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Traffic Impact Assessment Report

487 Ellison Road, Aspley

Proposed Healthcare Services Development

7/08/2026

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Proposed Healthcare Services Development

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Executive Summary

This report assesses the Proposed Healthcare Services Development at 487 Ellison Road, Aspley. The following provides an executive summary of the report.

Proposed Development

The proposed development contemplates the extension of the existing healthcare services site. It has an existing floor area of 184 square metres, and contemplates the addition of 169 square metres, for a total of 353 square metres.

Car parking is provided within the existing on site carpark, noting that the existing parking spaces are not formally line-marked. An existing loading bay is provided in the car park. Vehicle access is via the two existing crossovers, which allow circulation through the car park. The crossover on Ellison Road is signed 'no entry.'

Quantum Traffic has prepared a mark-up of line-marking to provide compliant car parking spaces within the existing car parking area. The mark-up is attached in Appendix B. The ensuing traffic and parking assessments assume that this mark-up is adopted. This may be implemented via a permit condition for a line-marking plan.

Parking Assessments

The application has a statutory car parking requirement to provide 32 car spaces. Based on the mark-up prepared by Quantum Traffic, the existing car parking area has capacity to provide 30 formal car parking spaces. A dispensation of 2 car parking spaces is sought.

Based on a first-principles assessment, the parking demands are expected to be 16 cars.

It is acknowledged that there will be fluctuations in the proportion of people who travel to the site via car. The actual number of cars at any time may be higher or lower than 16. The capacity for 30 cars enables this variation to be comfortably accommodated on-site.

Parking surveys as outlined in this report indicate that there is ample on-street parking available. Regardless, all parking is expected to be accommodated on-site.

The car park requires one space for occupants with a disability. This is included in the mark-up in Appendix B.

A motorcycle parking requirement does not apply based on the number of car parking spaces provided.

The Planning Scheme policy does not list a bicycle parking requirement or end-of-trip requirement for this use.

Parking Layout

The layout of the parking modules and access driveways generally accord with the requirements of the City Plan, with minor variation deemed acceptable as discussed.

The existing crossover from Ellison Road is restricted to 'no entry,' which mitigates the impacts on Ellison Road. The existing crossover from Eustace Street provides two-way unrestricted access.

Based on AS2890.1 and a review of existing conditions, no alterations to the site access controls are not considered necessary.

The site corner at the intersection of Ellison Road and Eustace Street provides a compliant 6m by 3-chord truncation, which complies with the requirements. No alterations are proposed to the site boundary or the intersection of Ellison Road and Eustace Street. It is additionally noted that the existing boundary fence provides visibility through the fence, which provides improved visibility at the corner.

Traffic Impacts

The centre is expected to generate up to 116 trips per day inclusive of up to 16 trips during the site generated peak hour.

The additional trips on Ellison Road and Eustace Street are minor in the context of their intended traffic volume.

The site generated peak hour is offset from the network peak, which reduces the impacts on the road network.

The existing 'no entry' control at the site access on Ellison Road minimises the impacts on Ellison Road.

The application expands the existing use. This traffic is partly offset by the traffic currently generated by the site.

Service Vehicles

Waste collection has historically been undertaken at kerbside in front of the site on Eustace Street. It is expected that this arrangement will continue following the development. Regardless, to assess the existing design against the statutory requirements SC6.31, swept path diagrams have been undertaken, confirming that a refuse collection vehicle can reverse into the site from Eustace Street and exit in a forwards direction.

SC6.31 specifies design for regular access by vans. The accessway aisle widths are sufficient for circulation by a B99 design vehicle representing vans, as per SC6.31. An existing loading area is provided on-site which can accommodate vans without obstructing the accessway or parking areas. No changes are proposed to the loading area.

Summary of Opinions

Having undertaken all tasks necessary to adequately assess the traffic engineering impacts of the Proposed Healthcare Services Development at 487 Ellison Road, Aspley, the proposed development is satisfactory.

There are no reasons why a permit for the proposed development should not be issued from a traffic engineering perspective, subject to appropriate conditions.

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1 Introduction

The following Traffic Impact Assessment Report (TIAR) reviews the critical engineering matters associated with the Proposed Healthcare Services Development at 487 Ellison Road, Aspley with consideration to the relevant standards of the Brisbane City Council Planning Scheme.

Our assessment is based on an inspection of the site and its surrounds, review of nearby car parking inventory and restrictions, and experience with other similar development applications.

The assessment responds to Items 5 and 6a of the RFI provided by Brisbane City Council for this application.

2 Proposal

The proposed development contemplates the extension of the existing healthcare services site via the construction of a single storey building with a GFA of 169 m^2.

Car parking is provided within the existing on site carpark, noting that the existing parking spaces are not formally line-marked. An existing loading bay is provided in the car park. Vehicle access is via the two existing crossovers, which allow circulation through the car park.

Development plans prepared by Affordable Modular Buildings are attached in Appendix A.

Quantum Traffic has prepared a mark-up of line-marking to provide compliant car parking spaces within the existing car parking area. The mark-up is attached in Appendix B. The ensuing traffic and parking assessments assume that this mark-up is adopted. This may be implemented via a permit condition for a line-marking plan.

Table 1 outlines the key attributes of the development form a traffic engineering perspective.

Table 1: Proposal Summary

Attribute	Proposal
Land Use	
Health Care Service	353 m^2 post-development comprising: • *184 m^2 existing, excluding existing 28 m^2 deck area* • *169 m^2 additional*
Car Parking Provision and Location	
Provision	30 spaces (based on the mark-up prepared by Quantum Traffic) Including 1 DDA space and shared area
Location	Outdoor at-grade car park
Motorcycle Parking	
Provision and Location	None

Bicycle Parking	
Provision and Location	None
Vehicle Access	
Crossovers	Vehicle access via the two existing crossovers, from Ellison Road and Eustace Street

3 Existing Conditions

3.1 Subject Site

The proposed development site located at 487 Ellison Road, Aspley, is generally rectangular in shape and has a road frontage to Ellison Road of approximately 39.2m along the southern property boundary and has a road frontage to Eustace Street of approximately 66.0m along the eastern property boundary. The subject site comprises of Lot Plan 1/RP164545.

Table 2 outlines the key existing features of the development site. A site photograph, aerial photograph and location map of the subject site are provided at Table 2, Figure 1 and Figure 3, respectively.

Table 2: Existing Site Features

Site Feature	Detail
Municipality	
Municipality	Brisbane City Council
Planning Scheme	
Zoning	Low Density Residential Zone
Overlays	Airport environs overlay OLS - Horizontal limitation surface boundary Procedures for air navigation surfaces (PANS) BBS zone - Distance from airport 3-8km Bicycle network overlay Biodiversity areas overlay Matters of state environmental significance (MSES) sub-category Community purposes network overlay Critical infrastructure and movement network overlay Dwelling house character overlay Flood overlay Overland flow flood planning area sub-category Road hierarchy overlay

Site Feature	Detail
	Streetscape hierarchy overlay
Critical Dimensions	
Site Area	~ 2,477 m^2
Site Frontage (east)	~ 63.8 m
Site Frontage (south)	~ 41.4 m
Gross Floor Area	212 m^2
Crossover Dimensions	
Crossover Widths	4.6m wide crossover to Ellison Road 5.7m wide crossover to Eustace Street
On-Street Carparking	
Ellison Road	Unrestricted – All times
Eustace Street	Unrestricted – All times
Nearby Land Use	
Within 250m	Residential (low density) Sport and Recreation



Figure 1: ***Site Photograph***



Figure 2: ***Aerial Photograph (source: Nearmap)***

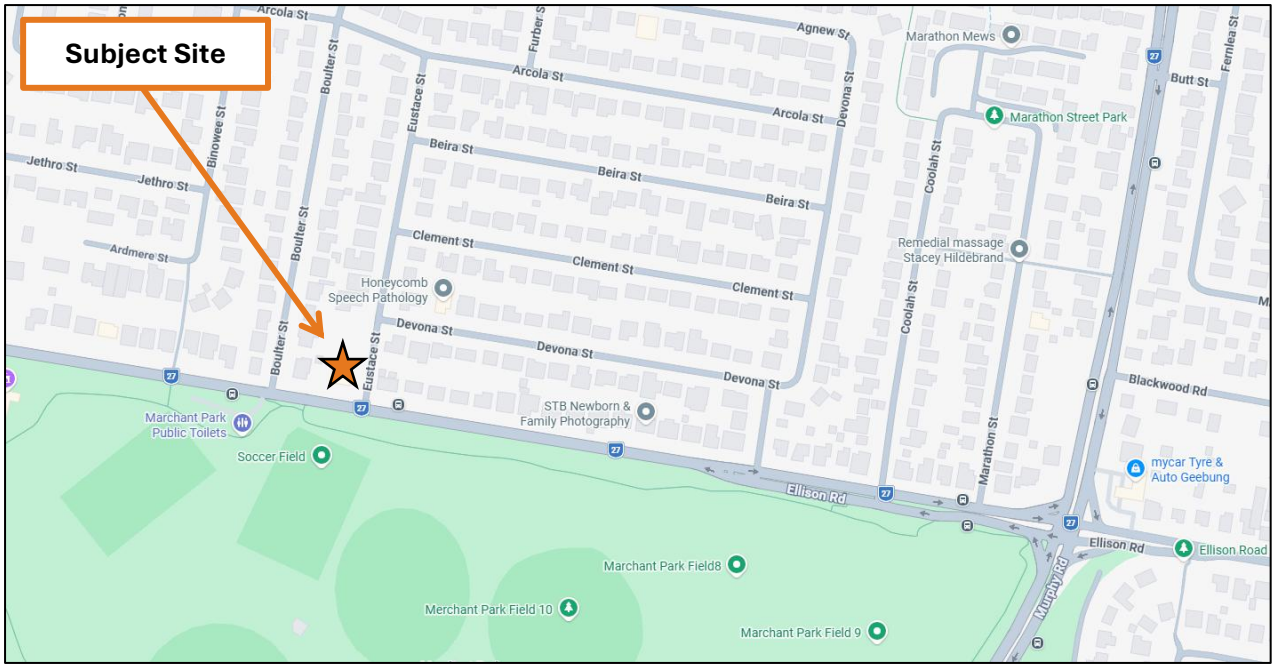

Figure 3: ***Location Map (source: Google Maps)***

Ellison Road

Ellison Road, which runs adjacent to the site's southern frontage, is a declared District Road under the care and management of the Department of Transport and Main Roads. Aligned generally in an east to west direction, Ellison Road provides a connection between Bilsen Road in the east and Gympie Road in the west.

Adjacent to the subject site, Ellison Road operates as a single carriageway with a single lane of traffic in each direction, with a shoulder on either side of the road for kerbside parking. A pedestrian island and associated line marking is located adjacent the site towards the western boundary.

Parking is typically unrestricted along Ellison Road in the vicinity of the site, subject to intermittent no stopping/ bus zone restrictions.

The sign posted speed limit of 60km/h applies to Ellison Road.

Photographs of Ellison Road in the vicinity of the subject site are shown in Figure 4 and Figure 5 following.



Figure 4: ***Ellison Road (view east)***



Figure 5: ***Ellison Road (view west)***

Eustace Street

Eustace Avenue, adjacent to the site's eastern frontage, is a declared neighbourhood road under the care and management of Brisbane City Council. Aligned generally in a north to south direction, Eustace Street provides a connection between Arcola Street in the north and Ellison Road in the south.

Adjacent the subject site, Eustace Street operates as a single carriageway with sufficient width for kerbside parking on both sides.

Carparking is unrestricted along Eustace Street.

The default urban speed limit of 50km/h applies.

Photographs of Eustace Street in the vicinity of the subject site are shown in Figure 6 and Figure 7 following.



Figure 6: ***Eustace Street (view north)***



Figure 7: ***Eustace Street (view south)***

3.2 Public Transport

The subject site is well located with regards to public transport and is a ~50m walk to the Boulter Street #43 bus stop, connecting the site to the broader public transport network.

The following public transport services operate proximate the site:

- Bus Route #336 – Chermside Loop between Chermside, Chermside West, Aspley and Geebung.

Based on public transport accessibility and a variety of services offered, the subject site has moderate public transport availability.

The existing public transport routes in the vicinity of the subject site are shown in Figure 8 following.

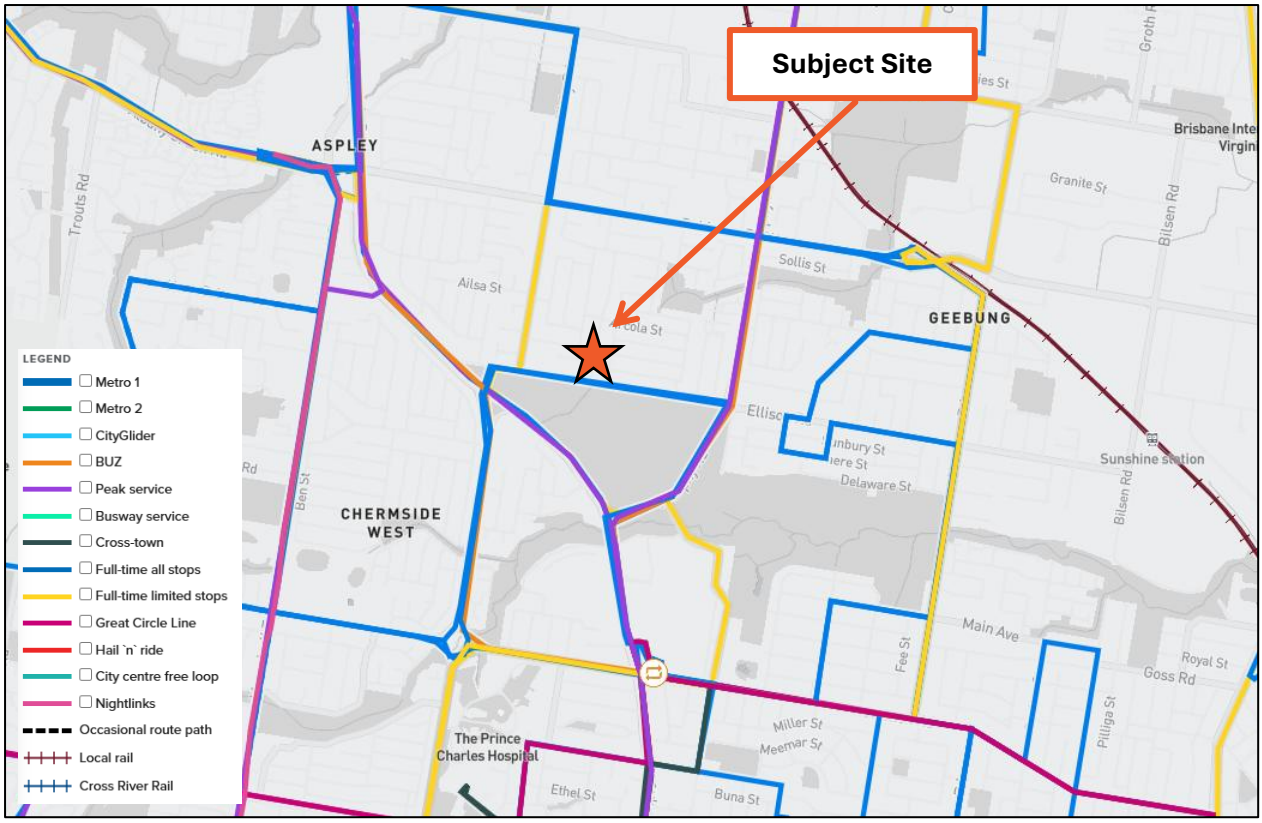

Figure 8: ***Public Transport Services Map (source: Brisbane City Council)***

3.3 Car Parking Occupancy Surveys

A parking survey was conducted at the time of the site inspection to capture general weekday daytime parking conditions proximate the site. The survey was conducted between 12:30AM to 2:00PM on Monday 23rd March 2026.

The surveyed area included on-street parking resources within approximately 100m walking distance of the subject site, as shown below in Figure 9.

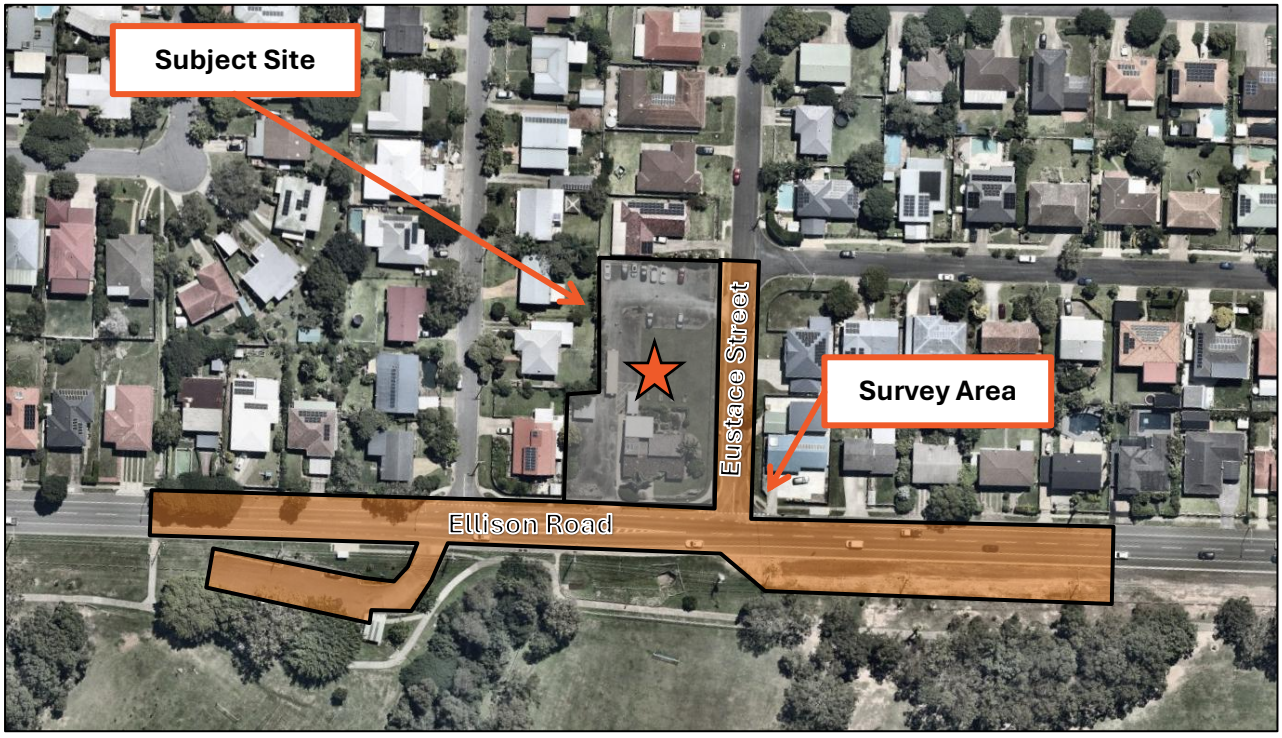

Figure 9: ***Car Parking Occupancy Survey Area Map (Source: Nearmap)***

The surveyed area comprised of 87 suitable car parking spaces, with parking typically unrestricted, with the exception of 2x DDA spaces in the off-street carpark.

The parking capacities and demands for spaces suitable for visitors were as follows:

- Ellison Road (467 Ellison Road to 521 Ellison Road):
  - Capacity = 45
  - Demand @ 12:30pm/ 2:00pm = 1/1
- Eustace Street – West Side (Site Frontage):
  - Capacity = 7
  - Demand @ 12:30pm/ 2:00pm = 0/0
- Off Street Carpark (Marchant Park):
  - Capacity = 21
  - Demand @ 12:30pm/ 2:00pm = 2/4

The survey indicates that car parking is in low demand, with the maximum occupancy observed to be 7% at the time of the survey, leaving no less than 68 spaces vacant that would be suitable to accommodate short-term visitor parking.

A detailed summary of the parking capacity and occupancy is provided in Figure 10 below.

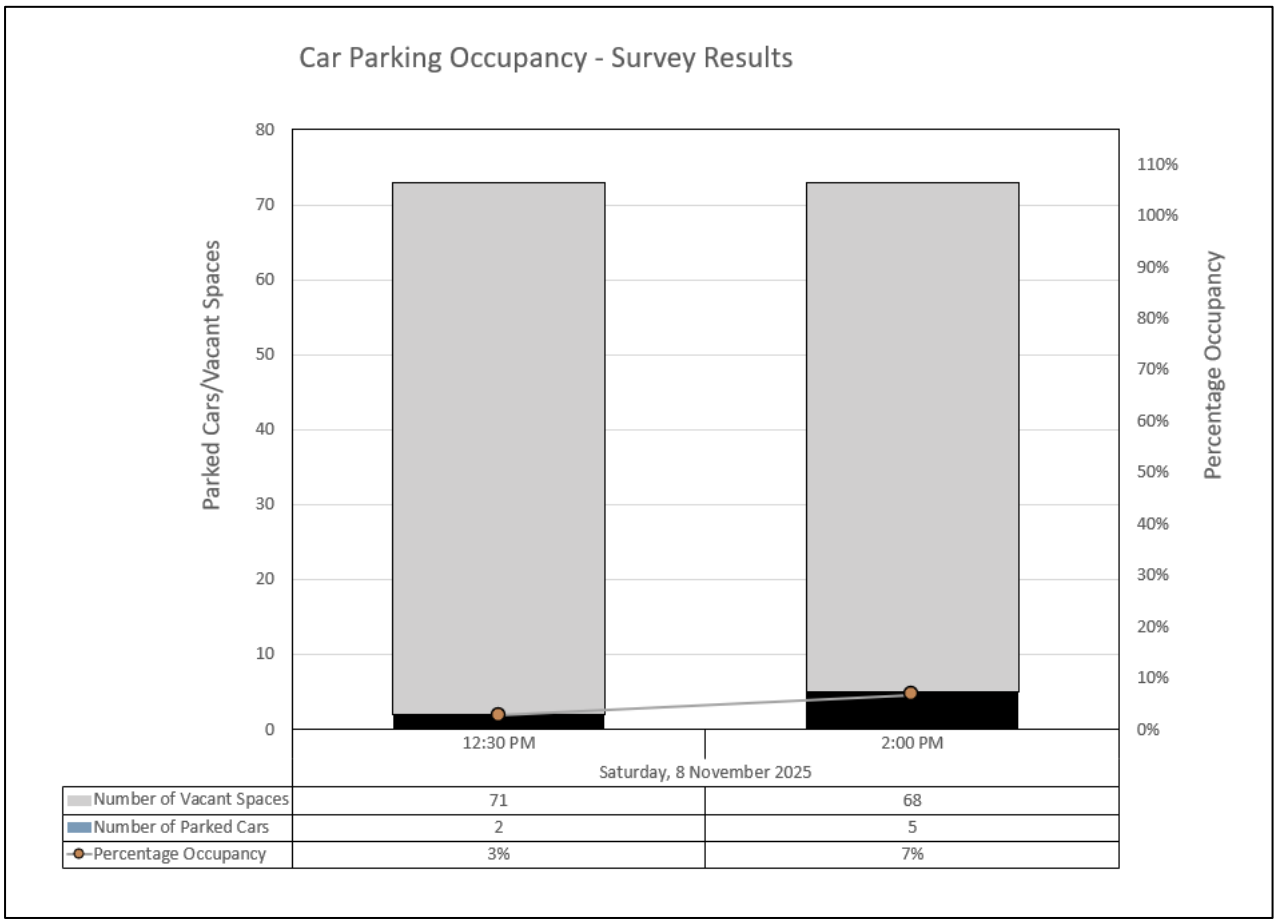

Figure 10: ***Car Parking Survey Results***

4 Parking Assessments

4.1 Car Parking

SC6.31 of the Brisbane City Council City Plan (2014) prescribes the required number of car spaces for the proposed development. The existing and proposed uses are considered under the category of 'health care service.'

Based on the preceding, Table 3 following has been prepared to assess the statutory car parking requirements of the proposed development against Schedule 6.31 of the Brisbane City Council City Plan.

***Table 3:* Statutory Car Parking Assessment**

Use	No.	Statutory Rate	Requirement	Provision	Shortfall/ Surplus
Proposed					
Health care service	353 sqm	14 spaces plus 5 spaces per 100m2 gross floor area (if 200m2 or greater gross floor area)	32 spaces	30 spaces	2-space shortfall

Note [1]: In accordance with the policy, where the number of parking spaces calculated is not a whole number, then the number of spaces provided is the whole number next above the calculated number.

Based on the above assessment, the application has a statutory car parking requirement to provide 32 car spaces.

Based on the mark-up prepared by Quantum Traffic, the existing car parking area has capacity to provide 30 formal car parking spaces.

A dispensation of 2 car parking spaces is sought. Therefore, as per the Brisbane 'Transport, Access, Parking and Servicing Code,' in order to demonstrate that adequate car parking is provided, an assessment is prepared to identify if the number of car parking spaces provided is appropriate.

4.1.1 Assessment of Car Parking Shortfall

Expected Demand based on First-Principles Assessment

The Applicant has advised that with the new build, the centre will have room for 8 therapists, 2 admin staff, and 8 families at a time.

'Method of Travel to Work' statistics have been collected from the ABS 2021 Census data. The data indicates that for people who travelled to work in Aspley, 83.62% drove a car. Of those who didn't drive a car to work, the majority travelled as a passenger (i.e. carpooled) or took a bus. Based on this ratio, the 10 staff are expected to generate 8 parked cars on the site.

The parking rate per family is likely to be higher than for staff, who are more likely to drive their child to the site. For this assessment, we assume a rate of 1 car per family. Based on this ratio, the 8 families are expected to generate 8 parked cars on the site.

Therefore, the parking demands are expected to be 16 cars.

It is acknowledged that there will be fluctuations in the proportion of people who travel to the site via car. The actual number of cars at any time may be higher or lower than 16. The capacity for 30 cars enables this variation to be comfortably accommodated on-site.

Availability of Parking Spaces

Parking surveys as outlined in this report indicate that there is ample on-street parking available. Therefore, if there were any parking overflow, this is not expected to have adverse effects on the surrounding parking amenities. Regardless, all parking is expected to be accommodated on-site.

Conclusions

The assessment finds that all parking is expected to be accommodated on-site, and no adverse effects on the surrounding parking amenities are expected.

4.2 Accessible Parking

SC6.31 requires that parking spaces for vehicle occupants with a disability are provided at a rate of 1 space per 50 ordinary parking spaces and a minimum provision of 1 space is required.

On this basis, the car park requires one space for occupants with a disability. This is included in the mark-up in Appendix B.

4.3 Motorcycle Parking

Additionally, for car parks over 50 spaces, SC6.31 requires that 2% of the number of spaces are provided as motorcycle spaces.

The car park is not more than 50 spaces. Therefore, this requirement does not apply.

4.4 Bicycle Parking and End-of-Trip Facilities Assessment

The transport, access, parking and servicing planning scheme policy (SC6.31) prescribes the provisional requirements for bicycle parking and End of Trip (EoT) facilities. The policy does not list a bicycle parking requirement or end-of-trip requirement for a “health care service” use.

5 Parking Design

5.1 Car Park Layout

Quantum Traffic has prepared a mark-up to provide compliant car parking spaces within the existing parking area, which is attached in Appendix B. The following table reviews the mark-up against the relevant Australian Standards.

Swept path diagrams have been prepared to demonstrate that two-way access at the crossover from Eustace Street has been maintained around the proposed new line marking. The diagrams are attached in Appendix C.

Table 4: ***Review of Carpark Design***

Measure	Planning Policy Requirement	Discussion
Conventional Car Parking Spaces		
Classification of Spaces	*SC6.31 (TAPS PSP), 7.8.1, Table 18*	Medical centres are classified as Class 3.
Car Park Dimensions	*SC6.31 (TAPS PSP), 7.8.1, Table 18*	The minimum space dimensions required are: *For User Class 3:* • 2.6m wide x 5.4m long space The car parking spaces have compliant dimensions.
Aisle Widths	*SC6.31 (TAPS PSP), 7.4.4* *All parking aisles provide for two-way traffic movement and have a minimum width of 6.2m.*	The aisles are based on the layout of the existing car park including kerbs. Based on the mark-up, the aisles are approximately: • 6.275m in the car parking area the Ellison Road frontage • 7.220m in the car parking area the Eustace Street frontage • 5.970m in the connecting aisle between the two car parking areas The two main car parking area aisles accord with Item 1 of this criterion. The connecting aisle at 5.970m is less than 6.2m, however it exceeds the minimum requirement under AS2890.1 (which is 5.8m for this user class). Traffic volumes at this connecting section will primarily be southbound given that the Ellison Road access is outbound only, therefore the frequency of opposing movements will be minimal. This is not expected to compromise the efficient operation of the car park as per PO1 of Part 9.4.11 (Transport, access, parking and servicing code) of the City Plan. These aisles are constrained by the existing parking layout and it is not practical to increase the widths. This minor variation is considered acceptable given that it aligns with the performance outcomes, complies with AS2890.1, and the width is constrained by existing conditions.
Adjacent Columns & Obstructions	*SC6.31 (TAPS PSP), Figure m*	No obstructions as per clearance required
Blind Aisle Length	*SC6.31 (TAPS PSP) 7.4.5*	No blind aisles

Measure	Planning Policy Requirement	Discussion
	Terminated aisles extend 2m or more beyond the last parking space, or *an 8m aisle is provided directly behind the last parking space*	
Headroom	*SC6.31 (TAPS PSP) 7.7.1* *To permit access for most vehicles expected to use a car parking area, the minimum clear height between the floor and any overhead obstructions is 2.3m.*	Parking outdoors
Gradients	*SC6.31 (TAPS PSP) 7.6* *The component of the gradient in the car parking area across parking spaces is not to exceed 1 in 20 (5%).*	Car park is generally flat, minor grades for drainage.
Accessible Car Parking		
Space Dimensions	*SC6.31 (TAPS PSP), 7.8.1, Table 18*	The minimum space dimensions required are: *For Class 4, 90-degree spaces*: • 2.4m wide x 5.4m long space • Plus 2.4m wide x 5.4m long shared area The DDA space has compliant dimensions. Swept path diagrams have been prepared to demonstrate that access for the accessible parking. The diagrams are attached in Appendix C.
Headroom	*SC6.31 (TAPS PSP), 7.7.2* *AS2890.6:2022, Section 2.4:* *The path of vehicular travel from the car park entrance to all parking spaces for people with disabilities and from those spaces to the car park exit shall have a minimum headroom of 2200 mm.* *The headroom above each dedicated space and adjacent shared area, measured from the level of the dedicated space shall be a minimum of 2500 mm.*	Parking outdoors
Gradients	*SC6.31 (TAPS PSP) 7.6, Table 17* *1 in 40 maximum gradient*	Car park is generally flat, minor grades for drainage.
External Vehicle Access		
Access Width	*SC6.31 (TAPS PSP) 4.6.2 to 4.6.4*	Discussed in the following sections of this report

Measure	Planning Policy Requirement	Discussion
Pedestrian Sight Line Triangles	*SC6.31 (TAPS PSP), Figure c*	Sight triangles contain grassed areas which complies
Ramps		
Gradient	*SC6.31 (TAPS PSP) 7.6, Table 17*	No ramps proposed
Changes of grade	*SC6.31 (TAPS PSP) 7.6.6*	No ramps proposed
Changes of grade	*SC6.31 (TAPS PSP) 7.6.7*	No ramps proposed

Thus, the layout of the parking modules and access driveways generally accord with the requirements, with a minor variation to the aisle width at one location, which is deemed acceptable as discussed.

5.2 Turn Restrictions at Ellison Road Crossover

Background Information & Context

Item 5c of the RFI provided by Brisbane City Council for this application requests that the "access on Ellison Road must be restricted to left-in and left-out only. A non-trunk extension of the pedestrian median is required as physical enforcement to prevent unlawful turns."

Existing Conditions

The existing crossover is approximately 4.6m wide from Ellison Road, with 'no entry' restriction. The photograph in the figure below presents the 'no entry' sign.



***Figure 11:* Photo of 'No Entry' Sign at Existing Crossover from Ellison Road**

Inbound traffic enters via Eustace Street, typically travelling from Ellison Road and turning left into the site. Outbound traffic has the option to use either crossover. Under the current operating conditions

both entry and exit are primarily facilitated via the crossover to Eustace Street, with minimal traffic exiting directly to Ellison Road.

In general, the critical traffic impact at a crossover arises from traffic waiting to turn into the site. The existing 'no entry' control as demonstrated above mitigates this concern.

The request to modify this to a left-in and left-out crossover would worsen the traffic impacts on Ellison Road by introducing a left turn entry movement, and this is not considered to align with PO3 of Part 9.4.11 of the City Plan, which states that vehicle access should be designed to have "no significant impact on the safety, efficiency, function, convenience of use or capacity of the road network." Accordingly, the existing arrangement is considered to better align with the objectives in the city plan.

5.3 Crossover Widths

Background Information & Context

Item 5d of the RFI provided by Brisbane City Council for this application requests that the access must "accommodate two-way traffic in and out of the subject site, with a 6.5m width for service vehicles such as ambulances."

Existing Conditions

The existing crossovers are:

- As noted above, the crossover from Ellison Road is approximately 4.6m wide, with 'no entry' restriction.
- The crossover from Eustace Street is approximately 5.7m wide, with unrestricted two-way access.



Figure 12: Photo of Ellison Rd Crossover from Internal Perspective



Figure 13: Photo of Eustace St Crossover from Internal Perspective

These crossovers have been observed to operate acceptably for the existing use; however it is acknowledged that the traffic volumes will increase as a result of the expansion.

Ellison Road

Under the outbound-only configuration at Ellison Road, any queuing would be internal, which is deemed to be acceptable given the low volumes of traffic movements and the carpark layout which can accommodate short queues on occasion within the site.

Additionally, the large proximity of the two crossovers ensures that movements at each access point can occur both simultaneously and independently, as ample internal space is provided between the access points within the carparking layout. This ensures that cars waiting to exit via Ellison Road will have no impact to the operation of the Eustace Street crossover, maintaining safe and efficient site access.

Eustace Street

To assess the warrant for two-way passing, we refer to the guidelines under AS2890.1. Clause 3.2.2 of AS2890.1 provides a guideline that "30 or more movements in a peak hour (in and out combined) would usually require provision for two vehicles to pass on the driveway, i.e. a minimum width of 5.5 m." It is noted that this requirement refers to the movements at a single access point i.e. 30 movements at the Eustace Street or Ellison Road crossover respectively.

As outlined in the traffic assessment in this document (Section 6.1), peak hour traffic is estimated to be less than 30 movements per hour for the entire site. This will be split between the 2 crossovers, resulting in significantly less than 30 movements at the Eustace Street access. Therefore, the above requirements of Clause 3.2.2 for two-way passing do not apply and the proposed crossover is deemed to be satisfactory.

Ambulance Access

As discussed above, two-way passing at the site accesses is not warranted based on the site considerations and the guidelines under AS2890.1.

Item 5d of the RFI notes that the crossovers must provide for service vehicles such as ambulances.

Swept path diagrams have been prepared and are attached in Appendix D demonstrating that the crossovers are appropriate for ambulances to circulate through the site.

Conclusions

As discussed above, the proposed access to Ellison Road and existing signage controls ensure that the crossover arrangement will allow the road to continue to operate safely, efficiently and not significantly impact the functionality or capacity as in accordance with PO3 as outlined in 9.4.11 of the City Plan.

Therefore, alterations (as outlined in RFI Items 5c and 5d) to the site access controls are not considered necessary based on the above.

5.4 Corner Truncation

Item 6a of the RFI provided by Brisbane City Council for this application requests that the plans "provide a 6.0m by three chord corner truncation at the corner of Ellison Road and Eustace Street in accordance with PO6 of the Road Hierarchy Overlay Code."

PO6 outlines the requirements for maintaining the functionality, hierarchy and impacts on the road network for developments that contain an "*extension of or change to the road network*". However, the site boundary at this intersection is existing, and no changes are proposed to the site boundary or the intersection and therefore the above is not triggered.

Regardless, the existing site has a three-chord truncation at this corner, measuring 6m x 6m in accordance with the requirement.

The following figure depicts the layout of the existing corner truncation compared to the layout specified under Chapter 3.7.4.7.4 (Road Corridor Design) of SC6.16 of the Planning Scheme.

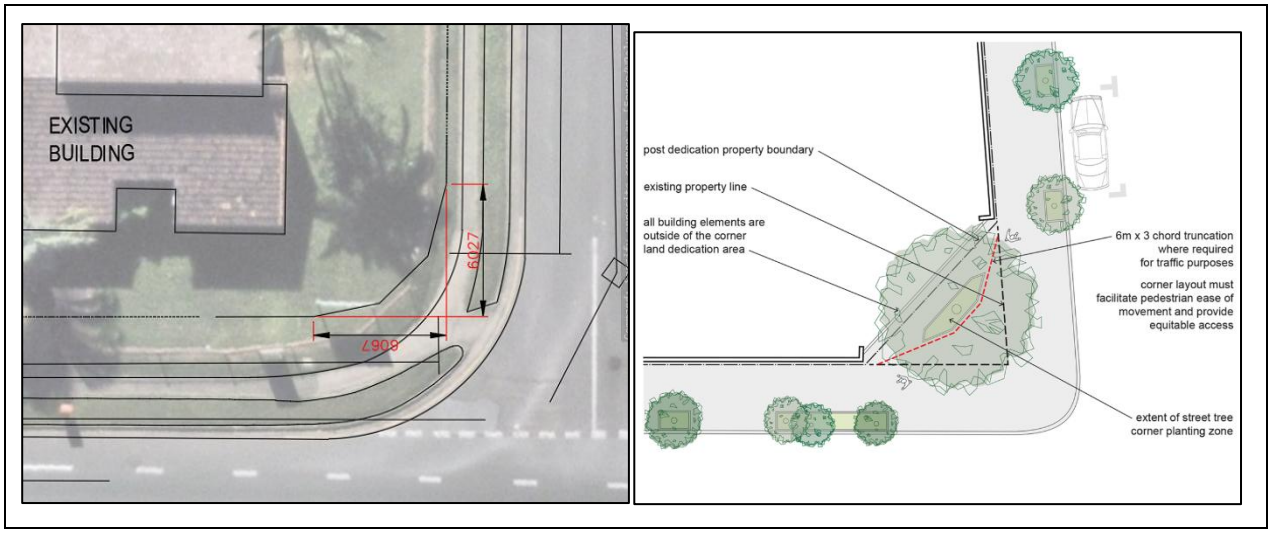

Figure 14: ***Corner Truncation***

It is additionally noted that the existing boundary fence provides visibility through the fence, which provides improved visibility at the corner.

6 Traffic Assessment

6.1 Traffic Generation

Estimate Based on NSW Guide

The NSW Guide to Traffic Generating Developments (2024) outlines traffic generation rates for various land uses based on extensive data collection. Whilst the data is primarily collected in NSW, the guide is nonetheless commonly used to determine traffic generation at new developments across Australia.

Rates for medical centre are provided based on surveys undertaken in 2015 at a total of 20 sites, with 14 metropolitan (Sydney) sites and six regional sites. The data finds that the average of the surveyed medical centres generated:

- 32 vehicle trips during the weekday site peak hour

- 130 daily vehicle trips on weekdays
- 22 vehicle trips during the weekend site peak hour
- 81 daily vehicle trips on weekends

The proposed centre will be closed on weekends. The weekday traffic volumes are adopted for the following review.

The Analysis Report for the NSW data acknowledges that the regression analysis showed low levels of correlation between the number of vehicular and person trips and the independent variables. Therefore, a first principles assessment is provided below. An estimate based on the NSW data is nonetheless provided as follows, to provide an additional reference for this assessment.

The surveyed sites had an average of 8.55 doctors. This corresponds to the following weekday traffic volumes:

- 3.74 vehicle trips per doctor during the weekday site peak hour
- 15.20 daily vehicle trips per doctor on weekdays

The proposal has 8 therapists, which corresponds to the following estimates:

- 30 vehicle trips during the weekday site peak hour
- 122 daily vehicle trips on weekdays

It is noted that the data was based on a variety of medical centres, including general practitioners. The proposed therapy appointments are longer than an average medical centre, and therefore, would generate lower traffic generation rates per medical practitioner. The following review based on first principles is provided.

Estimate Based on First Principles

The following trips are expected:

- Staff will typically arrive at the start of the day and depart at the end of the day. This contributes 2 trips per day per staff, or 20 trips per day in total. It is noted from the NSW data that the site generated peak hour is typically in the late morning or early afternoon, therefore the staff trips at the start and end of the day are not likely to contribute to the site generated peak volumes.
- The Applicant provides one-hour appointments, which may be face-to-face or telehealth. For face-to-face appointment, children and their families will generate 2 trips per appointment: 1 inbound and 1 outbound. Telehealth appointments do not generate traffic. Given that the centre has capacity for up to 8 children at a time, this equates to a total of 8 appointments per hour when the centre is at maximum capacity. This is up to 16 trips per hour, or less, depending on the proportion of telehealth appointments.
- Therapists see a maximum of 6 clients per day. For 8 therapists, this is a total of 48 clients, which equates to 96 trips per day from children and their families, or less, depending on the proportion of telehealth appointments.
- Summing the 20 daily trips for staff and 96 daily trips for children, this is a total of 116 daily trips.

Therefore, the centre is expected to generate up to 116 trips per day inclusive of up to 16 trips during the site generated peak hour.

This is slightly lower than the estimate based on the NSW Guide falls within this range, which is expected given that the proposal has a lower turnover compared to typical medical centre.

6.2 Traffic Distribution

Ellison Road is a 'District Road' under the City Plan, and provides the main connection to the site from the arterial road network in both directions. The proposed use is likely to attract trips from a wide catchment area. Therefore, a significant majority of traffic is expected to approach from and depart via Ellison Road, in both directions.

The crossover on Ellison Road has an existing 'no entry' restriction which is proposed to be retained. Inbound traffic enters via Eustace Street, typically travelling from Ellison Road and turning left into the site. Outbound traffic has the option to use either crossover, however it is likely that they will preference the direct access to Ellison Road.

Therefore, the trips generated on Ellison Road constitute nearly 100% of the site-generated traffic, or up to 16 trips during the site-generated peak. The trips generated on Eustace Street constitute all inbound traffic and a negligible proportion of outbound traffic, which is 50% of the total traffic, or up to 8 trips during the site-generated peak.

6.3 Traffic Impacts

A district road is identified by Brisbane City Council as designed to serve catchments of approximately 1,000 households (outside the inner suburbs) which, at a rate of 1 peak hour trip per household, is 1,000 peak hour trips. The additional up to 16 trips on Ellison Road is less than 2% of the intended overall traffic volume.

A neighbourhood road is identified by Brisbane City Council as designed to serve catchments of approximately 300 households which is 300 peak hour trips. The additional up to 8 trips at the south end of Eustace Street is less than 3% of the intended traffic volume.

Therefore, this traffic volume is minor in the context of the road network. Additionally, the following considerations are noted:

- The site generated peak hour is likely to occur in the late morning or early afternoon. This is offset from the network peak, which reduces the impacts on the road network.
- The existing 'no entry' control at the site access on Ellison Road minimises the impacts on Ellison Road.
- This application expands the existing use. Therefore, the additional traffic is partly offset by the traffic currently generated by the site.

Overall, the traffic impacts are expected to be minor.

7 Service Vehicles

7.1 Statutory Requirements

Table 1 of SC6.31 of the Brisbane City Council City Plan (2014) prescribes the required service vehicles for various land uses. For a health care service, the requirements are:

- Access design (occasional access): Refuse Collection Vehicle
- Internal design (regular access) — major road: Van as represented by 99.8th percentile
- Internal design (regular access) — minor road: Van as represented by 99.8th percentile

It is noted that for the access design (occasional access), Clause 3.2.3 of SC6.31 notes that:

> *a. the Column 2 design service vehicle can stand wholly contained within the site without occupying any designated queue areas, or blocking access to more than 50% of car parking spaces;*
>
> *b. any on-street manoeuvring by the Column 2 design service vehicle can be limited to safe reversing onto the site in one movement only;*
>
> *c. the swept path of the Column 2 design service vehicle may cover the overall width of a two-way undivided driveway.*

Therefore, the access should be designed for occasional access by a refuse collection vehicle which may reverse into the site, and regular access by a B99 design vehicle representing a van.

It is noted that the site accesses and internal accessways are existing, and no changes (except line marking) are proposed.

7.2 Occasional Access - Refuse Collection

It is observed that waste collection has historically been undertaken at kerbside in front of the site on Eustace Street. Therefore, a waste vehicle would not need to access the site. It is expected that this arrangement will continue following the development.

Regardless, to assess the existing design against the statutory requirements SC6.31, swept path diagrams have been undertaken, confirming that a refuse collection vehicle can reverse into the site from Eustace Street and exit in a forwards direction, which is satisfactory under items b and c of Clause 3.2.3, as outlined above. The diagrams are attached in Appendix E.

It is acknowledged that under item a, the refuse vehicle should not occupy any designated queue areas or block access to more than 50% of car parking spaces. If the operator were to undertake on-site refuse collection in future, this could be scheduled outside the operating hours of the facility, which would not have any adverse impacts on queuing or access to car parking.

7.3 Regular Access - Van

The accessway aisles are more than sufficient for circulation by a B99 design vehicle.

An existing loading area is provided on-site which is approximately 6m deep and 9m wide. This is more than sufficient to accommodate vans parking without obstructing the accessway or parking areas. No changes are proposed to the loading area.

Swept path diagrams are attached in Appendix F demonstrating access and usage of the loading area with the nominated vehicle.

8 Conclusions

Having visited the site and undertaken a detailed traffic engineering assessment the following conclusions are reached in relation to the Proposed Healthcare Services Development at 487 Ellison Road, Aspley:

1. The proposed development contemplates the extension of the existing healthcare services site. It has an existing floor area of 184 square metres, and contemplates the addition of 169 square metres, for a total of 353 square metres.
2. Car parking is provided within the existing on site carpark, noting that the existing parking spaces are not formally line-marked. An existing loading bay is provided in the car park. Vehicle access is via the two existing crossovers, which allow circulation through the car park. The crossover on Ellison Road is signed 'no entry.'
3. Quantum Traffic has prepared a mark-up of line-marking to provide compliant car parking spaces within the existing car parking area. The mark-up is attached in Appendix B. The ensuing traffic and parking assessments assume that this mark-up is adopted. This may be implemented via a permit condition for a line-marking plan.
4. The application has a statutory car parking requirement to provide 32 car spaces. Based on the mark-up prepared by Quantum Traffic, the existing car parking area has capacity to provide 30 formal car parking spaces. A dispensation of 2 car parking spaces is sought. The dispensation is considered appropriate based on the following:
    a. Based on a first-principles assessment, the parking demands are expected to be 16 cars.
    b. It is acknowledged that there will be fluctuations in the proportion of people who travel to the site via car. The actual number of cars at any time may be higher or lower than 16. The capacity for 30 cars enables this variation to be comfortably accommodated on-site.
    c. Parking surveys as outlined in this report indicate that there is ample on-street parking available. Regardless, all parking is expected to be accommodated on-site.
5. The car park requires one space for occupants with a disability. This is included in the mark-up in Appendix B.
6. A motorcycle parking requirement does not apply based on the number of car parking spaces provided.
7. The Planning Scheme policy does not list a bicycle parking requirement or end-of-trip requirement for this use.
8. The layout of the parking modules and access driveways generally accord with the requirements of the City Plan, with minor variation deemed acceptable as discussed.
9. The existing crossover from Ellison Road is restricted to 'no entry,' which mitigates the impacts on Ellison Road. The existing crossover from Eustace Street provides two-way unrestricted access. Based on AS2890.1 and a review of existing conditions, no alterations to the site access controls are not considered necessary.
10. The site corner at the intersection of Ellison Road and Eustace Street provides a compliant 6m by 3-chord truncation, which complies with the requirements. No alterations are proposed to the site boundary or the intersection of Ellison Road and Eustace Street. It is additionally noted that the existing boundary fence provides visibility through the fence, which provides improved visibility at the corner.

11. The centre is expected to generate up to 116 trips per day inclusive of up to 16 trips during the site generated peak hour. A review of the traffic impacts finds that:
    a. The additional trips on Ellison Road and Eustace Street are minor in the context of their intended traffic volume.
    b. The site generated peak hour is offset from the network peak, which reduces the impacts on the road network.
    c. The existing 'no entry' control at the site access on Ellison Road minimises the impacts on Ellison Road.
    d. The application expands the existing use. This traffic is partly offset by the traffic currently generated by the site.
12. Waste collection has historically been undertaken at kerbside in front of the site on Eustace Street. It is expected that this arrangement will continue following the development. Regardless, to assess the existing design against the statutory requirements SC6.31, swept path diagrams have been undertaken, confirming that a refuse collection vehicle can reverse into the site from Eustace Street and exit in a forwards direction.
13. SC6.31 specifies design for regular access by vans. The accessway aisle widths are sufficient for circulation by a B99 design vehicle representing vans, as per SC6.31. An existing loading area is provided on-site which can accommodate vans without obstructing the accessway or parking areas. No changes are proposed to the loading area.

Having undertaken all tasks necessary to adequately assess the traffic engineering impacts of the Proposed Healthcare Services Development at 487 Ellison Road, Aspley, the proposed development is satisfactory.

There are no reasons why a permit for the proposed development should not be issued from a traffic engineering perspective, subject to appropriate conditions.

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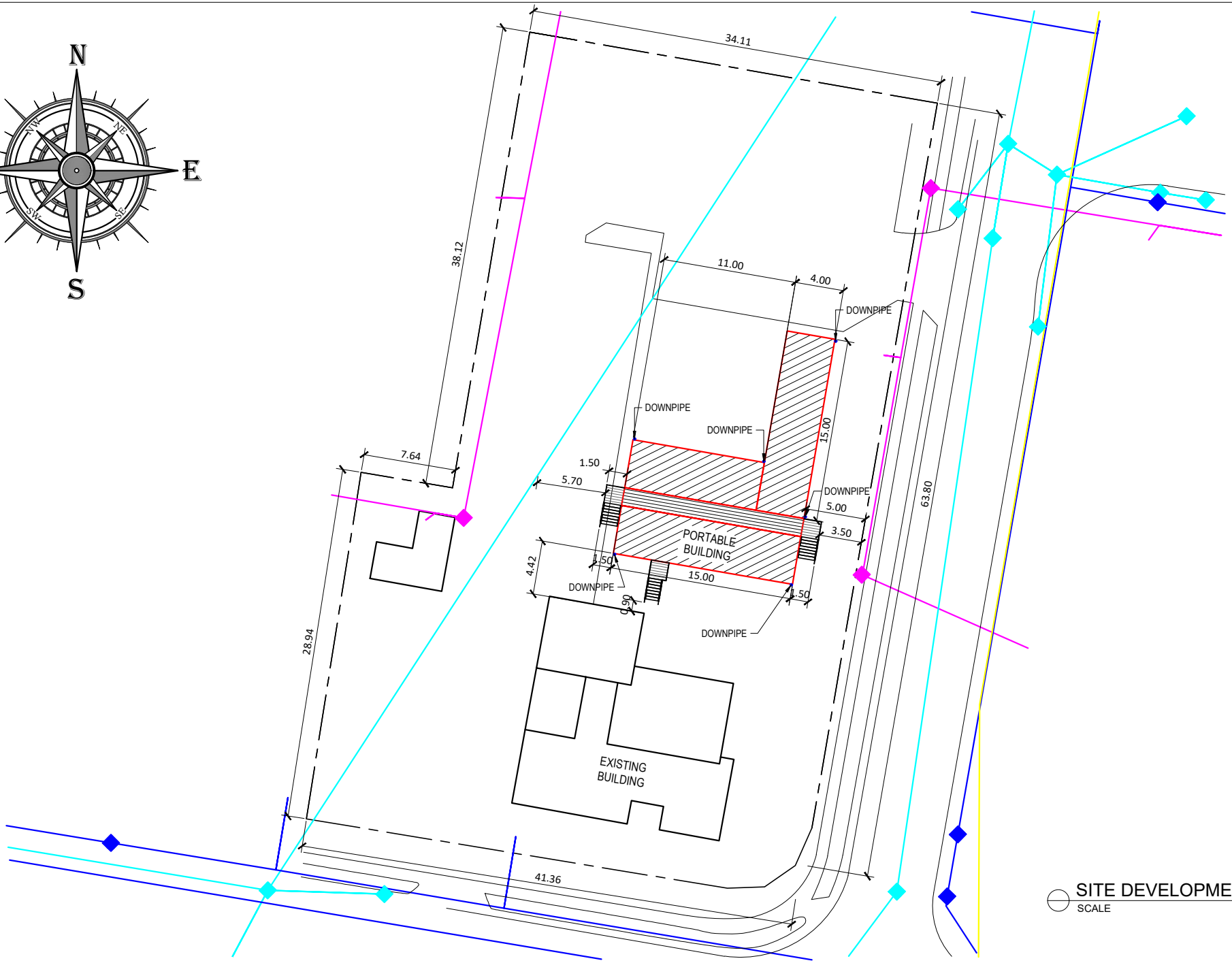
Appendix A:

Development Plans



SITE DEVELOPMENT PLAN
SCALE 1:300

AFFORDABLE MODULAR BUILDINGS
PORTABLE BUILDING GROUP PTY LTD ABN: 54 655 549 241
OFFICES / ABLUTION BLOCKS / WORKERS ACCOMMODATION / LUNCH ROOMS / TINY HOMES / GRANNY FLATS / SHIPPING CONTAINER MODIFICATIONS / HOME OFFICES
TRANSPORTABLE BUILDINGS RESIDENTIAL & COMMERCIAL

PROJECT : PORTABLE BUILDINGS JOINED - 2 x 4.0m WIDE x 15.0m LONG & 4.0m WIDE x 11.0m w/ DECK & PATIO
CLIENT: Inv 1027 - VIVIENNE WILLIAMS
PROJECT LOCATION: 487 ELLISON ROAD, ASPLEY, QLD 4034

REV # 2

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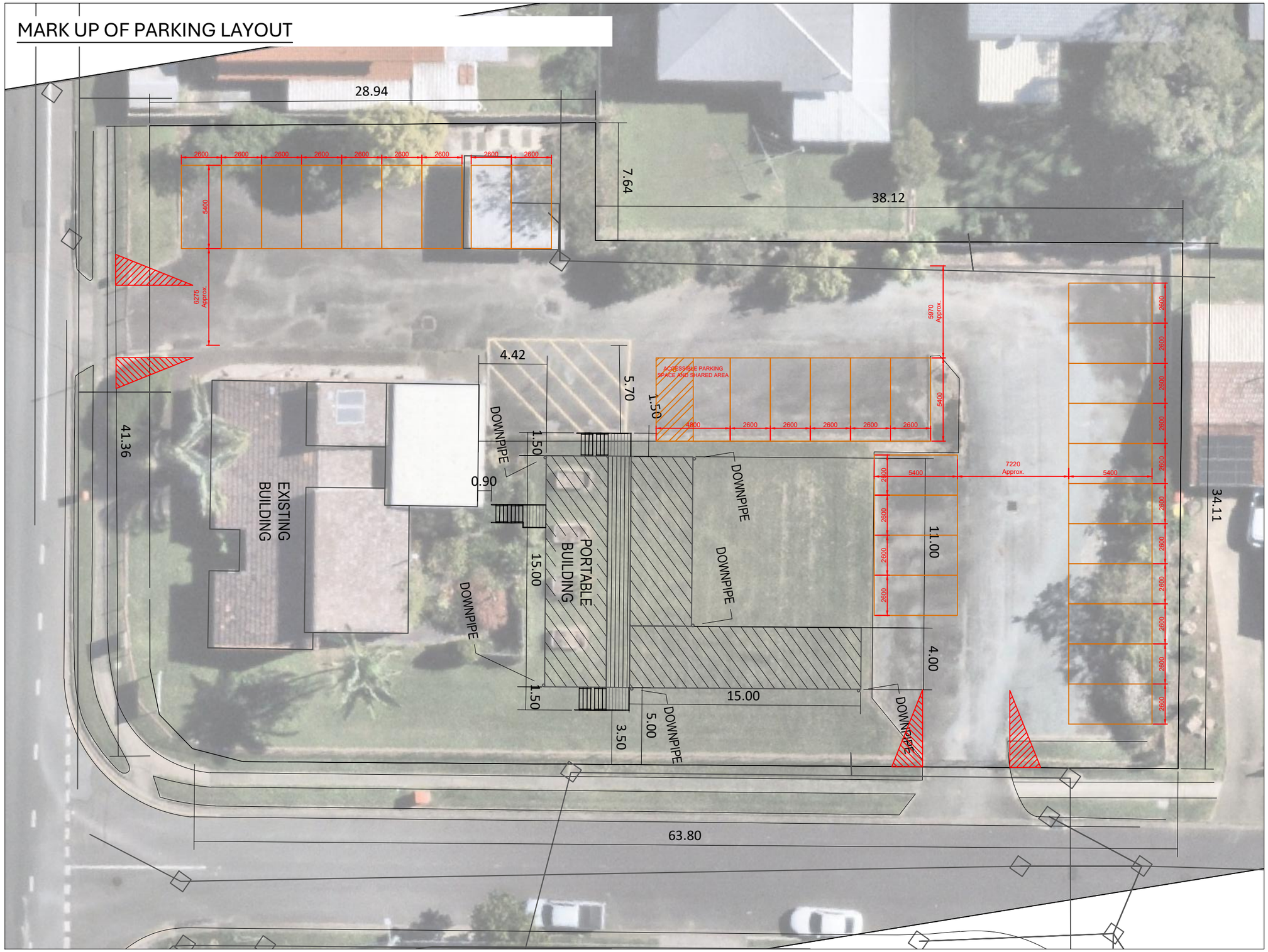
Appendix B:

Mark-Up of Recommended Parking Layout

MARK UP OF PARKING LAYOUT



LEGEND

Recommended line-marking

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Address: 487 ELLISON RD ASPLEY
Development Type: HEALTH CARE SERVICE
Assessment: PARKING LAYOUT

Mark up of parking layout

REVISION	DATE	DESCRIPTION
A	16/06/26	ORIGINAL ISSUE
B	06/08/26	UPDATED ISSUE

NOTES:
- BASE PLANS PREPARED BY AFFORDABLE MODULAR BUILDINGS
- SIMULATION SOFTWARE - AUTOTURN

N

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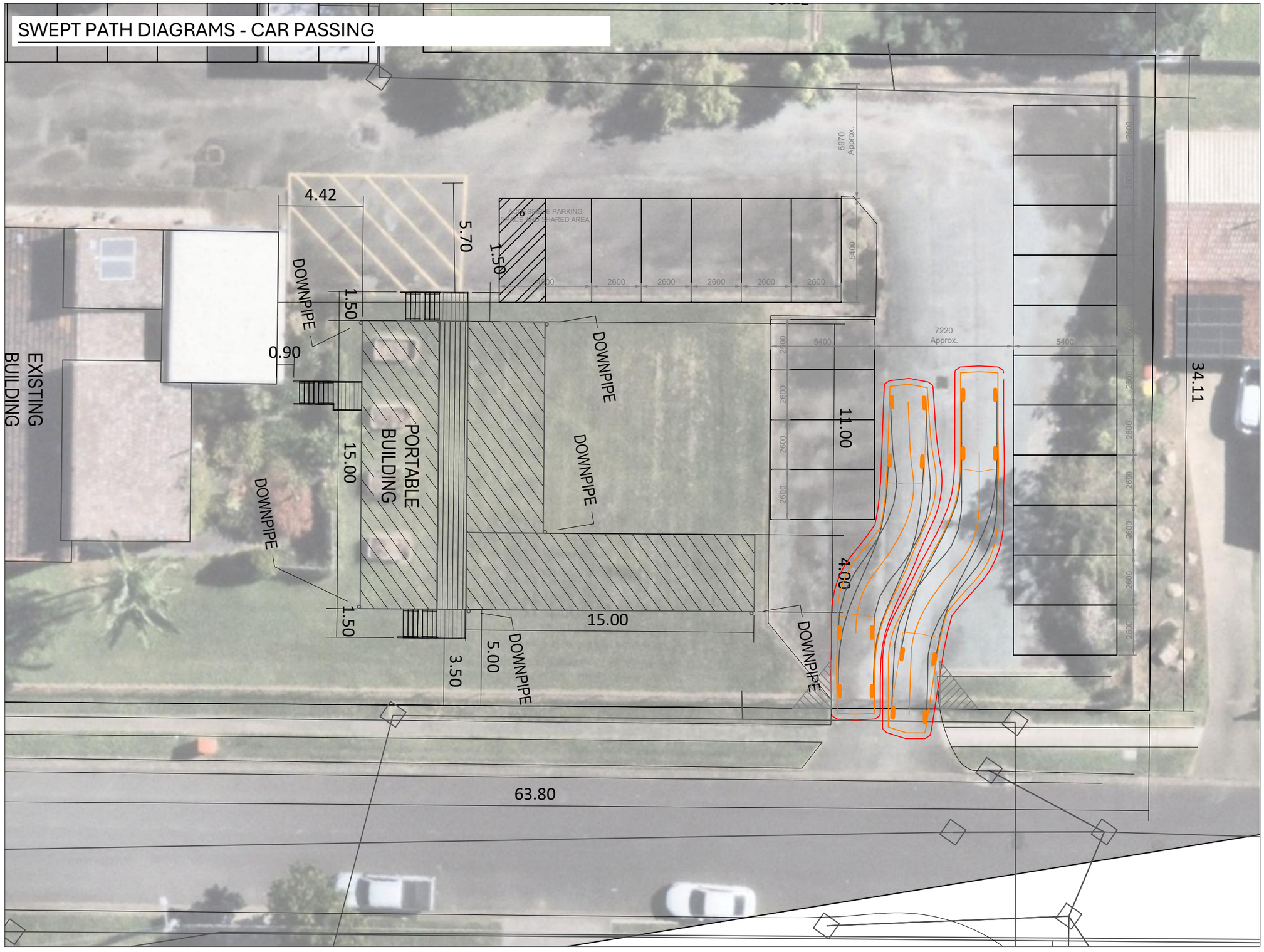
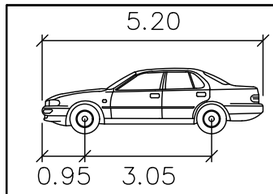
Appendix C:

Swept Path Diagrams – Cars

SWEPT PATH DIAGRAMS - CAR PASSING



DESIGN VEHICLE USED IN SIMULATION



B99 Design Car - AS2890.1:2004

Width	: 1940 mm
Track	: 1840 mm
Lock to Lock Time	: 6.0 sec
Steering Angle	: 33.9 degrees
Speed	: 5 km/h

LEGEND

- Vehicle Body
- Wheel Tracks
- Clearance Lines (300mm)

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Assessment: PARKING LAYOUT

Swept Path Diagrams

REVISION	DATE	DESCRIPTION
A	16/06/26	ORIGINAL ISSUE
B	06/08/26	UPDATED ISSUE

NOTES:
- BASE PLANS PREPARED BY AFFORDABLE MODULAR BUILDINGS
- SIMULATION SOFTWARE - AUTOTURN

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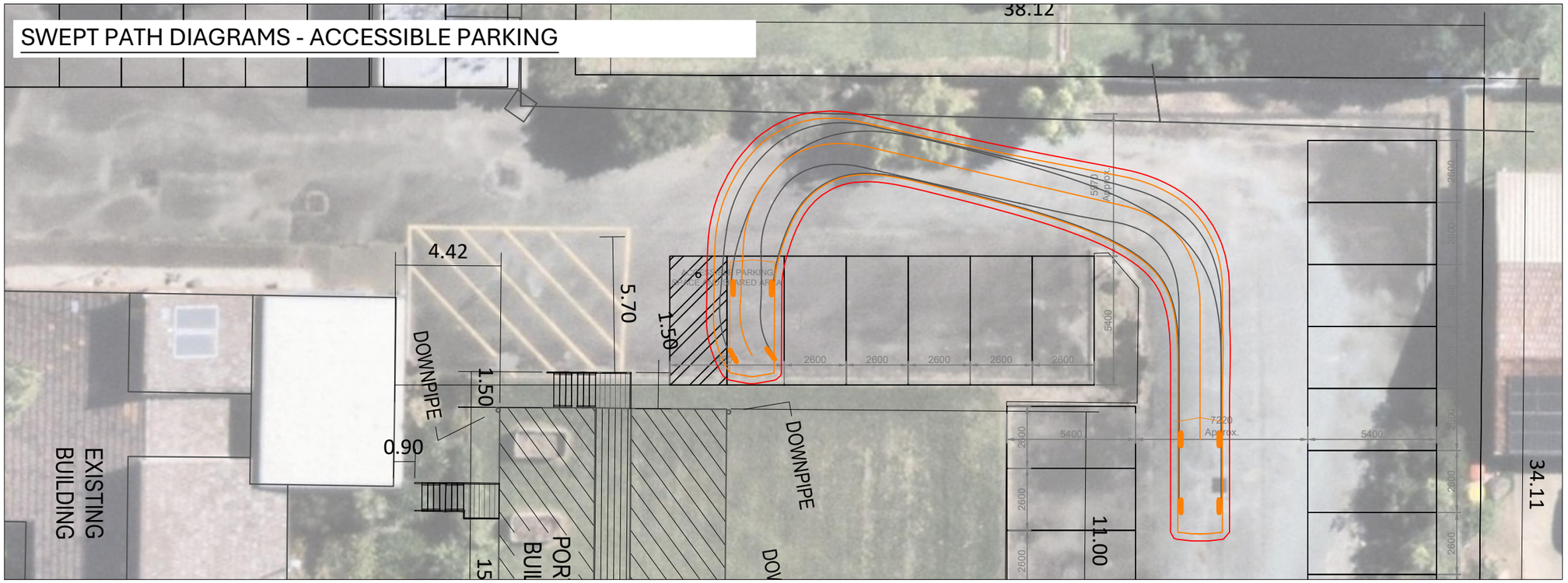
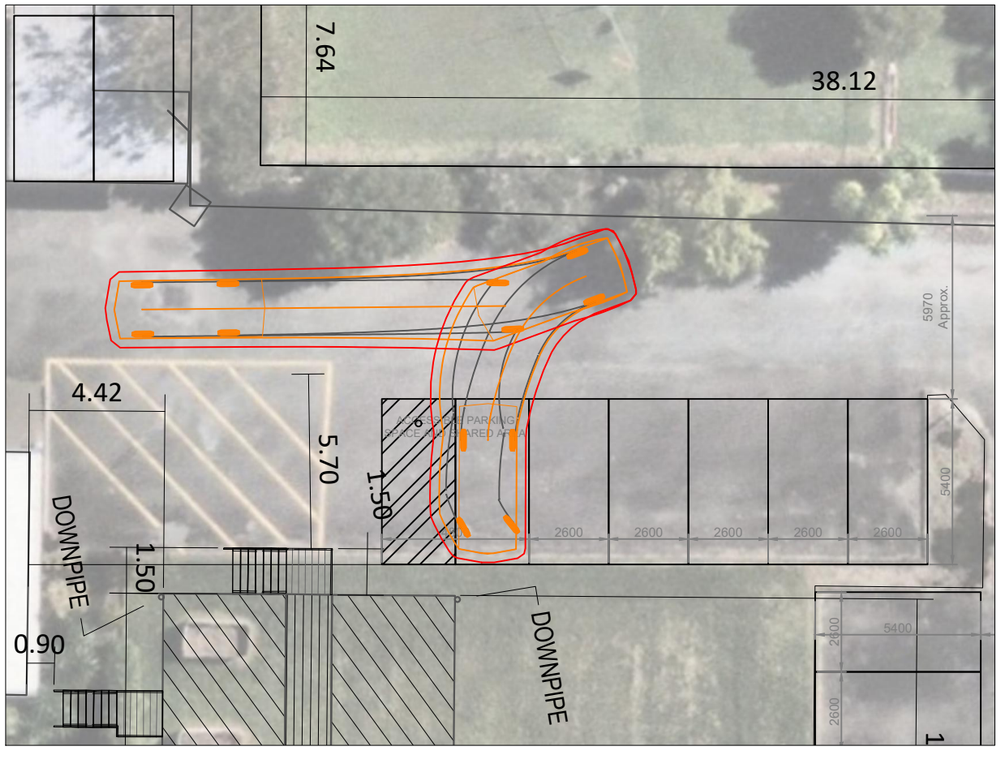
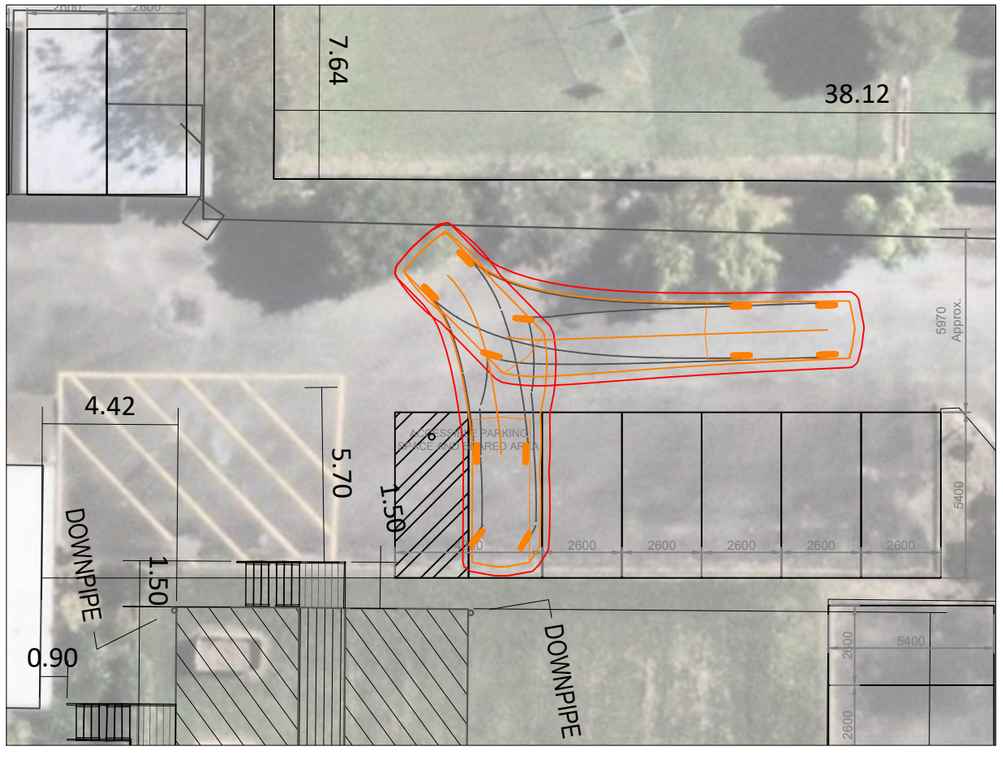
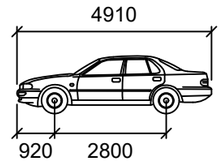
SWEPT PATH DIAGRAMS - ACCESSIBLE PARKING







DESIGN VEHICLE USED IN SIMULATION



B85 Design Car - AS2890.1:2004

Width	:	1870mm
Track	:	1770mm
Lock to Lock Time	:	6.0sec
Steering Angle	:	34.1degrees
Design Speed	:	5km/h

LEGEND

- Vehicle Body
- Wheel Tracks
- Clearance Lines (300mm)

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Assessment: PARKING LAYOUT

Swept Path Diagrams

REVISION	DATE	DESCRIPTION
A	16/06/26	ORIGINAL ISSUE
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NOTES:
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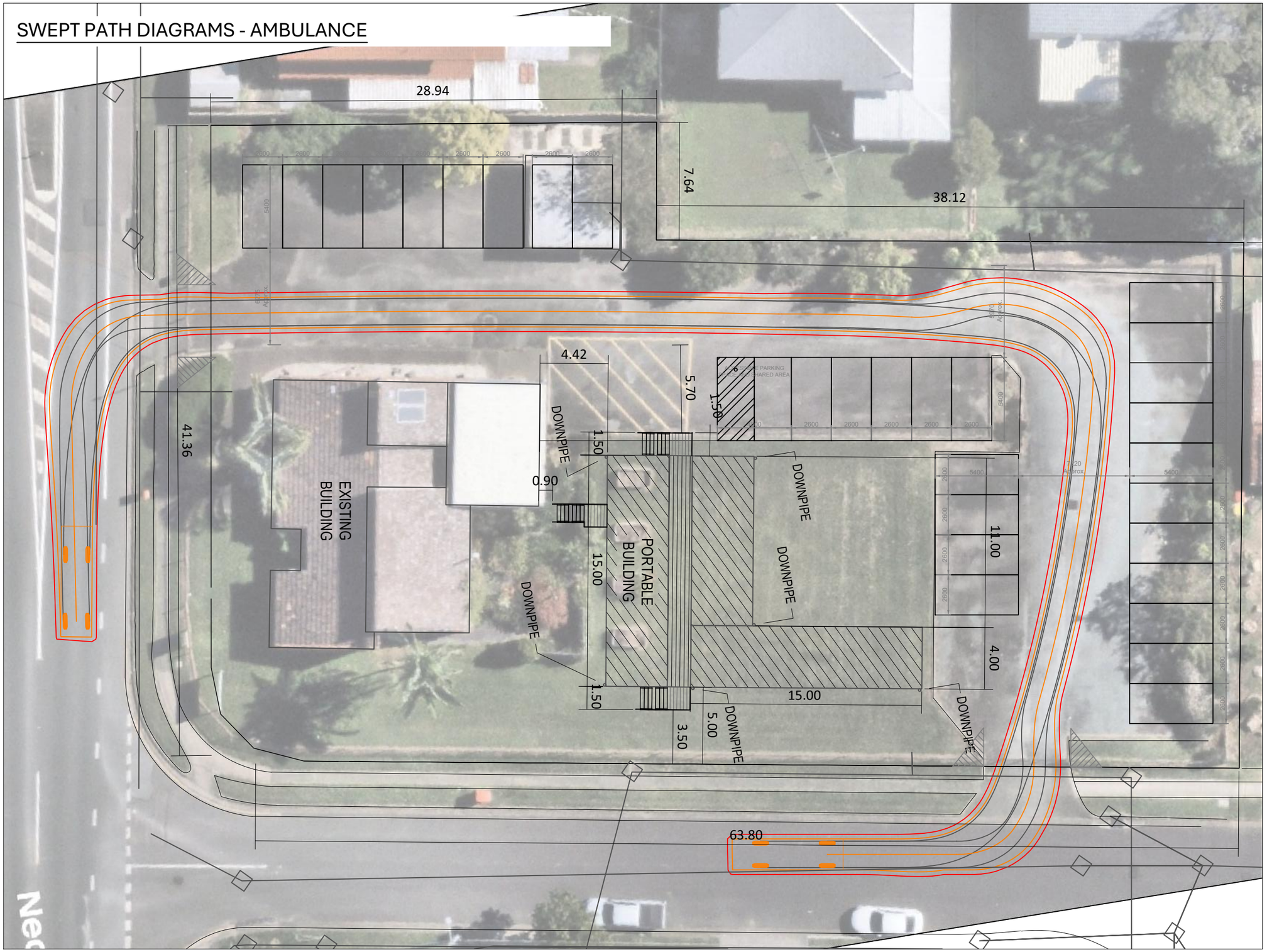
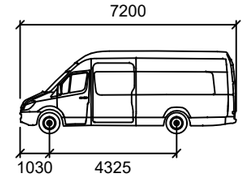
Appendix D:

Swept Path Diagrams - Ambulance

SWEPT PATH DIAGRAMS - AMBULANCE



DESIGN VEHICLE USED IN SIMULATION



Ambulance (CPAV)

Width	:	2005mm
Track	:	1705mm
Lock to Lock Time	:	6.0s
Steering Angle	:	37.3 degrees
Design Speed	:	5km/h

LEGEND

- Vehicle Body
- Wheel Tracks
- Clearance Lines (300mm)

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Assessment: PARKING LAYOUT

Swept Path Diagrams

REVISION	DATE	DESCRIPTION
A	16/06/26	ORIGINAL ISSUE
B	06/08/26	UPDATED ISSUE

NOTES:
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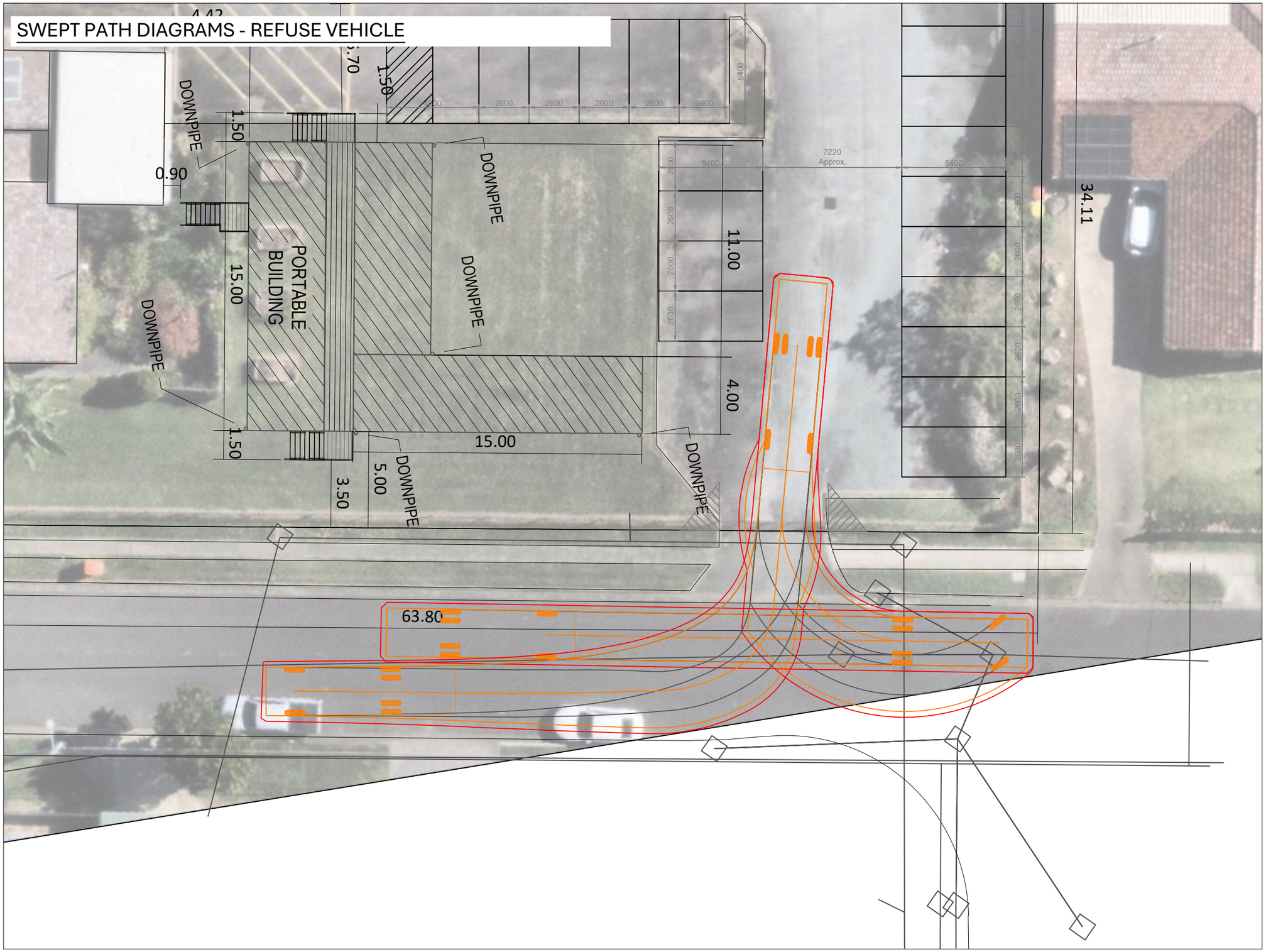
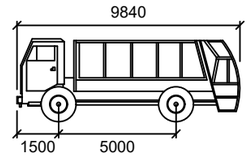
Appendix E:

Swept Path Diagrams - Refuse

SWEPT PATH DIAGRAMS - REFUSE VEHICLE



DESIGN VEHICLE USED IN SIMULATION



Industrial Refuse Collection Vehicle
(JJ Richards Waste)

Width	:	2500
Track	:	2480
Lock to Lock Time	:	6.0
Steering Angle	:	38.2

LEGEND

- Vehicle Body
- Wheel Tracks
- Clearance Lines (300mm)

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Swept Path Diagrams

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NOTES:
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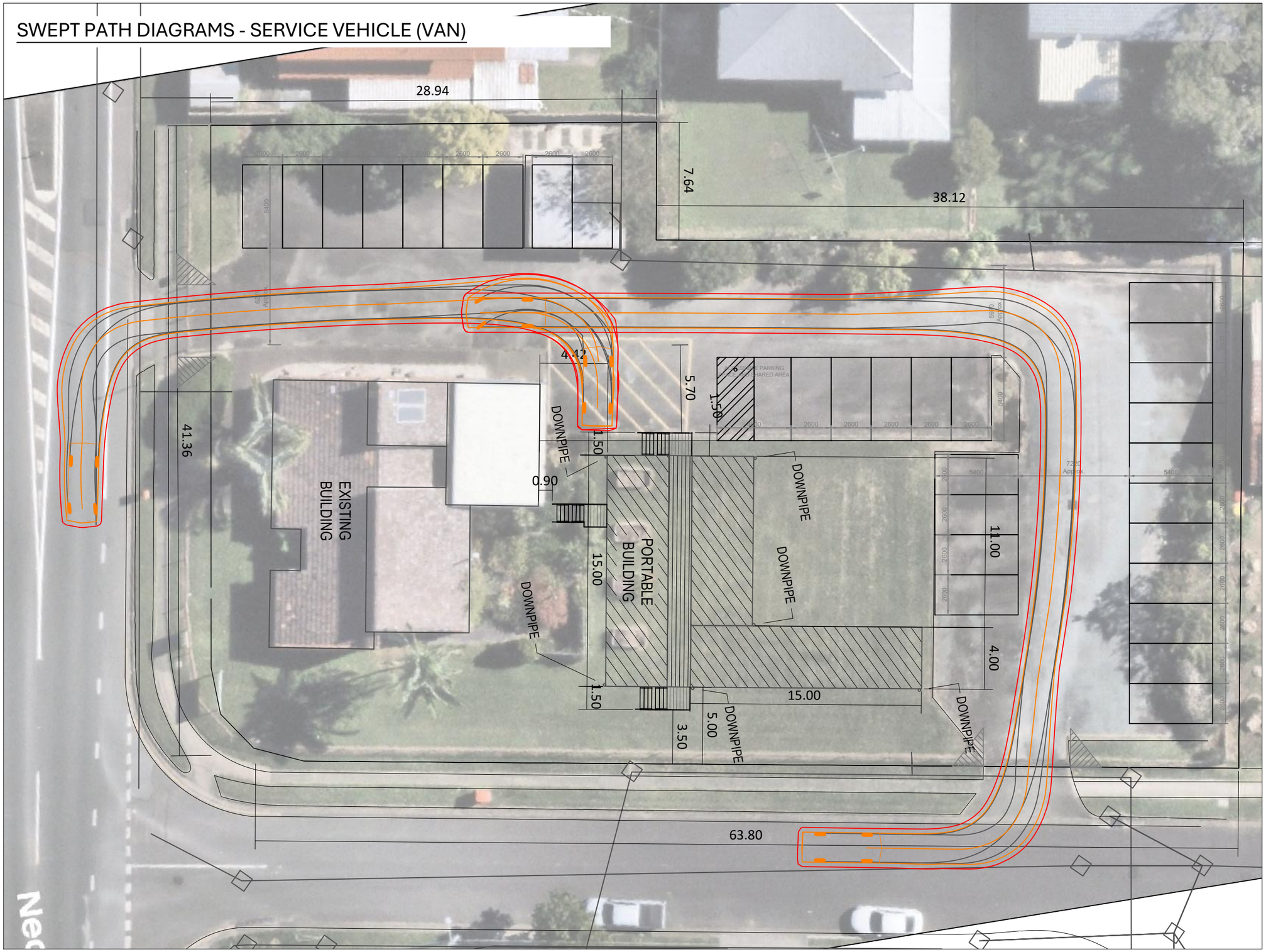
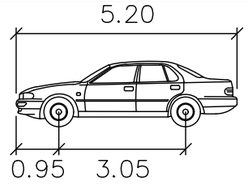
Appendix F:

Swept Path Diagrams – Van Loading

SWEPT PATH DIAGRAMS - SERVICE VEHICLE (VAN)



DESIGN VEHICLE USED IN SIMULATION



B99 Design Car - AS2890.1:2004

Width	: 1940 mm
Track	: 1840 mm
Lock to Lock Time	: 6.0 sec
Steering Angle	: 33.9 degrees
Speed	: 5 km/h

LEGEND

- Vehicle Body
- Wheel Tracks
- Clearance Lines (300mm)

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NOTES:
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- VAN REPRESENTED BY B99 DESIGN VEHICLE AS PER SC6.31 TABLE 20

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REFERENCE	REVISION	SHEET	SCALE
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