

APPENDIX H

LANDSCAPE INTENT PLAN



VANTAGE YATALA

LANDSCAPE INTENT PACKAGE (STAGE 3)

FPI Queensland

Lot 504 on SP329485
504 Homestead Drive, Stapylton

March 2023
Issue - For Approval
Revision - A

Prepared By -
Gassman Development Perspectives
Job No. 5941



CONTENTS

- 02** Site Characteristics & Development Proposal
- 03** Site Locality Plan
- 04** Landscape Strategy
- 05** Landscape Intent Plan
- 06** Streetscape & Industrial Lots (Sections)
- 07** Streetscape & Industrial Lots (Sections)
- 08** Wayfinding and legibility
- 09** Open Space and Rehabilitation
- 10** Common Property
- 11** Water Sensitive Urban Design
- 12** Hardscape & Furnishings
- 13** Planting Palette

SITE CHARACTERISTICS

The site is located within the Gold Coast suburb of Stapylton (4207). The subject has only recently been registered and sealed, and was formerly known as Lot 502 Homestead Drive, Stapylton - Lot 502 on SP316137.

The overall subject site is irregular in shape and is situated on the southern side of Homestead Drive and Fairway Street and on the eastern side of Christensen Road. The subject land is vacant; predominantly cleared; and resembles a civil construction site as it has been provisionally prepared to accommodate this industrial subdivision (and adjoining Stage 1 and 2 areas) through the undertaking of bulk earthworks and vegetation clearing.

DEVELOPMENT PROPOSAL

The proposal is to develop the subject land as Stage 3 of the approved industrial estate over the subject site (commonly referred to as 'Vantage'). The proposed industrial lots will range in allotment areas from 2,352m² to 95,930m², with landscaped buffers provided along new road frontages. The proposal is unique in that it proposes a Community Title Scheme over the industrial lots, specifically to deliver small scale park and amenity facilities for the immediate workforce. All core infrastructure, such as roads and stormwater basins are still to be designed to Council specifications and dedicated as public assets.

The proposed development will include the following development aspects:

- Development Permit for Reconfiguring a Lot for Community Title Subdivision and Common Property
- Development Permit for Operational Work – Change to Ground Level and Vegetation Clearing.

Supporting documentation to be read in conjunction with this landscape intent package, is as follows;

- Preliminary Approval Current Decision Notice MIN/2020/659- authored by GDP
- Proposed ROL Plan - authored by GDP
- Code Assessment - authored by GDP
- Change to Ground Level Drawings c
- Stormwater Management Plan - authored by GDP
- Engineering Services Report - authored by GDP
- Traffic Impact Assessment - authored by Ryterskild Traffic Group
- Community Management Statement - authored by Frasers Property Australia

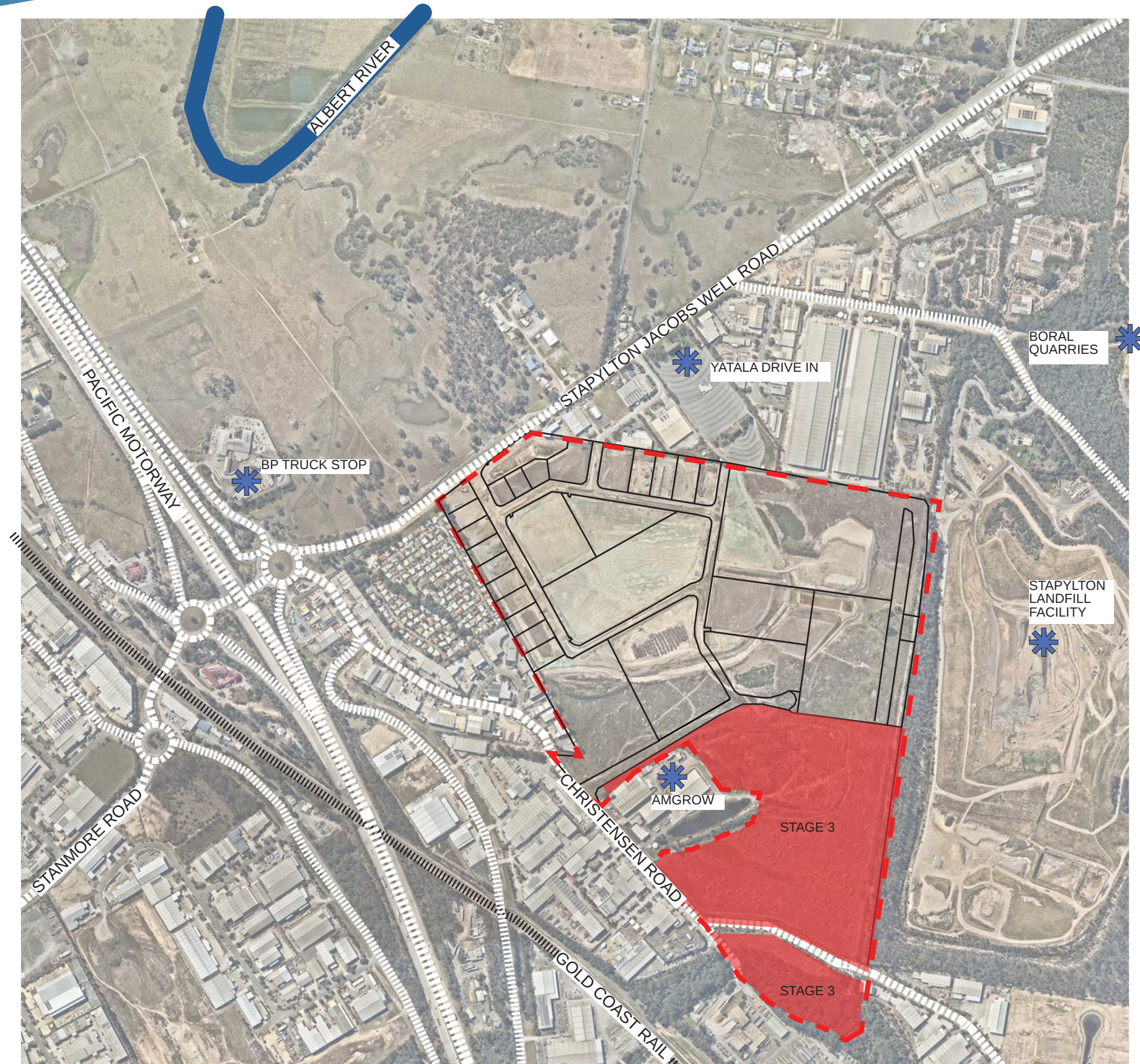


SITE LOCALITY PLAN

The site is located within the Gold Coast suburb of Stapylton (4207). The subject has only recently been registered and sealed, and was formerly known Lot 504 on SP329485 504 Homestead Drive, Stapylton.

In terms of location context, the overall subject site is located approximately:

- 500 metres from the Pacific Motorway, Yatala north interchange
- 5.5 kilometers from the Beenleigh CBD
- Five kilometers from Beenleigh Transit Centre
- 30 minutes from Southport CBD
- 30 minutes from Brisbane CBD



LANDSCAPE STRATEGY

The landscape design intent for Vantage Estate Yatala is underpinned by a number of overriding design principles that will promote legibility, create site scale and setting and respond to the environmentally values of the site.

The design will respect the environmental aspects of responsible design, planning and construction which will respond to issues of biodiversity, natural processes and impacts on local waterways.

The scale and nature of landscaping materials and selected plant species will be appropriately selected to compliment the size of proposed buildings and structures nominated for the site, whilst being sensitive to available space.

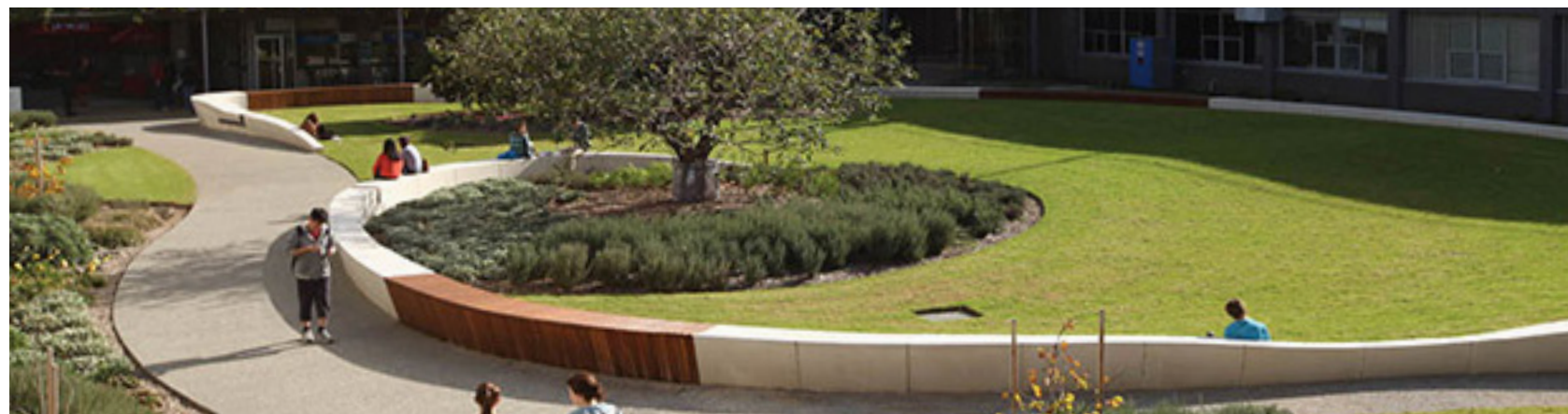
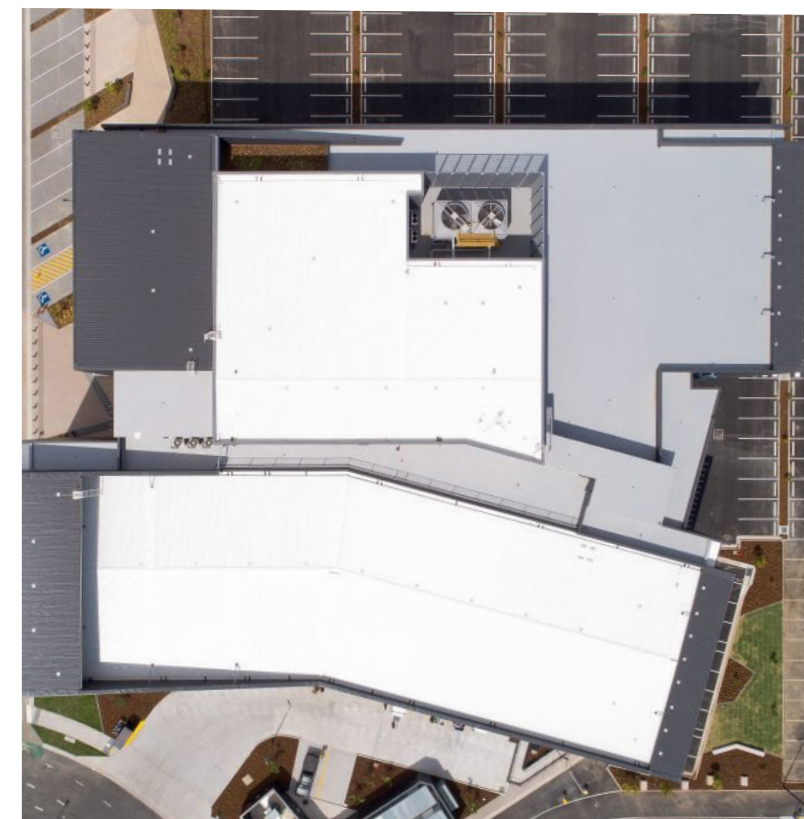
Principals of Crime Prevention Through Environmental Design (CPTED) will be adapted via the use of planting hierarchy throughout the development. The use of plant species with low heights and trees with clear trunk to base of tree canopy will allow for passive surveillance as well as recognition of traffic and pedestrian movements.

Way finding will be promoted by using nominated hardscape, furnishing and planting and palettes, that will be reflected through the site's entirety. Clear view lines and signage will further promote legibility. Whilst open spaces and furniture nominated in areas to create hold points at resting / passive use areas.

Water Sensitive Urban Design (WSUD) principals will be incorporated into open space areas allowing for water filtering and harvesting for the site. Local endemic flora will be used within these zones with the intention of filtering and cleaning collected water whilst also enhancing the sites natural features.

Community Title Scheme over the industrial lots has allowed for the facilitation of a recreational health precinct within the estate. The health precinct aims to promote health and well being, stainability and the environment, for the immediate workforce and visitors to the estate. The recreational health precinct, the first of its kind implemented within an industrial estate in Queensland, will contain park shelters, gym equipment and a basketball court, and is aimed to cater for the staff that work within the estate.

Planting will be selected for suitability and tolerance to the varying site conditions. The planting scheme used is predominantly native species which has been nominated to soften the built form, compliment the surrounding natural ecosystems, minimize water usage and limit maintenance.



LANDSCAPE INTENT PLAN

LEGEND

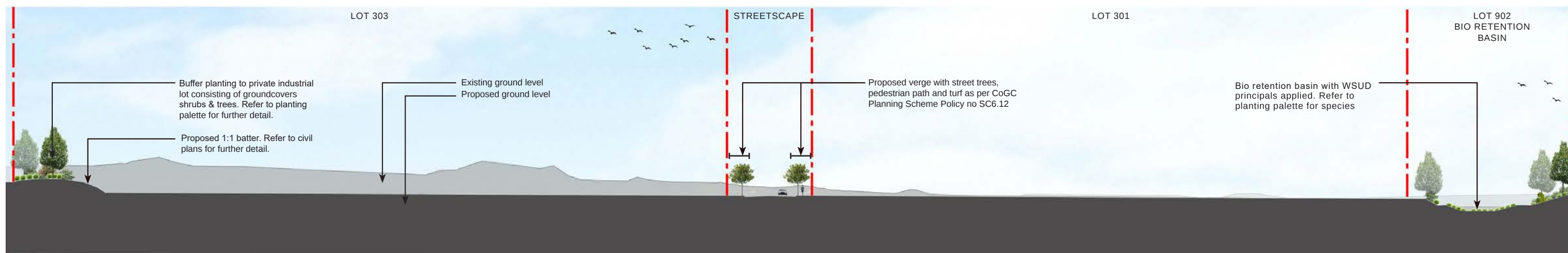
- | | | | | | |
|----|--|---|----|---|---|
| 01 |  | Road Corridor
Road Corridor and Existing Internal Road as per approval MIN/2022/245 | 09 |  | Streetscape Treatment
In accordance with Gold Coast City Plan 9.4.6 and SC.6.12. Street tree species to include Waterhousea floribunda, Lophostemon confertus, and Flindersia australis as to tie into previous stages. |
| 02 |  | Proposed Road
Refer to civil documents for further detail | 10 |  | Open Space / Reserve
Refer to open space management plan authored by GDP for further information |
| 03 |  | Existing Common Property | 11 |  | Bio Retention Basin
To be planted in accordance with WSUD principals. Lower batter and basin floor to be planted at 80% of construction completion |
| 04 |  | Proposed Industrial Allotments | 12 |  | Revegetated Buffer Strip
To create linkage between the north and south of the site. 1:2 batters are to be over excavated, micro benched and have 400mm topsoil over batter. Refer to planting palette for further detail. |
| 05 |  | Common Property Planting
To have landscape treatment of tree, shrub, and groundcover species planted. refer to planting palette within this package for further detail. | |  | Fencing
1.8m high chain wire fence as per |
| 06 |  | Common Property Health Precinct
Basketball court and outdoor gym equipment. | |  | Fencing
1.8m high black powder coated palisade fencing |
| 07 |  | Common Property Shelter & Facilities
Shelter, picnic tables, bbq, water bubblers and open areas for office functions. | |  | Fencing
1.2m post rail fence (safety) |
| 08 |  | Common Property Car Park
Carparking area with shade trees. | |  | Section Marker
refer to page 05 and 06 |



STREETSCAPE & INDUSTRY LOTS



SECTION 1: COMMON PROPERTY, STREETSCAPE, PROPOSED INDUSTRY LOT



SECTION 2: PROPOSED INDUSTRY LOT, STREETSCAPE AND BIO RETENTION BASIN



gassman
development
perspectives

planning
environment
landscape
engineering
survey

Gold Coast and Logan Office
Access Business Park
76 Business Street Yatala Q. 4207
t: (07) 38073333
f: (07) 32875461
e: mail@gassman.com.au

VANTAGE INDUSTRIAL ESTATE

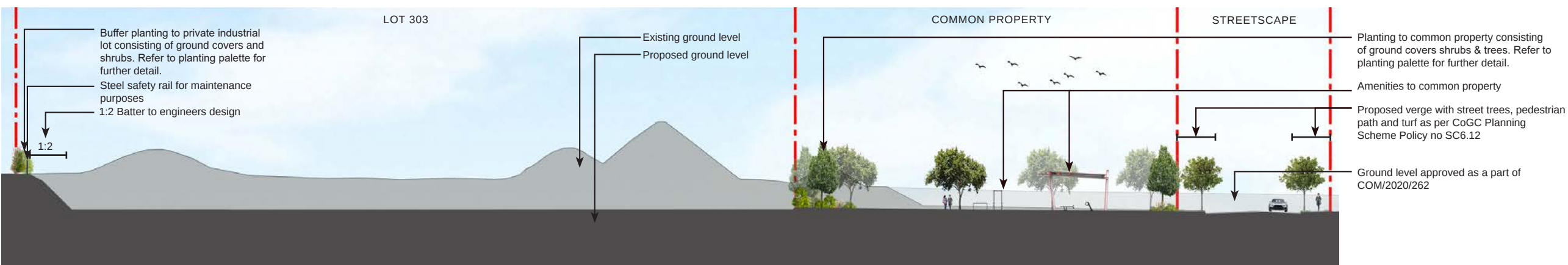
STREETSCAPE & INDUSTRY LOTS
SECTION ELEVATION DRAWINGS

Date: 23.03.23
Project no: 5941
Rev: A Dwn: JLS

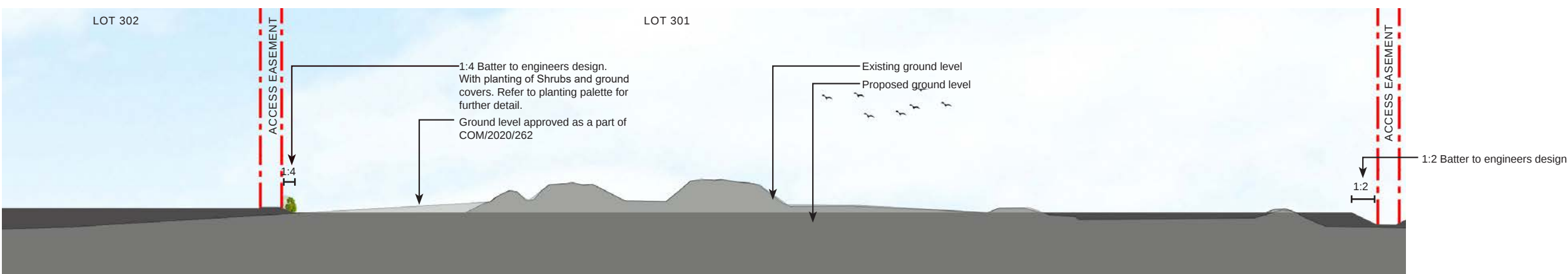
STREETSCAPE & INDUSTRY LOTS



SECTION 3 : PROPOSED INDUSTRY LOT, BIO RETENTION BASIN AND REHABILITATED BUFFER STRIP



SECTION 4 : PROPOSED INDUSTRY LOT, COMMON PROPERTY, STREETSCAPE



SECTION 5 : PROPOSED INDUSTRY LOTS AND ACCESS EASEMENT

WAY FINDING

The scale and nature of landscaping materials and selected plant species will be appropriately selected to compliment the size of proposed buildings and structures nominated for the site, whilst being sensitive to available space.

Way finding statement signage and totem poles will be implemented within the common property of Stage 3. The signage wall will be constructed from rendered block, crazy pave, whilst the totems will be made from powder coated steel. Both items will match previously approved signage and totems within Stage 1 and Stage 2 of the development (OPW/2020/960 and OPW/2021/1370) .

Way finding will be further promoted by using nominated hardscape, furnishing and planting and palettes, that will be reflected through the site's entirety. The use of "Fraser's Red" the Fraser Industrial Properties logo colour along with the use of stone and similar landscape planting palette, within the estate will create an adhesive bond between all areas.



OPEN SPACE & REHABILITATION

Management and protection of lot 904 within Stage 3 of the Vantage Yatala development is to be dedicated to Council as an Open Space Lot for the purposes of conservation.

Lot 904 approximately 60m wide, lies adjacent to Sandy Creek, and consists of riparian corridor of remnant vegetation.

An Ecological Assessment Report (EAR) prepared by GDP recorded details of ecological features and values within the subject area, including vegetation communities, the likelihood or presence of significant fauna and flora. The EAR identified two vegetation communities described as low open forest (consisting of *Melaleuca nodosa*, *E. crebra*, *C. citriodora*) and tall open forest (consisting of *Eucalyptus grandis*, *C. intermedia*, *E. major*).

Prior to council dedication Lot 904 will be rehabilitated in accordance with the Rehabilitation Management Plan (RPM) provided by GDP. The area is intended to act a functioning ecological community of core habitat for a range of native flora and fauna. Rehabilitation in the form of natural and assisted regeneration and small areas of reconstruction planting, ensuring the native vegetation communities have the capacity to thrive, maintain high levels of ecological function and ensure natural biodiversity values are protected.

Tree species: *Flindersia australis*, *Euroschinus falcatus*, *Diospyros fasciculosa*, *Hymenospermum flavum*, *Glochidion ferdinandi* and *Cupaniopsis anarcardioides* (at approximately 40 trees every 100m2).

Shrub species; *Acmena smithii*, *Melaleuca bracteata*, *Melaleuca viminalis*, *Breynia oblongifolia*, *Alphitonia excelsa*, *Leptospermum polygalifolium*, *Macaranga tanarius*, *Sannantha similis*, *Hibiscus heterophyllus* (at approximately 30 shrubs every 100m2).

Groundcovers and tufting grasses: *Lomandra longifolia*, *Dianella caerulea*, *Carex apressa*, *Gahnia aspera*, *Juncus usitatus*, *Lepidosperma laterale* and *Lomandra hystrix* (at approximately 30 groundcovers per 100m2).



Above: Proposed Rehabilitation

- IMAGES RIGHT:
1. *Corymbia citriodora*, spotted gum
 2. *Lomandra longifolia*, mat rush
 3. *Lomandra hystrix*, creek matrush
 4. *Alphitonia excelsa*, red ash
 5. *Calistemon viminalis*, red bottlebrush
 6. *Gahnia aspera*, rough saw sedge
 7. *Themeda triandra*, kangaroo grass
 8. *Melaleuca linariifolia*, snow in summer
 9. Site photograph depicting existing nest box
 10. Site photograph depicting existing condition of Lot 904
 11. Typical treatment of a Rehabilitation area



COMMON PROPERTY

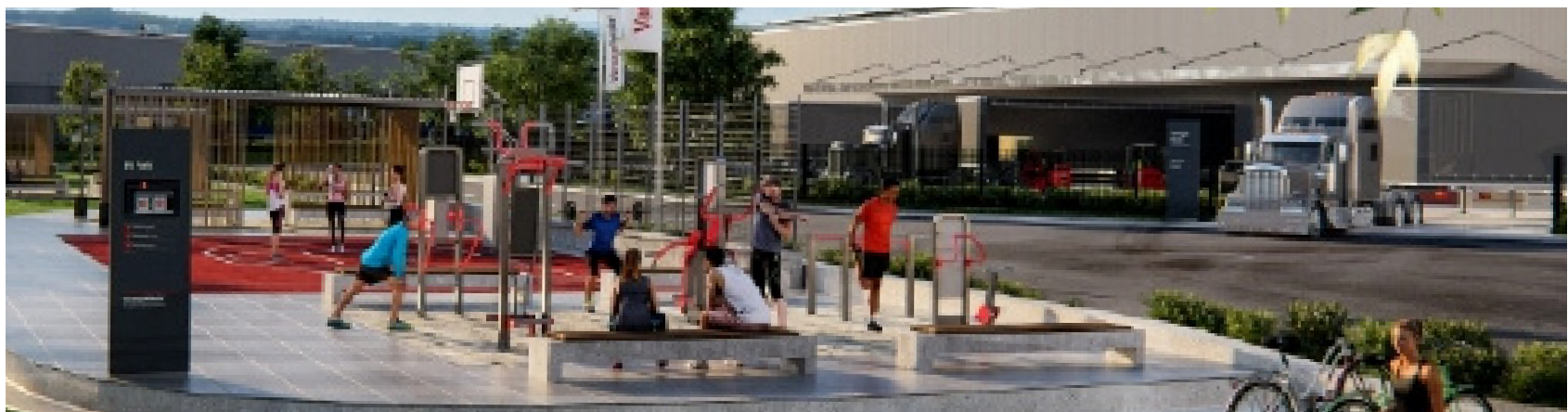
The proposed development includes a park and amenities lot to the north of Lot 303. The park lot and all park embellishments are to remain under the ownership and management of the future Body Corporate of the industrial estate, as per the approved Community Management Statement.

The recreational health precinct, the first of its kind implemented within an industrial estate in Queensland, will include embellishments and facilities to service the immediate industrial work force. Provision of such facilities are lacking in many industrial estates across the Yatala Enterprise Area (YEA), which do not allow workers to leave their workplace and disconnect during a break in an outdoor, well landscaped setting.

Furnishing and planting and palettes used within the common property park will continue a common theme of the use of "Fraser's Red" from the Fraser Industrial Properties logo colour, along with the use of stone and similar landscape planting palette, within the estate will create an adhesive bond between all areas.



Above: Common Property (park)



WATER SENSITIVE URBAN DESIGN

Water Sensitive Urban Design (WSUD) principles will be applied throughout the site to manage water in a sustainable way, and provide opportunities for the development industry to achieve a healthy outcome for the surrounding environment. The outcome will benefit water bodies located within the local catchment.

The principals followed, use the site's natural features and topography, integrate storm water, water supply and sewage management.

The Vantage industrial development Stage 3 proposes two bio retention basins. The bio retention basins will be planted with native water sensitive species ,that have qualities to draw out toxins from storm water, and help catch litter before it reaches storm water drains.

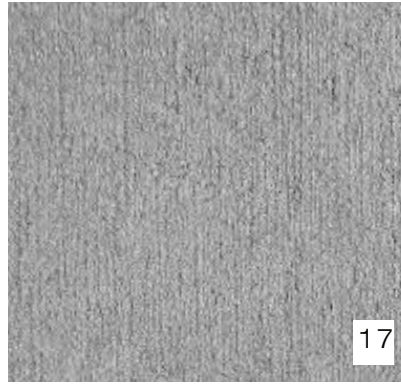
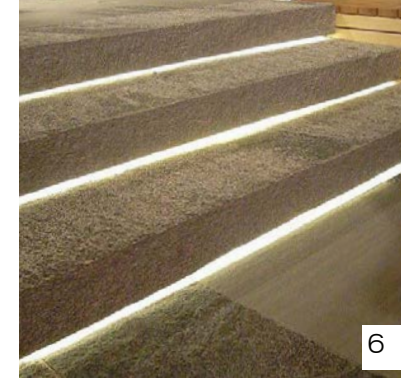
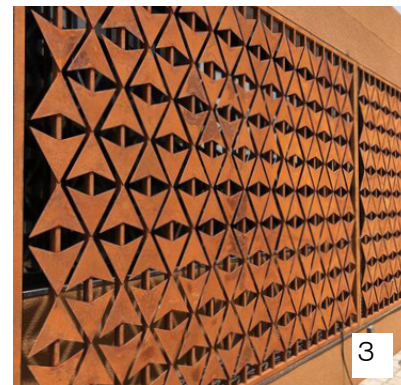
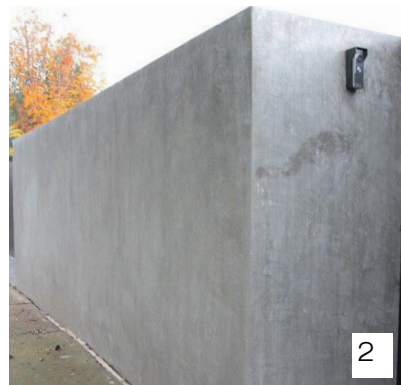
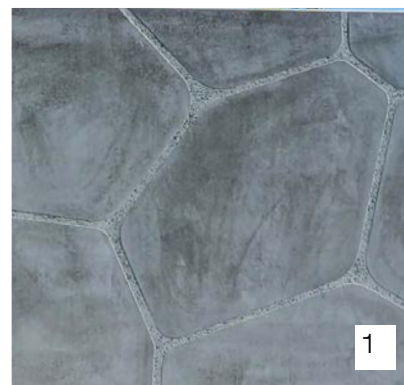
A number of native aquatic grass species and native shrub and tree species will be planted within the proposed bio retention basins and swales ,enhancing the area and attracting fauna and bird life.

Referral to GDP's water mapping and civil design, is suggested for further information with relation to catchment, bio retention treatments.



1. Poa labillarderie, tussock grass
2. Callistemon sieberi, river bottlebrush
3. Carex appressa, tall sedge
4. Cyperus reflectus, tall flat sedge
5. Dianella caerulea, blue flax lily
6. Lomandra hystrix, spiny mat rush
7. Melaleuca quinquenervia, broadleaved paperbark
8. Myoporum parvifolium, creeping boobialla
9. Example of a storm water drainage point
10. Example of a grassed swale to dry creek swale
11. Example of a bio retention basin

HARDSCAPE AND FURNISHINGS



1. Plain grey concrete with stencil
2. Rendered block work
3. Coreten sheet with laser cut stencil
4. Gabion wall
5. Bench Seating
6. LED strip lighting
7. A Park Shelter
8. Single BBQ meeting GCC regulations
9. Drinking Fountain with dog bowl
10. Gossi Park Picnic table range
11. Exposed aggregate concrete band
12. Gym equipment TBC
13. Basket ball half court
14. Low Gabion wall as seating
15. Signage
16. Timber bollards as per GCCC guidelines
17. Broom finished plain grey concrete
18. Black powder coated palisade fence
19. Chian wire mesh fencing
20. Steel-rail fencing
21. Forest mulch
22. Sugarcane mulch
23. River rock gravel
24. Timber edge
25. Concrete edge

PLANTING PALETTE



1



2



3



4



5



6



7



8



9



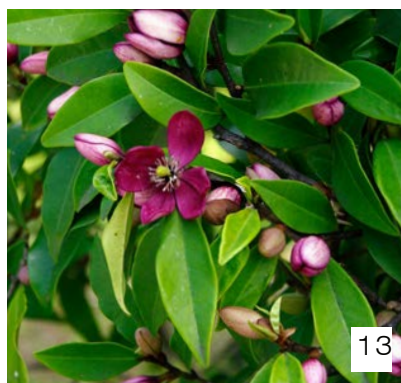
10



11



12



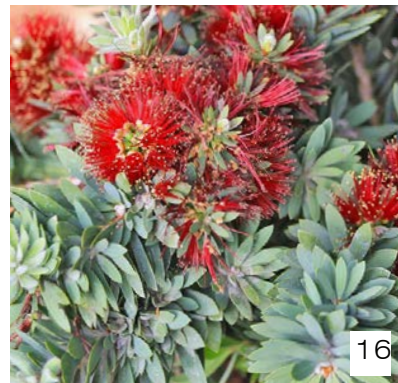
13



14



15



16



17



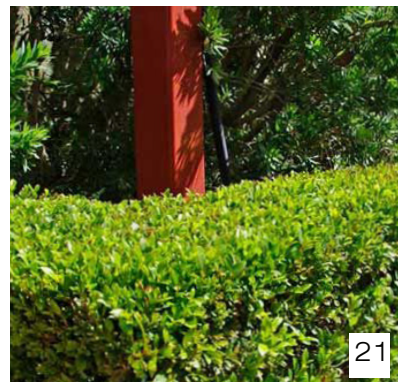
18



19



20



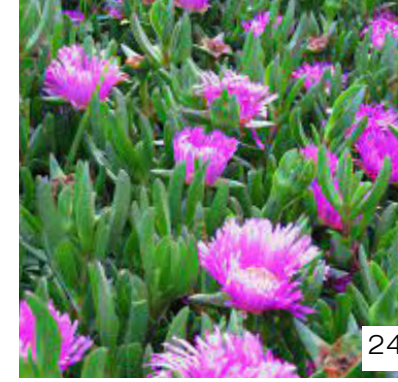
21



22



23



24

STREET TREES

1. Flindersia australis, crows ash
2. Harpalea pendula
3. Eucalyptus tereticornis, forest red gum
4. Lophostemon confertus, brush box

FEATURE SPECIES

5. Brachychiton acerifolius, flame tree
6. Grevillea 'moonlight'
7. Photinia 'red robyn'

SCREENING SHRUBS

8. Syzygium resilience
9. Elaeocarpus eumundii, eumundii
10. Elaeocarpus reticulatus, blueberry ash

SCREENING SHRUBS & FEATURE SHRUBS

11. Syzygium austalis, lily pily
12. Photinia robusta, photinia
13. Michelia figo, port wint magnolia
14. Grevillea 'firecracker'
15. Westringia fruticosa, coastal rosemary
16. Callistemon little john, little john
17. Melaleuca 'claret tops'
18. Westringia zena

GROUNDCOVERS & TUFTING GRASSES

19. Myoporum parvifolium, boobialla
20. Philodendron 'rojo congo'
21. Syzygium 'tiny trev'
22. Lomandra 'lime tough'
23. Trachelospermum jasminoides, star jasmine
24. Carpobrotus glaucescens, pig face



APPENDIX I

TRAFFIC IMPACT ASSESSMENT





TRANSPORT IMPACT ASSESSMENT

PROPOSED WELLBEING PRECINCT AND INDUSTRIAL
LOTS (VANTAGE STAGE 3)

LOT 301, 302, 303 AND 401, VANTAGE ESTATE, YATALA

Prepared for

FRASERS PROPERTY INDUSTRIAL

6 APRIL 2023

DOCUMENT REGISTER

RTE Reference 22301

Prepared by Luke Rytenskild, Dare Janzekovic

Document History

Version	Version date	Details	Reviewed and Authorised	
			Name / Position	Signature
1	6 April 2023	DA	Luke Rytenskild Director RPEQ 6293	

COPYRIGHT NOTICE

© Copyright CRG Traffic Pty Ltd All Rights Reserved. Copyright in the whole and every part of this document belongs to CRG Traffic Pty Ltd and may not be used, sold, transferred, copied or reproduced in whole or in part in any manner or form or in or on any media to any person without the prior written consent of CRG Traffic Pty Ltd.

COMPANY INFORMATION

CRG Traffic Pty Ltd as trustee for the Rytenskild CRG Trust trading as Rytenskild Traffic Group
ABN 24 401 134 418 ACN 151 846 847
Director: Luke Rytenskild RPEQ 6293

GOLD COAST

Suite 2
24 Surfers Avenue
Mermaid Beach QLD 4218

BRISBANE

Suite 52
149 Wickham Tce
Spring Hill QLD 4000

SYDNEY

Level 26
44 Market Street
Sydney NSW 2000

Phone: 1300 220020
Facsimile: 1300 087177
Email: info@rytenskildtraffic.com
Web: www.rytenskildtraffic.com

TABLE OF CONTENTS

1.0	INTRODUCTION	4
2.0	SUBJECT SITE.....	4
3.0	PROPOSED PLAN OF DEVELOPMENT	5
4.0	CHRISTENSEN ROAD / HIGHLANDS STREET INTERSECTION.....	6
5.0	ROAD NETWORK DESIGN.....	8
6.0	ROAD NETWORK IMPACT	13
6.1	Background Traffic	13
6.2	Development Trip Generation	13
6.3	Impact on Christensen Road / Highlands Street Intersection	14
7.0	SUMMARY OF CONCLUSIONS & RECOMMENDATIONS	15
APPENDIX		15
	APPENDIX A - TRAFFIC SURVEY ON CHRISTENSEN ROAD (2018)	16
	APPENDIX B - STAGE 1 & 2 DEVELOPMENT TRAFFIC ESTIMATES (APPROVED)	17
	APPENDIX C – DETAILED SIDRA OUTPUT (CHRISTENSEN RD / HIGHLANDS ST INTERSECTION.....	19
	APPENDIX D – RESPONSE COUNCIL’S TRANSPORT CODE (2003).....	24
	APPENDIX E – STATE CODE 6 RESPONSE	40

1.0 INTRODUCTION

Rytenskild Traffic Engineering (RTE) has been engaged by Frasers Property Industrial to prepare a Traffic Impact Assessment of Stage 3 of the proposed wellbeing precinct and industrial precinct (Vantage Estate) at Yatala.

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

- Access by service vehicles;
- Design of the Christensen Road / Highlands Street intersection;
- Compliance of internal road network design.

2.0 SUBJECT SITE

As shown in Figure 2.1, the subject site is for Stage 3 of the approved Vantage Industrial Estate.

The site is located within the low and medium impact industry zone.

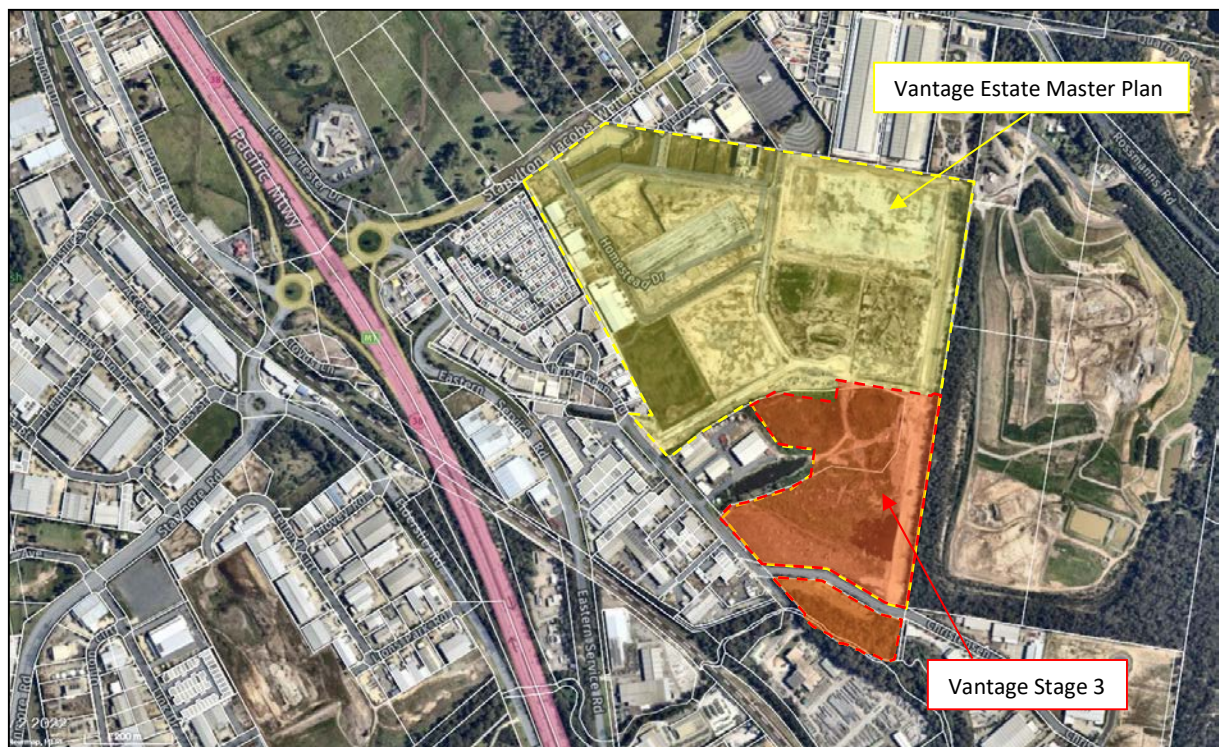


FIGURE 2.1 – LOCATION OF SUBJECT SITE

3.0 PROPOSED PLAN OF DEVELOPMENT

The proposed plan of development is for Stage 3 of the Vantage Industrial Estate. Stage 3 comprises of five lots (Lots 301, 302, 303 and 401), and a wellbeing precinct to be developed on common property.

It is proposed that each of the proposed lots along the northern side of Christensen Road will gain access via a new road which will intersect with Highlands Street.

The proposed plan of reconfiguration is shown in Figure 3.1.

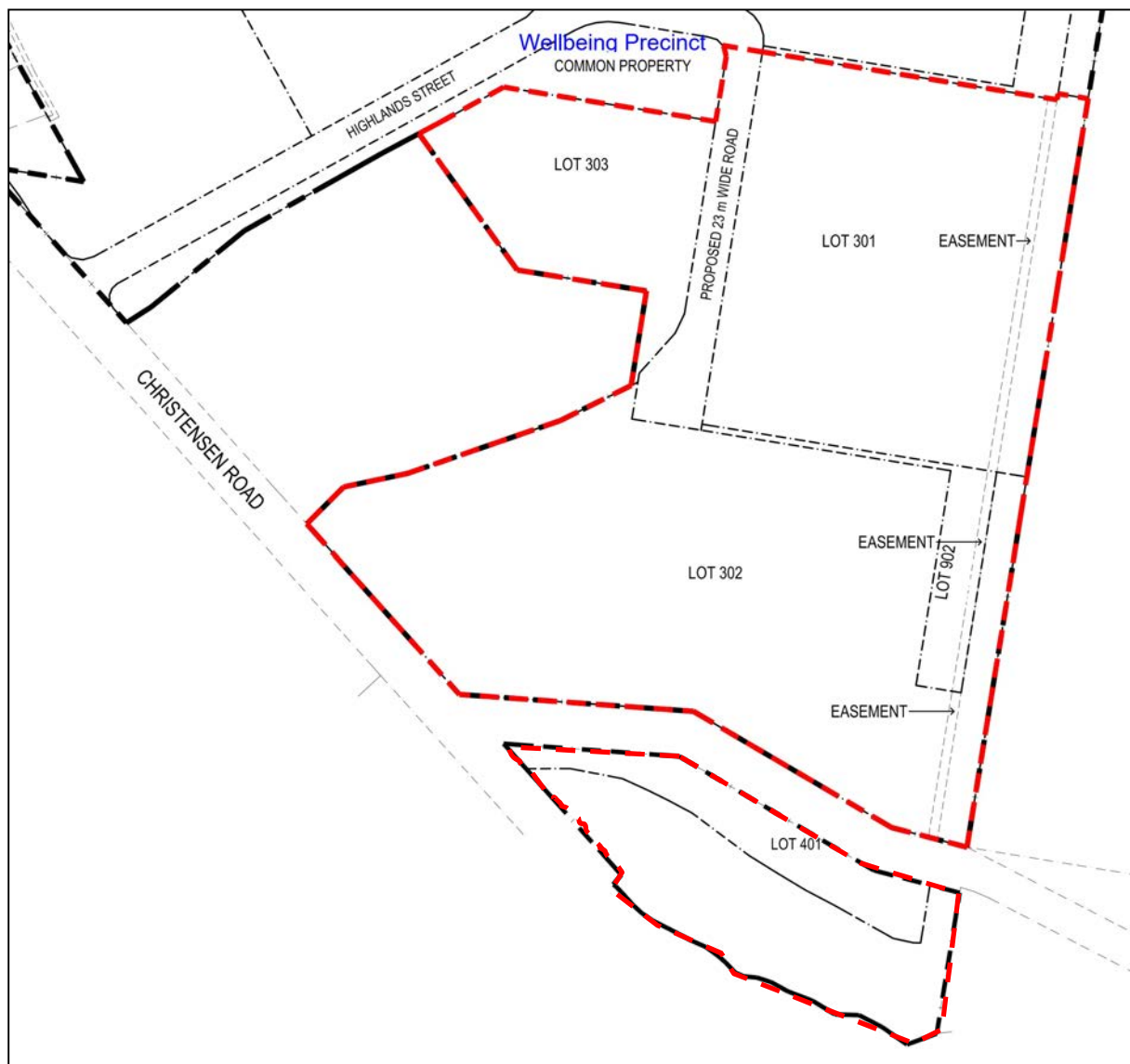
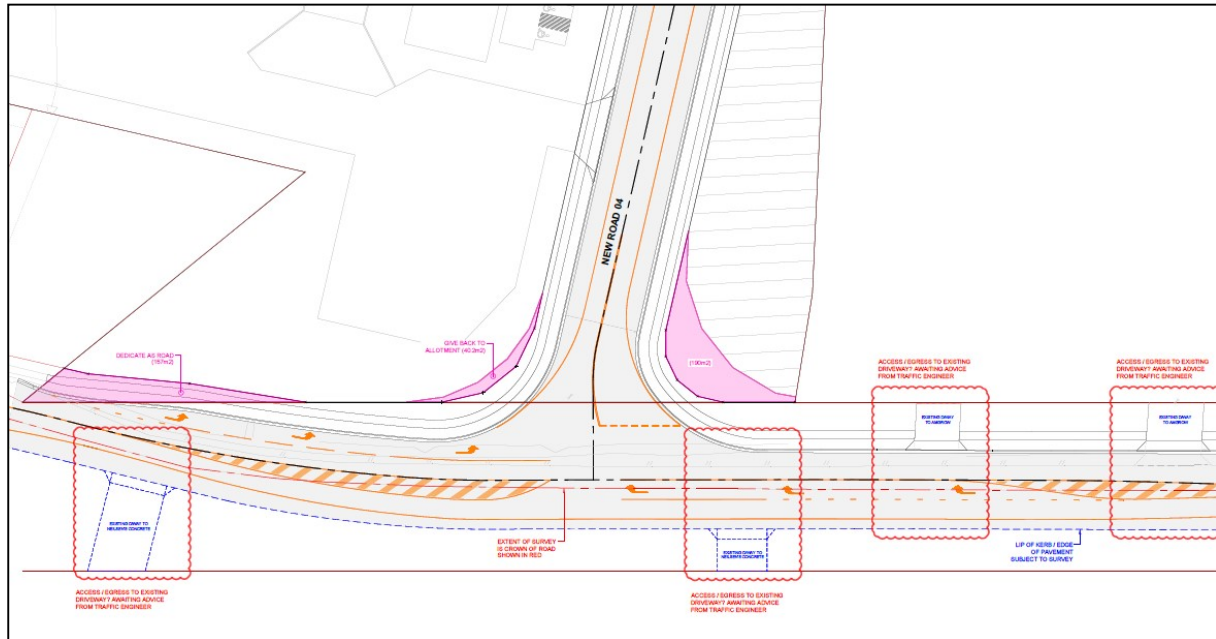


FIGURE 3.1 – PROPOSED STAGE 3 PLAN

4.0 CHRISTENSEN ROAD / HIGHLANDS STREET INTERSECTION

It is planned that the Christensen Road / Highlands Street intersection be constructed as a priority controlled junction with dedicated Type AUL and CHR left and right turn treatments. The planned intersection layout is provided in Figure 4.1.



**FIGURE 4.1 – CURRENTLY PLANNED LAYOUT FOR THE
CHRISTENSEN ROAD / HIGHLANDS STREET INTERSECTION**

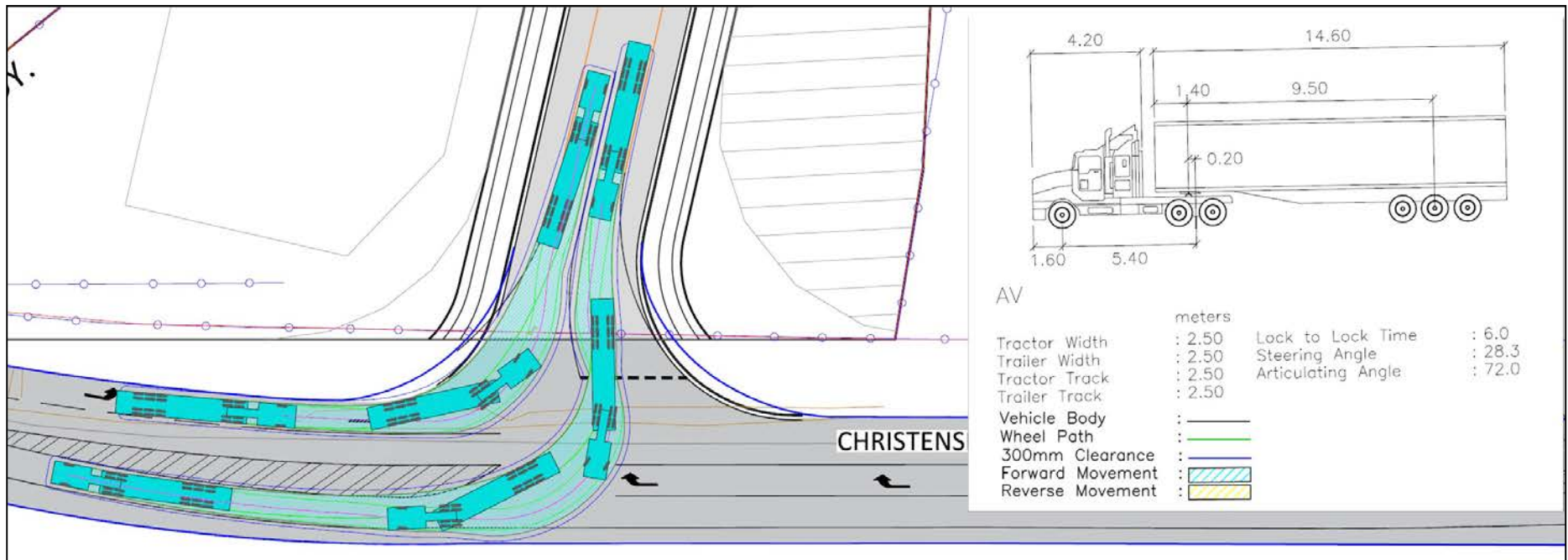


FIGURE 4.3 – SWEPT PATH OF ARTICULATED VEHICLE (AV) AT THE CHRISTENSEN ROAD / HIGHLANDS STREET INTERSECTION

5.0 ROAD NETWORK DESIGN

The proposed road profiles have been designed in accordance with the *Gold Coast City Council Infrastructure Planning Policy*. The new proposed 23 metre road extending from Highlands Street has been designed as an Industrial Collector Road. The proposed road profile and classification is shown in Figure 6.1, with a concept plan of the new road section connecting to Stage 3 shown in Figures 5.2 and 5.3.

A swept path analysis has been prepared for the proposed road layout in accordance with AS2890.2:2018. As shown in Figures 5.4 and 5.5, the design allows for a truck up to the size of an Articulated Vehicle (AV).

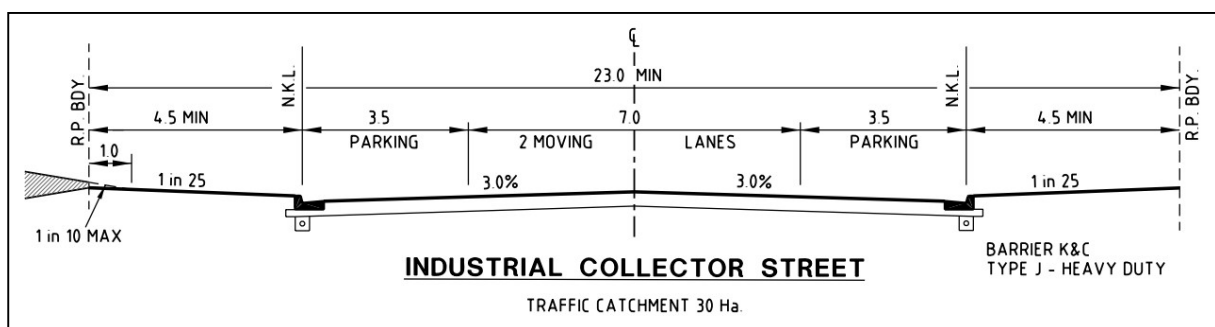


FIGURE 5.1 – PROPOSED NEW ROAD CROSS SECTION

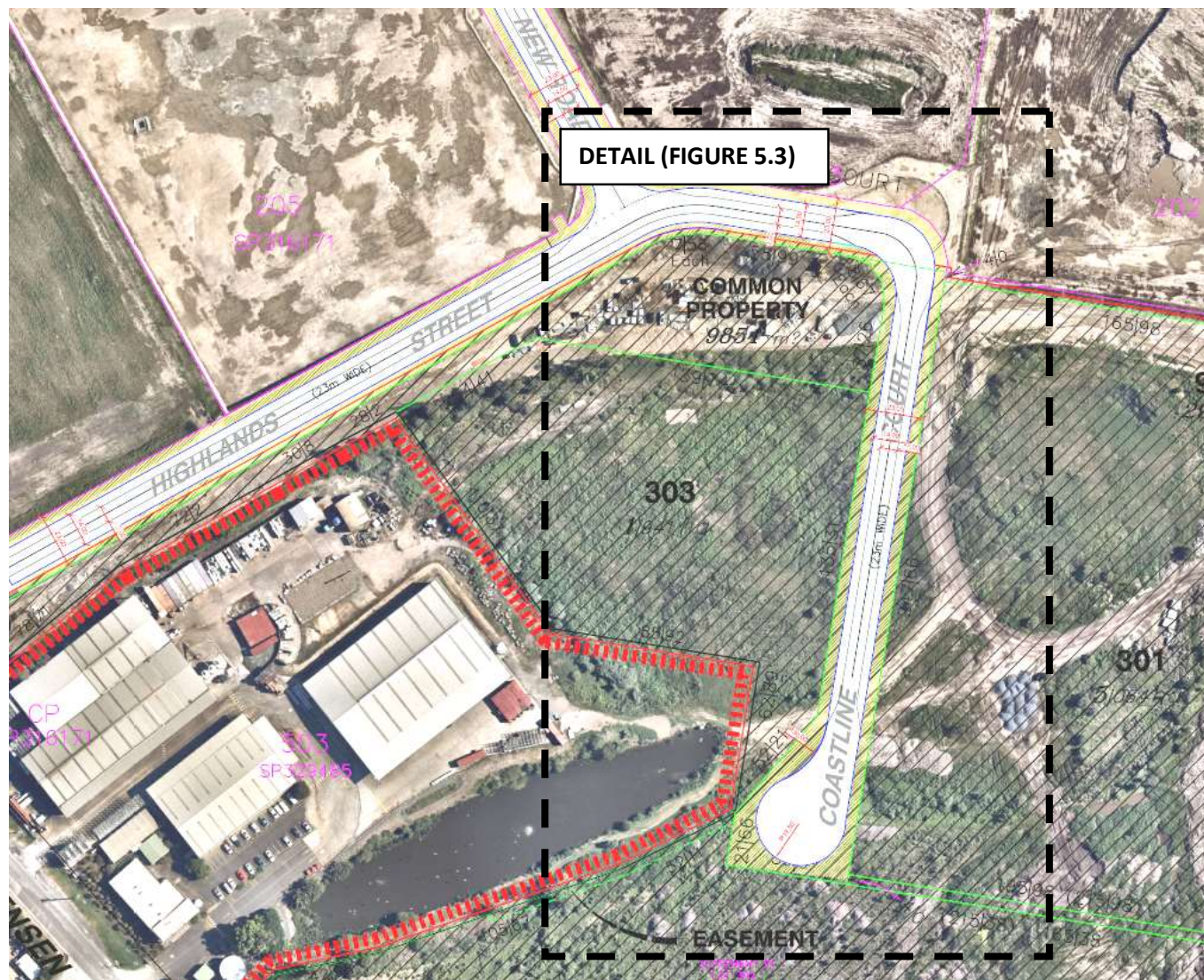


FIGURE 5.2 – INTERNAL ROAD LAYOUT (OVERALL PLAN)

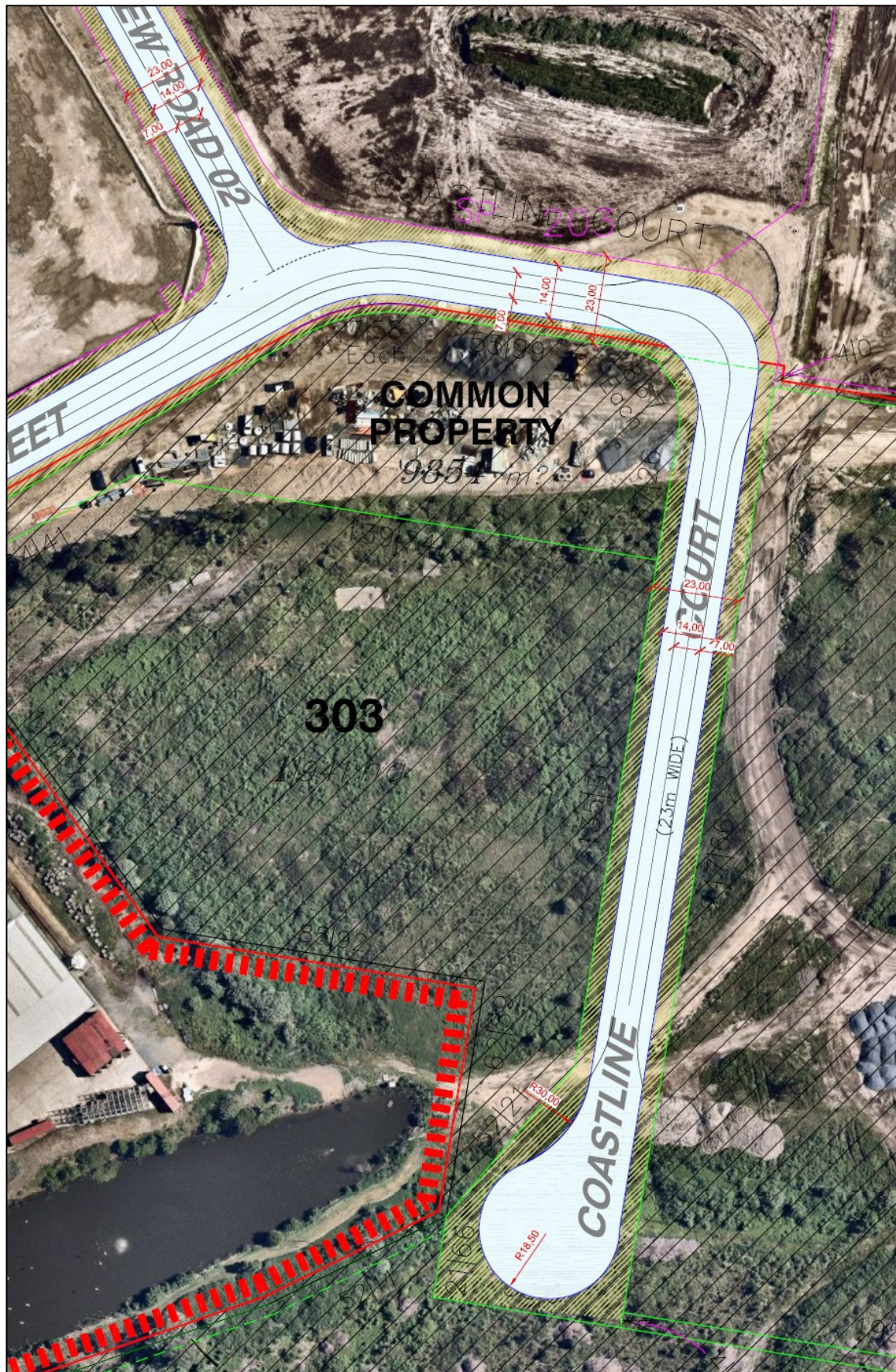


FIGURE 5.3 – INTERNAL ROAD LAYOUT (DETAIL)

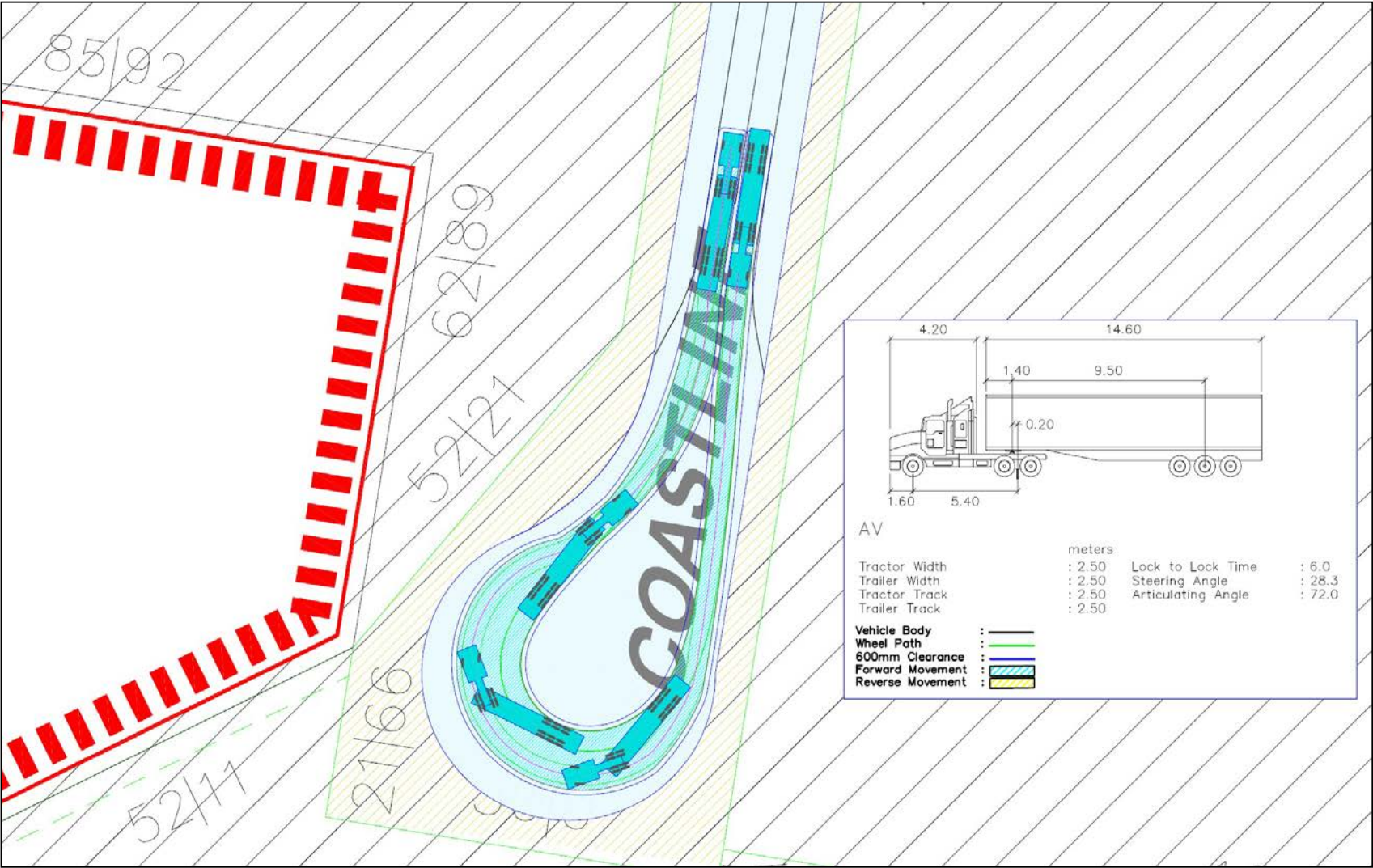


FIGURE 5.4 – SWEEP PATH OF A 20m ARTICULATED VEHICLE (CUL-DE-SAC)

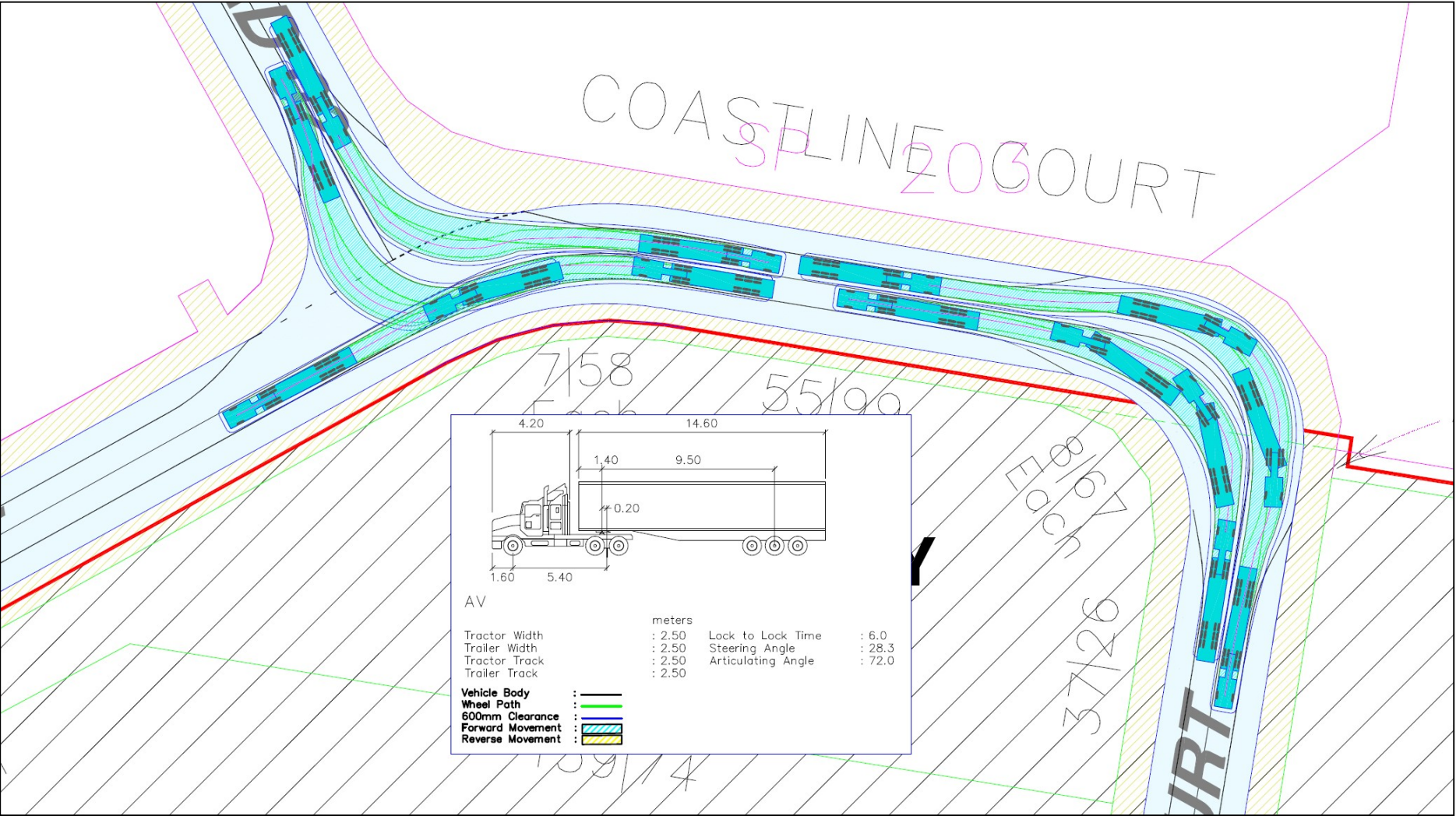


FIGURE 5.5 – SWEEP PATH OF A 20m ARTICULATED VEHICLE
(INTERSECTION MANOEUVRING)

6.0 ROAD NETWORK IMPACT

6.1 Background Traffic

As shown as Attachment A, Christensen Road has been surveyed to carry in the order of 3,000 vehicles per day near the proposed intersection location in 2018. Given that Christensen Road does not provide through connection to the wider network, it is considered that any increase in background demand is directly associated with the planned future connection across Sandy Creek.

6.2 Development Trip Generation

In accordance with the original traffic impact assessment, the following trip generation rates have been adopted for the analysis.

0.42 trips / 100m² GFA / peak hour, and 4 trips / 100m² GFA / day.

The above rate is considered to be reasonable for the proposal and is consistent with the rate adopted for Stages 1 and 2. Application of the above rate to the area associated with Stage 3 results in a peak hour demand of 331 trips during the morning and afternoon peak hour periods as shown in Table 6.1.

Table 6.1 - Estimated Peak Hour Development Traffic Generation (STAGE3 ONLY)

Stage	Lot Area (m ²)	Est GFA (m ²)	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
STAGE 3	175,245	78,860	215	116	331	67	264	331

- Assumes 45% site cover
- Peak Hour Distribution: AM Peak 65 / 35, PM Peak 20/80
- Potential floor areas have been estimated through application of a 45% site coverage.

6.3 Impact on Christensen Road / Highlands Street Intersection

The impacts of the overall estate upon the wider road network have previously been assessed as part of the preliminary approval. Therefore, only impacts on the Christensen Road / Highlands Street intersection have been assessed as part of the analysis. It is noted that the subject change results in a reduction in access points along the northern side of Christensen Road to a single point, with the access on the southern side of Christensen Road retained.

For the purposes of the analysis a sensitivity assessment has been prepared for the Christensen Road / Highlands Street intersection based on the background traffic generated by Stages 1 and 2 (Appendix B), and resultant estimate for Stage 3, including the Common Property lot and Lots 301, 302 and 303, as follows:

Stage	Lot Area (m2)	Est GFA (m2)	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
Common Property + Lots 301, 302 & 303.	156,245	70,310	191	104	295	59	236	295

- Assumes 45% site cover
- Peak Hour Distribution: AM Peak 65 / 35, PM Peak 20/80
- Potential floor areas have been estimated through application of a 45% site coverage.

As shown as Attachment C, the Christensen Road / Highlands Street intersection under priority control will operate within acceptable criteria with Stage 3 of the site in operation. It is therefore determined that the proposed change in the access arrangements along Christensen Road will not have adverse impact on the safety and efficiency of the frontage road and the intersection.

It is noted that the model assumes that Christensen Road is a 'NO THROUGH ROAD' and therefore does not generate a significant background traffic demand. Further investigation is required at future stages as the connection over Sandy Creek is established.

7.0 SUMMARY OF CONCLUSIONS & RECOMMENDATIONS

- The proposed plan of subdivision for Stage 3 of the Vantage Industrial Estate in Yatala. The new stage comprises of 4 industrial dwelling lots (301, 302, 303 & 401), and an additional wellbeing precinct.
- It is proposed that Lots 301, 302 and 303 will gain access via a new 23 metre road off Highlands Street. Lots 302 and 402 will gain access via Christensen Road.
- It is proposed planned that the Christensen Road / Highlands Street intersection be constructed as a priority controlled junction with dedicated Type AUL and CHR left and right turn treatments.
- Given the current status of road network planning and the sensitivity of the network to new connections and upgrades (due to congestion), traffic signals may not be warranted for some time.
- The proposed road profiles have been designed in accordance with the *Gold Coast City Council Infrastructure Planning Policy*.

APPENDIX

APPENDIX A –TRAFFIC SURVEY ON CHRISTENSEN ROAD

APPENDIX B – STAGE 1 & 2 DEVELOPMENT TRAFFIC ESTIMATES (APPROVED)

APPENDIX C – DETAILED SIDRA OUTPUT (CHRISTENSEN ROAD / HIGHLANDS STREET INTERSECTION

APPENDIX D - RESPONSE TO TRANSPORT CODE

APPENDIX E - STATE

APPENDIX A - TRAFFIC SURVEY ON CHRISTENSEN ROAD (2018)

Weekly Vehicle Counts

WeeklyVehicle-41

Site: Christensen Rd Yatala.0.1NS
Description: Christensen Rd, Yatala just south of Maiella St
Filter time: 20:21 Sunday, 11 March 2018 => 21:52 Thursday, 15 March 2018
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages	
	12 Mar	13 Mar	14 Mar	15 Mar	16 Mar	17 Mar	18 Mar	1 - 5	1 - 7
Hour									
0000-0100	3	4	7	12	*	*	*	6.5	6.5
0100-0200	6	10	10	18	*	*	*	11.0	11.0
0200-0300	6	7	6	10	*	*	*	7.3	7.3
0300-0400	17	22	20	22	*	*	*	20.3	20.3
0400-0500	77	74	85	82	*	*	*	79.5	79.5
0500-0600	243	242	249	230	*	*	*	241.0	241.0
0600-0700	196	226	208	180	*	*	*	202.5	202.5
0700-0800	214	236	241	217	*	*	*	227.0	227.0
0800-0900	225	234	200	235	*	*	*	223.5	223.5
0900-1000	198	235	218	219	*	*	*	217.5	217.5
1000-1100	220	230	216	188	*	*	*	213.5	213.5
1100-1200	209	216	192	216	*	*	*	208.3	208.3
1200-1300	217	198	227	232	*	*	*	218.5	218.5
1300-1400	207	237	241	234	*	*	*	229.8	229.8
1400-1500	258	244	284	267	*	*	*	263.3	263.3
1500-1600	244	239	245	243	*	*	*	242.8	242.8
1600-1700	222	222	233	234	*	*	*	227.8	227.8
1700-1800	107	94	103	108	*	*	*	103.0	103.0
1800-1900	32	38	46	35	*	*	*	37.8	37.8
1900-2000	15	14	19	0	*	*	*	12.0	12.0
2000-2100	7	5	14	0	*	*	*	6.5	6.5
2100-2200	9	11	10	0	*	*	*	7.5	7.5
2200-2300	19	16	23	*	*	*	*	19.3	19.3
2300-2400	0	4	3	*	*	*	*	2.3	2.3
Totals									
0700-1900	2353	2423	2446	2428	*	*	*	2412.5	2412.5
0600-2200	2580	2679	2697	2608	*	*	*	2641.0	2641.0
0600-0000	2599	2699	2723	*	*	*	*	2662.7	2662.7
0000-0000	2951	3058	3100	*	*	*	*	3028.2	3028.2

APPENDIX B - STAGE 1 & 2 DEVELOPMENT TRAFFIC ESTIMATES (APPROVED)

(RTE TRAFFIC REPORT DATED 10 MARCH 2022, REF20337)

- Development Traffic Estimates

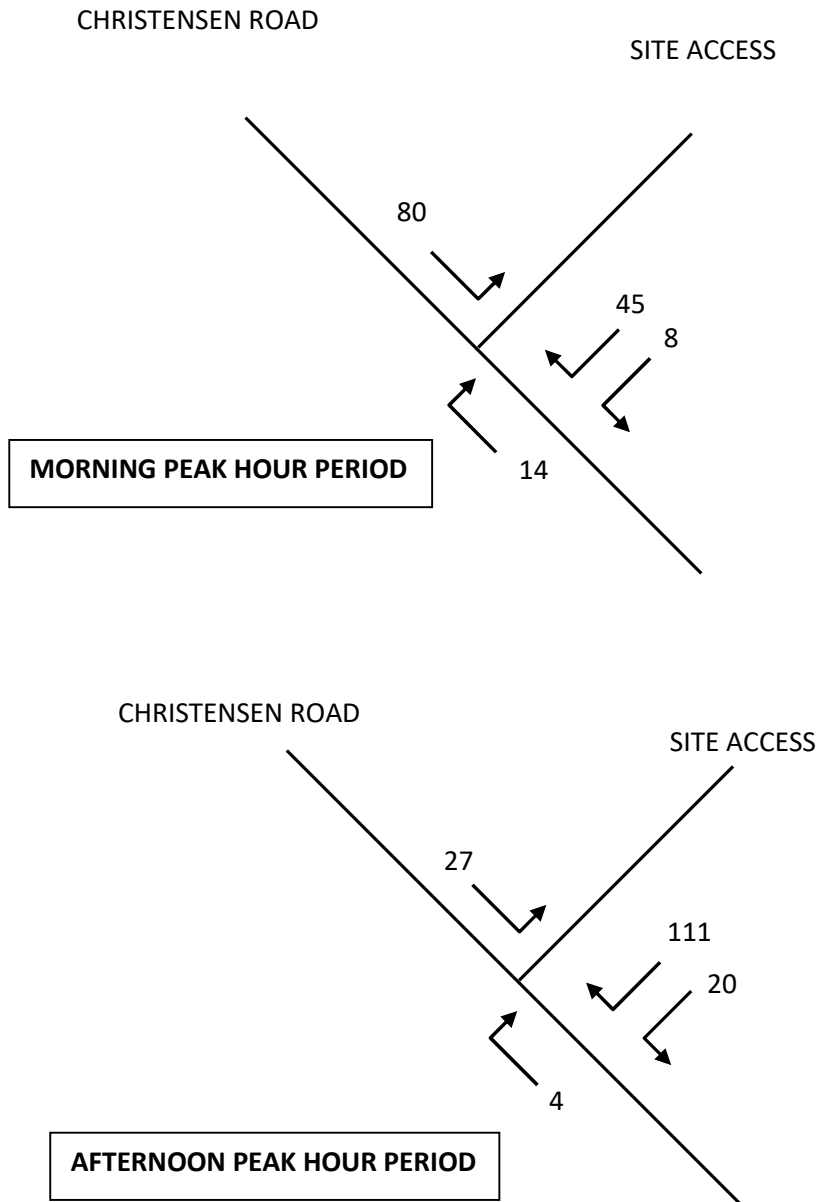
Table 4.1 - Estimated Peak Hour Development Traffic Generation (STAGES 1 & 2 ONLY)

Stage	Lot Area (m ²)	Est GFA (m ²)	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
STAGE 1	119833	53925	147	79	226	46	180	226
STAGE 2	276677	124505	340	183	523	105	427	523
TOTAL TRAFFIC			487	262	749	151	607	749

Assumes 45% site cover

Peak Hour Distribution: AM Peak 65 / 35, PM Peak 20/80

- Development Traffic Distribution



**FIGURE 4.2 – STAGES 1 & 2 DEVELOPMENT TRAFFIC ESTIMATES
AT THE CHRISTENSEN ROAD INTERSECTION**

APPENDIX C – DETAILED SIDRA OUTPUT (CHRISTENSEN ROAD / HIGHLANDS STREET INTERSECTION)

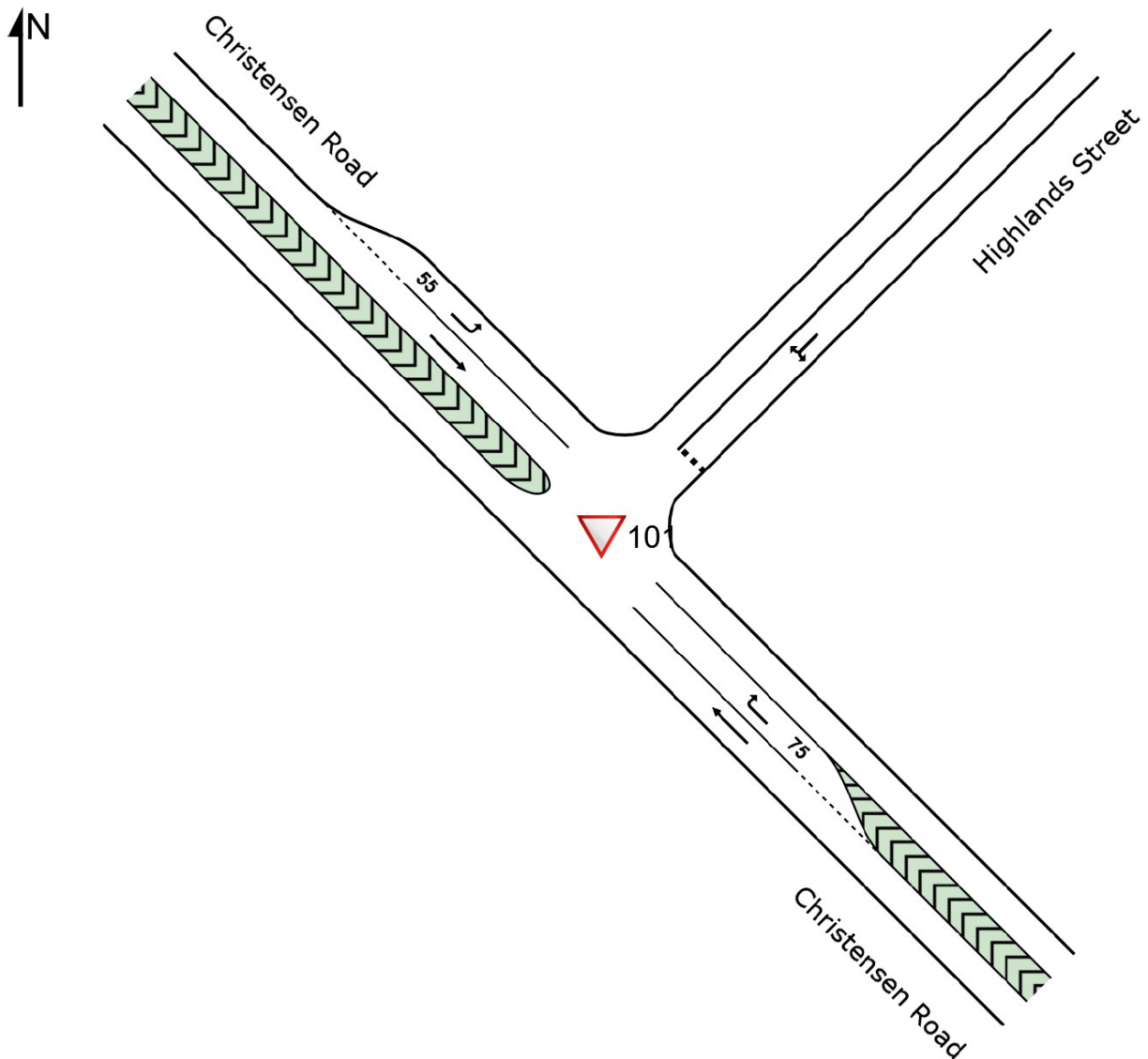
AM PEAK - BACKGROUND TRAFFIC (STAGES 1 & 2 + 2018 SURVEY)

PM PEAK - BACKGROUND TRAFFIC (STAGES 1 & 2 + 2018 SURVEY)

AM PEAK - DESIGN TRAFFIC (BACKGROUND + STAGE 3)

PM PEAK - DESIGN TRAFFIC (BACKGROUND + STAGE 3)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

▽ Site: 101 AM Peak (Christensen Rd - New Rd Int) -
Background (2018 + S1 + S2) (Site Folder: Stage 3 - Access via
Christensen Road)]

22301 - Christensen Road / Highlands Street (Site Access Intersection)
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
SouthEast: Christensen Road														
5	T1	125	15.0	125	15.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
6	R2	14	15.0	14	15.0	0.013	6.6	LOS A	0.1	0.4	0.32	0.57	0.32	51.6
Approach		139	15.0	139	15.0	0.070	0.7	NA	0.1	0.4	0.03	0.06	0.03	59.0
NorthEast: Highlands Street														
7	L2	8	15.0	8	15.0	0.076	6.3	LOS A	0.3	2.3	0.41	0.65	0.41	51.2
9	R2	45	15.0	45	15.0	0.076	8.5	LOS A	0.3	2.3	0.41	0.65	0.41	50.9
Approach		53	15.0	53	15.0	0.076	8.1	LOS A	0.3	2.3	0.41	0.65	0.41	51.0
NorthWest: Christensen Road														
10	L2	80	15.0	80	15.0	0.048	5.7	LOS A	0.0	0.0	0.00	0.57	0.00	53.0
11	T1	125	15.0	125	15.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		205	15.0	205	15.0	0.070	2.2	NA	0.0	0.0	0.00	0.22	0.00	57.0
All Vehicles		397	15.0	397	15.0	0.076	2.5	NA	0.3	2.3	0.07	0.22	0.07	56.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▽ Site: 101 PM Peak (Christensen Rd - New Rd Int) -
Background (2018 + S1 + S2) (Site Folder: Stage 3 - Access via
Christensen Road)]

22301 - Christensen Road / Highlands Street (Site Access Intersection
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
SouthEast: Christensen Road														
5	T1	142	15.0	142	15.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
6	R2	4	15.0	4	15.0	0.004	6.4	LOS A	0.0	0.1	0.29	0.55	0.29	51.7
Approach		146	15.0	146	15.0	0.080	0.2	NA	0.0	0.1	0.01	0.02	0.01	59.7
NorthEast: Highlands Street														
7	L2	20	15.0	20	15.0	0.188	6.5	LOS A	0.8	6.1	0.45	0.69	0.45	51.0
9	R2	111	15.0	111	15.0	0.188	8.8	LOS A	0.8	6.1	0.45	0.69	0.45	50.7
Approach		131	15.0	131	15.0	0.188	8.4	LOS A	0.8	6.1	0.45	0.69	0.45	50.8
NorthWest: Christensen Road														
10	L2	27	15.0	27	15.0	0.016	5.7	LOS A	0.0	0.0	0.00	0.57	0.00	53.0
11	T1	142	15.0	142	15.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		169	15.0	169	15.0	0.080	0.9	NA	0.0	0.0	0.00	0.09	0.00	58.7
All Vehicles		446	15.0	446	15.0	0.188	2.9	NA	0.8	6.1	0.13	0.24	0.13	56.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▽ Site: 101 AM Peak (Christensen Rd - New Rd Int) -
 Design (Background + Stage 3) (Site Folder: Stage 3 - Access
 via Christensen Road)]

22301 - Christensen Road / Highlands Street (Site Access Intersection)
 Site Category: (None)
 Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
						v/c	sec							km/h
SouthEast: Christensen Road														
5	T1	125	15.0	125	15.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
6	R2	14	15.0	14	15.0	0.017	7.8	LOS A	0.1	0.5	0.46	0.64	0.46	50.9
Approach		139	15.0	139	15.0	0.070	0.8	NA	0.1	0.5	0.05	0.06	0.05	58.9
NorthEast: Highlands Street														
7	L2	8	15.0	8	15.0	0.270	6.5	LOS A	1.2	9.3	0.55	0.79	0.57	49.7
9	R2	149	15.0	149	15.0	0.270	10.4	LOS B	1.2	9.3	0.55	0.79	0.57	49.5
Approach		157	15.0	157	15.0	0.270	10.2	LOS B	1.2	9.3	0.55	0.79	0.57	49.5
NorthWest: Christensen Road														
10	L2	271	15.0	271	15.0	0.162	5.8	LOS A	0.0	0.0	0.00	0.57	0.00	52.9
11	T1	125	15.0	125	15.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		396	15.0	396	15.0	0.162	3.9	NA	0.0	0.0	0.00	0.39	0.00	55.0
All Vehicles		692	15.0	692	15.0	0.270	4.7	NA	1.2	9.3	0.13	0.42	0.14	54.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 101 PM Peak (Christensen Rd - New Rd Int) -
Design (Background + Stage 3) (Site Folder: Stage 3 - Access
via Christensen Road)]

22301 - Christensen Road / Highlands Street (Site Access Intersection)
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
SouthEast: Christensen Road														
5	T1	142	15.0	142	15.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
6	R2	4	15.0	4	15.0	0.004	6.7	LOS A	0.0	0.1	0.34	0.56	0.34	51.6
Approach		146	15.0	146	15.0	0.080	0.2	NA	0.0	0.1	0.01	0.02	0.01	59.7
NorthEast: Highlands Street														
7	L2	20	15.0	20	15.0	0.571	9.0	LOS A	4.8	37.6	0.65	0.98	1.02	48.1
9	R2	347	15.0	347	15.0	0.571	12.8	LOS B	4.8	37.6	0.65	0.98	1.02	47.9
Approach		367	15.0	367	15.0	0.571	12.6	LOS B	4.8	37.6	0.65	0.98	1.02	47.9
NorthWest: Christensen Road														
10	L2	86	15.0	86	15.0	0.051	5.7	LOS A	0.0	0.0	0.00	0.57	0.00	53.0
11	T1	142	15.0	142	15.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		228	15.0	228	15.0	0.080	2.2	NA	0.0	0.0	0.00	0.22	0.00	57.1
All Vehicles		741	15.0	741	15.0	0.571	7.0	NA	4.8	37.6	0.33	0.55	0.51	52.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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

Part 7 Codes

Division 3 Constraint Codes

Chapter 4 Car Parking, Access and Transport Integration

1.0 Purpose

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

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

Key objectives include:

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

2.0 Application

- 2.1 This code applies to development indicated as self, code or impact assessable in the Table of Development in the domain or Local Area Plan (LAP) within which the development is proposed.
- 2.2 This code specifically applies to development (whether on private or public land) that requires one or more of the following:
 - private or public car parking;
 - bicycle parking and associated facilities;
 - goods loading and circulation in public or private places; and
 - integration of public transport with private or public development in the City.
- 2.3 This code also applies to any development that is proposed for sites identified on Domain Maps or the Priority Infrastructure Plan Maps as being affected by Future Road Requirements, including areas required for future road corridor development.
- 2.4 Where a domain or LAP Place Code contains car parking requirements that differ from this code, the LAP requirements take precedence.
- 2.5 Performance Criteria PC1-PC24 apply to all code and impact assessable development referred to in this code. For development identified as self assessable, in the relevant domain or LAP, only the acceptable solutions to Performance Criteria PC1-PC16 apply.

3.0 Development Requirements

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
Development that is Self Assessable, Code Assessable or Impact Assessable			
Protection and Preservation of Areas Required for Road Widening, the Provision of Public Transport Facilities or New Transport Corridors			
PC1 Land affected by any proposed road realignment or widening must not have development constructed over that part of the land required for road realignment or road widening.	AS1 All sites that are affected by Future Road Requirement as shown on the Domain Maps, do not have buildings or structures erected forward of the indicated building setback line. This requirement does not apply to a fence with a height not exceeding 1.8 metres and a width not exceeding 0.5 metres.	NOT APPLICABLE, THE PROPOSED CHANGE DOES NOT IMPACT ON FUTURE ROAD REQUIREMENTS	
Port Cocheres			
PC2 Where provision is made for a <i>porte cochere</i> , it must be designed to enable vertical clearance, manoeuvring, access and queuing of vehicles. The capacity of the <i>porte cochere</i> and associated access and manoeuvring must accommodate vehicles entirely within the site, including the queuing of vehicles.	AS2 The <i>porte cochere</i> has a minimum vertical clearance of 4.5 metres.	NOT APPLICABLE, PROPOSAL DOES NOT PROVIDE A PORTE COCHERE.	
Design of Car Parking Areas and Car Park Spaces			
PC3 All car parking spaces must be constructed and line marked to the correct size and standard.	AS3.1 All car parking spaces and facilities are constructed, sealed, line marked and maintained in accordance with the layout requirements of AS2890.1 – Parking	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
	Facilities Part 1: Off Street Car Parking and AS2890.2 – Off Street Parking Part 2: Commercial Vehicles. AS3.2 Where the development includes a combination of low turnover and high turnover car spaces, the parking spaces and aisles are designed to the high turnover or Class 3 requirements in AS2980.1 – Parking Facilities Part 1: Off Street Car Parking.		
PC4 Car parking areas must be landscaped to reduce visual impact and to provide opportunities for shade.	AS4 In car parking areas exceeding 300m ² in site area: a) at least 5% of the area is landscaped; b) a landscaped buffer, with a minimum height of 600mm and width of 1500mm, is provided along any public street frontage and the common boundary to the adjoining property; and c) one landscaped tree bay is to be provided for every 21 car parking spaces.	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	
Signs and Line Marking			
PC5 Signs and line marking must be provided to indicate the location of the car park and the position of the access points for all car parks used by the public where: a) a car park is located at the rear of the site;	AS5.1 Signs incorporate the standard Service Sign Series 'P' sign, as detailed under Guide Signs in the Manual of Uniform Traffic Control Devices, Queensland. (This does not apply to residential developments with less than 10 units)	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
b) access to the car park is not located in the main frontage road; c) there are a number of access points serving different parts of the site.	AS5.2 Signs are used to mark car parking bays which are provided for disabled drivers, motorcycles and special zones, such as bus zones.		
Tandem Car Spaces			
PC6 Tandem car parking must only be used in circumstances where no inconvenience arises from its use.	AS6.1 Tandem car parking spaces (ie. two car parking spaces, nose to tail) are counted as one space, except in the following cases: a) the development is for residential purposes; b) the tandem spaces are to be used by the occupants of the site, in one tenancy; c) the car park area is to be operated as a public car park with on-site management. In this case, a tandem car park may be counted as no more than 1.5 car spaces. AS6.2 The minimum length of the tandem car space is 10.4 metres. AS6.3 Tandem garages have a minimum internal length of 11 metres.	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	
Access to Car Park Areas			
PC7 Car parking areas must not cause vehicle	AS7.1 For developments in excess of 100	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
queues into the frontage road system or encourage drivers to reverse into the road system.	residential units with frontage to major roads, a turn round facility with a minimum diameter of 12.0m is provided between the gate and the road. AS7.2 All car parking facilities, except those associated with detached dwellings and duplex dwellings is designed so that all vehicles enter and exist the site in a forward gear. AS7.3 Provision is made for a defined queuing area, free of any parking manoeuvres or internal intersections in accordance with the provisions of the Table to Acceptable Solution AS7.3 , for developments comprising of more than two dwelling units and where a security gate is proposed.	RECONFIGURATION OF A LOT.	

Table to Acceptable Solution AS7.3	
Car Park Capacity (Number of Spaces)	Minimum Queue Length (Vehicles) *
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6

201 to 250	7
More than 250	7 plus 1% of capacity over 250 spaces
* Note: Each vehicle shall be taken to occupy 6.0 metres in length.	

Performance Criteria	Acceptable Solutions	How does the proposal comply with the Acceptable Solution or Performance Criteria?	Internal Use: Has compliance with the Acceptable Solution/ Performance Criteria been demonstrated? Is a request for further information required?
PC8 Car parking areas providing more than 20 car parking spaces must allow for the separation of vehicles and pedestrians.	AS8 Sealed pedestrian footpaths, at a gradient not exceeding 1:12, are provided from the car parking area along the shortest possible route to the point of destination.	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	
PC9 Access to car parking spaces must be provided for employees and visitors.	AS9.1 Car park areas have no gateways, doors or similar devices which restrict vehicular access by employees or visitors.	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	
Driveways and Crossovers			
PC10 Driveways from car parks or developments into public roads must be minimised to reduce interference with public road traffic and pedestrians.	AS10.1 The maximum number of crossovers for residential developments is one for detached dwelling properties and two for multiple unit dwelling complexes. AS10.2 The maximum number of crossovers for non-residential developments is two crossovers per property. AS10.3 A vehicle crossover is separated from any other vehicle crossover by a minimum distance of three metres.	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	
PC11 All development must make provision for safe access to roads or streets adjacent to the site. Crossovers must be constructed to a standard consistent with	AS11.1 The geometric design of entry and exit driveways conforms with Standard Drawing No 59218 of Planning Scheme Policy 11 – Land Development	NOT APPLICABLE, APPLICATION OF FOR A CHANGE TO A RECONFIGURATION OF A LOT.	

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

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

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

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

Table to Acceptable Solution AS14.1

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

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

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

Table to Acceptable Solution AS14.1

Use or Development	Service Vehicle Provisions
Tavern	HRV
Temporary Use	AV
Theatre	SRV
Tourist Shop	SRV
Transit Centre	HRV
Transport Terminal	AV
Vehicle Hire Premises	AV
Vehicle Sales Premises	AV
Warehouse	AV
Waterfront Industry	HRV

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

Table to Acceptable Solution AS14.2

HRV and AV Requirements

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

Table to Acceptable Solution AS14.2

HRV and AV Requirements

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

APPENDIX E – STATE CODE 6 RESPONSE

State code 6: Protection of state transport networks

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 – THE PROPOSAL DOES NOT INTRODUCE ADDITIONAL AREA NOT PREVIOUSLY ADDRESSED AS PART OF THE PRELIMINARY APPROVAL
PO3 Development does not result in a worsening of operating conditions on a state-controlled road or the surrounding road network. Note: To demonstrate compliance with this performance outcome,	No acceptable outcome is prescribed.	COMPLIES – THE PROPOSAL DOES NOT INTRODUCE ADDITIONAL AREA NOT PREVIOUSLY ADDRESSED AS PART OF THE PRELIMINARY APPROVAL

Performance outcomes	Acceptable outcomes	Response
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 THE STATE CONTROLLED NETWORK
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 ASSESSMENT
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 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	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: AO7.3 Upgrades to a level crossing are designed and	

Performance outcomes	Acceptable outcomes	Response
performance outcome.	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	
	A07.5 On-site vehicle circulation is designed to give priority to entering vehicles at all times.	
PO8 Development does not result in a worsening of the infrastructure condition of a railway or rail transport infrastructure.	No acceptable outcome is prescribed.	COMPLIES
PO9 Development does not result in a worsening of operating conditions of a railway	No acceptable outcome is prescribed.	COMPLIES
Stormwater and drainage		

Performance outcomes	Acceptable outcomes	Response
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 IMPACT ASSESSMENT
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 IMPACT ASSESSMENT
	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	
	AO11.3 Development does not worsen the condition of an existing lawful point of discharge to a state transport corridor.	
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 IMPACT ASSESSMENT
Planned upgrades		
PO13 Development does not impede delivery of planned upgrades of state transport infrastructure.	AO13.1 Development is not located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of state transport infrastructure. Note: Land required for the planned upgrade of state transport	COMPLIES

Performance outcomes	Acceptable outcomes	Response
	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.	
	OR all of the following acceptable outcomes apply: AO13.3 Structures and infrastructure located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of state transport infrastructure are able to be readily relocated or removed without materially affecting the viability or functionality of the development.	
	AND	
	AO13.4 Vehicular access for the development is consistent with the function and design of the planned upgrade of state transport infrastructure.	
	AND	
	AO13.5 Development does not involve filling and excavation of, or material changes to, land required for a planned upgrade to a state transport infrastructure.	
	AND	

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

Table 6.2.3: Public passenger transport infrastructure

Performance outcomes	Acceptable outcomes	Response
Public passenger transport infrastructure		
PO14 Development does not damage or interfere with public passenger transport infrastructure, public passenger services or pedestrian or cycle access to public passenger transport infrastructure and public passenger services.	AO14.1 Vehicular access and associated road access works are not located within 5 metres of public passenger transport infrastructure. AND	COMPLIES
	AO14.2 Development does not necessitate the relocation of existing public passenger transport infrastructure. AND	COMPLIES
	AO14.3 Development does not obstruct pedestrian or cyclist access to public passenger transport infrastructure or public passenger services. AND	COMPLIES
	AO14.4 The normal operation of public passenger transport infrastructure or public passenger services is not interrupted during construction of the development.	COMPLIES
PO15 Upgraded or new public passenger transport infrastructure is provided to accommodate the demand for public passenger transport generated by the development.	No acceptable outcome is prescribed.	NOT APPLICABLE

Performance outcomes	Acceptable outcomes	Response
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.		
PO16 Development is designed to ensure the location of public passenger transport infrastructure prioritises and enables efficient public passenger services. Note: Chapters 2 and 5 of the Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015 provides guidance on how to comply with this performance outcome. Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.	No acceptable outcome is prescribed.	NOT APPLICABLE

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

Page 48 of 50

Performance outcomes	Acceptable outcomes	Response
	AND	
	AO20.3 Development does not result in public passenger services movements through car parking aisles.	COMPLIES
PO21 Taxi facilities are provided to accommodate the demand generated by the development. Note: Guidance on how to meet the performance outcome are available in chapter 7 of the Public Transport Infrastructure Manual, Department of Transport and Main Roads, 2015. Refer to the SDAP Supporting Information: Public passenger transport infrastructure, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcome.	No acceptable outcome is prescribed.	NOT APPLICABLE
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 parking for people with disabilities 4. Disability standards for accessible public transport 2002 made under section 31(1) of the	NOT APPLICABLE NOT APPLICABLE

Performance outcomes	Acceptable outcomes	Response
	<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