



**ctmp -
concept
stage;**

**Bankstown North Public School
Redevelopment - Main Works**

For SINSW
5 May 2020

**parking;
traffic;
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1. Introduction

1.1 Project Description

ptc. has been engaged by JDH Architects on behalf of School Infrastructure New South Wales (SINSW) to undertake a Concept Construction Traffic Management Plan (CCTMP) associated with the Stage Significant Development Application of Bankstown North Public School (BNPS), 322 Hume Highway, Bankstown. The site is located within the City of Canterbury Bankstown Council local government area and has been assessed under that Council's control.

This report addresses the construction works related to the redevelopment of the School.

The location of the subject site is outlined in Figure 1.

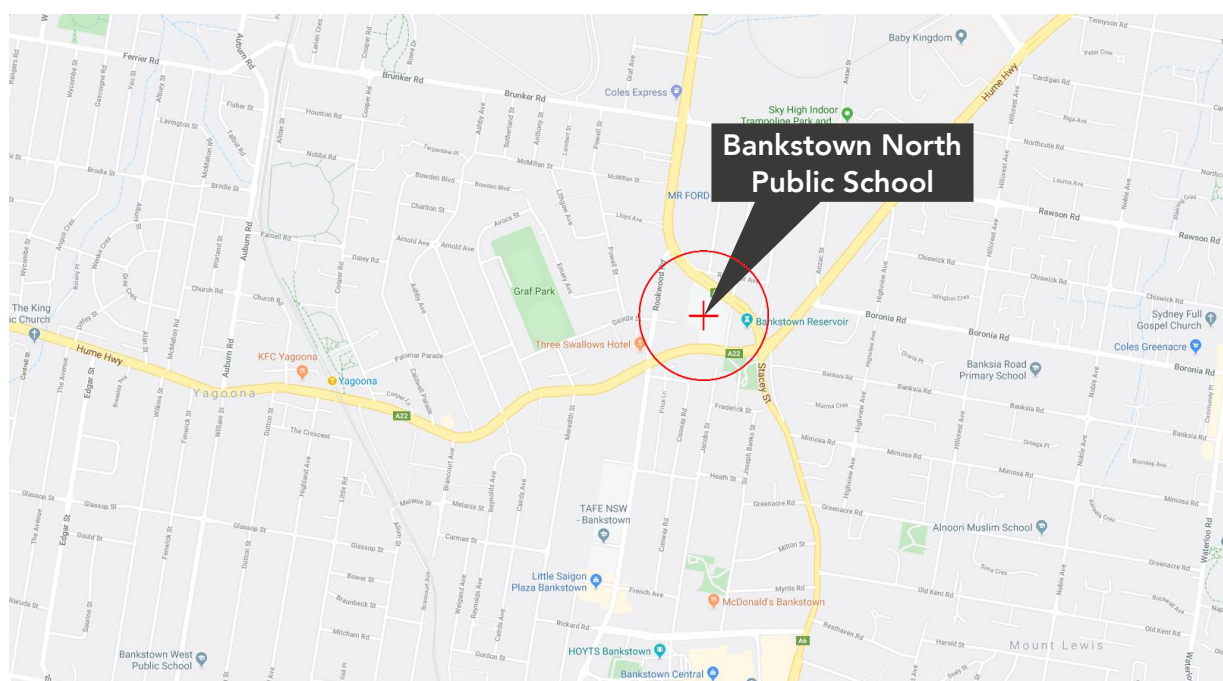


Figure 1 – Site Location

1.2 Purpose of this Report

The CCTMP address the potential construction activity associated with the construction of the development, including:

- Location of any proposed Work Zone, Site Boundary, and any site office, crane locations, material and waste storage area and other components as necessary;
- Haulage routes;
- Construction vehicle access arrangements;
- A heavy vehicle swept path assessment, demonstrating feasibility of any site access, in addition to haulage routes if required;
- Estimated construction hours;
- Estimated number of construction vehicle movements;
- Estimated construction program;
- Mitigation of any potential impacts to general traffic, cyclists, pedestrians and bus services within the vicinity of the site from construction vehicles during the construction of the proposed works;
- Development of a concept traffic management plan (TMP), outlining the construction access to the development and a description of likely traffic control measures required.

1.3 Structure of this Report

This report has been prepared to present the traffic and pedestrian management arrangements (including Traffic Control Plans) associated with the redevelopment of the BNPS.

This report presents the following considerations in relation to the CCTMP:

Section 2	Background;
Section 3	A description of the project;
Section 4	A description of the road network and transport facilities serving the development site;
Section 5	Management of construction vehicles and non-site traffic; and
Section 6	Summary

2. Background

BNPS is located at 322 Hume Highway in Bankstown, approximately 16 kilometres southwest of Sydney CBD. It is also located north of St Felix Catholic Primary School, east of Graf Park and west of Bankstown Reservoir.

The School has frontage to Hume Highway in the south, Stacey Street in the north and Beresford Avenue in the east.

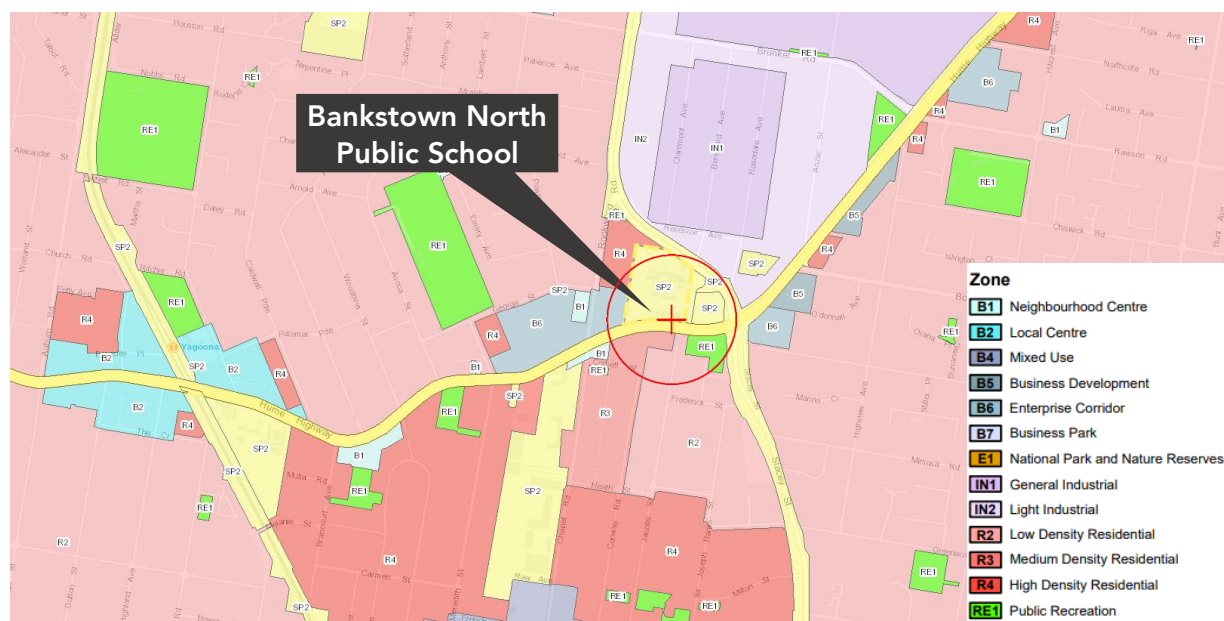


Figure 2 – Land Zoning

In terms of land use, the School is located within an area that is predominantly residential with industrial land use located in the north. The residential land uses in the south are generally high density residential while the land uses to the east and west are generally low density. In addition, there are enterprise corridor and business development land use along Hume Highway.

The School is comprised of the following lots:

- Lot 1 of DP 441732, DP 501320 and DP 772787;
- Lot 1, Section 5 of DP 192509;
- Lot 11, 12, 13 and 14 of DP 132498;
- Lot 14 of DP 1000689
- Lot 7 and 8 of DP 441703; and
- Lot A of DP 399940 and DP 444924

The aerial photograph in Figure 3 provides an overview of the area and context in relation to the surrounding land uses.

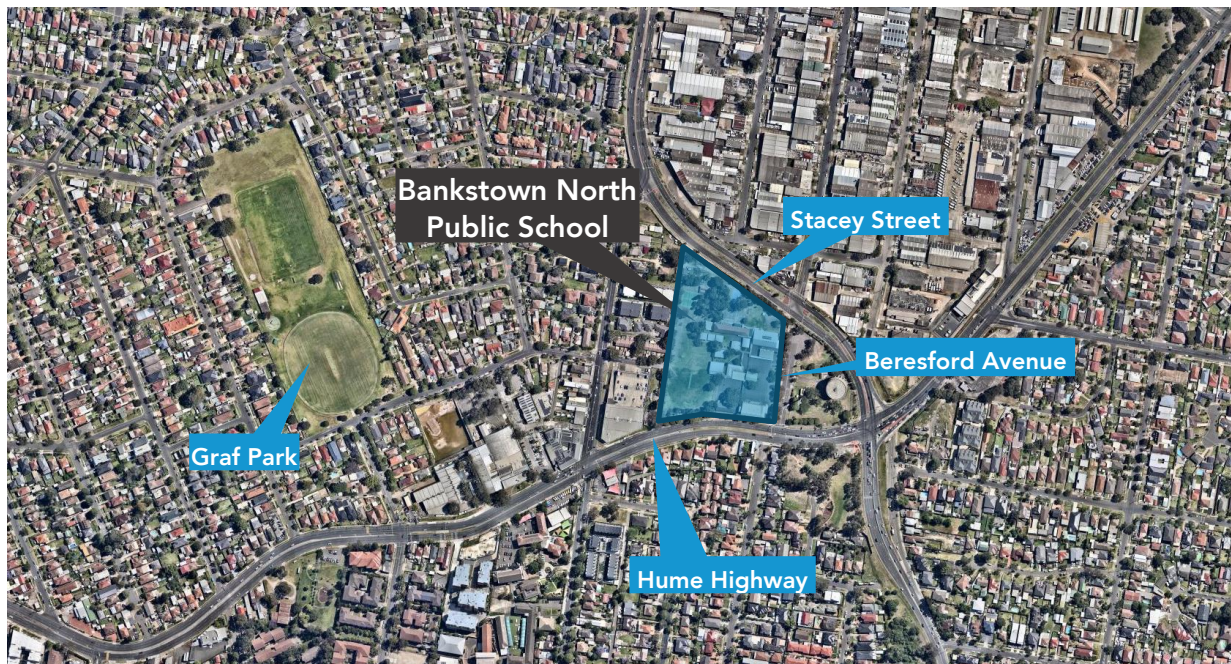


Figure 3 – Site Context

4. Existing Transport Facilities

4.1 Road Hierarchy

The School is located between Hume Highway and Stacey Street, and in this regard has reasonably good connections to the arterial road network as shown in Figure 5.

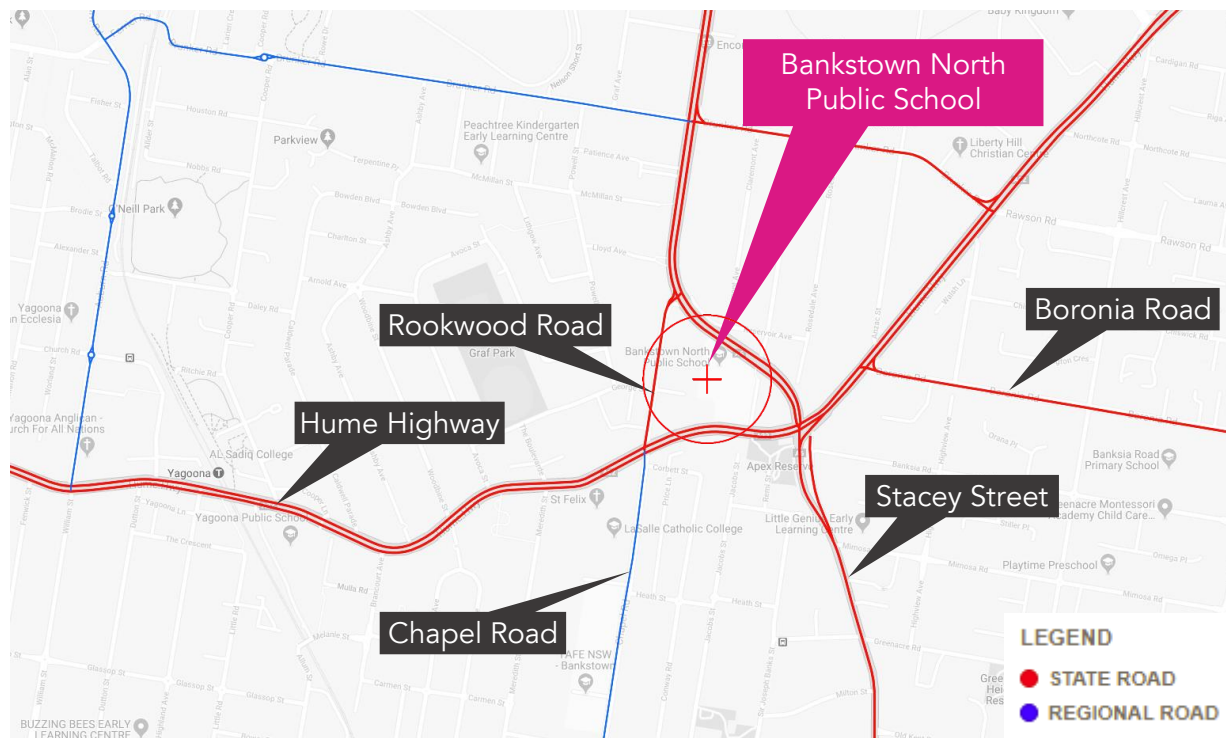


Figure 5 – Road Hierarchy

The NSW administrative road hierarchy comprises the following road classifications, which align with the generic road hierarchy as follows:

- | | |
|----------------|--|
| State Roads | - Freeways and Primary Arterials (RMS Managed) |
| Regional Roads | - Secondary or Sub Arterials (Council Managed, partly funded by the State) |
| Local Roads | - Collector and Local Access Roads (Council Managed) |

Hume Highway

Road Classification	State Road
Alignment	East-West
Number of Lanes	3 lanes in each direction
Carriageway Type	Divided
Carriageway Width	23m
Speed Limit	60 km/h
School Zone	Yes, from Stacey Street to The Boulevard
Parking Controls	Clearway 6am-10am eastbound & 3pm-7pm westbound Mon-Fri
Forms Site Frontage	Yes



Figure 6 – Hume Highway – Eastbound from Beresford Avenue

Stacey Street

Road Classification	State Road
Alignment	North-South
Number of Lanes	2 lanes in each direction
Carriageway Type	Divided
Carriageway Width	22m
Speed Limit	70 km/h
School Zone	No
Parking Controls	Clearway 6am-7pm Mon-Fri & 9am-6pm Sat-Sun & Public Holidays
Forms Site Frontage	Yes



Figure 7 – Stacey Street – Northbound from Beresford Avenue

Rookwood Road

Road Classification	State Road
Alignment	North-South
Number of Lanes	1 lane northbound & 2 lanes southbound
Carriageway Type	Undivided
Carriageway Width	13m
Speed Limit	60 km/h
School Zone	Yes, from Hume Highway to George Street
Parking Controls	Time restricted parking northbound & No Parking southbound
Forms Site Frontage	No



Figure 8 – Rookwood Road – Southbound from George Street

Chapel Road

Road Classification	Regional Road
Alignment	North-South
Number of Lanes	2 lanes northbound & 1 lane southbound
Carriageway Type	Undivided
Carriageway Width	12m
Speed Limit	60 km/h
School Zone	Yes, from Hume Highway to Heath Street
Parking Controls	No
Forms Site Frontage	No



Figure 9 – Chapel Road – Southbound from Corbett Street

Boronia Road

Road Classification	State Road
Alignment	East-West
Number of Lanes	2 lanes in each direction
Carriageway Type	Undivided
Carriageway Width	12m
Speed Limit	60 km/h
School Zone	No
Parking Controls	No stopping 6am-10am & 3pm-7pm Mon-Fri
Forms Site Frontage	No



Figure 10 – Boronia Road – Eastbound from Hume Highway

Beresford Avenue

Road Classification	Local Road
Alignment	North South
Number of Lanes	1 lane northbound, and 2 lanes southbound
Carriageway Type	Undivided
Carriageway Width	12m
Speed Limit	50 km/h
School Zone	Yes
Parking Controls	No parking 8am-9:30am & 2:30pm-4pm Mon-Fri, 1/4 Hour Parking
Forms Site Frontage	No



Figure 11 – Beresford Avenue – Northbound from Hume Highway

4.2 Key Intersections

The key intersections in the vicinity of the site and their characteristics are listed below and shown in Figure 12:

- Hume Highway / Stacey Street: signalised 4-arm intersection
- Stacey Street / Hume Highway: signalised 3-arm intersection
- Hume Highway / Rockwood Road / Chapel Street: signalised 4-arm intersection
- Rockwood Road / George Street / Davis Lane: signalised 4-arm intersection
- Hume Highway / Beresford Avenue: signalised 3-arm intersection

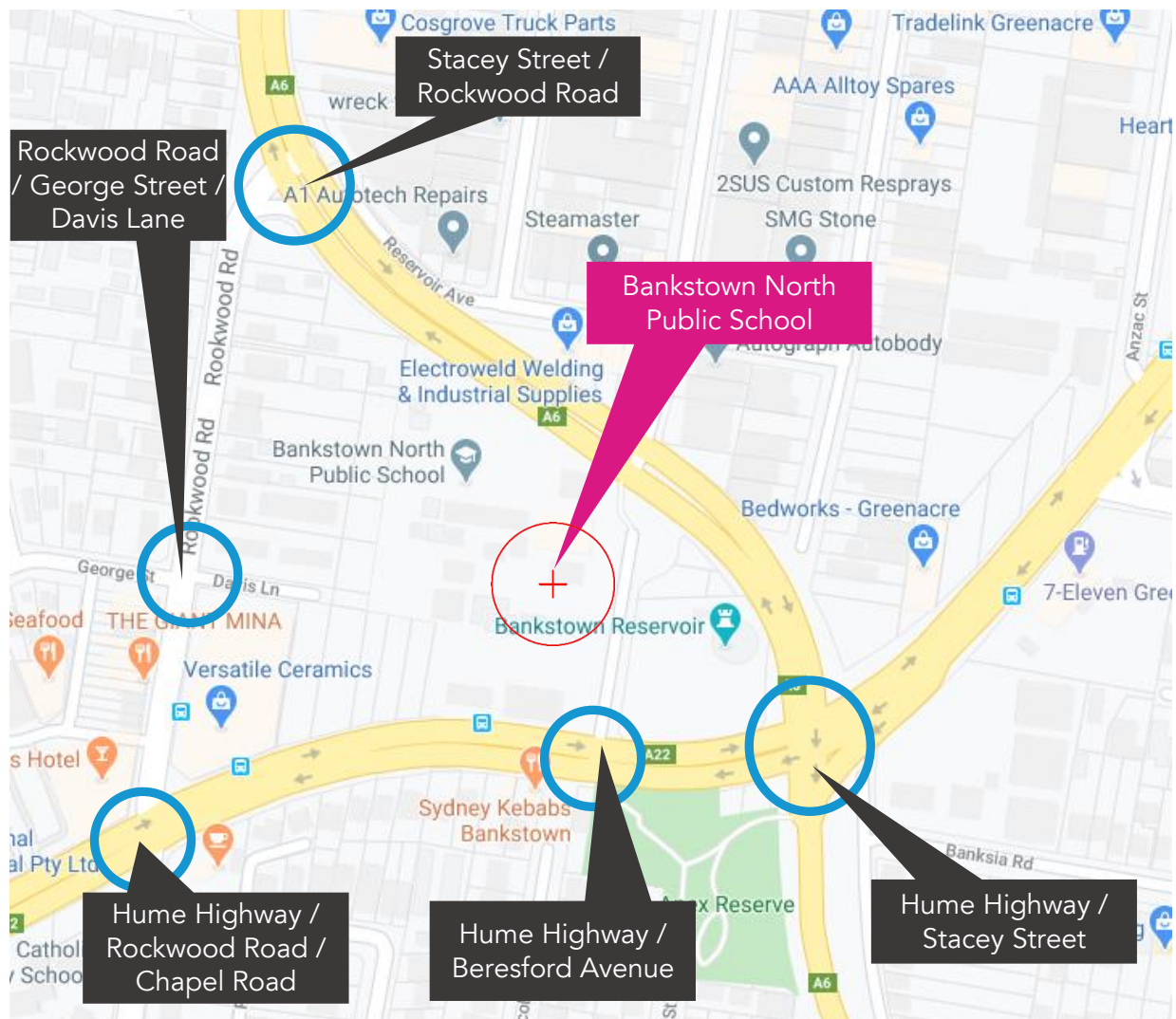


Figure 12 – Key Intersections

4.3 Public Transport

The locality of the School has been assessed in the context of available modes of transport that may be utilised by students, parents and staff members. When defining accessibility, the NSW Planning Guidelines for Walking and Cycling (2004) suggest a 400m – 800m catchment is a comfortable walking distance to access public transport and local amenities.

Figure 13 illustrates 400m and 800m catchments from BNPS, together with a number of public transport options and network, which are available in the vicinity of the site, such as bus services. Details of public transport options available are outlined in the following sections.

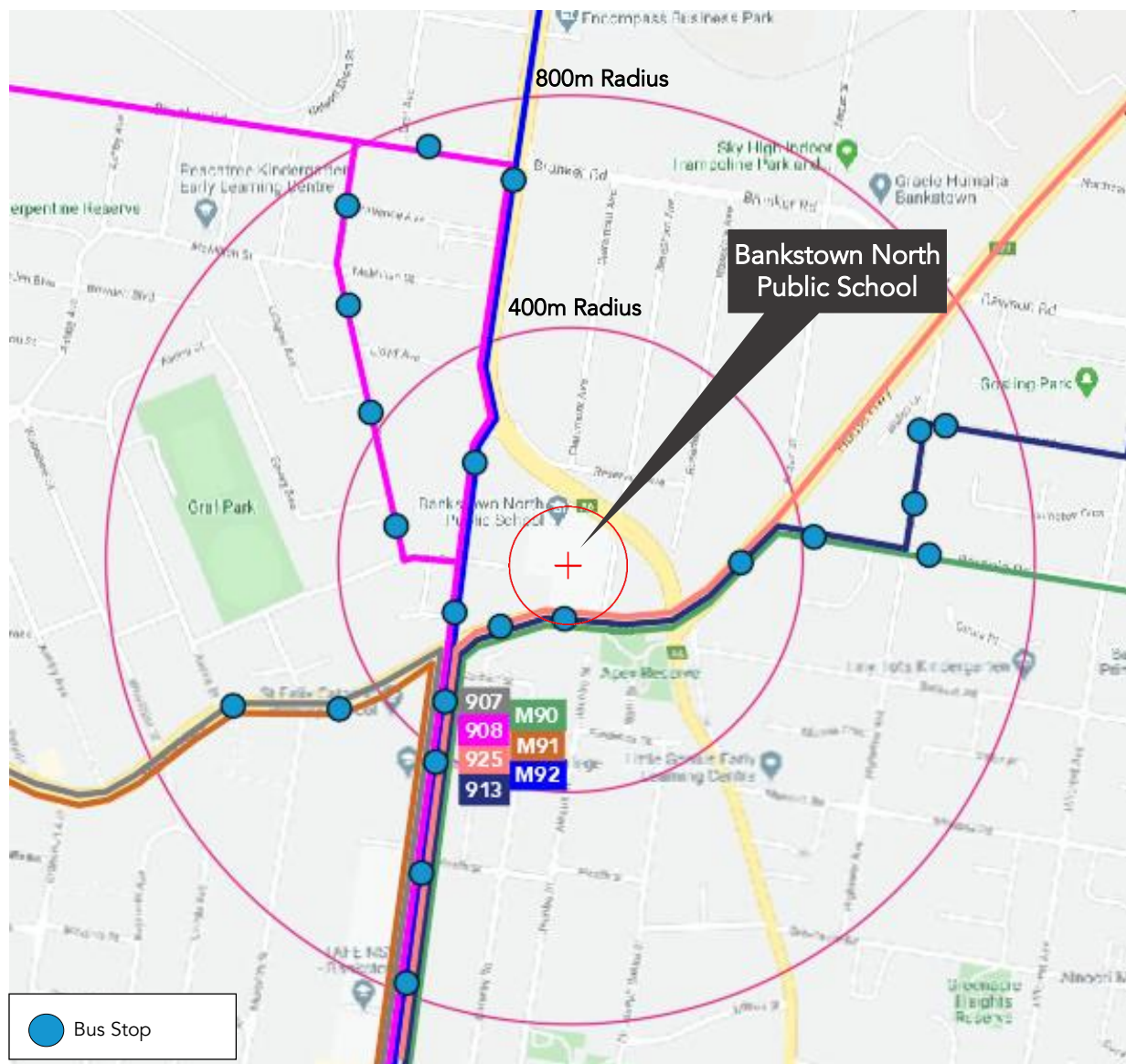


Figure 13 – 400m and 800m Catchments and Surrounding Public Transport (Bus Services)

4.3.1 Bus Services

As shown in Figure 13 there is a number of bus services within the 400m and 800m catchment. The closest bus stop is located on Hume Highway which is 50 metres away from the School. The bus services, including coverage, approximate operation times and frequency, are summarised in Table 1.

Table 1 – Bus Services Frequency

Route	Frequency (approx.)	Coverage	Stop Location
907	Every 20 minutes from 5:13am to 9:54pm Mon-Fri Every 20 minutes from 7:07am to 8:36pm on weekends	Parramatta to Bankstown via Bass Hill	300m
908	Hourly from 7:25am to 5:50pm Mon-Fri Hourly from 9:00am to 4:21pm on weekends	Merrylands to Bankstown via Birrong and Auburn	260m
913	Only operate hourly from 5:32am to 4:49pm Mon-Fri	Bankstown to Strathfield	50m
925	Every 30 minutes from 7:02am to 9:06pm Mon-Fri Hourly from 7:43am to 6:43pm on weekends	East Hills to Lidcombe via Bankstown	50m
M90	Every 20 minutes from 6:20am to 8:52pm Mon-Fri Every 20 minutes from 7:05am to 8:12pm on weekends	Burwood to Liverpool	50m
M91	Every 10 minutes from 5:20am to 11:30pm Mon-Fri Every 20 minutes from 6:36am to 11:20pm on weekends	Hurstville to Parramatta via Padstow & Chester Hill	300m
M92	Every 10 minutes from 6:06am to 9:20pm Mon-Fri Every 20 minutes from: 7:26am to 8:26pm on weekends	Sutherland to Parramatta	260m

The development is well serviced by buses with regular services (every 10-60 minutes throughout the day on weekdays), and therefore provides an alternative mode share option for students, parents and staff, subject to the availability of convenient bus stops close to their home location.

4.3.2 Rail

Yagoona Station and Bankstown Station are located approximately 1.4km and 1.5km walking distance from the School respectively, which both provides services to T3 – Bankstown line.

Table 2 – Rail Services

Rail Route	From	To	Frequency on Weekdays (approx.)
T3 – Bankstown Line	Liverpool or Lidcombe	City	Every 10 minutes Mon-Fri Every 15 minutes on weekends

Services via the Bankstown Line are frequent and provide excellent availability throughout the day, especially during peak hours.

4.4 Active Travel

The locality was reviewed for features that would attract active transport trips (walking and cycling), with reference to the NSW Guidelines for Walking and Cycling (2004).

4.4.1 Walking

Walking is a viable transport option for distances under one kilometre (approximately 15-20min) and is often quicker for short trips door to door. Walking is also the most space efficient mode of transport for short trips and presents the highest benefits. Co-benefits where walking replaces a motorised trip include improved health for the individual, reduced congestion on the road network and reduced noise and emission pollution.

The pedestrian network in the locality has been assessed to provide a reasonably high level of amenities within the vicinity of the school. Major roads such as Hume Highway and Rockwood Road generally have footpaths on both sides of the road; however, Stacey Street provides footpaths on the southern side only. The lack of a footpath on the northern side is likely due to the industrial character of land north of BNPS. Some local roads such as Chapel Road and Rockwood Road offer pedestrian footpaths on both sides of the carriageway, whereas Beresford Avenue and Davis Lane offer footpaths only on one side of the road. Signalised pedestrian crossings are provided at all major intersections. Considering amenities within a 1km walking distance to the school, the residential areas have a more rural character and offer no or only one footpath along the roads. Pram ramps are generally provided at each end of a footpath.

Figure 14 shows an overview of existing pedestrian infrastructure in the vicinity of the site.

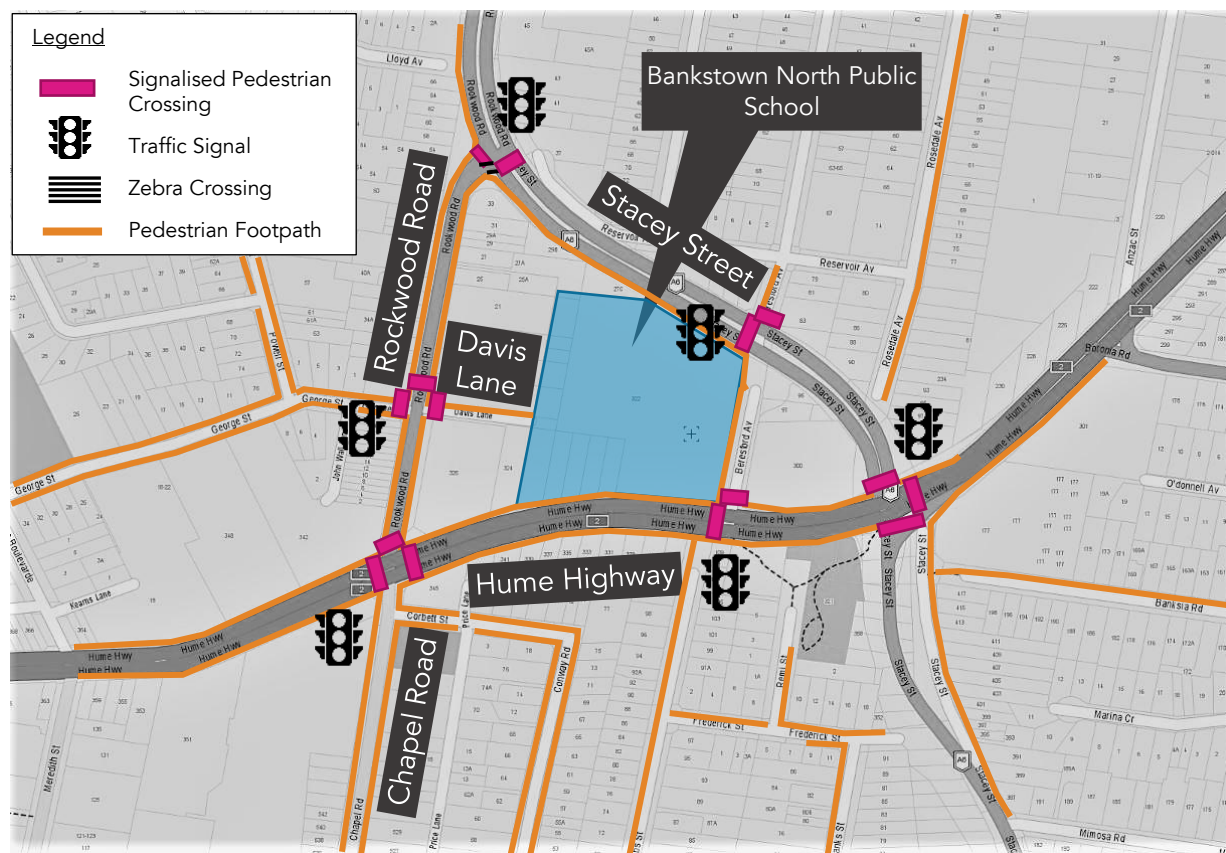


Figure 14 – Surrounding Pedestrian Infrastructure

4.4.2 Cycling

The subject site currently has poor connectivity to the bicycle network. Figure 15 presents a screenshot of the cycle map published by Council. This will discourage cycling as an alternative mode of transport for staff and students.

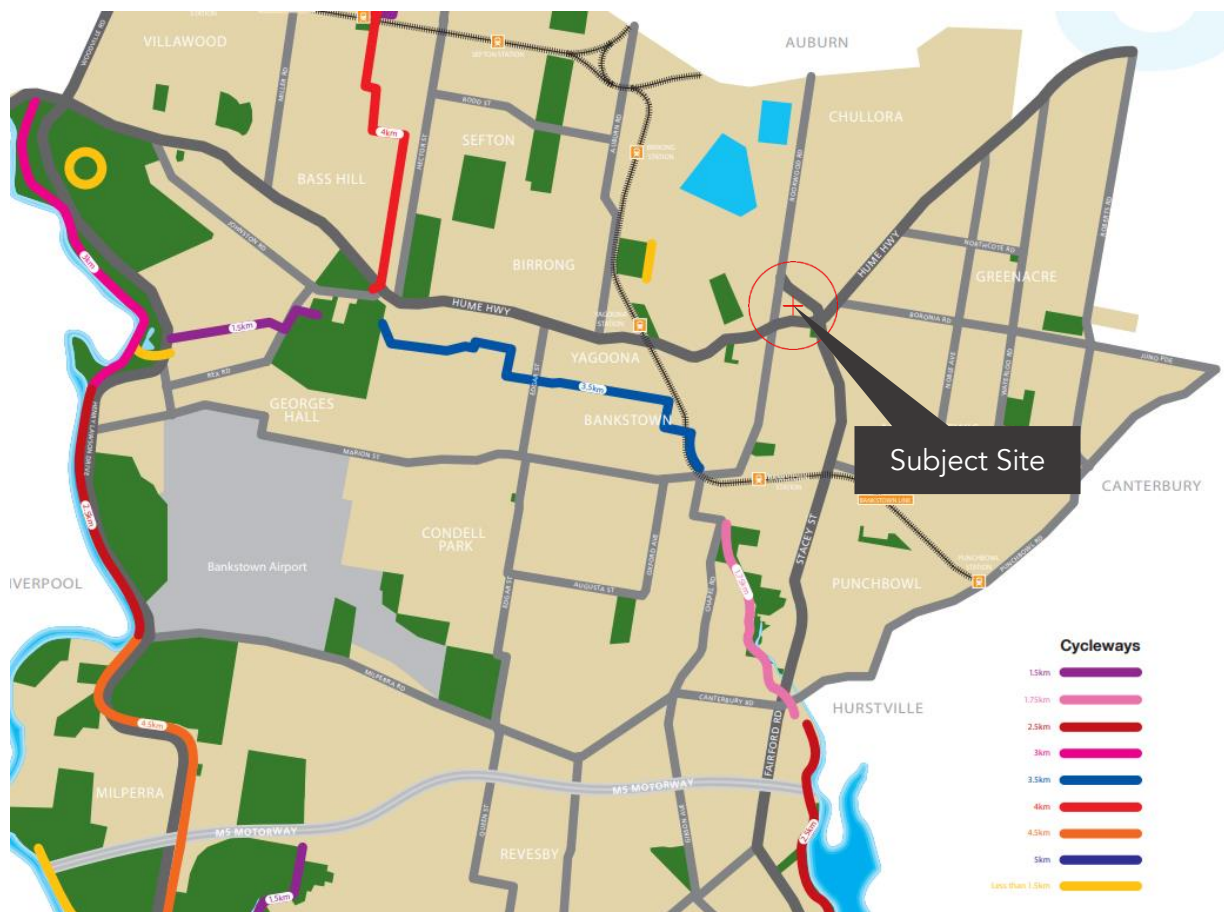


Figure 15 – Surrounding Cycle Paths (Source: Bankstown Cycleway Map)

5. Conceptual Construction Management Plan (CCTMP)

5.1 Objective

The traffic management plan associated with the construction activity aims to ensure the safety of all workers and road users within the vicinity of the construction site and following are the primary objectives:

- To minimise the impact of the construction vehicle traffic on the overall operation of the road network;
- To ensure continuous, safe and efficient movement of traffic for both the general public and construction workers;
- Installation of appropriate advance warning signs to inform users of the changed traffic conditions;
- To provide a description of the construction vehicles and the volume of these construction vehicles accessing the construction site;
- To provide information regarding the changed access arrangement and also a description of the proposed external routes for vehicles including the construction vehicles accessing the site; and
- Establishment of a safe pedestrian environment in the vicinity of the site.

5.2 Hours of Work

All works, associated with the project will be restricted to the time periods by the Conditions of Consent. At this stage these hour are not known and therefore we have assumed the following working hours associated with the construction activity:

- Monday to Friday 7:00am to 7:00pm;
- Saturday 7:00am to 5:00pm; and
- Sunday, Public Holidays No works to be undertaken without prior approval.

Construction vehicle movements will be restricted during the school peak period times on weekdays between 8.00am-9.30am and 2:30pm-4:00pm.

5.3 General Requirements

In accordance with Road and Maritime Services (RMS) requirements, all vehicles transporting loose materials will have to be entirely load covered and / or secured to prevent any large items, excess dust or dirt particles depositing onto the roadway during the travel to and from the site. All subcontractors must be inducted by the lead contractor to ensure that the procedures are met for all vehicles entering and exiting the construction site. The lead contractors will monitor the roads leading to and from the site and take all necessary steps rectify any road deposits caused by site vehicles.

Vehicles operating to, from and within the site shall do so in a manner, which does not create unreasonable or unnecessary noise or vibration. No tracked vehicles will be permitted or required on any paved roads. Public roads and access points will not be obstructed by any materials, refuse skips or the like, under any circumstances. No construction vehicles are permitted to double park, or park on the public road.

Spoil shall be exported from site as progressively as the works occur. Spoil shall not be stockpiled and exported from the site in bulk.

The applicant / contractor is required to follow and abide by the specific standard requirements for construction management as set out by City of Canterbury Bankstown Council.

5.4 Construction Staging

The dates for construction works are to be confirmed (TBC) at construction stage. As mentioned in Section 3, the main works will involve the construction of a pick-up and drop-off area, two building blocks and a new games court. Post construction the temporary demountables will need to be removed from the site.

The plan for the proposed phases is shown in Figure 16.

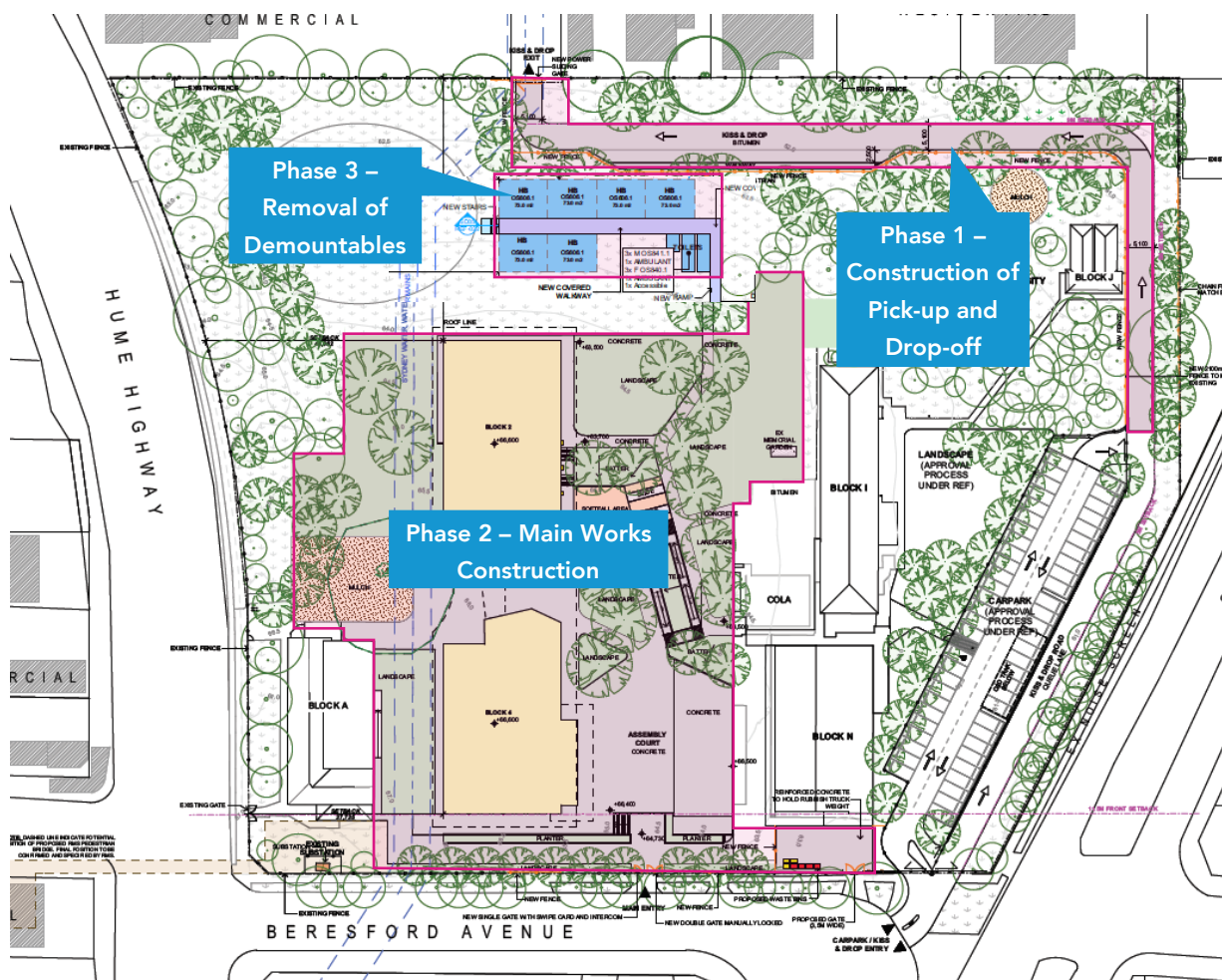


Figure 16 – Construction Plan

5.5 Construction Vehicle Types

The construction will involve the use of number of different vehicle types in relation to the various tasks involved. The vehicles during Phase 1 and Phase 3 will be limited to up to a 12.5m HRV for the construction of the pick-up and drop-off area and the removal of demountables. Phase 2 will be limited to a 19m long Articulated Vehicle (AV) for all material removal and deliveries.

Any oversized vehicle that is required to access the development site will be dealt with separately, with the submission of required permits to and subsequent approval by City of Canterbury Bankstown Council.

5.6 Construction Vehicle Routes

The site is located in the suburb of Bankstown and the proposed construction vehicle routes have regard for the surrounding traffic arrangements in the vicinity of the site. No queuing or marshalling of trucks is permitted on any public road and all loading and unloading of materials will be undertaken within the site or a work zone (refer to Section 5.8).

All vehicle routes to site are constrained to existing public roads that have the physical geometry to accommodate the turning movements. Approaching the site, some vehicle movements will entail the assistance of traffic controllers, as more than one lane will be required for turning manoeuvres. For signage and control requirements in these cases refer to Section 5.7.

5.6.1 Phase 1 – Construction of Pick-up and Drop-off & Phase 3 – Removal of Demountables

To access the site via Davis Lane, vehicles travelling from the east will approach the site westbound along Hume Highway, turn right into Rockwood Road, turn right into the Davis Lane and then enter the site. Vehicles travelling from the west will travel eastbound along Hume Highway, turn left into Rockwood Road, turn right into the Davis Lane and then enter the site. Vehicles travelling from the north will approach the site southbound via Rockwood Road, turn left into Davis Lane and then enter the site. Vehicles travelling from the south will travel northbound along Stacey Street, turn left into Hume Highway, turn right into Rockwood Road, turn right into Davis Lane and then enter the site.

After leaving the site, vehicles will travel along Davis Lane, turn left into Rockwood Road and then either turn left into Hume Highway to travel east, north and south or turn right into Hume Highway to travel west. The vehicle routes for Phase 1 and Phase 3 are shown in Figure 17.

Construction trucks are to enter and exit the site via Davis Lane via a single gate for both entering and exiting trucks. It is envisaged that the final section of the pick-up and drop-off lane will either allow for trucks to undertake the required turning manoeuvre or it will be finalised after the demountables are removed.

Swept paths for an HRV entering and exiting the site are shown in Figure 18.

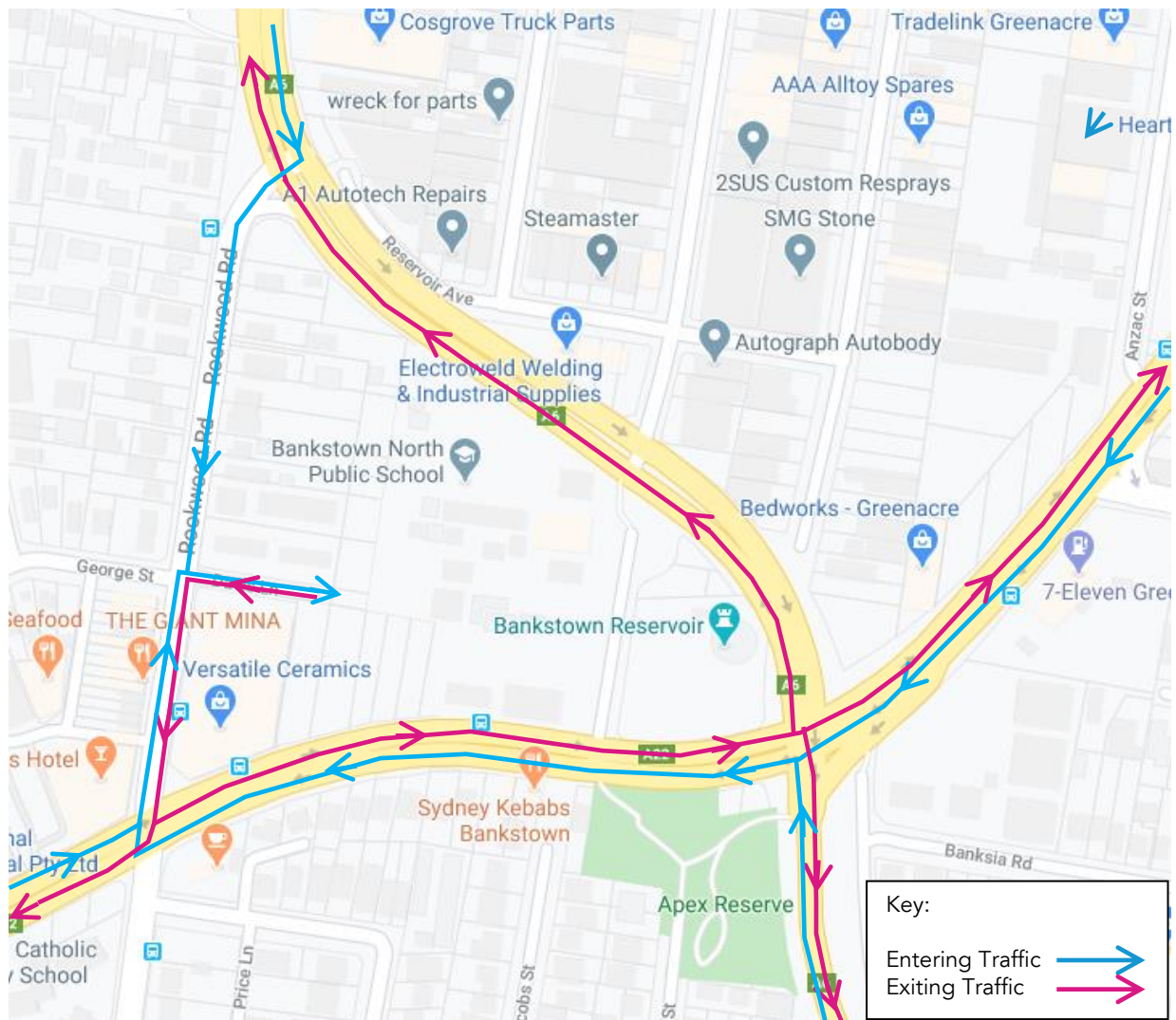


Figure 17 – Phase 1 and Phase 3 – Construction Vehicle Route Plan

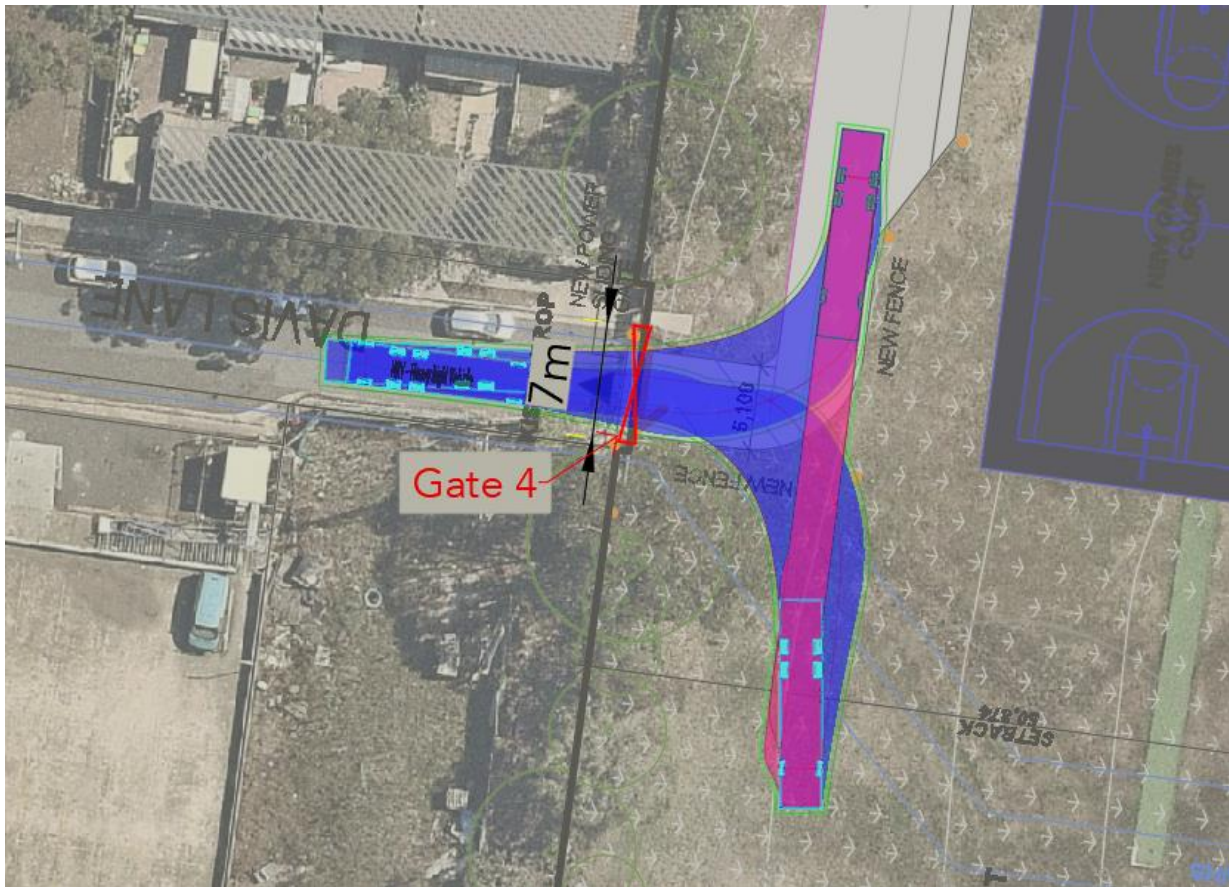


Figure 18 – Phase 1 and Phase 3 – HRV entering and exiting the site from Gate 4 via Davis Lane

5.6.2 Phase 2 – Main Works Construction

To access the site via Beresford Avenue, vehicles travelling from the east will approach the site westbound along Hume Highway, turn right onto Beresford Avenue and then turn into the site, and vehicles travelling from the south will travel northbound along Stacey Street, turn left into Hume Highway, then right into Beresford Avenue and links into the site. Vehicles travelling from the west will travel eastbound along Hume Highway, turn left onto Beresford Avenue and then turn into the site. Vehicles travelling from the north will approach the site southbound via Rockwood Road, turn left into Hume Highway and then turn into the site.

After leaving the site, vehicles will travel southbound on Beresford Avenue and then either turn left into Hume Highway to travel east, north and south or turn right to travel west. The vehicle routes for Phase 2 are shown in Figure 19.

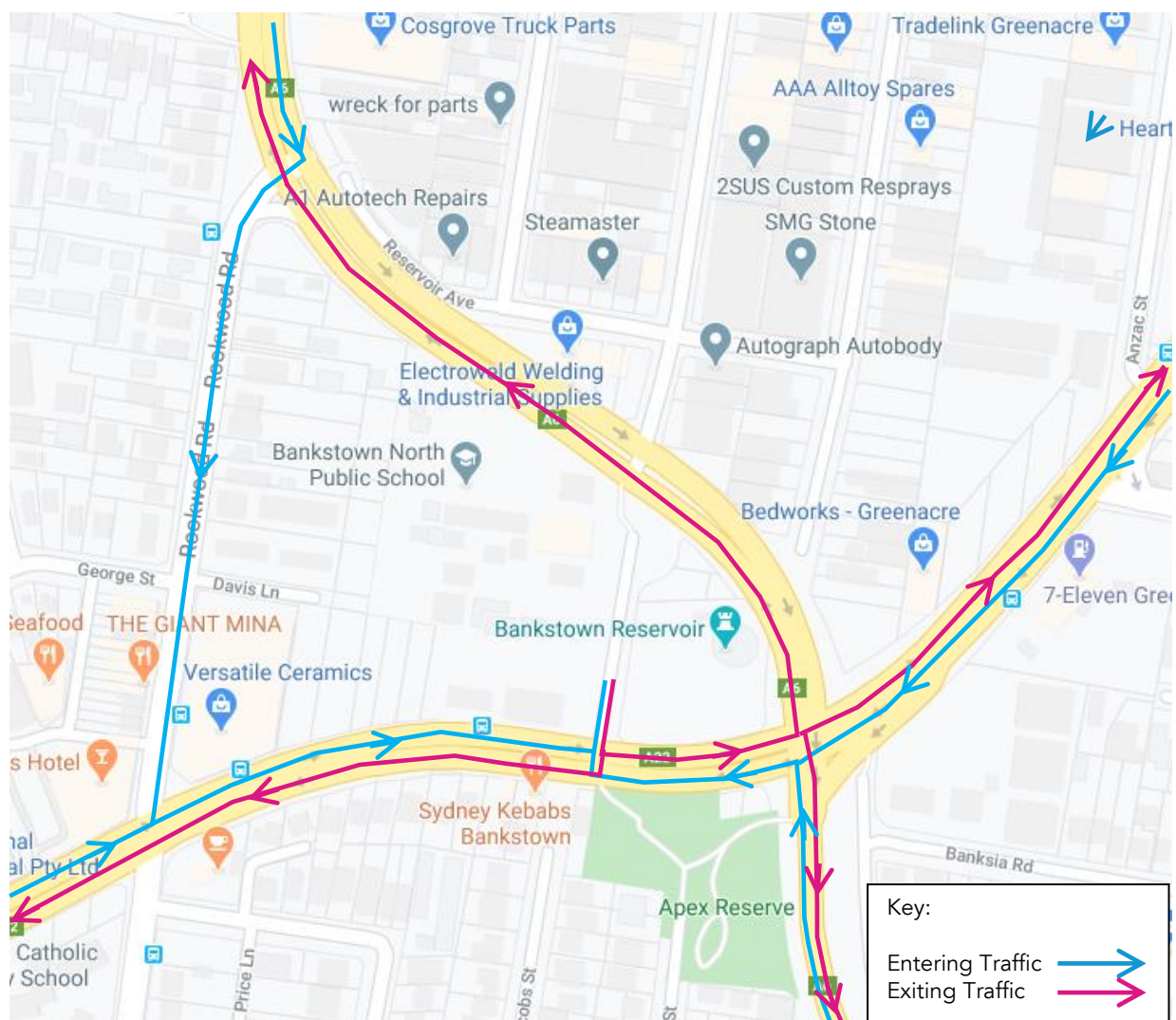


Figure 19 – Phase 2 – Construction Vehicle Route Plan

In regards to the positioning of construction vehicles during works it is noted that the proposed “Assembly Area” within the site is sufficient to accommodate a 19m long AV undertaking a U-turn. However, as this report is conceptual and a building constructor is yet to be appointed, the suitability of a work zone along Beresford Avenue has also been analysed. In the following, Option 1 – No Work Zone and Option 2 – With Work Zone are detailed in Section 5.6.2.1 and Section 5.6.2.2 respectively.

5.6.2.1. Option 1 – No Work Zone

Swept paths for an AV entering and exiting the site are shown in Figure 20 and Figure 21 respectively.

The construction trucks are to enter and exit the site via Beresford Avenue. Separate entry and exit driveways / gates will be provided for entering and exiting trucks.

AVs will require a wider turn circle to turn left into the site; hence to avoid this, they will go all the way up to the end of the road and use the cul-de-sac to undertake a U-turn before entering the site from the right. The trucks can then turn around within the future “Assembly Court” and turn right into Beresford Avenue to exit the site. Refer to Section 5.7 for traffic control measures.

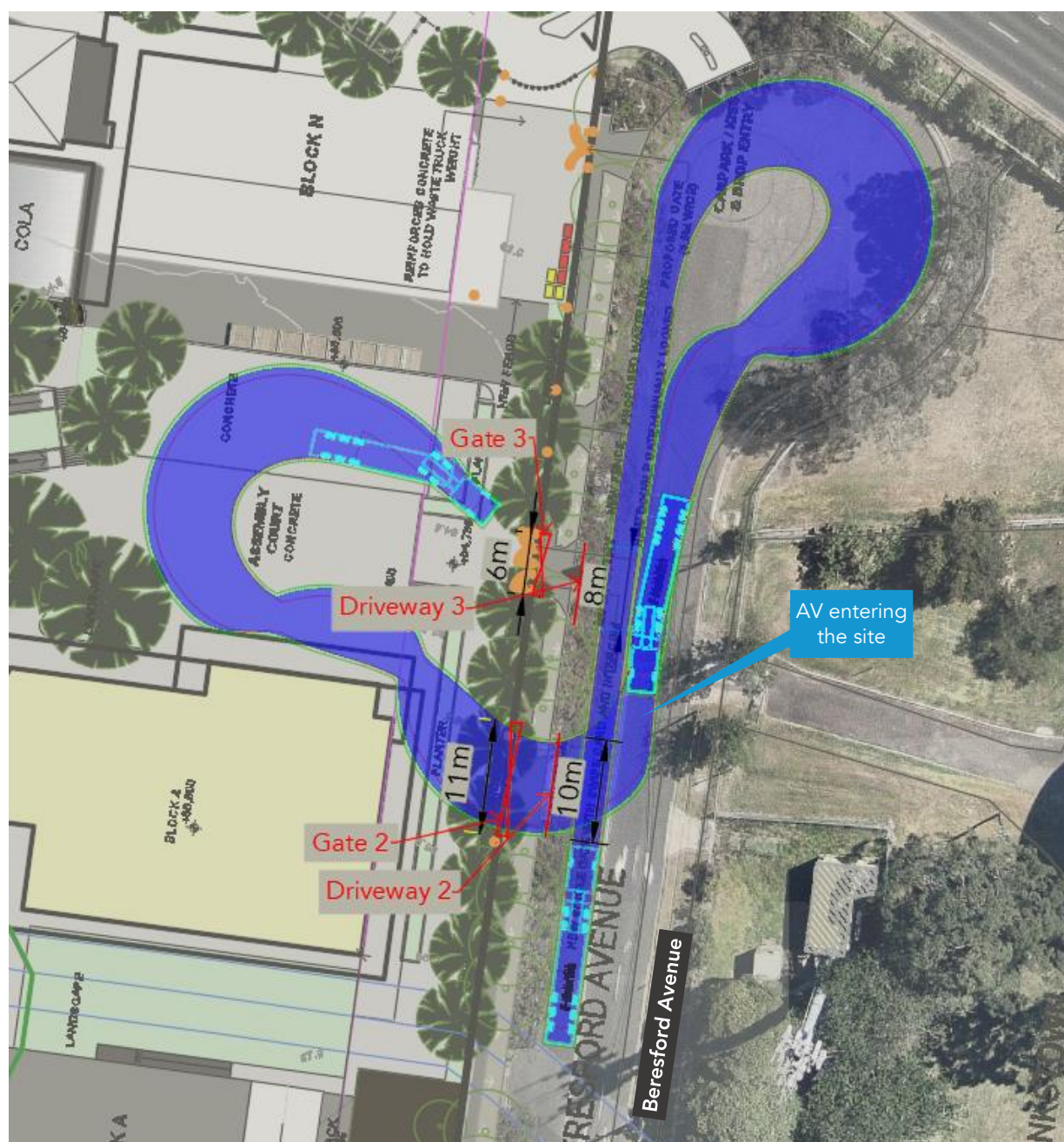


Figure 20 – Phase 2 – AV entering the site from Gate 2 via Beresford Avenue

Gate 2 and driveway 2 need to be 11 meters and 10 meters wide respectively, and gate 3 and driveway 3 need to be 6 meters and 8 meters wide respectively. It should also be noted that there are trees on either side of driveway 3, and the swept paths presented in Figure 21 show that the AV exiting the site do not encroach the tree trunks; however, caution should be taken during vehicle movements.

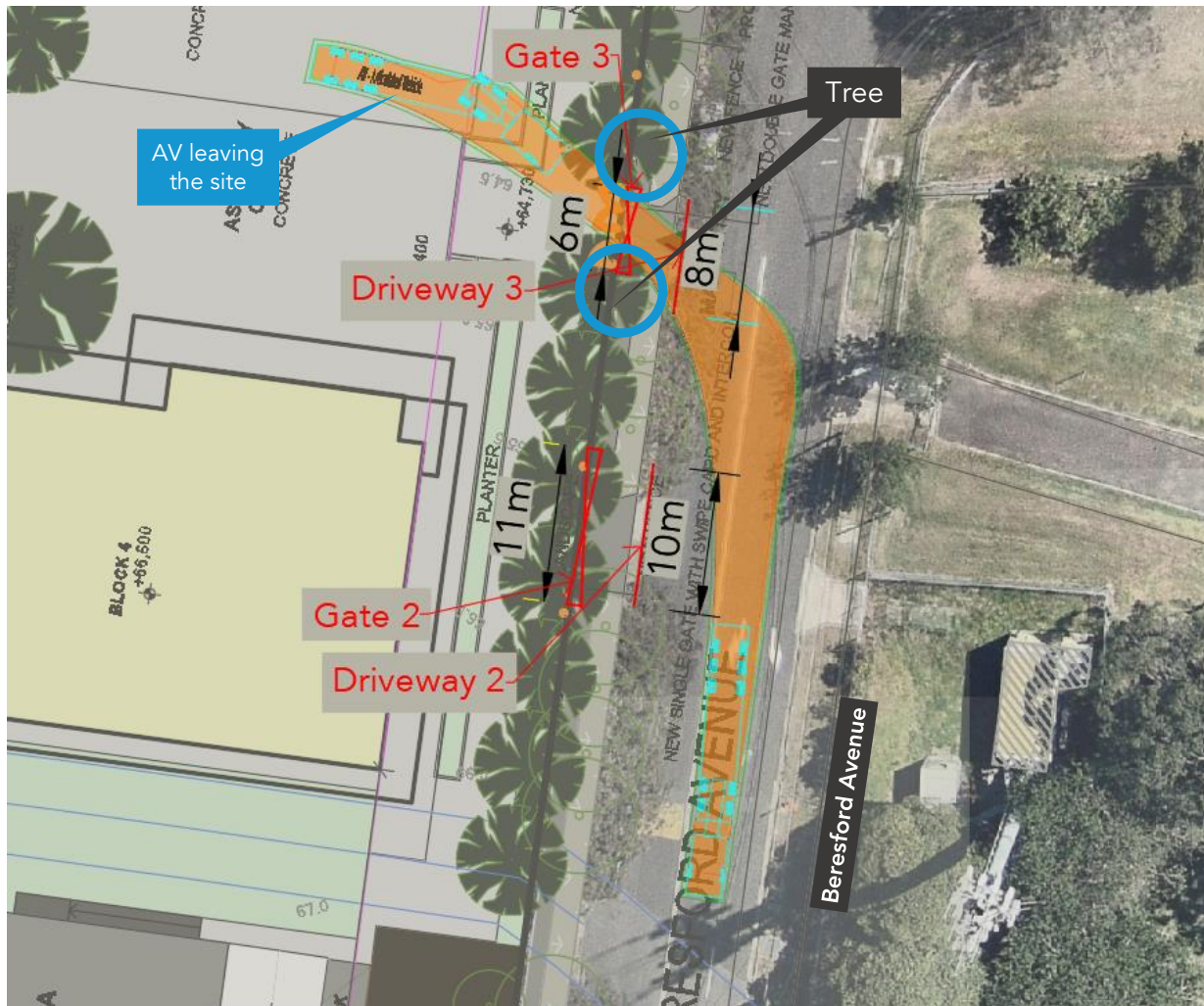


Figure 21 – Phase 2 – AV exiting the site from Gate 3 via Beresford Avenue

5.6.2.2. Option 2 – With Work Zone

The swept path of an AV approaching and leaving the work zone is shown in Figure 22.

The construction trucks will enter and exit the work zone via Beresford Avenue.

It is proposed that the work zone is 42m long. The effect on parking as well as pick-up and drop-off spaces is described in Section 5.9.2. The required pedestrian management measures are described in Section 5.10.

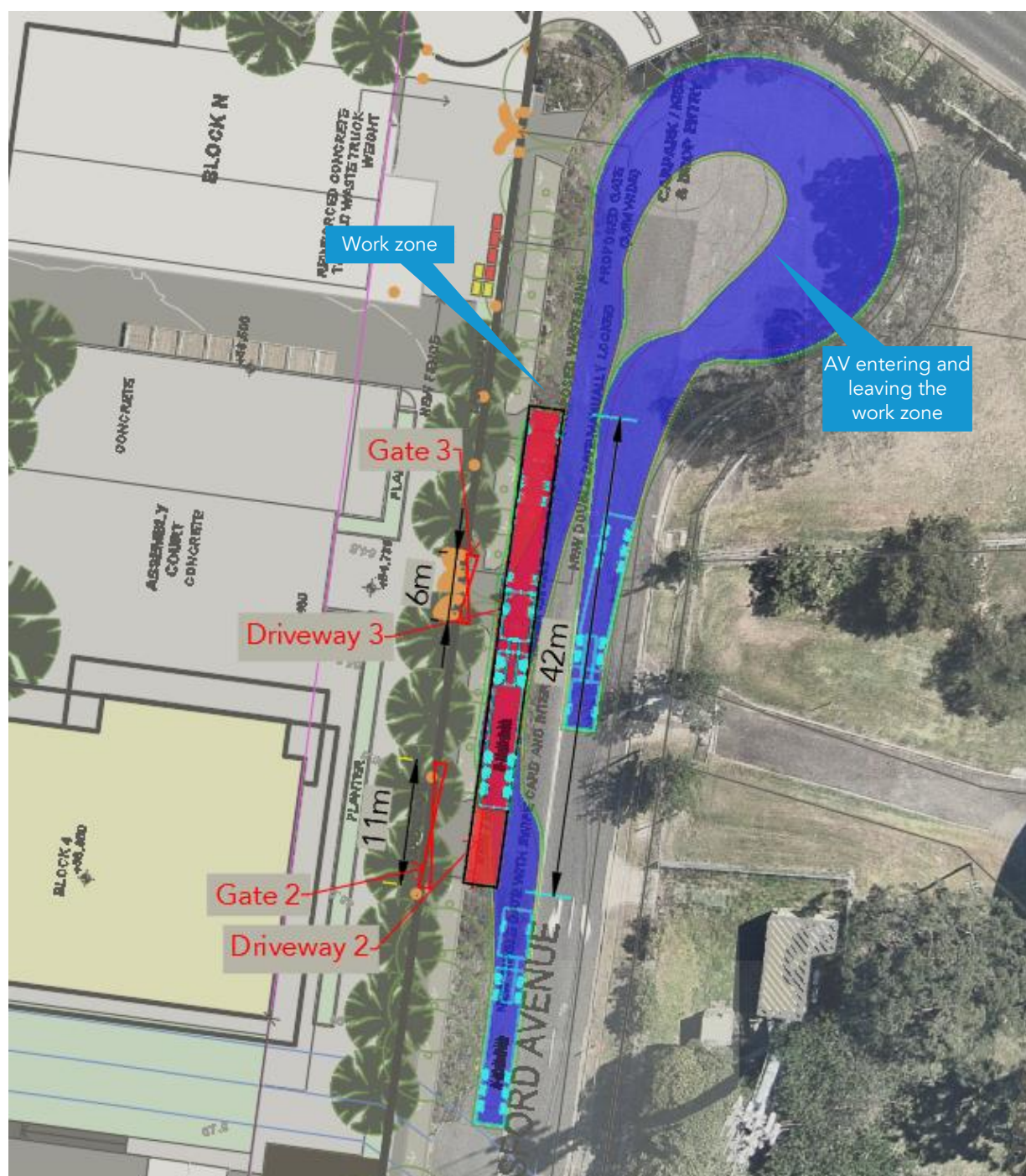


Figure 22 – Phase 2 – AV entering and exiting the Work Zone via Beresford Avenue

5.6.3 Swept Path Assessment at the Nearby Intersections

When entering and exiting the site the vehicles need to use the surrounding road network and intersections. For this reason, a swept path assessment has been undertaken to confirm that all required vehicle movements are possible. The following figures show AV movements in the key intersections as described in Section 4.2.

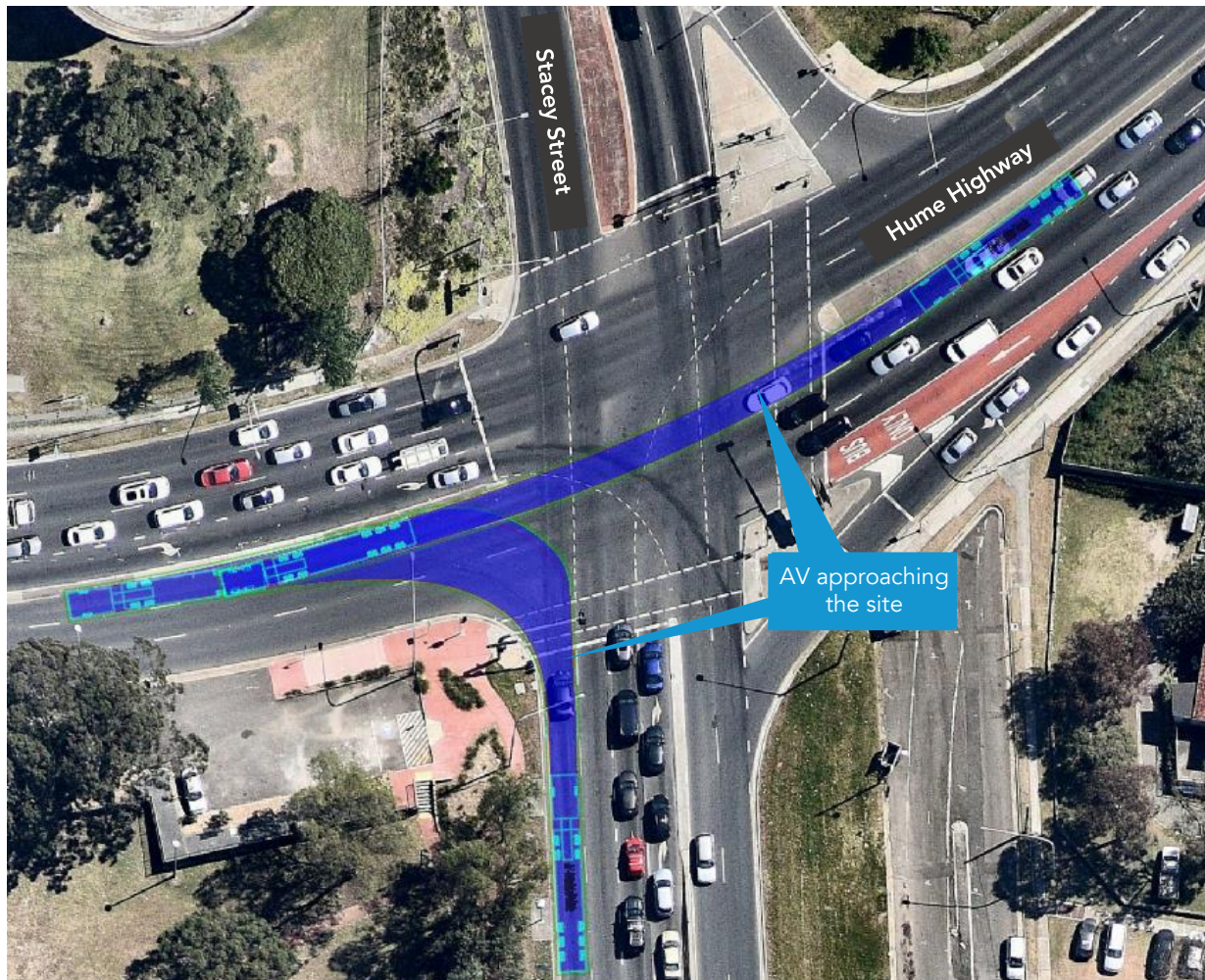


Figure 23 – AV approaching the site from East via Hume Highway and South via Stacey Street



Figure 24 – AV approaching the site from North via Stacey Street

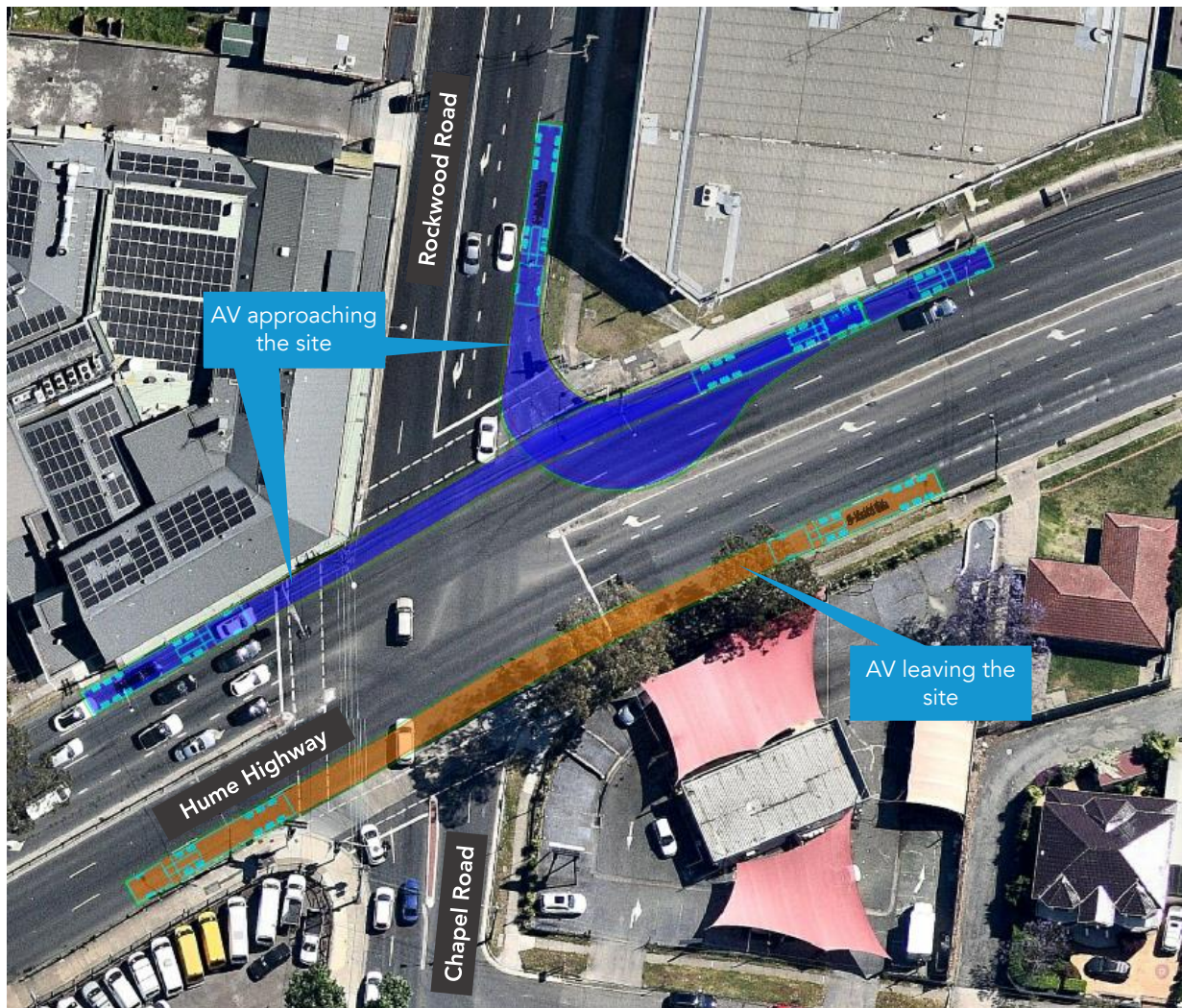


Figure 25 – AV approaching the site from North via Rookwood Road, and from West via Hume Highway and leaving the site towards west via Hume Highway

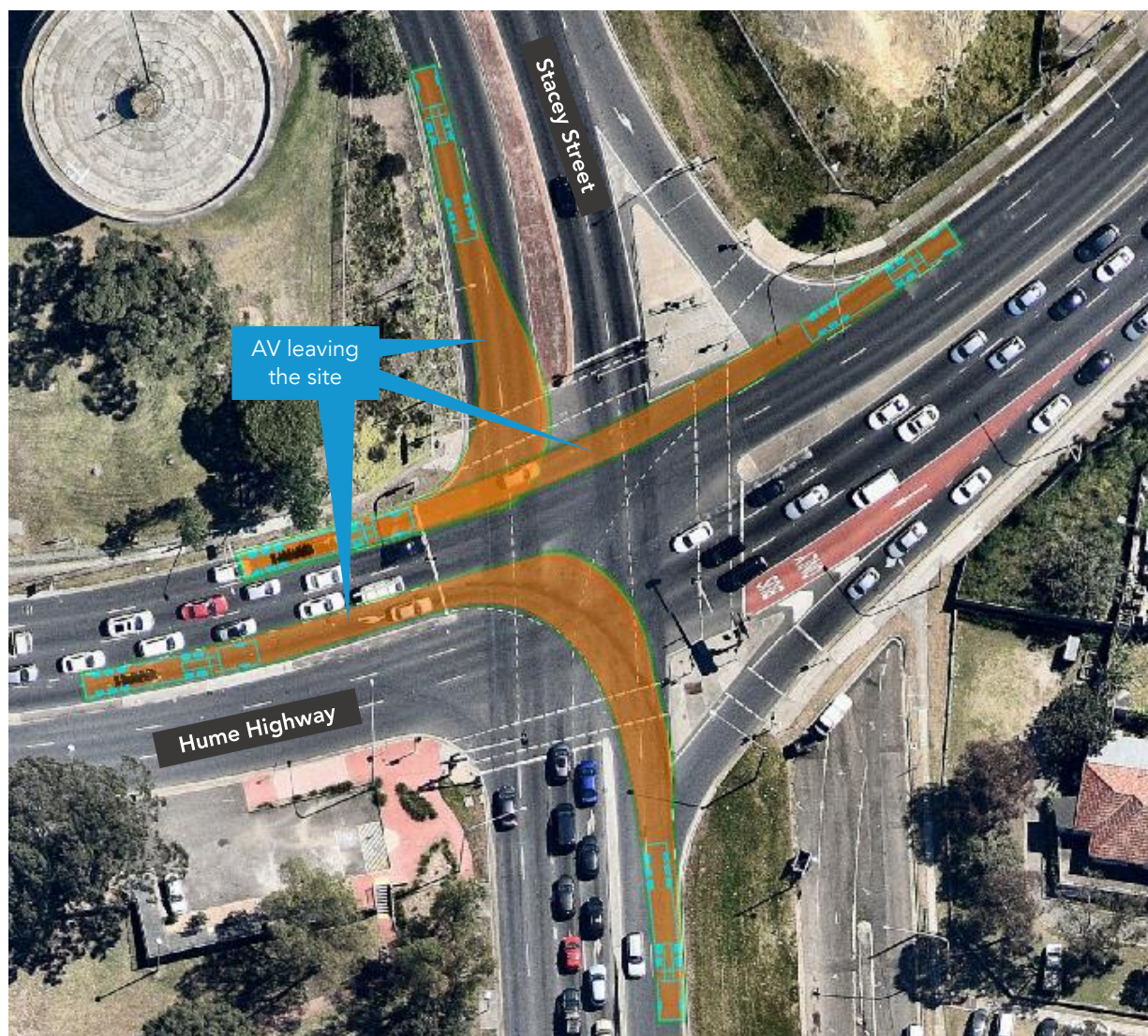


Figure 26 – AV leaving the site towards East via Hume Highway and North and South via Stacey Street

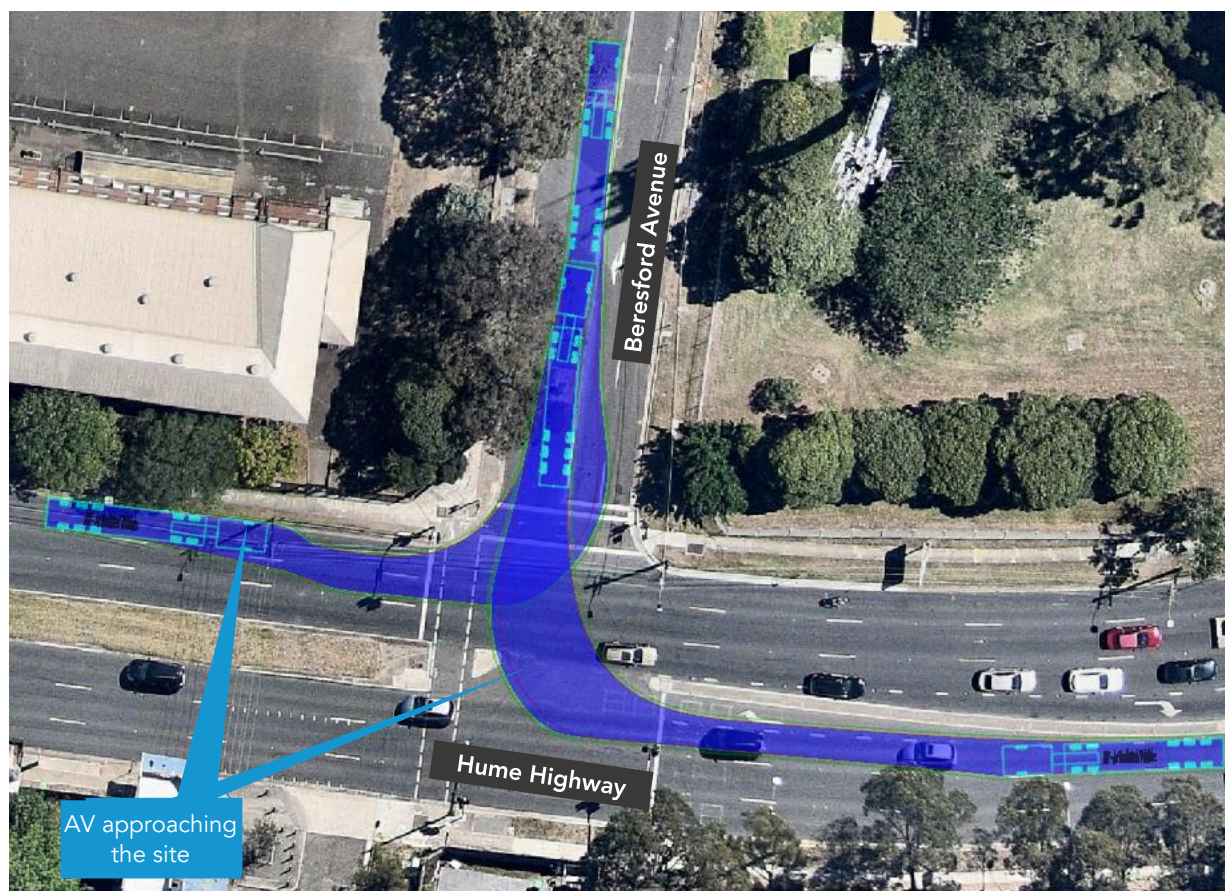


Figure 27 – AV approaching the site from east and west via Hume Highway

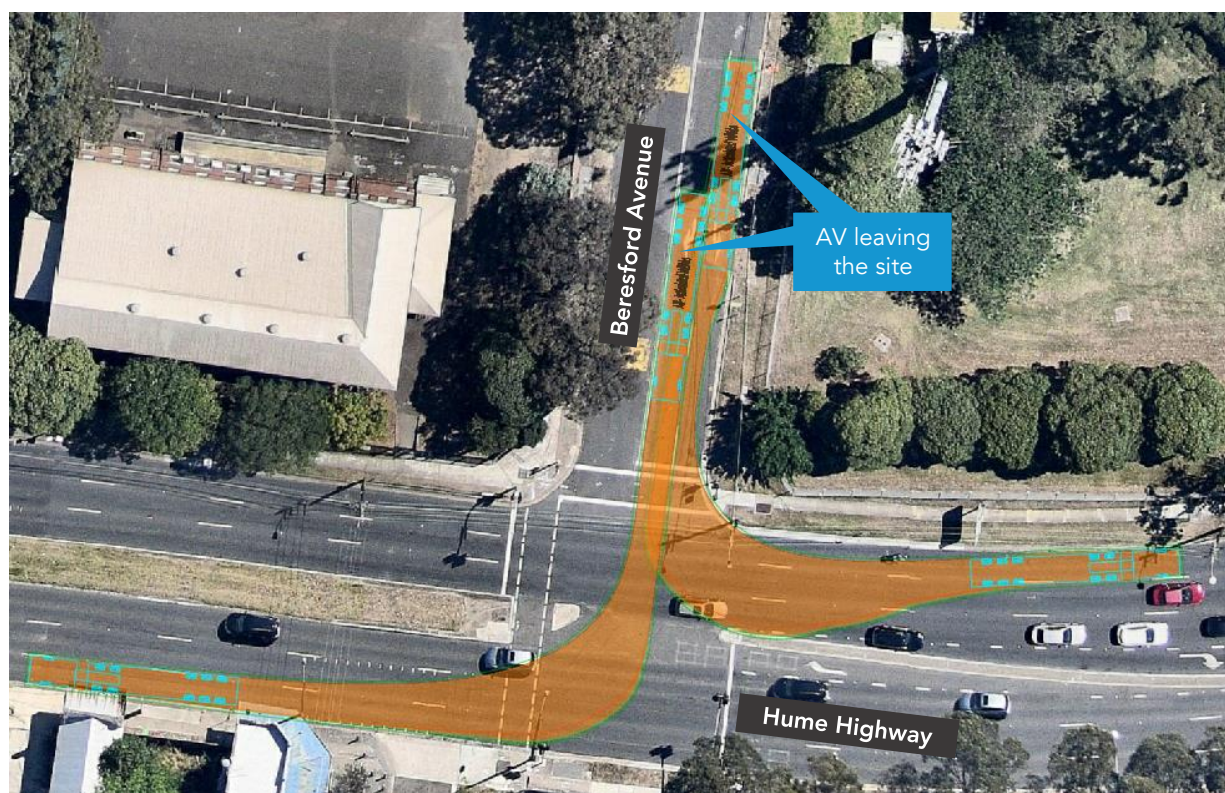


Figure 28 – AV leaving the site towards east and west via Hume Highway

5.6.4 Swept Path Assessment of an HRV at the Nearby Intersections

When approaching and leaving the site vehicles need to use the surrounding road network and intersections. For this reason, a swept path assessment has been undertaken to confirm that all required vehicle movements are possible. The following figures show HRV movements in the key intersections as described in Section 4.2.

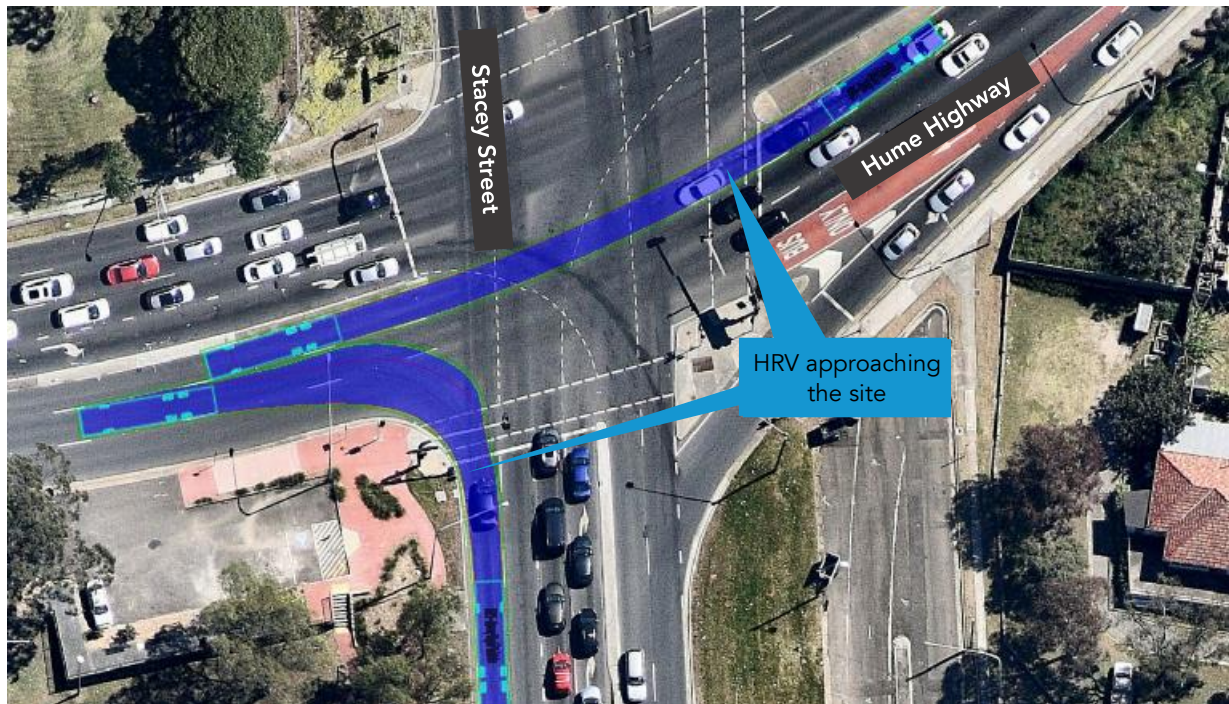


Figure 29 – HRV approaching the site from East via Hume Highway and South via Stacey Street

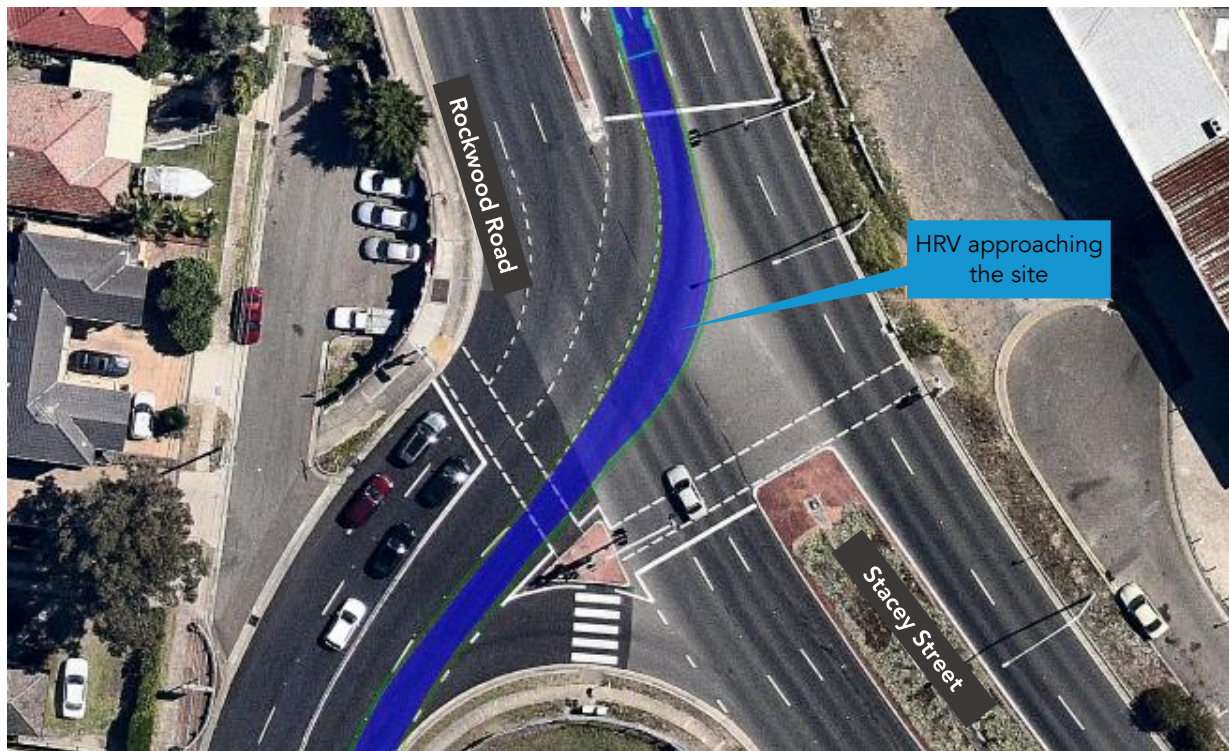


Figure 30 – HRV approaching the site from North via Rockwood Road

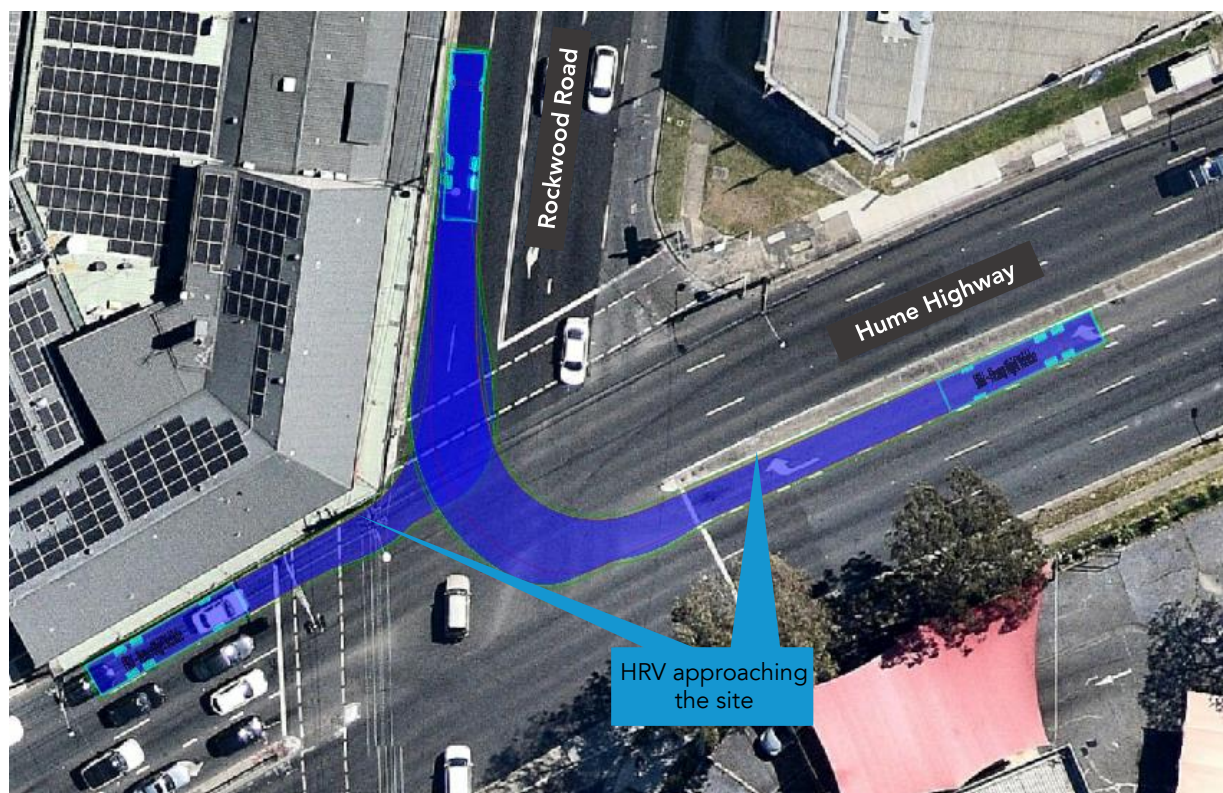


Figure 31 – AV approaching the site from East and West via Hume Highway

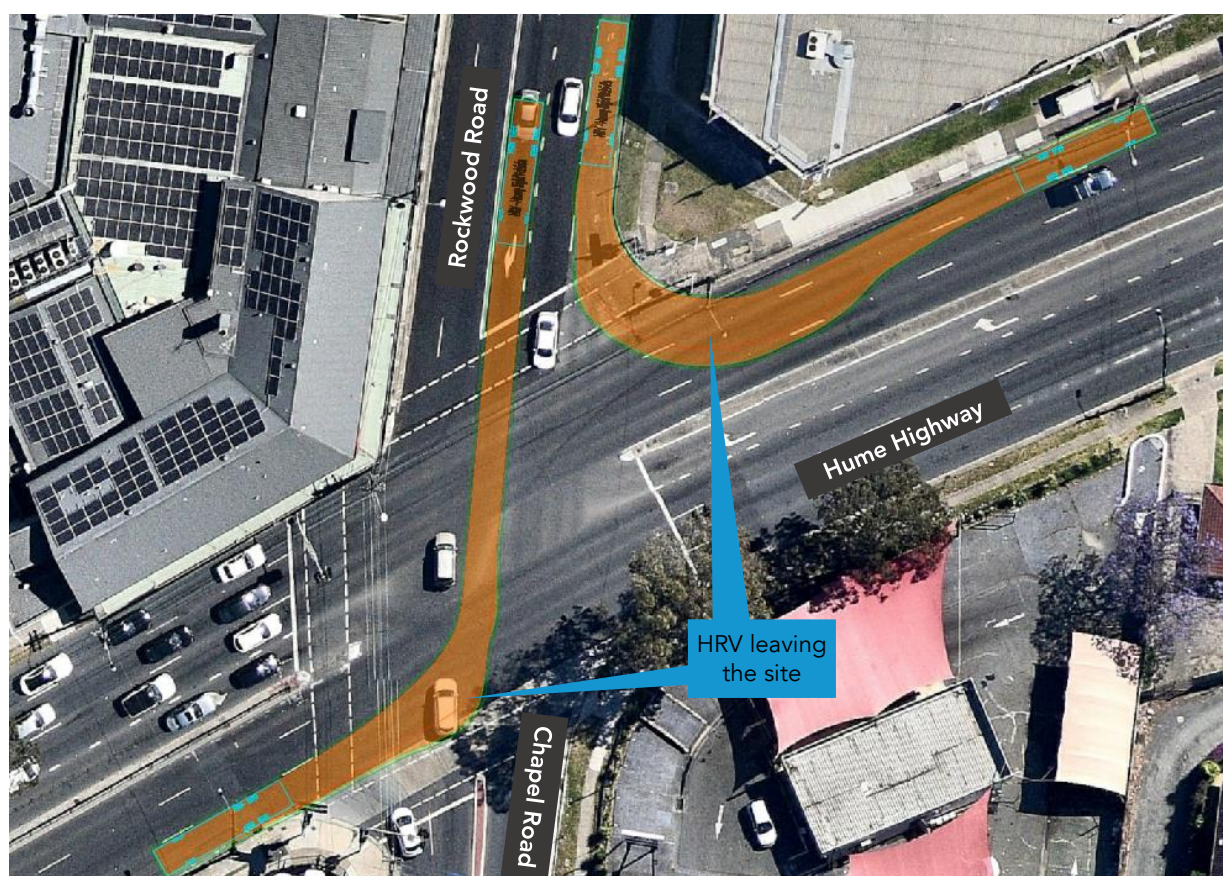


Figure 32 – AV leaving the site towards East and West via Rockwood Road

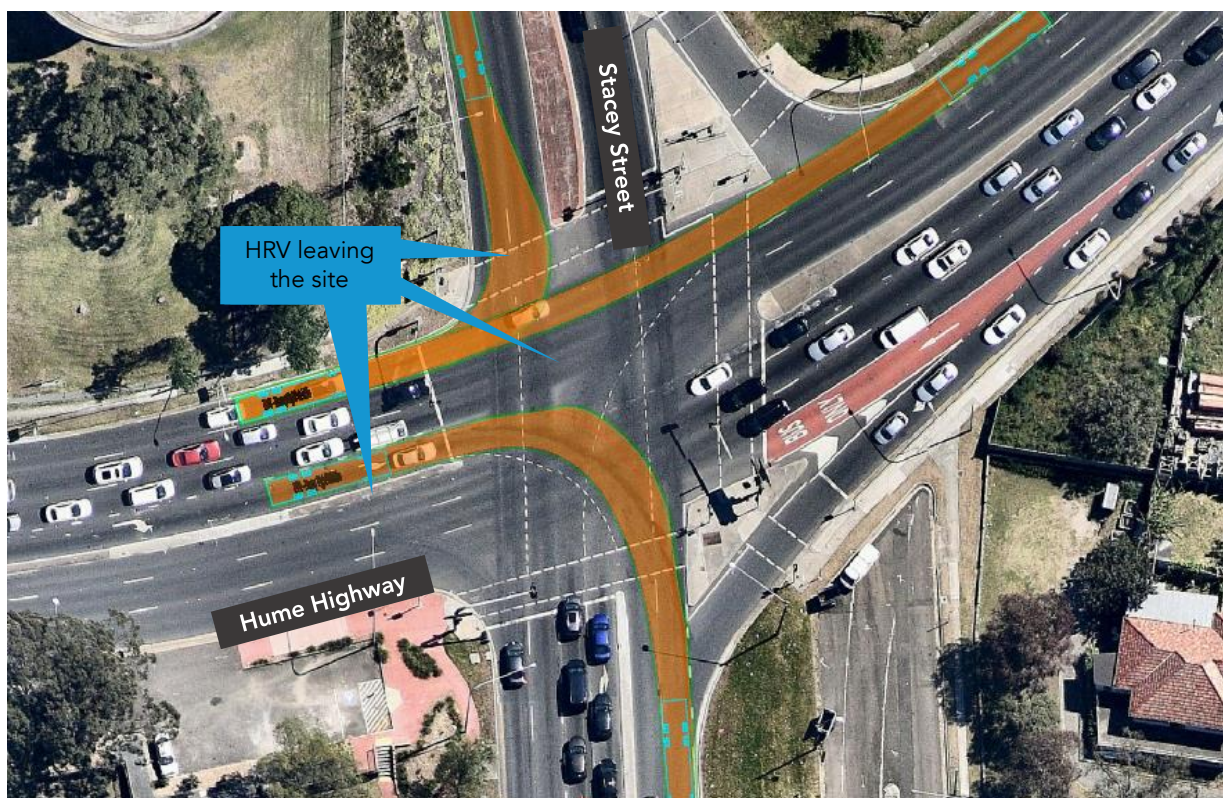


Figure 33 – HRV leaving the site towards East via Hume Highway and North and South via Stacey Street

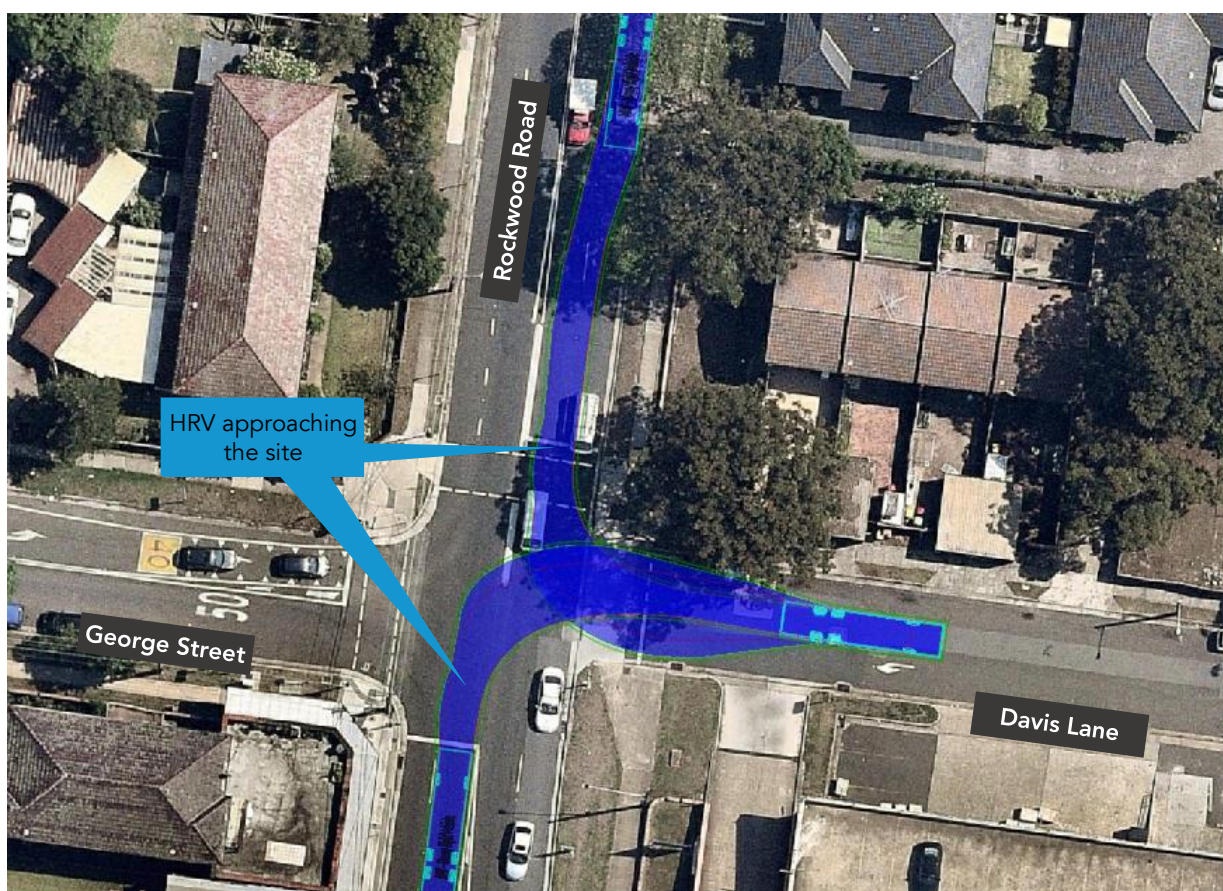


Figure 34 – HRV approaching the site from north and south via Rockwood Road

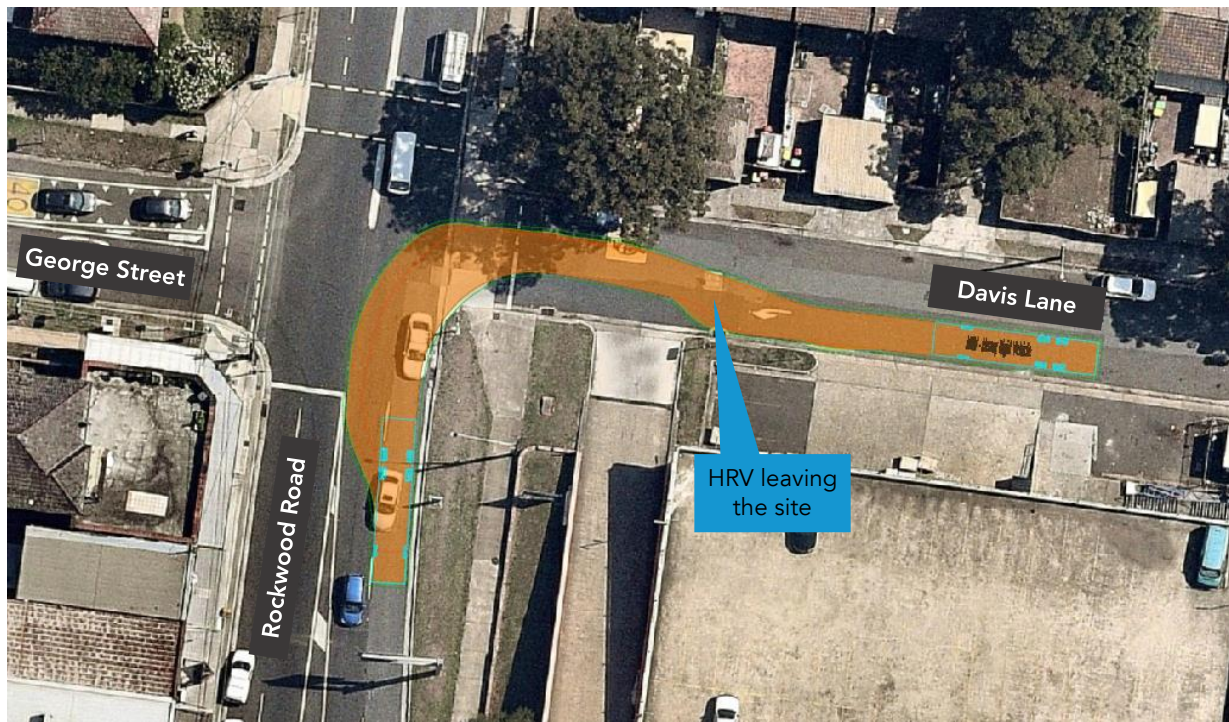


Figure 35 – HRV leaving the site towards south via Rockwood Road

5.7 Traffic Control Measures

The Traffic Control Plan (TCP) outlines the proposed traffic management plan to inform road users of the changed traffic conditions in the vicinity of the works site.

The TCPs have been set out in accordance with the RMS Traffic Control at Works Site.

These specific TCPs will be provided by the traffic management contractor prior to commencement of works and submitted to Council / RMS for approval.

5.7.1 Phase 1 – Construction of Pick-up and Drop-off & Phase 3 – Removal of Demountables

HRVs turning left from Rockwood Road into Davis Lane need to occupy the opposite direction lane, therefore, traffic control measure TCP 77 will be required along Davis Lane to stop those travelling eastbound.

HRVs wanting to exit Davis Lane onto Rockwood Avenue need to occupy both lanes on both roads. The truck will be hold back by a traffic controller approximately 15m from the intersection until it can leave the lane, so that other vehicles are able to turn into Davis Lane. When considering the exit manoeuvre, it is noted that the Davis Lane arm of the intersection is not signalised and the truck needs to wait for a sufficient gap to exit. The TCS drawing shows that during phase B the through traffic along Rockwood Road is stopped in both directions and no turns into Davis Lane are possible (refer to Figure 36). Therefore, phase B provides a gap that can be utilised by the HRV to turn left from Davis Lane without disrupting through traffic along Rockwood Road.

The TCP 195 should be implemented along Rockwood Road to prepare road used for truck movements, which are most likely unusual at this intersection.

The locations of required traffic control measures are shown in Figure 37 and Figure 38.

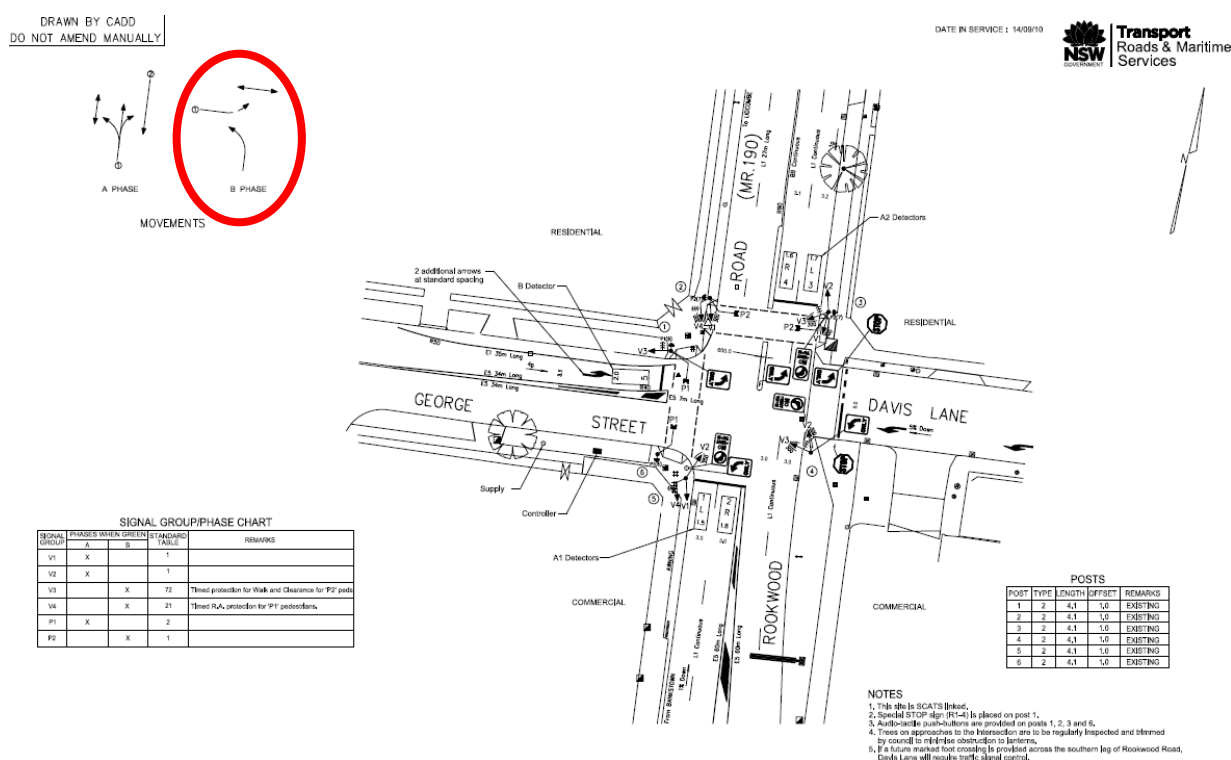


Figure 36 – TCS Drawing for Rockwood Street / George Street Intersection

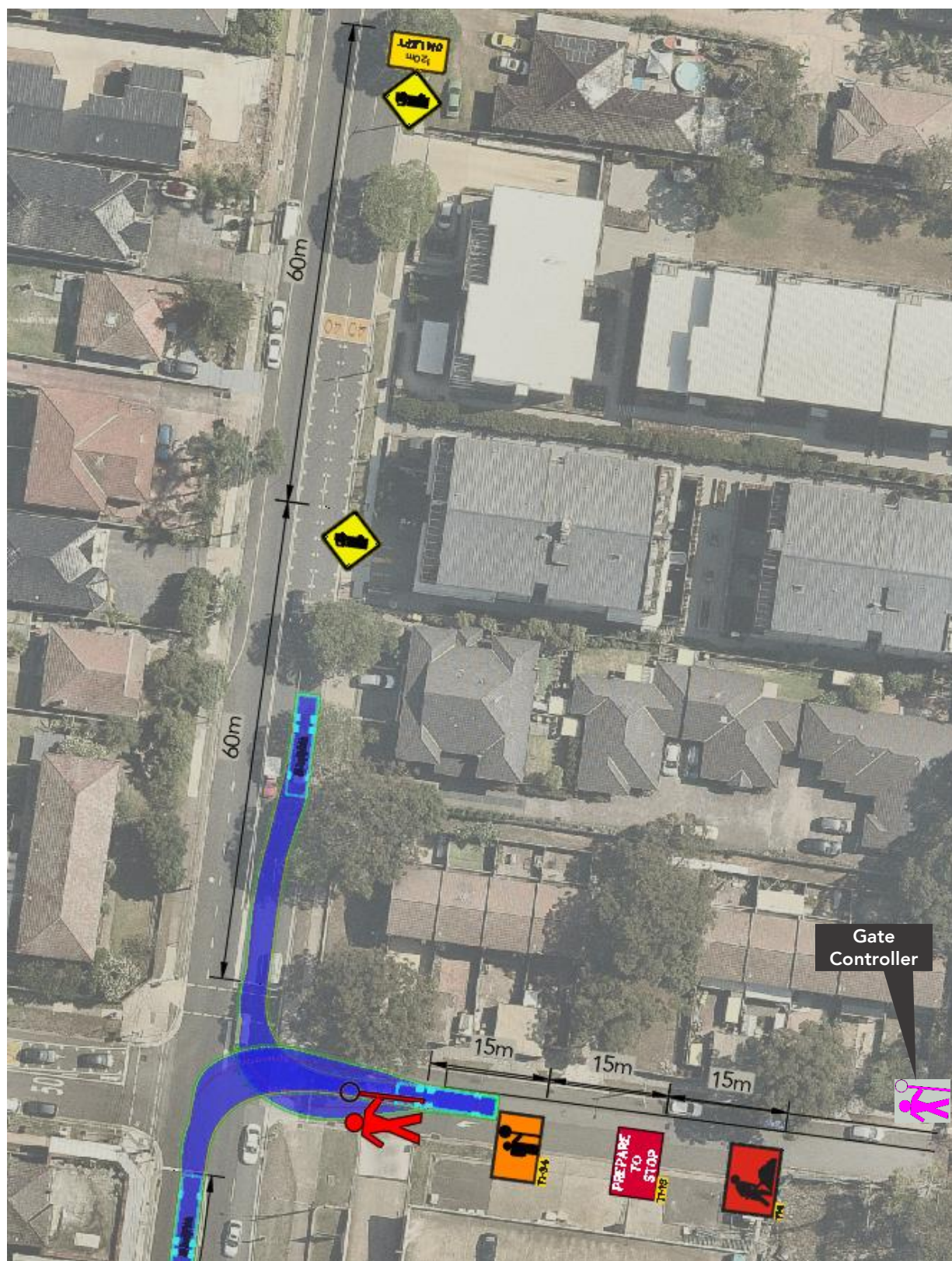


Figure 37 – TCP 77 and TCP 195 at Davis Lane and southbound Rockwood Road



Figure 38 – TCP 77 and TCP 195 at Davis Lane and northbound Rockwood Road

5.7.2 Phase 2 – Main Works Construction – No Work Zone

AV turning left from Hume Highway into Beresford Avenue needs to occupy the opposite direction lane, therefore, traffic control measure TCP 77 will be required along Beresford Avenue to manage the traffic. Likewise, TCP 195 will be required along Beresford Avenue to inform other road users of turning vehicles in and out of site. The locations of required measures are shown in the following figures.



Figure 39 – TCP 77 along Beresford Avenue

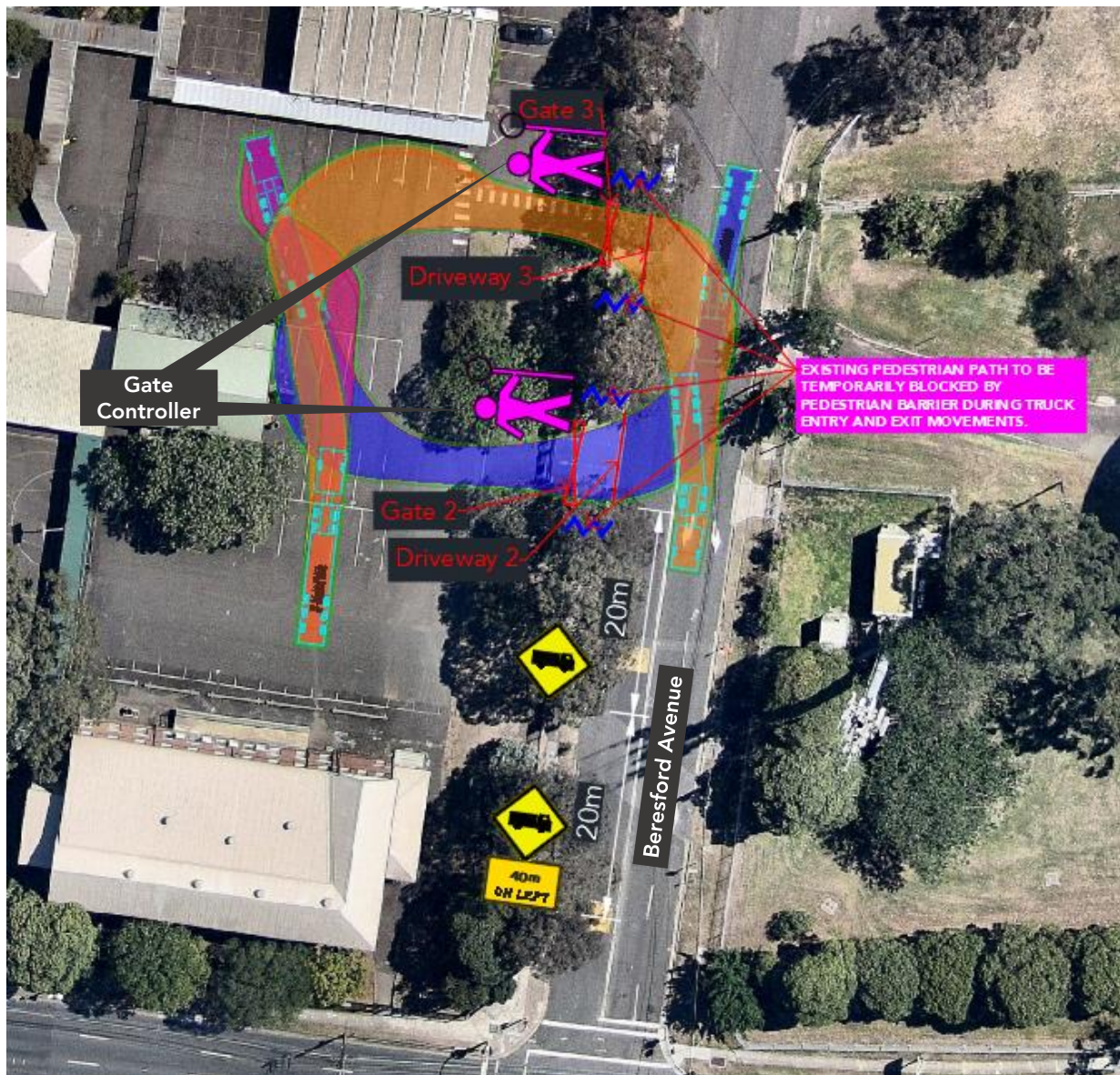


Figure 40 – TCP 195 along Beresford Avenue

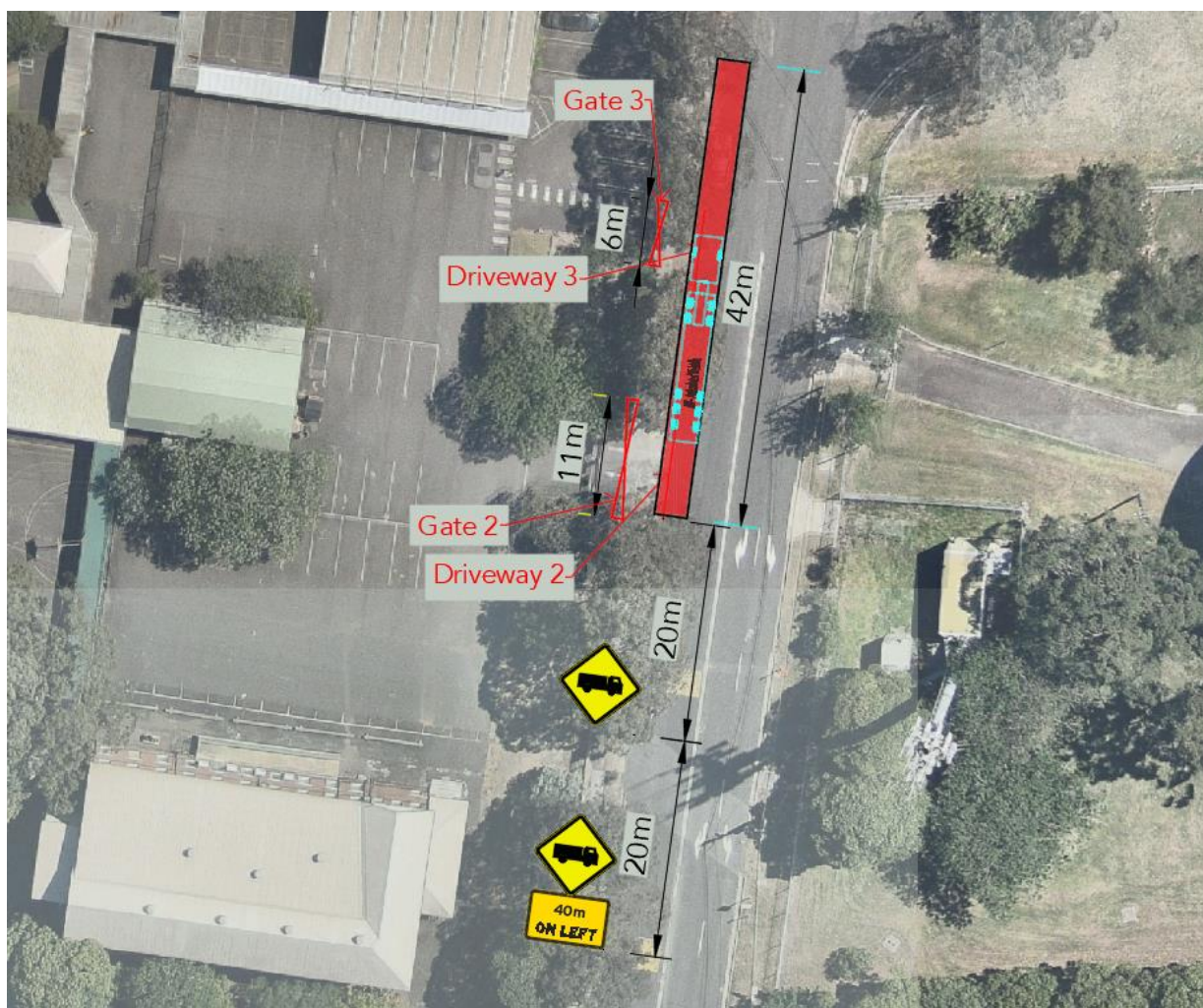


Figure 42 – TCP 195 along Beresford Avenue

5.8 Work Zone

No work zones are proposed during Phase 1 and Phase 3, as all construction and demolition activities will be undertaken within the site. During Phase 2 the contractor may wish to establish a work zone along Beresford Avenue. While reviewing the need for a Work Zone, the following matters should be considered:

- Pedestrian and public safety;
- To ensure no construction vehicles queue in nearby public roads; and
- Providing clarity to residents and general public of approved designated construction activity zone.

It is proposed to provide a 42m long work zone between the 3 existing driveways, as shown in Figure 43. Appropriate signage shall be provided to inform road users of the restrictions. The work zone should be restricted to times of construction work hours.



Figure 43 – Phase 2 – Work Zone

5.9 Parking Controls

During Phase 1 and Phase 3 no changes to parking controls are required. It is proposed to impose parking restrictions during Phase 2, but they differ depending on whether a work zone is used. The proposed changes to parking are discussed in the following sections.

5.9.1 Phase 2 – No Work Zone

During Phase 2, if trucks undertake all loading and unloading within the site, approximately three (3) parking spaces between Driveway 2 and Driveway 3 are likely to be effected by construction vehicles. “No Parking” restrictions outside of pick-up and drop-off hours should be imposed along the encroached area as shown in Figure 44.

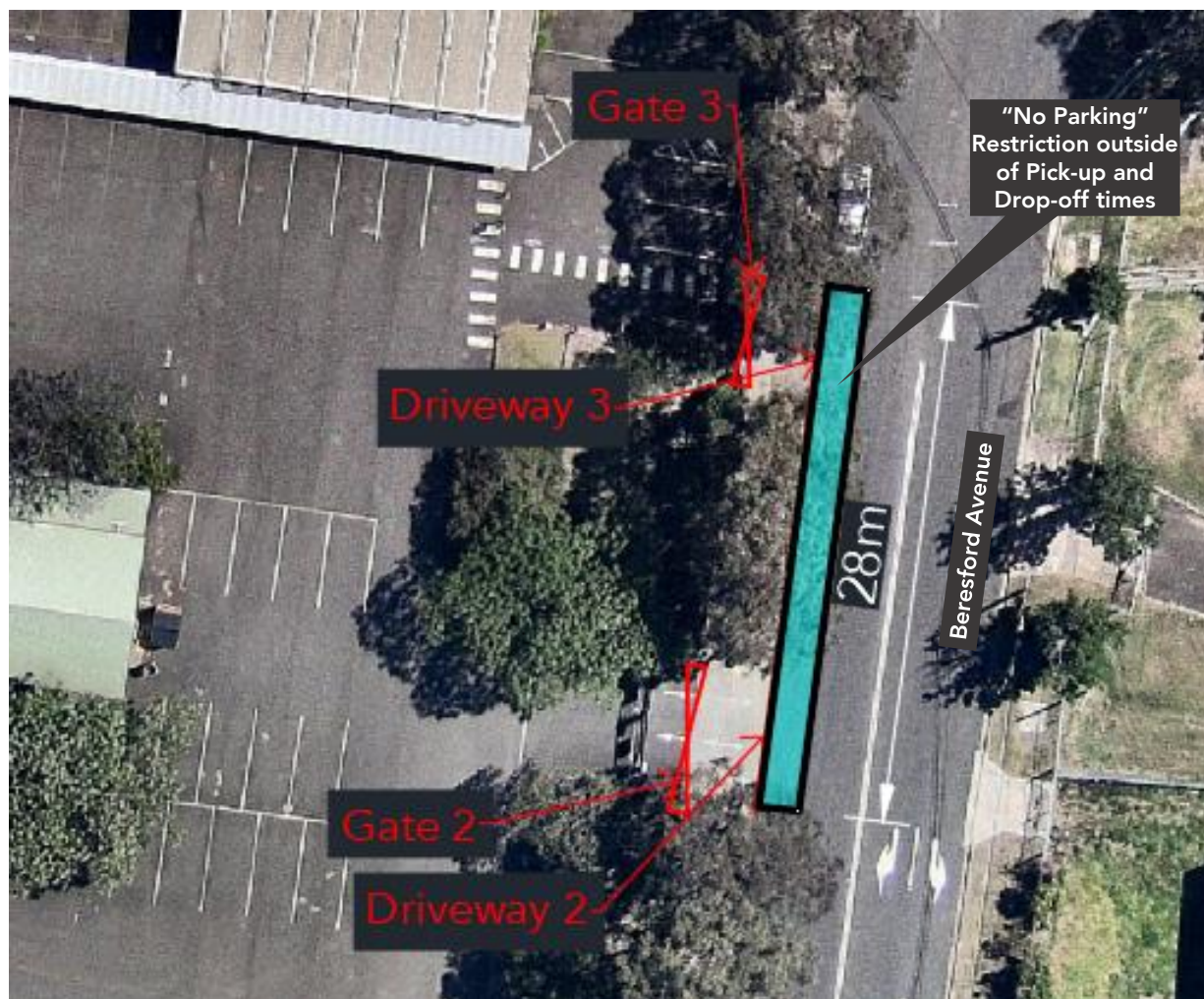


Figure 44 – Phase 2 – No Work Zone – Proposed Temporary Parking Controls

5.9.2 Phase 2 – With Work Zone

During Phase 2, if a work zone is implemented, approximately six (6) parking as well as pick-up and drop-off spaces will be temporarily removed. The “Work Zone” restriction needs to be in place throughout the construction hours, even if construction vehicles are not arriving or leaving. The extent of the work zone is shown in Figure 45.

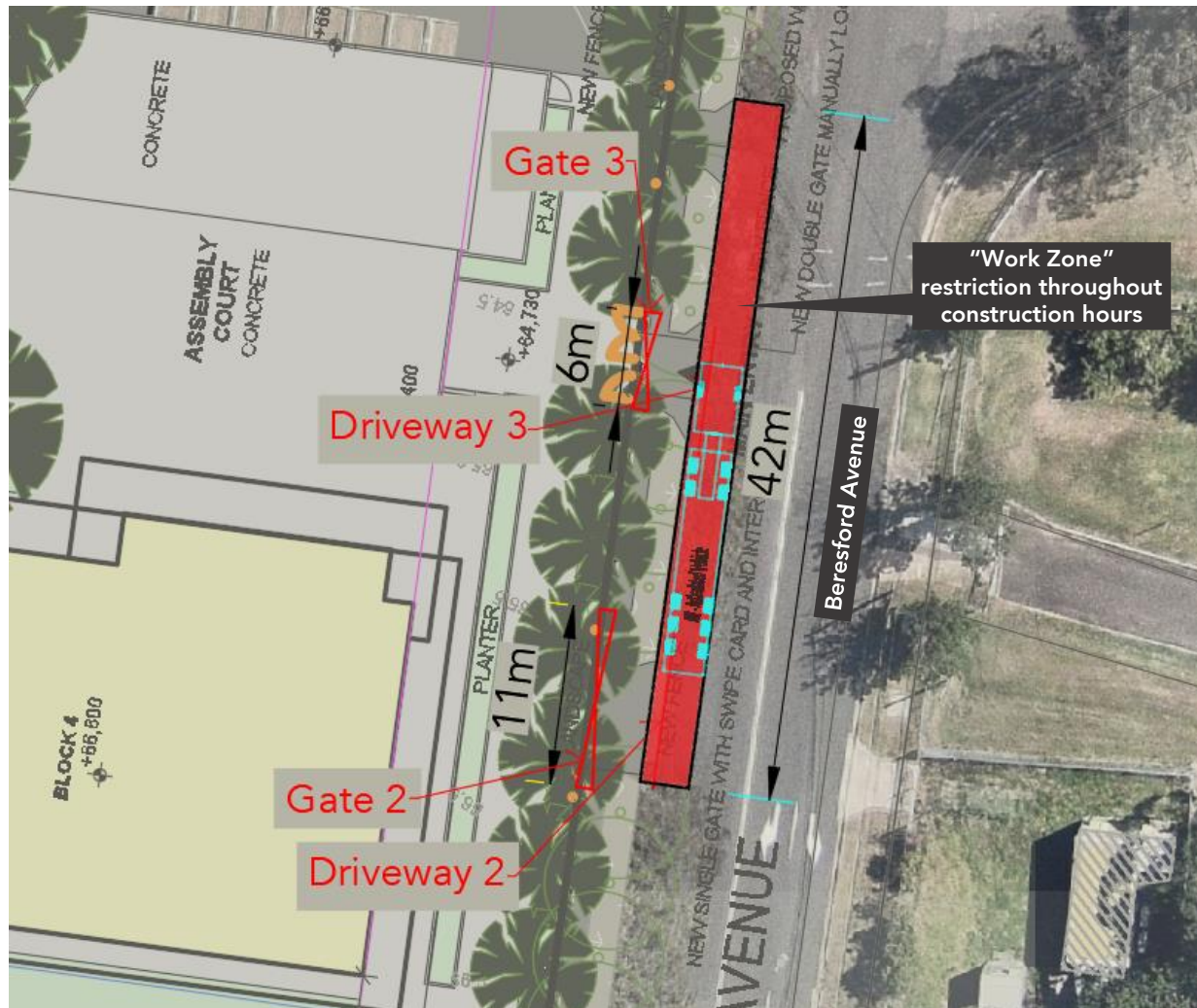


Figure 45 – Phase 2 – With Work Zone – Proposed Temporary Parking Controls

Considering that the work zone would reduce the number of existing pick-up and drop-off spaces, the following resolutions are possible:

- Utilise the new staff car park as a pick-up and drop-off area until the new pick-up and drop-off area is ready for use, or
- Utilise the new pick-up and drop-off area, if its construction is finished prior to establishing the work zone.

For the utilisation of the new staff car park, the following has been considered. With 33 current staff and 56 parking spaces within the new car park, a minimum of 23 parking spaces will remain unoccupied during pick-up and drop-off times. The layout shown in Figure 46 proposes to utilise 16 parking spaces as a pick-up

and drop-off lane. This area should be blocked off outside of pick-up and drop-off times to keep it vacant, and / or staff need to be advised to park their vehicles within the remaining parking spaces.

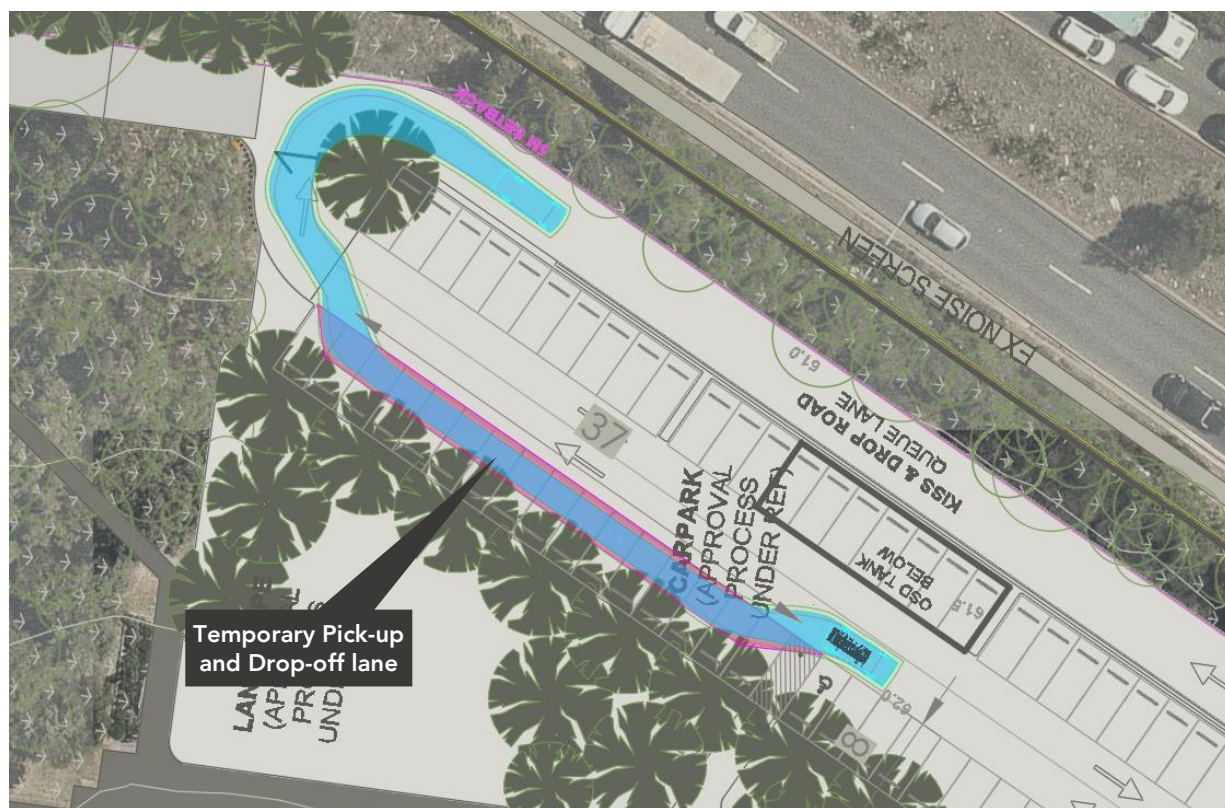


Figure 46 – Temporary Pick-up and Drop-off lane at the new staff car park

5.10 Pedestrian Management

Pedestrian access to and around the site is to be maintained at all times.

The entire site (and any remote work areas when applicable) and during all phases will be physically separated from the School via A-Class fencing. The extents of fencing will be modified during the works as required to suit the works occurring at each project phase. The access points to the site will be securely locked even when the construction / demolition activities are not occurring.

During Phase 2 if a work zone is established, B class overhead hoarding shall be provided along the work zone on Beresford Avenue.

It is noted that construction vehicle movements will be limited to hours outside of school peak times, meaning that construction vehicles will not interfere with school pick-up and drop-off activities.

Where relevant, it is proposed that gate controllers overlook vehicular and pedestrian movements when the construction vehicles enter or exit the site, as shown in Figure 37 and Figure 40. The controllers will temporarily deploy a pedestrian barrier to stop pedestrians and then open the barrier when it is safe to continue on.

5.11 Cumulative Effect of Adjacent Developments

During the construction stage, liaison with adjacent developments (if any) will be undertaken to mitigate the cumulative effect of the concurrent works. This will include the coordination of truck movements to prevent the combined impact of construction activities.

5.12 Special Deliveries

Whilst not anticipated, any oversized vehicle that is required to travel to the site will be dealt with separately, with the submission of required permits to and subsequent approval by City of Canterbury Bankstown Council prior to any delivery.

5.13 Staff Parking

Construction workers can park their cars within the new staff car park, taking into account daily staff usage.

Site personnel will be advised to car pool and site personal will be informed of the public transport options available in the vicinity of the site (refer to Section 4.3) and advised to utilise these facilities.

5.14 Work Site Security

As discussed in Section 5.10, to provide security to the works site and protection to the general public, it is proposed that the entire site (and any remote work areas when applicable) will be physically separated from the School via A-Class temporary fencing. The extents of fencing will be modified during the works as required to suit the works occurring at each project stage.

Prior to commencement of works the contractor will facilitate a Safety Workshop where the school and their stakeholders shall be invited to identify site specific safety and security initiatives.

All access points are to be securely locked when construction activities are not in progress. The exact location of this fence is to be agreed on site, prior to commencement of the works.

5.15 Staff Induction

All staff and subcontractors engaged on site will be required to undergo a site induction. The induction will include permitted access routes to and from the construction site for all vehicles, as well as standard environmental, OH&S, driver protocols and emergency procedures. Additionally, the lead contractor will discuss TMP requirements regularly as a part of toolbox talks and advise workers of public transport and car-pooling opportunities.

5.16 Emergency Vehicle Access

The proposed traffic control arrangements do not propose the closure of any local roads. Any emergency vehicles requiring access to the project site will do so via the site access along Beresford Avenue and / or Davis Lane.

A detailed Emergency Management Plan will be further developed by the contractor prior to site establishment works.

5.17 Access to Adjoining Properties

Access to all adjoining properties will be maintained throughout the works. The adjacent land owners will be notified of works via letter box distribution and road signage to advised of anticipated truck movements in operation with access to adjoining properties being maintained at all times.

5.18 Occupational Health and Safety

Any workers required to undertake works or traffic control within the public domain shall be suitably trained and will be covered by adequate and appropriate insurances. All traffic control personnel will be required to hold RMS accreditation in accordance with Section 8 of Traffic Control at Worksites.

The comprehensive Work Health & Safety Management Plan will be provided by Hutchinson Builders and shall be constantly reviewed as the design and construction methodology progress.

5.19 Method of Communicating Traffic Changes

Although construction traffic will be conducted outside of school peak hours, parents and staff should be informed of the temporary traffic conditions.

During construction the contractor shall each morning, prior to work commencing, ensure all signage is erected in accordance with the TCP and clearly visible. Each evening, upon completion of work, the contractor is to ensure signage is either covered or removed as required.

Any variation to the layout of the TCP on site is to be recorded and certified by authorised RMS accredited personnel. The associated TCP road signage will inform drivers of works activities in the area including truck movements in operation.

5.20 Contact Details for On-Site Enquiries and Site Access

The principal contractor is yet to be appointed and contact details of a Site Manager will be provided at a later stage.

5.21 Maintenance of Roads and Footpaths

The roads and footpaths along the route of travel will be kept in a serviceable state at all times. Any damage arising as a result of the proposed truck movements will be treated / repaired by the principal contractor at no cost to Council.

6. Summary

This concept CTMP has been prepared to outline the construction traffic measures to improve site safety to the public and workers during the construction process.

With the measures described in the concept CTMP in place, the construction activity is anticipated to have minimal disruption to the daily activities within the vicinity of the site.

It is envisaged that this document will be reviewed during the construction stage and amended if required, due to changes in design, RMS, Councils or any other authority requirements.