



PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

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TRANSPORT ASSESSMENT

PROPOSED WAREHOUSE DEVELOPMENT

LOT 28, WONGAWALLEN DRIVE, YARRABILBA

(Response to EDQ Request for Further Information, dated
26 July 2024)

Prepared for

PJ DEVELOPMENTS

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1.0 INTRODUCTION

Rytenskild Traffic Engineering (RTE) has been engaged by PJ Developments to review the transport elements of its proposed service industry and warehouse development in Yarrabilba.

This report forms part of a Development Application to be lodged with Economic Development Queensland (EDQ). The following matters have been addressed during the study:

- Car parking supply and design;
- Vehicle access arrangements;
- Provision for pedestrians and cyclists;
- Heavy vehicle access and on-site circulation.

A Further Issues Letter from EDQ dated 26 July 2024 has been received and responses to the following traffic-related items have been addressed below and throughout the report.

Item:

5. Traffic Impact Assessment (TIA)

a) Section 4.2 – Car Parking Design:

i. The nominated width for car parking spaces is 2.5m. However, the width of bays in the proximity of units 1, 2, 3 and 10 are 2.4m wide. Provide clarification on the sizing of the carpark spaces and submit the amended plans to confirm consistent widths of carparking spaces.

ii. B85 is nominated as the relevant design vehicle for swept path analysis. Submit amended swept path analysis to demonstrate B99 can be accommodated instead of the proposed B85.

Response:

- Car parking at industrial developments such as the proposed are generally dimensioned at 2.4 metres wide, as most light vehicles park at the site for an extended period of time, and there is typically only a small number of visitors. The proposal includes a significant number of spaces at 2.5 metres wide, which will comfortably allow for visitors to the site. Car parking spaces with a width of 2.4 metres will generally be used by workers.
- In accordance with AS2890.1, a B85 vehicle is nominated as the design vehicle for manoeuvring two and from car parking spaces. A B99 vehicle is used to check circulation.

Item:

b) Section 6 – Provision for Heavy Vehicle provided swept paths for AV only shows circulation without demonstrate how it is able to park for any loading/ unloading purposes. Submit amended swept paths for AV showing the following:

- ingress and egress in all directions on Wongawallan Drive and Edison Crescent; and

ii) location of parking for loading and unloading without impacting accessibility to car parks

Response:

- i. It is not intended that Articulated Vehicles (AV) will require access to the site, and the report has been modified accordingly so that a Heavy Rigid Vehicle (HRV) is the design vehicle for regular access.
- ii. The proposal provides access and loading by service vehicles up to the size of a Heavy Rigid Vehicle (HRV). As shown in Figure 6.1, a HRV is able to utilise the loading bay without impacting the accessibility of surrounding car parking spaces. The site forms part of a master plan and the surrounding road network has been designed to cater for the proposed use.

Item:

- c) The submitted TIA and plans does not include the anticipated traffic generation rate for the development. Submit an amended TIA and plans to include the anticipated traffic generation rate for this development.

Response:

The report has been revised to include the anticipated traffic generation of the development based on the rates outlined in the DTMR *Road Planning and Design Manual (RPDM)*. As detailed in Section 8, the proposal has a traffic generation potential of 15 trips per peak hour. This level of traffic generation is considered low and should not adversely impact upon the operation of the surrounding road network.

EDQ raised further issues in its email dated 9 September 2024. A response to each of the issues are provided below:

Item:

1 Potential Impacts of the Proposed Driveway Crossover Location

Due to the below swept paths shown non-satisfactory circulation, therefore solely rely on compliance with AS2890 of 6m separation requirements is not supported. Justifications of safety issues and circulation are needed to analyse the suitability of the proposed location.

Response:

The proposed driveway off Wongawallen Drive will primarily be used by light vehicles, and only by heavy vehicles exiting the site. Given the position of the site in the network, heavy vehicles will typically only turn left from the site and travel north. The location of the driveway complies with AS2890 and is therefore generally considered to be satisfactory with respect to safety issues. It is noted that driveways located near intersections are generally only a concern where there are significant right-turn movements conflicting with turning traffic at the intersection. In this case, the majority of traffic will turn left from the driveway with only a small volume turning right. There is ample separation from the nearby intersection to allow such movements to occur safely.

2 HRV Swept Paths

The proposed HRV swept paths show that the vehicle is traversing over the verge which would cause ongoing maintenance issues. Also, the swept path does not show the entire path from the street to the bay as well as leaving the bay and exiting the site.

Response:

The swept path analysis has been modified so that the paths are contained on the crossover.

3 AV Swept Paths

The proposed AV swept paths through the site via Wongawallan Drive shows conflict with 3 parking bays. That means these 3 bays are to be vacant for the AV to be able to move through the site. If the AV visit is not organised in advance and the bays in question are not vacant by the time the AV is within the site, it could have impacts on the vehicles trying to enter the site which consequentially could have impacts external to the site.

Response:

AV swept paths have been removed from the report. The applicant does not intend to allow Articulated Vehicles too access the site, nor will there be a demand for such given the size of the tenancies.

4 B99 Swept Paths

The B99 swept paths associated with the Wongawallan Drive driveway as shown on Figure 5.5 of the updated traffic report are not satisfactory. This is due to the conflict between vehicles exiting and entering the site which is caused by the loading bay encroachments onto the aisle. Vehicles accessing the site would be required to stop at the driveway which could have an impact on the road network.

Response:

The plan has been modified so that there is no conflict between B99 vehicles circulating and the operation of the loading bay.

5 Safety Issues - Sight Displays

The sight displays at the property boundary is obstructed by the proposed car parking spaces at the boundary associated with Unit 1. The design would need to change to ensure this safety matter is satisfactorily addressed.

Response:

The plan has been modified so that compliant sight splays are provided at each driveway. Please refer to Figures 5.1 – 5.3.

2.0 SUBJECT SITE

As shown in Figure 2.1, the subject site is located within the Yarrabilba MIBA Precinct 2A and part of Precinct 5 and is situated on the south western corner of the Wongawallen Drive / Edison Court (new road) intersection. The site is identified as proposed Lot 28 and has a total site area of 3,180m².

The site is located within the Priority Development Area and is currently vacant.

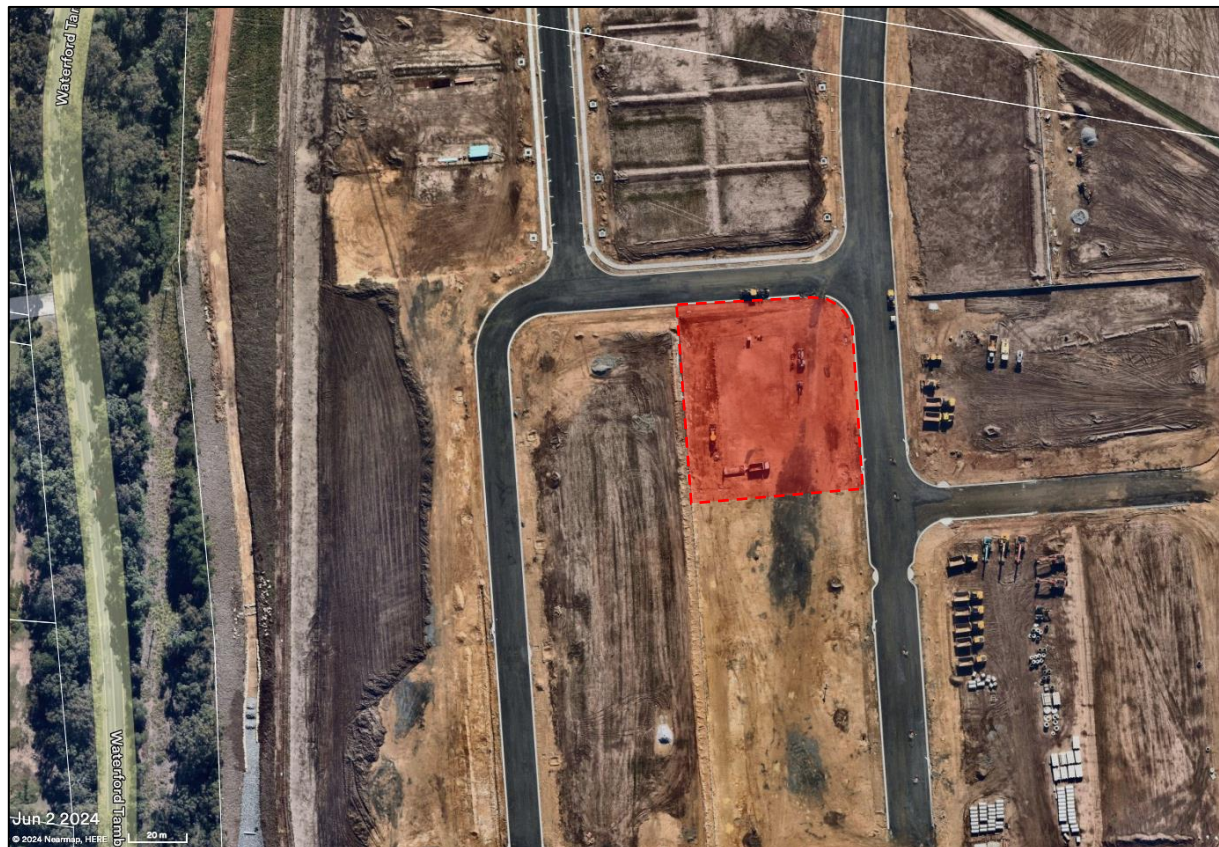
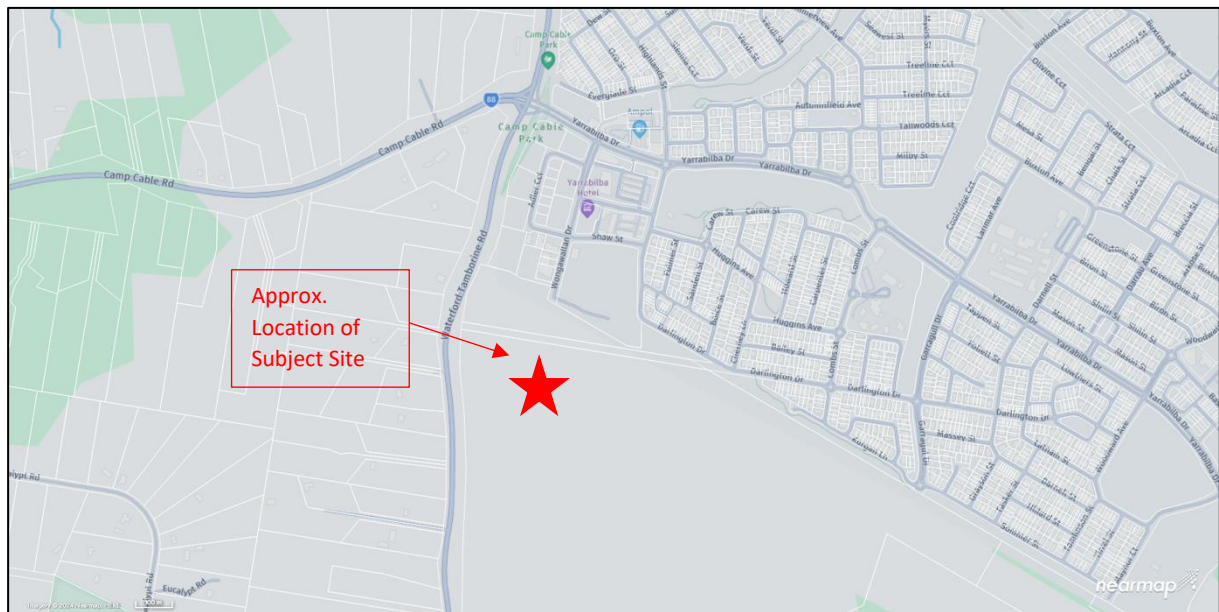


FIGURE 2.1 – LOCATION OF SUBJECT SITE

3.0 DEVELOPMENT PROPOSAL

The proposal is for a service industry and warehouse development comprising 10 individual unit tenancies with a total Gross Floor Area (GFA) of 900m² and 800m² respectively.

The proposal provides a total of 26 car parking spaces including two (2) accessible (PWD) spaces.

Access to this proposed to be gained via two crossovers located on each road frontage, with both crossovers permitting all movements. A two-way internal circulation road is proposed to be provided, supplying access to the various car parking areas.

The proposed site plan is shown in Figure 3.1.

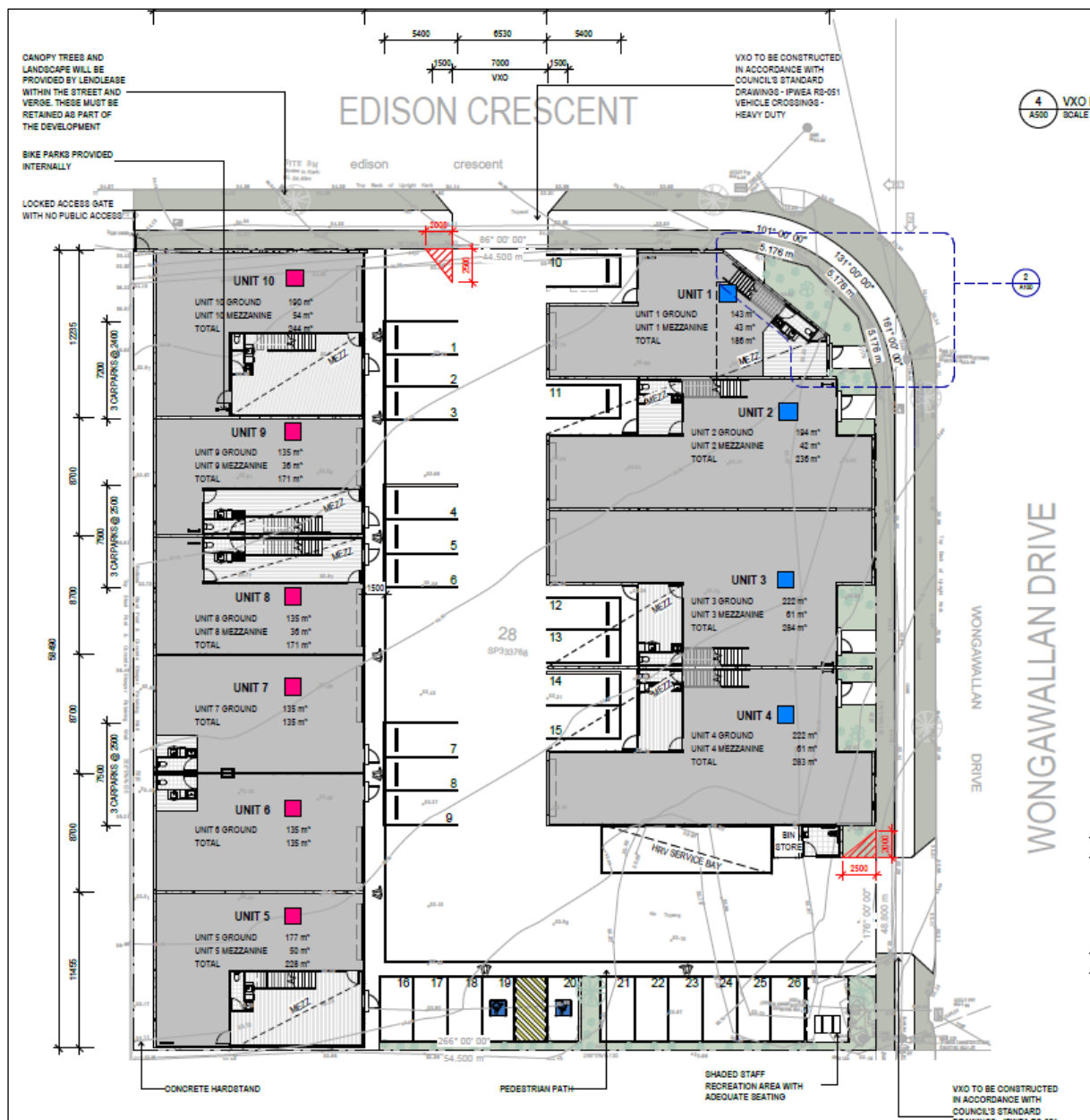


FIGURE 3.1 – PROPOSED SITE PLAN

4.0 CAR PARKING

4.1 Car Parking Supply

In accordance with the Logan Planning Scheme, the following car parking rate is applicable to the proposed development:

Service Industry:

1 space per 50m² GFA

Warehouse:

1 space per 100m² GFA

Application of the above rate results in a requirement for 26 spaces, as follows:

Table 4.1: Acceptable Outcome for car parking

Component	Minimum Car Parking Spaces Required
Service Industry (900m ²)	18 spaces
Warehouse (800m ²)	8 spaces
Total	26 spaces

The proposal provides a total of 26 car parking spaces and therefore meets the Logan Planning Scheme.

4.2 Car Parking Design

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

The proposed car parking layout has the following dimensions:

Car parking aisle - 6.5 metres (min)
Car parking spaces - 2.4m (min) x 5.4m
PWD spaces - 2.4m x 5.4m, plus 2.4m wide shared zone

It is noted that car parking spaces provided with a width of 2.5 metres are intended to allow for visitors to the site. Car parking spaces with a width of 2.4 metres will generally be used by workers.

The layout and dimensions are shown in Figure 4.1. Swept path diagrams for B85 design vehicles are shown in Figures 4.2 – 4.3.



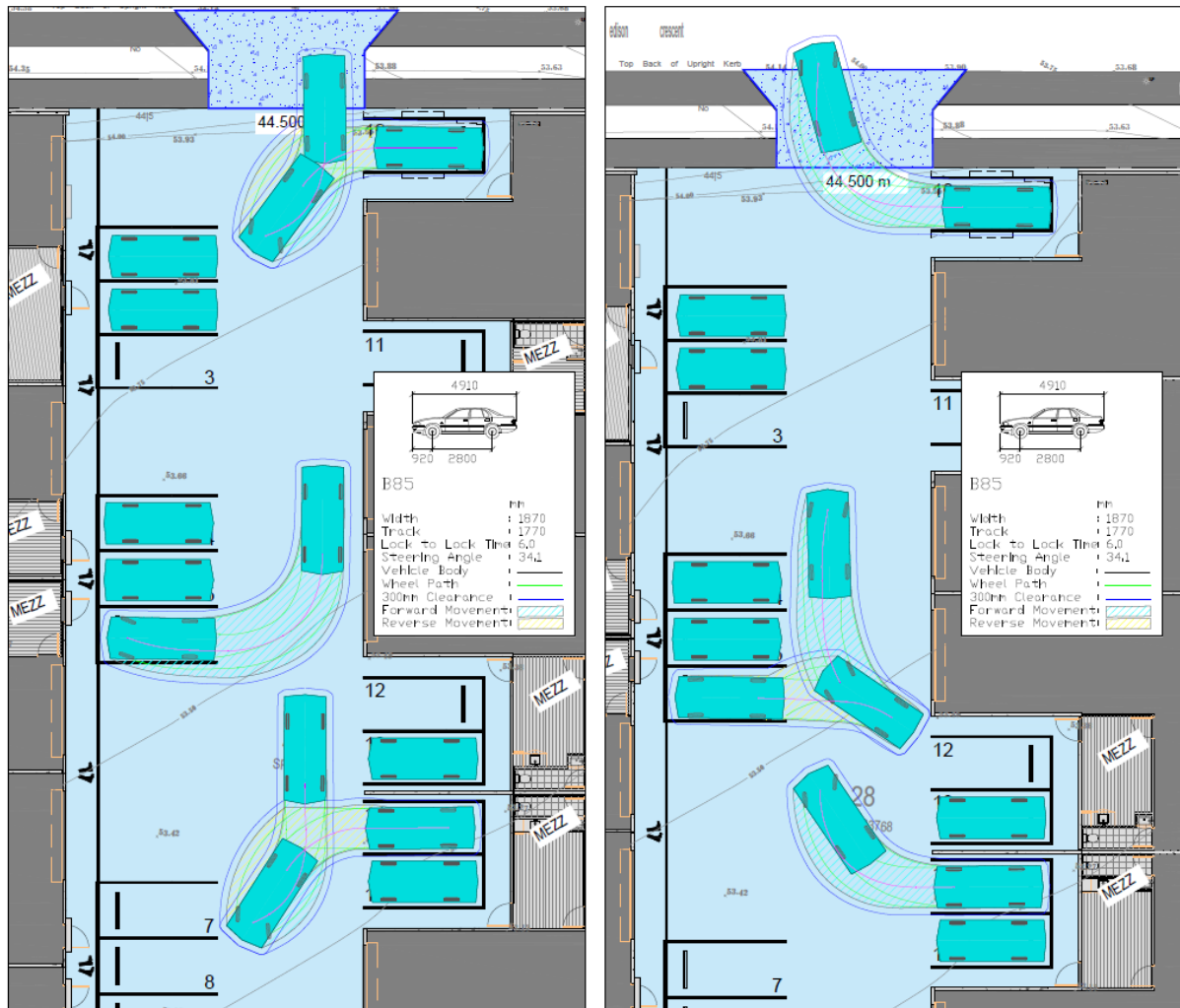


FIGURE 4.2 – SWEEP PATH OF B85 VEHICLES (MANOEUVRING)

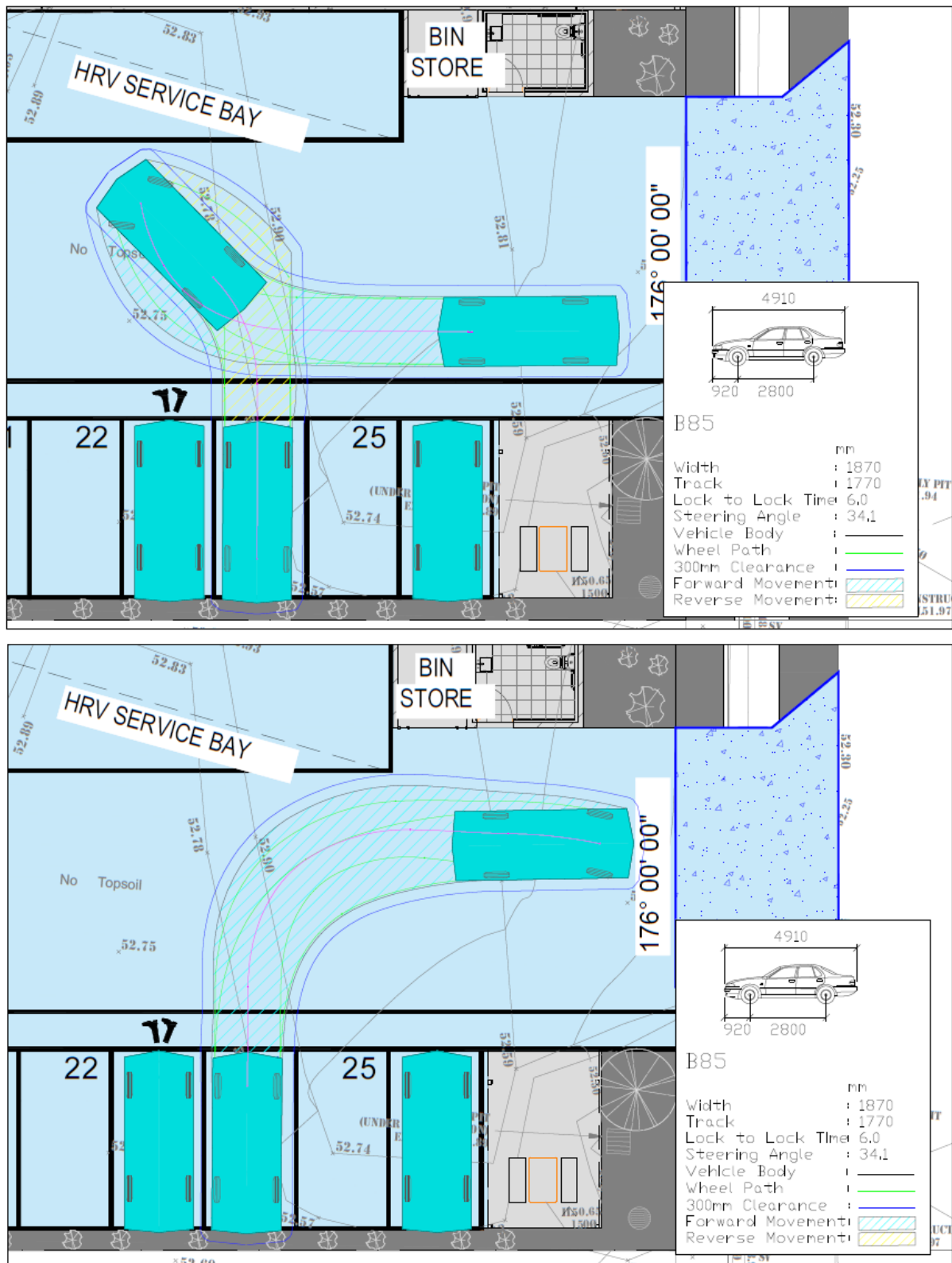


FIGURE 4.3 – SWEEP PATH OF B85 VEHICLES (MANOEUVRING)

5.0 ACCESS ARRANGEMENTS

The proposed access crossovers have been designed in accordance with IPWEA Standard Drawing RS-051.

The proposed layout and dimensions of each crossover are shown in Figures 5.1 – 5.2. As shown in Figure 5.3, the proposed vehicle crossover on Wongawallan Drive has been positioned at least 6 metres away from the nearby intersection, in accordance with Figure 3.1 of AS2890.1:2004. As shown in Figure 5.1 – 5.3, the crossovers have been designed with a sight splay on the exit side. The Wongawallan Drive crossover also allows a sight splay on the southern side as it will be used for heavy vehicles exiting the site.

Swept paths for B99 design vehicles entering and exiting the site are shown in Figures 5.4 and 5.5. The proposed signage plan is shown in Figure 5.6.

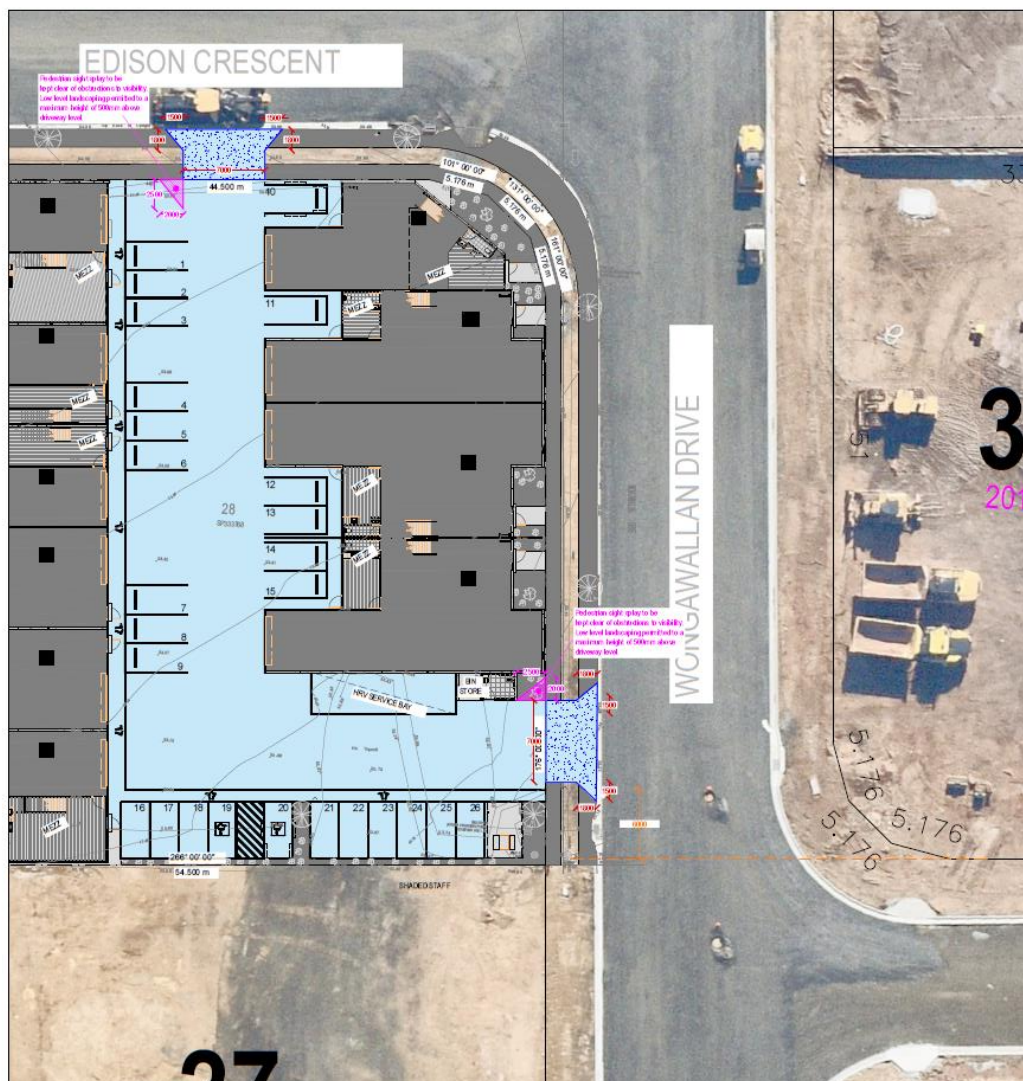
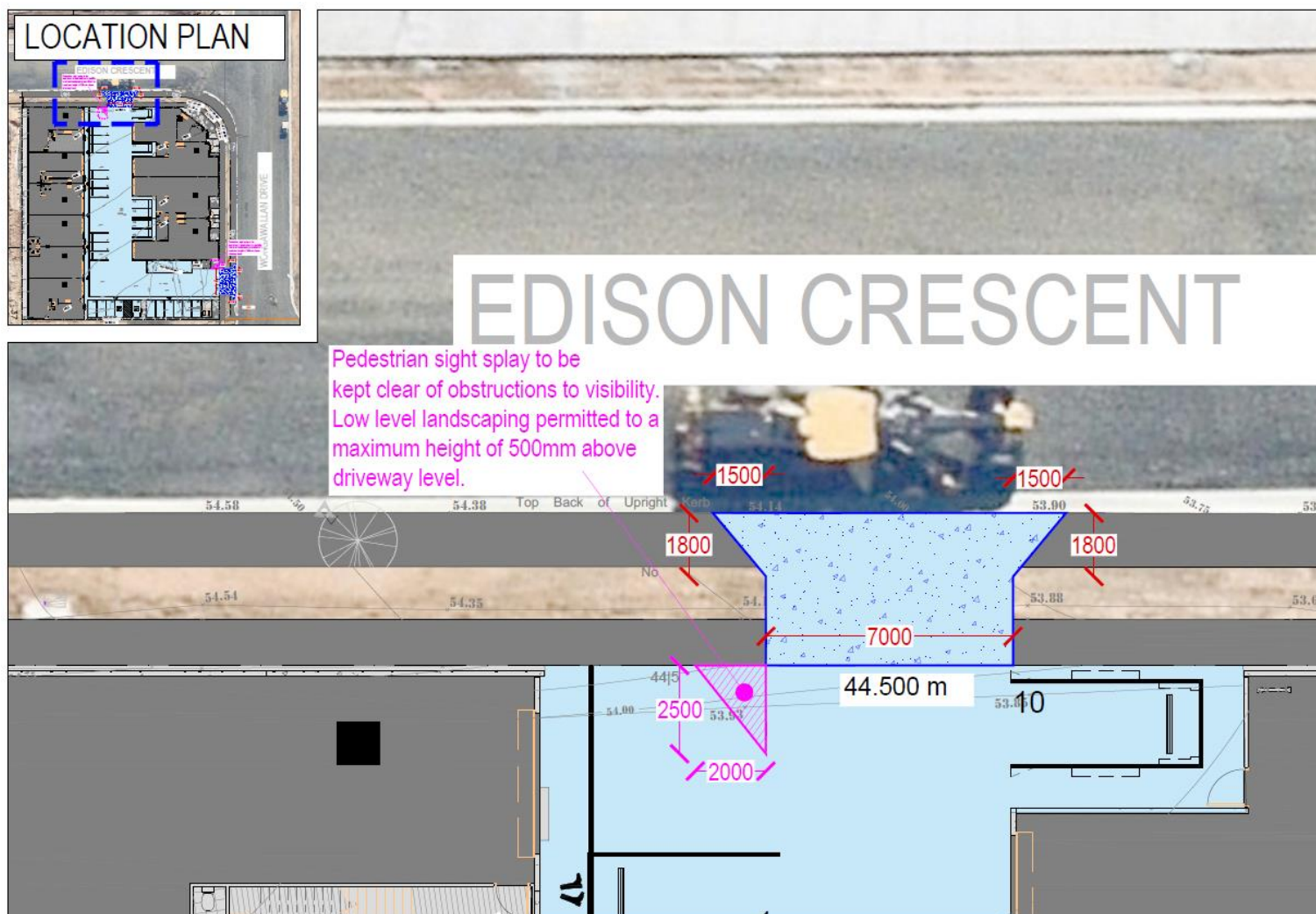
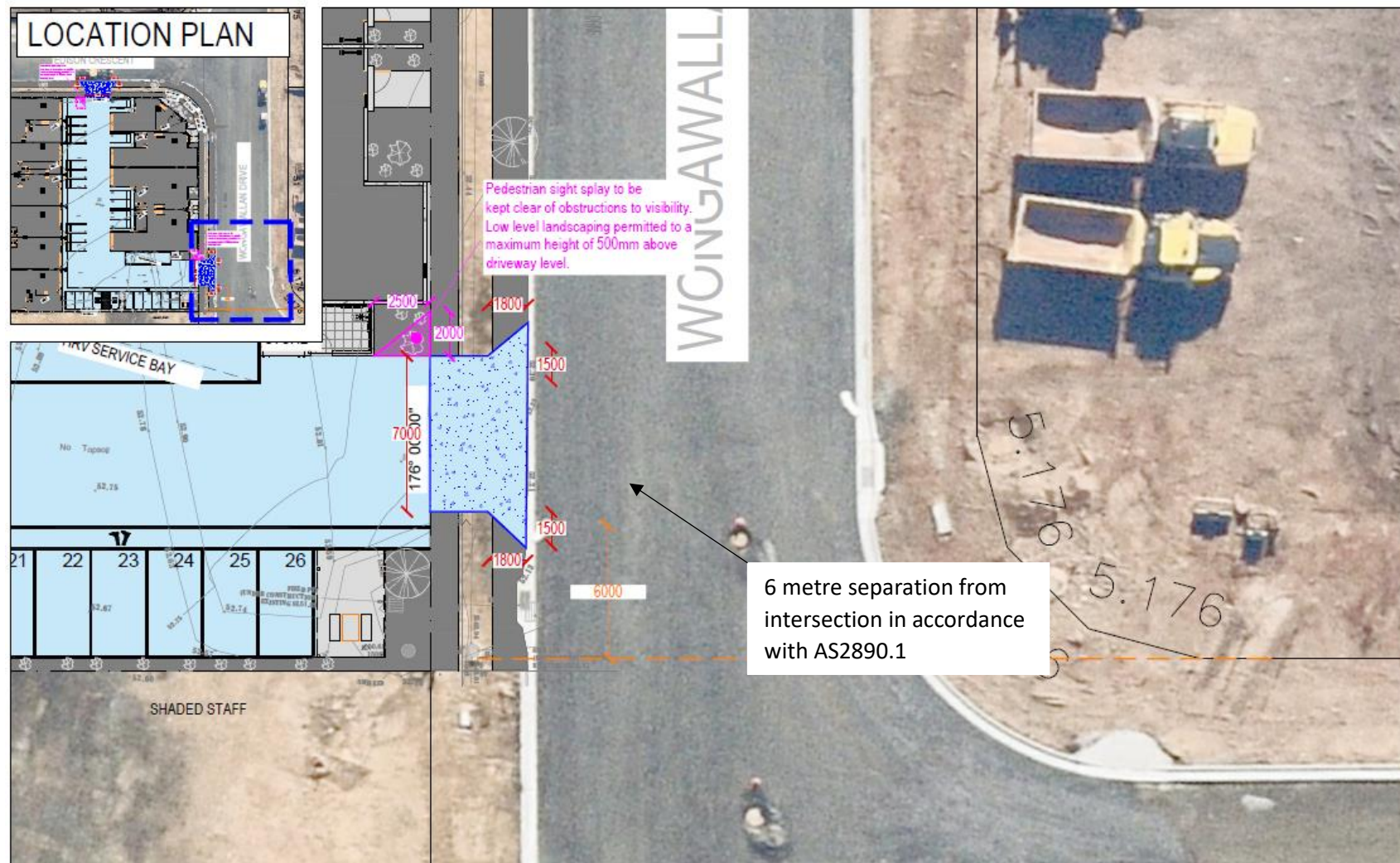


FIGURE 5.1 – PROPOSED LAYOUT AND DIMENSIONS OF PROPOSED VEHICLE CROSSOVER (OVERVIEW)





**FIGURE 5.3 – PROPOSED LAYOUT AND DIMENSIONS OF VEHICLE CROSSOVER
 (EASTERN CROSSOVER)**

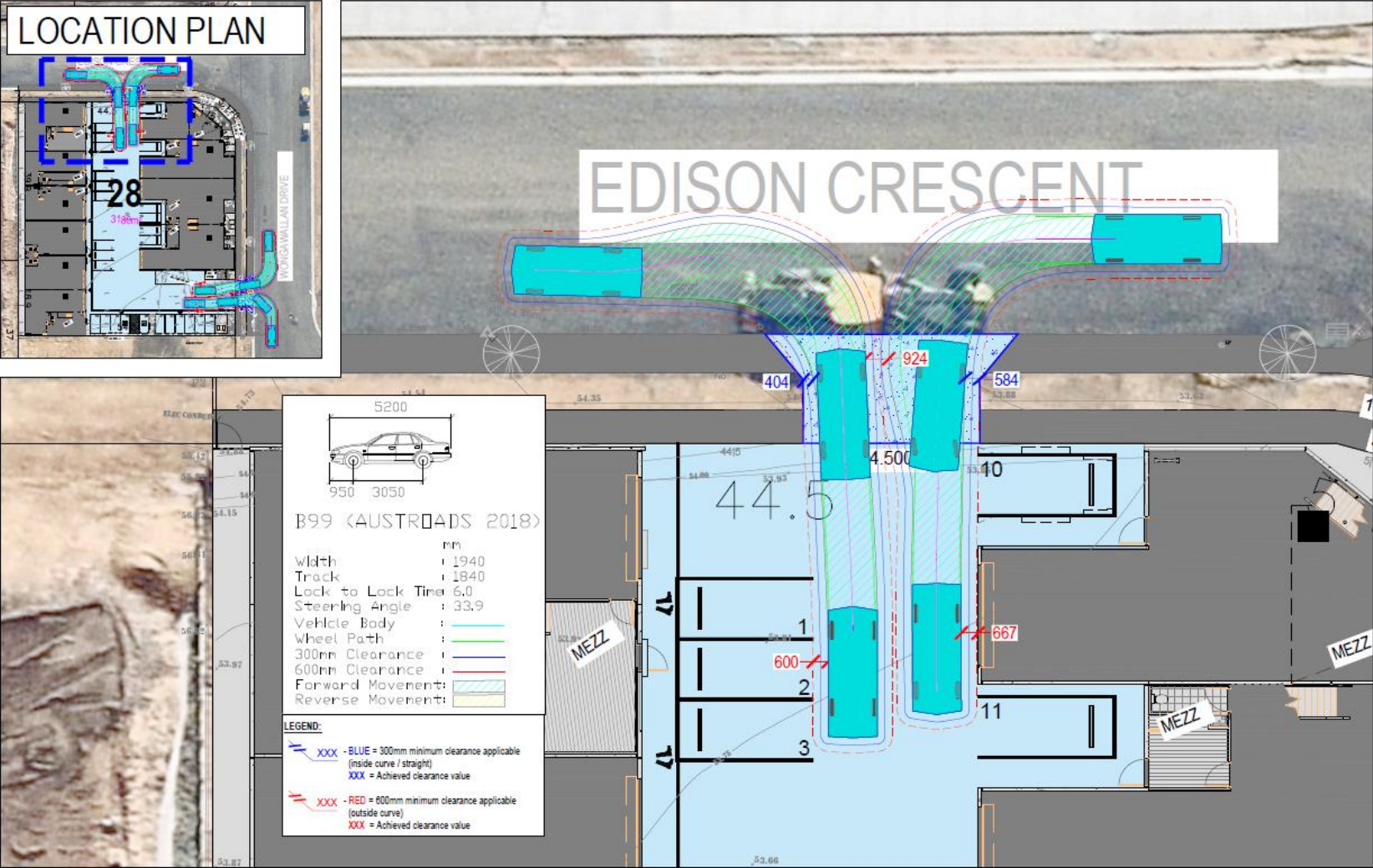


FIGURE 5.4 – SWEEP PATHS FOR B99 DESIGN VEHICLES ENTERING /EXITING THE SITE

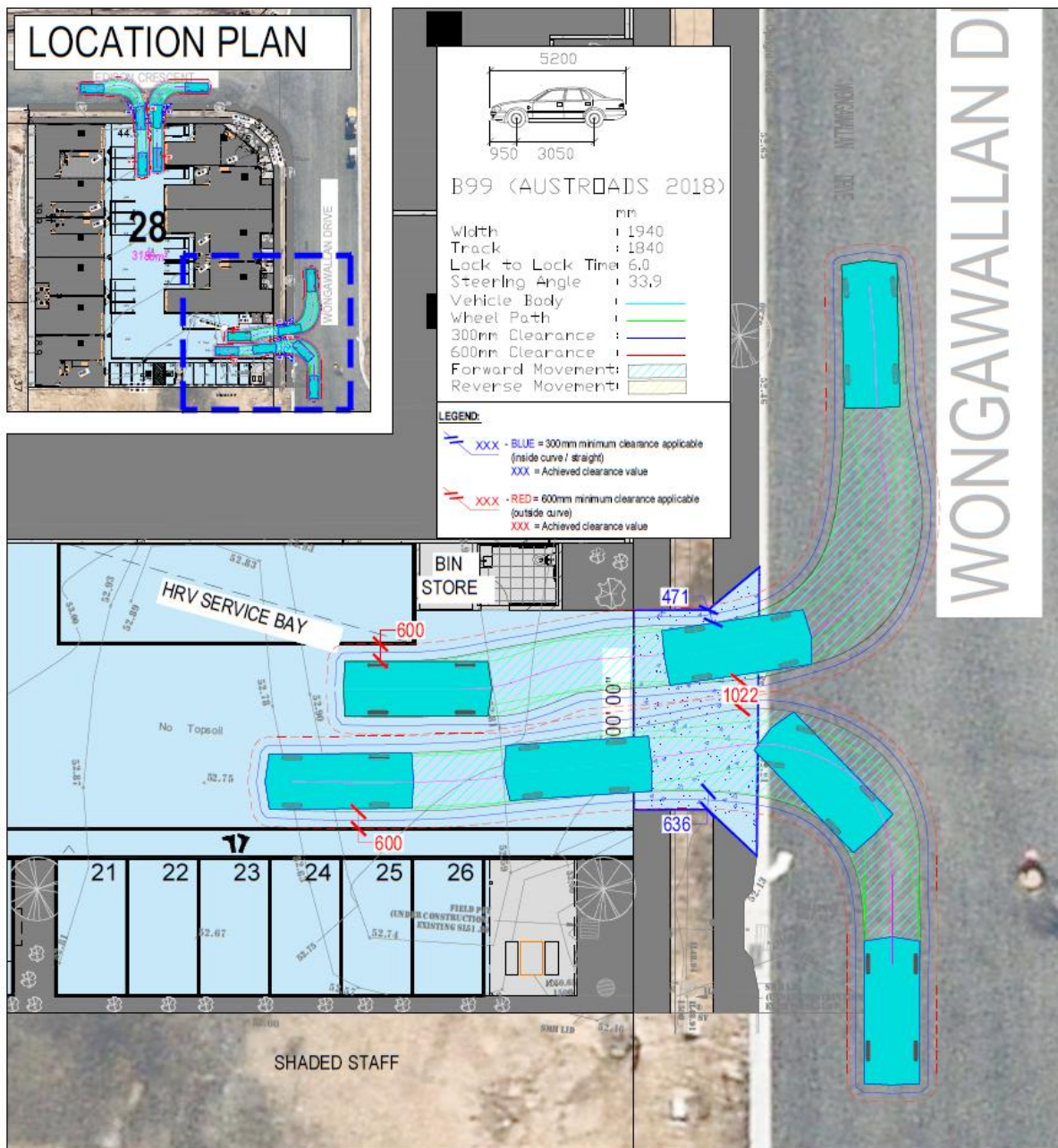
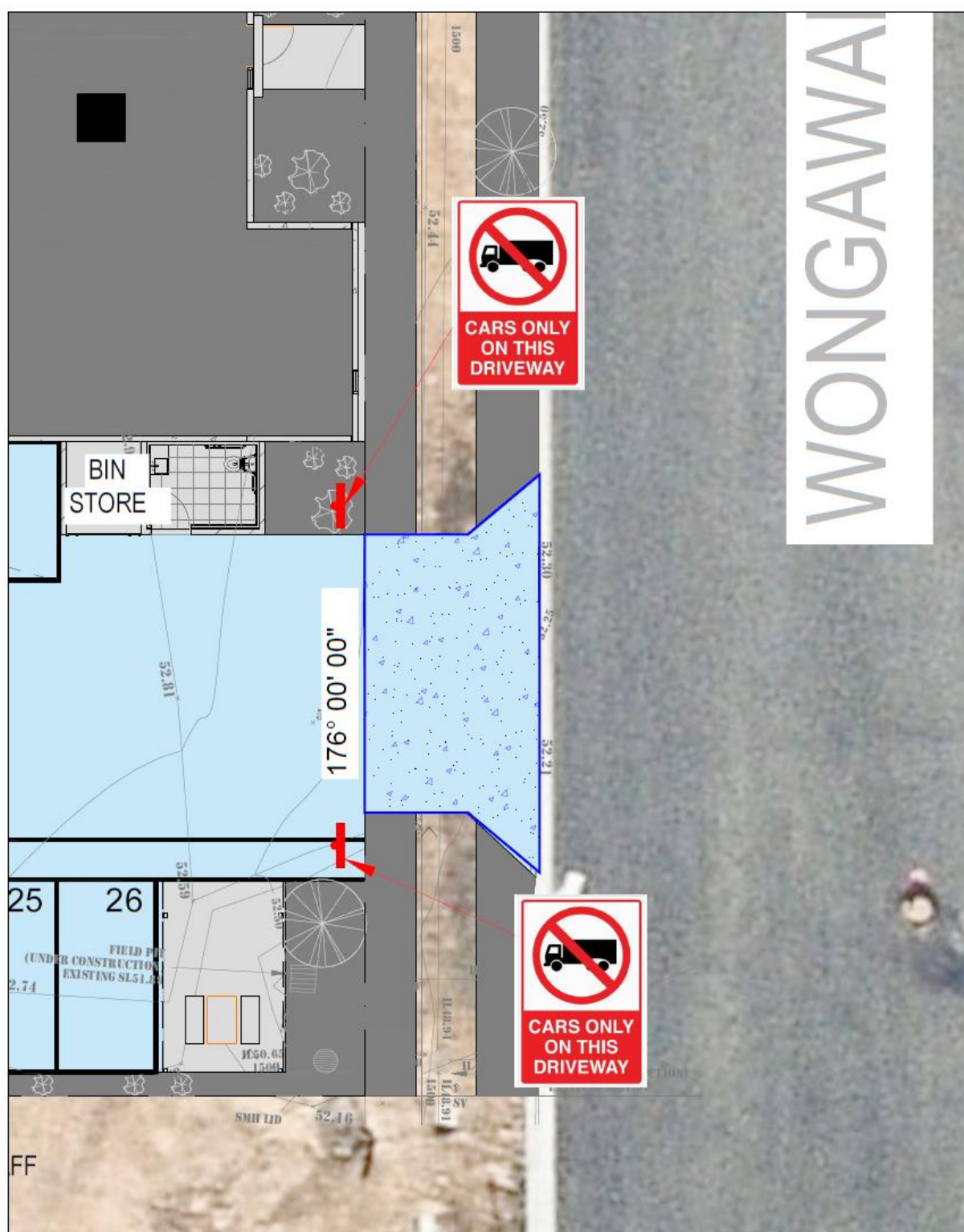


FIGURE 5.5 – SWEEP PATHS FOR B99 DESIGN VEHICLES ENTERING /EXITING THE SITE



6.0 PROVISION FOR HEAVY VEHICLES

6.1 Acceptable Outcome

In accordance with Table 9.4.13-9 of the Logan Planning Scheme, the site plan has been designed to allow for a Heavy Rigid Vehicle (HRV).

6.2 Proposed Outcome

The proposal provides access and loading by service vehicles up to the size of a Heavy Rigid Vehicle (HRV). As shown in Figures 6.1 and 6.2, a HRV is able to manoeuvre on-site without the need for reversing to or from the public road.

As shown in Figures 6.3 – 6.5, a front-loading 10.5 metre Council Waste Collection Vehicle (WCV) can satisfactorily circulate through the site, so that it can enter and exit in a forward gear.

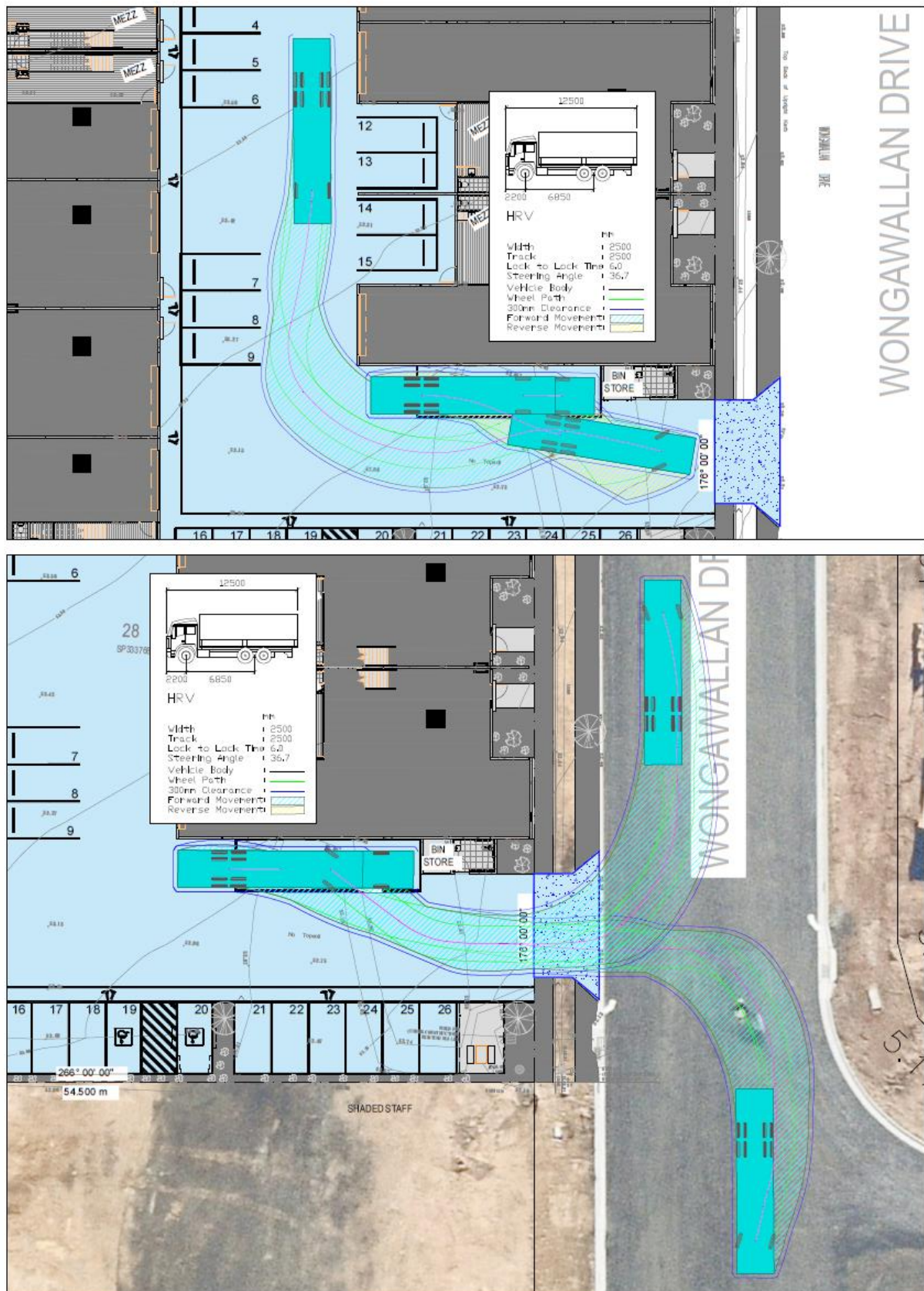


FIGURE 6.1 – HEAVY RIGID VEHICLE (HRV) CIRCULATING



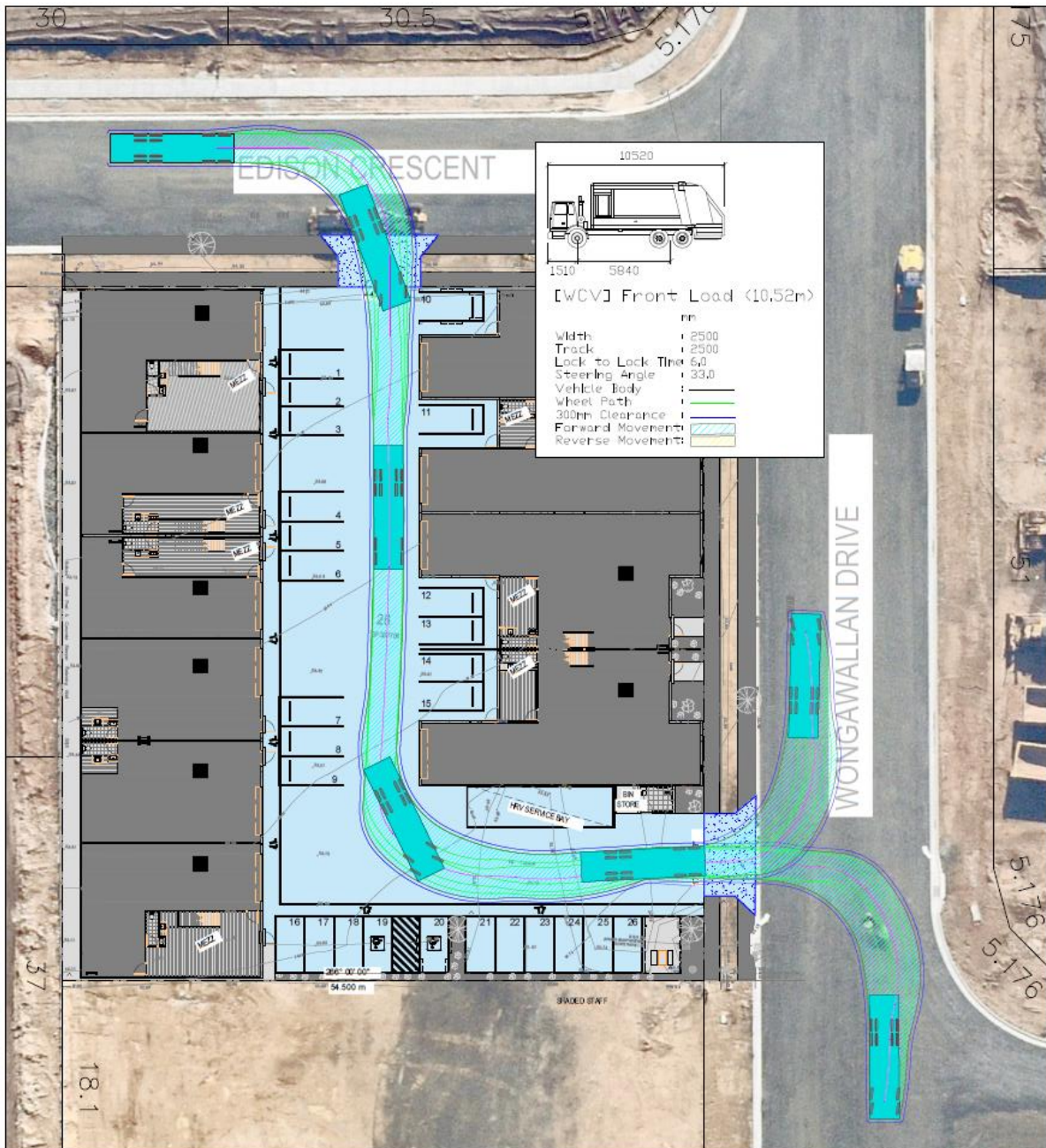


FIGURE 6.3 – FRONT LOADING WASTE COLLECTION VEHICLE (WCV) MANOEUVRING

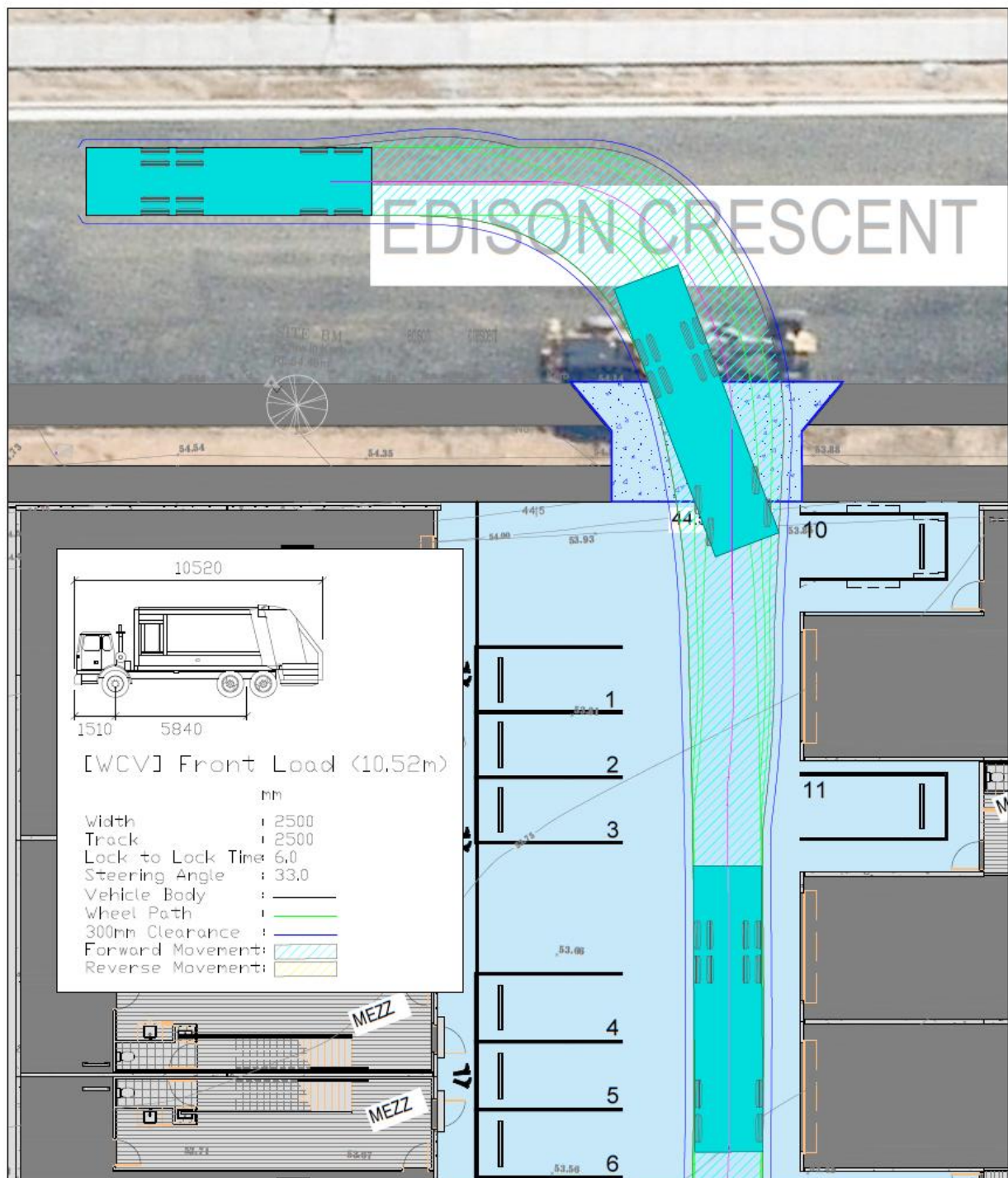


FIGURE 6.4 – FRONT LOADING WASTE COLLECTION VEHICLE (WCV) MANOEUVRING

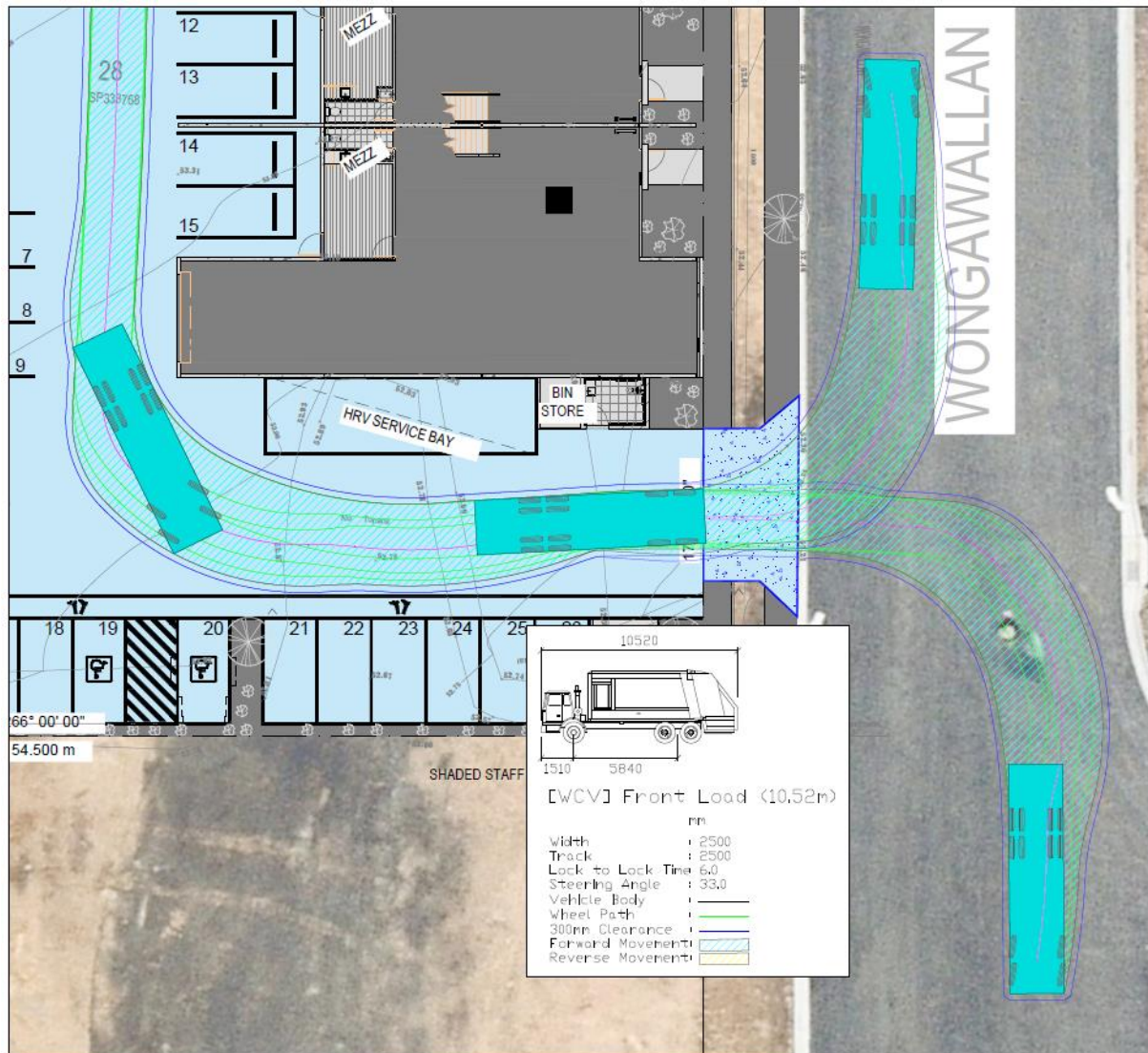


FIGURE 6.5 – FRONT LOADING WASTE COLLECTION VEHICLE (WCV) MANOEUVRING

7.0 PROVISION FOR PEDESTRIANS AND CYCLISTS

Bicycle parking is not required under the Servicing, Access, and Parking Code of the Logan Planning Scheme for the proposed uses; however, one (1) bicycle parking space has been provided inside each of the tenancies.

Safe pedestrian access is provided between the car parking area and the building entrance.

8.0 DEVELOPMENT TRAFFIC ESTIMATES

The Department of Main Roads, *Road Planning and Design Manual (RPDM)* indicates that the following trip generation rates are appropriate for childcare centres such as the proposed:

Light Industrial:

0.9 trips per 100m² of GFA

Application of the above rate, the proposed development yields a traffic generation potential of 15 peak hour trips, as follows:

Table 8.1 - Estimated Development Traffic Generation

Component	Morning Peak Hour			Afternoon Peak Hour		
	In	Out	Total	In	Out	Total
Light Industrial (1,700m ² GFA)	3	12	15	11	4	15

Peak Hour Distribution: AM – 20 / 80, PM – 70 / 30

9.0 SUMMARY OF CONCLUSIONS & RECOMMENDATIONS

- The proposal is for a service industry and warehouse development comprising 10 individual unit tenancies with a total Gross Floor Area (GFA) of 900m² and 800m² respectively.
- The proposed car parking supply of 26 spaces meets the minimum requirement stipulated under the Logan Planning Scheme.
- The geometric layout of the proposed parking facilities has generally been designed to comply with the relevant requirements specified in the Planning Scheme and AS2890.1: 2004.
- The proposed access crossovers have been designed in accordance with IPWEA Standard Drawing RS-051.
- The proposed site plan has been designed to allow for servicing by vehicles up to a Heavy Rigid Vehicle (HRV).
- Swept path analysis indicates a front-loading 10.5 metre Council Waste Collection Vehicle (WCV) can satisfactorily circulate through the site, so that it can enter and exit in a forward gear.
- Bicycle parking is not required under the Servicing, Access, and Parking Code of the Logan Planning Scheme for the proposed uses; however, one (1) bicycle parking space has been provided inside each of the tenancies.
- Safe pedestrian access is provided between the car parking area and the building entrance.
- Application of the traffic generation rate outlined in the *Road Planning and Design Manual (RPDM)*, the proposed development yields a traffic generation potential of 15 peak-hour trips.