Traffic Engineering Report

Maroochydore PDA Private Hospital

About TTM

For 30 years, we've been at the centre of the Australian development and infrastructure industry. Our unique combination of acoustics, data, traffic and waste services is fundamental to the success of any architectural or development project.

We have over 50 staff, with an unrivalled depth of experience. Our industry knowledge, technical expertise and commercial insight allow us to deliver an exceptional and reliable service.

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Revision Record

No.	Author	Reviewed/Approved	Description	Date
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1 Introduction

1.1 Background

TTM Consulting has been engaged by Essence Project Management Pty Ltd to prepare a traffic engineering report investigating a proposed private hospital located at Lot J1 and Lot J2, Maroochydore City Centre. It is understood that a traffic assessment is required as part of a Development Application submission to SunCentral and Economic Development Queensland (EDQ).

1.2 Scope

This report investigates the transport aspects associated with the proposed development. The scope of the transport aspects investigated includes:

- Parking supply required to cater for development demand;
- Parking layout to provide efficient and safe on-site manoeuvring;
- Access configuration to provide efficient and safe manoeuvring between the site and the public road network;
- Service vehicle provisions and on-site manoeuvring;
- Access to a suitable level of public transport;
- Suitability of internal pedestrian and cyclist provisions; &
- Identification of likely traffic volumes generated by the development and possible impacts on the surrounding road network.

To assess the proposed transport arrangements, the development plans have been assessed against the following guidelines and planning documents:

- Maroochydore City Centre, Priority Development Area (PDA) Development Scheme;
- Prescribed Waste Infrastructure Standards (PWIS);
- Sunshine Coast Council Planning Scheme Policy (SCC PSP)
- Australian Standards for Parking Facilities (AS2890 series), namely;
  - Part 1: Off-Street Car Parking Facilities (AS2890.1:2004);
  - Part 2: Off-Street Commercial Vehicle Facilities (AS2890.2:2018);
  - Part 3: Bicycle Parking (AS2890.3:2015); &
  - Part 6: Off-Street Parking for People with Disabilities (AS2890.6:2009).
- Building Code of Australia (BCA)

1.3 Site Location

The site is located within Precinct 3 of the Maroochydore Priority Development Area (PDA), described as Lot J1 and lot J2 as shown in Figure 1-1. The site has an approximate site area of 2,000m^2.

Figure 1-1: Site location (Source: Nearmap Aerial Imaging)

2 Proposed Development

2.1 Development Profile

The development proposal consists of a private hospital, including several consulting suites, along with restaurant and retail tenancies on the ground floor.

The development summary is described in Table 2-1.

Table 2-1: Development Profile

Land Use	Area (m² GFA)
G.01 – Coffee Shop	70
G.02 – Restaurant	310
G.03 – Pathology	47
G.04 – Tenancy	79
G.05 – Tenancy	74
G.06 – Imaging	540
G.07 – General Retail	202
4.01 – Office	210
4.02 – USC Clinical Trials	702
4.03 – USC Orthotics and Prosthetics	550
4.04 – USC Cadaver Lab	150
4.05 – Office	84
5.01 – Frank (Health insurance)	350
5.02 – Neurosurgery	125
5.03 – Sports and Spinal	450
5.04 – Medacta (Orthopedic)	500
5.05 – Office	92
5.06 – Office	87
5.07 – Office	104
6.01 to 6.11 – Consultancy Suites	1677
7.01 Hospital	2080
8.01 Hospital	2080
Total	**10,563**

2.2 Access

Access to the development will be achieved directly from Future Way on the southern frontage of the site.

The access arrangements are described as follows:

- 7.4m wide driveway crossover.

- Priority control with all turns permitted.

Further details in relation to the proposed access arrangements are included in Section 5.

2.3 Parking

The development proposal includes the following parking supply:

- 210 car parking spaces comprising of:
  - 122 unallocated spaces.
  - 88 allocated staff spaces.
- 78 bicycle parking spaces.

Further details regarding the car and bicycle parking provisions are included in Sections 4 and 7 respectively.

2.4 Servicing

The development proposal includes the following service vehicle provisions:

- 1 medium rigid vehicle (MRV) bay.
- 1 small rigid vehicle (SRV) bay.

Further details in relation to the proposed service vehicle provisions is included in Section 6.

3 Transport Infrastructure

3.1 The Road Network

In accordance with the PDA Development Scheme the hierarchy and characteristics of roads in the immediate vicinity of the site are shown below in Table 3-1 and Figure 3-1.

Table 3-1: Local Road Hierarchy

Road	Speed Limit	Lanes	Classification
Mundoo Boulevard	50kph	2 lanes, divided (inc on-street parking, cycle lanes, public transport)	Main Street Boulevard
Future Way	50kph	2 lanes, undivided (inc on-street parking)	Town Centre Avenue
South Sea Islander Way	50kph	2 lanes, undivided (inc on-street parking)	Town Centre Avenue
Market Lane	50kph	1 lane, northbound	Laneway
First Ave	50kph	4 lanes, divided (inc cycle lanes, puclic transport)	Town Centre Boulevard

*Default speed limit on unsigned roads is 50 kph in built-up areas in Queensland

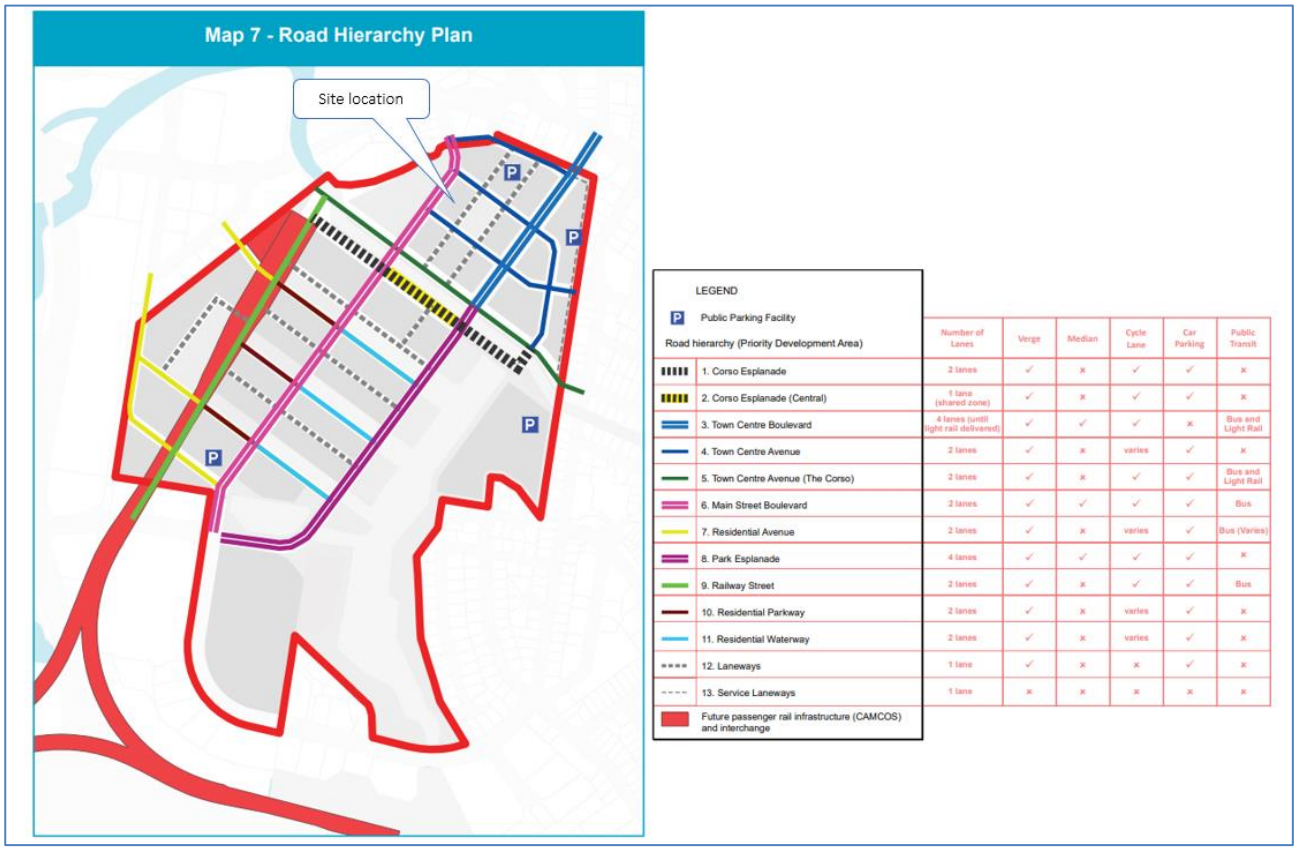


Figure 3-1: Road Hierarchy - PDA Development Scheme

3.2 Road Planning

Inspection of SCC's Local Government Infrastructure Plan (LGIP) indicates that there are currently no plans for trunk infrastructure upgrades in the vicinity of the site.

3.3 Public Transport, Pedestrian & Cyclist Facilities

3.3.1 Existing Public and Active Transport

Bus

The subject site is located within close proximity to several bus stops adjacent to the PDA. The closest existing bus stop is 350m walking distance (3 minutes) north-east of the subject site along Aerodrome Road. Additional bus stops servicing the same bus routes are located further along Aerodrome Road, First Avenue and Second Avenue. These bus stops are utilised by Translink Service No.'s 600, 611, 614, 615, 616 and 619. All bus stops provide suitable connectivity to the public transport network. A summary of the bus stop locations and the services available (at the bus stops) are shown in Figure 3-2.

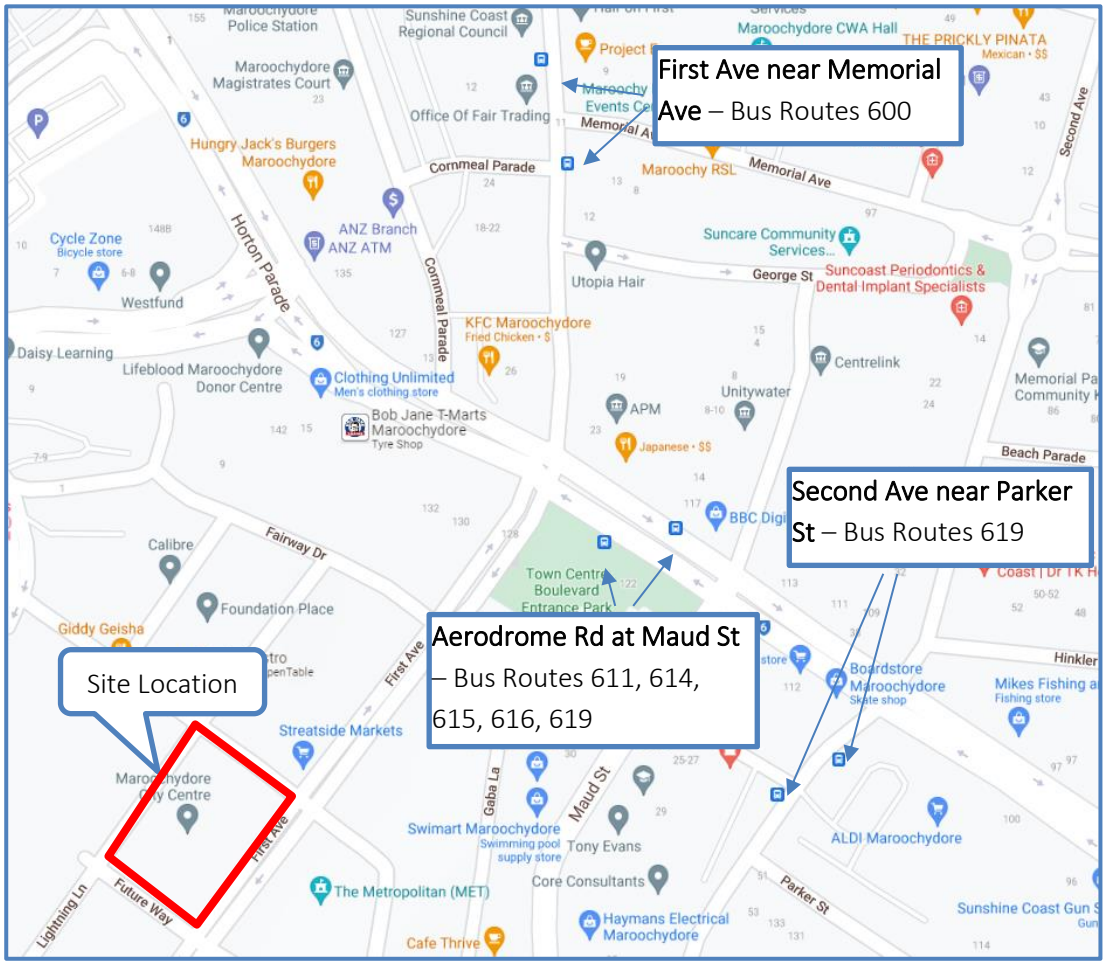


Figure 3-2: Bus Stop Summary

A summary of the areas served by the bus routes and the frequency of the services is provided in Table 3-2.

Table 3-2: Bus Route Timetable Summary

Bus Route	Servicing	Operating Times	Service Alignment	Frequency (Approx.)
600	Caloundra to Maroochydore via Kawana and Mooloolaba	5:25AM – 9:40PM (Monday – Friday) 6:25AM – 11:10PM (Saturday) 6:55AM – 8:40PM (Sunday)	Aerodrome Road <-> First Avenue <-> The Esplanade	15 min (peak) (weekdays) 30 – 60 min (off-peak and weekends)
611	Maroochydore to SCUH via Mooloolaba and Kawana	7:48AM – 9:48PM (Monday – Friday) 7:48AM – 9:48PM (Weekends)	Aerodrome Road <-> Alexandra Parade	30 min (peak and off peak) (weekdays and weekends)
614	Kawana to Maroochydore via Mountain Creek	7:25AM – 6:25PM (Monday – Friday) 8:25AM – 5:25PM (Weekends)	Aerodrome <-> Maud Street	60 min (peak and off peak) (weekdays and weekends)
615	Maroochydore to Landsborough via University	5:00AM – 9:13PM (Monday – Friday) 5:41AM – 9:34PM (Saturday) 7:11AM – 8:41PM (Sunday)	Aerodrome <-> Alexandra Parade	25 min (peak) (weekdays) 60 min (off peak) (weekdays) 90 – 180 minutes (weekends)
616	Maroochydore to University via Alexandra Headland	6:55AM – 9:05PM (Monday – Friday) 7:25AM – 7:25PM (Weekends)	Aerodrome Road <-> Alexandra Parade	30 min (peak and off peak) (weekdays) 60 min (weekends)
619	Kawana to Maroochydore via Alexandra Headland	7:45AM – 6:45PM (Monday – Friday) 7:45AM – 5:45PM (Saturday) 8:45AM – 5:45PM (Sunday)	Aerodrome Road <-> Second Avenue	60 min (peak and off peak) (weekdays) 60 min (weekends)

Pedestrians

Formal footpaths are (or will be) provided along the site frontages.

Unsignalised pedestrian crossing facilities are provided at the following intersections surrounding the subject site:

- South Sea Islander Way/Market Lane
- Future Way/Market Lane
- Future Way/Mundoo Boulevard

A signalised pedestrian crossing is also located at the South Sea Islander Way/Mundoo Boulevard intersection.

Cyclists

The 2031 Strategic Network of Pedestrian and Cycle Links (Pathways) and 2031 Strategic Network of Pedestrian and Cycle Links (On Road Cycleways) within SCC's PSP do not provide bicycle network overlays with respect to the subject site. The Department of Transport and Main Roads (DTMR's) Principal Cycle Network Plan (2016) and Priority Route Maps (2017) however do indicate existing and future cycle routes surrounding the subject site. Figure 3-3 below demonstrates these routes.

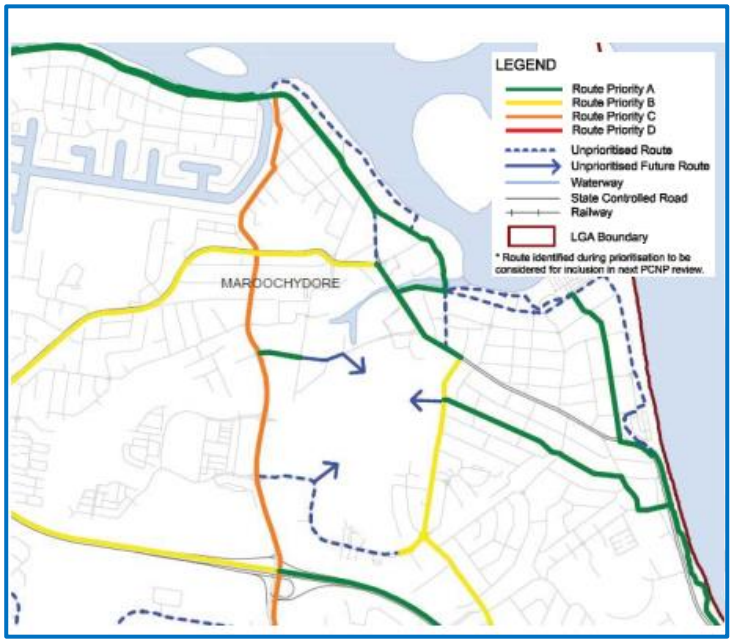


Figure 3-3: Cycle Network Surrounding the Subject Site

The PDA Development Scheme provides the Active Transport Plan as illustrated in Figure 3-4, including publicly accessible end-of-trip facilities (EOTF), which will be sited to connect with the principal cycle network at several points along the boundary of the PDA.

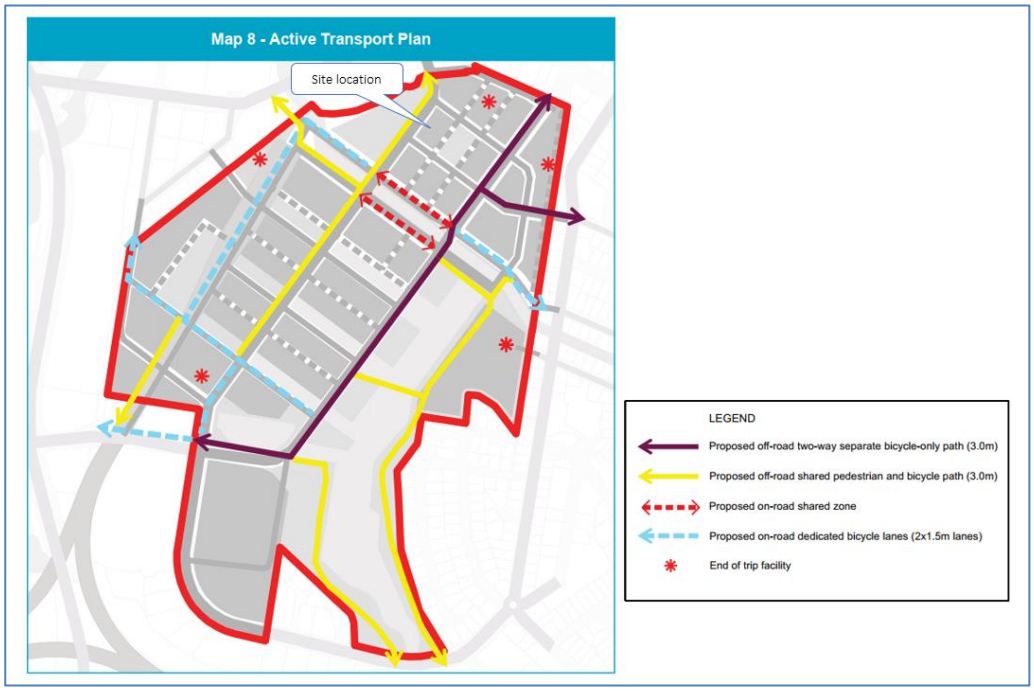


Figure 3-4: Active Transport Plan - PDA Development Scheme

As illustrated in Figure 3-3 and Figure 3-4, there are currently several high-priority routes surrounding the subject site, with unprioritized future routes planned to connect the Maroochydore PDA to the surrounding road network.

3.3.2 Future PDA Public Transport Facilities

Sunshine Coast Light Rail Project

Feasibility studies have been conducted for a Sunshine Coast Light Rail System and the construction is subject to funding. This light rail system will run between Maroochydore and Caloundra, with several route options being investigated for each major section of the route (Maroochydore, Mooloolaba, Kawana and Caloundra). The 3 options proposed for the Maroochydore section are illustrated in Figure 3-5.

Figure 3-5: Sunshine Coast Light Rail Route Options - Maroochydore

Option A has been ultimately selected as the preferred route and will service a wide pedestrian catchment area and support the Maroochydore PDA and transit interchange with future transport systems. Based on review of the available documents, stop locations for the light rail have yet to be finalised.

CAMCOS

The Caboolture to Maroochydore Corridor Study (CAMCOS) is a future passenger rail infrastructure that is located within the PDA which provides access from the south terminates to the north of the PDA. The rail line will run near the western boundary of the PDA.

3.3.3 Summary

Overall, the subject site is located in close proximity to a significant volume (and range) of existing and proposed public and active transport facilities.

4 Car Parking Arrangements

4.1 Development Scheme Parking Supply Requirement

The PDA Development Scheme specifies car parking rates for the PDA based on the land use and precinct. The development scheme refers to following land uses for on-site parking rates:

- Residential
- Non-residential
- Government/Emergency services and Community uses/Research and Technology Industry

The proposed private hospital (with ancillary retail/commercial land uses) therefore falls under *'Government/Emergency services and Community uses/Research and technology industry'* land use category which stipulates that *"car parking rates to be determined by a car parking management plan submitted with the PDA development application"*. The retail component of the private hospital is considered to be an ancillary use to the development and has therefore been excluded from the parking assessment.

4.1.1 Practical Parking Requirement

In determining the parking requirement for the development, TTM has reviewed several sources to identify a suitable supply. TTM has considered planning requirements, industry standards and first principles assessment based on our experience across these types of developments.

A first principles approach has been adopted for this assessment, as detailed below. The proposed development is broken into the following three variables to assess the practical demand.

Staff

Staff are to be provided a space per Full Time Employee (FTE) factored for car share and modal split.

- Car share estimated at 1.03 persons per car.
- Mode split estimated at 90% private car.

Hospital Patients / Visitors

Patients and visitor parking for a hospital is variable based on the type of services offered. Typically, a day surgery patient, undertaking an elective procedure in a private hospital is more likely to drive and park, than an emergency patient to a public hospital. TTM has identified parking rates between 0.5 and 0.8 spaces per bed from a review of current parking requirements within Local Government Areas (LGAs). Given the mix of public and private facilities on the site, a rate of 0.7 spaces per bed would appear to be suitable.

Consulting Suite Patients / Visitors

Finally, the above generally caters for hospital operations and ignore the higher patient demand of consultancy suites. It is noted that the staff component of these area is already accounted for in the FTE numbers for the site. With respect to patients, TTM adopts a rate of 2 spaces per suite for patients. This allows for 1 patient in consultation and 1 patient waiting/completing appointments.

The above first principles approach result in the following formula in determining the practical parking requirement:

Peak Parking Demand = [(No. FTE/Vehicle Occupancy) x %private car use] + [No. of beds in private hospital x 0.7] + [No.of individual consulting rooms within each tenancy x 2]

This equates to a total parking requirement of 206 spaces based on the following operational information provided by Essence:

- FTE: 103
- Hospital beds: 45
- Consulting rooms: 42

Peak Parking Demand = [(103/1.03) x 90%] + [45 x 0.7] + [42 x 2] = 206 spaces

Based on the above assessment, the proposed 210 spaces are considered suitable to service the proposed development.

4.1.2 PWD Parking

In accordance with the BCA, Class 5 buildings are required to provide PWD parking spaces at a rate of 1 space for every 100 parking spaces or part thereof. The development proposes 6 PWD parking spaces, with two located on each podium level. This provision satisfies the requirements outlined in the BCA.

4.1.3 Small Car Bays

The proposed parking supply includes 23 small car parking spaces. These will be allocated as staff parking spaces.

4.1.4 Motorcycle Parking

The PDA Development Scheme does not provide specific requirements for motorcycle parking. The development proposes to provide 20 motorcycle spaces located on podium levels 2 and 3. This is considered suitable to service the proposed development.

4.1.5 Conclusion

Overall, the parking supply for the proposed development is considered suitable.

4.2 Car Park Layout

Table 4-1 identifies the characteristics of the proposed car parking area with respect to the AS2890.1. The last column identifies the compliance of each design aspect.

Table 4-1: Parking Design Requirements

Design Aspect	AS2890.1 Requirement	Proposed Provision	Compliance
Parking Space Length: • Standard Space • PWD Space • Small Car Space	 5.4m 5.4m 5.0m	 5.4m 5.4m 5.0m	 Compliant Compliant Complaint
Parking Space Width: • Staff (Class 1A) • Visitor Medical (Class 3) • PWD Space	 2.4m 2.6m 2.4m + 2.4m 'shared area'	 2.4m (min) 2.6m 2.4m + 2.4m 'Shared Area'	 Compliant Compliant Compliant
Parking Envelope Clearance – Clearance to Walls	Space 0.3m clear of wall or large columns	Space 0.3m clear of wall or large columns	Compliant
Aisle Width: • Staff (Class 1A) • Visitor/Unallocated (Class 3) • Ramp	 5.8m 5.8m 6.1m (between walls)	 6.2m (min) 6.2m (min) 7m (between walls)	 Compliant Compliant Compliant
Parking Aisle Extension	1m beyond last bay	1m beyond last bay	Compliant
Maximum Gradient: • PWD parking • Parking bay • Parking aisle • Ramps	 1:40 (2.5%) 1:20 (5.0%) 1:16 (6.25%) 1:6 (25%)	 Flat Flat Flat 1:6 (25%)	 Compliant Compliant Compliant Compliant
Maximum Change in Grade	1:8 (12.5%) summit 1:6.67 (15.0%) sag	1:12 (8.33%)	Compliant Compliant
Height Clearance: • General Min. • Over PWD Space	 2.2m 2.5m	 2.2m min 2.5m min	 Compliant Compliant

In general, the proposed design provisions for the car parking areas generally comply with the requirements set out in the AS2890.1.

Overall, the design of the car parking areas for the proposed development is considered acceptable.

5 Site Access Arrangements

5.1 Overview

As per Map 5 Precinct Development Principles Plan, illustrated in Table 5-1 below the PDA Development Scheme only permits vehicle access to the subject site via South Sea Islander Way and Future Way.

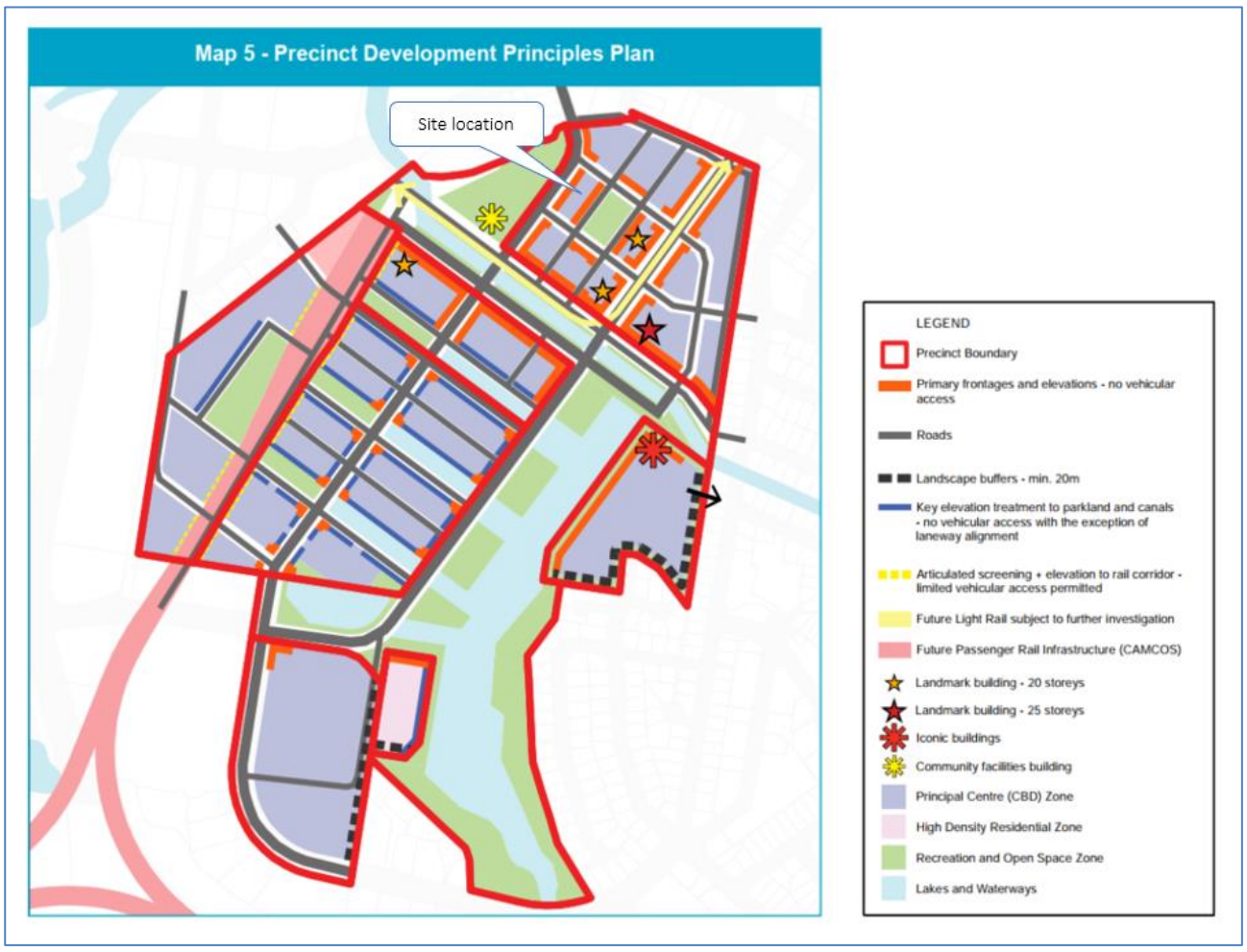


Figure 5-1: Map 5 Precinct Development Principles Plan - PDA Development Scheme

It is proposed that access to the parking and servicing areas will be achieved via a driveway crossover at Future Way, which aligns with the requirements outlined in the PDA Development Scheme.

5.2 Suitability of the Access Arrangements

It is proposed that access to the parking and servicing areas will be achieved via a 7.4m wide driveway crossover.

The proposed driveway crossover has been designed generally in accordance with Public Works Engineering Australia, Queensland (IPWEAQ) Standard Drawing RS-051.

In regard to other key access design parameters, AS2890.1 and AS2890.2 have been referred to. Table 5-1 details the design parameters in accordance with the requirements outlined in AS2890.1, AS2890.2 and IPWEAQ Standard Drawing No. RS-051. Where compliance is not achieved, further information is provided below.

Table 5-1: Design Characteristics for the Driveway Crossover

Design Aspect	AS2890.1 & AS2890.2 Requirement	Proposed Provision	Compliance
Crossover Width	6.5m (MRV)	7.4m	Compliant
Minimum Intersection Separation	6m from tangent point of kerb	6m from tangent point of kerb	Compliant
Sight Distance (Future Way)	Ideally 69m, minimum 45m (50kph)	West: Clear sight distance to Mundoo Blvd / Future Wy intersection East: > 100m	Compliant
Pedestrian Visibility Splays	2m x 2.5m	2.5m x 2.5m	Compliant
Entry Queue Capacity	30m (5 cars)	54m (9 cars)	Compliant
Gradient of first 6m	1:20 (5%)	Flat	Compliant

The design of the proposed crossover generally complies with the requirements outlined in AS2890.1, AS2890.2 and IPWEAQ Standard Drawing No. RS-051. Further information is provided below in relation to the form of the driveway crossover and specifically in relation to the exit splay.

5.2.1 Driveway Form

Whilst the form of the driveway crossover generally aligns with IPWEAQ Standard Drawing No. RS-051, the exit splay has been modified (and provided as a Type A) to ensure that adequate separation is provided to the Future Way/Market Lane intersection in accordance with the requirements outlined in AS2890.1. The modified exit splay is considered adequate in this instance based on the following:

- The driveway crossover is 7.4m wide, which satisfies the minimum requirements outlined in AS2890.2 to accommodate an MRV.
- It is anticipated that the majority of service vehicles will exit to the west towards Mundoo Boulevard. Mundoo Boulevard is a higher order road (main street boulevard) providing access to Plaza Parade and the wider road network within the Maroochydore PDA.
- Given the form of the adjacent road network and specifically the relatively narrow width of the nearside lane on Future Way, the provision of a standard (Type B2) splay would provide no significant improvement in terms of larger vehicles turning left onto Future Way (from the driveway crossover) with vehicles still required to encroach into the opposite lane.
- The modified exit splay will reduce the crossing distance for pedestrians at the driveway crossover.

5.2.2 Conclusion

Overall, the location and design of the access arrangements for the proposed development are considered acceptable.

6 Service Vehicle Arrangements

6.1 Servicing Requirements

The PDA development Scheme does not specify specific servicing requirements. Consequently, SCC's PSP has therefore been referred to as a guide.

Table 9.4.8.3.5 of the SCC's PSP stipulated the following in regard to the required amount of service vehicle spaces for hospital land uses: "*Sufficient spaces to accommodate number of vehicles likely to be parked at any one time (with min. 1 WCV bay)*".

6.2 Practical Requirements

6.2.1 General Servicing

Discussions with Essence Project Management Pty Ltd have confirmed the following in terms of estimated service vehicle demands:

- Kitchen & Food Deliveries
  - Reheat kitchen in the hospital only with
  - One (1) delivery daily
- Oxygen Deliveries
  - Expected to be delivered via small tanks and transported directly to the oxygen room.
  - Two (2) deliveries per week
- Linen Deliveries
  - Two (2) deliveries per week (outside of peak hours)
- Miscellaneous
  - General supplies and consumables
  - Three (3) deliveries per week (maximum)
- Fuel deliveries
  - To service the backup generators
  - Expected on an 'as needed' basis, no more than once (1) every few months

A total of 14 general servicing deliveries are expected each week, equating to approximately two (2) deliveries per day. It is expected that these deliveries will occur mostly by SRV sized vehicles.

6.2.2 Refuse Collection

Waste collection is proposed to occur via and Automated Waste Collection System (AWCS), which transports waste and recycling via underground pipes and infrastructure. However, it is noted that some waste and recycling cannot be accommodate by the AWCS due to the nature of the development as a hospital. In this instance, provision for a Waste Collection Vehicle (WCV) should be provided for on-site. As per the requirements in the PWIS, provision should be made for an 8.8m MRV sized WCW.

It is expected that waste collection by vehicles up to an MRV in size will occur daily. This is primarily to cater for non-general waste generated by the hospital, which needs to be collected frequently.

6.2.3 Ambulance Bay

The private hospital will not provide 'emergency services' and will therefore not require a dedicated ambulance bay to be provided.

In the unlikely event that an ambulance is required to access the private hospital, parking within the loading dock or level podium parking can occur.

6.3 Proposed Provisions

6.3.1 Loading Bay Provisions

As illustrated on the development plans included in Appendix A**,** it is proposed that an MRV bay and SRV bay will be provided on-site within a designated loading area on the ground floor.

It is intended that the loading bays will be managed by on-site management of the hospital, including the ground level retail tenancies. TTM recommend that the loading bays could be further managed by an online system such as mobileDOCK, to manage service vehicle access and arrival times. Application of such a system would assist the efficient servicing of the development, ensure correct vehicle size and manage potential vehicle access conflicts.

In addition, a service vehicle bay is proposed adjacent the hospital lift on podium level 1. This bay has been provided to directly service the 'wet lab'.

The proposed loading bay provision is therefore considered adequate.

6.3.2 Service Vehicle Manoeuvring

TTM has undertaken a swept path analysis (using Autotrack software) to determine the suitability of the service vehicle arrangements. Drawing No. 20BRT0317-01 included in Appendix B, confirms that the design of the service vehicle area is adequate to facilitate vehicular access and on-site manoeuvring by the MRV and SRV. The swept path for the fuel truck for the back-up generator is also documented in Drawing No. 20BRT0317-01.

The loading area has been designed to ensure service vehicles can enter and exit the site in a forward gear with manoeuvring to occur within the designated loading area, separate from the circulation road/ramp

facilitating access to the podium parking levels. The swept path analysis has demonstrated that service vehicles can 'hold' at exit of the loading area, prior to the circulation road/ramp facilitating access to the podium parking level and give-way to passenger vehicle entering or exiting the development prior to departing the site.

Unimpeded access is also provided to the loading area to ensure queuing will not occur onto Future Way.

6.3.3 Conclusion

Overall, the service vehicle design provisions for the development are considered acceptable and fit-for-purpose.

7 Active Transport

7.1 Public Transport

The proposed development is located within close proximity to several bus stops outside of the PDA area and the future proposed light rail is expected to provide a high level of public transport serviceability to all developments within the PDA.

7.2 Pedestrian Access

Formal footpaths are (or will be) provided along the site frontages.

Unsignalised pedestrian crossing facilities are provided at the following intersections surrounding the subject site:

- South Sea Islander Way/Market Lane
- Future Way/Market Lane
- Future Way/Mundoo Boulevard

A signalised pedestrian crossing is also located at the South Sea Islander Way/Mundoo Boulevard intersection.

Pedestrian access to the development will be facilitated via Mundoo Boulevard and Market Lane.

7.3 Cyclist Requirements

The PDA Development Scheme does not specifically provide guidance in relation to bicycle parking and/or EOTF requirements but does point to Austroads in regard to walking and cycling. Therefore, Appendix I of the Cycling Aspects of Austroads Guides document has been referred to in terms of determining the suitability of the proposed bicycle parking supply. The bicycle parking requirements (in accordance with Appendix I of the Cycling Aspects of Austroads Guides document) are provided in Table 7-1 below.

Table 7-1: Bicycle Parking Requirements

Land Use	Requirement	Extent	Requirement	Provision
General hospital: Employee	1 per 15 beds	45	3	78
General hospital: Visitor	1 per 30 beds	45	2	
Consulting rooms: Employee	1 per 8 practitioners	42	6	
Consulting rooms:	1 per 4 practitioners	42	11	
Retail (shop): Employee	1 per 300m^2 GFA	735m^2	3	
Retail (shop): Visitor	1 per 500m^2 GFA	735m^2	2	
Total			**27**	**78**

The development proposes to provide a total of 78 bicycle parking spaces which exceeds the requirements

outlined in Austroads. This is to encourage the use of active transport over private vehicle use, in line with the visions of the Maroochydore PDA.

Austroads Guide to Traffic Management Part 11: Parking Management Techniques notes bicycle parking facilities should be designed in accordance with AS2890.3. The proposed bicycle parking, as shown in the development plans included in Appendix A, has been designed in accordance with AS2890.3.

8 Traffic Impact Assessment

It is understood that SCC traffic models were utilised to assess the PDA development traffic impacts on the surrounding Maroochydore area and local road network with detailed traffic analysis for the PDA undertaken by Cardno.

According to the Precinct 3 plan, a maximum 15 story development is permitted on the subject site. The proposed development comprises 8 storeys, a significant reduction compared to the maximum allowable building height and resulting scale.

It is assumed that the traffic modelling undertaken by SCC and Cardno took into consideration the maximum building height (and resulting scale) noted in the Precinct 3 plan. Consequently, no additional traffic analysis is considered necessary.

9 Summary and Conclusions

9.1 Car Parking Arrangements

The parking provisions for the proposed development are considered suitable.

The design of the car parking areas for the proposed development is considered acceptable.

9.2 Access Arrangements

The access arrangements for the proposed development are considered suitable.

9.3 Service Vehicle Arrangements

The service vehicle arrangements are considered adequate to meet the needs of the proposed development.

9.4 Active Transport Facilities

The current and proposed public and active transport infrastructure is of a high standard to service the proposed development.

9.5 Impact on Surrounding Road Network

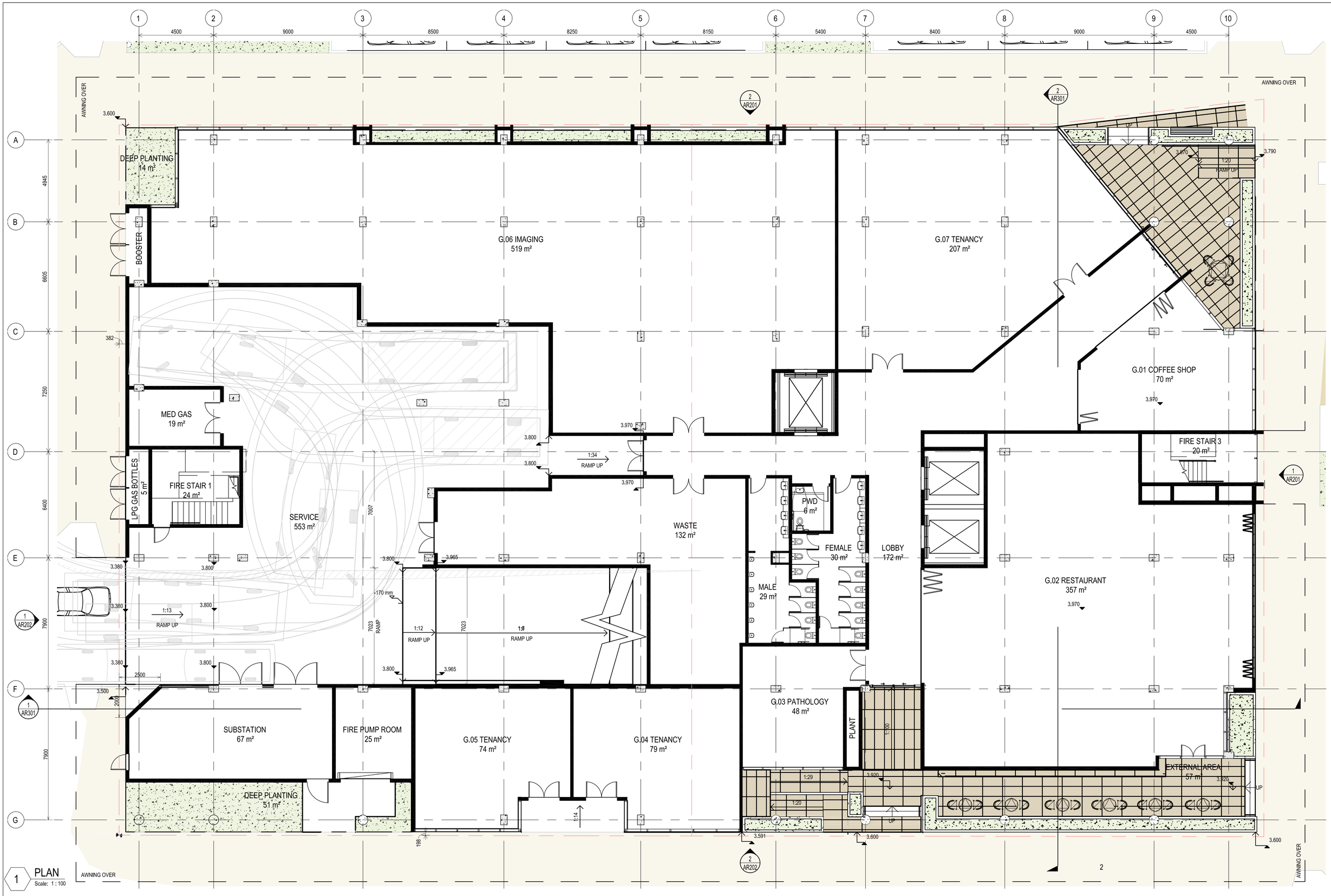
According to the Precinct 3 plan, a maximum 15 story development is permitted on the subject site. The proposed development comprises 8 storeys, a significant reduction compared to the maximum allowable building height and resulting scale.

It is assumed that the traffic modelling undertaken by SCC and Cardno took into consideration the maximum building height (and resulting scale) noted in the Precinct 3 plan. Consequently, no additional traffic analysis is considered necessary.

9.6 Conclusion

Based on the assessment contained within this report, TTM see no traffic engineering reason why the relevant approvals should not be granted.

Appendix A Development Plans



1 PLAN
Scale: 1 : 100

REV	DESCRIPTION	AUTH	CHK	DATE
A	DESIGN DEVELOPMENT	DSJ	MP	27.08.21
B	CLIENT REVIEW	DSJ	MP	10.09.21
C	FOR COORDINATION	DSJ	MP	16.09.21
D	SUN CENTRAL SUBMISSION	DH	PB	08.11.21
E	ISSUE FOR DEVELOPMENT APPROVAL	PM	MS	19.11.21

STATUS
DEVELOPMENT APPROVAL
0m 1 2 3 4 5

NORTH

CLIENT
BARWON INVESTMENT PARTNERS
BARWON

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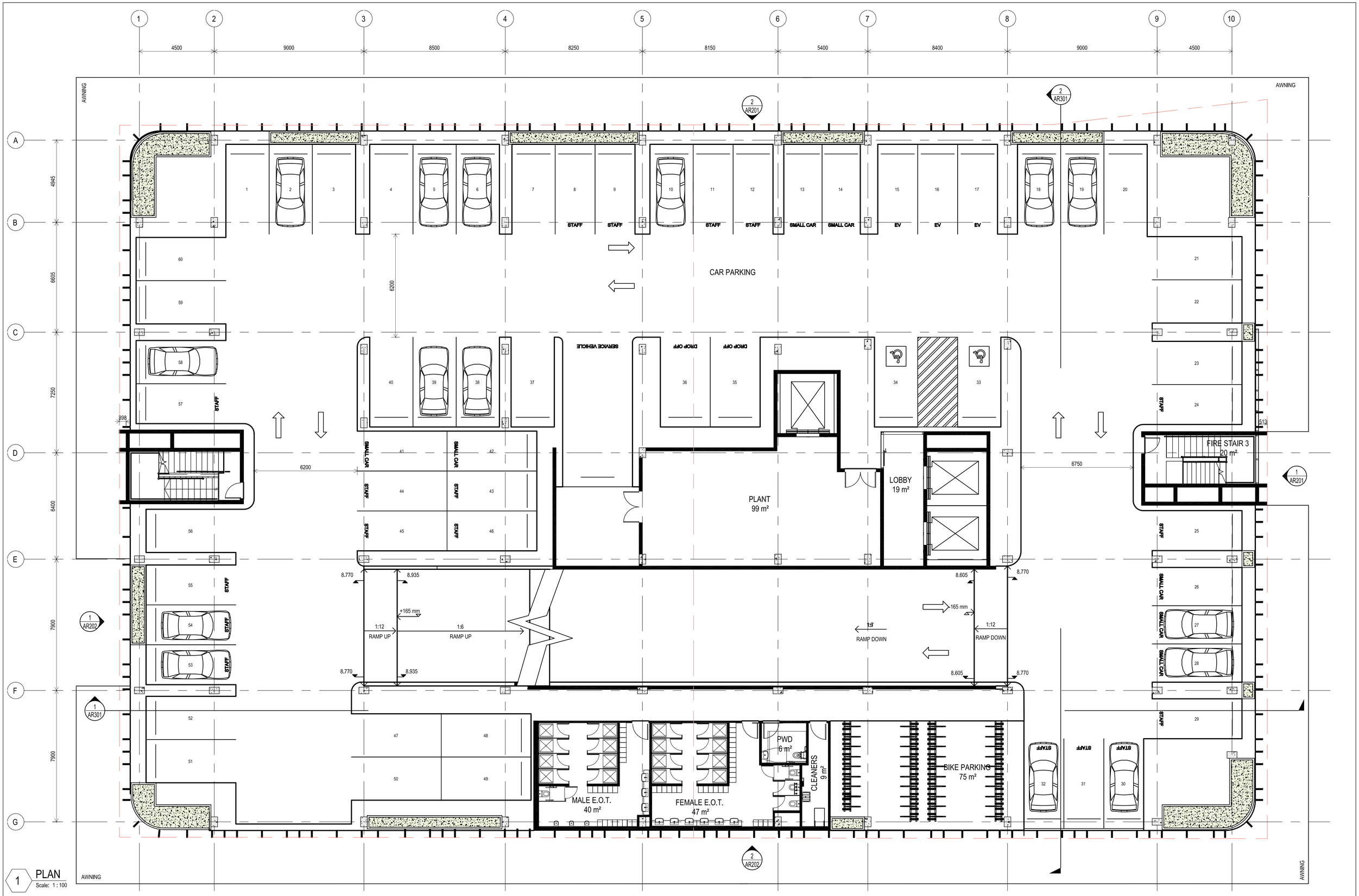
ABN: 65 112 807 931
HSPC HEALTH ARCHITECTS

PROJECT
PARKVIEW PLACE
Maroochydore Health Centre

DRAWING TITLE
FLOOR PLAN - GROUND LEVEL

DRAWN PM		CHECKED MS	
ISSUE 19/11/2021 4:05:01 PM		SCALE @ A1 1 : 100	
PROJECT No 20673	STAGE DA	DRAWING No MMX-AR-1000	REVISION E

19/11/2021 4:05:01 PM



1 PLAN
Scale: 1 : 100

REV	DESCRIPTION	AUTH	CHK	DATE
A	DESIGN DEVELOPMENT	DSJ	MP	27.08.21
B	CLIENT REVIEW	DSJ	MP	10.09.21
C	FOR COORDINATION	DSJ	MP	16.09.21
D	SUN CENTRAL SUBMISSION	DH	PB	08.11.21
E	ISSUE FOR DEVELOPMENT APPROVAL	PM	MS	19.11.21

STATUS
DEVELOPMENT APPROVAL
0m 1 2 3 4 5

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HSPC
HEALTH ARCHITECTS

PROJECT
PARKVIEW PLACE
Maroochydore Health Centre

DRAWING TITLE
FLOOR PLAN - LEVEL 01

DRAWN: PM	CHECKED: MS
ISSUE: 19/11/2021 4:05:10 PM	SCALE @ A1: 1 : 100
PROJECT No: 20673	STAGE: DA
DRAWING No: MMX-AR-1001	REVISION: E

19/11/2021 4:05:10 PM

1 PLAN
Scale: 1 : 100

REV	DESCRIPTION	AUTH	CHK	DATE
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B	CLIENT REVIEW	DSJ	MP	10.09.21
C	FOR COORDINATION	DSJ	MP	16.09.21
D	SUN CENTRAL SUBMISSION	DH	PB	08.11.21
E	ISSUE FOR DEVELOPMENT APPROVAL	PM	MS	19.11.21

STATUS
DEVELOPMENT APPROVAL
0m 1 2 3 4 5

NORTH

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HSPC HEALTH ARCHITECTS

PROJECT
PARKVIEW PLACE
Maroochydore Health Centre

DRAWING TITLE
FLOOR PLAN - LEVEL 02

DRAWN PM	CHECKED MS
ISSUE 19/11/2021 4:05:16 PM	SCALE @ A1 1 : 100
PROJECT No 20673	STAGE DA
DRAWING No MMX-AR-1002	REVISION E

19/11/2021 4:05:16 PM

1 PLAN
Scale: 1 : 100

REV	DESCRIPTION	AUTH	CHK	DATE
A	DESIGN DEVELOPMENT	DSJ	MP	27.08.21
B	CLIENT REVIEW	DSJ	MP	10.09.21
C	FOR COORDINATION	DSJ	MP	16.09.21
D	SUN CENTRAL SUBMISSION	DH	PB	08.11.21
E	ISSUE FOR DEVELOPMENT APPROVAL	PM	MS	19.11.21

STATUS
DEVELOPMENT APPROVAL
0m 1 2 3 4 5

NORTH

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HSPC HEALTH ARCHITECTS

PROJECT
PARKVIEW PLACE
Maroochydore Health Centre

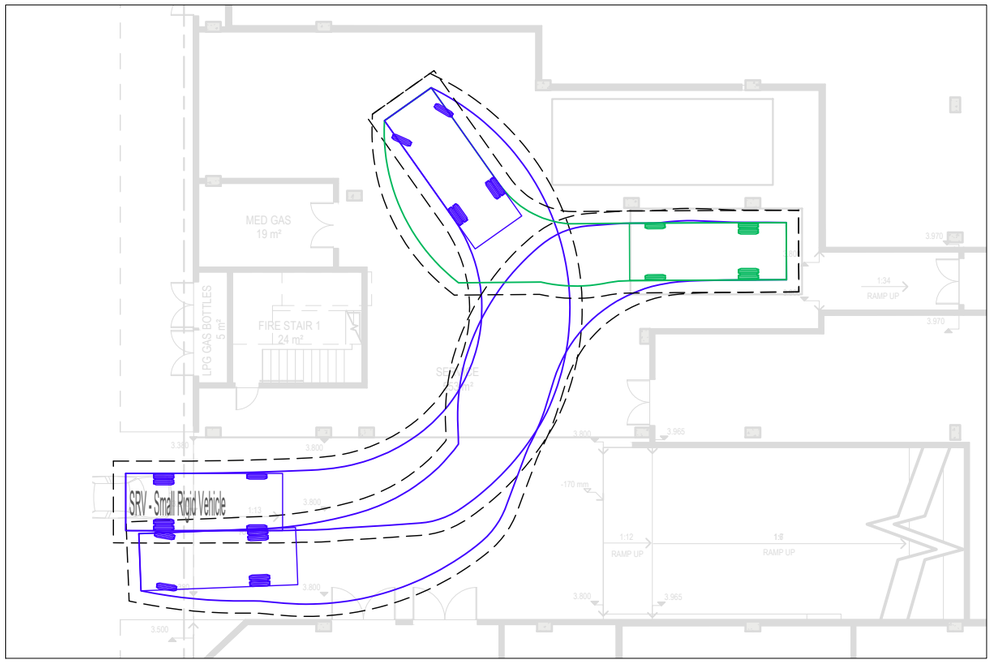
DRAWING TITLE
FLOOR PLAN - LEVEL 03

DRAWN	CHECKED
PM	MS
ISSUE	SCALE @ A1
10/11/2021 4:05:23 PM	1 : 100

PROJECT No	STAGE	DRAWING No	REVISION
20673	DA	MMX-AR-1003	E

19/11/2021 4:05:23 PM

Appendix B Swept Path Drawings



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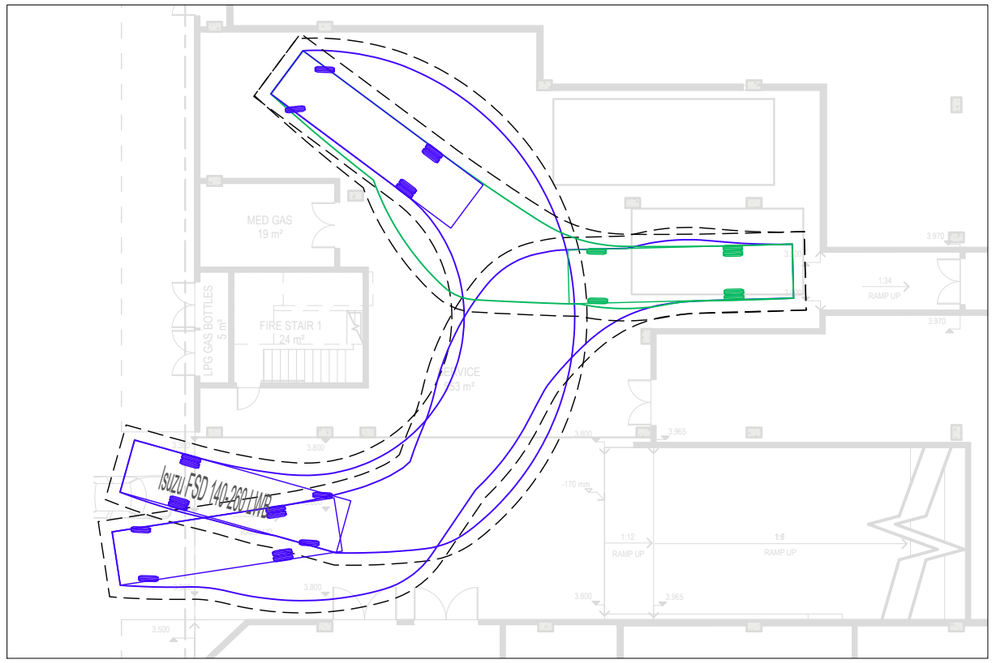
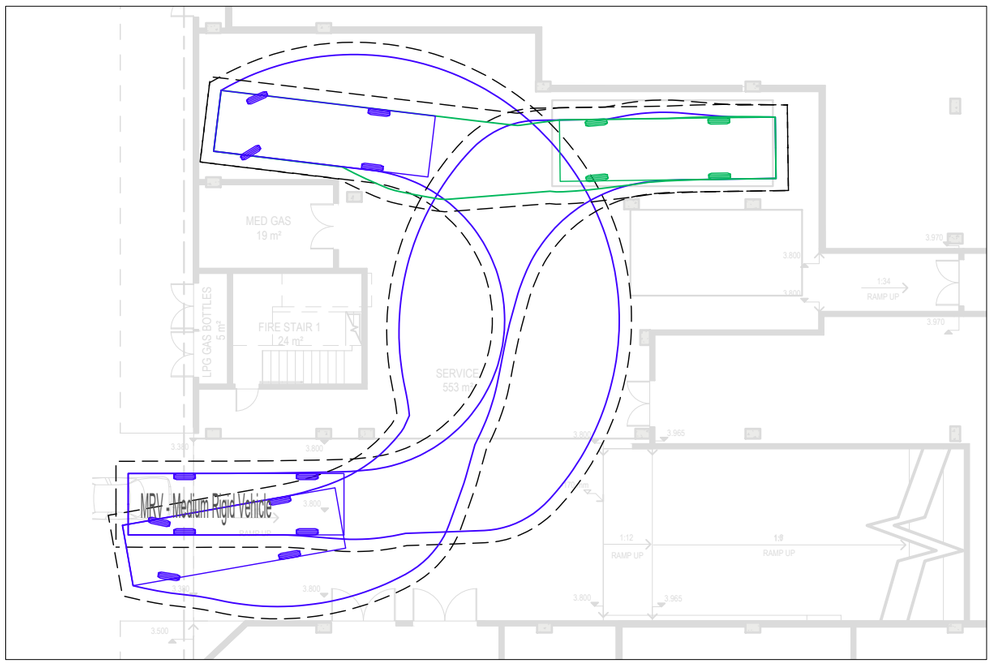
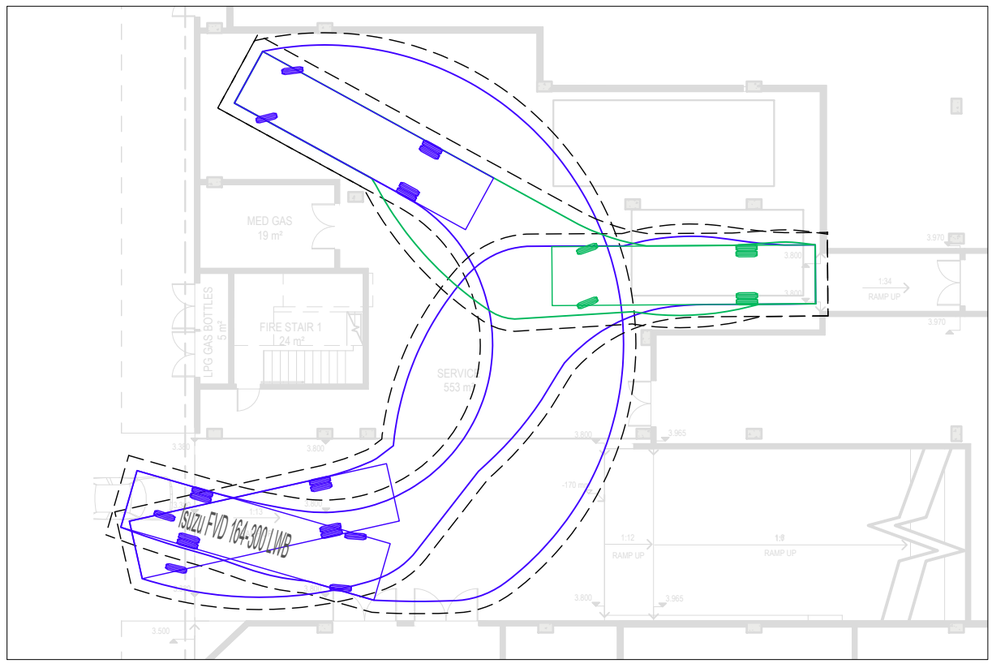


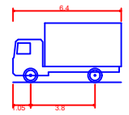
LOADING DOCK ACCESS - ISUZU FUEL TRUCK (140-260 LWB)



LOADING DOCK ACCESS - MRV

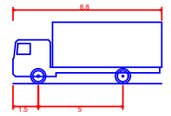


LOADING DOCK ACCESS - ISUZU FUEL TRUCK (164-300 LWB)



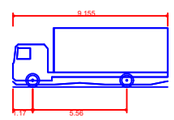
SRV - Small Rigid Vehicle

Overall Length	6.400m
Overall Width	2.330m
Overall Body Height	3.500m
Min Body Ground Clearance	0.398m
Track Width	2.330m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.100m



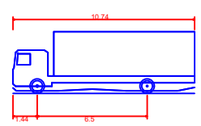
MRV - Medium Rigid Vehicle

Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10.000m



Isuzu FSD 140-260 LWB

Overall Length	9.155m
Overall Width	2.200m
Overall Body Height	3.488m
Min Body Ground Clearance	0.150m
Track Width	2.240m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	9.950m



Isuzu FVD 164-300 LWB

Overall Length	10.740m
Overall Width	2.400m
Overall Body Height	3.644m
Min Body Ground Clearance	0.150m
Track Width	2.445m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	11.350m

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	19-11-21	ORIGINAL ISSUE	SM	TB	AR

SCALE 0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

NORTH

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PROJECT
MAROOCHYDORE PDA PRIVATE HOSPITAL

DRAWING TITLE
SERVICE VEHICLE SWEPT PATH ANALYSIS
SRV, MRV AND ISUZU FUEL TRUCK DESIGN VEHICLES

PROJECT NUMBER	ORIGINAL SIZE
21BRT0317	A3
DRAWING NUMBER	REVISION
21BRT0317-01	A
DATE	SHEET
19 Nov 2021	1 OF 1