
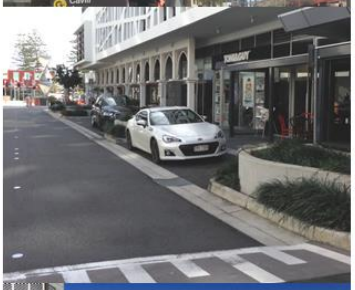




rytenskild
Traffic Engineering

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL
Approval no: DEV2024/1529
Date: 2 December 2024
Queensland Government

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL
Approval no: DEV2024/1529/2
Date: 07 March 2025
Queensland Government

TRANSPORT IMPACT ASSESSMENT

PROPOSED AGED CARE FACILITY

CORNER OF KARAKUL ROAD AND ANGORA ROAD, HAMILTON

(Response to EDQ Further Issues Letter, dated 21 August 2024)

AMENDED IN RED
By: Elrico Koeberg
Date: 13 February 2025
Queensland Government

Prepared for

ROCKPOOL

3 OCTOBER 2024

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Prepared by Luke Rytenskild, Isabella Ashby

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1.0 INTRODUCTION

Rytenskild Traffic Engineering (RTE) has been engaged by Rockpool to prepare a Transport Impact Assessment of its proposed aged care facility at Hamilton.

This report forms part of a Development Application to be lodged with Economic Development Queensland (EDQ). This is an updated version of the original traffic report in response to EDQ's Further Issues Letter (DEV2024/1529), dated 21 August 2024. Our responses to Item 1 of the request are provided below, with additional information provided within the report where necessary.

Items:

1. Traffic, Access and Servicing

a) On-street Parking

EDQ and Council have no objection to the proposed access location, however it results in loss of on-street parking. Noted that there may be an opportunity to offset the loss by providing an indented parking bay in Angora Road. Submit amended plans to demonstrate relocation of on-street parking in Angora Road.

b) Driveway

Section 5 of the Traffic Impact Assessment report contains errors, such as referencing an existing driveway that does not exist and it states a crossover width that is inconsistent with what is dimensioned on the referenced figure. Submit an amended Traffic Impact Assessment report to correct the abovementioned.

It is noted that the vegetated buildout shown on the western side of the driveway is not sufficiently sized to offset the loss on the eastern side. Submit amended engineering plans to demonstrate the vegetated buildout be extended to meet the driveway flare.

c) On Site Servicing

The occasional service vehicle for the proposed development, based on the Transport, Access, Parking and Servicing (TAPS) Planning Scheme Policy (PSP) of Brisbane City Plan 2014 (City Plan), is an LRV. As mentioned in the Traffic Impact Assessment report, the 10.24m LRV is significantly smaller than the standard 12.5m LRV. Submit amended swept path analysis certified by RPEQ to demonstrate manoeuvring for LRV (Please note that the swept path analysis and 10.24 m LVR is not supported by Council).

In addition, the submitted materials are not clear to demonstrate the site can be suitably serviced by the relevant design vehicle, with any Porte-cochere structure to exceed the clearance requirements for RCV circulation to operate as shown in the Traffic Impact Assessment report. To ensure sufficient on-site waste collection can be serviced, a minimum of 4.5 meters vertical height clearance over the loading dock and drop-off areas must be provided.

Furthermore, the swept path analysis references rear load RCV, however the report conclusion references a front loading RCV. It is noted the operating clearance for front loading RCV is significantly higher (as detailed in the Refuse PSP). Clarification and revised swept paths are required to demonstrate the proposed service vehicle and comply with the abovementioned requirements.

Response:

A On-street parking

It is agreed that an additional on-street parking module can be provided at the location shown below.

Figure 1 – Proposed additional on-street parking in Angora Road

B Driveway

Section 5 has been amended.

C Servicing

The site plan has been modified so that a Heavy Rigid Vehicle (HRV) can access and manoeuvre on-site. This sized vehicle will not require regular access and will need to manoeuvre over four staff allocated parking spaces. This is considered to be satisfactory as management can arrange for those spaces to be kept clear when such a vehicle is scheduled to arrive.

2.0 SUBJECT SITE

As shown in Figure 2.1, the subject site is located on the northern side of the Angora Road / Karakul Road intersection. The site is vacant and located within the Economic Development Queensland (EDQ) zone.

Angora Road and Karakul Road are classified as local roads, each featuring a single lane of travel in both directions. As shown in Figure 2.2, Angora Road functions as a through road for Macarthur Avenue connecting at either end via roundabouts. Angora Road connects to Karakul Road via a basic T-junction, with Angora Road functioning as the priority.

FIGURE 2.1 – LOCATION OF SUBJECT SITE

FIGURE 2.2 – IMAGES OF SURROUNDING ROAD NETWORK

3.0 DEVELOPMENT PROPOSAL

The proposal is for a residential (aged) care facility comprising of approximately 153 beds.

Car parking is proposed over ground level, with a total provision of 44 car parking spaces.

Access to car parking facilities and the loading area will be provided off Karakul Road.

The proposed lower ground and ground floor plans are shown in Figure 3.1.

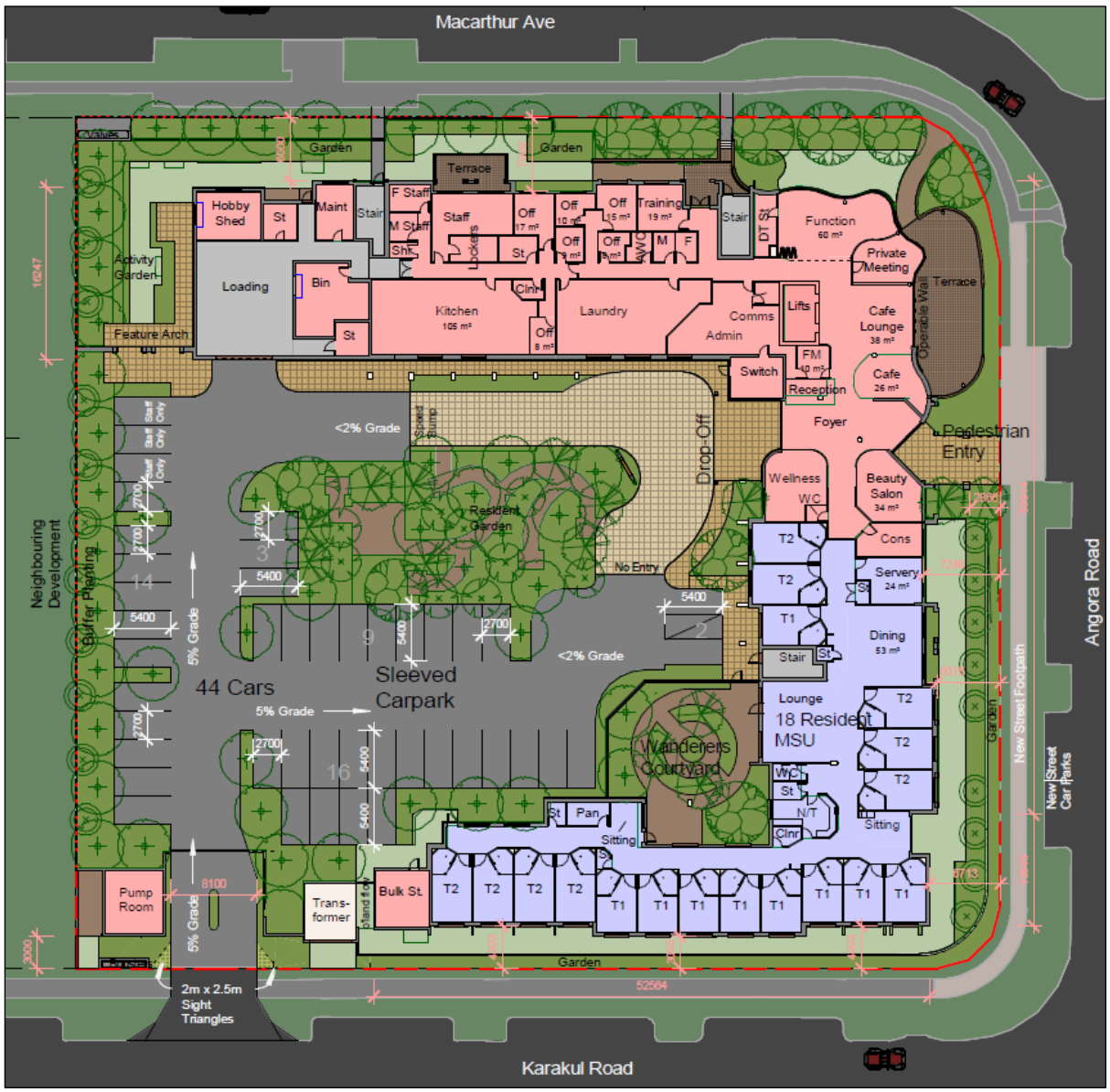

FIGURE 3.1 – PROPOSED GROUND FLOOR PLAN

4.0 CAR PARKING

4.1 Car Parking Supply

It is noted that the TAPS Code stipulates the following rate for the proposed use:

Residential care facility:
1 space per 6 beds

Application of the above rate results in a minimum requirement of 25.5 (26) parking spaces for the proposal. The proposed provision of 44 spaces therefore exceeds the Acceptable outcome to the TAPS Code.

4.2 Car Parking Design

The geometric layout of the proposed parking facilities has generally been designed to comply with the relevant requirements specified in the TAPS PSP and AS2890.1: 2004. A summary of the proposed car parking characteristics is provided in Table 4.1.

Table 4.1 – Car Parking Design Characteristics

Design Aspect	Minimum Standard	Proposed Provision	Compliance
Parking space length: - Visitor - Staff	 5.4 metres 5.4 metres	 5.4 metres 5.4 metres	 Compliant Compliant
Parking space width: - Visitor - Staff	 2.5 metres 2.4 metres	 2.7 metres 2.7 metres	 Compliant Compliant
Aisle Width: - Parking aisle - Circulation aisle	 5.8 metres 5.5 metres	 >5.8 metres >5.5 metres	 Compliant Compliant
Maximum Gradient - Parking Bay - Parking Aisle - Ramp	 1:20 (5.0%) 1:16 (6.25%) 1:40 (2.5%)	 <1:20 (5.0%) <1:20 (5.0%) <1:4 (25%)	Compliant
Maximum Change in Grade	1:8 (12.5%) summit 1:6.67 (15.0%) sag	Max. 5%	Compliant
Height Clearance - General Min. - Absolute Min.	 2.2 metres N/A	>2.2 metres	Compliant
Parking Aisle Extension	1 metre beyond last bay	2.0 metres	Compliant

The proposed car parking dimensions are shown in Figure 4.1.

A swept path analysis of the proposed car park indicates that the required design vehicle will be able to access and manoeuvre within the facility satisfactorily. Swept path diagrams for B85 and B99 vehicles are provided as Figures 4.2 and 4.3.

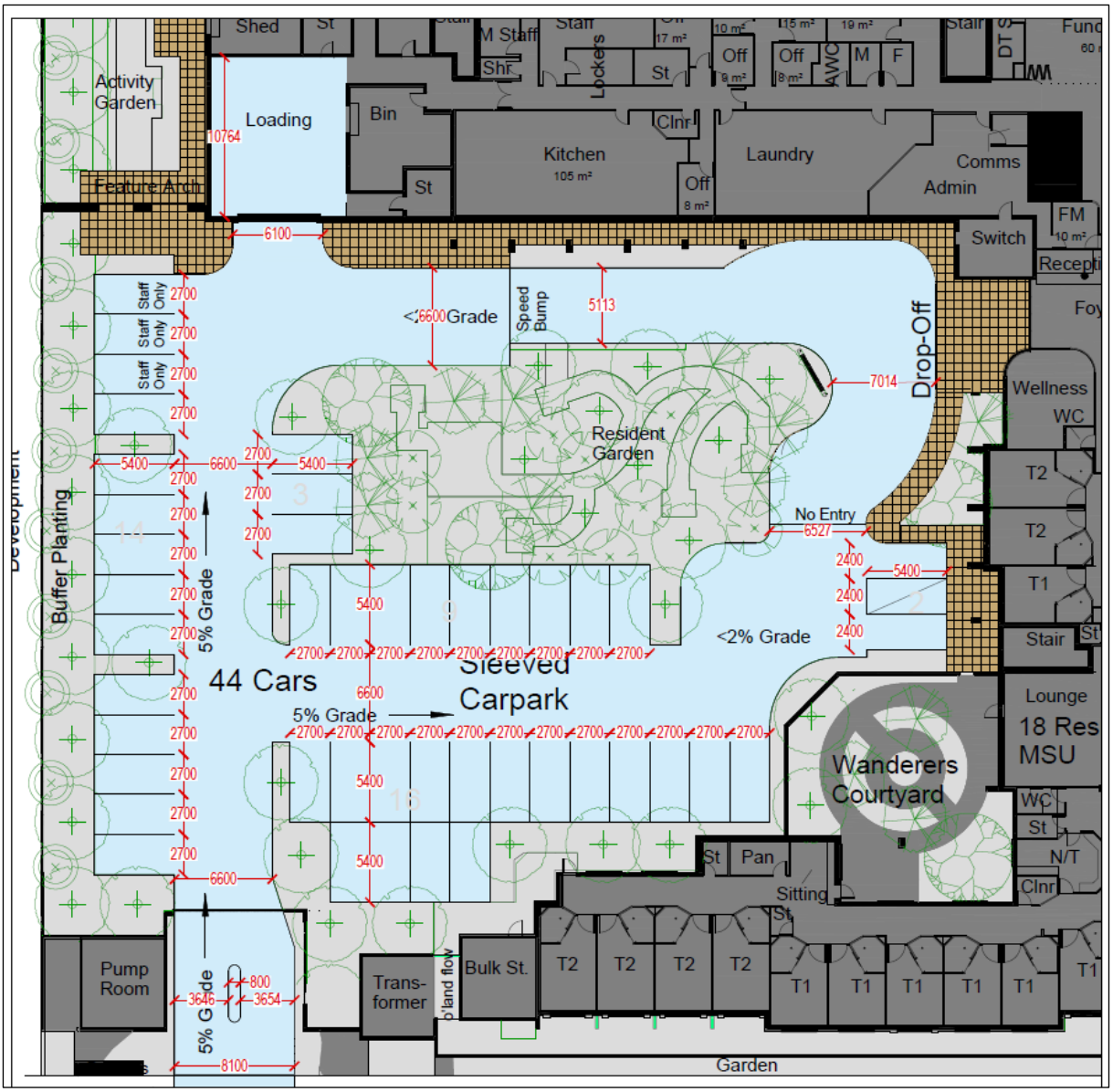

FIGURE 4.1 – DIMENSIONED CAR PARKING PLAN

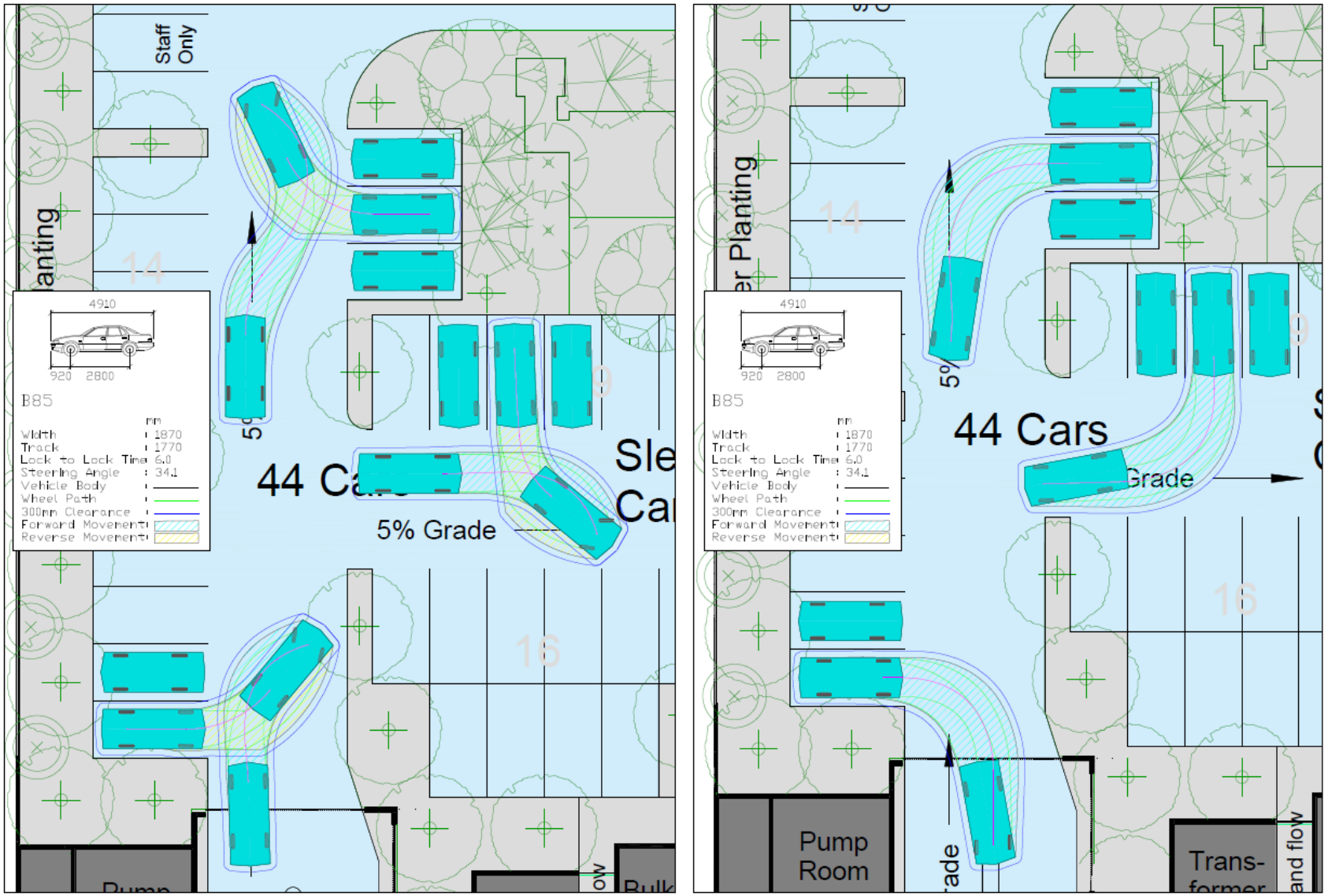

FIGURE 4.2 – SWEPT PATH OF 85TH PERCENTILE VEHICLES

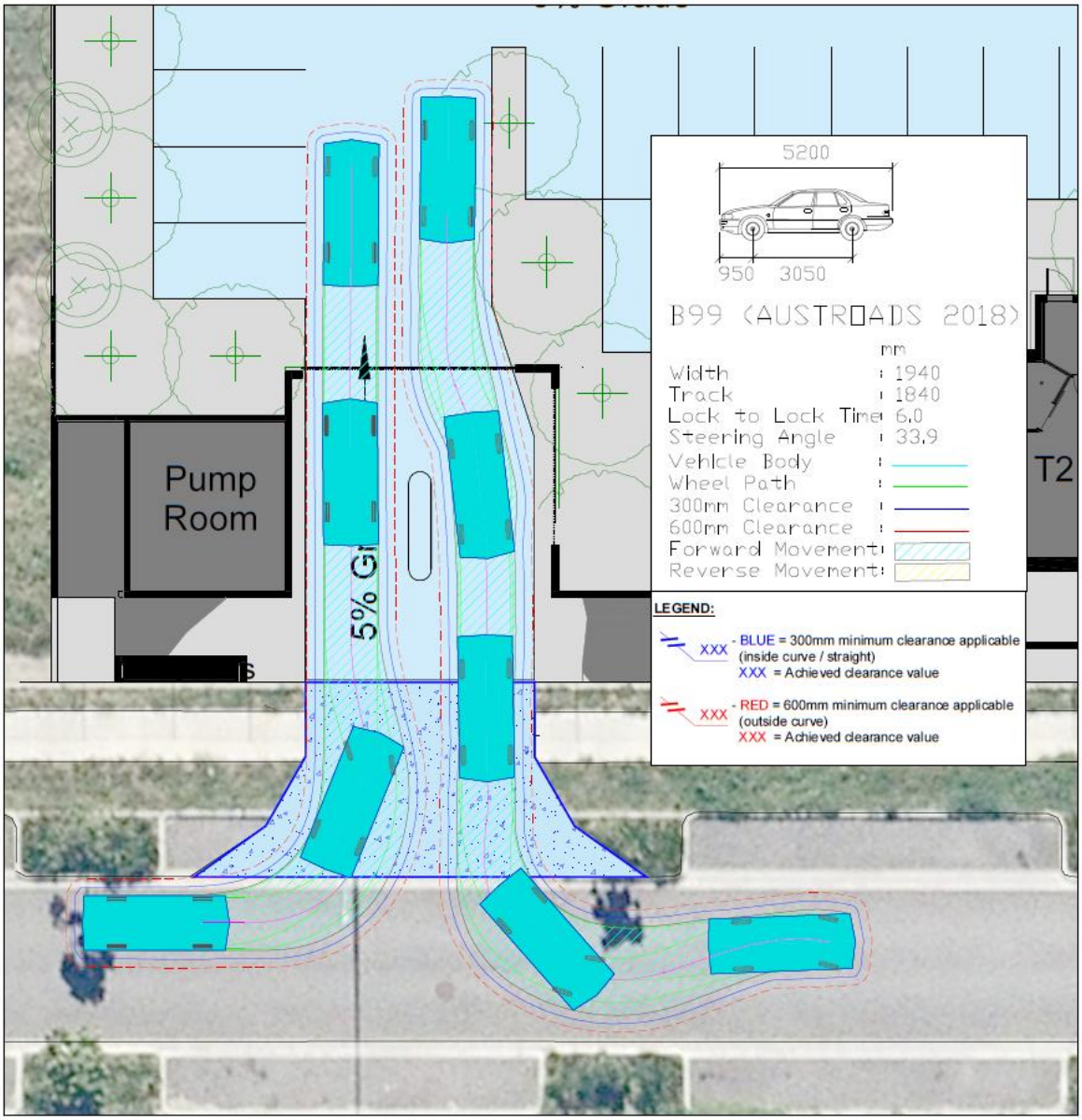

FIGURE 4.3 – SWEPT PATH OF 99TH PERCENTILE VEHICLES

5.0 ACCESS ARRANGEMENTS

Vehicular access will be located from a single crossover located at the northern end of the Karakul Road frontage. As shown in Figure 5.1, it is proposed that a Type B2 (8.1m) crossover be provided.

Pedestrian sight splays, in accordance with AS2890.1, have been provided on both sides of the driveway to ensure visibility and safety.

It is noted that the existing vegetated build out will be modified to suit the new vehicle crossover arrangements.

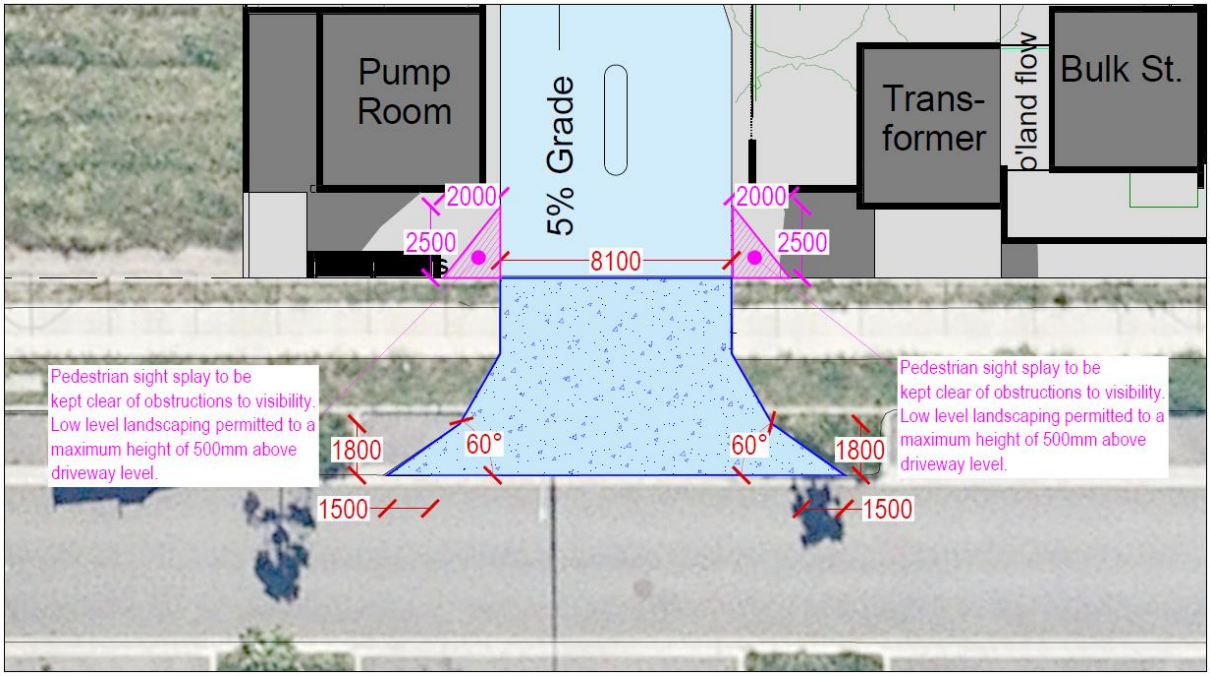

FIGURE 5.1 – PROPOSED VEHICLE CROSSOVER LAYOUT AND DIMENSIONS (KARAKUL ROAD)

6.0 PROVISION FOR SERVICE VEHICLES

As shown in Figures 6.1 and 6.2, the proposed loading facility satisfactorily allows for access by rear lift Refuse Collection Vehicle. The largest delivery vehicles will be smaller than an RCV.

In accordance with Table 1 of the TAPS PSP, a Residential Care Facility is required to make provision for Regular access by a Large Rigid Vehicle. The site plan has been modified so that a Heavy Rigid Vehicle (HRV) can access and manoeuvre on-site (refer to Figure 6.3). This sized vehicle will not require regular access and will need to manoeuvre over two staff allocated parking spaces. This is considered to be satisfactory as management can arrange for those spaces to be kept clear when such a vehicle is scheduled to arrive.

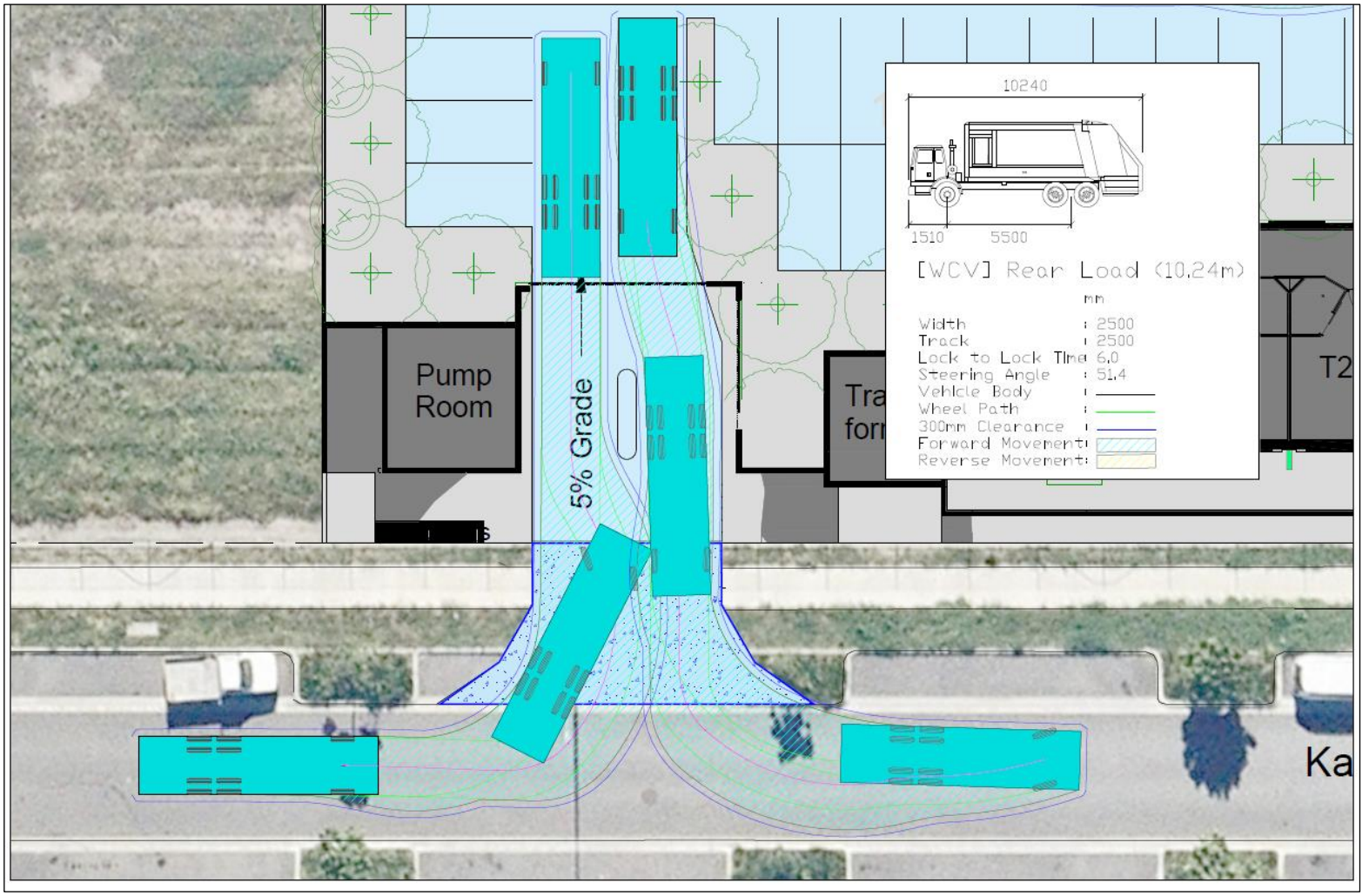

FIGURE 6.1 – SWEPT PATHS OF REAR LIFT REFUSE COLLECTION VEHICLE AT ACCESS DRIVEWAY

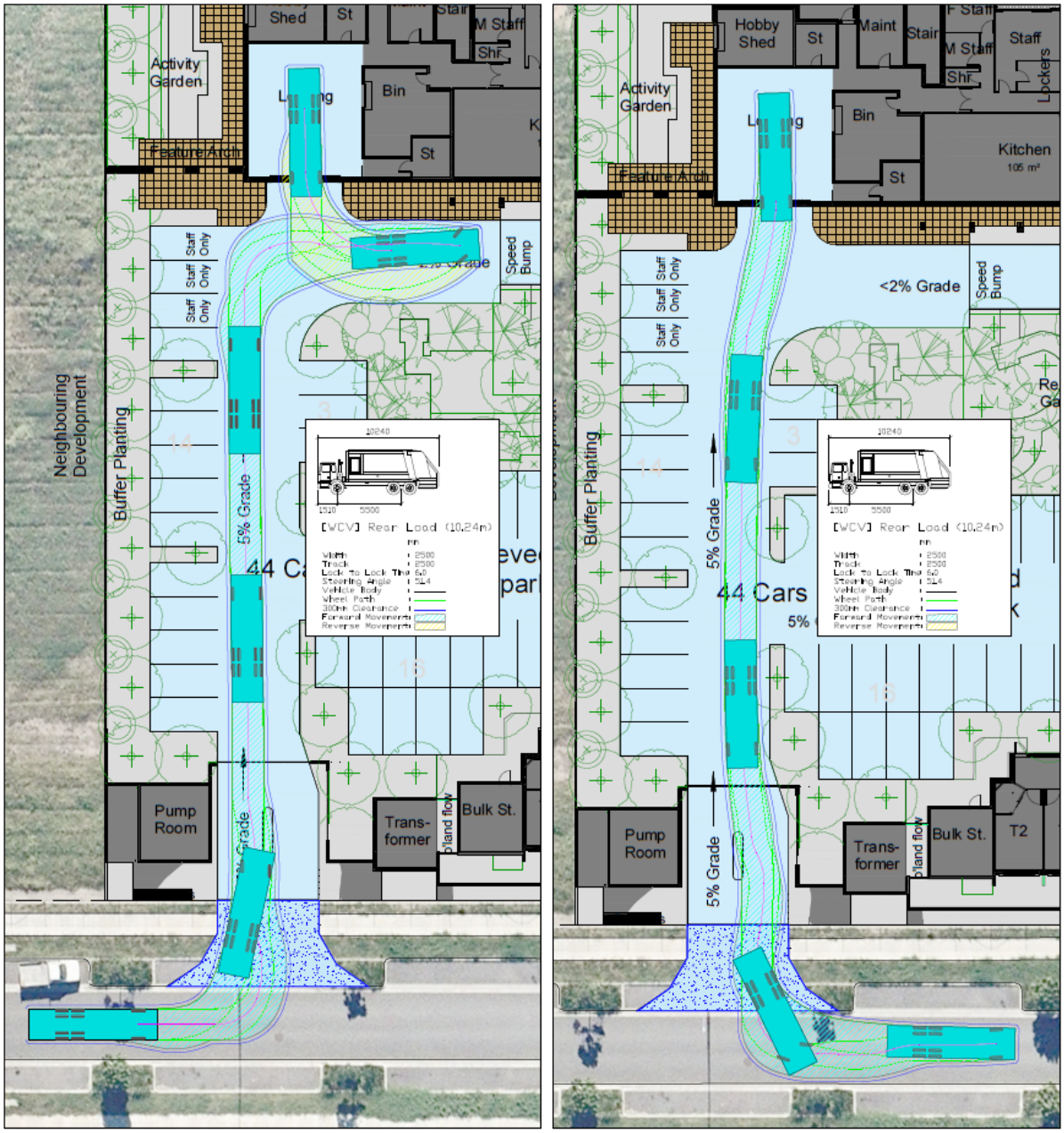

FIGURE 6.2 – ON-SITE MANOEUVRING FOR REAR LIFT REFUSE COLLECTION VEHICLE

FIGURE 6.3 – SWEPT PATHS FOR A HEAVY RIGID VEHICLE (HRV)

7.0 PROVISION FOR PEDESTRIANS AND CYCLISTS

It has been observed that even residents who are physically capable of leaving the property independently seldom do so. Typically, residents leave the property only in the company of a carer or family member. Therefore, any pedestrian movements associated with the proposal will primarily involve staff and visitors.

Notwithstanding the above, pedestrian entries have been provided that connect to the Macarthur Avenue and Angora Road frontages.

The Northshore Hamilton Priority Development Area Development Scheme and Brisbane City Plan do not mandate bicycle parking for Aged Care facilities. However, if it is found that bicycle parking and end-of-trip facilities are necessary to achieve targeted Green Star points, hence, appropriate bicycle parking, end-of-trip facilities, and relevant accessways will be provided.

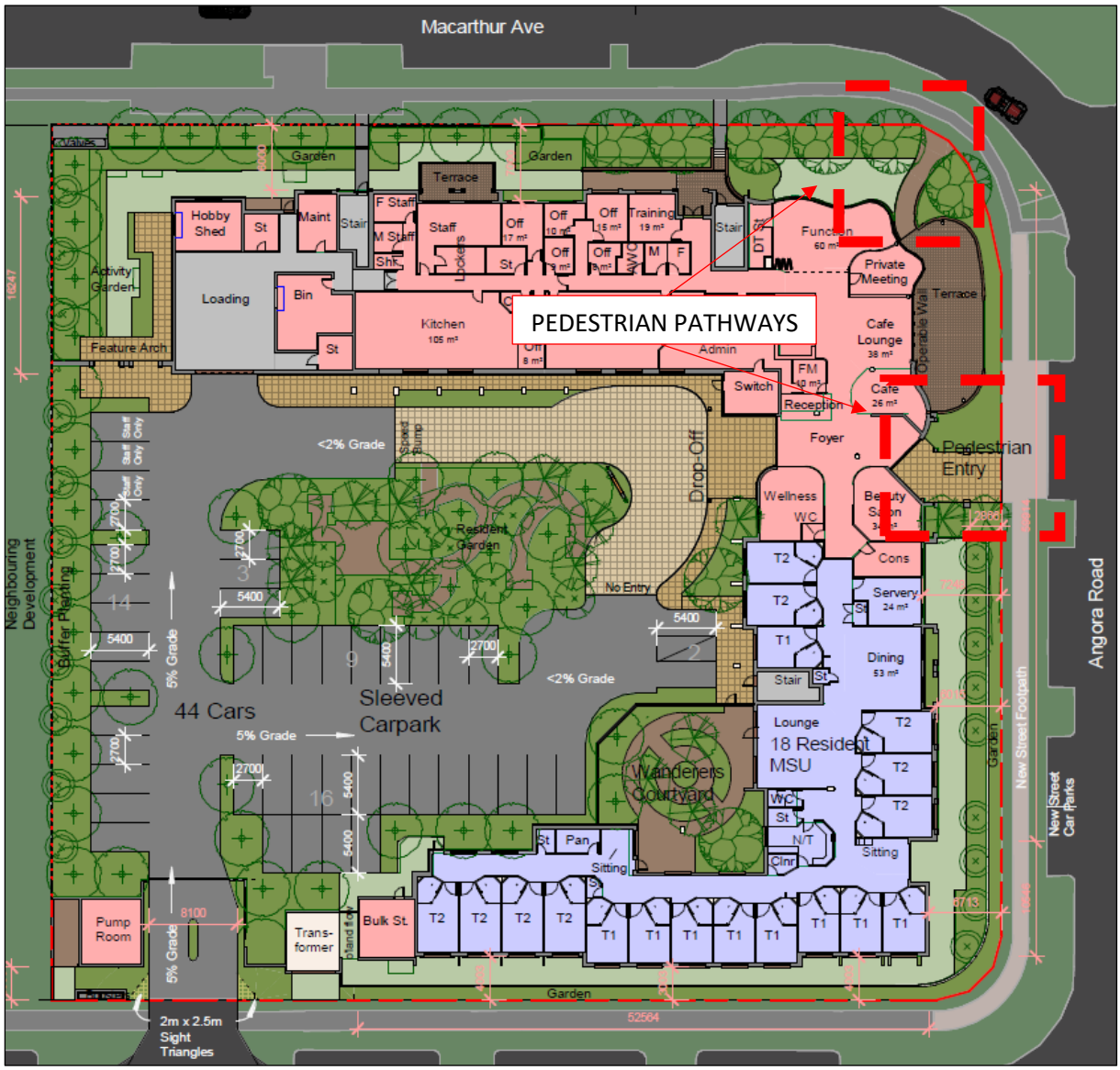

FIGURE 7.1 – PROVISION FOR PEDESTRIANS AND CYCLISTS

8.0 ROAD NETWORK IMPACT

8.1 Development Traffic Estimates

In general, aged care facilities and particularly where residents rely on nursing care, have a low traffic impact. Residents are not capable of driving and so vehicle trips are only generated by staff and visitors.

In accordance with standard trip generation rates, 'high care' aged care facilities typically generate traffic at a rate of 0.1 – 0.2 peak hour trips / bed. Assuming the higher end of the range, this equates to a traffic generation of approximately 31 vehicle movements per peak hour period. Based on information provided by the Applicant, it is estimated that the proposal will generate in the order of 30 vehicle movements per hour at the time when shifts will change.

The proposal will generate some small – medium rigid vehicle deliveries (eg food supplies, linen, general maintenance, medical waste). It is expected that the proposal will require four RCV visits per week (2 x general and 2 x recycling).

8.2 Road Network Impacts

The surrounding road network has been designed to accommodate planned development in the EDQ zone. Critical intersections within the local area are controlled by roundabouts with intersections with the major arterial network controlled by high-capacity signalised junctions. As discussed above, the traffic generation of the proposal will be relatively low, and likely to be significantly less than envisioned during the planning and design phase of the surrounding road network. As such, a detailed assessment of road network impacts is not considered to be warranted.

9.0 SUMMARY OF CONCLUSIONS & RECOMMENDATIONS

- The subject site is located on the northern side of the Angora Road / Karakul Road intersection. The site is currently vacant and is located within the Economic Development Queensland (EDQ) zone.

- Given that the site is located within Brisbane City, the Transport, Access, Parking and Servicing Planning Scheme Policy (TAPS PSP) has been used as a guide.

- The proposal is for a residential (aged) care facility comprising of approximately 153 beds. Car parking is proposed over ground level, with a total provision of 44 car parking spaces. Access to car parking facilities and the loading area will be provided off Karakul Road.

- The proposed car parking supply exceeds the Acceptable outcome to the TAPS code. The geometric layout of the proposed parking facilities has generally been designed to comply with the relevant requirements specified in the TAPS Code.

- Provision has been made for a rear lift RCV to manoeuvre on-site. Small Rigid vehicles will be able to circulate through the car park to the building entrance allowing for easy access for ambulances. The site plan has been modified so that a Heavy Rigid Vehicle (HRV) can access and manoeuvre on-site (refer to Figure 6.3). This sized vehicle will not require regular access and will need to manoeuvre over four staff allocated parking spaces. This is considered to be satisfactory as management can arrange for those spaces to be kept clear when such a vehicle is scheduled to arrive.