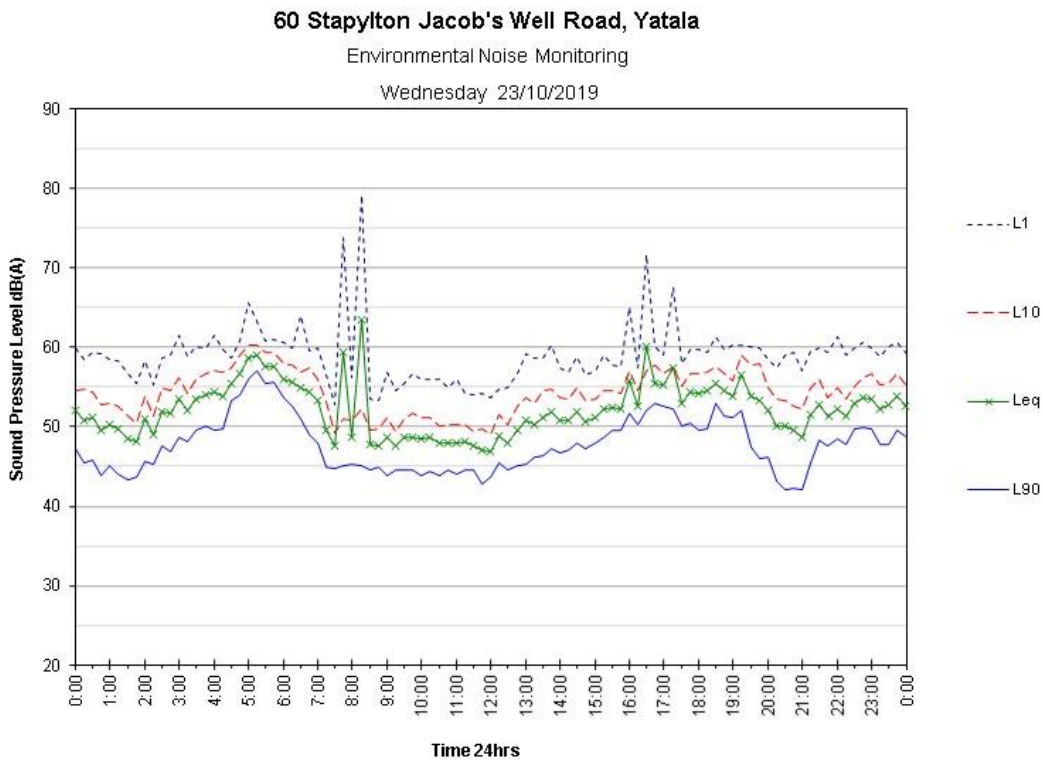


60 Stapylton Jacob's Well Road, Yatala

Environmental Noise Monitoring

Tuesday 22/10/2019







APPENDIX H

ENGINEERING SERVICES REPORT



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ENGINEERING SERVICES REPORT

APPLICATION FOR MATERIAL CHANGE OF USE - WAREHOUSE

ADDRESS

60 Stapylton Jacobs Well Road, Stapylton

REAL PROPERTY DESCRIPTION

Lot 501 on SP295994

PREPARED FOR

FPI Queensland Pty. Ltd.

December 2021 (Rev. 1)



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

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1.	Mitchell Gassman	Mitchell Gassman

Approval for Issue

Rev. No.	Name	Position	Signature	Date
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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 501 on SP295994) and specifically Lot 121 within the ROL-approved Stage 1 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 (refer **Appendix A – Proposed Site Plan**)

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 121 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.

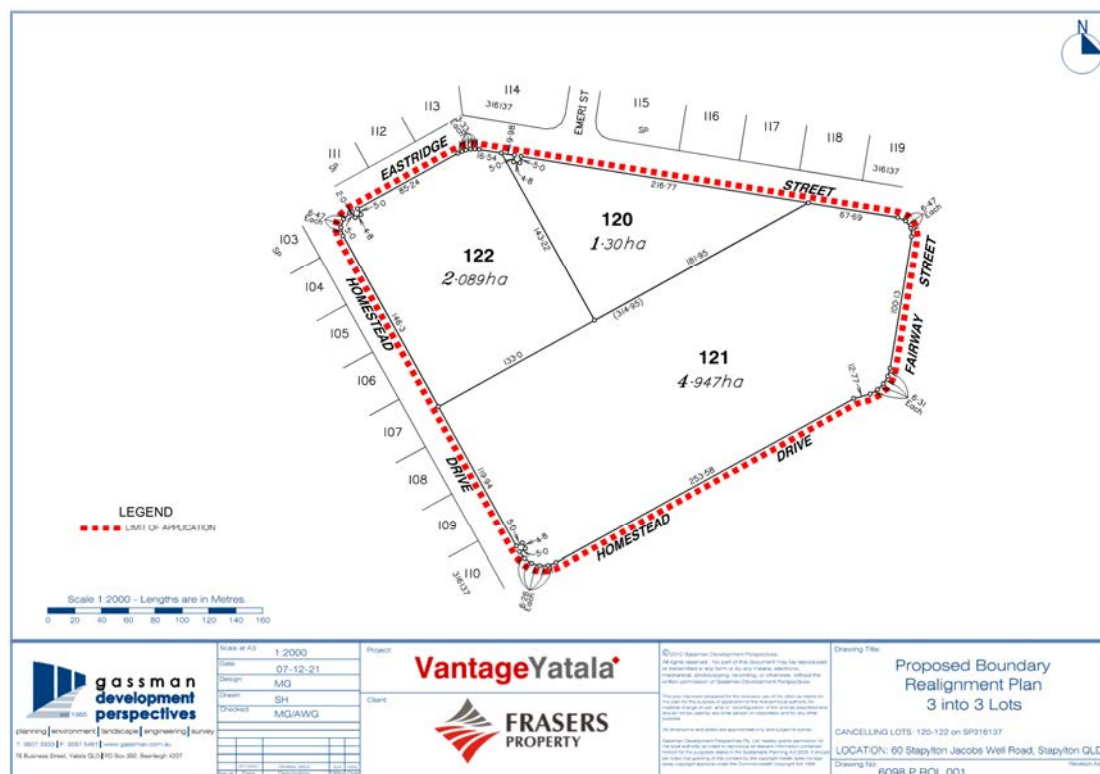


Figure 1.1: Lots 120, 121 & 122 Boundary Realignment Plan, Source: GDP

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 Stapylton Jacobs Well Road to the north, Christensen Road and existing industrial uses to the west and Council's land fill facility to the south-east (refer to **Figure 2.1**).



Figure 2.1: Site Locality Plan, Source: Google Earth 2017

2.2 LAND ENCUMBRANCES

There are no existing encumbrances over the subject site.

2.3 EXISTING LAND USES

The subject land is vacant following vegetation clearing to facilitate the industrial development.

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 121 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 Stage 2 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 were undertaken as part of Stage 1 of the development to provide generally flat pads suitable for the intended industrial use based on the ROL-approved lot layout (Council Ref: COM/2020/262).

As part of the realignment of the lot boundaries to facilitate the proposed warehouse land use, an updated bulk earthworks strategy has been developed by Gassman Development Perspectives over Lots 120-122 of the development which is linked to the boundary realignment application being lodged concurrently with council to the warehouse MCU. The lot-specific change to ground level works which incorporate the required retaining structure along the Lots 121-122 common boundary are shown within contained within **Appendix C**.

4.0 ROADWORKS AND ACCESS

Stage 1 of the proposed development will ultimately 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 the forthcoming Stage 2 currently under construction. 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

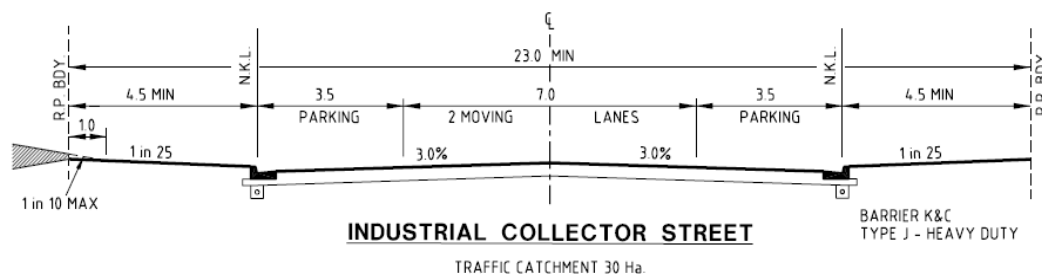


Figure 4.1: Proposed Internal Roads Cross Section, Source: CoGC Std Dwg 05-02-004

Lot 121 and its proposed warehouse facility has frontages to three (3) road reserves within the Vantage industrial development as demonstrated within the proposed site plan contained within **Appendix A**. All vehicular crossovers are located in compliant locations and sized to suit the industrial nature in which they will be used. The proposed finished surface levels for the warehouse shown in **Appendix C** ensure compliant grades are achieved throughout the proposed warehouse carparks and surrounding hard stand areas as per AS2890.2 Off-street commercial vehicle facilities.

5.0 INFRASTRUCTURE SERVICES

5.1 SEWERAGE

As existing Operational Works Approval (Council Ref: MIN/2021/95, Decision Notice dated 21 June 2021) from CoGC is in place for the civil servicing of Vantage Stage 1 and the currently approved lot configuration. Due to the lot boundary changes required to facilitate the warehouse facility minor augmentation of the currently approved and constructed gravity sewer network will be required.

The extension of the 150mm diameter gravity sewer line along Homestead Drive and installation of the new property connection are shown within the Engineering Servicing Strategy Plan contained within **Appendix C**. As the Stage 1 civil works are expected to be On Maintenance with CoGC at the time of Council's approval of the warehouse MCU. A new Operational Works application will be made to undertake the required works.

5.2 WATER SUPPLY

As existing Operational Works Approval (Council Ref: MIN/2021/95, Decision Notice dated 21 June 2021) from CoGC is in place for the civil servicing of Vantage Stage 1 and the currently approved lot configuration. The existing provisions for property connections made within the approved and constructed works facilitate the proposed warehouse lot layout and as such no augmentation of the existing potable water main is required to facilitate the 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 main perspective. The proposed connection location is noted within the Engineering Servicing Strategy Plan contained within **Appendix C**.

5.3 ELECTRICITY AND TELECOMMUNICATIONS

Stage 1 of the Vantage industrial development has underground reticulated electrical and telecommunications (NBN) networks approved by the relevant service authorities (electrical and communications reticulation to the subject site's road frontage).

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 stormwater drainage network will be designed within the Lot 121 extent to ensure the proposed warehouse facility and associated hardstand areas discharge to the OPW-approved (Council-ref: MIN/2021/95) Legal Points of Discharge (LPoD) for current Lots 120 and 121 along Homestead Drive and Fairway Street. A schematic of how the proposed development will utilise the approved LPoDs is contained within **Appendix C**.

Due to the shift south in the common boundary between Lots 121 and 122 to facilitate the proposed warehouse development, the existing stormwater property connection for Lot 121 which has been constructed as part of Stage 1 of the Vantage development (Council ref: MIN/2021/195) will need to be extended within the lot and within an easement into the new Lot 121 extent to provide a LPoD. These works are shown within the Engineering Servicing Strategy Plan contained within **Appendix C**.

6.2 STORMWATER QUANTITY

A Site Based Stormwater Management Plan (SWMP) has been prepared by Gassman Development Perspectives (Version 4, dated 5 February 2021) and approved by Council as part of the Vantage Stage 1 ROL (Council Ref: COM/2020/123). This report demonstrates that attenuation measures are able to be incorporated into the proposed development at a regional level to ensure there is no adverse impacts to downstream properties, waterways or infrastructure occur as a result of an increase in peak stormwater flow rates discharging from the subject site upon development.

This is achieved through the detailed design and implementation of appropriately sized detention basin for Stage 1 that comply with City of Gold Coast Council's Land Development Guidelines along with the Queensland Urban Drainage Manual (QUDM). It is noted that whilst the boundaries for Lots 120-122 have been realigned to facilitate the proposed warehouse development, there is no increase in overall size in contributing catchment to the Stage 1 or future Stage 2 basin which would trigger the need to augment the regional stormwater quantity measures in place for the development. This is demonstrated in the Stormwater Catchment Boundary Plan contained within **Appendix D**.

6.2 STORMWATER QUALITY

A suitable stormwater treatment train is to be implemented as part of the construction of Vantage Stage 1 to ensure the servicing of both 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 4, dated 5 February 2021) and approved by Council as part of the Vantage Stage 1 ROL (Council Ref: COM/2020/123) 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.

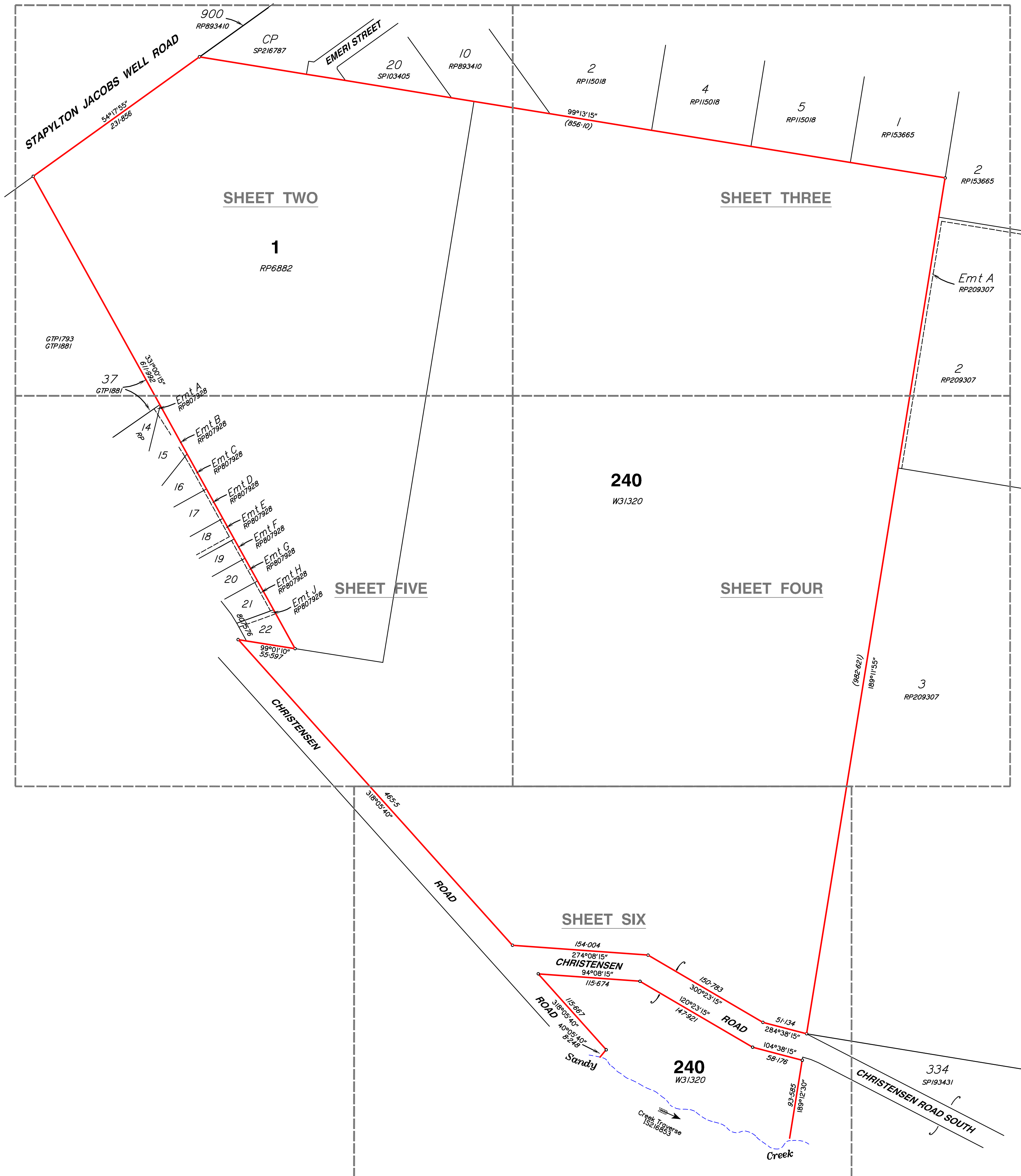
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7.0 CONCLUSION

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

Appendix B – Site Survey



Notes

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CONTOUR AND DETAIL PLAN

Over Lot 1 on RP6882 and Lot 240 on WD31320

Parish of **ALBERT**

County of **Ward**

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Origin	PSM 133471	Checked	
	RL 22.169		

Scale (on A1 original)

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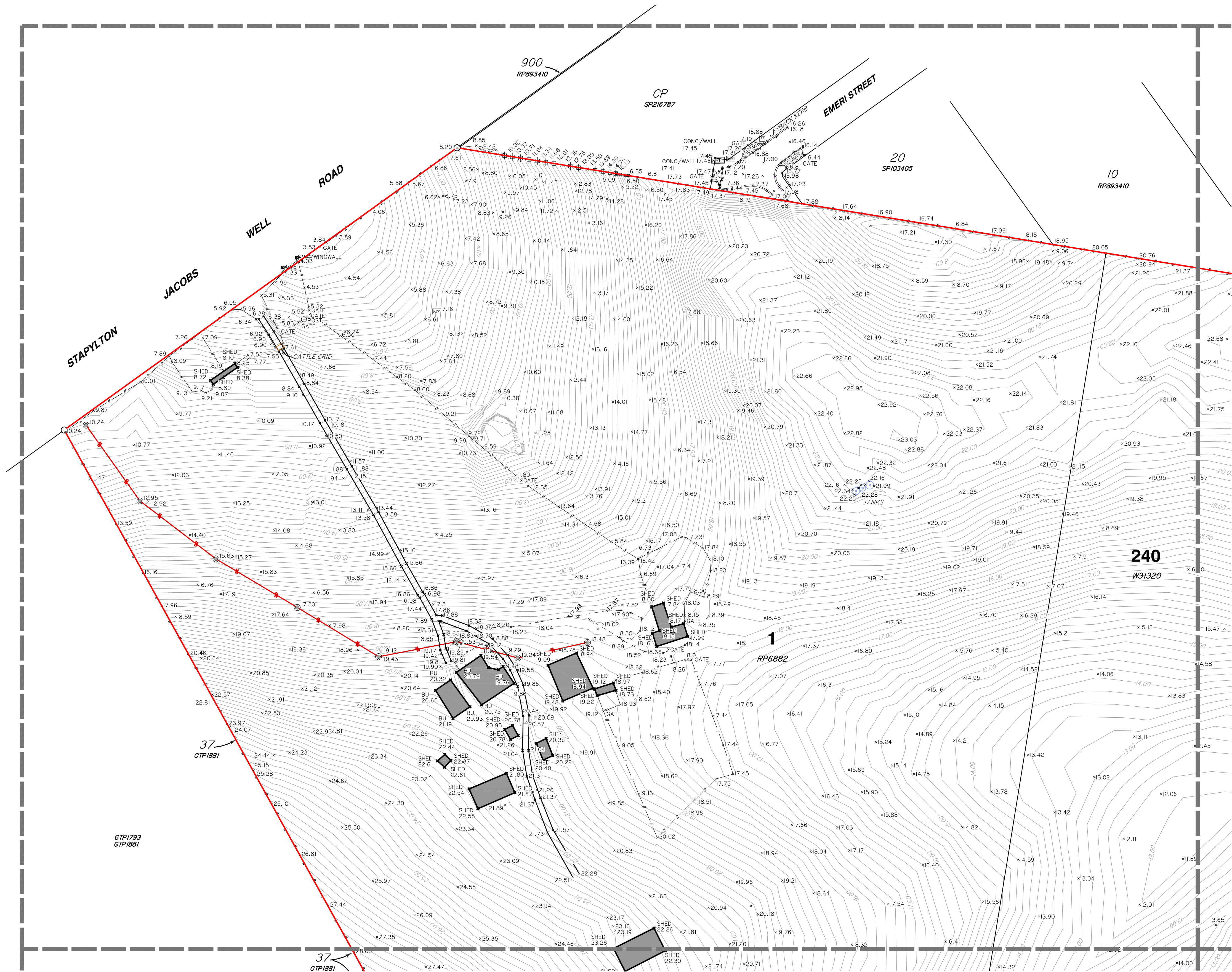
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PLAN No. **5093 S CD 01**



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
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- OPEN DRAIN
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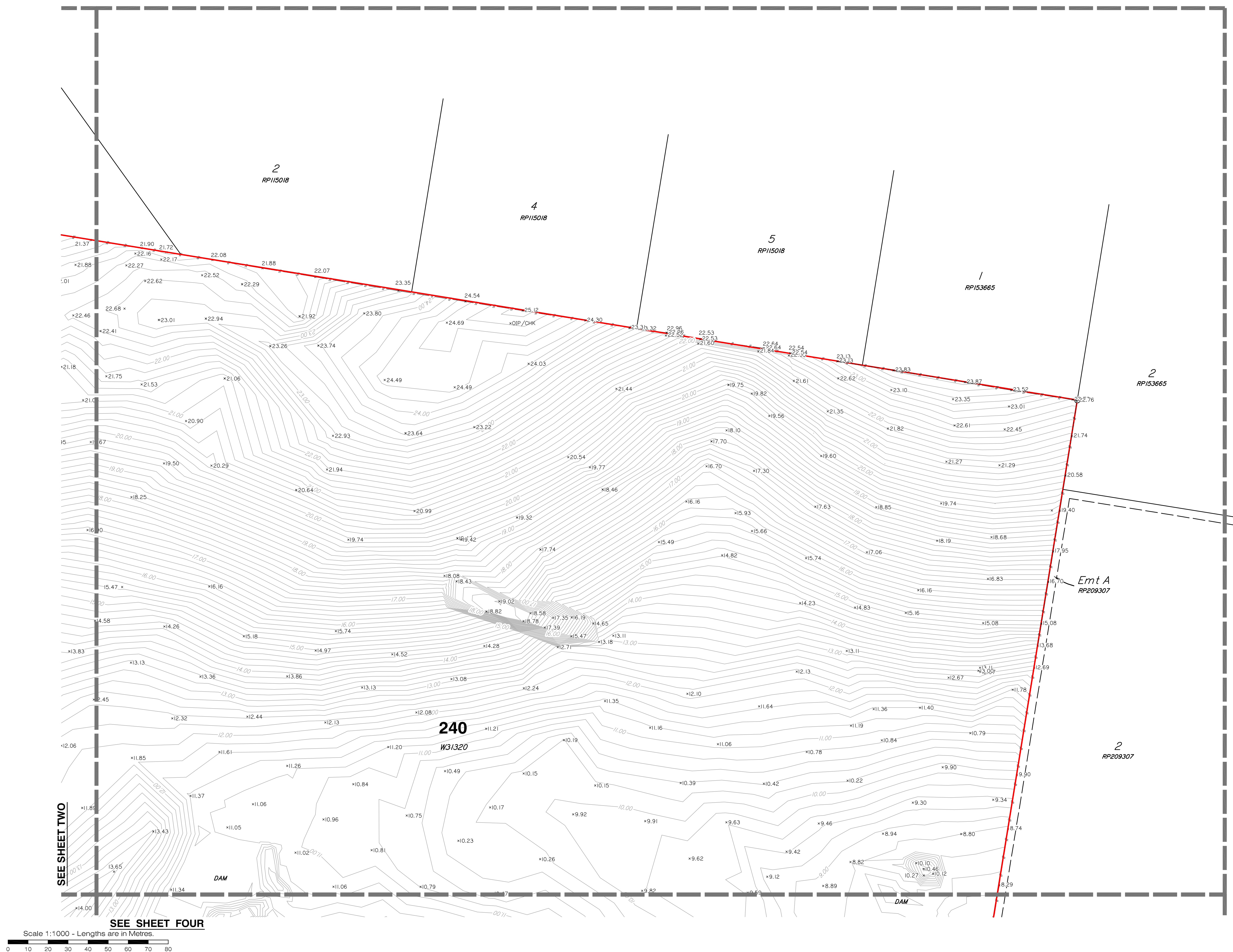


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| ○ | | MANHOLE |
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| ○ | | CONTOUR LEVEL |

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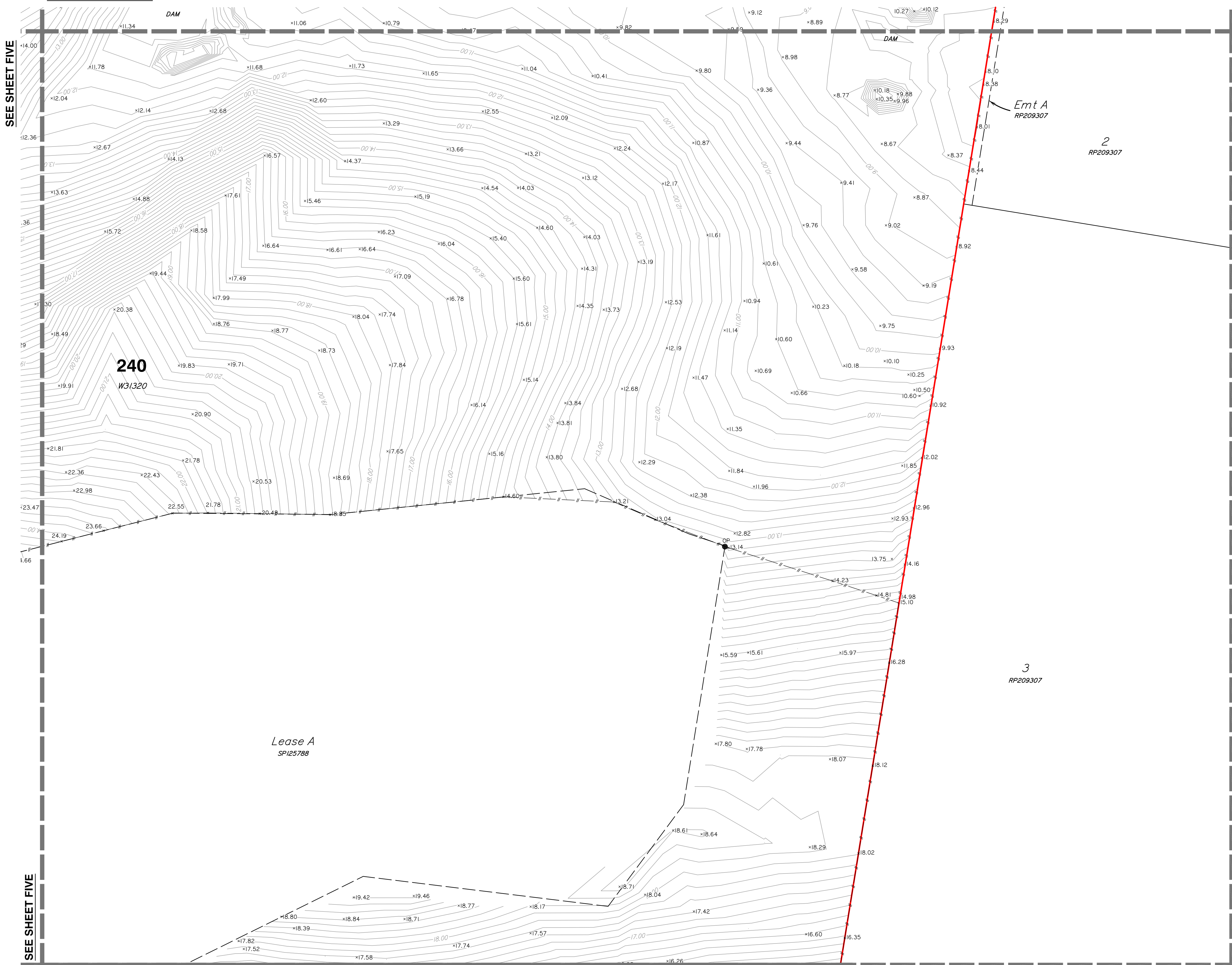
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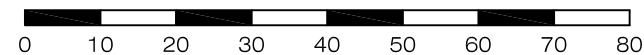


SEE SHEET THREE



SEE SHEET SIX

Scale 1:1000 - Lengths are in Metres.



LEGEND

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County of **Ward**

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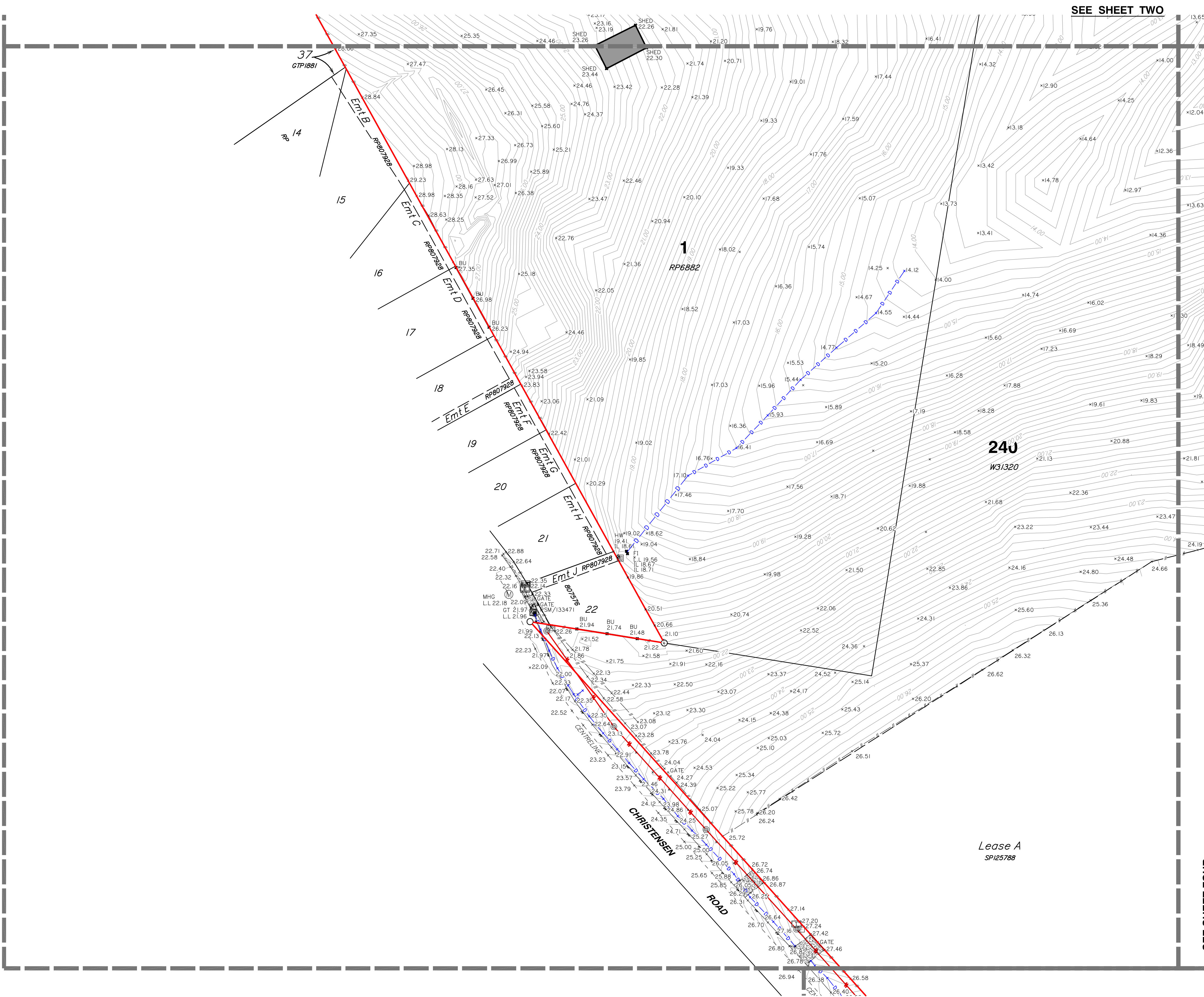
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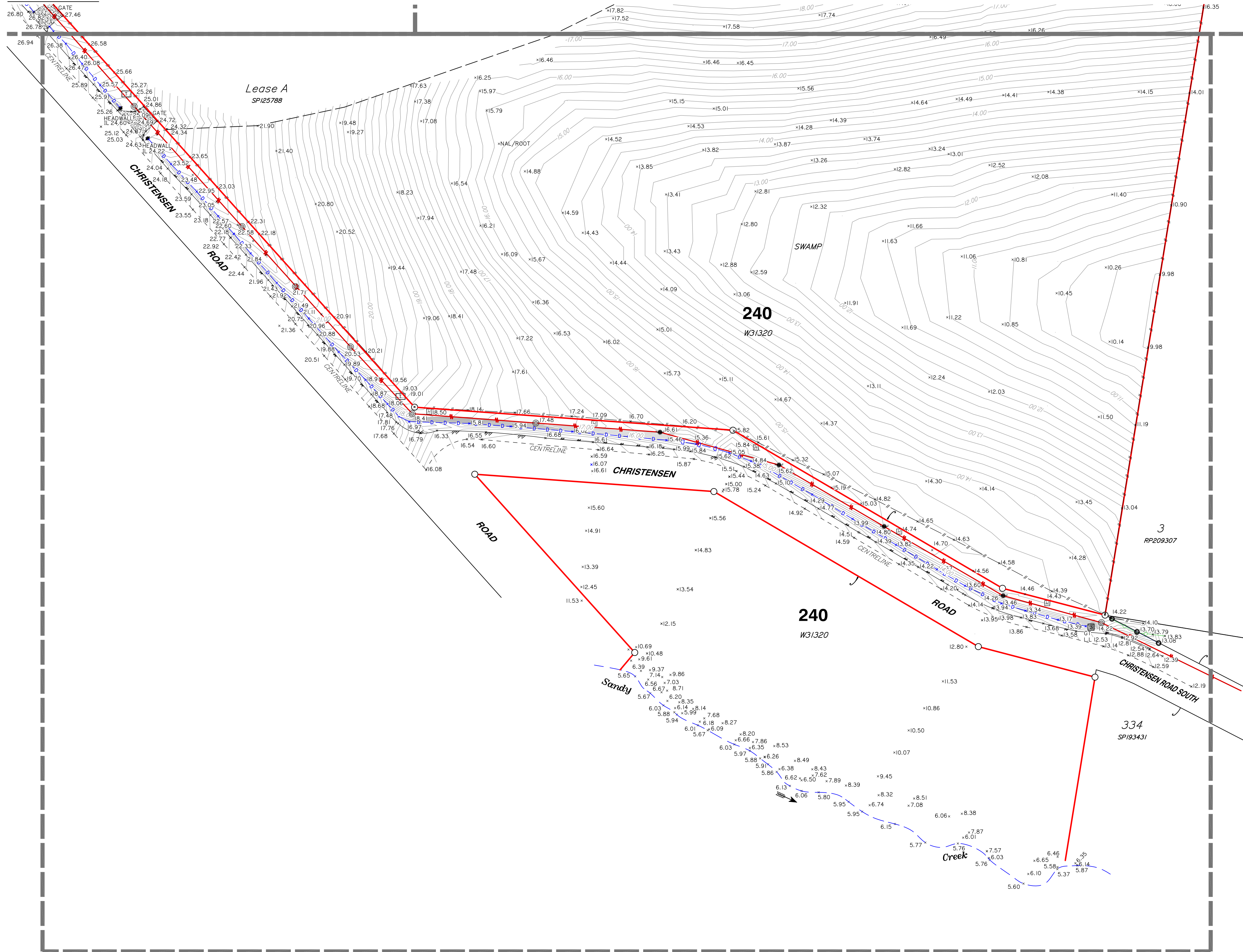
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SEE SHEET FIVE

SEE SHEET FOUR



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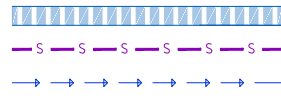
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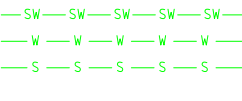
Appendix C – Civil Servicing Strategy Plan

LEGEND

- SUBJECT SITE
BOUNDARY SITE
EXISTING CONTOURS
PROPOSED EASEMENT



- PROPOSED STORMWATER DRAINAGE
PROPOSED GRAVITY SEWER
EMERGENCY OVERLAND FLOW PATH



- EXISTING STORMWATER
EXISTING POTABLE WATER
EXISTING GRAVITY SEWER



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(AUSTRALIA) PTY. LTD.

Project:

NATIONAL TILES
WAREHOUSE MCU

Site Address:

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Plan: SP295994
Local Authority: CITY OF GOLD COAST
COUNCIL
Level Datum: AHD
Meridian: -
Contour Interval: -
PSM: -
RL: -

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DRAWING TITLE

LOT 121 - ENGINEERING
SERVICING STRATEGY PLAN

Rev	Date	Description	By	Check
A	21-12-2021	ORIGINAL ISSUE	DV	MG
Issue	Date	Description	DRN	CHK

SCALE IN METRES



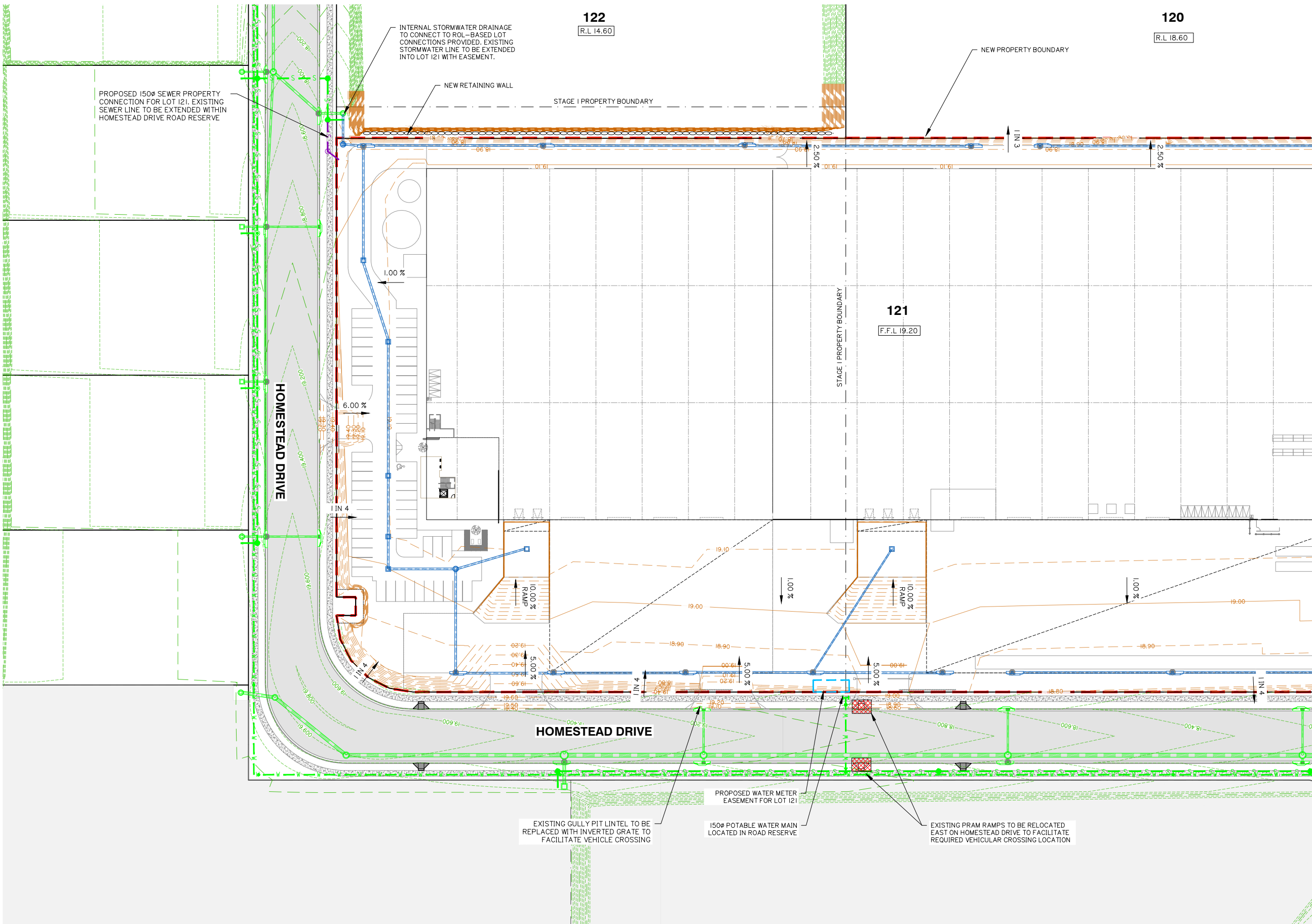
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Designed:	DV
Drafted:	DV
Approved:	MG
RPEQ:	16939
Signed:	
Date:	21-12-2021

Drawing No:
6098 ENG SP 001

Rev. No:
A



LOT 121 - ENGINEERING SERVICING STRATEGY PLAN

SUBJECT SITE
BOUNDARY SITE
EXISTING CONTOURS
PROPOSED EASEMENT

PROPOSED STORMWATER
DRAINAGE
GRAVITY SEWER
EMERGENCY OVERLAND FLOW
PATH

— SW — SW — SW — SW — SW —
— W — W — W — W — W —
— S — S — S — S — S —

EXISTING STORMWATER
EXISTING POTABLE WATER
EXISTING GRAVITY SEWER



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

RPD:	
Lot:	501
Plan:	SP295994
Local Authority:	CITY OF GOLD COAST COUNCIL
Level Datum:	AHD
Meridian:	-
Contour Interval:	-
PSM:	-
RL:	-

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LOT 121 - ENGINEERING
SERVICING STRATEGY PLAN

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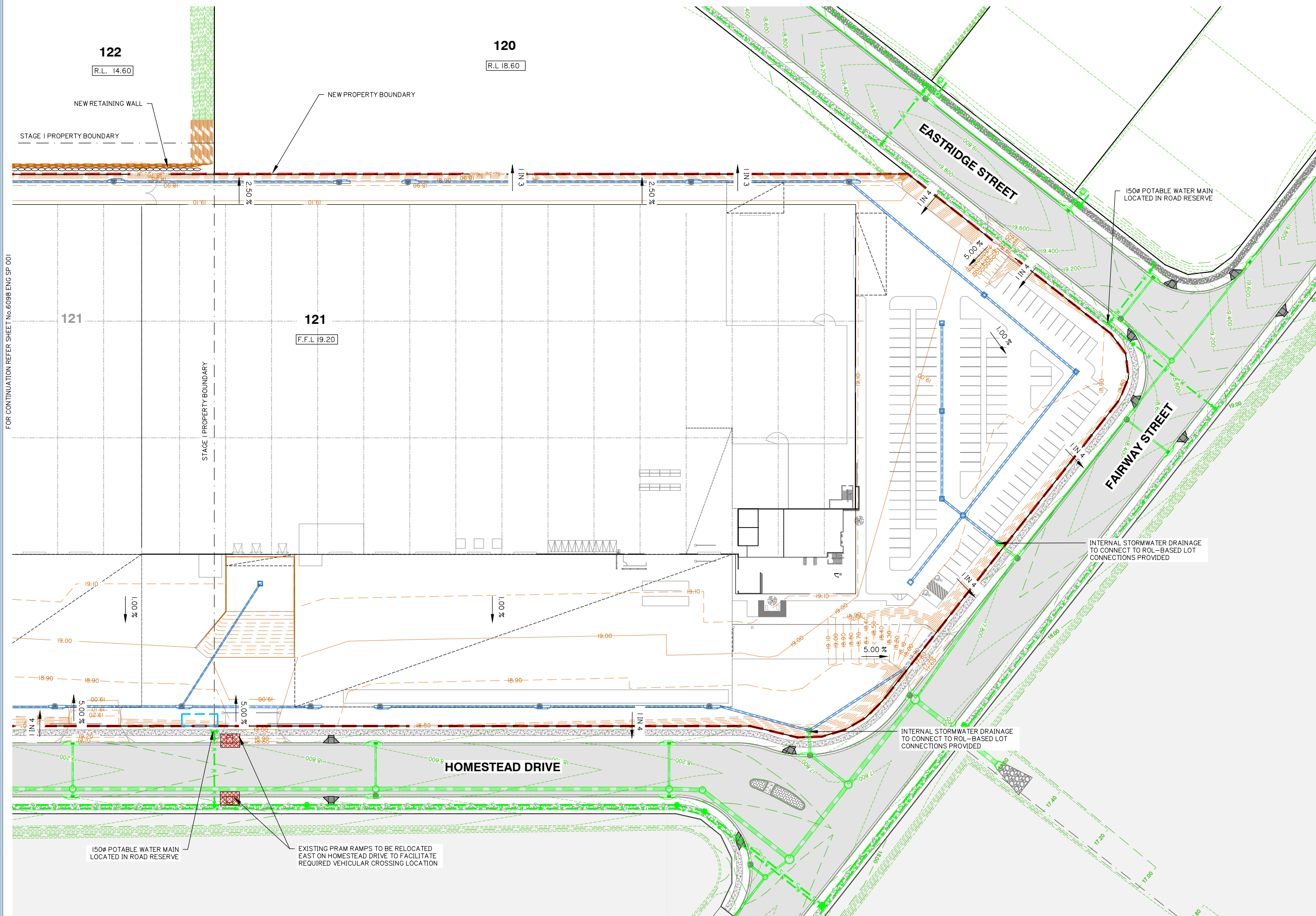
0 10 20 30 40 50

1:500 (FULL SIZE A1)

1:1000 (HALF SIZE A3)

Designed:	DV
Drafted:	DV
Approved:	MG
RPEQ:	16939
Signed:	
Date:	21-12-2021

Drawing No:	Rev. No:
6098 ENG SP 002	A



LOT 121 – ENGINEERING SERVICING STRATEGY PLAN

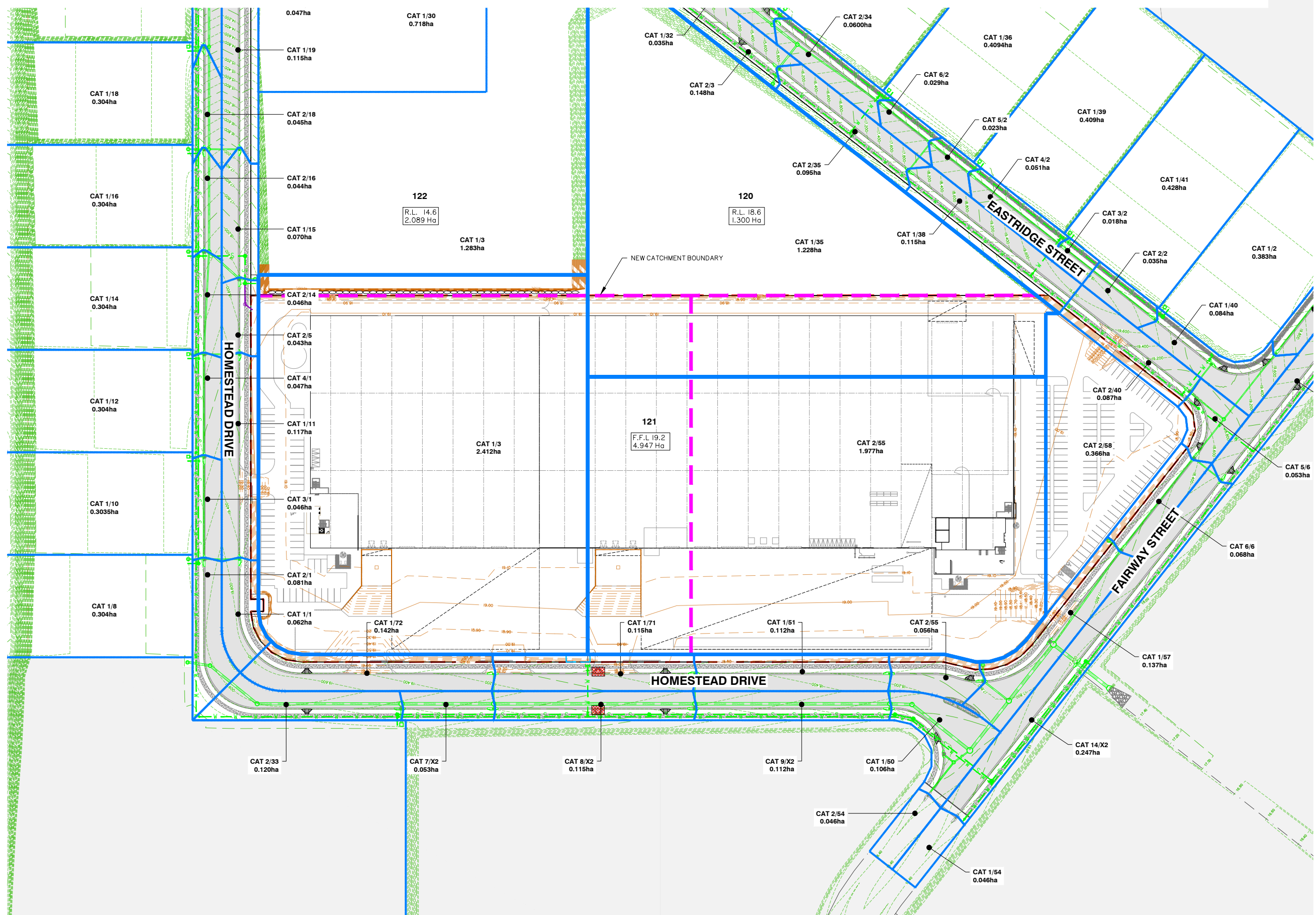
Appendix D – Stormwater Catchment Boundary Plan

LEGEND

- SUBJECT SITE
- BOUNDARY SITE
- EXISTING CONTOURS
- PROPOSED EASEMENT
- EXISTING STORMWATER CATCHMENT BOUNDARY
- PROPOSED RECONFIGURED STORMWATER CATCHMENT TO MATCH EXISTING INFRASTRUCTURE CAPACITY

- PROPOSED STORMWATER DRAINAGE
- GRAVITY SEWER
- EMERGENCY OVERLAND FLOW PATH

- EXISTING STORMWATER
- EXISTING POTABLE WATER
- EXISTING GRAVITY SEWER



STORMWATER CATCHMENT BOUNDARY PLAN



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Project:

NATIONAL TILES
WAREHOUSE MCU

Site Address:

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Plan: SP295994
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DRAWING TITLE

LOT 121 -
STORMWATER CATCHMENT
BOUNDARY PLAN

Issue	Date	Original Issue	Description	DV	MG
A	21-12-2021				

SCALE IN METRES

0 15 30 45 60 75

1:750 (FULL SIZE A1)
1:1500 (HALF SIZE A3)

Scale at A1: 1:500

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Date:	21-12-2021

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